GUHRING
The Tool Company

GM 300

TOOLHOLDERS, CLAMPING SYSTEMS AND ACCESSORIES

для размещения заказа - guhring@guhring-tools.ru

MQL

GUHRING MQL SYSTEMS

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Higher cutting speeds and longer tool life are possible thanks to adapted cooling as well as highest surface qualities thanks to the pure lubricant. Work pieces and chips remain dry! Save the cost of de-greasing your work pieces as well as disposal of chips and soluble oil.

1 MQL BY GÜHRING

Our products for the MQL 1-channel technology are identified by this symbol.

Visual feature of the 1-channel system
is the gold colored MQL length setting screw.

2 MQL BY GÜHRING

Our products for the MQL 2-channel technology are identified by this symbol.

Visual feature of the 2-channel system
is the black colored MQL length setting screw.

YOU CAN NOW REQUEST THE MQL CATALOG!

All Guhring tool holders as well as much information on MQL technology applications in the new MQL catalog at a glance.

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HMC 3000
MICRO-PRECISION DRILLS
HR 500

PERFECT CLAMPING

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- direct hydraulic clamping of shanks from Ø 3 mm
- quick, simple and accurate length setting
- perfect concentricity R < 3 µm with 10 x d1

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HMC 3000

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HSK-A hydraulic chucks HMC 3000 for clamping small diameters

Product information

- perfect concentricity: < 3 µm at 10xd1
- balancing quality: G6.3 / 30,000 rev./min
- HSK-A to DIN 69893
- high clamping force
- quick, simple handling and accurate length setting
- IC and GÜHROJET peripheral cooling ensure optimal chip evacuation and tool lubrication

Scope of delivery

- incl. length adjustment screw
- incl. hexagon chuck key Guhring no. 4912
- order coolant delivery set Guhring no. 4949 separately

GÜHROJET

Series Number 4618

HSK-A d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	SW	Order Code	EDP Numbers
32	3	28	40	84	34	33	4	3.032	9046180030320
32	4	28	40	84	34	33	4	4.032	9046180040320
32	5	28	40	84	34	33	4	5.032	9046180050320
40	3	28	33.5	74	34	40	4	3.040	9046180030400
40	4	28	33.5	74	34	40	4	4.040	9046180040400
40	5	28	33.5	74	34	40	4	5.040	9046180050400
50	3	28	40	74	34	32	4	3.050	9046180030500
50	4	28	40	74	34	32	4	4.050	9046180040500
50	5	28	40	74	34	32	4	5.050	9046180050500
63	3	28	50	74	34	28.5	5	3.063	9046180030630
63	4	28	50	74	34	28.5	5	4.063	9046180040630
63	5	28	50	74	34	28.5	5	5.063	9046180050630
100	3	28	50	79	34	30	5	3.100	9046180031000
100	4	28	50	79	34	30	5	4.100	9046180041000
100	5	28	50	79	34	30	5	5.100	9046180051000

HSK-A hydraulic chucks with increased clamping force

Product information

- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- to DIN 69882-7
- also available in extra-long lengths l1 = 150 / 160 mm and 200 mm

Scope of delivery

- incl. adjustment screw Guhring no. 4900
- incl. hexagon chuck key Guhring no. 4912
- order coolant delivery set Guhring no. 4949 separately

Series Number 4299

HSK-A d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	incl. setting screw 4900	SW	kg	Order Code	EDP Numbers
32	6	26	40	80	37	29	9049000060140	4	0.44	6.032	9042990060320
32	8	28	40	80	37	29	9049000080140	4	0.40	8.032	9042990080320
32	10	30	40	85	41	35	9049000080140	4	0.40	10.032	9042990100320
32	12	32	40	90	46	40	9049000080140	4	0.40	12.032	9042990120320
40	6	26	33.5	70	37	36	9049000060140	4	0.60	6.040	9042990060400
40	8	28	33.5	70	37	36	9049000080140	4	0.60	8.040	9042990080400
40	10	30	33.5	75	41	42	9049000080140	4	0.60	10.040	9042990100400
40	12	32	33.5	80	46	48	9049000080140	4	0.60	12.040	9042990120400
50	6	26	40	70	37	28	9049000060140	4	0.80	6.050	9042990060500
50	8	28	40	70	37	28	9049000080140	4	0.80	8.050	9042990080500
50	10	30	40	75	41	34	9049000100140	4	0.80	10.050	9042990100500
50	12	32	40	85	46	44	9049000120140	4	0.80	12.050	9042990120500
50	14	34	40	85	46	44	9049000120140	5	0.80	14.050	9042990140500
50	16	38	40	90	49	30	9049000160140	5	0.80	16.050	9042990160500
50	18	40	40	90	49	30	9049000160140	5	1.10	18.050	9042990180500
50	20	42	40	90	51	29	9049000201140	5	1.10	20.050	9042990200500
63	6	26	50	70	37	24.5	9049000060140	5	0.97	6.063	9042990060630
63	8	28	50	70	37	24.5	9049000080140	5	1.00	8.063	9042990080630
63	10	30	50	80	41	35.5	9049000100140	5	1.00	10.063	9042990100630
63	12	32	50	85	46	41.5	9049000120140	5	1.10	12.063	9042990120630
63	14	34	50	85	46	41.5	9049000120140	5	1.10	14.063	9042990140630
63	16	38	50	90	49	45.5	9049000160140	5	1.20	16.063	9042990160630
63	18	40	50	90	49	48.5	9049000160140	5	1.20	18.063	9042990180630
63	20	42	50	90	51	47.5	9049000201140	5	1.20	20.063	9042990200630
63	25	57	63	120	57	55.3	9049000201140	6	2.10	25.063	9042990250630
63	32	64	75	125	61	63	9049000201140	6	2.40	32.063	9042990320630
63	6	26	50	150	37	103	9049000060140	5	1.50	6.163	9042990061630
63	8	28	50	150	37	104	9049000080140	5	1.50	8.163	9042990081630
63	10	30	50	150	41	104	9049000100140	5	1.50	10.163	9042990101630
63	12	32	50	150	46	105	9049000120140	5	1.50	12.163	9042990121630
63	14	34	50	150	46	105	9049000120140	5	1.70	14.163	9042990141630
63	16	38	50	150	49	106	9049000160140	5	1.80	16.163	9042990161630
63	18	40	50	150	49	107	9049000160140	5	1.90	18.163	9042990181630
63	20	42	50	150	51	108	9049000201140	5	1.90	20.163	9042990201630

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HSK-A hydraulic chucks with increased clamping force

Series Number **4299**

HSK-A d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	incl. setting screw 4900	SW	kg	Order Code	EDP Numbers
63	6	26	50	200	37	153	**9049000060140**	5	1.70	6.263	**9042990062630**
63	8	28	50	200	37	154	**9049000080140**	5	1.70	8.263	**9042990082630**
63	10	30	50	200	41	154	**9049000100140**	5	1.80	10.263	**9042990102630**
63	12	32	50	200	46	155	**9049000120140**	5	1.80	12.263	**9042990122630**
63	14	34	50	200	46	155	**9049000120140**	5	2.00	14.263	**9042990142630**
63	16	38	50	200	49	156	**9049000160140**	5	2.20	16.263	**9042990162630**
63	18	40	50	200	49	157	**9049000160140**	5	2.30	18.263	**9042990182630**
63	20	42	50	200	51	158	**9049000201140**	5	2.50	20.263	**9042990202630**
80	6	26	50	70	37	24	**9049000060140**	5	1.50	6.080	**9042990060800**
80	8	28	50	70	37	24	**9049000080140**	5	1.50	8.080	**9042990080800**
80	10	30	50	80	41	35	**9049000100140**	5	1.50	10.080	**9042990100800**
80	12	32	50	85	46	40	**9049000120140**	5	1.60	12.080	**9042990120800**
80	14	34	50	85	46	40	**9049000120140**	5	1.60	14.080	**9042990140800**
80	16	38	50	95	49	51	**9049000160140**	5	1.70	16.080	**9042990160800**
80	18	40	50	95	49	51	**9049000160140**	5	1.80	18.080	**9042990180800**
80	20	42	50	95	51	52	**9049000201140**	5	1.80	20.080	**9042990200800**
80	25	57	63	110	57	65	**9049000201140**	6	2.60	25.080	**9042990250800**
80	32	64	75	125	61	63	**9049000201140**	6	3.20	32.080	**9042990320800**
100	6	26	50	75	37	26	**9049000060140**	5	2.40	6.100	**9042990061000**
100	8	28	50	75	37	26	**9049000080140**	5	2.40	8.100	**9042990081000**
100	10	30	50	90	41	42	**9049000100140**	5	2.50	10.100	**9042990101000**
100	12	32	50	95	46	47	**9049000120140**	5	2.50	12.100	**9042990121000**
100	14	34	50	95	46	47	**9049000120140**	5	2.50	14.100	**9042990141000**
100	16	38	50	100	49	53	**9049000160140**	5	2.70	16.100	**9042990161000**
100	18	40	50	100	49	53	**9049000160140**	5	2.70	18.100	**9042990181000**
100	20	42	50	105	51	59	**9049000201140**	5	3.20	20.100	**9042990201000**
100	25	57	63	110	57	62	**9049000201140**	6	3.30	25.100	**9042990251000**
100	32	64	75	110	61	62	**9049000201140**	6	3.30	32.100	**9042990321000**
100	6	27	50	160	37	104	**9049000060140**	5	2.80	106.100	**9042991061000**
100	8	27	50	160	37	104	**9049000080140**	5	2.80	108.100	**9042991081000**
100	10	32	50	160	41	105	**9049000100140**	5	2.90	110.100	**9042991101000**
100	12	32	50	160	46	105	**9049000120140**	5	2.90	112.100	**9042991121000**
100	14	34	50	160	46	107	**9049000120140**	5	2.90	114.100	**9042991141000**
100	16	34	50	160	49	107	**9049000160140**	5	3.20	116.100	**9042991161000**
100	18	42	50	160	49	108	**9049000160140**	5	3.20	118.100	**9042991181000**
100	20	42	50	160	51	108	**9049000201140**	5	3.60	120.100	**9042991201000**
100	25	53	63	160	57	110	**9049000201140**	6	3.70	125.100	**9042991251000**
100	32	53	75	160	61	110	**9049000201140**	6	4.20	132.100	**9042991321000**
100	6	27	50	200	37	144	**9049000060140**	5	3.00	206.100	**9042992061000**
100	8	27	50	200	37	144	**9049000080140**	5	3.00	208.100	**9042992081000**
100	10	32	50	200	41	145	**9049000100140**	5	3.10	210.100	**9042992101000**
100	12	32	50	200	46	145	**9049000120140**	5	3.10	212.100	**9042992121000**
100	14	34	50	200	46	147	**9049000120140**	5	3.10	214.100	**9042992141000**
100	16	34	50	200	46	147	**9049000160140**	5	3.40	216.100	**9042992161000**
100	18	42	50	200	49	148	**9049000160140**	5	3.40	218.100	**9042992181000**
100	20	42	50	200	51	148	**9049000201140**	5	3.80	220.100	**9042992201000**
100	25	53	63	200	57	150	**9049000201140**	6	3.90	225.100	**9042992251000**
100	32	53	75	200	61	150	**9049000201140**	6	3.90	232.100	**9042992321000**

HSK-A hydraulic chucks with radial length setting

Product information
- balancing quality: G6.3 / 15,000 rev./min
- robust, radially operated length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- to DIN 69882-7

Scope of delivery
- incl. hexagon chuck key Guhring no. 4912
- incl. hexagon key inserts for radial length setting
- order coolant delivery set Guhring no. 4949 separately
- MQL design available as an option

Series Number 4296

HSK-A d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	SW	kg	Order Code	EDP Numbers
50	6	26	40	80	37	35	5	0.80	6.050	**9042960060500**
50	8	28	40	80	37	36	5	0.80	8.050	**9042960080500**
50	10	30	40	85	41	38	5	0.90	10.050	**9042960100500**
50	12	32	40	90	46	47	5	0.90	12.050	**9042960120500**
50	14	34	40	90	46	46	5	1.00	14.050	**9042960140500**
50	16	38	53	95	49	36.5	5	1.20	16.050	**9042960160500**
50	18	40	57	95	49	36.5	5	1.20	18.050	**9042960180500**
50	20	42	60	100	51	39	5	1.30	20.050	**9042960200500**
63	6	26	50	80	37	33	5	1.00	6.063	**9042960060630**
63	8	28	50	80	37	33	5	1.10	8.063	**9042960080630**
63	10	30	50	85	41	38	5	1.10	10.063	**9042960100630**
63	12	32	50	90	46	40	5	1.20	12.063	**9042960120630**
63	14	34	50	90	46	46	5	1.20	14.063	**9042960140630**
63	16	38	50	95	50.5	51	5	1.30	16.063	**9042960160630**
63	18	40	50	95	49	52	5	1.30	18.063	**9042960180630**
63	20	42	50	200	51	58	5	1.40	20.063	**9042960200630**
63	25	57	63	120	57	59.5	6	2.30	25.063	**9042960250630**
63	32	64	75	125	61	62.5	6	2.30	32.063	**9042960320630**
80	6	26	50	85	37	35.5	5	1.50	6.080	**9042960060800**
80	8	28	50	85	37	36	5	1.50	8.080	**9042960080800**
80	10	30	50	90	41	38	5	1.50	10.080	**9042960100800**
80	12	32	50	95	46	40	5	1.60	12.080	**9042960120800**
80	14	34	50	95	46	41	5	1.60	14.080	**9042960140800**
80	16	38	50	100	49	46	5	1.60	16.080	**9042960160800**
80	18	40	50	100	49	46	5	1.80	18.080	**9042960180800**
80	20	42	50	105	51	51	5	1.80	20.080	**9042960200800**
80	25	57	63	115	57	58.5	6	2.60	25.080	**9042960250800**
80	32	64	75	125	61	58.5	6	2.60	32.080	**9042960320800**
100	6	26	50	85	37	33	5	2.50	6.100	**9042960061000**
100	8	28	50	85	37	33	5	2.70	8.100	**9042960081000**
100	10	30	50	90	41	36	5	2.80	10.100	**9042960101000**
100	12	32	50	95	46	40	5	2.80	12.100	**9042960121000**
100	14	34	50	95	46	46	5	2.70	14.100	**9042960141000**
100	16	38	50	100	49	51	5	2.90	16.100	**9042960161000**
100	18	40	50	100	49	52	5	2.80	18.100	**9042960181000**
100	20	42	50	105	51	58	5	3.20	20.100	**9042960201000**
100	25	57	63	115	57	60	6	3.40	25.100	**9042960251000**
100	32	64	75	120	61	68	6	3.40	32.100	**9042960321000**

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для размещения заказа - guhring@guhring-tools.ru

HSK-C hydraulic chucks with increased clamping force

Product information

- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- for tool shank tolerance h6

Scope of delivery

- incl. adjustment screw Guhring no. 4900
- incl. hexagon chuck key Guhring no. 4912

Series Number 4267

HSK-C d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	incl. setting screw 4900	SW	kg	Order Code	EDP Numbers
32	6	26	32	65	37.5	33	**9049000060140**	4	0.40	6.032	**9042670060320**
32	8	28	32	67	37.5	34	**9049000080140**	4	0.40	8.032	**9042670080320**
32	10	30	32	72.7	42.5	39	**9049000080140**	4	0.40	10.032	**9042670100320**
32	12	31.5	32	76	46	45	**9049000080140**	4	0.40	12.032	**9042670120320**
40	6	26	33.5	60	37	35	**9049000060140**	4	0.40	6.040	**9042670060400**
40	8	28	33.5	60	37	36	**9049000080140**	4	0.40	8.040	**9042670080400**
40	10	30	33.5	65	41	41	**9049000080140**	4	0.50	10.040	**9042670100400**
40	12	32	33.5	70	46	47	**9049000080140**	4	0.60	12.040	**9042670120400**
50	6	26	50	60	37	30	**9049000060140**	4	0.70	6.050	**9042670060500**
50	8	28	50	60	37	30	**9049000080140**	5	0.70	8.050	**9042670080500**
50	10	30	50	65	41	35	**9049000100140**	5	0.70	10.050	**9042670100500**
50	12	32	50	75	46	44	**9049000120140**	5	0.80	12.050	**9042670120500**
50	14	34	50	75	46	46	**9049000120140**	5	0.70	14.050	**9042670140500**
50	16	38	50	80	49	51	**9049000160140**	5	0.80	16.050	**9042670160500**
50	18	40	50	80	49	51	**9049000160140**	5	1.50	18.050	**9042670180500**
50	20	42	50	80	51	52	**9049000200140**	5	1.20	20.050	**9042670200500**
63	6	26	50	60	37	25	**9049000060140**	5	1.00	6.063	**9042670060630**
63	8	28	50	60	37	26	**9049000080140**	5	1.00	8.063	**9042670080630**
63	10	30	50	65	41	31	**9049000100140**	5	1.00	10.063	**9042670100630**
63	12	32	50	75	46	41	**9049000120140**	5	1.10	12.063	**9042670120630**
63	14	34	50	75	46	42	**9049000120140**	5	1.00	14.063	**9042670140630**
63	16	38	50	80	49	48	**9049000160140**	5	1.10	16.063	**9042670160630**
63	18	40	50	80	49	48	**9049000160140**	5	1.20	18.063	**9042670180630**
63	20	42	50	80	51	49	**9049000201140**	5	1.20	20.063	**9042670200630**
63	25	50	63	95	57	63	**9049000201140**	5	2.00	25.063	**9042670250630**
63	32	62.5	75	100	61	60	**9049000201140**	5	2.00	32.063	**9042670320630**

для размещения заказа - guhring@guhring-tools.ru

HSK-C hydraulic chucks with radial length adjustment

Product information
- balancing quality: G6.3 / 15,000 rev./min
- robust, radially operated length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- to DIN 69882-7

Scope of delivery
- incl. hexagon chuck key Guhring no. 4912
- incl. hexagon key inserts for radial length setting

Series Number 4295

HSK-C d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	SW	kg	Order Code	EDP Numbers
40	6	26	33.5	60	37	32.5	5	0.50	6.040	**9042950060400**
40	8	28	33.5	60	37	33	5	0.50	8.040	**9042950080400**
40	10	30	33.5	65	41	38.5	5	0.50	10.040	**9042950100400**
40	12	32	33.5	70	46	44	5	0.60	12.040	**9042950120400**
50	6	26	40	60	37	29.5	5	0.60	6.050	**9042950060500**
50	8	28	40	60	37	29.5	5	0.60	8.050	**9042950080500**
50	10	30	40	65	41	35.5	5	0.60	10.050	**9042950100500**
50	12	32	40	75	46	46	5	0.80	12.050	**9042950120500**
50	14	34	40	75	46	47	5	0.90	14.050	**9042950140500**
50	16	38	50	80	49	50	5	0.90	16.050	**9042950160500**
50	18	40	50	80	49	50	5	1.00	18.050	**9042950180500**
50	20	42	50	80	51	50	5	1.00	20.050	**9042950200500**
63	6	26	50	60	37	26	5	1.00	6.063	**9042950060630**
63	8	28	50	60	37	26	5	1.10	8.063	**9042950080630**
63	10	30	50	65	41	32	5	1.10	10.063	**9042950100630**
63	12	32	50	75	46	42.5	5	1.10	12.063	**9042950120630**
63	14	34	50	75	46	43	5	1.10	14.063	**9042950140630**
63	16	38	50	80	49	49	5	1.20	16.063	**9042950160630**
63	18	40	50	80	49	50	5	1.20	18.063	**9042950180630**
63	20	42	50	80	51	50.5	5	1.20	20.063	**9042950200630**
63	25	50	63	95	57	52	6	1.80	25.063	**9042950250630**
63	32	63	63	100	61	60	6	2.30	32.063	**9042950320630**

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ISO taper hydraulic chucks HMC 3000 for clamping small diameters

Product information

- perfect concentricity: < 3 µm at 10xd1
- balancing quality: G6.3 / 30,000 rev./min
- ISO taper to DIN 69871 form AD/B
- high clamping force
- quick, simple handling and accurate length setting
- IC and GÜHROJET peripheral cooling ensure optimal chip evacuation and tool lubrication

Scope of delivery

- incl. length adjustment screw
- incl. hexagon chuck key Guhring no. 4912
- order pull studs Guhring no. 4925, 4926 separately

GÜHROJET

Series Number 4619

ISO taper	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	SW	Order Code	EDP Numbers
40	3	28	49.5	84.5	34	34	5	3.040	**9046190030400**
40	4	28	49.5	84.5	34	34	5	4.040	**9046190040400**
40	5	28	49.5	84.5	34	34	5	5.040	**9046190050400**

ISO taper hydraulic chucks with increased clamping force

Product information

- ISO taper to DIN 69871 form AD/B
- form B supplied with threaded pins in bores
- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- for tool shank tolerance h6

Scope of delivery

- incl. adjustment screw Guhring no. 4900
- incl. hexagon chuck key Guhring no. 4912
- order pull studs Guhring no. 4925, 4926 separately

Series Number 4213

ISO taper	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	incl. setting screw 4900 …	SW	kg	Order Code	EDP Numbers
40	6	26	49.5	80.5	37	29.5	**9049000060140**	5	1.50	6.040	**9042130060400**
40	8	28	49.5	80.5	37	30	**9049000080140**	5	1.50	8.040	**9042130080400**
40	10	30	49.5	80.5	41	31	**9049000100140**	5	1.50	10.040	**9042130100400**
40	12	32	49.5	80.5	46	31.5	**9049000120140**	5	1.50	12.040	**9042130120400**
40	14	34	49.5	80.5	46	31.5	**9049000120140**	5	1.50	14.040	**9042130140400**
40	16	38	49.5	80.5	49	33	**9049000160140**	5	1.50	16.040	**9042130160400**
40	18	40	49.5	80.5	49	33	**9049000201140**	5	1.50	18.040	**9042130180400**
40	20	49.5	49.5	64.5	51	-	**9049000201140**	6	1.50	20.040	**9042130200400**
40	20	42	49.5	80.5	51	34	**9049000201140**	6	1.50	20.140	**9042130201400**
40	20	42	49.5	110	51	34	**9049000200140**	6	2.00	20.240	**9042130202400**
40	25	49.5	49.5	80.5	57	61.5	**9049000200140**	6	2.00	25.040	**9042130250400**
40	32	63	80	80.5	61	25.5	**9049000200140**	6	2.00	32.040	**9042130320400**
50	12	32	49.5	80.5	46	31.5	**9049000120140**	5	3.50	12.050	**9042130120500**
50	20	42	49.5	80.5	51	34	**9049000201140**	6	4.00	20.050	**9042130200500**
50	20	42	49.5	110	51	34	**9049000201140**	6	4.00	20.150	**9042130201500**
50	32	72	72	81	61	-	**9049000201140**	6	4.00	32.050	**9042130320500**

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MAS/BT hydraulic chucks HMC 3000 for clamping small diameters

Product information

- perfect concentricity: < 3 µm at 10xd1
- balancing quality: G6.3 / 30,000 rev./min
- MAS/BT to JIS B 6339 form AD/B (*: version AD without coolant supply over collar)
- high clamping force
- quick, simple handling and accurate length setting
- IC and GÜHROJET peripheral cooling ensure optimal chip evacuation and tool lubrication

Scope of delivery

- incl. length adjustment screw
- incl. hexagon chuck key Guhring no. 4912

- order pull studs Guhring no. 4927, 4928 separately

GÜHROJET

Series Number	4620

BT	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	SW	Order Code	EDP Numbers
30*	3	28	-	55	34	22.5	4	3.030	**9046200030300**
30*	4	28	-	55	34	22.5	4	4.030	**9046200040300**
30*	5	28	-	55	34	22.5	4	5.030	**9046200050300**
40	3	28	44.5	94	34	48.5	5	3.040	**9046200030400**
40	4	28	44.5	94	34	48.5	5	4.040	**9046200040400**
40	5	28	44.5	94	34	48.5	5	5.040	**9046200050400**

MAS/BT hydraulic chucks with increased clamping force

Product information

- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- max. deviation f. concentricity 3 µm
- for tool shank tolerance h6
- MAS/BT to JIS B 6339 form AD/B (*: version AD without coolant supply over collar)

Scope of delivery

- incl. adjustment screw Guhring no. 4900
- incl. hexagon chuck key Guhring no. 4912
- order pull studs Guhring no. 4927, 4928 separately

Series Number **4221**

BT	for shank Ø $d_{1\ h6}$ mm/inch	d_2 mm/inch	d_4 mm	l_1 mm	l_2 mm	l_5 mm	incl. setting screw 4900 …	SW	kg	Order Code	EDP Numbers
30*	6	26	-	51	37	18	**9049000060140**	4	0.60	6.030	**9042210060300**
30*	8	28	-	51	37	18.5	**9049000120140**	4	0.60	8.030	**9042210080300**
30*	10	30	-	51	41	19	**9049000100140**	4	0.60	10.030	**9042210100300**
30*	12	32	-	51	46	19.5	**9049000120140**	4	0.60	12.030	**9042210120300**
30*	16	38	-	90	49	50	**9049000160140**	4	1.00	16.030	**9042210160300**
30*	20	42	-	90	51	50	**9049000201140**	5	1.00	20.030	**9042210200300**
30*	1/4	26	-	75	37	52	**9049000060140**	4	1.00	106.030	**9042211060300**
30*	3/8	30	-	80	41	57	**9049000120140**	4	1.00	109.030	**9042211090300**
30*	1/2	32	-	90	46	50	**9049000120140**	4	1.00	112.030	**9042211120300**
30*	5/8	38	-	90	49	50	**9049000160140**	4	1.00	115.030	**9042211150300**
30*	3/4	40	-	90	49	50	**9049000160140**	5	1.00	119.030	**9042211190300**
40	6	26	44.5	90	37	43	**9049000060140**	5	0.25	6.040	**9042210060400**
40	8	28	44.5	90	37	44.5	**9049000080140**	5	0.45	8.040	**9042210080400**
40	10	30	44.5	90	41	44.5	**9049000100140**	5	0.70	10.040	**9042210100400**
40	12	32	44.5	90	46	44.5	**9049000120140**	5	1.40	12.040	**9042210120400**
40	14	34	44.5	90	46	44.5	**9049000120140**	5	0.14	14.040	**9042210140400**
40	16	38	44.5	90	49	47.5	**9049000160140**	5	0.18	16.040	**9042210160400**
40	18	40	44.5	90	49	47.5	**9049000160140**	5	0.23	18.040	**9042210180400**
40	20	49.5	-	72.5	51	45.5	**9049000201140**	6	1.40	20.040	**9042210200400**
40	20	42	44.5	90	51	47.5	**9049000201140**	6	1.50	20.140	**9042210201400**
40	25	49.5	49.5	83	57	56	**9049000201140**	6	0.42	25.040	**9042210250400**
40	32	63	80	83	61	25.5	**9049000201140**	6	0.68	32.040	**9042210320400**
50	12	32	44.5	90	46	34	**9049000120500**	5	0.12	12.050	**9042210120500**
50	20	42	44.5	90	51	34	**9049000200500**	6	4.00	20.050	**9042210200500**
50	32	72	72	90	61	-	**9049000320500**	6	4.10	32.050	**9042210320500**

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CAT hydraulic holder

Product information

- Balancing quality G6.3 / 15.000rev./min.
- Taper according to ANSI/ASME B 5.50
- Coolant through center and also through flange (plugged with set screws when supplied)
- Axial length setting
- CAT 40 - 5/8 x 11 retention knob thread
- CAT 50 - 1” x 8 retention knob thread

Scope of delivery

- Including setting screw, Guhring no. 4900
- Including hex wrench, Guhring no. 4912
- Special dimensions on request

Series Number **4216**

CAT	for clamping dia. d1 in h6 inch	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	SW	incl. setting screw 4900 …	Order Code	EDP Numbers
40	1/4	26	44.5	64	37	29.5	5	**9049000060140**	106.040	**9042161060400**
40	3/8	30	44.5	64	41	31	5	**9049000080140**	109.040	**9042161090400**
40	1/2	32	44.5	64	46	31.5	5	**9049000120140**	112.040	**9042161120400**
40	5/8	38	44.5	64	49	33	5	**9049000160140**	115.040	**9042161150400**
40	3/4	40	44.5	64	49	33	5	**9049000160140**	119.040	**9042161190400**
40	1	49.5	44.5	81	57	40	6	**9049000201140**	125.040	**9042161250400**
40	1 1/4	63	80	81	61	25.5	6	**9049000201140**	131.040	**9042161310400**
50	1/4	26	69.9	81	37	29.5	5	**9049000060140**	106.050	**9042161060500**
50	3/8	30	69.9	81	41	31	5	**9049000080140**	109.050	**9042161090500**
50	1/2	32	69.9	81	46	31.5	5	**9049000120140**	112.050	**9042161120500**
50	5/8	38	69.9	81	49	33	5	**9049000160140**	115.050	**9042161150500**
50	3/4	40	69.9	81	49	33	5	**9049000201140**	119.050	**9042161190500**
50	1	57	69.9	81	57	40	6	**9049000201140**	125.050	**9042161250500**
50	1 1/4	63	69.9	81	61	45	6	**9049000201140**	131.050	**9042161310500**
40	6	26	44.5	64	37	29.5	5	**9049000060140**	6.040	**9042160060400**
40	8	28	44.5	64	37	30	5	**9049000080140**	8.040	**9042160080400**
40	10	30	44.5	64	41	31	5	**9049000100140**	10.040	**9042160100400**
40	12	32	44.5	64	46	31.5	5	**9049000120140**	12.040	**9042160120400**
40	14	34	44.5	64	46	31.5	5	**9049000120140**	14.040	**9042160140400**
40	16	38	44.5	64	49	33	5	**9049000160140**	16.040	**9042160160400**
40	18	40	44.5	64	49	33	5	**9049000160140**	18.040	**9042160180400**
40	20	42	44.5	64	51	34	5	**9049000201140**	20.040	**9042160200400**
40	25	49.5	44.5	81	57	40	6	**9049000201140**	25.040	**9042160250400**
40	32	63	80	81	61	25.5	6	**9049000201140**	32.040	**9042160320400**
50	6	26	69.9	81	37	29.5	5	**9049000060140**	6.050	**9042160060500**
50	8	28	69.9	81	37	30	5	**9049000080140**	8.050	**9042160080500**
50	10	30	69.9	81	41	31	5	**9049000100140**	10.050	**9042160100500**
50	12	32	69.9	81	46	31.5	5	**9049000120140**	12.050	**9042160120500**
50	14	34	69.9	81	46	31.5	5	**9049000120140**	14.050	**9042160140500**
50	16	38	69.9	81	49	33	5	**9049000160140**	16.050	**9042160160500**
50	18	40	69.9	81	49	33	5	**9049000160140**	18.050	**9042160180500**
50	20	42	69.9	81	51	34	5	**9049000201140**	20.050	**9042160200500**
50	25	57	69.9	81	57	40	6	**9049000201140**	25.050	**9042160250500**
50	32	63	69.9	81	61	45	6	**9049000201140**	32.050	**9042160320500**

Reduction sleeves for hydraulic chucks, sealed

Product information

- for clamping smaller shank-Ø in hydraulic chucks
- clamping-Ø for tool shank tolerance h6
- concentricity ≤ 2 µm
- with adjustable limit stop
- the application of reduction sleeves makes it possible to increase the permissible transferable torque by approx. 25% in comparsion to direct clamping

Scope of delivery

- incl. stop element
- special dimensions on request

Series Number 4368

d_1 inch/mm	for shank Ø $d_{3\ h6}$ inch/mm	d_2 mm	l_1 mm	l_2 mm	l_3 mm	Order Code	EDP Numbers
1/2	1/8	16.5	45	2	26.5	3.013	9043680030130
1/2	3/16	16.5	45	2	26.5	4.013	9043680040130
1/2	1/4	16.5	45	2	26.5	6.013	9043680060130
1/2	5/16	16.5	45	2	26.5	8.013	9043680080130
1/2	3/8	16.5	45	2	26.5	9.013	9043680090130
1/2	3	16.5	45	2	26.5	103.013	9043681030130
1/2	4	16.5	45	2	26.5	104.013	9043681040130
1/2	5	16.5	45	2	26.5	105.013	9043681050130
1/2	6	16.5	45	2	26.5	106.013	9043681060130
1/2	8	16.5	45	2	34.5	108.013	9043681080130
3/4	1/8	24	50.5	2	28.5	3.019	9043680030190
3/4	3/16	24	50.5	2	28.5	4.019	9043680040190
3/4	1/4	24	50.5	2	37.5	6.019	9043680060190
3/4	5/16	24	50.5	2	37.5	8.019	9043680080190
3/4	3/8	24	50.5	2	42.5	9.019	9043680090190
3/4	7/16	24	50.5	2	47.5	11.019	9043680110190
3/4	1/2	24	50.5	2	47.5	13.019	9043680130190
3/4	9/16	24	50.5	2	47.5	14.019	9043680140190
3/4	5/8	24	50.5	2	47.5	15.019	9043680150190
3/4	3	24	50.5	2	28.5	103.019	9043681030190
3/4	4	24	50.5	2	28.5	104.019	9043681040190
3/4	5	24	50.5	2	28.5	105.019	9043681050190
3/4	6	24	50.5	2	37.5	106.019	9043681060190
3/4	8	24	50.5	2	37.5	108.019	9043681080190
3/4	10	24	50.5	2	42.5	110.019	9043681100190
3/4	12	24	50.5	2	47.5	112.019	9043681120190
3/4	14	24	50.5	2	47.5	114.019	9043681140190
1 1/4	1/4	35.5	60.5	2	37.5	6.031	9043680060310
1 1/4	5/16	35.5	60.5	2	37.5	8.031	9043680080310
1 1/4	3/8	35.5	60.5	2	37.5	9.031	9043680090310
1 1/4	7/16	35.5	60.5	2	40.5	11.031	9043680110310
1 1/4	1/2	35.5	60.5	2	44.5	13.031	9043680130310
1 1/4	9/16	35.5	60.5	2	44.5	14.031	9043680140310
1 1/4	5/8	35.5	60.5	2	50.5	15.031	9043680150310
1 1/4	11/16	35.5	60.5	2	50.5	17.031	9043680170310
1 1/4	3/4	35.5	60.5	2	50.5	19.031	9043680190310
1 1/4	13/16	35.5	60.5	2	50.5	20.031	9043680200310
1 1/4	7/8	35.5	60.5	2	50.5	22.031	9043680220310
1 1/4	15/16	35.5	60.5	2	58.5	24.031	9043680240310
1 1/4	1	35.5	60.5	2	58.5	25.031	9043680250310
1 1/4	8	35.5	60.5	2	37.5	108.031	9043681080310
1 1/4	10	35.5	60.5	2	40.5	110.031	9043681100310
1 1/4	12	35.5	60.5	2	44.5	112.031	9043681120310
1 1/4	14	35.5	60.5	2	44.5	114.031	9043681140310
1 1/4	16	35.5	60.5	2	50.5	116.031	9043681160310
1 1/4	18	35.5	60.5	2	50.5	118.031	9043681180310

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Reduction sleeves for hydraulic chucks, sealed

							Series Number	4368
d_1 inch/mm	for shank Ø d_3 h6 inch/mm	d_2 mm	l_1 mm	l_2 mm	l_3 mm	Order Code		EDP Numbers
1 1/4	20	35.5	60.5	2	50.5	120.031		9043681200310
1 1/4	25	35.5	60.5	2	58.5	125.031		9043681250310
12	1/8	16.5	45	2	26.5	103.012		9043681030120
12	3/16	16.5	45	2	26.5	104.012		9043681040120
12	1/4	16.5	45	2	34.5	106.012		9043681060120
12	5/16	16.5	45	2	34.5	108.012		9043681080120
12	3/8	16.5	45	2	34.5	109.012		9043681090120
12	3	16.5	45	2	26.5	3.012		9043680030120
12	4	16.5	45	2	26.5	4.012		9043680040120
12	5	16.5	45	2	26.5	5.012		9043680050120
12	6	16.5	45	2	34.5	6.012		9043680060120
12	8	16.5	45	2	34.5	8.012		9043680080120
20	1/8	24	50.5	2	28.5	103.020		9043681030200
20	3/16	24	50.5	2	28.5	104.020		9043681040200
20	1/4	24	50.5	2	37.5	106.020		9043681060200
20	5/16	24	50.5	2	37.5	108.020		9043681080200
20	3/8	24	50.5	2	42.5	109.020		9043681090200
20	7/16	24	50.5	2	42.5	111.020		9043681110200
20	1/2	24	50.5	2	47.5	113.020		9043681130200
20	9/16	24	50.5	2	47.5	114.020		9043681140200
20	5/8	24	50.5	2	47.5	115.020		9043681150200
20	3	24	50.5	2	28.5	3.020		9043680030200
20	4	24	50.5	2	28.5	4.020		9043680040200
20	5	24	50.5	2	28.5	5.020		9043680050200
20	6	24	50.5	2	37.5	6.020		9043680060200
20	7	24	50.5	2	37.5	7.020		9043680070200
20	8	24	50.5	2	37.5	8.020		9043680080200
20	9	24	50.5	2	42.5	9.020		9043680090200
20	10	24	50.5	2	42.5	10.020		9043680100200
20	11	24	50.5	2	42.5	11.020		9043680110200
20	12	24	50.5	2	47.5	12.020		9043680120200
20	13	24	50.5	2	47.5	13.020		9043680130200
20	14	24	50.5	2	47.5	14.020		9043680140200
20	15	24	50.5	2	47.5	15.020		9043680150200
20	16	24	50.5	2	47.5	16.020		9043680160200
32	1/4	35.5	60.5	2	37.5	106.032		9043681060320
32	5/16	35.5	60.5	2	37.5	108.032		9043681080320
32	3/8	35.5	60.5	2	37.5	109.032		9043681090320
32	7/16	35.5	60.5	2	40.5	111.032		9043681110320
32	1/2	35.5	60.5	2	44.5	113.032		9043681130320
32	9/16	35.5	60.5	2	50.5	114.032		9043681140320
32	5/8	35.5	60.5	2	50.5	115.032		9043681150320
32	11/16	35.5	60.5	2	50.5	117.032		9043681170320
32	3/4	35.5	60.5	2	50.5	119.032		9043681190320
32	13/16	35.5	60.5	2	50.5	120.032		9043681200320
32	7/8	35.5	60.5	2	50.5	122.032		9043681220320
32	15/16	35.5	60.5	2	50.5	124.032		9043681240320
32	1	35.5	60.5	2	58.5	125.032		9043681250320
32	6	35.5	60.5	2	37.5	6.032		9043680060320
32	8	35.5	60.5	2	37.5	8.032		9043680080320
32	10	35.5	60.5	2	40.5	10.032		9043680100320
32	12	35.5	60.5	2	44.5	12.032		9043680120320
32	14	35.5	60.5	2	44.5	14.032		9043680140320
32	16	35.5	60.5	2	50.5	16.032		9043680160320
32	18	35.5	60.5	2	50.5	18.032		9043680180320
32	20	35.5	60.5	2	50.5	20.032		9043680200320
32	25	35.5	60.5	2	58.5	25.032		9043680250320

GÜHROJET reduction sleeves for hydraulic chucks with peripheral cooling

Product information

- for clamping smaller shank-Ø in hydraulic chucks
- clamping-Ø for tool shank tolerance h6
- with coolant slots for peripheral cooling, therefore process and tool life improvement
- concentricity ≤ 2 µm
- with adjustable limit stop
- the application of reduction sleeves makes it possible to increase the permissible transferable torque by approx. 25% in comparsion to direct clamping

Scope of delivery

- incl. stop element
- special dimensions on request

Series Number 4369

d_1 inch/mm	for shank Ø $d_{3\ h6}$ inch/mm	d_2 mm	l_1 mm	l_2 mm	l_3 mm	Order Code	EDP Numbers
1/2	1/8	16.5	45	2	26.5	3.013	9043690030130
1/2	3/16	16.5	45	2	26.5	4.013	9043690040130
1/2	1/4	16.5	45	2	26.5	6.013	9043690060130
1/2	5/16	16.5	45	2	26.5	8.013	9043690080130
1/2	3/8	16.5	45	2	26.5	9.013	9043690090130
3/4	1/8	24	50.5	2	28.5	3.019	9043690030190
3/4	3/16	24	50.5	2	28.5	4.019	9043690040190
3/4	1/4	24	50.5	2	37.5	6.019	9043690060190
3/4	5/16	24	50.5	2	37.5	8.019	9043690080190
3/4	3/8	24	50.5	2	42.5	9.019	9043690090190
3/4	7/16	24	50.5	2	42.5	11.019	9043690110190
3/4	1/2	24	50.5	2	47.5	13.019	9043690130190
3/4	9/16	24	50.5	2	47.5	14.019	9043690140190
3/4	5/8	24	50.5	2	47.5	15.019	9043690150190
1 1/4	1/4	35.5	60.5	2	37.5	6.031	9043690060310
1 1/4	5/16	35.5	60.5	2	37.5	8.031	9043690080310
1 1/4	3/8	35.5	60.5	2	37.5	9.031	9043690090310
1 1/4	1/2	35.5	60.5	2	44.5	13.031	9043690130310
1 1/4	9/16	35.5	60.5	2	44.5	14.031	9043690140310
1 1/4	5/8	35.5	60.5	2	50.5	15.031	9043690150310
1 1/4	11/16	35.5	60.5	2	50.5	17.031	9043690170310
1 1/4	3/4	35.5	60.5	2	50.5	19.031	9043690190310
1 1/4	7/8	35.5	60.5	2	50.5	22.031	9043690220310
1 1/4	1	35.5	60.5	2	58.5	25.031	9043690250310
1/2	5	16.5	45	2	26.5	105.013	9043691050130
1/2	6	16.5	45	2	26.5	106.013	9043691060130
3/4	3	24	50.5	2	28.5	103.019	9043691030190
3/4	4	24	50.5	2	28.5	104.019	9043691040190
3/4	6	24	50.5	2	37.5	106.019	9043691060190
3/4	8	24	50.5	2	37.5	108.019	9043691080190
3/4	10	24	50.5	2	42.5	110.019	9043691100190
3/4	12	24	50.5	2	47.5	112.019	9043691120190
3/4	14	24	50.5	2	47.5	114.019	9043691140190
1 1/4	20	35.5	60.5	2	50.5	120.031	9043691200310
1 1/4	25	35.5	60.5	2	58.5	125.031	9043691250310
12	1/8	16.5	45	2	26.5	103.012	9043691030120
12	3/16	16.5	45	2	26.5	104.012	9043691040120
12	1/4	16.5	45	2	34.5	106.012	9043691060120
12	5/16	16.5	45	2	34.5	108.012	9043691080120
12	3/8	16.5	45	2	34.5	109.012	9043691090120

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GÜHROJET reduction sleeves for hydraulic chucks with peripheral cooling

							Series Number	4369
d_1 inch/mm	for shank Ø d_3 h6 inch/mm	d_2 mm	l_1 mm	l_2 mm	l_3 mm	Order Code		EDP Numbers
20	1/8	24	50.5	2	28.5	103.020		9043691030200
20	3/16	24	50.5	2	28.5	104.020		9043691040200
20	1/4	24	50.5	2	37.5	106.020		9043691060200
20	5/16	24	50.5	2	37.5	108.020		9043691080200
20	3/8	24	50.5	2	42.5	109.020		9043691090200
20	7/16	24	50.5	2	42.5	111.020		9043691110200
20	1/2	24	50.5	2	47.5	113.020		9043691130200
20	9/16	24	50.5	2	47.5	114.020		9043691140200
20	5/8	24	50.5	2	47.5	115.020		9043691150200
32	1/2	35.5	60.5	2	44.5	113.032		9043691130320
32	5/8	35.5	60.5	2	50.5	115.032		9043691150320
32	3/4	35.5	60.5	2	50.5	119.032		9043691190320
32	7/8	35.5	60.5	2	50.5	122.032		9043691220320
32	1	35.5	60.5	2	58.5	125.032		9043691250320
12	3	16.5	45	2	26.5	3.012		9043690030120
12	4	16.5	45	2	26.5	4.012		9043690040120
12	5	16.5	45	2	26.5	5.012		9043690050120
12	6	16.5	45	2	34.5	6.012		9043690060120
12	8	16.5	45	2	34.5	8.012		9043690080120
20	3	24	50.5	2	28.5	3.020		9043690030200
20	4	24	50.5	2	28.5	4.020		9043690040200
20	5	24	50.5	2	28.5	5.020		9043690050200
20	6	24	50.5	2	37.5	6.020		9043690060200
20	7	24	50.5	2	37.5	7.020		9043690070200
20	8	24	50.5	2	37.5	8.020		9043690080200
20	9	24	50.5	2	42.5	9.020		9043690090200
20	10	24	50.5	2	42.5	10.020		9043690100200
20	11	24	50.5	2	42.5	11.020		9043690110200
20	12	24	50.5	2	47.5	12.020		9043690120200
20	13	24	50.5	2	47.5	13.020		9043690130200
20	14	24	50.5	2	47.5	14.020		9043690140200
20	15	24	50.5	2	47.5	15.020		9043690150200
20	16	24	50.5	2	47.5	16.020		9043690160200
32	6	35.5	60.5	2	37.5	6.032		9043690060320
32	8	35.5	60.5	2	37.5	8.032		9043690080320
32	10	35.5	60.5	2	40.5	10.032		9043690100320
32	12	35.5	60.5	2	44.5	12.032		9043690120320
32	14	35.5	60.5	2	44.5	14.032		9043690140320
32	16	35.5	60.5	2	50.5	16.032		9043690160320
32	18	35.5	60.5	2	50.5	18.032		9043690180320
32	20	35.5	60.5	2	50.5	20.032		9043690200320
32	25	35.5	60.5	2	58.5	25.032		9043690250320

Extraction key for reduction sleeves

Product information

- for Guhring no. 4368 and 4369
- for the simple removal of reduction sleeves

Series Number	4099
for reduction sleeves d_1	EDP Numbers
12 to 32	9040990010000

Senso 3000

Product information

- accurate, quick and simple measuring of the clamping force of hydraulic chucks
- mobility allows measuring within machines and fixtures
- determines clamping force via a pressure sensitive plug gauge
- display of absolute measuring value or percentage clamping force in relation to reference value

Scope of delivery

- incl. carbide proofing bar for determining the torque
- incl. type CR 2430 battery
- incl. sturdy case

Series Number		4038
clamping diameter mm	kg	EDP Numbers
6.0	1.1	9040380060000
8.0	1.1	9040380080000
10.0	1.3	9040380100000
12.0	1.3	9040380120000
14.0	1.3	9040380140000
16.0	1.3	9040380160000
18.0	1.5	9040380180000
20.0	1.5	9040380200000
25.0	2.0	9040380250000
32.0	2.5	9040380320000

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Adjustment screws

Product information

- for hydraulic chucks
- for conentional internal cooling
- with facing stop for standard shank ends
- for HSK 32/40 with clamping-Ø 10.0 and 12.0 mm use code no. 8.014

					Series Number	4900
for clamping-Ø	l_1 mm	G	SW1	SW2		EDP Numbers
6	14.0	M5	2.5	2.5		9049000060140
8	14.0	M6	3.0	3.0		9049000080140
10	14.0	M8x1	4.0	4.0		9049000100140
12/14	14.0	M10x1	5.0	5.0		9049000120140
16/18	14.0	M12x1	6.0	6.0		9049000160140
20/25/32	14.0	M16x1	6.0	6.0		9049000200140
20/25/32	14.0	M16x1	8.0	6.0		9049000201140

MQL length pre-setting screws for the conversion

Product information

- for hydraulic chucks and shrink fit chucks
- optimised for MQL with special geometry
- with tapered stop for MQL conical shank ends

					Series Number	4919
d_1 mm	l_1 mm	G	SW1	SW2		EDP Numbers
6	14.8	M5	2.5	2.5		9049190060000
8	15.6	M6	3.0	3.0		9049190080000
10	16.1	M8x1	4.0	4.0		9049190100000
10	16.6	M8x1	3.0	3.0		9049190100400
10	16.6	M6	3.0	3.0		9049190100320
12	16.6	M10x1	5.0	5.0		9049190120000
12	17.6	M6	3.0	3.0		9049190120320
14	17.6	M10x1	5.0	5.0		9049190140000
14	18.6	M6	3.0	3.0		9049190140400
16	18.6	M12x1	5.0	5.0		9049190160000
16	19.6	M6	3.0	3.0		9049190160400
18	19.6	M12x1	5.0	5.0		9049190180000
20	20.6	M16x1	5.0	5.0		9049190200000
25	22.6	M16x1	8.0	6.0		9049190250000
32	26.1	M16x1	8.0	6.0		9049190320000

MQL coolant delivery sets HSK-A for the conversion

Product information
- replace conventional coolant delivery sets, Guhring no. 4949, when applying MQL
- for hydraulic chucks to DIN 69882-7

Scope of delivery
- complete MQL coolant delivery set consisting of :
  coolant pipe, cap nut
  MQL tube and O-rings

Series Number 4924

for HSK-A	clamping-Ø mm	d_1 mm	d_2 mm	d_4 mm	l_1 mm	l_3 mm	G	EDP Numbers
32	6	2.5	6	3.5	54.2	28.0	M10x1	9049240320100
32	8	3.0	6	3.5	54.3	28.1	M10x1	9049240320300
32	10	3.0	6	3.5	55.8	29.6	M10x1	9049240320500
32	12	3.0	6	3.5	56.6	30.4	M10x1	9049240320700
40	6	2.5	8	4.0	45.1	16.0	M12x1	9049240400100
40	8	3.0	8	4.0	56.2	15.8	M12x1	9049240400300
40	10	3.0	8	4.0	46.3	17.1	M12x1	9049240400500
40	12	3.0	8	4.0	46.7	17.5	M12x1	9049240400700
50	6	2.5	10	4.0	44.6	11.9	M16x1	9049240500100
50	8	3.0	10	4.0	46.1	13.4	M16x1	9049240500300
50	10	4.0	10	4.0	45.7	13.0	M16x1	9049240500500
50	12	5.0	10	4.0	46.1	13.4	M16x1	9049240500700
50	14	5.0	10	4.0	51.5	18.8	M16x1	9049240500900
50	16	5.0	10	4.0	52.8	20.1	M16x1	9049240501100
50	18	5.0	10	4.0	53.2	20.5	M16x1	9049240501300
50	20	5.0	10	4.0	51.5	18.8	M16x1	9049240501500
63	6	2.5	12	4.0	45.7	9.5	M18x1	9049240630100
63	6	2.5	12	4.0	126.9	90.6	M18x1	9049240630110
63	6	2.5	12	4.0	176.9	140.6	M18x1	9049240630120
63	8	3.0	12	4.0	46.0	9.8	M18x1	9049240630300
63	8	3.0	12	4.0	126.1	89.9	M18x1	9049240630310
63	8	3.0	12	4.0	176.2	139.9	M18x1	9049240630320
63	10	4.0	12	4.0	51.7	15.5	M18x1	9049240630500
63	10	4.0	12	4.0	122.2	86.0	M18x1	9049240630510
63	10	4.0	12	4.0	172.2	135.9	M18x1	9049240630520
63	12/14/20	5.0	12	4.0	52.1	15.9	M18x1	9049240630700
63	16/18	5.0	12	4.0	53.8	17.6	M18x1	9049240630900
63	12/14	5.0	12	4.0	117.6	81.4	M18x1	9049240630910
63	12/14	5.0	12	4.0	167.6	131.3	M18x1	9049240630920
63	16	5.0	12	4.0	114.3	78.0	M18x1	9049240631110
63	25/32	6.0	12	4.0	77.0	40.8	M18x1	9049240631200
63	18	5.0	12	4.0	114.6	78.3	M18x1	9049240631310
63	16/18	5.0	12	4.0	164.6	128.3	M18x1	9049240631320
63	20	5.0	12	4.0	112.9	76.6	M18x1	9049240631510
63	20	5.0	12	4.0	162.9	126.6	M18x1	9049240631520
80	6	2.5	14	4.0	44.8	5.5	M20x1.5	9049240800100
80	8	3.0	14	4.0	44.9	5.6	M20x1.5	9049240800300
80	10	4.0	14	4.0	50.9	11.6	M20x1.5	9049240800500
80	12	5.0	14	4.0	51.3	12.0	M20x1.5	9049240800700
80	14	5.0	14	4.0	51.6	12.3	M20x1.5	9049240800900
80	16	5.0	14	4.0	57.9	18.6	M20x1.5	9049240801100
80	18	5.0	14	4.0	58.3	19.0	M20x1.5	9049240801300
80	20	5.0	14	4.0	56.6	17.3	M20x1.5	9049240801500
80	25	6.0	14	4.0	53.1	13.8	M20x1.5	9049240801700
80	32	6.0	14	4.0	77.2	37.9	M20x1.5	9049240801900
100	6	2.5	16	4.0	53.0	9.2	M24x1.5	9049241000100
100	8	3.0	16	4.0	53.7	9.9	M24x1.5	9049241000300
100	10	4.0	16	4.0	63.3	19.5	M24x1.5	9049241000500
100	12	5.0	16	4.0	63.8	20.0	M24x1.5	9049241000700
100	14	5.0	16	4.0	64.2	20.4	M24x1.5	9049241000900
100	16	5.0	16	4.0	65.4	21.6	M24x1.5	9049241001100
100	18	5.0	16	4.0	65.8	22.0	M24x1.5	9049241001300
100	20	5.0	16	4.0	69.2	25.4	M24x1.5	9049241001500
100	25	6.0	16	4.0	68.6	24.8	M24x1.5	9049241001700
100	32	6.0	16	4.0	64.6	20.8	M24x1.5	9049241001900

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HSK-A shrink fit chucks

Product information

- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- to DIN 69882-8
- for tool shank tolerance h6
- also available in the lengths l1 = 120 mm, 160 mm (concentricity 5 µm) and 200 mm (concentricity 7 µm)

Scope of delivery

- incl. setting screw Guhring no. 4977 or 4904
- for conventional cooling order coolant delivery set, Guhring no. 4949, separately
- special dimensions on request

Series Number 4736

HSK-A d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	kg	Order Code	EDP Numbers
32	6	21	26	70	36	**9049770060140**	0.30	6.032	**9047360060320**
32	8	21	26	70	36	**9049770080140**	0.30	8.032	**9047360080320**
32	10	24	29	75	41	**9049770100140**	0.30	10.032	**9047360100320**
32	12	24	29	80	46	**9049770120140**	0.30	12.032	**9047360120320**
40	6	21	27	80	36	**9049770060140**	0.40	6.040	**9047360060400**
40	8	21	27	80	36	**9049770080140**	0.40	8.040	**9047360080400**
40	10	24	32	80	41	**9049770100140**	0.50	10.040	**9047360100400**
40	12	24	32	90	46	**9049770120140**	0.50	12.040	**9047360120400**
40	14	27	34	90	46	**9049770120140**	0.60	14.040	**9047360140400**
40	16	27	34	90	49	**9049770160140**	0.50	16.040	**9047360160400**
40	18	33	42	95	49	**9049770160140**	0.90	18.040	**9047360180400**
40	20	33	42	100	51	**9049770201140**	0.90	20.040	**9047360200400**
50	6	21	27	80	36	**9049770060140**	0.60	6.050	**9047360060500**
50	8	21	27	80	36	**9049770080140**	0.60	8.050	**9047360080500**
50	10	24	32	85	41	**9049770100140**	0.70	10.050	**9047360100500**
50	12	24	32	90	46	**9049770120140**	0.70	12.050	**9047360120500**
50	14	27	34	90	46	**9049770120140**	0.70	14.050	**9047360140500**
50	16	27	34	95	49	**9049770160140**	1.00	16.050	**9047360160500**
50	18	33	42	95	49	**9049770160140**	0.90	18.050	**9047360180500**
50	20	33	42	100	51	**9049770201140**	0.90	20.050	**9047360200500**
63	1/8	10	18	80	36	**9049040050160**	0.70	903.063	**9047369030630**
63	3/16	10	18	80	40	**9049040080180**	0.70	904.063	**9047369040630**
63	1/4	20	27	80	36	**9049770060140**	0.80	906.063	**9047369060630**
63	5/16	21	27	80	36	**9049770080140**	0.80	907.063	**9047369070630**
63	3/8	24	32	85	41	**9049770080140**	0.80	909.063	**9047369090630**
63	1/2	24	32	90	46	**9049770120140**	0.90	912.063	**9047369120630**
63	5/8	27	34	95	49	**9049770120140**	1.00	915.063	**9047369150630**
63	3/4	33	42	100	49	**9049770160140**	1.20	919.063	**9047369190630**
63	1	44	53	115	57	**9049770201140**	1.80	925.063	**9047369250630**
63	3	10	18	80	30	**9049040050160**	0.70	3.063	**9047360030630**
63	4	10	18	80	35	**9049040060160**	0.70	4.063	**9047360040630**
63	5	10	18	80	40	**9049040080180**	0.70	5.063	**9047360050630**
63	6	21	27	80	36	**9049770060140**	0.80	6.063	**9047360060630**
63	8	21	27	80	36	**9049770080140**	0.80	8.063	**9047360080630**
63	10	24	32	85	41	**9049770100140**	0.90	10.063	**9047360100630**
63	12	24	32	90	46	**9049770120140**	0.90	12.063	**9047360120630**
63	14	27	34	90	46	**9049770120140**	1.00	14.063	**9047360140630**

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HSK-A shrink fit chucks GÜHROJET with peripheral cooling

Product information

- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- to DIN 69882-8
- for tool shank tolerance h6
- also available in the lengths l1 = 120 mm, 160 mm (concentricity 5 µm) and 200 mm (concentricity 7 µm)

Scope of delivery

- incl. setting screw Guhring no. 4977 or 4904
- for conventional cooling order coolant delivery set, Guhring no. 4949, separately
- special dimensions on request

Series Number 4736

HSK-A d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	kg	Order Code	EDP Numbers
63	16	27	34	95	49	9049770160140	1.00	16.063	9047360160630
63	18	33	42	95	49	9049770160140	1.20	18.063	9047360180630
63	20	33	42	100	51	9049770201140	1.20	20.063	9047360200630
63	25	44	53	115	57	9049770201140	1.80	25.063	9047360250630
63	3	10	25	120	30	9049040050160	0.80	203.063	9047362030630
63	4	10	25	120	35	9049040060160	0.80	204.063	9047362040630
63	5	10	25	120	40	9049040080180	0.80	205.063	9047362050630
63	6	21	27	120	36	9049770060140	0.90	206.063	9047362060630
63	8	21	27	120	36	9049770080140	1.00	208.063	9047362080630
63	10	24	32	120	41	9049770100140	1.10	210.063	9047362100630
63	12	24	32	120	46	9049770120140	1.20	212.063	9047362120630
63	14	27	34	120	46	9049770120140	1.20	214.063	9047362140630
63	16	27	34	120	49	9049770160140	1.20	216.063	9047362160630
63	18	33	42	120	49	9049770160140	1.40	218.063	9047362180630
63	20	33	42	120	51	9049770200140	1.40	220.063	9047362200630
63	32	44	53	120	61	9049770201140	1.70	32.063	9047360320630
63	3	10	31	160	30	9049040050160	0.90	103.063	9047361030630
63	4	10	31	160	35	9049040060160	0.90	104.063	9047361040630
63	5	10	31	160	40	9049040080180	0.90	105.063	9047361050630
63	6	21	27	160	36	9049770060140	1.10	106.063	9047361060630
63	8	21	27	160	36	9049770080140	1.10	108.063	9047361080630
63	10	24	32	160	41	9049770100140	1.30	110.063	9047361100630
63	12	24	32	160	46	9049770120140	1.30	112.063	9047361120630
63	14	27	34	160	46	9049770120140	1.40	114.063	9047361140630
63	16	27	34	160	49	9049770160140	1.40	116.063	9047361160630
63	18	33	42	160	49	9049770160140	1.60	118.063	9047361180630
63	20	33	42	160	51	9049770201140	1.60	120.063	9047361200630
63	25	44	53	160	57	9049770201140	1.80	125.063	9047361250630
63	32	44	53	160	61	9049770201140	1.70	132.063	9047361320630
63	6	21	27	200	36	9049770060140	1.30	306.063	9047363060630
63	8	21	27	200	36	9049770080140	1.30	308.063	9047363080630
63	10	24	32	200	41	9049770100140	1.50	310.063	9047363100630
63	12	24	32	200	46	9049770120140	1.50	312.063	9047363120630
63	14	27	34	200	46	9049770120140	1.70	314.063	9047363140630
63	16	27	34	200	49	9049770160140	1.70	316.063	9047363160630
63	18	33	42	200	49	9049770160140	1.80	318.063	9047363180630
63	20	33	42	200	51	9049770201140	1.80	320.063	9047363200630
63	25	44	53	200	57	9049770201140	2.00	325.063	9047363250630
63	32	44	53	200	61	9049770201140	1.90	332.063	9047363320630
80	6	21	27	85	36	9049770060140	1.30	6.080	9047360060800
80	8	21	27	85	36	9049770080140	1.30	8.080	9047360080800
80	10	24	32	90	41	9049770100140	1.40	10.080	9047360100800
80	12	24	32	95	46	9049770120140	1.40	12.080	9047360120800
80	14	27	34	95	46	9049770120140	1.50	14.080	9047360140800
80	16	27	34	100	49	9049770160140	1.50	16.080	9047360160800
80	18	33	42	100	49	9049770160140	1.70	18.080	9047360180800
80	20	33	42	105	51	9049770201140	1.70	20.080	9047360200800
80	25	44	53	115	57	9049770201140	2.20	25.080	9047360250800
80	32	44	53	120	61	9049770201140	2.10	32.080	9047360320800

HSK-A shrink fit chucks

Product information

- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- to DIN 69882-8
- for tool shank tolerance h6
- also available in the lengths l1 = 120 mm, 160 mm (concentricity 5 µm) and 200 mm (concentricity 7 µm)

Scope of delivery

- incl. setting screw Guhring no. 4977 or 4904
- for conventional cooling order coolant delivery set, Guhring no. 4949, separately
- special dimensions on request

Series Number **4736**

HSK-A d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	kg	Order Code	EDP Numbers
80	6	21	27	160	36	**9049770060140**	1.60	106.080	**9047361060800**
80	8	21	27	160	36	**9049770080140**	1.60	108.080	**9047361080800**
80	10	24	32	160	41	**9049770100140**	1.80	110.080	**9047361100800**
80	12	24	32	160	46	**9049770120140**	1.80	112.080	**9047361120800**
80	14	27	34	160	46	**9049770120140**	1.90	114.080	**9047361140800**
80	16	27	34	160	49	**9049770160140**	1.90	116.080	**9047361160800**
80	18	33	42	160	49	**9049770160140**	2.30	118.080	**9047361180800**
80	20	33	42	160	51	**9049770201140**	2.30	120.080	**9047361200800**
80	25	44	53	160	57	**9049770201140**	3.00	125.080	**9047361250800**
80	32	44	53	160	61	**9049770201140**	2.80	132.080	**9047361320800**
100	1/4	21	27	85	36	**9049770060140**	2.20	906.100	**9047369061000**
100	3/8	24	32	90	41	**9049770080140**	2.20	909.100	**9047369091000**
100	1/2	24	32	95	46	**9049770120140**	2.30	912.100	**9047369121000**
100	5/8	27	34	100	49	**9049770120140**	2.30	915.100	**9047369151000**
100	3/4	33	42	105	49	**9049770160140**	2.30	919.100	**9047369191000**
100	1	44	53	115	75	**9049770201140**	3.00	925.100	**9047369251000**
100	6	21	27	85	36	**9049770060140**	2.20	6.100	**9047360061000**
100	8	21	27	85	36	**9049770080140**	2.20	8.100	**9047360081000**
100	10	24	32	90	41	**9049770100140**	2.30	10.100	**9047360101000**
100	12	24	32	95	46	**9049770120140**	2.30	12.100	**9047360121000**
100	14	27	34	95	46	**9049770120140**	2.30	14.100	**9047360141000**
100	16	27	34	100	49	**9049770160140**	2.30	16.100	**9047360161000**
100	18	33	42	100	49	**9049770160140**	2.50	18.100	**9047360181000**
100	20	33	42	105	51	**9049770201140**	2.50	20.100	**9047360201000**
100	25	44	53	115	57	**9049770201140**	3.00	25.100	**9047360251000**
100	32	44	53	120	61	**9049770201140**	3.00	32.100	**9047360321000**
100	6	21	27	160	36	**9049770060140**	2.60	106.100	**9047361061000**
100	8	21	27	160	36	**9049770080140**	2.50	108.100	**9047361081000**
100	10	24	32	160	41	**9049770100140**	2.70	110.100	**9047361101000**
100	12	24	32	160	46	**9049770120140**	2.70	112.100	**9047361121000**
100	14	27	34	160	46	**9049770120140**	2.80	114.100	**9047361141000**
100	16	27	34	160	49	**9049770160140**	2.80	116.100	**9047361161000**
100	18	33	42	160	49	**9049770160140**	3.20	118.100	**9047361181000**
100	20	33	42	160	51	**9049770201140**	3.10	120.100	**9047361201000**
100	25	44	53	160	57	**9049770201140**	3.90	125.100	**9047361251000**
100	32	44	53	160	61	**9049770201140**	3.70	132.100	**9047361321000**
100	6	21	27	200	36	**9049770060140**	2.80	306.100	**9047363061000**
100	8	21	27	200	36	**9049770080140**	2.80	308.100	**9047363081000**
100	10	24	32	200	41	**9049770100140**	2.90	310.100	**9047363101000**
100	12	24	32	200	46	**9049770120140**	2.90	312.100	**9047363121000**
100	14	27	34	200	46	**9049770120140**	3.00	314.100	**9047363141000**
100	16	27	34	200	49	**9049770160140**	3.00	316.100	**9047363161000**
100	18	33	42	200	49	**9049770160140**	3.40	318.100	**9047363181000**
100	20	33	42	200	51	**9049770201140**	3.30	320.100	**9047363201000**
100	25	44	53	200	57	**9049770201140**	4.00	325.100	**9047363251000**
100	32	44	53	200	61	**9049770201140**	3.90	332.100	**9047363321000**

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HSK-A shrink fit chucks GÜHROJET with peripheral cooling

Product information

- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- for tool shank tolerance h6
- to DIN 69882-8
- optimised cooling for tools without internal coolant ducts
- good chip evacuation and increased process reliability

Scope of delivery

- incl. setting screw Guhring no. 4938
- for conventional cooling order coolant delivery set, Guhring no. 4949, separately
- special dimensions on request

GÜHROJET

Series Number 4755

HSK-A d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. 4938 …	kg	Order Code	EDP Numbers
40	6	21	27	80	36	**9049380060000**	0.50	6.040	**9047550060400**
40	8	21	27	80	36	**9049380080000**	0.50	8.040	**9047550080400**
40	10	24	32	80	41	**9049380100000**	0.50	10.040	**9047550100400**
40	12	24	32	90	46	**9049380120000**	0.50	12.040	**9047550120400**
40	14	27	33.5	90	46	**9049380120000**	0.50	14.040	**9047550140400**
40	16	27	33.5	90	49	**9049380160000**	0.50	16.040	**9047550160400**
50	6	21	27	80	36	**9049380060000**	0.60	6.050	**9047550060500**
50	8	21	27	80	36	**9049380080000**	0.60	8.050	**9047550080500**
50	10	24	32	85	41	**9049380100000**	0.60	10.050	**9047550100500**
50	12	24	32	90	46	**9049380120000**	0.70	12.050	**9047550120500**
50	14	27	34	90	46	**9049380120000**	0.70	14.050	**9047550140500**
50	16	27	34	95	49	**9049380160000**	0.70	16.050	**9047550160500**
50	18	33	41.5	95	49	**9049380160000**	0.90	18.050	**9047550180500**
50	20	33	41.5	100	51	**9049380200000**	0.90	20.050	**9047550200500**
63	6	21	27	80	36	**9049380060000**	0.80	6.063	**9047550060630**
63	8	21	27	80	36	**9049380080000**	0.80	8.063	**9047550080630**
63	10	24	32	85	41	**9049380100000**	0.90	10.063	**9047550100630**
63	12	24	32	90	46	**9049380120000**	0.90	12.063	**9047550120630**
63	14	27	34	90	46	**9049380120000**	1.00	14.063	**9047550140630**
63	16	27	34	95	49	**9049380160000**	1.00	16.063	**9047550160630**
63	18	33	42	95	49	**9049380160000**	1.20	18.063	**9047550180630**
63	20	33	42	100	51	**9049380200000**	1.20	20.063	**9047550200630**
63	6	21	27	120	36	**9049380060000**	0.90	206.063	**9047552060630**
63	8	21	27	120	36	**9049380080000**	0.90	208.063	**9047552080630**
63	10	24	32	120	41	**9049380100000**	1.10	210.063	**9047552100630**
63	12	24	32	120	46	**9049380120000**	1.20	212.063	**9047552120630**
63	14	27	34	120	46	**9049380120000**	1.20	214.063	**9047552140630**
63	16	27	34	120	49	**9049380160000**	1.20	216.063	**9047552160630**
63	18	33	42	120	49	**9049380160000**	1.20	218.063	**9047552180630**
63	20	33	42	120	51	**9049380200000**	1.40	220.063	**9047552200630**
100	6	21	27	85	36	**9049380060000**	2.20	6.100	**9047550061000**
100	8	21	27	85	36	**9049380080000**	2.20	8.100	**9047550081000**
100	10	24	32	90	41	**9049380100000**	2.30	10.100	**9047550101000**
100	12	24	32	95	46	**9049380120000**	2.30	12.100	**9047550121000**
100	14	27	34	95	46	**9049380120000**	2.30	14.100	**9047550141000**
100	16	27	34	100	49	**9049380160000**	2.30	16.100	**9047550161000**
100	18	33	42	100	49	**9049380160000**	2.50	18.100	**9047550181000**
100	20	33	42	105	51	**9049380200000**	2.50	20.100	**9047550201000**
100	25	44	53	115	57	**9049380200000**	3.00	25.100	**9047550251000**
100	32	44	53	120	61	**9049380200000**	3.00	32.100	**9047550321000**

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HSK-C shrink fit chucks

Product information

- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- for tool shank tolerance h6
- to DIN 69882-8

Scope of delivery

- incl. setting screw Guhring no. 4977
- special dimensions on request

Series Number 4758

HSK-C d_3	for clamping-Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guhring no. 4977	kg	Order Code	EDP Numbers
32	6	21	26	65	36	**9049770060140**	0.30	6.032	**9047580060320**
32	8	21	26	65	36	**9049770080140**	0.30	8.032	**9047580080320**
32	10	24	30	65	41	**9049770100140**	0.30	10.032	**9047580100320**
32	12	24	32	75	46	**9049770120140**	0.40	12.032	**9047580120320**
40	6	21	30	70	36	**9049770060140**	0.50	6.040	**9047580060400**
40	8	21	30	70	36	**9049770080140**	0.30	8.040	**9047580080400**
40	10	24	34	70	41	**9049770100140**	0.40	10.040	**9047580100400**
40	12	24	35	80	46	**9049770120140**	0.40	12.040	**9047580120400**
40	14	27	38	80	46	**9049770120140**	0.50	14.040	**9047580140400**
40	16	27	38	80	49	**9049770160140**	0.50	16.040	**9047580160400**
50	6	21	30	70	36	**9049770060140**	0.50	6.050	**9047580060500**
50	8	21	30	70	36	**9049770080140**	0.40	8.050	**9047580080500**
50	10	24	33	75	41	**9049770100140**	0.50	10.050	**9047580100500**
50	12	24	34	80	46	**9049770120140**	0.50	12.050	**9047580120500**
50	14	27	37	80	46	**9049770120140**	0.60	14.050	**9047580140500**
50	16	27	39	85	49	**9049770160140**	0.60	16.050	**9047580160500**
50	18	33	45	85	49	**9049770160140**	0.80	18.050	**9047580180500**
50	20	33	45	90	51	**9049770201140**	0.80	20.050	**9047580200500**
63	6	21	30	70	36	**9049770060140**	0.60	6.063	**9047580060630**
63	8	21	30	70	36	**9049770080140**	0.60	8.063	**9047580080630**
63	10	24	34	75	41	**9049770100140**	0.70	10.063	**9047580100630**
63	12	24	34	80	46	**9049770120140**	0.70	12.063	**9047580120630**
63	14	27	36	80	46	**9049770120140**	0.80	14.063	**9047580140630**
63	16	27	36	85	49	**9049770160140**	0.80	16.063	**9047580160630**
63	18	33	44	85	49	**9049770160140**	1.00	18.063	**9047580180630**
63	20	33	45	90	51	**9049770201140**	1.00	20.063	**9047580200630**
63	25	44	53	100	57	**9049770201140**	1.50	25.063	**9047580250630**
63	32	44	53	110	61	**9049770201140**	3.90	32.063	**9047580320630**

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HSK-E shrink fit chucks

Product information
- balancing quality G2.5 / 25,000 rev./min or U < 1 gmm
- for tool shank tolerance h6

Scope of delivery
- incl. setting screw Guhring no. 4977 or 4904
- for conventional cooling order coolant delivery set, Guhring no. 4949, separately
- special dimensions on request

Series Number 4737

HSK-E d_3	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	kg	Order Code	EDP Numbers
32	3	10	16	60	–	–	0.16	3.032	**9047370030320**
32	4	10	16	60	–	–	0.16	4.032	**9047370040320**
32	5	10	16	60	–	–	0.16	5.032	**9047370050320**
32	6	21	26	70	36	**9049770060140**	0.18	6.032	**9047370060320**
32	8	21	26	70	36	**9049770080140**	0.20	8.032	**9047370080320**
32	10	24	29	75	41	**9049770100140**	0.25	10.032	**9047370100320**
32	12	24	29	80	46	**9049770120140**	0.25	12.032	**9047370120320**
40	3	10	19	80	–	–	0.28	3.040	**9047370030400**
40	4	10	19	80	–	–	0.28	4.040	**9047370040400**
40	5	10	19	80	–	–	0.27	5.040	**9047370050400**
40	6	21	27	80	36	**9049770060140**	0.41	6.040	**9047370060400**
40	8	21	27	80	36	**9049770080140**	0.41	8.040	**9047370080400**
40	10	24	32	80	41	**9049770100140**	0.48	10.040	**9047370100400**
40	12	24	32	90	46	**9049770120140**	0.52	12.040	**9047370120400**
40	14	27	34	90	46	**9049770120140**	0.57	14.040	**9047370140400**
40	16	27	34	90	49	**9049770160140**	0.55	16.040	**9047370160400**
50	3	10	18	80	30	**9049040050160**	0.49	3.050	**9047370030500**
50	4	10	18	80	35	**9049040060160**	0.49	4.050	**9047370040500**
50	5	10	18	80	–	–	0.49	5.050	**9047370050500**
50	6	21	27	80	36	**9049770060140**	0.59	6.050	**9047370060500**
50	8	21	27	80	36	**9049770080140**	0.58	8.050	**9047370080500**
50	10	24	32	85	41	**9049770100140**	0.57	10.050	**9047370100500**
50	12	24	32	90	46	**9049770120140**	0.69	12.050	**9047370120500**
50	14	27	34	90	46	**9049770120140**	0.74	14.050	**9047370140500**
50	16	27	34	95	49	**9049770160140**	0.75	16.050	**9047370160500**
50	18	33	42	95	49	**9049770160140**	0.92	18.050	**9047370180500**
50	20	33	42	100	51	**9049770201140**	0.94	20.050	**9047370200500**
63	6	21	27	80	36	**9049770060140**	0.86	6.063	**9047370060630**
63	8	21	27	80	36	**9049770080140**	0.85	8.063	**9047370080630**
63	10	24	32	85	41	**9049770100140**	0.94	10.063	**9047370100630**
63	12	24	32	90	46	**9049770120140**	0.96	12.063	**9047370120630**
63	14	27	34	90	46	**9049770120140**	1.01	14.063	**9047370140630**
63	16	27	34	95	49	**9049770160140**	1.02	16.063	**9047370160630**
63	18	33	42	95	49	**9049770160140**	1.19	18.063	**9047370180630**
63	20	33	42	100	51	**9049770201140**	1.21	20.063	**9047370200630**
63	25	44	53	115	57	**9049770201140**	1.80	25.063	**9047370250630**
63	32	44	53	120	61	**9049770201140**	1.73	32.063	**9047370320630**

ISO taper shrink fit chucks

Product information

- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- ISO taper to DIN 69871 form AD/B
- for tool shank tolerance h6
- also available in the lengths l1 = 120 mm, 160 mm (concentricity 5 µm) and 200mm (concentricity 7 µm)

Scope of delivery

- incl. setting screw Guhring no. 4977 bzw. 4904
- order pull studs Guhring no. 4925, 4926 separately
- special dimensions on request

Series Number 4738

ISO taper	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	kg	Order Code	EDP Numbers
40	3	10	18	80	30	**9049040050160**	0.90	3.040	**9047380030400**
40	4	10	18	80	35	**9049040060160**	0.90	4.040	**9047380040400**
40	5	10	18	80	40	**9049040080180**	0.90	5.040	**9047380050400**
40	6	21	27	80	36	**9049770060140**	1.00	6.040	**9047380060400**
40	8	21	27	80	36	**9049770080140**	1.00	8.040	**9047380080400**
40	10	24	32	80	41	**9049770100140**	1.10	10.040	**9047380100400**
40	12	24	32	80	46	**9049770120140**	1.00	12.040	**9047380120400**
40	14	27	34	80	46	**9049770120140**	1.10	14.040	**9047380140400**
40	16	27	34	80	49	**9049770160140**	1.10	16.040	**9047380160400**
40	18	33	42	80	49	**9049770160140**	1.20	18.040	**9047380180400**
40	20	33	42	80	51	**9049770201140**	1.50	20.040	**9047380200400**
40	25	44	53	100	57	**9049770201140**	1.50	25.040	**9047380250400**
40	32	44	53	100	61	**9049770201140**	1.50	32.040	**9047380320400**
40	3	10	24	120	30	**9049040050160**	1.00	203.040	**9047382030400**
40	4	10	24	120	35	**9049040060160**	1.00	204.040	**9047382040400**
40	5	10	24	120	40	**9049040080180**	1.00	205.040	**9047382050400**
40	6	21	27	120	36	**9049770060140**	1.10	206.040	**9047382060400**
40	8	21	27	120	36	**9049770080140**	1.10	208.040	**9047382080400**
40	10	24	32	120	41	**9049770100140**	1.20	210.040	**9047382100400**
40	12	24	32	120	46	**9049770120140**	1.20	212.040	**9047382120400**
40	14	27	34	120	46	**9049770120140**	1.40	214.040	**9047382140400**
40	16	27	34	120	49	**9049770160140**	1.40	216.040	**9047382160400**
40	18	33	42	120	49	**9049770160140**	1.50	218.040	**9047382180400**
40	20	33	42	120	51	**9049770201140**	1.50	220.040	**9047382200400**
40	3	10	31	160	30	**9049040050160**	1.10	103.040	**9047381030400**
40	4	10	31	160	35	**9049040060160**	1.10	104.040	**9047381040400**
40	5	10	31	160	40	**9049040080180**	1.10	105.040	**9047381050400**
40	6	21	27	160	36	**9049770060140**	1.30	106.040	**9047381060400**
40	8	21	27	160	36	**9049770080140**	1.30	108.040	**9047381080400**
40	10	24	32	160	41	**9049770100140**	1.50	110.040	**9047381100400**
40	12	24	32	160	46	**9049770120140**	1.50	112.040	**9047381120400**
40	14	27	34	160	46	**9049770120140**	1.70	114.040	**9047381140400**
40	16	27	34	160	49	**9049770160140**	1.70	116.040	**9047381160400**
40	18	33	42	160	49	**9049770160140**	1.90	118.040	**9047381180400**
40	20	33	42	160	51	**9049770201140**	1.90	120.040	**9047381200400**
40	25	44	53	160	57	**9049770201140**	2.20	125.040	**9047381250400**
40	6	21	27	200	36	**9049770060140**	1.60	306.040	**9047383060400**
40	8	21	27	200	36	**9049770080140**	1.60	308.040	**9047383080400**
40	10	24	32	200	41	**9049770100140**	1.80	310.040	**9047383100400**
40	12	24	32	200	46	**9049770120140**	1.80	312.040	**9047383120400**
40	14	27	34	200	46	**9049770120140**	2.10	314.040	**9047383140400**

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ISO taper shrink fit chucks

Product information
- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- ISO taper to DIN 69871 form AD/B
- for tool shank tolerance h6
- also available in the lengths l1 = 120 mm, 160 mm (concentricity 5 µm) and 200mm (concentricity 7 µm)

Scope of delivery
- incl. setting screw Guhring no. 4977 bzw. 4904
- order pull studs Guhring no. 4925, 4926 separately
- special dimensions on request

Series Number **4738**

ISO taper	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	kg	Order Code	EDP Numbers
40	16	27	34	200	49	**9049770160140**	2.10	316.040	**9047383160400**
40	18	33	42	200	49	**9049770160140**	2.30	318.040	**9047383180400**
40	20	33	42	200	51	**9049770201140**	2.30	320.040	**9047383200400**
40	25	44	53	200	58	**9049770201140**	2.60	325.040	**9047383250400**
40	32	44	53	200	61	**9049770201140**	2.50	332.040	**9047383320400**
50	3	10	18	80	30	**9049040050160**	2.60	3.050	**9047380030500**
50	4	10	18	80	35	**9049040060160**	2.60	4.050	**9047380040500**
50	5	10	18	80	40	**9049040080180**	2.60	5.050	**9047380050500**
50	6	21	27	80	36	**9049770060140**	2.90	6.050	**9047380060500**
50	8	21	27	80	36	**9049770080140**	2.90	8.050	**9047380080500**
50	10	24	32	80	41	**9049770100140**	2.90	10.050	**9047380100500**
50	12	24	32	80	46	**9049770120140**	2.90	12.050	**9047380120500**
50	14	27	34	80	46	**9049770120140**	3.00	14.050	**9047380140500**
50	16	27	34	80	49	**9049770160140**	3.00	16.050	**9047380160500**
50	18	33	42	80	49	**9049770160140**	3.00	18.050	**9047380180500**
50	20	33	42	80	51	**9049770201140**	3.00	20.050	**9047380200500**
50	25	44	53	100	57	**9049770201140**	3.60	25.050	**9047380250500**
50	32	44	53	100	61	**9049770201140**	3.50	32.050	**9047380320500**
50	6	21	27	160	36	**9049770060140**	3.10	106.050	**9047381060500**
50	8	21	27	160	36	**9049770080140**	3.10	108.050	**9047381080500**
50	10	24	32	160	41	**9049770100140**	3.40	110.050	**9047381100500**
50	12	24	32	160	46	**9049770120140**	3.40	112.050	**9047381120500**
50	14	27	34	160	46	**9049770120140**	3.70	114.050	**9047381140500**
50	16	27	34	160	49	**9049770160140**	3.70	116.050	**9047381160500**
50	18	33	42	160	49	**9049770160140**	4.10	118.050	**9047381180500**
50	20	33	42	160	51	**9049770201140**	4.10	120.050	**9047381200500**
50	25	44	53	160	57	**9049770201140**	4.70	125.050	**9047381250500**
50	32	44	53	160	61	**9049770201140**	4.60	132.050	**9047381320500**
50	6	21	27	200	36	**9049770060140**	3.40	306.050	**9047383060500**
50	8	21	27	200	36	**9049770080140**	3.40	308.050	**9047383080500**
50	10	24	32	200	41	**9049770100140**	3.70	310.050	**9047383100500**
50	12	24	32	200	46	**9049770120140**	3.70	312.050	**9047383120500**
50	14	27	34	200	46	**9049770120140**	4.00	314.050	**9047383140500**
50	16	27	34	200	49	**9049770160140**	4.00	316.050	**9047383160500**
50	18	33	42	200	49	**9049770160140**	4.40	318.050	**9047383180500**
50	20	33	42	200	51	**9049770201140**	4.40	320.050	**9047383200500**
50	25	44	53	200	57	**9049770201140**	5.00	325.050	**9047383250500**
50	32	44	53	200	61	**9049770201140**	4.90	332.050	**9047383320500**

ISO taper shrink fit chucks GÜHROJET

Product information
- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- ISO taper to DIN 69871 form AD/B
- for tool shank tolerance h6
- optimized cooling for tools without internal coolant ducts
- good chip evacuation and increased process reliability

Scope of delivery
- incl. setting screw Guhring no. 4977
- order pull studs Guhring no. 4925, 4926 separately
- special dimensions on request

GÜHROJET

Series Number 4729

ISO taper	for shank Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	kg	Order Code	EDP Numbers
40	6	21	27	80	36	**9049770060140**	1.00	6.040	**9047290060400**
40	8	21	27	80	36	**9049770080140**	1.00	8.040	**9047290080400**
40	10	24	32	80	41	**9049770100140**	1.10	10.040	**9047290100400**
40	12	24	32	80	46	**9049770120140**	1.00	12.040	**9047290120400**
40	14	27	34	80	46	**9049770120140**	1.10	14.040	**9047290140400**
40	16	27	34	80	49	**9049770160140**	1.10	16.040	**9047290160400**
40	18	33	42	80	49	**9049770160140**	1.20	18.040	**9047290180400**
40	20	33	42	80	51	**9049770201140**	1.50	20.040	**9047290200400**
50	6	21	27	80	36	**9049770060140**	2.80	6.050	**9047290060500**
50	8	21	27	80	36	**9049770080140**	2.80	8.050	**9047290080500**
50	10	24	32	80	41	**9049770100140**	2.80	10.050	**9047290100500**
50	12	24	32	80	46	**9049770120140**	2.80	12.050	**9047290120500**
50	14	27	34	80	46	**9049770120140**	2.80	14.050	**9047290140500**
50	16	27	34	80	49	**9049770160140**	2.80	16.050	**9047290160500**
50	18	33	42	80	49	**9049770160140**	3.00	18.050	**9047290180500**
50	20	33	42	80	51	**9049770201140**	3.00	20.050	**9047290200500**
50	25	44	53	100	57	**9049770201140**	3.50	25.050	**9047290250500**
50	32	44	53	100	61	**9049770201140**	3.30	32.050	**9047290320500**

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MAS/BT shrink fit chucks

Product information
- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- MAS/BT to JIS B 6339 form AD/B
  (*: version AD without coolant supply over collar)
- for tool shank tolerance h6

Scope of delivery
- incl. setting screw Guhring no. 4977 bzw. 4904
- order pull studs Guhring no. 4927, 4928 separately
- special dimensions on request

									Series Number	4739
MAS/BT	for shank Ø $d_{1\ h6}$ mm/inch	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	kg	Order Code	EDP Numbers	
30*	1/8	10	18	80	34	**9049040050160**	0.60	103.030	**9047391030300**	
30*	3/16	10	18	80	34	**9049040080180**	0.60	104.030	**9047391040300**	
30*	1/4	21	27	80	36	**9049770060140**	0.60	106.030	**9047391060300**	
30*	5/16	21	27	80	36	**9049770080140**	0.70	107.030	**9047391070300**	
30*	3/8	24	32	80	41	**9049770080140**		109.030	**9047391090300**	
30*	1/2	24	34	80	46	**9049770120140**	0.70	112.030	**9047391120300**	
30*	5/8	27	34	80	49	**9049770160140**	0.80	115.030	**9047391150300**	
30*	3/4	33	42	90	51	**9049770160140**	0.90	119.030	**9047391190300**	
30*	3	10	18	80	30	**9049040050160**	0.60	3.030	**9047390030300**	
30*	4	10	18	80	35	**9049040060160**	0.60	4.030	**9047390040300**	
30*	5	10	18	80	40	**9049040080180**	0..6	5.030	**9047390050300**	
30*	6	21	27	80	36	**9049770060140**	0.70	6.030	**9047390060300**	
30*	8	21	27	80	36	**9049770080140**	0.70	8.030	**9047390080300**	
30*	10	24	32	80	41	**9049770100140**	0.80	10.030	**9047390100300**	
30*	12	24	32	80	46	**9049770120140**	0.80	12.030	**9047390120300**	
30*	14	27	34	80	46	**9049770120140**	0.80	14.030	**9047390140300**	
30*	16	27	34	80	49	**9049770160140**	0.80	16.030	**9047390160300**	
30*	18	33	42	90	49	**9049770160140**	0.90	18.030	**9047390180300**	
30*	20	33	42	90	51	**9049770201140**	0.90	20.030	**9047390200300**	
40	3	10	18	85	30	**9049040050160**	1.00	3.040	**9047390030400**	
40	4	10	18	85	35	**9049040060160**	1.00	4.040	**9047390040400**	
40	5	10	18	85	40	**9049040080180**	1.00	5.040	**9047390050400**	
40	6	21	27	90	36	**9049770060140**	1.20	6.040	**9047390060400**	
40	8	21	27	90	36	**9049770080140**	1.20	8.040	**9047390080400**	
40	10	24	32	90	41	**9049770100140**	1.30	10.040	**9047390100400**	
40	12	24	32	90	46	**9049770120140**	1.30	12.040	**9047390120400**	
40	14	27	34	90	46	**9049770120140**	1.40	14.040	**9047390140400**	
40	16	27	34	90	49	**9049770160140**	1.40	16.040	**9047390160400**	
40	18	33	42	90	49	**9049770160140**	1.40	18.040	**9047390180400**	
40	20	33	42	90	51	**9049770201140**	1.70	20.040	**9047390200400**	
40	25	44	53	100	57	**9049770201140**	1.80	25.040	**9047390250400**	
40	32	44	53	100	61	**9049770201140**	1.70	32.040	**9047390320400**	
40	6	21	27	130	36	**9049770060140**	1.30	6.140	**9047390061400**	
40	8	24	32	130	41	**9049770080140**	1.30	8.140	**9047390081400**	
40	10	24	32	130	46	**9049770100140**	1.40	10.140	**9047390101400**	
40	12	27	34	130	46	**9049770120140**	1.40	12.140	**9047390121400**	
40	14	27	34	130	49	**9049770120140**	1.40	14.140	**9047390141400**	
40	16	33	42	130	49	**9049770160140**	1.50	16.140	**9047390161400**	

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MAS/BT shrink fit chucks

Product information
- balancing quality G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- MAS/BT to JIS B 6339 form AD/B
  (*: version AD without coolant supply over collar)
- for tool shank tolerance h6

Scope of delivery
- incl. setting screw Guhring no. 4977 bzw. 4904
- order pull studs Guhring no. 4927, 4928 separately
- special dimensions on request

Series Number **4739**

MAS/BT	for shank Ø $d_{1\ h6}$ mm/inch	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	kg	Order Code	EDP Numbers
40	18	33	42	130	51	**9049770160140**	1.50	18.140	**9047390181400**
40	20	44	53	130	57	**9049770201140**	1.80	20.140	**9047390201400**
40	25	44	53	130	58	**9049770201140**	2.00	25.140	**9047390251400**
40	32	44	53	130	61	**9049770201140**	1.90	32.140	**9047390321400**
50	6	21	27	100	36	**9049770060140**	2.90	6.050	**9047390060500**
50	8	21	27	100	36	**9049770080140**	2.90	8.050	**9047390080500**
50	10	24	32	100	41	**9049770100140**	2.90	10.050	**9047390100500**
50	12	24	32	100	46	**9049770120140**	2.90	12.050	**9047390120500**
50	14	27	34	100	46	**9049770120140**	3.00	14.050	**9047390140500**
50	16	27	34	100	49	**9049770160140**	3.00	16.050	**9047390160500**
50	18	33	42	100	49	**9049770160140**	1.90	18.050	**9047390180500**
50	20	33	42	100	51	**9049770201140**	1.90	20.050	**9047390200500**
50	25	44	53	110	57	**9049770201140**	2.20	25.050	**9047390250500**
50	32	44	53	110	61	**9049770201140**	2.20	32.050	**9047390320500**

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CAT shrink fit holder

Product information

- Balancing quality G6.3 / 15.000rev./min.
- Including balancing threads 4x M6 / 6xM6
- Taper according to ANSI/ASME B 5.50
- Coolant through center and also through flange (plugged with threaded pins when supplied)
- CAT 40 - 5/8 x 11 retention knob thread
- CAT 50 - 1” x 8 retention knob thread

Scope of delivery

- Including setting screw, Guhring no. 4977 with axial force dampening for perfect runout accuracy
- Special dimensions on request

								Series Number	4764
CAT	clamping dia. d1 in h6 inch/mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	Order Code		EDP Numbers
40	1/4	21	27	80	36	**9049770060140**	106.040		**9047641060400**
40	3/8	24	32	80	41	**9049770080140**	109.040		**9047641090400**
40	1/2	24	32	80	46	**9049770120140**	112.040		**9047641120400**
40	5/8	27	34	80	49	**9049770160140**	115.040		**9047641150400**
40	3/4	33	42	80	49	**9049770160140**	119.040		**9047641190400**
40	1	44	53	100	57	**9049770201140**	125.040		**9047641250400**
40	1 1/4	44	53	100	61	**9049770201140**	131.040		**9047641310400**
40	6	21	27	80	36	**9049770060140**	6.040		**9047640060400**
40	8	21	27	80	36	**9049770080140**	8.040		**9047640080400**
40	10	24	32	80	41	**9049770100140**	10.040		**9047640100400**
40	12	24	32	80	46	**9049770120140**	12.040		**9047640120400**
40	14	27	34	80	46	**9049770120140**	14.040		**9047640140400**
40	16	27	34	80	49	**9049770160140**	16.040		**9047640160400**
40	18	33	42	80	49	**9049770160140**	18.040		**9047640180400**
40	20	33	42	80	51	**9049770201140**	20.040		**9047640200400**
40	25	44	53	100	57	**9049770201140**	25.040		**9047640250400**
40	32	44	53	100	61	**9049770201140**	32.040		**9047640320400**
50	1/4	21	27	80	36	**9049770060140**	106.050		**9047641060500**
50	3/8	24	32	80	41	**9049770080140**	109.050		**9047641090500**
50	1/2	24	32	80	46	**9049770120140**	112.050		**9047641120500**
50	5/8	27	34	80	49	**9049770160140**	115.050		**9047641150500**
50	3/4	33	42	80	49	**9049770160140**	119.050		**9047641190500**
50	1	44	53	100	57	**9049770201140**	125.050		**9047641250500**
50	1 1/4	44	53	100	61	**9049770201140**	131.050		**9047641310500**
50	6	21	27	80	36	**9049770060140**	6.050		**9047640060500**
50	8	21	27	80	36	**9049770080140**	8.050		**9047640080500**
50	10	24	32	80	41	**9049770100140**	10.050		**9047640100500**
50	12	24	32	80	46	**9049770120140**	12.050		**9047640120500**
50	14	27	34	80	46	**9049770120140**	14.050		**9047640140500**
50	16	27	34	80	49	**9049770160140**	16.050		**9047640160500**
50	18	33	42	80	49	**9049770160140**	18.050		**9047640180500**
50	20	33	42	80	51	**9049770201140**	20.050		**9047640200500**
50	25	44	53	100	57	**9049770201140**	25.050		**9047640250500**
50	32	44	53	100	61	**9049770201140**	32.050		**9047640320500**

CAT GUHROJET shrink fit holder

Product information

- Optimized cooling for tools without internal coolant ducts
- Good chip evacuation and increased process reliability
- Balancing quality G6.3 / 15.000rev./min.
- Including balancing threads 4x M6 / 6xM6
- Taper according to ANSI/ASME B 5.50
- Coolant through center and also through flange (plugged with threaded pins when supplied)
- CAT 40 - 5/8 x 11 retention knob thread
- CAT 50 - 1” x 8 retention knob thread

Scope of delivery

- Including setting screw, Guhring no. 4938 with slots for coolant supply
- Special dimensions on request

GÜHROJET

Series Number	4765

CAT	clamping dia. d1 in h6 inch	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	Order Code	EDP Numbers
40	1/4	21	27	80	36	**9049770060140**	106.040	**9047651060400**
40	3/8	24	32	80	41	**9049770080140**	109.040	**9047651090400**
40	1/2	24	32	80	46	**9049770120140**	112.040	**9047651120400**
40	5/8	27	34	80	49	**9049770160140**	115.040	**9047651150400**
40	3/4	33	42	80	49	**9049770160140**	119.040	**9047651190400**
50	3/8	24	32	80	41	**9049770080140**	109.050	**9047651090500**
50	1/2	24	32	80	46	**9049770120140**	112.050	**9047651120500**
50	3/4	33	42	80	49	**9049770160140**	119.050	**9047651190500**
50	1	44	53	100	57	**9049770201140**	125.050	**9047651250500**

A gripping principle

When shrink fitting tools into shrink fit chucks, the decisive factors for ensuring the safe clamping of the tool in the tool holder are solely the heating and cooling of the tool holder. The heating process expands the shrink fit chuck enabling a tool to be inserted or withdrawn respectively. During the cooling process it contracts again and clamps the inserted tool with maximum clamping force.

Because the shrink fit chucks can become extremely hot in localized areas during the heating process and the tools shrink fitted for insertion or withdrawal respectively possess very sharp cutting edges, it is important that the operator wears Kevlar® gloves during the shrink fit operation to prevent burns and cuts to the hands.

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Shrink fit extensions

Product information

- for clamping in hydraulic chucks or shrink fit chucks
- internal cooling suitable
- we recommend the use of special cooling adaptors Guhring no. 4419
- for carbide tool shanks in tolerance h6 (from d1 14mm also HSS possible)

Scope of delivery

- incl. setting screw Guhring no. 4977 or 4904
- special dimensions on request

Series Number 4719

for shank Ø $d_{1\ h6}$ mm	d_2 mm	$d_{3\ h6}$ mm	d_4 mm	l_1 mm	l_2 mm	incl. setting screw Guh. no. Code no.	Order Code	EDP Numbers
3	7	16	16	115	30	**9049040050160**	3.016	**9047190030160**
4	7	16	16	115	35	**9049040060160**	4.016	**9047190040160**
5	8	16	16	115	40	**9049040080180**	5.016	**9047190050160**
6	10	16	16	115	36	**9049770060140**	6.016	**9047190060160**
8	12	16	16	115	36	**9049770080140**	8.016	**9047190080160**
10	14	16	16	115	41	**9049770100140**	10.016	**9047190100160**
12	16	16	23	115	46	**9049770120140**	12.016	**9047190120160**
3	7	20	16	115	30	**9049040050160**	3.020	**9047190030200**
4	8	20	17	115	35	**9049040060160**	4.020	**9047190040200**
5	9	20	18	115	40	**9049040080180**	5.020	**9047190050200**
6	10	20	19	115	36	**9049770060140**	6.020	**9047190060200**
8	12	20	20	115	36	**9049770080140**	8.020	**9047190080200**
10	14	20	20	115	41	**9049770100140**	10.020	**9047190100200**
12	16	20	20	115	46	**9049770120140**	12.020	**9047190120200**
14	20	20	29	150	46	**9049770120140**	14.020	**9047190140200**
14	20	25	29	150	46	**9049770120140**	14.025	**9047190140250**
16	24	25	33	150	49	**9049770160140**	16.025	**9047190160250**
3	10	20	20	160	30	**9049040050160**	3.120	**9047190031200**
4	10	20	20	160	35	**9049040060160**	4.120	**9047190041200**
5	10	20	20	160	40	**9049040080180**	5.120	**9047190051200**
6	14	20	20	160	36	**9049770060140**	6.120	**9047190061200**
8	14	20	20	160	36	**9049770080140**	8.120	**9047190081200**
10	20	25	25	160	41	**9049770100140**	10.125	**9047190101250**
12	20	25	25	160	46	**9049770120140**	12.125	**9047190121250**
14	20	25	29	160	46	**9049770160140**	14.125	**9047190141250**
16	22	25	33	160	49	**9049770160140**	16.125	**9047190161250**
18	27	32	32	160	49	**9049770160140**	18.132	**9047190181320**
20	27	32	32	160	51	**9049770201140**	20.132	**9047190201320**
3	10	20	20	200	30	**9049040050160**	3.220	**9047190032200**
4	10	20	20	200	35	**9049040060160**	4.220	**9047190042200**
5	10	20	20	200	40	**9049040080180**	5.220	**9047190052200**
6	14	20	20	200	36	**9049770060140**	6.220	**9047190062200**
8	14	20	20	200	36	**9049770080140**	8.220	**9047190082200**
10	20	25	25	200	41	**9049770100140**	10.225	**9047190102250**
12	20	25	25	200	46	**9049770120140**	12.225	**9047190122250**
14	20	32	32	200	46	**9049770160140**	14.232	**9047190142320**
16	24	32	32	200	49	**9049770160140**	16.232	**9047190162320**
18	27	32	32	200	49	**9049770200140**	18.232	**9047190182320**
20	27	32	32	200	51	**9049770201140**	20.232	**9047190202320**

Universal length setting adaptor

Product information

- for shrink fit and hydraulic chucks
- for length pre-setting of the setting screw with the cutting tool (less difference dimension l2, see sketch)
- flexibly mounted hexagonal key SW1/SW2 (*only available as rigid design)
- with standard screws suitable for wet application Guhring no. 4900, 4941, 4977
- suitable with MQL setting screws Guhring no. 4621, 4919, 4937

Series Number 4718

d_1 mm	d_2 mm	l_1 mm	l_2 mm	l_3 mm	l_4 mm	SW1	SW2	SW3	EDP Numbers
6.0	25.0	115.0	80.0	50.0	10.0	2.0	1.5	-	9047180060010
6.0	25.0	115.0	80.0	50.0	10.0	3.0	2.5	-	9047180060000
6*	25.0	115.0	80.0	50.0	10.0	4.0	-	-	9047180060020
8.0	25.0	115.0	80.0	50.0	10.0	2.0	1.5	-	9047180080010
8.0	25.0	115.0	80.0	50.0	10.0	3.0	-	-	9047180080000
8*	25.0	115.0	80.0	50.0	10.0	4.0	-	-	9047180080020
10.0	25.0	115.0	80.0	50.0	10.0	2.0	1.5	-	9047180100010
10.0	25.0	115.0	80.0	50.0	10.0	4.0	3.0	-	9047180100000
12.0	25.0	115.0	80.0	50.0	10.0	3.0	2.0	1.5	9047180120010
12.0	25.0	115.0	80.0	50.0	10.0	5.0	4.0	-	9047180120000
14.0	25.0	115.0	80.0	50.0	10.0	3.0	2.0	1.5	9047180140010
14.0	25.0	115.0	80.0	50.0	10.0	5.0	4.0	-	9047180140000
16.0	25.0	120.0	85.0	55.0	10.0	3.0	2.0	1.5	9047180160010
16.0	25.0	120.0	85.0	55.0	10.0	6.0	5.0	4.0	9047180160000
18.0	30.0	120.0	85.0	55.0	10.0	3.0	2.0	1.5	9047180180010
18.0	30.0	120.0	85.0	55.0	10.0	6.0	5.0	4.0	9047180180000
20.0	30.0	135.0	90.0	65.0	10.0	4.0	3.0	2.0	9047180200010
20.0	30.0	135.0	90.0	65.0	10.0	8.0	5.0	-	9047180200000
25.0	35.0	140.0	100.0	70.0	10.0	4.0	3.0	2.0	9047180250010
25.0	35.0	140.0	100.0	70.0	10.0	8.0	5.0	-	9047180250000
32.0	45.0	150.0	100.0	70.0	10.0	4.0	3.0	2.0	9047180320010
32.0	45.0	150.0	100.0	70.0	10.0	8.0	5.0	-	9047180320000

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Setting screws for GÜHROJET shrink fit chucks

Product information

- setting screws for GÜHROJET-shrink fit chucks Guhring no. 4755 and 4729.
- slotted for reliable coolant supply for conventional internal cooling

					Series Number	4938
for clamping-Ø	l_1 mm	G	SW1	SW2		EDP Numbers
6	14.0	M5	2.5	2.5		9049380060000
8	14.0	M6	3.0	3.0		9049380080000
10	14.0	M8 x 1	4.0	4.0		9049380100000
12/14	14.0	M10 x 1	5.0	5.0		9049380120000
16/18	14.0	M12 x 1	6.0	6.0		9049380160000
20/25/32	14.0	M16 x 1	8.0	6.0		9049380200000

Shrink fit chuck length setting screw with axial force damping

Product information

- for shrink fit chucks
- for conventional internal cooling
- with facing stop for standard shank ends
- with patented axial force damping. O-ring reduces the concentricity error when shrink fitting on the setting screw

						Series Number	4977
for clamping-Ø	l_1 mm	G	SW1	SW2	O-Ring		EDP Numbers
6	14.0	M5	2.5	2.5	3 x 1		9049770060140
8	14.0	M6	3.0	3.0	3.5 x 1		9049770080140
10	14.0	M8 x 1	4.0	4.0	6 x 1		9049770100140
12/14	14.0	M10 x 1	5.0	5.0	6 x 1		9049770120140
16/18	14.0	M12 x 1	6.0	6.0	7.5 x 1.5		9049770160140
20/25/32	14.0	M16 x 1	8.0	6.0	12 x 1.5		9049770201140

Length setting screws for conventional cooling

Product information

- To adapt MQL tool holders to meet the requirements of conventional wet machining. For plain end shanks. The height of screw head compensates the height of MQL taper.

- for MQL HSK-A shrink fit chucks hydraulic chucks
- for use with shank according to DIN 6535 with plain shank end for conventional cooling
- The patented face orientated o-ring provides axial force clamping which eliminates concentricity errors.

	Series Number	4941

for HSK-A	clamping - Ø	G	d_1 mm	l_1 mm	SW	EDP Numbers
40	6	M5	6	15	2.5	**9049410060410**
40	6	M7x1	6	15	2.5	**9049410060400**
40	8	M7x1	6	18	3	**9049410080400**
50	6	M8x1	8	14	2.5	**9049410060500**
50	8	M8x1	7	18	3	**9049410080500**
40 / 50	10	M8x1	10	17.7	4	**9049410100500**
63/ 80/ 100	6	M10x1	9	22	2.5	**9049410061000**
63/ 80/ 100	8	M10x1	9	22	3	**9049410081000**
63/ 80/ 100	10	M10x1	10	16.2	4	**9049410101000**
40/ 50/ 63/ 80/ 100	12	M10x1	10	16.2	5	**9049410121000**
40/ 50/ 63/ 80/ 100	14	M10x1	10	17.2	5	**9049410141000**
50/ 63/ 80/ 100	16	M12x1	16	18.2	6	**9049410161000**
50/ 63/ 80/ 100	18	M12x1	16	19.2	6	**9049410181000**
50/ 63/ 80/ 100	20	M16x1	16	19.2	8	**9049410201000**
63/ 80/ 100	25	M16x1	16	22.7	8	**9049410251000**
63/ 80/ 100	32	M16x1	16	26.7	8	**9049410321000**

Setting screws

Product information

- for HSK-A side lock holders with bore to DIN 1835-2, form E, shrink fit chuck and shrink fit extensions

Scope of delivery

- minimum order quantity 5

	Series Number	4904

G	l_1 mm	SW	EDP Numbers
M5	16	2.5	**9049040050160**
M5	20	2.5	**9049040050200**
M6	16	3.0	**9049040060160**
M6	20	3.0	**9049040060200**
M8	12	3.0	**9049040080120**
M8	18	4.0	**9049040080180**
M10	17	3.0	**9049040100170**
M10	20	5.0	**9049040100200**
M12	14	3.0	**9049040120140**
M12	20	5.0	**9049040120200**
M16	25	5.0	**9049040160250**
M20	25	6.0	**9049040200250**

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MQL length setting screws

Product information
- for hydraulic chucks and shrink fit chucks
- with special geometry optimized for MQL
- with conical end for tapered MQL shank ends

Series Number	4919

d_1 mm	l_1 mm	G	SW1	SW2	EDP Numbers
6	14.8	M5	2.5	2.5	**9049190060000**
8	15.6	M6	3.0	3.0	**9049190080000**
10	16.1	M8x1	4.0	4.0	**9049190100000**
10	16.6	M8x1	3.0	3.0	**9049190100400**
10	16.6	M6	3.0	3.0	**9049190100320**
12	16.6	M10x1	5.0	5.0	**9049190120000**
12	17.6	M6	3.0	3.0	**9049190120320**
14	17.6	M10x1	5.0	5.0	**9049190140000**
14	18.6	M6	3.0	3.0	**9049190140400**
16	18.6	M12x1	5.0	5.0	**9049190160000**
16	19.6	M6	3.0	3.0	**9049190160400**
18	19.6	M12x1	5.0	5.0	**9049190180000**
20	20.6	M16x1	5.0	5.0	**9049190200000**
25	22.6	M16x1	8.0	6.0	**9049190250000**
32	26.1	M16x1	8.0	6.0	**9049190320000**

MQL coolant delivery sets HSK-A

Product information
- replace conventional coolant delivery sets, Guhring no. 4949, when applying MQL
- for shrink fit chucks to DIN 69882-8

Scope of delivery
- complete MQL coolant delivery sets

Series Number	4924

for HSK-A	clamping-Ø mm	d_1 mm	d_2 mm	d_4 mm	l_1 mm	l_3 mm	G	EDP Numbers
32	6	2.5	6	3.5	45.1	18.9	M10x1	**9049240320200**
32	10	3.0	6	3.5	45.7	19.5	M10x1	**9049240320600**
32	8/12	3.0	6	3.5	45.2	19.0	M10x1	**9049240320800**
40	6	2.5	8	4.0	56.0	26.9	M12x1	**9049240400200**
40	8	3.0	8	4.0	56.2	27.0	M12x1	**9049240400400**
40	10	3.0	8	4.0	51.7	22.5	M12x1	**9049240400600**
40	12/14	3.0	8	4.0	57.2	28.0	M12x1	**9049240401000**
40	16	3.0	8	4.0	54.2	25.0	M12x1	**9049240401200**
50	6	2.5	10	4.0	55.4	22.7	M16x1	**9049240500200**
50	8	3.0	10	4.0	46.5	13.8	M16x1	**9049240500400**

MQL coolant delivery sets HSK-A

Product information
- replace conventional coolant delivery sets, Guhring no. 4949, when applying MQL
- for shrink fit chucks to DIN 69882-8

Scope of delivery
- complete MQL coolant delivery sets

Series Number 4924

for HSK-A	clamping-Ø mm	d_1 mm	d_2 mm	d_4 mm	l_1 mm	l_3 mm	G	EDP Numbers
50	10	4.0	10	4.0	46.1	13.4	M16x1	**9049240500600**
50	12	5.0	10	4.0	55.7	23.0	M16x1	**9049240500800**
50	14	5.0	10	4.0	55.7	22.9	M16x1	**9049240501000**
50	16/18	5.0	10	4.0	57.7	25.0	M16x1	**9049240501400**
50	20	5.0	10	4.0	60.7	28.0	M16x1	**9049240501600**
63	6	2.5	12	4.0	56.7	20.5	M18x1	**9049240630200**
63	6	2.5	12	4.0	137.7	101.4	M18x1	**9049240630210**
63	8	3.0	12	4.0	57.0	20.8	M18x1	**9049240630400**
63	8	3.0	12	4.0	137.0	100.7	M18x1	**9049240630410**
63	10	4.0	12	4.0	55.7	19.5	M18x1	**9049240630600**
63	10	4.0	12	4.0	132.2	95.9	M18x1	**9049240630610**
63	12/14	5.0	12	4.0	55.7	19.5	M18x1	**9049240630800**
63	12/14	5.0	12	4.0	127.1	90.8	M18x1	**9049240630810**
63	16/18	5.0	12	4.0	57.5	21.3	M18x1	**9049240631000**
63	16/18	5.0	12	4.0	124.3	88.0	M18x1	**9049240631410**
63	20	5.0	12	4.0	60.7	24.5	M18x1	**9049240631100**
63	20	5.0	12	4.0	122.1	85.8	M18x1	**9049240631610**
63	25	6.0	12	4.0	69.0	32.8	M18x1	**9049240631300**
63	25	6.0	12	4.0	116.2	79.9	M18x1	**9049240631810**
63	32	6.0	12	4.0	70.7	34.5	M18x1	**9049240631400**
63	32	6.0	12	4.0	112.2	75.9	M18x1	**9049240632010**
80	6	2.5	14	4.0	61.2	21.9	M20x1.5	**9049240800200**
80	8	3.0	14	4.0	61.3	22.0	M20x1.5	**9049240800400**
80	10	4.0	14	4.0	61.3	22.0	M20x1.5	**9049240800600**
80	12/14	5.0	14	4.0	61.3	22.0	M20x1.5	**9049240801000**
80	16/18	5.0	14	4.0	63.3	24.0	M20x1.5	**9049240801400**
80	20	5.0	14	4.0	66.3	27.0	M20x1.5	**9049240801600**
80	25	6.0	14	4.0	70.3	31.0	M20x1.5	**9049240801800**
80	32	6.0	14	4.0	71.3	32.0	M20x1.5	**9049240802000**
100	6	2.5	16	4.0	63.9	20.1	M24x1.5	**9049241000200**
100	8	3.0	16	4.0	64.6	20.8	M24x1.5	**9049241000400**
100	10	4.0	16	4.0	63.3	19.5	M24x1.5	**9049241000600**
100	12/14	5.0	16	4.0	63.3	19.5	M24x1.5	**9049241001000**
100	16/18	5.0	16	4.0	65.3	21.5	M24x1.5	**9049241001400**
100	20	5.0	16	4.0	68.3	24.5	M24x1.5	**9049241001600**
100	25	6.0	16	4.0	72.3	28.5	M24x1.5	**9049241001800**
100	32	6.0	16	4.0	73.3	29.5	M24x1.5	**9049241002000**

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MQL conversion of tool holders for conventional cooling

With the assistance of Guhring's MQL length adjustment screw, Guhring no. 4919, and MQL coolant delivery set, Guhring no. 4924, tool holders such as shrink fit chucks, Guhring no. 4736, from Guhring's GM 300 program can be converted for application under MQL conditions and automatic tool clamping. This combination is suitable for 2-channel MQL systems. The insertion depth is reduced by the length of the cone on the MQL shank and does not correspond with our Guhring standard. Special solutions for SK/BT are available on request.

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GSS 2000

Simple operation

The movement of the spindle and its heating is a single handed operation.
Tool clamping cannot be simpler and quicker!

Quick cooling

The water-cooled cooling elements cool down the shrink fit chuck quickly and safely. The shrink fit chuck remains clean and dry, **so that it can be applied again without drying and without rusting**. Hot spots remain safely screened during the cooling process in order to prevent burns.

Safe shrink fitting

The minimal heating of the shrink fit chuck ensures **maximum operating safety** on the one hand, on the other the controlled heating ensures the **long life** of the shrink fit chuck.

The control panel

The clear control panel with display makes the operation of the GSS 2000 **very user-friendly.**

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Benefit from the advantages of GSS 2000

GSS 2000

Efficient operation

The turntable allows simultaneous preparation, heating and cooling of the shrink fit chucks. **Subsequently, there is no waiting time, tool clamping is seamless and with maximum efficiency.**

All under control

Practical locations and compartments provide room for accessories such as stop discs or gloves in close proximity to the equipment. **Thus all the necessary components are always at hand.**

- **High-performance spindle,** hence quick change time
- **Overheating protection** for holder
- **Automatic mode** possible (equipment automatically selects the correct heating program)
- **Error detection** choosing wrong chuck/program
- **Heating programs** for standard/reinforced and very small holder/shrink fit extensions
- **Maximum rigidity**
- **Highest cutting rates**

GSS 2000 Comfort version

Product information

- 3-station system with turntable

Scope of delivery

- incl. base system with turntable
- incl. induction coil Guhring no. 4743 / version 2008
- incl. 1 limit stop collar set Guhring no. 4769 / version 2008
- incl. SpeedCooler Guhring no. 4747
- incl. 1 pair of gloves Guhring no. 4750
- with integrated SpeedCooler-Manager

- order HSK-/ISO-holders Guhring nos. 4745, 4744 separately

	Series Number 4742
	EDP Numbers
US version 50/60 Hz / 400-480 V, SpeedCooler 115 V	9047420020000

GSS 2000 HSK holders

Product information

- for GSS 2000 Comfort Plus Guhring no. 4742

- holder (spider) for turn-table to hold max. 3 shrink fit chucks.

Series Number	4745
for HSK-A/C/E	EDP Numbers
32	9047450320000
40	9047450400000
50	9047450500000
63	9047450630000
80	9047450800000
100	9047451000000

GSS 2000 ISO taper holders

Product information

- for GSS 2000 Comfort Plus Guhring no. 4742
- also suitable for MAS-BT

- holder (spider) for turn-table to hold max. 3 shrink fit chucks.

Series Number	4744
for ISO taper and BT	EDP Numbers
30	9047440300000
40	9047440400000
50	9047440500000

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System cart

Product information

- for GSS 2000
- for mobile and stationary application
- systematic storage of cooler and accessories

	Series Number	4748
		EDP Numbers
System cart		9047480010000

Swivel compartments for GSS 2000

Product information

- for the clean storage of GSS shrink fit system accessories, i.e. limit stop washers, gloves, measuring instruments etc.
- suitable for GSS 2000 Comfort Plus and ECO Plus Guhring no. 4742 and 4752

Scope of delivery

- swivel compartment does not include accessories shown

	Series Number	4763
		EDP Numbers
Swivel compartments for GSS 2000 accessories		9047630010000

Tongs

Product information

- for the safe handling of hot tools

	Series Number	4749
		EDP Numbers
Tongs		9047490010000

Cooling adaptor set, complete

Product information

- cooling adaptor set for shrink fit system GSS 2000 Comfort Plus and ECO Plus Guhring no. 4742 and 4752
- for inserting in the cooling adaptor Ø14-16, in order to effectively and safely cool the small shrink fit holders with clamping diameter Ø 3-5

		Series Number	4419
for cooling adaptor	for shank Ø	EDP Numbers	
Ø14-16	Ø 3-5	9044190050000	

Protective gloves

Product information

- Kevlar gloves providing protection against sharp cutting edges and high temperatures
- as specified for all shrink fit applications

	Series Number	4750
	EDP Numbers	
Protective gloves		9047500010000

Universal length setting adaptor

Product information

- for shrink fit chuck to DIN 69 882-8
- for length pre-setting of the setting screw Guhring no. 4977 with the cutting tool (less difference dimension l2, see sketch)
- flexibly mounted hexagonal key SW1/SW2 (*only available as rigid design)
- with standard screws suitable for wet application Guhring no. 4900, 4941, 4977
- suitable with MQL setting screws Guhring no. 4621, 4919, 4937

Series Number **4718**

d_1 mm	d_2 mm	l_1 mm	l_2 mm	l_3 mm	l_4 mm	SW1	SW2	SW3	EDP Numbers
6.0	25.0	115.0	80.0	50.0	10.0	2.0	1.5	-	9047180060000
6.0	25.0	115.0	80.0	50.0	10.0	3.0	2.5	-	9047180080000
6.0*	25.0	115.0	80.0	50.0	10.0	4.0	-	-	9047180100000
8.0	25.0	115.0	80.0	50.0	10.0	2.0	1.5	-	9047180120000
8.0	25.0	115.0	80.0	50.0	10.0	3.0	-	-	9047180140000
8.0*	25.0	115.0	80.0	50.0	10.0	4.0	-	-	9047180160000
10.0	25.0	115.0	80.0	50.0	10.0	2.0	1.5	-	9047180180000
10.0	25.0	115.0	80.0	50.0	10.0	4.0	3.0	-	9047180200000
12.0	25.0	115.0	80.0	50.0	10.0	3.0	2.0	1.5	9047180250000
12.0	25.0	115.0	80.0	50.0	10.0	5.0	4.0	-	9047180320000
14.0	25.0	115.0	80.0	50.0	10.0	3.0	2.0	1.5	9047180060010
14.0	25.0	115.0	80.0	50.0	10.0	5.0	4.0	-	9047180060020
16.0	25.0	120.0	85.0	55.0	10.0	3.0	2.0	1.5	9047180080010
16.0	25.0	120.0	85.0	55.0	10.0	6.0	5.0	4.0	9047180080020
18.0	30.0	120.0	85.0	55.0	10.0	3.0	2.0	1.5	9047180100010
18.0	30.0	120.0	85.0	55.0	10.0	6.0	5.0	4.0	9047180120010
20.0	30.0	135.0	90.0	65.0	10.0	4.0	3.0	2.0	9047180140010
20.0	30.0	135.0	90.0	65.0	10.0	8.0	5.0	-	9047180160010
25.0	35.0	140.0	100.0	70.0	10.0	4.0	3.0	2.0	9047180180010
25.0	35.0	140.0	100.0	70.0	10.0	8.0	5.0	-	9047180200010
32.0	45.0	150.0	100.0	70.0	10.0	4.0	3.0	2.0	9047180250010
32.0	45.0	150.0	100.0	70.0	10.0	8.0	5.0	-	9047180320010

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GSS 2000 Eco-Plus

Product information

- 1-place system

Scope of delivery

- incl. base system
- incl. induction coil Guhring no. 4743 / version 2008
- incl. 1 limit stop collar set Guhring no. 4769 / version 2008
- incl. SpeedCooler Guhring no. 4747
- incl. 1 pair of glovese Guhring no. 4750
- with integrated SpeedCooler-Manager

- order HSK-/ISO-holders Guhring nos. 4761, 4762 separately!

Series Number	4752
	EDP Numbers
50/60 Hz / 400-480 V, SpeedCooler 115 V	9047520200000

GSS 2000 Basic

Product information

- 1-place system

Scope of delivery

- incl. base system
- incl. 1 limit stop collar set Guhring no. 4769 / version 2008
- incl. 1 pair of gloves Guhring no. 4750

- order HSK-/ISO-holders Guhring nos. 4761, 4762 separately!

Series Number	4730
	EDP Numbers
Version 50/60 Hz / 400-480 V	9047300100000

HSK holder carriers GSS 2000

Product information

- for GSS 2000 Basic and ECO Plus Guhring no. 4730 and 4752
- holder carriers for HSK shrink fit chucks

Series Number	4761
for HSK- A/C/E	EDP Numbers
32	9047610320000
40	9047610400000
50	9047610500000
63	9047610630000
80	9047610800000
100	9047611000000

ISO taper holder carriers GSS 2000

Product information

- for GSS 2000 Basic and ECO Plus Guhring no. 4730 and 4752
- also suitable for MAS-BT
- holder carriers for SK or MAS/BT shrink fit chucks

Series Number	4762
for ISO taper and BT	EDP Numbers
30	9047620300000
40	9047620400000
50	9047620500000

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SpeedCooler Cooling system

Product information

- for GSS 2000 Comfort Version and Eco-Plus

Series Number	4747
	EDP Numbers
50/60 Hz, 115 V	9047470020000

SpeedCooler Manager

Product information

- for automatic switch on and off of the SpeedCooler
- preserves the cooling system and reduce the service intervals

Series Number	4759
	EDP Numbers
50/60 Hz, 115 V	9047590020000

Induction coil

Product information

- for GSS 2000 / version 2008
- HSS for Ø 6…32 mm, carbide for Ø 3…32 mm

Series Number	4743
Ø range mm	EDP Numbers
3…32	9047430320000

Limit stop collars

Product information

- for induction coil
- suitable for all GSS systems
- for extra short standard shrink fit chucks with Code no. ….,100

Series Number	4769
for tool shank diameter	EDP Numbers
3 - 5 mm	9047690050000
6 - 12 mm	9047690120000
14 - 16 mm	9047690121000
18 - 20 mm	9047690160000
25 - 32 mm	9047690200000
6 - 12 mm	9047690201000
14 - 20 mm	9047690320000
25 - 32 mm	9047690321000

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PRECISION CLAMPING CHUCKS
TECHNOLOGY AND ADVANTAGES

Guhring's precision clamping chucks offer highest clamping force particularly for milling operations but also for drilling and reaming as well as under HSC and HPC conditions. The special clamping sleeve is clamped via a worm gear and optimally transfers the enormous clamping force onto the clamped tool. This enables clamping forces of, for example, > 200 Nm for 12 mm shank diameters or > 300 Nm for 16 mm shank diameters.

This system offers the following advantages:

- Increased cutting depths in comparison to conventional tool holders
- Increased radial engagement and subsequently higher material removal rate
- Maintenance-free technology
- Suitable for straight shanks to DIN 1835 A and B as well a to 6535 HA, HB and HE
- Concentricity 3 µm with 2.5 x D

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HSK-A precision clamping chucks

Product information

- for heavy-duty cutting as well as HSC and HPC
- to DIN 69893
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- highest clamping force and stability thanks to mech. tension gearing
- actuation torque for clamping initiation 12Nm
- suitable for internal cooling up to 80 bar

Scope of delivery

- hexagon clamping key Guhring no. 4912 4,010
- order clamping sleeves Guhring no. 4302, 4235, 4236, 4237 separately
- order coolant delivery set Guhring no. 4949 separately
- for optimal operation order torque wrench 12 Nm Guhring no. 4915 12,0 and sockets Guhring no. 4916 4,0 separately

Series Number 4300

HSK-A d_3	for clamping-Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_5 mm	SW	Order Code	EDP Numbers
63	3 to 20	40	53	92	20	4	20.063	**9043000200630**
100	3 to 20	40	70	100	18	4	20.100	**9043000201000**
100	20 to 32	56	70	135	3	4	32.100	**9043000321000**

ISO taper precision clamping chucks

Product information

- for heavy-duty cutting as well as HSC and HPC
- ISO taper to DIN 69871 form AD
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- highest clamping force and stability thanks to mech. tension gearing
- actuation torque for clamping initiation 12Nm
- suitable for internal cooling up to 80 bar central coolant supply form AD

Scope of delivery

- hexagon clamping key Guhring no. 4912 4,010
- order clamping sleeves Guhring no. 4302, 4235, 4236, 4237 separately
- order pull studs Guhring no. 4925 or 4926 separately
- for optimal operation order torque wrench 12 Nm Guhring no. 4915 12,0 and sockets Guhring no. 4916 4,0 separately
- form AD/B on request

Series Number 4301

ISO taper	for clamping-Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_5 mm	SW	Order Code	EDP Numbers
40	3 to 20	40	50	63	20	4	20.040	**9043010200400**
50	3 to 20	40	63	62	20	4	20.050	**9043010200500**
50	20 to 32	56	70	110	3	4	32.050	**9043010320500**

MAS/BT precision clamping chucks

Product information

- for heavy-duty cutting as well as HSC and HPC
- MAS/BT to JIS B 6339
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- highest clamping force and stability thanks to mech. tension gearing
- actuation torque for clamping initiation 12Nm
- suitable for internal cooling up to 80 bar central coolant supply form AD

Scope of delivery

- hexagon clamping key Guhring no. 4912 4.010
- order clamping sleeves Guhring no. 4302, 4235, 4236, 4237 separately
- for optimal operation order torque wrench 12 Nm Guhring no. 4915 12,0 and sockets Guhring no. 4916 4,0 separately
- form AD/B on request

Series Number 4244

MAS-BT	for clamping-Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_5 mm	SW	Order Code	EDP Numbers
30	3 to 20	40	53	82	20	4	20.030	**9042440200300**
40	3 to 20	40	63	70	18	4	20.040	**9042440200400**
40	3 to 20	40	63	120	48	4	120.040	**9042441200400**
40	20 to 32	56	70	135	3	4	32.040	**9042440320400**
50	3 to 20	40	63	81	18	4	20.050	**9042440200500**
50	3 to 20	40	63	167	84	4	120.050	**9042441200500**
50	20 to 32	56	70	130	3	4	32.050	**9042440320500**

CAT precision clamping chucks

Product information

- for heavy-duty cutting as well as HSC and HPC
- CAT to ANSI B5.50
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- highest clamping force and stability thanks to mech. tension gearing
- actuation torque for clamping initiation 12Nm
- suitable for internal cooling up to 80 bar
- central coolant supply form AD
- CAT40 d4: does not correspond to ANSI B5.50

Scope of delivery

- hexagon clamping key Guhring no. 4912 4.010
- order clamping sleeves Guhring no. 4302, 4235, 4236, 4237 separately
- for optimal operation order torque wrench 12 Nm Guhring no. 4915 12.0 and sockets Guhring no. 4916 4.0 separately

Series Number 4243

CAT	for clamping-Ø $d_{1\ h6}$ mm	d_2 mm	d_4 mm	l_1 mm	l_5 mm	SW	Order Code	EDP Numbers
40	3 to 20	40	50	62.5	20	4	20.040	**9042430200400**
50	3 to 20	40	63	62.0	18	4	20.050	**9042430200500**
50	20 to 32	56	70	110	3	4	32.050	**9042430320500**

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GÜHROJET clamping sleeves with peripherical cooling for precision clamping chucks

Product information

- for clamping tools with straight shank
- for maximum holding torque
- design with peripheral cooling
- for tool shank tolerance h6

Scope of delivery

- incl. length setting screw

GÜHROJET

Series Number **4302**

Nominal size	for shank Ø $d_{1\ h6}$ mm	d_2 mm	l_1 mm	l_2 mm	SW	Order Code	EDP Numbers
20	3	24.6	66	28	4	3.020	**9043020030200**
20	4	24.6	66	28	4	4.020	**9043020040200**
20	5	24.6	66	28	4	5.020	**9043020050200**
20	6	24.6	66	36	4	6.020	**9043020060200**
20	8	24.6	66	36	4	8.020	**9043020080200**
20	10	24.6	66	40	4	10.020	**9043020100200**
20	12	24.6	66	45	4	12.020	**9043020120200**
20	14	24.6	66	45	4	14.020	**9043020140200**
20	16	24.6	66	48	4	16.020	**9043020160200**
20	18	24.6	66	48	4	18.020	**9043020180200**
20	20	24.6	66	50	4	20.020	**9043020200200**
32	20	45.5	90	50	4	20.032	**9043020200320**
32	22	45.5	90	50	4	22.032	**9043020220320**
32	25	45.5	90	56	4	25.032	**9043020250320**
32	32	45.5	90	59	4	32.032	**9043020320320**

для размещения заказа - guhring@guhring-tools.ru

Clamping sleeves for precision clamping chucks, sealed version

Product information

- for clamping tools with straight shank
- for maximum holding torque
- sealed version
- for tool shank tolerance h6

Scope of delivery

- incl. length setting screw

Series Number 4235

Nominal size	for shank Ø $d_{1\ h6}$ mm	d_2 mm	l_1 mm	l_2 mm	SW	Order Code	EDP Numbers
20	3	24.6	66	28	4	3.020	**9042350030200**
20	4	24.6	66	28	4	4.020	**9042350040200**
20	5	24.6	66	28	4	5.020	**9042350050200**
20	6	24.6	66	36	4	6.020	**9042350060200**
20	8	24.6	66	36	4	8.020	**9042350080200**
20	10	24.6	66	40	4	10.020	**9042350100200**
20	12	24.6	66	45	4	12.020	**9042350120200**
20	14	24.6	66	45	4	14.020	**9042350140200**
20	16	24.6	66	48	4	16.020	**9042350160200**
20	18	24.6	66	48	4	18.020	**9042350180200**
20	20	24.6	66	50	4	20.020	**9042350200200**
32	20	45.5	90	50	4	20.032	**9042350200320**
32	22	45.5	90	50	4	22.032	**9042350220320**
32	25	45.5	90	56	4	25.032	**9042350250320**
32	32	45.5	90	59	4	32.032	**9042350320320**

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GÜHROJET clamping sleeves with peripheral cooling, imperial, for precision clamping chucks

Product information

- for clamping imperial tool shanks
- for maximum holding torque
- design with peripheral cooling
- for tool shank tolerance h6

Scope of delivery

- incl. length setting screw

Series Number **4236**

Nominal size	for shank Ø $d_{1\ h6}$ inch	d_2 mm	l_1 mm	l_2 mm	SW	Order Code	EDP Numbers
20	1/8	24.6	66	28	4	1.020	**9042360010200**
20	3/16	24.6	66	28	4	2.020	**9042360020200**
20	1/4	24.6	66	28	4	3.020	**9042360030200**
20	5/16	24.6	66	36	4	4.020	**9042360040200**
20	3/8	24.6	66	36	4	5.020	**9042360050200**
20	7/16	24.6	66	40	4	6.020	**9042360060200**
20	1/2	24.6	66	45	4	7.020	**9042360070200**
20	9/16	24.6	66	45	4	8.020	**9042360080200**
20	5/8	24.6	66	48	4	9.020	**9042360090200**
20	11/16	24.6	66	48	4	10.020	**9042360100200**
20	3/4	24.6	66	50	4	11.020	**9042360110200**
32	3/4	45.5	90	50	4	1.032	**9042360010320**
32	1	45.5	90	56	4	2.032	**9042360020320**
32	1-1/4	45.5	90	59	4	3.032	**9042360030320**

Clamping sleeves, imperial, for precision clamping chucks, sealed version

Product information

- for clamping imperial tool shanks
- for maximum holding torque
- sealed version
- for tool shank tolerance h6

Scope of delivery

- incl. length setting screw

Series Number **4237**

Nominal size	for shank Ø $d_{1\ h6}$ inch	d_2 mm	l_1 mm	l_2 mm	SW	Order Code	EDP Numbers
20	1/8	24.6	66	28	4	1.020	**9042370010200**
20	3/16	24.6	66	28	4	2.020	**9042370020200**
20	1/4	24.6	66	36	4	3.020	**9042370030200**
20	5/16	24.6	66	36	4	4.020	**9042370040200**
20	3/8	24.6	66	40	4	5.020	**9042370050200**
20	7/16	24.6	66	45	4	6.020	**9042370060200**
20	1/2	24.6	66	45	4	7.020	**9042370070200**
20	9/16	24.6	66	45	4	8.020	**9042370080200**
20	5/8	24.6	66	48	4	9.020	**9042370090200**
20	11/16	24.6	66	48	4	10.020	**9042370100200**
20	3/4	24.6	66	50	4	11.020	**9042370110200**
32	3/4	45.5	90	50	4	1.032	**9042370010320**
32	1	45.5	90	56	4	2.032	**9042370020320**
32	1-1/4	45.5	90	59	4	3.032	**9042370030320**

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для размещения заказа - guhring@guhring-tools.ru

SYNCHRO

TAPPING CHUCKS

guhring@guhring-tools.ru
www.guhring-tools.ru

для размещения заказа - guhring@guhring-tools.ru

TAPPING CHUCKS

PERFORMANCE THROUGH COMPENSATION

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COMPENSATES SYNCHRONIZATION ERRORS

SHORTER CYCLE TIMES

HIGHER CUTTING RATES

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GUHROSYNC

THE EASY WAY TO THE PERFECT THREAD

Intelligent design:
As well as the suspension and damping elements in the slender GUHROSync chucks (for the reduction of axial and radial forces during the tapping process) there is also room for the delivery set for MQL or conventional cooling lubrication and the length setting screw.

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www.guhring-tools.ru

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The optimal combination of long-life metal spring and polymer damping elements considerably reduces axial and radial forces

Rigid chuck

GUHROSync

IMPROVED TOOL LIFE

IMPROVED THREAD QUALITY

GREATER PROCESS RELIABILITY

Made visible:
The spring symbol on the GUHROSync displays the effect of axial and radial force.

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REDUCTION OF AXIAL AND RADIAL FORCES

COMPENSATES SYNCHRONIZATION ERRORS

QUICK AND ACCURATE LENGTH SETTING OF TOOLS

MODULAR DESIGN FOR DIFFERENT STANDARD AND SPECIAL VERSIONS

LONGER TOOL LIFE

REDUCED CYCLE TIMES

IMPROVED THREAD QUALITY

GREATER PROCESS RELIABILITY

Configuration of GUHROSync synchro tapping chucks with straight shank for internal cooling

Side lock holders

4343 HSK-A

4322 ISO taper

4233 BT taper

4087 CAT taper

Shrink fit chucks

4736 HSK-A

4758 HSK-C

4764 CAT taper

Hydraulic synchro tapping chucks with increased clamping force

4221 MAS-BT

4299 HSK-A

4267 HSK-C

4213 ISO taper

4216 CAT taper

Hydraulic synchro tapping chucks

4601 HSK-A

Hydraulic synchro tapping chucks

4576 ISO taper

Hydraulic synchro tapping chucks

4577 MAS-BT

4525 Type B

Hydraulic synchro tapping chucks with cylindrical shank Ø 25, DIN 1835-B+E, internal cooling

4525 Type A

Hydraulic synchro tapping chucks with cylindrical shank Ø 20, DIN 1835-A, internal cooling

4364

Setting screws for synchro tapping chucks, with conventional int. cooling

4605 Sealed reduction sleeve

4606 GUHROJET reduction sleeve

Threading tool:
shank diameter x square

HSK-A hydraulic synchro tapping chucks with internal cooling

Product information

- compensates synchronisation errors
- guarantees high thread quality and optimal tool life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction sleeves with active drive
- length-setting screw allows 3 mm read-justment
- suitable for internal cooling identifiable by black colored ring
- coolant pressure up to max. 80 bar

Scope of delivery

- incl. hexagon clamping key Guhring no. 4912
- incl. adjustment key for adjustment screws

- order setting screw “face” Guhring no. 4364 separately
- order reduction sleeves Guhring no. 4605 or 4606 separately
- for conventional cooling order coolant delivery set Guhring no. 4949 separately

GÜHROSync

										Series Number	4601
HSK-A d_3	d_4 mm	for shank Ø d_1 x VKT	for thread	d_2 mm	l_1 mm	tension/ compr. ± mm	SW	kg	Order Code		EDP Numbers
63	12	2.8 to 10	M3 to M12	40	106.5	0.3	4	1.5	12.063		**9046010120630**
63	20	6 to 16	M8 to M20	40	120.5	0.3	5	1.6	20.063		**9046010200630**
100	12	2.8 to 10	M3 to M12	40	113	0.3	4	2.8	12.100		**9046010121000**
100	20	6 to 16	M8 to M20	40	127	0.3	5	2.9	20.100		**9046010201000**

guhring@guhring-tools.ru
www.guhring-tools.ru

ISO taper hydraulic synchro tapping chucks with internal cooling

Product information

- SK30 to DIN 69871 form AD without coolant supply over collar
- SK40 to DIN 69871 form AD/B
- form B supplied with threaded pins in bores
- compensates synchronisation errors
- guarantees high thread quality and optimal tool life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction sleeves with active drive
- length-setting screw allows 3 mm readjustment
- suitable for internal cooling identifiable by black colored ring
- coolant pressure up to max. 80 bar

Scope of delivery

- incl. hexagon clamping key Guhring no. 4912
- incl. adjustment key for adjustment screws

- order setting screw “face” Guhring no. 4364 separately
- order reduction sleeves Guhring no. 4605 or 4606 separately
- order pull studs, Guhring no. 4925 or 4926 separately

GÜHROSync

										Series Number	4576
SK	d_4 mm	for shank Ø d_1	for thread	d_2 mm	l_1 mm	tension/ compr. ± mm	SW	kg	Order Code		EDP Numbers
30	12	2.8 to 10	M3 to M12	40	81	0.3	4	0.8	12.030		**9045760120300**
30	20	6 to 16	M8 to M20	40	95	0.3	5	0.9	20.030		**9045760200300**
40	12	2.8 to 10	M3 to M12	40	85	0.3	4	1.3	12.040		**9045760120400**
40	20	6 to 16	M8 to M20	40	99	0.3	5	1.4	20.040		**9045760200400**

MAS/BT hydraulic synchro tapping chucks with internal cooling

Product information

- MAS/BT30 to JIS B 6339-2 form JD without coolant supply over collar
- MAS/BT40 to JIS B 6339-2 form JD/JF (form AD/B)
- form B supplied with threaded pins in bores
- compensates synchronisation errors
- guarantees high thread quality and optimal tool life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction sleeves with active drive
- length-setting screw allows 3 mm re-adjustment
- suitable for internal cooling identifiable by black colored ring
- coolant pressure up to max. 80 bar

Scope of delivery

- incl. hexagon clamping key Guhring no. 4912
- incl. adjustment key for adjustment screws

- order setting screw “face” Guhring no. 4364 separately
- order reduction sleeves Guhring no. 4605 or 4606 separately
- order pull studs, Guhring no. 4927 or 4928 separately

GÜHROSync

										Series Number	4577
BT	d_4 mm	for shank Ø d_1	for thread	d_2 mm	l_1 mm	tension/ compr. ± mm	SW	kg	Order Code		EDP Numbers
30	12	2.8 to 10	M3 to M12	40	81	0.3	4	0.8	12.030		**9045770120300**
30	20	6 to 16	M8 to M20	40	95	0.3	5	0.9	20.030		**9045770200300**
40	12	2.8 to 10	M3 to M12	40	85	0.3	4	1.3	12.040		**9045770120400**
40	20	6 to 16	M8 to M20	40	99	0.3	5	1.4	20.040		**9045770200400**

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для размещения заказа - guhring@guhring-tools.ru

Straight shank hydraulic synchro tapping chucks for internal cooling

Product information

- compensates synchronisation errors
- guarantees best thread quality and optimal life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction sleeves with active drive
- length-setting screw allows 3 mm readjustment
- holder shank to DIN 1835-A or holding in precision chucks (hydraulic, shrink fit or power clamping chucks)
- suitable for internal cooling identifiable by black colored ring
- coolant pressure up to max. 80 bar

Scope of delivery

- incl. hexagon clamping key Guhring no. 4912
- incl. adjustment key for adjustment screws

- order setting screw “face” Guhring no. 4364 separately
- order reduction sleeves Guhring no. 4605 or 4606 separately

GÜHROSync

Series Number 4525

d_3 h6 mm	d_4 mm	Type	for shank Ø d_1	for thread	d_2 mm	l_1 mm	tension/ compr. ± mm	SW	kg	Order Code	EDP Numbers
20	12	A	2.8 to 10	M3 to M12	40	80	0.3	4	0.7	12.020	**9045250120200**
20	20	A	6 to 16	M8 to M20	40	94	0.3	5	0.8	20.020	**9045250200200**
25	12	B	2.8 to 10	M3 to M12	40	80	0.3	4	0.7	12.025	**9045250120250**
25	20	B	6 to 16	M8 to M20	40	94	0.3	5	0.8	20.025	**9045250200250**

HSK-A adaptors for tapping chucks

Product information
- for quick change chucks and Synchro tapping chucks with straight shank

Scope of delivery
- incl. clamping screws Guhring no. 4903, code no. 12,001
- order coolant delivery set Guhring no. 4949 separately

Series Number 4343

HSK-A d_3	d_1 mm	d_2 mm	l_1 mm	SW	kg	Order Code	EDP Numbers
50	25	50	80	6	0.89	25.050	**9043430250500**
63	25	50	82	6	1.26	25.063	**9043430250630**
80	25	50	87	6	3.1	25.080	**9043430250800**
100	25	50	89	6	4.08	25.100	**9043430251000**

CAT side lock holder extra short

Product information
- balancing quality G6.3 / 15.000 rev./min.
- taper according to ANSI/ASME B5.50
- Coolant through center
- CAT 40 - 5/8 x 11 retention knob thread
- CAT 50 - 1" x 8 retention knob thread

Scope of delivery
- incl. clamping screw Guhring no. 4903

EXCLUSIVELY for GÜHROSync

Series Number 4087

CAT	clamping-Ø d_1 mm	d_2 mm	l_1 mm	SW	kg	Order Code	EDP Numbers
40	25	44.5	35	6.0	0.8	25.040	**9040870250400**
50	25	70.0	35	6.0	2.8	25.050	**9040870250500**

Setting screws for synchro tapping chucks with conventional internal cooling

Product information

- for GuhroSync synchro tapping chucks Guhring no. 4601, 4576, 4577, 4525
- for conventional internal cooling
- for standard shank ends
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery

- with O-ring for secure seal

Series Number **4364**

for nominal size	for tap shank-Ø x □	G	d_1 mm	d_2 mm	l_1 mm	SW	O-ring	image	Order Code	EDP Numbers
ER20 / Hydro12	< Ø6	M8x1	3.6	3.3	28.0	2.0	3.5x1	1	5.020	**9043640050200**
ER20 / Hydro12	6x4.9	M8x1	3.6	4.8	26.0	2.5	3.5x1	1	6.020	**9043640060200**
ER20 / Hydro12	7x5.5	M8x1	3.6	5.4	25.8	2.5	3.5x1	1	7.020	**9043640070200**
ER20 / Hydro12	8x6.2	M8x1	3.6	6.1	20.9	2.5	3.5x1	1	8.020	**9043640080200**
ER20 / Hydro12	9x7	M8x1	3.6	6.9	20.3	2.5	3.5x1	1	9.020	**9043640090200**
ER20 / Hydro12	10x8	M8x1	3.6	7.8	15.8	2.5	3.5x1	2	10.020	**9043640100200**
ER20 / Hydro12	11x9	M8x1	3.6	8.8	14.8	2.5	3.5x1	2	11.020	**9043640110200**
ER32 / Hydro20	< Ø6	M10x1	4.1	3.3	33.0	2.0	4x1	1	5.032	**9043640050320**
ER32 / Hydro20	6x4.9	M10x1	4.1	4.8	34.0	3.0	4x1	1	6.032	**9043640060320**
ER32 / Hydro20	7x5.5	M10x1	4.1	5.4	33.8	3.0	4x1	1	7.032	**9043640070320**
ER32 / Hydro20	8x6.2	M10x1	4.1	6.1	28.8	3.0	4x1	1	8.032	**9043640080320**
ER32 / Hydro20	9x7	M10x1	4.1	6.9	28.3	3.0	4x1	1	9.032	**9043640090320**
ER32 / Hydro20	10x8	M10x1	4.1	7.8	23.8	3.0	4x1	1	10.032	**9043640100320**
ER32 / Hydro20	11x9 & 12x9	M10x1	4.1	8.8	22.9	3.0	4x1	1	11.032	**9043640110320**
ER32 / Hydro20	14x11	M10x1	4.1	10.8	20.7	3.0	4x1	2	14.032	**9043640140320**
ER32 / Hydro20	16x12	M10x1	4.1	11.8	19.7	3.0	4x1	2	16.032	**9043640160320**
ER32 / Hydro20	18x14.5 & 20x16	M10x1	4.1	14.3	18.0	3.0	4x1	2	18.032	**9043640180320**

Configuration of GUHROSync tapping chucks for internal cooling with MQL

4508 MQL 1 BY GÜHRING
MQL coolant delivery set
for single channel
HSK-A

4511 MQL 2 BY GÜHRING
MQL coolant delivery set
for 2 channel systems
HSK-A

4513 MQL 1 BY GÜHRING MQL 2 BY GÜHRING
MQL coolant delivery set
HSK-A (filler)

MQL shrink fit chucks
HSK-A
auto. tool change

4741 MQL 1 BY GÜHRING
4614 MQL 2 BY GÜHRING

man. tool change

4735 MQL 1 BY GÜHRING
4613 MQL 2 BY GÜHRING

MQL hydraulic tapping chucks
HSK-A
auto. tool change

4210 MQL 1 BY GÜHRING
4612 MQL 2 BY GÜHRING

man. tool change

4209 MQL 1 BY GÜHRING
4611 MQL 2 BY GÜHRING

MQL HSK-A hydraulic
synchro tapping chucks for
single channel
auto. tool change

4602 MQL 1 BY GÜHRING

MQL HSK-A hydraulic
synchro tapping chucks for
2 channel systems
auto. tool change

4603 MQL 2 BY GÜHRING

MQL HSK-A hydraulic
synchro tapping chucks
man. tool change

4604 MQL 1 BY GÜHRING MQL 2 BY GÜHRING

4524 MQL 1 BY GÜHRING MQL 2 BY GÜHRING
MQL hydraulic synchro tapping chuck with internal coolant
cylindrical shank Ø20.0 mm

4305
MQL setting screws with internal cone
for MQL synchro tapping chucks

4605
Reduction sleeves, sealed

4606
GUHROJET reduction sleeves

Threading tool with MQL shank:
shank diameter x square

для размещения заказа - guhring@guhring-tools.ru

MQL HSK-A hydraulic synchro tapping chucks for single channel systems and automatic tool change

Product information

- for MQL single channel systems
- MQL coolant pressure up to max. 16 bar
- compensates synchronisation errors
- guarantees high thread quality and optimal tool life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction sleeves with active drive
- length-setting screw allows 3 mm readjustment
- Guhring MQL identifiable by green colored ring

Scope of delivery

- incl. hexagon clamping key Guhring no. 4912
- incl. MQL coolant delivery set for automatic tool change Guhring no. 4508
- incl. adjustment key for MQL adjustment screws

- order MQL adjustment screw Guhring no. 4305 separately
- order reduction sleeves Guhring no. 4605 or 4606 separately

1 MQL BY GÜHRING

GÜHROSync

										Series Number	4602
HSK-A d_3	d_4 mm	for shank-Ø d_1	for thread	d_2 mm	l_1 mm	tension/ compr. ± mm	SW	kg	Order Code		EDP Numbers
63	12	2.8 to 10	M3 to M12	40	106.5	0.3	4	1.5	12.063		**9046020120630**
63	20	6 to 16	M8 to M20	40	120.5	0.3	5	1.6	20.063		**9046020200630**
100	12	2.8 to 10	M3 to M12	40	113	0.3	4	2.8	12.100		**9046020121000**
100	20	6 to 16	M8 to M20	40	127	0.3	5	2.9	20.100		**9046020201000**

для размещения заказа - guhring@guhring-tools.ru

MQL HSK-A hydraulic synchro tapping chucks for 2 channel systems and automatic tool change

Product information

- for MQL 2 channel systems
- MQL coolant pressure up to max. 16 bar
- compensates synchronisation errors
- guarantees high thread quality and optimal tool life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction sleeves with active drive
- length-setting screw allows 3 mm readjustment
- Guhring MQL identifiable by green colored ring

Scope of delivery

- incl. hexagon clamping key Guhring no. 4912
- incl. MQL coolant delivery set for automatic tool change Guhring no. 4511
- incl. adjustment key for MQL adjustment screws

- order MQL adjustment screw Guhring no. 4305 separately
- order reduction sleeves Guhring no. 4605 or 4606 separately

2 MQL BY GÜHRING

GÜHROSync

Series Number	4603

HSK-A d_3	d_4 mm	for shank-Ø d_1	for thread	d_2 mm	l_1 mm	tension/ compr. ± mm	SW	kg	Order Code	EDP Numbers
63	12	2.8 to 10	M3 to M12	40	106.5	0.3	4	1.5	12.063	**9046030120630**
63	20	6 to 16	M8 to M20	40	120.5	0.3	5	1.6	20.063	**9046030200630**
100	12	2.8 to 10	M3 to M12	40	113	0.3	4	2.8	12.100	**9046030121000**
100	20	6 to 16	M8 to M20	40	127	0.3	5	2.9	20.100	**9046030201000**

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MQL HSK-A hydraulic synchro tapping chucks for manual tool change

Product information

- for MQL single and double channel systems
- MQL coolant pressure up to max. 16 bar
- compensates synchronisation errors
- guarantees high thread quality and optimal tool life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction sleeves with active drive
- length-setting screw allows 3 mm readjustment
- Guhring MQL identifiable by green colored ring

Scope of delivery

- incl. hexagon clamping key Guhring no. 4912
- incl. MQL coolant delivery set for manual tool change (filler) Guhring no. 4513
- incl. adjustment key for MQL adjustment screws

- order MQL adjustment screw Guhring no. 4305 separately
- order reduction sleeves Guhring no. 4605 or 4606 separately

1 MQL BY GÜHRING

2 MQL BY GÜHRING

GÜHROSync

Series Number **4604**

HSK-A d_3	d_4 mm	for shank-Ø d_1	for thread	d_2 mm	l_1 mm	tension/ compr. ± mm	SW	kg	Order Code	EDP Numbers
63	12	2.8 to 10	M3 to M12	40	106.5	0.3	4	1.5	12.063	**9046040120630**
63	20	6 to 16	M8 to M20	40	120.5	0.3	5	1.6	20.063	**9046040200630**
100	12	2.8 to 10	M3 to M12	40	113	0.3	4	2.8	12.100	**9046040121000**
100	20	6 to 16	M8 to M20	40	127	0.3	5	2.9	20.100	**9046040201000**

MQL hydraulic synchro tapping chucks with internal cooling

Product information

- for MQL single and double channel systems
- MQL coolant pressure up to max. 16 bar
- compensates synchronisation errors
- guarantees high thread quality and optimal tool life
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap
- reduces an increase in axial forces during the cutting cycle to a minimum
- convenient hydraulic clamping using reduction sleeves with active drive
- length-setting screw allows 3 mm readjustment
- holder shank to DIN 1835-A or holding in precision chucks (hydraulic, shrink fit or power clamping chucks)
- Guhring MQL identifiable by green colored ring

Scope of delivery

- incl. hexagon clamping key Guhring no. 4912
- incl. adjustment key for MQL adjustment screws

- order MQL adjustment screw Guhring no. 4305 separately
- order reduction sleeves Guhring no. 4605 or 4606 separately

1 MQL BY GÜHRING

2 MQL BY GÜHRING

GÜHROSync

Series Number 4524

d_3 h6 mm	d_4 mm	for shank-Ø d_1	for thread	d_2 mm	l_1 mm	tension/ compr. ± mm	SW	kg	Order Code	EDP Numbers
20	12	2.8 to 10	M3 to M12	40	80	0.3	4	0.7	12.020	**9045240120200**
20	20	6 to 16	M8 to M20	40	94	0.3	5	0.8	20.020	**9045240200200**

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MQL setting screws with internal cone for MQL synchro tapping chucks.

Product information
- MQL setting screws with internal cone
- for MQL single and double channel systems
- for MQL taps with external cone
- for MQL synchro tapping chucks Guhring no. 4602, 4603 and 4604
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery
- with O-ring for secure seal

Series Number 4305

for nom. size	for tap shank-Ø x □	G	d_1 mm	d_2 mm	l_1 mm	SW	O-ring	image	EDP Numbers
ER20 / Hydro12	6x4.9	M8x1	3.60	4.80	26.50	2.50	3.5x1	1.00	**9043050060200**
ER20 / Hydro12	7x5.5	M8x1	3.60	5.40	26.50	2.50	3.5x1	1.00	**9043050070200**
ER20 / Hydro12	8x6.2	M8x1	3.60	6.10	21.50	2.50	3.5x1	1.00	**9043050080200**
ER20 / Hydro12	9x7	M8x1	3.60	6.90	21.00	2.50	3.5x1	1.00	**9043050080200**
ER20 / Hydro12	10x8	M8x1	3.60	7.80	17.00	2.50	3.5x1	2.00	**9043050100200**
ER20 / Hydro12	11x9	M8x1	3.60	8.80	16.00	2.50	3.5x1	2.00	**9043050110200**
ER32 / Hydro20	6x4.9	M10x1	4.10	4.80	34.50	3.00	4x1	1.00	**9043050060320**
ER32 / Hydro20	7x5.5	M10x1	4.10	5.40	34.50	3.00	4x1	1.00	**9043050070320**
ER32 / Hydro20	8x6.2	M10x1	4.10	6.10	29.50	3.00	4x1	1.00	**9043050080320**
ER32 / Hydro20	9x7	M10x1	4.10	6.90	29.00	3.00	4x1	1.00	**9043050080320**
ER32 / Hydro20	10x8	M10x1	4.10	7.80	25.00	3.00	4x1	1.00	**9043050100320**
ER32 / Hydro20	11x9 & 12x9	M10x1	4.10	8.80	24.00	3.00	4x1	1.00	**9043050110320**
ER32 / Hydro20	14x11	M10x1	4.10	10.80	22.50	3.00	4x1	2.00	**9043050140320**
ER32 / Hydro20	16x12	M10x1	4.10	11.80	22.00	3.00	4x1	2.00	**9043050160320**
ER32 / Hydro20	18x14.5 & 20x16	M10x1	4.10	14.30	20.50	3.00	4x1	2.00	**9043050180320**

MQL coolant delivery set for single channel HSK-A

Product information
- to MQL standard
- version sim. to DIN 69895
- for MQL 1-channel systems
- for tool holders with automatic tool clamping
- dimensions d_2 and l_1 based on installed condition

1 MQL BY GÜHRING

EXCLUSIVELY for GÜHROSync

Series Number 4508

for HSK-A	d_1 mm	d_2 mm	d_3 mm	l_1 mm	l_2 mm	G	EDP Numbers
32	6.00	3.00	4.00	26.00	5.50	M10x1	**9045080100320**
40	8.00	3.80	5.40	29.50	7.50	M12x1	**9045080120400**
50	10.00	3.80	6.40	33.00	9.50	M16x1	**9045080160500**
63	12.00	3.80	8.00	36.50	11.50	M18x1	**9045080180630**
80	14.00	3.80	10.00	40.00	13.50	M20x1.5	**9045080200800**
100	16.00	3.80	12.00	44.00	15.50	M24x1.5	**9045080241000**

MQL coolant delivery set for 2 channel systems HSK-A

Product information
- to MQL standard
- version sim. to DIN 69895
- for MQL 2-channel systems
- for tool holders with automatic tool clamping
- “Crashsafe” version similar to DIN 69090-2 neck design
- dimensions d_2 and l_1 based on installed condition

2 MQL BY GÜHRING

EXCLUSIVELY for GÜHROSync

Series Number 4511

for HSK-A	d_1 mm	d_2 mm	d_3 mm	l_1 mm	l_2 mm	l_3 mm	G	EDP Numbers
32	6.00	3.00	4.00	26.00	5.50	-	M10x1	**9045110100320**
40	8.00	3.80	5.40	29.50	7.50	-	M12x1	**9045110120400**
50	10.00	3.60	4.00	33.00	9.50	21.00	M16x1	**9045110160500**
63	12.00	3.60	4.00	36.50	11.50	13.80	M18x1	**9045110180630**
80	14.00	3.60	4.00	40.00	13.50	14.00	M20x1.5	**9045110200800**
100	16.00	3.60	4.00	44.00	15.50	14.00	M24x1.5	**9045110241000**

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MQL coolant delivery set HSK-A (filler)

Product information

- to MQL standard
- for internal cooling MQL 1 and 2 channel systems
- for tool holders with manual tool clamping
- optimally sealed for MQL clamping set
- dimensions d_2 and l_1 based on installed condition

1 MQL BY GÜHRING

2 MQL BY GÜHRING

EXCLUSIVELY for GÜHROSync

Series Number	4513

for HSK-A	d_2 mm	d_3 mm	l_1 mm	l_2 mm	G	EDP Numbers
32.00	3.000	3.000	6.30	-	M10x1	**9045130100320**
40.00	3.600	4.000	8.30	5.00	M12x1	**9045130120400**
50.00	3.600	4.000	10.30	5.00	M16x1	**9045130160500**
50.00	5.000	5.000	10.30	-	M16x1	**9045130161500**
63.00	3.600	4.000	12.30	5.00	M18x1	**9045130180630**
63.00	6.000	6.000	12.30	-	M18x1	**9045130181630**
80.00	3.600	4.000	14.40	5.00	M20x1.5	**9045130200800**
80.00	8.000	8.000	14.40	-	M20x1.5	**9045130201800**
100.00	3.600	4.000	16.40	5.00	M24x1.5	**9045130241000**
100.00	8.000	8.000	16.40	-	M24x1.5	**9045130241010**

Reduction sleeves sealed for hydraulic synchro tapping chucks

Product information

- for clamping taps with square shank in GUHROSync synchro tapping chucks
- clamping-Ø for tool shank tolerance h6-h9
- face side closed, therefore coolant leak-proof for threading tools with IC
- positive drive
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery

- order setting screw Guhring no. 4364 separately
- order MQL setting screws Guhring no. 4305 separately

EXCLUSIVELY for GÜHROSync

Series Number 4605

d_4 mm	d_1 mm	□ mm	Standard	d_1 inch	□ inch	d_2 mm	l_1 mm	l_2 mm	l_3 mm	* code for adjustment screw		for thread	Order Code	EDP Numbers
12.00	2.800	2.100	DIN	-	-	16.50	29.00	2.00	-	-		M2 / M4	2.812	**9046050028120**
12.00	3.500	2.700	DIN	-	-	16.50	29.00	2.00	-	-		M3 / M4.5 / M5	3.512	**9046050035120**
12.00	4.000	3.200	JIS	-	-	16.50	29.00	2.00	-	-		M3	4.012	**9046050040120**
12.00	4.500	3.400	DIN	-	-	16.50	29.00	2.00	26.00	4364	5.020	M4 / M6	4.512	**9046050045120**
12.00	4.928	3.861	ANSI	0.194	0.152	16.50	29.00	2.00	26.00	4364	5.020	10-24 & 10-32	4.912	**9046050049120**
12.00	5.000	4.000	JIS	-	-	16.50	29.00	2.00	26.00	4364	5.020	M4	5.012	**9046050050120**
12.00	5.500	4.500	JIS	-	-	16.50	29.00	2.00	26.00	4364	5.020	M5	5.512	**9046050055120**
12.00	5.588	4.191	ANSI	0.220	0.165	16.50	29.00	2.00	26.00	4364	5.020	12-24 & 12-28	15.512	**9046050155120**
12.00	6.000	4.500	JIS	-	-	16.50	29.00	2.00	26.00	4364	5.020	M6	16.012	**9046050160120**
12.00	6.000	4.900	DIN	-	-	16.50	29.00	2.00	26.00	4364	6.020	M4.5/M5/M6/M8	6.012	**9046050060120**
12.00	6.200	5.000	JIS	-	-	16.50	29.00	2.00	26.00	4364	6.020	M7 / M8	6.212	**9046050062120**
12.00	6.477	4.851	ANSI	0.255	0.191	16.50	29.00	2.00	26.00	4364	6.020	1/4-20 & 1/4-28	6.412	**9046050064120**
12.00	7.000	5.500	DIN / JIS	-	-	16.50	29.00	2.00	26.00	4364	7.020	M7 / M9 / M10	7.012	**9046050070120**
12.00	7.938	5.944	ANSI	0.3125	0.234	16.50	29.00	2.00	31.00	4364	7.020	1/16-27	7.912	**9046050079120**
12.00	8.000	6.200	DIN	-	-	16.50	29.00	2.00	31.00	4364	8.020	M8 / M11	8.012	**9046050080120**
12.00	8.000	6.500	JIS	-	-	16.50	29.00	2.00	31.00	4364	8.020	M11	18.012	**9046050180120**
12.00	8.077	6.045	ANSI	0.318	0.238	16.50	29.00	2.00	31.00	4364	7.020	5/16-18 & 5/16-24	28.012	**9046050280120**
12.00	8.204	6.147	ANSI	0.323	0.242	16.50	29.00	2.00	31.00	4364	7.020	7/16-14 & 7/16-20	8.212	**9046050082120**
12.00	8.500	6.500	JIS	-	-	16.50	29.00	2.00	31.00	4364	8.020	M12	8.512	**9046050085120**
12.00	9.000	7.000	DIN	-	-	16.50	29.00	2.00	32.00	4364	9.020	M9 / M12	9.012	**9046050090120**
12.00	9.322	6.985	ANSI	0.367	0.275	16.50	29.00	2.00	32.00	4364	9.020	1/2-13 & 1/2-20	9.312	**9046050093120**
12.00	9.677	7.264	ANSI	0.381	0.286	16.50	29.00	2.00	33.00	4364	9.020	3/8-16 & 3/8-24	9.612	**9046050096120**
12.00	10.000	8.000	DIN	-	-	16.50	29.00	2.00	36.00	4364	10.020	M10	10.012	**9046050100120**

Reduction sleeves sealed for hydraulic synchro tapping chucks

Product information

- for clamping taps with square shank in GUHROSync synchro tapping chucks
- clamping-Ø for tool shank tolerance h6-h9
- face side closed, therefore coolant leak-proof for threading tools with IC
- positive drive
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery

- order setting screw Guhring no. 4364 separately
- order MQL setting screws Guhring no. 4305 separately

EXCLUSIVELY for GÜHROSync

Series Number 4605

d_4 mm	d_1 mm	□ mm	Standard	d_1 inch	□ inch	d_2 mm	l_1 mm	l_2 mm	l_3 mm	* code for adjustment screw	for thread	Order Code	EDP Numbers
20.00	6.000	4.500	JIS	-	-	24.10	34.00	2.00	26.00	4364 6.032	M6	26.020	**9046050260200**
20.00	6.000	4.900	DIN	-	-	24.10	34.00	2.00	26.00	4364 6.032	M4.5/M5/M6/M8	6.020	**9046050060200**
20.00	6.200	5.000	JIS	-	-	24.10	34.00	2.00	26.00	4364 6.032	M7 / M8	6.220	**9046050062200**
20.00	6.477	4.851	ANSI	0.255	0.191	24.10	34.00	2.00	26.00	4364 6.032	1/4-20 & 1/4-28	6.420	**9046050064200**
20.00	7.000	5.500	DIN / JIS	-	-	24.10	34.00	2.00	26.00	4364 7.032	M7 / M9 / M10	7.020	**9046050070200**
20.00	7.938	5.944	ANSI	0.3125	0.234	24.10	34.00	2.00	31.00	4364 7.032	1/16-27	7.920	**9046050079200**
20.00	8.000	6.200	DIN	-	-	24.10	34.00	2.00	31.00	4364 8.032	M8 / M11	8.020	**9046050080200**
20.00	8.000	6.500	JIS	-	-	24.10	34.00	2.00	31.00	4364 8.032	M11	18.020	**9046050180200**
20.00	8.077	6.045	ANSI	0.318	0.238	24.10	34.00	2.00	31.00	4364 8.032	5/16-18 & 5/16-24	28.020	**9046050280200**
20.00	8.204	6.147	ANSI	0.323	0.242	24.10	34.00	2.00	31.00	4364 8.032	7/16-14 & 7/16-20	8.220	**9046050082200**
20.00	8.500	6.500	JIS	-	-	24.10	34.00	2.00	31.00	4364 8.032	M12	8.520	**9046050085200**
20.00	9.000	7.000	DIN	-	-	24.10	34.00	2.00	32.00	4364 9.032	M9 / M12	9.020	**9046050090200**
20.00	9.322	6.985	ANSI	0.367	0.275	24.10	34.00	2.00	32.00	4364 8.032	1/2-13 & 1/2-20	9.320	**9046050093200**
20.00	9.677	7.264	ANSI	0.381	0.286	24.10	34.00	2.00	33.00	4364 9.032	3/8-16 & 3/8-24	9.620	**9046050096200**
20.00	10.000	8.000	DIN	-	-	24.10	34.00	2.00	36.00	4364 10.032	M10	10.020	**9046050100200**
20.00	10.500	8.000	JIS	-	-	24.10	34.00	2.00	36.00	4364 10.032	M14	10.520	**9046050105200**
20.00	10.897	8.179	ANSI	0.4290	0.3220	24.10	34.00	2.00	35.00	4364 10.032	9/16-12 & 9/16-18	10.820	**9046050108200**
20.00	11.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	4364 11.032	M14	11.020	**9046050110200**
20.00	12.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	4364 11.032	M12 / M16	12.020	**9046050120200**
20.00	12.192	9.144	ANSI	0.480	0.36	24.10	34.00	2.00	36.00	4364 11.032	5/8-11 & 5/8-18	12.120	**9046050121200**
20.00	12.500	10.000	JIS	-	-	24.10	34.00	2.00	38.00	4364 11.032	M16	12.520	**9046050125200**
20.00	13.000	10.000	JIS	-	-	24.10	34.00	2.00	38.00	4364 11.032	M17	13.020	**9046050130200**
20.00	14.000	11.000	DIN / JIS	-	-	24.10	34.00	2.00	39.00	4364 11.032	M18	14.020	**9046050140200**
20.00	14.288	10.693	ANSI	0.5625	0.421	24.10	34.00	2.00	38.00	4364 11.032	1/4-18	14.220	**9046050142200**
20.00	14.986	10.719	ANSI	0.590	0.422	24.10	34.00	2.00	39.00	4364 11.032	3/4-10 & 3/4-16	14.920	**9046050149200**
20.00	15.000	12.000	JIS	-	-	24.10	34.00	2.00	40.00	4364 16.032	M20	15.020	**9046050150200**
20.00	16.000	12.000	DIN	-	-	24.10	34.00	2.00	41.00	4364 16.032	M20	16.020	**9046050160200**

GUHROJET reduction sleeves for hydraulic synchro tapping chucks

Product information

- for clamping taps with square shank in GUHROSync synchro tapping chucks
- clamping-Ø for tool shank tolerance h6-h9
- positive drive of reduction bush in Guhrosync synchro chuck
- with coolant slots for peripheral cooling, therefore process and tool life improvement
- coiled swarf is consistently washed away
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery

- order setting screw Guhring no. 4364 separately
- order MQL setting screws Guhring no. 4305 separately

GÜHROJET

EXCLUSIVELY for GÜHROSync

Series Number 4606

d_4 mm	d_1 mm	□ mm	Standard	d_1 inch	□ inch	d_2 mm	l_1 mm	l_2 mm	l_3 mm	* code for adjustment screw	for thread	Order Code	EDP Numbers
12.00	2.800	2.100	DIN	-	-	16.50	29.00	2.00	-	-	M2 / M4	2.812	**9046060028120**
12.00	3.500	2.700	DIN	-	-	16.50	29.00	2.00	-	-	M3 / M4.5 / M5	3.512	**9046060035120**
12.00	3.581	2.794	ANSI	0.1410	0.110	16.50	29.00	2.00	-	-	2-56 to 6-40	3.612	**9046060036120**
12.00	4.000	3.200	JIS	-	-	16.50	29.00	2.00	-	-	M3	4.012	**9046060040120**
12.00	4.268	3.327	ANSI	0.1680	0.131	16.50	29.00	2.00	-	-	8-32 & 8-36	4.312	**9046060043120**
12.00	4.500	3.400	DIN	-	-	16.50	29.00	2.00	-	-	M4 / M6	4.512	**9046060045120**
12.00	4.928	3.861	ANSI	0.194	0.152	16.50	29.00	2.00	-	-	10-24 & 10-32	4.912	**9046060049120**
12.00	5.000	4.000	JIS	-	-	16.50	29.00	2.00	-	-	M4	5.012	**9046060050120**
12.00	5.500	4.500	JIS	-	-	16.50	29.00	2.00	-	-	M5	5.512	**9046060055120**
12.00	5.588	4.191	ANSI	0.220	0.165	16.50	29.00	2.00	-	-	12-24 & 12-28	15.512	**9046060155120**
12.00	6.000	4.500	JIS	-	-	16.50	29.00	2.00	26.00	6.020	M6	16.012	**9046060160120**
12.00	6.000	4.900	DIN	-	-	16.50	29.00	2.00	26.00	6.020	M4.5/M5/M6/M8	6.012	**9046060060120**
12.00	6.200	5.000	JIS	-	-	16.50	29.00	2.00	26.00	6.020	M7 / M8	6.212	**9046060062120**
12.00	6.477	4.851	ANSI	0.255	0.191	16.50	29.00	2.00	26.00	6.020	1/4-20 & 1/4-28	6.412	**9046060064120**
12.00	7.000	5.500	DIN / JIS	-	-	16.50	29.00	2.00	26.00	7.020	M7 / M9 / M10	7.012	**9046060070120**
12.00	7.938	5.944	ANSI	0.3125	0.234	16.50	29.00	2.00	31.00	7.020	1/16-27	7.912	**9046060079120**
12.00	8.000	6.200	DIN	-	-	16.50	29.00	2.00	31.00	8.020	M8 / M11	8.012	**9046060080120**
12.00	8.000	6.500	JIS	-	-	16.50	29.00	2.00	31.00	8.020	M11	18.012	**9046060180120**
12.00	8.077	6.045	ANSI	0.318	0.238	16.50	29.00	2.00	31.00	7.020	5/16-18 & 5/16-24	28.012	**9046060280120**
12.00	8.204	6.147	ANSI	0.323	0.242	16.50	29.00	2.00	31.00	8.020	7/16-14 & 7/16-20	8.212	**9046060082120**
12.00	8.500	6.500	JIS	-	-	16.50	29.00	2.00	31.00	8.020	M12	8.512	**9046060085120**
12.00	9.000	7.000	DIN	-	-	16.50	29.00	2.00	32.00	9.020	M9 / M12	9.012	**9046060090120**
12.00	9.322	6.985	ANSI	0.367	0.275	16.50	29.00	2.00	32.00	9.020	1/2-13 & 1/2-20	9.312	**9046060093120**
12.00	9.677	7.264	ANSI	0.381	0.286	16.50	29.00	2.00	33.00	9.020	3/8-16 & 3/8-24	9.612	**9046060096120**
12.00	10.000	8.000	DIN	-	-	16.50	29.00	2.00	36.00	10.020	M10	10.012	**9046060100120**

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GUHROJET reduction sleeves for hydraulic synchro tapping chucks

Product information

- for clamping taps with square shank in GUHROSync synchro tapping chucks
- clamping-Ø for tool shank tolerance h6-h9
- positive drive of reduction bush in Guhrosync synchro chuck
- with coolant slots for peripheral cooling, therefore process and tool life improvement
- coiled swarf is consistently washed away
- position setting screw on tap shank
- length-setting screw allows 3 mm readjustment

Scope of delivery

- order setting screw Guhring no. 4364 separately
- order MQL setting screws Guhring no. 4305 separately

GÜHROJET

EXCLUSIVELY for GÜHROSync

Series Number 4606

d_4 mm	d_1 mm	□ mm	Standard	d_1 inch	□ inch	d_2 mm	l_1 mm	l_2 mm	l_3 mm	* code for adjustment screw	for thread	Order Code	EDP Numbers
20.00	6.000	4.500	JIS	-	-	24.10	34.00	2.00	26.00	6.032	M6	26.020	**9046060260200**
20.00	6.000	4.900	DIN	-	-	24.10	34.00	2.00	26.00	6.032	M4.5/M5/M6/M8	6.020	**9046060060200**
20.00	6.200	5.000	JIS	-	-	24.10	34.00	2.00	26.00	6.032	M7 / M8	6.220	**9046060062200**
20.00	6.477	4.851	ANSI	0.255	0.191	24.10	34.00	2.00	26.00	6.032	1/4-20 & 1/4-28	6.420	**9046060064200**
20.00	7.000	5.500	DIN / JIS	-	-	24.10	34.00	2.00	26.00	7.032	M7 / M9 / M10	7.020	**9046060070200**
20.00	7.938	5.944	ANSI	0.3125	0.234	24.10	34.00	2.00	31.00	7.032	1/16-27	7.920	**9046060079200**
20.00	8.000	6.200	DIN	-	-	24.10	34.00	2.00	31.00	8.032	M8 / M11	8.020	**9046060080200**
20.00	8.000	6.500	JIS	-	-	24.10	34.00	2.00	31.00	8.032	M11	18.020	**9046060180200**
20.00	8.077	6.045	ANSI	0.318	0.238	24.10	34.00	2.00	31.00	8.032	5/16-18 & 5/16-24	28.020	**9046060280200**
20.00	8.204	6.147	ANSI	0.323	0.242	24.10	34.00	2.00	31.00	8.032	7/16-14 & 7/16-20	8.220	**9046060082200**
20.00	8.500	6.500	JIS	-	-	24.10	34.00	2.00	31.00	8.032	M12	8.520	**9046060085200**
20.00	9.000	7.000	DIN	-	-	24.10	34.00	2.00	32.00	9.032	M9 / M12	9.020	**9046060090200**
20.00	9.322	6.985	ANSI	0.367	0.275	24.10	34.00	2.00	32.00	9.032	1/2-13 & 1/2-20	9.320	**9046060093200**
20.00	9.677	7.264	ANSI	0.381	0.286	24.10	34.00	2.00	33.00	9.032	3/8-16 & 3/8-24	9.620	**9046060096200**
20.00	10.000	8.000	DIN	-	-	24.10	34.00	2.00	36.00	10.032	M10	10.020	**9046060100200**
20.00	10.500	8.000	JIS	-	-	24.10	34.00	2.00	36.00	10.032	M14	10.520	**9046060105200**
20.00	10.897	8.179	ANSI	0.4290	0.3220	24.10	34.00	2.00	35.00	10.032	9/16-12 & 9/16-18	10.820	**9046060108200**
20.00	11.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	11.032	M14	11.020	**9046060110200**
20.00	12.000	9.000	DIN	-	-	24.10	34.00	2.00	37.00	11.032	M12 / M16	12.020	**9046060120200**
20.00	12.192	9.144	ANSI	0.480	0.36	24.10	34.00	2.00	36.00	11.032	5/8-11 & 5/8-18	12.120	**9046060121200**
20.00	12.500	10.000	JIS	-	-	24.10	34.00	2.00	38.00	11.032	M16	12.520	**9046060125200**
20.00	13.000	10.000	JIS	-	-	24.10	34.00	2.00	38.00	11.032	M17	13.020	**9046060130200**
20.00	14.000	11.000	DIN / JIS	-	-	24.10	34.00	2.00	39.00	14.032	M18	14.020	**9046060140200**
20.00	14.288	10.693	ANSI	0.5625	0.421	24.10	34.00	2.00	38.00	11.032	1/4-18	14.220	**9046060142200**
20.00	14.986	10.719	ANSI	0.590	0.422	24.10	34.00	2.00	39.00	11.032	3/4-10 & 3/4-16	14.920	**9046060149200**
20.00	15.000	12.000	JIS	-	-	24.10	34.00	2.00	40.00	16.032	M20	15.020	**9046060150200**
20.00	16.000	12.000	DIN	-	-	24.10	34.00	2.00	41.00	16.032	M20	16.020	**9046060160200**

Configuration of Synchro tapping chucks for conventional cooling

4328
HSK-A quick change chuck with internal cooling

4233
Whistle-Notch MAS/BT side lock holders

4322
Whistle-Notch ISO taper side lock holders

4329
Weldon

4334
Whistle-Notch

HSK-A side lock holders

4343
HSK-A adaptors for tapping chucks

4327
HSK-A synchro tapping chuck with internal cooling

4340
quick change chuck without internal cooling

4342
quick change chuck with internal cooling

4326
synchro tapping chuck with straight shank with internal cooling

4206
quick change tapping chuck adaptors

4364
setting screws for synchro tapping chucks, with conventional int. cooling

4308
tap collet

4335
sealing washer for retaining nuts

tap

tap

Synchro tapping chucks with straight shanks

Product information
- compensate synchronisation errors
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap, which can cause high frictional forces on the thread flanks
- length-setting screw allows 2 to 3 mm readjustment
- suitable for internal cooling
- max. coolant pressure up to 50 bar

Scope of delivery
- incl. sealed IC/ER clamping nut Guhring no. 4306 (*see torque)
- incl. adjustment key for adjustment screws
- order adjustment screws “plan“ Guhring no. 4364, tapping collet, Guhring no. 4308, sealing washer, Guhring no. 4325 and clamping key, Guhring no. 4913 separately

Series Number 4326

d_3 ~DIN 1835 mm	Nominal size	for thread	d_1 mm	d_2 mm	l_1 mm	tension/ compr. mm	torque* Nm	G	SW	EDP Numbers
25.0	ER20	M3.5-M14	4.0-11.0	34.0	73.0	0.15	40	M25x1.5	0.50	**9043260200250**
25.0	ER32	M3.5-M28	4.0-20.0	50.0	88.0	0.15	170	M40x1.5	1.30	**9043260320250**

HSK-A synchro tapping chucks

Product information
- compensate synchronisation errors
- guarantee high thread quality and optimal tool life with conventional taps
- minimal length compensation in tension and compression direction between synchronous spindle and tap reduces excessive thread flank friction
- reduces a possible increase in axial forces during the cutting cycle to a minimum
- length-setting screw allows 2 to 3 mm readjustment
- suitable for internal cooling
- max. coolant pressure up to 50 bar

Scope of delivery
- incl. sealed IC/ER clamping nut Guhring no. 4306 (*see torque)
- incl. adjustment key for adjustment screws
- order adjustment screws „plan“ Guhring no. 4364, tapping collet, Guhring no. 4308, sealing washer, Guhring no. 4325 and clamping key, Guhring no. 4913 separately
- for conventional cooling order coolant supply set Guhring no. 4949 separately

Series Number 4327

d_3 ~DIN 1835 mm	Nominal size	for thread	d_1 mm	d_2 mm	l_1 mm	tension/ compr. mm	torque* Nm	G	SW	EDP Numbers
63.0	ER20	M3.5-M14	4.0-11.0	34.0	95.5	0.15	40	M25x1.5	1.00	**9043270200630**
63.0	ER20	M3.5-M14	4.0-11.0	34.0	160.0	0.15	40	M25x1.5	1.50	**9043270201630**
63.0	ER32	M3.5-M28	4.0-20.0	50.0	109.0	0.15	170	M40x1.5	1.70	**9043270320630**
100.0	ER20	M3.5-M14	4.0-11.0	34.0	102.0	0.15	40	M25x1.5	2.50	**9043270201000**
100.0	ER32	M3.5-M28	4.0-20.0	50.0	115.5	0.15	170	M40x1.5	2.70	**9043270321000**

Tapping collets

Product information

- for clamping taps with square shank in Synchro tapping chucks or collet holders
- smaller Ø4mm are clamped with collet, Guh. no. 4307 without sq. drive

Series Number **4308**

Nominal size d_2	for shank Ø d_1 mm	square SW	l_1 mm	l_2 mm	EDP Numbers
ER16	4.5	3.4	27.5	18	**9043080045160**
ER16	5.5	4.3	27.5	18	**9043080055160**
ER16	6.0	4.9	27.5	18	**9043080060160**
ER16	7.0	5.5	27.5	18	**9043080070160**
ER16	8.0	6.2	27.5	22	**9043080080160**
ER20	4.0	3.0	31.5	15	**9043080040200**
ER20	4.5	3.4	31.5	18	**9043080045200**
ER20	5.5	4.3	31.5	18	**9043080055200**
ER20	6.0	4.9	31.5	18	**9043080060200**
ER20	7.0	5.5	31.5	18	**9043080070200**
ER20	8.0	6.2	31.5	22	**9043080080200**
ER20	9.0	7.0	31.5	22	**9043080090200**
ER20	10.0	8.0	31.5	25	**9043080100200**
ER20	11.0	9.0	31.5	25	**9043080110200**
ER25	4.5	3.4	34.0	18	**9043080045250**
ER25	5.5	4.3	34.0	18	**9043080055250**
ER25	6.0	4.9	34.0	18	**9043080060250**
ER25	7.0	5.5	34.0	18	**9043080070250**
ER25	8.0	6.2	34.0	22	**9043080080250**
ER25	9.0	7.0	34.0	22	**9043080090250**
ER25	10.0	8.0	34.0	25	**9043080100250**
ER25	11.0	9.0	34.0	25	**9043080110250**
ER25	12.0	9.0	34.0	25	**9043080120250**
ER32	4.0	3.0	40.0	15	**9043080040320**
ER32	4.5	3.4	40.0	18	**9043080045320**
ER32	5.5	4.3	40.0	18	**9043080055320**
ER32	6.0	4.9	40.0	18	**9043080060320**
ER32	7.0	5.5	40.0	18	**9043080070320**
ER32	8.0	6.2	40.0	22	**9043080080320**
ER32	9.0	7.0	40.0	22	**9043080090320**
ER32	10.0	8.0	40.0	25	**9043080100320**
ER32	11.0	9.0	40.0	25	**9043080110320**
ER32	12.0	9.0	40.0	25	**9043080120320**
ER32	14.0	11.0	40.0	25	**9043080140320**
ER32	16.0	12.0	40.0	25	**9043080160320**
ER32	18.0	14.5	40.0	25	**9043080180320**
ER32	20.0	16.0	40.0	28	**9043080200320**
ER40	7.0	5.5	46.0	18	**9043080070400**
ER40	8.0	6.2	46.0	22	**9043080080400**
ER40	9.0	7.0	46.0	22	**9043080090400**
ER40	10.0	8.0	46.0	25	**9043080100400**
ER40	11.0	9.0	46.0	25	**9043080110400**
ER40	12.0	9.0	46.0	25	**9043080120400**
ER40	14.0	11.0	46.0	25	**9043080140400**
ER40	16.0	12.0	46.0	25	**9043080160400**
ER40	18.0	14.5	46.0	25	**9043080180400**
ER40	20.0	16.0	46.0	28	**9043080200400**
ER40	22.0	18.0	46.0	28	**9043080220400**

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Quick change tapping chucks without internal cooling

Product information

- quick change tapping chucks are provided with a ball guided length compensator that compensates any length difference between spindle feed and pitch of tap thread

Series Number 4340

for thread	d_1 mm	d_2 mm	d_3 mm	l_1 mm	tension/ compression mm	kg	EDP Numbers
M3-M12	25	19	36	39	± 7.5	0.4	**9043400190250**
M8-M20	25	31	53	63	±10.0	0.9	**9043400310250**

Quick change tapping chucks with internal cooling

Product information

- quick change tapping chucks are provided with a ball guided length compensator that compensates any length difference between spindle feed and pitch of tap thread
- provided with internal coolant supply feeding the coolant through the chuck and adaptor into the shank of the tap. All functional elements are sealed
- max. coolant pressure up to 50 bar

Series Number 4342

for thread	d_1 mm	d_2 mm	d_3 mm	l_1 mm	tension/ compression mm	kg	EDP Numbers
M3-M12	25	19	39	62	7.5/7.5	0.6	**9043420190250**
M8-M20	25	31	60	88	10/10	1.0	**9043420310250**

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HSK-A quick change tapping chucks with internal cooling

Product information

- quick change tapping chucks are provided with a ball guided length compensator that compensates any length difference between spindle feed and pitch of tap thread
- guarantee high thread quality and optimal tool life with conventional taps
- max. coolant pressure up to 50 bar.

							Series Number	4328
HSK-A d_3 mm	for thread	d_1 mm	d_2 mm	l_1 mm	tension/ compression mm	kg		EDP Numbers
63	M3-M12	19	39	105	± 7.5	0.9		**9043280190630**
63	M8-M20	31	60	140	±10.0	1.0		**9043280310630**

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Quick change tapping chuck adaptors

Product information

- with safety clutch
- suitable for HSS taps
- for solid carbide taps a clamping groove is required on the shank to provide additional drive.
- suitable for internal coolant supply max. 50 bar.

					Series Number	4206
for thread	shank Ø x sq. d_1 mm	d_3 mm	d_4 mm	l_1 mm	Order Code	EDP Numbers
M3-M12	2.2	19	32	25	19.022	**9042060190220**
M3-M12	2.5 x 2.1	19	32	25	19.025	**9042060190250**
M3-M12	2.8 x 2.1	19	32	25	19.028	**9042060190280**
M3-M12	3.5 x 2.7	19	32	25	19.035	**9042060190350**
M3-M12	4 x 3	19	32	25	19.040	**9042060190400**
M3-M12	4.5 x 3.4	19	32	25	19.045	**9042060190450**
M3-M12	5.5 x 4.5	19	32	25	19.055	**9042060190550**
M3-M12	6 x 4.9	19	32	25	19.060	**9042060190600**
M3-M12	7 x 5.5	19	32	25	19.070	**9042060190700**
M3-M12	8 x 6.2	19	32	25	19.080	**9042060190800**
M3-M12	9 x 7	19	32	25	19.090	**9042060190900**
M3-M12	10 x 8	19	32	25	19.100	**9042060191000**
M8-M20	6 x 4.9	31	50	34	31.060	**9042060310600**
M8-M20	7 x 5.5	31	50	34	31.070	**9042060310700**
M8-M20	8 x 6.2	31	50	34	31.080	**9042060310800**
M8-M20	9 x 7	31	50	34	31.090	**9042060310900**
M8-M20	10 x 8	31	50	34	31.100	**9042060311000**
M8-M20	11 x 9	31	50	34	31.110	**9042060311100**
M8-M20	12 x 9	31	50	34	31.120	**9042060311200**
M8-M20	14 x 11	31	50	34	31.140	**9042060311400**
M8-M20	16 x 12	31	50	34	31.160	**9042060311600**

Setting screws for tapping collets

						Series Number	4906
for nom. size	for clamping range mm	G	d_1 mm	l_1 mm	SW	EDP Numbers	
ER16	4.5 - 7.0	M10	4.5	22	3	9049060450220	
ER20	4.5 - 7.0	M10	4.5	22	3	9049060450220	
ER20	8.0 - 10.0	M10	5.5	16	3	9049060550160	
ER25	4.5 - 7.0	M16	4.5	32	4	9049060450320	
ER25	8.0 - 9.0	M16	5.5	24	4	9049060550240	
ER25	10.0 - 12.0	M16	6.5	20	4	9049060650200	
ER32	4.5- 7.0	M16	4.5	36	4	9049060450360	
ER32	8.0 - 9.0	M16	5.5	30	4	9049060550300	
ER32	10.0 - 12.0	M16	5.5	24	4	9049060550240	
ER32	14.0 - 16.0	M16	6.5	20	4	9049060650200	
ER40	7.0 - 9.0	M16	4.5	36	4	9049060450360	
ER40	10.0 - 12.0	M16	5.5	30	4	9049060550300	
ER40	14.0 - 18.0	M16	9.5	26	4	9049060950260	
ER40	20.0	M16	16.0	20	5	9049061600200	

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GUHRING

TOOL HOLDERS

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TOOL HOLDERS WITH PERIPHERAL COOLING

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OPTIMAL CHIP EVACUATION

HIGH PROCESS RELIABILITY

IMPROVED COOLING LUBRICATION

GÜHROJET HSK-A Weldon side lock holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form B "Weldon"
- dimensions to DIN 69882-4
- from bore d1 = 25 with two clamping screws
- with coolant ducts in the bore for peripheral cooling, improving process and tool life
- coolant ducts:
  d = 6 - 14 with two coolant ducts
  d = 16 - 40 with four coolant ducts

Scope of delivery

- incl. clamping screw Guhring no. 4903
- order coolant delivery set, Guhring no. 4949 separately
- HSK-A32, 40 & 80 on request

GÜHROJET

Series Number 4232

HSK-A d_3	for shank Ø d_1 mm	d_2 mm	d_4 mm	l_1 mm	SW	kg	Order Code	EDP Numbers
50	6	25	15	65	3	0.50	6.050	**9042320060500**
50	8	28	20	65	4	0.60	8.050	**9042320080500**
50	10	35	25	65	5	0.60	10.050	**9042320100500**
50	12	42	30	80	6	0.90	12.050	**9042320120500**
50	14	44	32	80	6	0.90	14.050	**9042320140500**
50	16	48	36	80	6	1.00	16.050	**9042320160500**
50	18	50	38	80	6	1.00	18.500	**9042320185000**
50	20	52	40	80	8	1.00	20.050	**9042320200500**
63	6	25	15	65	3	0.80	6.063	**9042320060630**
63	8	28	20	65	4	0.80	8.063	**9042320080630**
63	10	35	25	65	5	0.90	10.063	**9042320100630**
63	12	42	30	80	6	1.20	12.063	**9042320120630**
63	14	44	32	80	6	1.20	14.063	**9042320140630**
63	16	48	36	80	6	1.30	16.063	**9042320160630**
63	18	50	38	80	6	1.40	18.063	**9042320180630**
63	20	52	40	80	8	1.40	20.063	**9042320200630**
63	25	65	45	110	10	2.40	25.063	**9042320250630**
63	32	72	56	110	10	2.70	32.063	**9042320320630**
100	6	25	15	80	3	3.00	6.100	**9042320061000**
100	8	28	20	80	4	3.20	8.100	**9042320081000**
100	10	35	25	80	5	3.40	10.100	**9042320101000**
100	12	42	30	80	6	3.40	12.100	**9042320121000**
100	14	44	32	80	6	3.50	14.100	**9042320141000**
100	16	48	36	100	6	3.80	16.100	**9042320161000**
100	18	50	38	100	6	3.80	18.100	**9042320181000**
100	20	52	40	100	8	3.90	20.100	**9042320201000**
100	25	65	45	100	10	3.90	25.100	**9042320251000**
100	32	72	56	100	10	4.20	32.100	**9042320321000**
100	40	80	60	110	10	4.60	40.100	**9042320401000**

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HSK-A Weldon side lock holders

Product information
- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- to DIN 69882-4
- with bore to DIN 1835-2 form B "Weldon"
- from bore d1 = 25 with two clamping screws

Scope of delivery
- incl. clamping screw Guhring no. 4903
- order coolant delivery set, Guhring no. 4949 separately

Series Number 4329

HSK-A d_3	clamping-Ø d_1 mm	d_2 mm	d_4 mm	l_1 mm	SW	kg	Order Code	EDP Numbers
32	6	25	15	60	3	0.24	6.032	**9043290060320**
32	8	28	20	60	4	0.27	8.032	**9043290080320**
32	10	35	25	65	5	0.31	10.032	**9043290100320**
32	12	42	30	65	6	0.41	12.032	**9043290120320**
40	6	25	15	60	3	0.33	6.040	**9043290060400**
40	8	28	20	60	4	0.35	8.040	**9043290080400**
40	10	35	25	60	5	0.47	10.040	**9043290100400**
40	12	42	30	70	6	0.58	12.040	**9043290120400**
40	14	44	32	75	6	0.59	14.040	**9043290140400**
40	16	48	36	75	6	0.64	16.040	**9043290160400**
50	6	25	15	65	3	0.52	6.050	**9043290060500**
50	8	28	20	65	4	0.55	8.050	**9043290080500**
50	10	35	25	65	5	0.62	10.050	**9043290100500**
50	12	42	30	80	6	0.87	12.050	**9043290120500**
50	14	44	32	80	6	0.90	14.050	**9043290140500**
50	16	48	36	80	6	0.94	16.050	**9043290160500**
50	18	50	38	80	6	0.96	18.050	**9043290180500**
50	20	52	40	80	8	0.97	20.050	**9043290200500**
63	6	25	15	65	3	0.81	6.063	**9043290060630**
63	8	28	20	65	4	0.83	8.063	**9043290080630**
63	10	35	25	65	5	0.89	10.063	**9043290100630**
63	12	42	30	80	6	1.20	12.063	**9043290120630**
63	14	44	32	80	6	1.20	14.063	**9043290140630**
63	16	48	36	80	6	1.30	16.063	**9043290160630**
63	18	50	38	80	6	1.35	18.063	**9043290180630**
63	20	52	40	80	8	1.40	20.063	**9043290200630**
63	25	65	45	110	10	2.40	25.063	**9043290250630**
63	32	72	56	110	10	2.70	32.063	**9043290320630**
80	6	25	15	80	3	1.75	6.080	**9043290060800**
80	8	28	20	80	4	1.90	8.080	**9043290080800**
80	10	35	25	80	5	2.10	10.080	**9043290100800**
80	12	42	30	80	6	2.10	12.080	**9043290120800**
80	14	44	32	80	6	2.30	14.080	**9043290140800**
80	16	48	36	100	6	2.50	16.080	**9043290160800**
80	18	50	38	100	6	2.50	18.080	**9043290180800**
80	20	52	40	100	8	2.70	20.080	**9043290200800**
80	25	65	45	100	10	2.80	25.080	**9043290250800**
80	32	72	56	110	10	2.85	32.080	**9043290320800**
80	40	80	60	120	10	2.98	40.080	**9043290400800**
100	6	25	15	80	3	3.00	6.100	**9043290061000**
100	8	28	20	80	4	3.20	8.100	**9043290081000**
100	10	35	25	80	5	3.40	10.100	**9043290101000**
100	12	42	30	80	6	3.40	12.100	**9043290121000**
100	14	44	32	80	6	3.50	14.100	**9043290141000**
100	16	48	36	100	6	3.80	16.100	**9043290161000**
100	18	50	38	100	6	3.80	18.100	**9043290181000**
100	20	52	40	100	8	3.90	20.100	**9043290201000**
100	25	65	45	100	10	3.90	25.100	**9043290251000**
100	32	72	56	100	10	4.20	32.100	**9043290321000**
100	40	80	60	110	10	4.60	40.100	**9043290401000**

Whistle Notch HSK-A side lock holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- to DIN 69882-5
- with bore to DIN 1835-2 form E "Whistle Notch"
- from bore d1 = 25 with two clamping screws

Scope of delivery

- incl. clamping screw Guhring no. 4903 and adjustment screw Guhring no. 4904
- order coolant delivery set, Guhring no. 4949 separately

Series Number 4334

HSK-A d_3	clamping-Ø d_1 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. adjustment screw 4904 …	SW	kg	Order Code	EDP Numbers
32	6	25	15	80	36	9049040050160	3	0.32	6.032	9043340060320
32	8	28	20	80	36	9049040060160	4	0.36	8.032	9043340080320
32	10	35	25	80	40	9049040080120	5	0.46	10.032	9043340100320
32	12	42	30	80	45	9049040100170	6	0.57	12.032	9043340120320
40	6	25	15	80	36	9049040050160	3	0.36	6.040	9043340060400
40	8	28	20	80	36	9049040060160	4	0.40	8.040	9043340080400
40	10	35	25	80	40	9049040080120	5	0.50	10.040	9043340100400
40	12	42	30	90	45	9049040100170	6	0.68	12.040	9043340120400
40	14	44	32	90	45	9049040100170	6	0.72	14.040	9043340140400
40	16	48	36	90	48	9049040120140	6	0.77	16.040	9043340160400
50	6	25	15	80	36	9049040050200	3	0.58	6.050	9043340060500
50	8	28	20	80	36	9049040060200	4	0.62	8.050	9043340080500
50	10	35	25	80	40	9049040080180	5	0.73	10.050	9043340100500
50	12	42	30	90	45	9049040100200	6	0.97	12.050	9043340120500
50	14	44	32	90	45	9049040100200	6	1.00	14.050	9043340140500
50	16	48	36	90	48	9049040120200	6	1.09	16.050	9043340160500
50	18	50	38	90	48	9049040120200	6	1.12	18.050	9043340180500
50	20	52	40	100	50	9049040160250	8	1.30	20.050	9043340200500
63	6	25	15	80	36	9049040050200	3	0.86	6.063	9043340060630
63	8	28	20	80	36	9049040060200	4	0.90	8.063	9043340080630
63	10	35	25	80	40	9049040080180	5	1.00	10.063	9043340100630
63	12	42	30	90	45	9049040100200	6	1.24	12.063	9043340120630
63	14	44	32	90	45	9049040100200	6	1.28	14.063	9043340140630
63	16	48	36	100	48	9049040120200	6	1.53	16.063	9043340160630
63	18	50	38	100	48	9049040120200	6	1.60	18.063	9043340180630
63	20	52	40	100	50	9049040160250	8	1.65	20.063	9043340200630
63	25	65	45	110	56	9049040200250	10	2.34	25.063	9043340250630
63	32	72	56	110	60	9049040200250	10	2.54	32.063	9043340320630
80	6	25	15	90	36	9049040050200	3	2.20	6.080	9043340060800
80	8	28	20	90	36	9049040060200	4	2.25	8.080	9043340080800
80	10	35	25	90	40	9049040080180	5	2.56	10.080	9043340100800
80	12	42	30	100	45	9049040100200	6	2.60	12.080	9043340120800
80	14	44	32	100	45	9049040100200	6	2.85	14.080	9043340140800
80	16	48	36	100	48	9049040120200	6	2.88	16.080	9043340160800
80	18	50	38	100	48	9049040120200	6	2.90	18.080	9043340180800
80	20	52	40	110	50	9049040160250	8	3.05	20.080	9043340200800
80	25	65	45	110	56	9049040200250	10	3.10	25.080	9043340250800
80	32	72	56	120	60	9049040200250	10	3.20	32.080	9043340320800
100	6	25	15	90	36	9049040050200	3	2.60	6.100	9043340061000
100	8	28	20	90	36	9049040060200	4	2.60	8.100	9043340081000
100	10	35	25	90	40	9049040080180	5	2.60	10.100	9043340101000
100	12	42	30	100	45	9049040100200	6	2.80	12.100	9043340121000
100	14	44	32	100	45	9049040100200	6	2.85	14.100	9043340141000
100	16	48	36	100	48	9049040120200	6	2.97	16.100	9043340161000
100	18	50	38	100	48	9049040120200	6	3.10	18.100	9043340181000
100	20	52	40	110	50	9049040160250	8	3.23	20.100	9043340201000
100	25	65	45	120	56	9049040200250	10	4.06	25.100	9043340251000
100	32	72	56	120	60	9049040200250	10	4.40	32.100	9043340321000

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Whistle Notch HSK-C side lock holders

Product information
- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- to DIN 69882-5
- with bore to DIN 1835-2 form E ”Whistle Notch“
- from bore d1 = 25 with two clamping screws Guhring no. 4903

Scope of delivery
- incl. clamping screw Guhring no. 4903 and adjustment screw Guhring no. 4905

Series Number 4333

HSK-C d_3	clamping-Ø d_1 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	incl. adjustment screw 4905 …	SW	kg	Order Code	EDP Numbers
32	6	25	15	60	36	**9049050050160**	3	0.23	6.032	**9043330060320**
32	8	28	20	60	36	**9049050060160**	4	0.28	8.032	**9043330080320**
32	10	35	25	65	40	**9049050080170**	5	0.43	10.032	**9043330100320**
40	6	25	15	60	36	**9049050050160**	3	0.29	6.040	**9043330060400**
40	8	28	20	60	36	**9049050060160**	4	0.33	8.040	**9043330080400**
40	10	35	25	65	40	**9049050080170**	5	0.47	10.040	**9043330100400**
40	12	42	30	70	45	**9049050100170**	6	0.67	12.040	**9043330120400**
40	14	44	32	70	45	**9049050100170**	6	0.73	14.040	**9043330140400**
40	16	48	36	75	48	**9049050120190**	6	0.92	16.040	**9043330160400**
40	20	52	40	80	50	**9049050160200**	8	1.11	20.040	**9043330200400**
50	6	25	15	60	36	**9049050050140**	3	0.42	6.050	**9043330060500**
50	8	28	20	60	36	**9049050060140**	4	0.46	8.050	**9043330080500**
50	10	35	25	65	40	**9049050080150**	5	0.57	10.050	**9043330100500**
50	12	42	30	75	45	**9049050100200**	6	0.80	12.050	**9043330120500**
50	14	44	32	75	45	**9049050100200**	6	0.87	14.050	**9043330140500**
50	16	48	36	80	48	**9049050120220**	6	1.02	16.050	**9043330160500**
50	18	50	38	80	48	**9049050120220**	6	1.09	18.050	**9043330180500**
50	20	52	40	80	50	**9049050160200**	8	1.15	20.050	**9043330200500**
50	25	65	45	95	56	**9049050200260**	10	2.14	25.050	**9043330250500**
63	6	25	15	60	36	**9049050050140**	3	0.64	6.063	**9043330060630**
63	8	28	20	60	36	**9049050060140**	4	0.66	8.063	**9043330080630**
63	10	35	25	65	40	**9049050080150**	5	0.78	10.063	**9043330100630**
63	12	42	30	75	45	**9049050100200**	6	0.99	12.063	**9043330120630**
63	14	44	32	75	45	**9049050100200**	6	1.03	14.063	**9043330140630**
63	16	48	36	80	48	**9049050120220**	6	1.21	16.063	**9043330160630**
63	18	50	38	80	48	**9049050120220**	6	1.26	18.063	**9043330180630**
63	20	52	40	80	50	**9049050160200**	8	1.31	20.063	**9043330200630**
63	25	65	45	95	56	**9049050200260**	10	2.23	25.063	**9043330250630**
63	32	72	56	100	60	**9049050200260**	10	2.75	32.063	**9043330320630**

GÜHROJET Weldon ISO taper side lock holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form B "Weldon"
- ISO taper to DIN 69871 form AD/B
- form B supplied with threaded pins in bores
- with coolant ducts in the bore for peripheral cooling, improving process and tool life
- from bore d1 = 25 mm with two clamping screws Guhring no. 4903
- coolant supply form AD/B
  (*: version AD without coolant supply over collar and without GÜHROJET)

Scope of delivery

- incl. clamping screw Guhring no. 4903
- order pull studs, Guhring no. 4925 or 4926 separately

GÜHROJET

Series Number	4317

ISO taper	clamping-Ø d_1 mm	d_2 mm	l_1 mm	SW	Order Code	EDP Numbers
40*	16	45	35	6	916.040	**9043179160400**
40*	20	45	35	8	920.040	**9043179200400**
40*	25	50	35	10	925.040	**9043179250400**
40	6	25	50	3	6.040	**9043170060400**
40	8	28	50	4	8.040	**9043170080400**
40	10	35	50	5	10.040	**9043170100400**
40	12	42	50	6	12.040	**9043170120400**
40	14	44	50	6	14.040	**9043170140400**
40	16	48	63	6	16.040	**9043170160400**
40	18	50	63	6	18.040	**9043170180400**
40	20	52	63	8	20.040	**9043170200400**
40	6	25	100	3	106.040	**9043171060400**
40	8	28	100	4	108.040	**9043171080400**
40	10	35	100	5	110.040	**9043171100400**
40	12	42	100	6	112.040	**9043171120400**
40	14	44	100	6	114.040	**9043171140400**
40	16	48	100	6	116.040	**9043171160400**
40	18	50	100	6	118.040	**9043171180400**
40	20	52	100	8	120.040	**9043171200400**
40	25	63	100	10	25.040	**9043170250400**
40	32	72	100	10	32.040	**9043170320400**
50	6	25	63	3	6.050	**9043170060500**
50	8	28	63	4	8.050	**9043170080500**
50	10	35	63	5	10.050	**9043170100500**
50	12	42	63	6	12.050	**9043170120500**
50	14	44	63	6	14.050	**9043170140500**
50	16	48	63	6	16.050	**9043170160500**
50	18	50	63	6	18.050	**9043170180500**
50	20	52	63	8	20.050	**9043170200500**
50	25	65	80	10	25.050	**9043170250500**
50	32	72	100	10	32.050	**9043170320500**

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Whistle Notch ISO taper side lock holders

Product information
- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form E ”Whistle Notch“
- ISO taper to DIN 69871 form AD/B
- from bore d1 = 25 mm with two clamping screws Guhring no. 4903

Scope of delivery
- incl. clamping screw Guhring no. 4903 and adjustment screw
- order pull studs, Guhring no. 4925 or 4926 separately

									Series Number	4322
ISO taper	clamping-Ø d_1 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	SW	kg	Order Code		EDP Numbers
40	6	25	15	50	36	3	0.90	6.040		**9043220060400**
40	8	28	20	50	36	4	0.90	8.040		**9043220080400**
40	10	35	25	50	40	5	1.00	10.040		**9043220100400**
40	12	42	30	50	45	6	1.20	12.040		**9043220120400**
40	14	44	32	50	45	6	1.20	14.040		**9043220140400**
40	16	48	36	63	48	6	1.20	16.040		**9043220160400**
40	18	50	38	63	48	6	1.40	18.040		**9043220180400**
40	20	52	40	63	50	8	1.50	20.040		**9043220200400**
40	25	65	45	100	56	10	2.30	25.040		**9043220250400**
40	32	72	56	100	60	10	2.50	32.040		**9043220320400**
50	6	25	15	63	36	3	2.70	6.050		**9043220060500**
50	8	28	20	63	36	4	2.70	8.050		**9043220080500**
50	10	35	25	63	40	5	2.90	10.050		**9043220100500**
50	12	42	30	63	45	6	3.00	12.050		**9043220120500**
50	14	44	32	63	45	6	3.00	14.050		**9043220140500**
50	16	48	36	63	48	6	3.00	16.050		**9043220160500**
50	18	50	38	63	48	6	3.00	18.050		**9043220180500**
50	20	52	40	63	50	8	3.10	20.050		**9043220200500**
50	25	65	45	80	56	10	3.70	25.050		**9043220250500**
50	32	72	56	100	60	10	4.50	32.050		**9043220320500**

GÜHROJET Weldon MAS/BT side lock holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form B "Weldon"
- MAS/BT to JIS B 6339 form AD/B
- from bore d1 = 25 with two clamping screws
- with coolant ducts in the bore for peripheral cooling, improving process and tool life
- coolant supply form AD/B
  (*: version AD without coolant supply over collar and without GÜHROJET)

Scope of delivery

- incl. clamping screw Guhring no. 4903
- order pull studs, Guhring no. 4927 or 4928 separately
- BT-50 on request

GÜHROJET

Series Number	4234

BT	clamping-Ø d_1 mm	d_2 mm	l_1 mm	SW	Order Code	EDP Numbers
30*	6	25	50	3	6.030	**9042340060300**
30*	8	28	50	4	8.030	**9042340080300**
30*	10	35	50	5	10.030	**9042340100300**
30*	12	42	50	6	12.030	**9042340120300**
30*	14	44	50	6	14.030	**9042340140300**
30*	16	48	63	6	16.030	**9042340160300**
30*	18	50	63	6	18.030	**9042340180300**
30*	20	52	63	8	20.030	**9042340200300**
40*	16	45	35	6	916.040	**9042349160400**
40*	20	45	35	8	920.040	**9042349200400**
40*	25	45	35	10	925.040	**9042349250400**
40	6	25	50	3	6.040	**9042340060400**
40	8	28	50	4	8.040	**9042340080400**
40	10	35	63	5	10.040	**9042340100400**
40	12	42	63	6	12.040	**9042340120400**
40	14	44	63	6	14.040	**9042340140400**
40	16	48	63	6	16.040	**9042340160400**
40	18	50	63	6	18.040	**9042340180400**
40	20	52	63	8	20.040	**9042340200400**
40	25	63	90	10	25.040	**9042340250400**
40	32	72	100	10	32.040	**9042340320400**
40	6	25	100	3	106.040	**9042341060400**
40	8	28	100	4	108.040	**9042341080400**
40	10	35	100	5	110.040	**9042341100400**
40	12	42	100	6	112.040	**9042341120400**
40	14	44	100	6	114.040	**9042341140400**
40	16	48	100	6	116.040	**9042341160400**
40	18	50	100	6	118.040	**9042341180400**
40	20	52	100	8	120.040	**9042341200400**

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Whistle Notch MAS/BT side lock holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- MAS/BT to JIS B 6339 form AD/B
- with bore to DIN 1835-2 form E „Whistle-Notch“
- from bore d1 = 25 with two clamping screws
- coolant supply form AD/B
  (*: BT50 version AD without coolant supply over collar)

Scope of delivery

- incl. clamping screw Guhring no. 4903 and adjustment screw
- order pull studs, Guhring no. 4927 or 4928 separately

							Series Number	4233
BT	clamping-Ø d_1 mm	d_2 mm	l_1 mm	l_2 mm	SW	Order Code		EDP Numbers
40	6	25	50	36	3	6.040		**9042330060400**
40	8	28	50	36	4	8.040		**9042330080400**
40	10	35	63	40	5	10.040		**9042330100400**
40	12	42	63	45	6	12.040		**9042330120400**
40	14	44	63	45	6	14.040		**9042330140400**
40	16	48	63	48	6	16.040		**9042330160400**
40	18	50	63	48	6	18.040		**9042330180400**
40	20	52	63	50	8	20.040		**9042330200400**
40	25	63	90	56	10	25.040		**9042330250400**
40	32	72	100	60	10	32.040		**9042330320400**
50*	6	25	63	36	3	6.050		**9042330060500**
50*	8	28	63	36	4	8.050		**9042330080500**
50*	10	35	63	40	5	10.050		**9042330100500**
50*	12	42	80	45	6	12.050		**9042330120500**
50*	14	44	80	45	6	14.050		**9042330140500**
50*	16	48	80	48	6	16.050		**9042330160500**
50*	18	50	80	48	6	18.050		**9042330180500**
50*	20	52	80	50	8	20.050		**9042330200500**
50*	25	65	100	56	10	25.050		**9042330250500**
50*	32	72	105	60	10	32.050		**9042330320500**

Clamping screws

Product information
- for side lock holders with bore to DIN 1835-2, B and E, and HSK-A adaptors for tapping chucks, Guhring nos. 4317/4322/4329/ 4333/4334/4343
- Guhring no. 4903 12,001 (M12) only for Guhring no. 4343

Scope of delivery
- Minimum order quantity 5

	Series Number	4903

for holder-Ø	G	l_1 mm	torque Nm	SW	EDP Numbers
6	M6	10	5	3	**9049030060000**
8	M8	10	10	4	**9049030080000**
10	M10	12	15	5	**9049030100000**
12/14	M12	16	28	6	**9049030120000**
25	M12	12	28	6	**9049030120010**
16/18	M14	16	42	6	**9049030140000**
20	M16	16	50	8	**9049030160000**
25	M18x2	20	60	10	**9049030180000**
32/40	M20x2	20	72	10	**9049030200000**
40	M20x2	25	72	10	**9049030200010**

Adjustment screws

Product information
- for HSK-A Weldon side lock holders with bore to DIN 1835-2, form E, shrink fit chuck and shrink fit extensions

Scope of delivery
- Minimum order quantity 5

	Series Number	4904

G	l_1 mm	SW	EDP Numbers
M5	16	2.5	**9049040050160**
M5	20	2.5	**9049040050200**
M6	16	3.0	**9049040060160**
M6	20	3.0	**9049040060200**
M8	12	3.0	**9049040080120**
M8	18	4.0	**9049040080180**
M10	17	3.0	**9049040100170**
M10	20	5.0	**9049040100200**
M12	14	3.0	**9049040120140**
M12	20	5.0	**9049040120200**
M16	25	5.0	**9049040160250**
M20	25	6.0	**9049040200250**

Adjustment screws

Product information
- for HSK-C side lock with bore to DIN 1835-2, form E, Guhring nos. 4333 / 4322

Scope of delivery
- Minimum order quantity 5

	Series Number	4905

G	l_1 mm	SW	EDP Numbers
M5	14	2.5	**9049050050140**
M5	16	2.5	**9049050050160**
M6	14	3.0	**9049050060140**
M6	16	3.0	**9049050060160**
M8	15	4.0	**9049050080150**
M8	17	4.0	**9049050080170**
M10	17	5.0	**9049050100170**
M10	20	5.0	**9049050100200**
M12	19	6.0	**9049050120190**
M12	22	6.0	**9049050120220**
M16	20	6.0	**9049050160200**
M20	26	6.0	**9049050200260**

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HSK-A collet holders

Product information

- balancing quality: G6.3 / 15,000 rev./min

Scope of delivery

- incl. retaining nut Guhring no. 4306 and adjustment screw Guhring no. 4902
- order collet, Guhring no. 4307, clamping key, Guhring no. 4913 and coolant delivery set, Guhring no. 4949 separately

Series Number 4304

HSK-A d_3	Nominal size	clamping range	d_2 mm	G	l_1 mm	l_2 mm	l_4 mm	incl. adjustment screw Guhr. no. 4902	kg	Order Code	EDP Numbers
32	ER 11	1-7	19	M14 x 0.75	55	25	6	**9049020110120**	0.16	11.032	**9043040110320**
32	ER 16	1-10	28	M22 x 1.5	80	34	6	**9049020160120**	0.30	16.032	**9043040160320**
32	ER 20	3-13	34	M25 x 1.5	70	40	6	**9049020160120**	0.27	20.032	**9043040200320**
40	ER 16	1-10	28	M22 x 1.5	80	34	6	**9049020160120**	0.40	16.040	**9043040160400**
40	ER 25	2-16	42	M32 x 1.5	80	44	6	**9049020250140**	0.51	25.040	**9043040250400**
40	ER 32	3-20	50	M40 x 1.5	100	50	10	**9049020320200**	0.72	32.040	**9043040320400**
50	ER 16	1-10	28	M22 x 1.5	100	34	6	**9049020160120**	0.74	16.050	**9043040160500**
50	ER 25	2-16	42	M32 x 1.5	80	44	6	**9049020250140**	0.66	25.050	**9043040250500**
50	ER 25	2-16	42	M32 x 1.5	100	44	6	**9049020250140**	0.83	25.150	**9043040251500**
50	ER 32	3-20	50	M40 x 1.5	100	50	10	**9049020320200**	0.93	32.050	**9043040320500**
63	ER 16	1-10	28	M22 x 1.5	100	34	6	**9049020160120**	0.95	16.063	**9043040160630**
63	ER 16	1-10	28	M22 x 1.5	160	34	6	**9049020160120**	1.40	16.163	**9043040161630**
63	ER 25	2-16	42	M32 x 1.5	80	42	6	**9049020250140**	0.94	25.063	**9043040250630**
63	ER 25	2-16	42	M32 x 1.5	100	42	6	**9049020250140**	1.08	25.163	**9043040251630**
63	ER 32	3-20	50	M40 x 1.5	100	50	10	**9049020320200**	1.20	32.063	**9043040320630**
63	ER 40	3-26	63	M50 x 1.5	120	56	10	**9049020320200**	1.80	40.063	**9043040400630**
80	ER 32	3-20	50	M40 x 1.5	100	50	10	**9049020320200**	2.75	32.080	**9043040320800**
80	ER 32	3-20	50	M40 x 1.5	160	50	10	**9049020320200**	3.45	32.180	**9043040321800**
80	ER 40	3-26	63	M50 x 1.5	120	56	10	**9049020320200**	2.93	40.080	**9043040400800**
100	ER 32	3-20	50	M40 x 1.5	100	50	10	**9049020320200**	2.70	32.100	**9043040321000**
100	ER 32	3-20	50	M40 x 1.5	160	50	10	**9049020320200**	4.30	32.101	**9043040321010**
100	ER 40	3-26	63	M50 x 1.5	120	56	10	**9049020320200**	3.20	40.100	**9043040401000**

HSK-A collet holders, sealed version

Product information

- sealed, suitable for coolant pressure up to 100 bar
- balancing quality: G6.3 / 15,000 rev./min

Scope of delivery

- incl. retaining nut Guhring no. 4306 and adjustment screw Guhring no. 4902
- order sealing washer, Guhring no. 4335, collet, Guhring no. 4307, clamping key, Guhring no. 4913 and coolant delivery set Guhring no. 4949 separately

Series Number 4324

HSK-A d_3	Nominal size	clamping range	d_2 mm	G	l_1 mm	l_2 mm	l_4 mm	incl. adjustment screw Guhr. no. 4902	kg	Order Code	EDP Numbers
32	ER 16	1-10	28	M22 x 1.5	85	39	6	**9049020160120**	0.32	16.032	**9043240160320**
32	ER 20	3-13	34	M25 x 1.5	75	45	6	**9049020160120**	0.31	20.032	**9043240200320**
40	ER 16	1-10	28	M22 x 1.5	85	39	6	**9049020160120**	0.41	16.040	**9043240160400**
40	ER 25	2-16	42	M32 x 1.5	85	49	6	**9049020250140**	0.51	25.040	**9043240250400**
40	ER 32	3-20	50	M40 x 1.5	105	55	10	**9049020320200**	0.72	32.040	**9043240320400**
50	ER 16	1-10	28	M22 x 1.5	105	39	6	**9049020160120**	0.78	16.050	**9043240160500**
50	ER 25	2-16	42	M32 x 1.5	85	49	6	**9049020250140**	0.66	25.050	**9043240250500**
50	ER 25	2-16	42	M32 x 1.5	105	49	10	**9049020250140**	0.86	25.150	**9043240251500**
50	ER 32	3-20	50	M40 x 1.5	105	55	10	**9049020320200**	0.93	32.050	**9043240320500**
63	ER 16	1-10	28	M22 x 1.5	105	39	6	**9049020160120**	1.00	16.063	**9043240160630**
63	ER 16	1-10	28	M22 x 1.5	165	39	6	**9049020160120**	1.45	16.163	**9043240161630**
63	ER 25	2-16	42	M32 x 1.5	85	47	6	**9049020250140**	0.94	25.063	**9043240250630**
63	ER 25	2-16	42	M32 x 1.5	105	47	6	**9049020250140**	1.08	25.163	**9043240251630**
63	ER 32	3-20	50	M40 x 1.5	105	55	10	**9049020320200**	1.20	32.063	**9043240320630**
63	ER 40	3-26	63	M50 x 1.5	125	61	10	**9049020320200**	1.80	40.063	**9043240400630**
80	ER 32	3-20	50	M40 x 1.5	105	55	10	**9049020320200**	2.80	32.080	**9043240320800**
80	ER 32	3-20	50	M40 x 1.5	165	55	10	**9049020320200**	3.50	32.180	**9043240321800**
80	ER 40	3-26	63	M50 x 1.5	125	61	10	**9049020320200**	2.98	40.080	**9043240400800**
100	ER 32	3-20	50	M40 x 1.5	105	55	10	**9049020320200**	2.70	32.100	**9043240321000**
100	ER 32	3-20	50	M40 x 1.5	165	55	10	**9049020320200**	4.30	32.101	**9043240321010**
100	ER 40	3-26	63	M50 x 1.5	125	61	10	**9049020320200**	3.20	40.100	**9043240401000**

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HSK-C collet holders

Product information

- balancing quality: G6.3 / 15,000 rev./min

Scope of delivery

- incl. retaining nut Guhring no. 4306 and adjustment screw Guhring no. 4901
- order collet, Guhring no. 4307, clamping key, Guhring no. 4913 separately

											Series Number	4303
HSK-C d_3	Nominal size	clamping range	d_2 mm	G	l_1 mm	l_2 mm	l_4 mm	incl. adjustment screw Guhr. no. 4901	kg	Order Code		EDP Numbers
25	ER16 mini	1-10	22	M19 x 1.0	50	30	4	**9049010160120**	0.10	16.025		**9043030160250**
32	ER 16	1-10	28	M22 x 1.5	55	32	4	**9049010160120**	0.19	16.032		**9043030160320**
32	ER 20	3-13	34	M25 x 1.5	60	38	5	**9049010160120**	0.23	20.032		**9043030200320**
32	ER 25	2-16	42	M32 x 1.5	70	44	6	**9049010250140**	0.36	25.032		**9043030250320**
40	ER 20	3-13	34	M25 x 1.5	60	38	5	**9049010160120**	0.28	20.040		**9043030200400**
40	ER 25	2-16	42	M32 x 1.5	70	44	6	**9049010250140**	0.41	25.040		**9043030250400**
40	ER 32	3-20	50	M40 x 1.5	75	49	6	**9049010250140**	0.59	32.040		**9043030320400**
50	ER 16	1-10	28	M22 x 1.5	60	34	6	**9049010160120**	0.45	16.050		**9043030160500**
50	ER 25	2-16	42	M32 x 1.5	70	44	6	**9049010250140**	0.54	25.050		**9043030250500**
50	ER 32	3-20	50	M40 x 1.5	75	49	6	**9049010250140**	0.68	32.050		**9043030320500**
50	ER 40	3-26	63	M50 x 1.5	80	54	6	**9049010250140**	0.98	40.050		**9043030400500**
63	ER 40	3-26	63	M50 x 1.5	80	54	6	**9049010250140**	1.17	40.063		**9043030400630**

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HSK-C collet holders, sealed version

Product information

- sealed, suitable for coolant pressure up to 100 bar
- balancing quality: G6.3 / 15,000 rev./min

Scope of delivery

- incl. retaining nut Guhring no. 4306 and adjustment screw Guhring no. 4901
- order sealing washer Guhring no. 4335, collet, Guhring no. 4307, clamping key, Guhring no. 4913 separately

Series Number **4323**

HSK-C d_3	Nominal size	clamping range	d_2 mm	G	l_1 mm	l_2 mm	l_4 mm	incl. adjustment screw Guhr. no. 4901	kg	Order Code	EDP Numbers
25	ER16 mini	1-10	22	M19 x 1.0	55	37	4	**9049010160120**	0.10	16.025	**9043230160250**
32	ER 16	1-10	28	M22 x 1.5	60	37	4	**9049010160120**	0.20	16.032	**9043230160320**
32	ER 20	3-13	34	M25 x 1.5	65	43	5	**9049010160120**	0.26	20.032	**9043230200320**
32	ER 25	2-16	42	M32 x 1.5	75	49	6	**9049010250140**	0.42	25.032	**9043230250320**
40	ER 20	3-13	34	M25 x 1.5	65	43	5	**9049010160120**	0.30	20.040	**9043230200400**
40	ER 25	2-16	42	M32 x 1.5	75	49	6	**9049010250140**	0.47	25.040	**9043230250400**
40	ER 32	3-20	50	M40 x 1.5	80	54	6	**9049010250140**	0.64	32.040	**9043230320400**
50	ER 16	1-10	28	M22 x 1.5	65	39	6	**9049010160120**	0.46	16.050	**9043230160500**
50	ER 25	2-16	42	M32 x 1.5	75	49	6	**9049010250140**	0.59	25.050	**9043230250500**
50	ER 32	3-20	50	M40 x 1.5	80	54	6	**9049010250140**	0.74	32.050	**9043230320500**
50	ER 40	3-26	63	M50 x 1.5	85	61	6	**9049010250140**	1.12	40.050	**9043230400500**
63	ER 40	3-26	63	M50 x 1.5	85	61	6	**9049010250140**	1.30	40.063	**9043230400630**

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HSK-E collet holders

Product information

- balancing quality: G2.5 / 25,000 rev./min or < 1 gmm residual imbalance
- incl. spanner flat for locking during clamping
- Code no. 16,025 without length adjustment and central cooling

Scope of delivery

- incl. retaining nut Guhring no. 4306 and adjustment screw
- order collet, Guhring no. 4307, clamping key, Guhring no. 4913 and coolant supply set, Guhring no. 4949 separately

Series Number 4397

HSK-E d_3	Nominal size	clamping range	d_2 mm	G	l_1 mm	l_2 mm	l_4 mm	kg	Order Code	EDP Numbers
25	ER 16 mini	1-10	22	M19 x 1.0	43	-	-	0.10	16.025	**9043970160250**
32	ER 16 mini	1-10	22	M19 x 1.0	60	32	4	0.20	16.032	**9043970160320**
32	ER 20 mini	1-13	28	M24 x 1.0	60	35	4	0.25	20.032	**9043970200320**
40	ER 16	1-10	28	M22 x 1.5	60	38	4	0.30	16.040	**9043970160400**
40	ER 20 mini	1-13	28	M24 x 1.0	65	37	6	0.30	20.040	**9043970200400**
40	ER 25 mini	2-16	35	M30 x 1.0	80	38	6	0.40	25.040	**9043970250400**
50	ER 16	1-10	28	M22 x 1.5	100	33	4	0.50	16.050	**9043970160500**
50	ER 20	1-13	34	M25 x 1.5	70	37.5	4	0.50	20.050	**9043970200500**
50	ER 25	2-16	42	M32 x 1.5	80	39	6	0.70	25.050	**9043970250500**
50	ER 32	3-20	50	M40 x 1.5	100	50	6	1.00	32.050	**9043970320500**
63	ER 32	3-20	50	M40 x 1.5	90	52	6	1.00	32.063	**9043970320630**
63	ER 40	4-26	63	M50 x 1.5	120	65	10	1.20	40.063	**9043970400630**

ISO taper collet holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- ISO taper to DIN 69871 form AD/B

Scope of delivery

- incl. retaining nut
- order collet, Guhring no. 4307, separately
- order clamping key, Guhring no. 4913 separately
- order pull studs, Guhring no. 4925 or 4926 separately

Series Number 4318

ISO taper	Nominal size	clamping range	d_2 mm	G	l_1 mm	Order Code	EDP Numbers
40	ER16	1-10	32	M22 x 1.5	63	16.040	**9043180160400**
40	ER25	2-16	42	M32 x 1.5	60	25.040	**9043180250400**
40	ER32	2-20	50	M40 x 1.5	70	32.040	**9043180320400**
40	ER16	1-10	32	M22 x 1.5	160	16.140	**9043180161400**
40	ER25	2-16	42	M32 x 1.5	160	25.140	**9043180251400**
40	ER32	2-20	50	M40 x 1.5	160	32.140	**9043180321400**
50	ER25	2-16	42	M32 x 1.5	60	25.050	**9043180250500**
50	ER32	2-20	50	M40 x 1.5	70	32.050	**9043180320500**
50	ER40	3-26	63	M50 x 1.5	80	40.050	**9043180400500**
50	ER25	2-16	42	M32 x 1.5	160	25.150	**9043180251500**
50	ER40	3-26	63	M50 x 1.5	160	40.150	**9043180401500**

MAS/BT collet holders

Product information

- balancing quality: G6.3 / 15,000 rev./min
- MAS/BT to JIS B 6339 form AD/B
- coolant supply form AD/B (*version AD without coolant supply over collar)

Scope of delivery

- incl. retaining nut
- order collet, Guhring no. 4307, separately
- order clamping key, Guhring no. 4913 separately
- BT50 on request

Series Number 4245

BT	clamping range	d_2 mm	G	l_1 mm	Order Code	EDP Numbers
30*	ER16	32	M22x1.5	70	16.030	**9042450160300**
30*	ER25	42	M32x1.5	70	25.030	**9042450250300**
40	ER16	32	M22x1.5	63	16.040	**9042450160400**
40	ER25	42	M32x1.5	60	25.040	**9042450250400**
40	ER32	50	M40x1.5	70	32.040	**9042450320400**
40	ER16	32	M22x1.5	160	16.140	**9042450161400**
40	ER25	42	M32x1.5	160	25.140	**9042450251400**
40	ER32	50	M40x1.5	160	32.140	**9042450321400**

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Clamping key

Product information

- for collet holders
- ER11 - clamping key SW17

Series Number **4913**

nominal size mm	type	l_1 mm	SW	EDP Numbers
ER16 mini	A	122	22	9049130162000
ER20 mini	A	139	28	9049130202000
ER25 mini	A	143	35	9049130252000
ER11	B	141	17	9049130110000
ER16	B	178	25	9049130160000
ER16	C	163	32	9049130160320
ER20	C	183	35	9049130200000
ER25	C	210	42	9049130250000
ER32	C	250	50	9049130320000
ER40	C	290	63	9049130400000

Adjustment screws for HSK-A/HSK-E collet holders

Product information

- with code nos. 16,012, 25,014 and 32,020 screws for the largest clamping diameter are without dog point

Series Number **4902**

for nominal size	for clamping range	G	d_1 mm	l_1 mm	SW	EDP Numbers
ER11	1 - 7	M6	–	12	3	9049020110120
ER16	1.2 - 6	M10	3.5	18	3	9049020160180
ER16	6 - 10	M10	–	12	3	9049020160120
ER20	3 - 6	M10	4.5	24	3	9049020200240
ER20	6-10	M10	5.5	18	3	9049020200180
ER20	10 - 13	M10	–	12	3	9049020160120
ER25	3 - 7	M16	4.5	26	4	9049020250260
ER25	7 - 10	M16	6.5	20	4	9049020250200
ER25	10 - 16	M16	–	14	4	9049020250140
ER32	3 - 10	M16	6.5	36	5	9049020320360
ER32	10 - 16	M16	9.5	28	5	9049020320280
ER32	16 - 20	M16	–	20	5	9049020320200
ER40	3 - 8	M16	6.5	44	5	9049020400440
ER40	8 - 10	M16	6.5	36	5	9049020320200
ER40	10 - 16	M16	9.5	28	5	9049020320360
ER40	16 - 26	M16	–	20	5	9049020320280

Adjustment screws for HSK-C collet holders

Product information

- with code nos.16,012 and 32,020 screws for the largest clamping diameter are without dog point

Series Number **4901**

for nominal size	for clamping range	G	d_1 mm	l_1 mm	SW	EDP Numbers
ER16	1.2- 6	M10	3.5	16	3	**9049010160160**
ER16	6-10	M10	–	12	3	**9049010160120**
ER20	3- 6	M10	4.5	20	3	**9049010200200**
ER20	6-10	M10	5.5	16	3	**9049010200160**
ER20	10-13	M10	–	12	3	**9049010160120**
ER25	3- 7	M16	4.5	26	4	**9049010250260**
ER25	7-10	M16	6.5	20	4	**9049010250200**
ER25	10-16	M16	–	14	4	**9049010250140**
ER32	3- 7	M16	6.5	32	5	**9049010320320**
ER32	7-10	M16	6.5	26	5	**9049010320260**
ER32	10-16	M16	9.5	20	5	**9049010320200**
ER32	16-20	M16	–	14	4	**9049010250140**
ER40	3- 6	M16	6.5	38	5	**9049010400380**
ER40	6- 8	M16	6.5	32	5	**9049010320320**
ER40	8-10	M16	6.5	26	5	**9049010320260**
ER40	10-16	M16	9.5	20	5	**9049010320200**
ER40	16-26	M16	–	14	4	**9049010250140**

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Collets DIN ISO 15488

Product information

- the application range of collet, Guhring no. 4307, is from nom.-Ø d1 to the next dimension below, i.e. for Ø 6.3 mm (nom. size ER20) order collet d1 = 7.0 mm (code no. 07,020).

Ordering example:

Ø d1	= 2.5
nom. size	= ER 20
Guhring no./Code no.	= 4307 02,520

Series Number 4307

nominal size d_2	d_1 mm	Clamping Range	l_1 mm	Order Code	EDP Numbers
ER11	1	1 to 0.5	18	1.011	9043070010110
ER11	1.5	1.5 to 1	18	1.511	9043070015110
ER11	2	2 to 1.5	18	2.011	9043070020110
ER11	2.5	2.5 to 2	18	2.511	9043070025110
ER11	3	3 to 2.5	18	3.011	9043070030110
ER11	4	4 to 3	18	4.011	9043070040110
ER11	5	5 to 4	18	5.011	9043070050110
ER11	6	6 to 5	18	6.011	9043070060110
ER11	7	7 to 6	18	7.011	9043070070110
ER16	1	1 to 0.5	27.5	1.016	9043070010160
ER16	1.5	1.5 to 1	27.5	1.516	9043070015160
ER16	2	2 to 1.5	27.5	2.016	9043070020160
ER16	2.5	2.5 to 2	27.5	2.516	9043070025160
ER16	3	3 to 2.5	27.5	3.016	9043070030160
ER16	4	4 to 3	27.5	4.016	9043070040160
ER16	5	5 to 4	27.5	5.016	9043070050160
ER16	6	6 to 5	27.5	6.016	9043070060160
ER16	7	7 to 6	27.5	7.016	9043070070160
ER16	8	8 to 7	27.5	8.016	9043070080160
ER16	9	9 to 8	27.5	9.016	9043070090160
ER16	10	10 to 9	27.5	10.016	9043070100160
ER20	1	1 to 0.5	31.5	1.020	9043070010200
ER20	1.5	1.5 to 1	31.5	1.520	9043070015200
ER20	2	2 to 1.5	31.5	2.020	9043070020200
ER20	2.5	2.5 to 2	31.5	2.520	9043070025200
ER20	3	3 to 2.5	31.5	3.020	9043070030200
ER20	4	4 to 3	31.5	4.020	9043070040200
ER20	5	5 to 4	31.5	5.020	9043070050200
ER20	6	6 to 5	31.5	6.020	9043070060200
ER20	7	7 to 6	31.5	7.020	9043070070200
ER20	8	8 to 7	31.5	8.020	9043070080200
ER20	9	9 to 8	31.5	9.020	9043070090200
ER20	10	10 to 9	31.5	10.020	9043070100200
ER20	11	11 to 10	31.5	11.020	9043070110200
ER20	12	12 to 11	31.5	12.020	9043070120200
ER20	13	13 to 12	31.5	13.020	9043070130200
ER25	1	1 to 0.5	34	1.025	9043070010250
ER25	1.5	1.5 to 1	34	1.525	9043070015250
ER25	2	2 to 1.5	34	2.025	9043070020250

Collets DIN ISO 15488

				Series Number	4307
nominal size d_2	d_1 mm	Clamping Range	l_1 mm	Order Code	EDP Numbers
ER25	2.5	2.5 to 2	34	2.525	9043070025250
ER25	3	3 to 2.5	34	3.025	9043070030250
ER25	4	4 to 3	34	4.025	9043070040250
ER25	5	5 to 4	34	5.025	9043070050250
ER25	6	6 to 5	34	6.025	9043070060250
ER25	7	7 to 6	34	7.025	9043070070250
ER25	8	8 to 7	34	8.025	9043070080250
ER25	9	9 to 8	34	9.025	9043070090250
ER25	10	10 to 9	34	10.025	9043070100250
ER25	11	11 to 10	34	11.025	9043070110250
ER25	12	12 to 11	34	12.025	9043070120250
ER25	13	13 to 12	34	13.025	9043070130250
ER25	14	14 to 13	34	14.025	9043070140250
ER25	15	15 to 14	34	15.025	9043070150250
ER25	16	16 to 15	34	16.025	9043070160250
ER32	2	2 to 1.5	40	2.032	9043070020320
ER32	2.5	2.5 to 2	40	2.532	9043070025320
ER32	3	3 to 2.5	40	3.032	9043070030320
ER32	4	4 to 3	40	4.032	9043070040320
ER32	5	5 to 4	40	5.032	9043070050320
ER32	6	6 to 5	40	6.032	9043070060320
ER32	7	7 to 6	40	7.032	9043070070320
ER32	8	8 to 7	40	8.032	9043070080320
ER32	9	9 to 8	40	9.032	9043070090320
ER32	10	10 to 9	40	10.032	9043070100320
ER32	11	11 to 10	40	11.032	9043070110320
ER32	12	12 to 11	40	12.032	9043070120320
ER32	13	13 to 12	40	13.032	9043070130320
ER32	14	14 to 13	40	14.032	9043070140320
ER32	15	15 to 14	40	15.032	9043070150320
ER32	16	16 to 15	40	16.032	9043070160320
ER32	17	17 to 16	40	17.032	9043070170320
ER32	18	18 to 17	40	18.032	9043070180320
ER32	19	19 to 18	40	19.032	9043070190320
ER32	20	20 to 19	40	20.032	9043070200320
ER40	4	4 to 3	46	4.040	9043070040400
ER40	5	5 to 4	46	5.040	9043070050400
ER40	6	6 to 5	46	6.040	9043070060400
ER40	7	7 to 6	46	7.040	9043070070400
ER40	8	8 to 7	46	8.040	9043070080400
ER40	9	9 to 8	46	9.040	9043070090400
ER40	10	10 to 9	46	10.040	9043070100400
ER40	11	11 to 10	46	11.040	9043070110400
ER40	12	12 to 11	46	12.040	9043070120400
ER40	13	13 to 12	46	13.040	9043070130400
ER40	14	14 to 13	46	14.040	9043070140400
ER40	15	15 to 14	46	15.040	9043070150400
ER40	16	16 to 15	46	16.040	9043070160400
ER40	17	17 to 16	46	17.040	9043070170400
ER40	18	18 to 17	46	18.040	9043070180400
ER40	19	19 to 18	46	19.040	9043070190400
ER40	20	20 to 19	46	20.040	9043070200400
ER40	21	21 to 20	46	21.040	9043070210400
ER40	22	22 to 21	46	22.040	9043070220400
ER40	23	23 to 22	46	23.040	9043070230400
ER40	24	24 to 23	46	24.040	9043070240400
ER40	25	25 to 24	46	25.040	9043070250400
ER40	26	26 to 25	46	26.040	9043070260400

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Collets ER metallic sealed

Product information

- DIN 15488
- for application without sealing washer
- concentricity error max. 6 µm
- for high-performance tools with internal cooling e.g. HR 500 reamers

- ER-DM collets with restricted clamping range

				Series Number	4175
nominal size d_2	d_1 mm	l_1 mm	Order Code		EDP Numbers
ER20	3.00	31.5	3.020		9041750030200
ER20	4.00	31.5	4.020		9041750040200
ER20	5.00	31.5	5.020		9041750050200
ER20	6.00	31.5	6.020		9041750060200
ER20	7 to 6.5	31.5	7.020		9041750070200
ER20	8 to 7.5	31.5	8.020		9041750080200
ER20	9 to 8.5	31.5	9.020		9041750090200
ER20	10 to 9.5	31.5	10.020		9041750100200
ER20	11 to 10.5	31.5	11.020		9041750110200
ER20	12 to 11.5	31.5	12.020		9041750120200
ER20	13 to 12.5	31.5	13.020		9041750130200
ER25	6.00	34	6.025		9041750060250
ER25	8 to 7.5	34	8.025		9041750080250
ER25	10 to 9.5	34	10.025		9041750100250
ER25	12 to 11.5	34	12.025		9041750120250
ER25	14 to 13.5	34	14.025		9041750140250
ER25	16 to 15.5	34	16.025		9041750160250
ER32	6.00	40	6.032		9041750060320
ER32	8 to 7.5	40	8.032		9041750080320
ER32	10 to 9.5	40	10.032		9041750100320
ER32	12 to 11.5	40	12.032		9041750120320
ER32	14 to 13.5	40	14.032		9041750140320
ER32	16 to 15.5	40	16.032		9041750160320
ER32	18 to 17.5	40	18.032		9041750180320
ER32	20 to 19.5	40	20.032		9041750200320

Sealing washers

Product information

- the application range of sealing washer, Guhring no. 4325, is from nom.-Ø d1 to the next dimension below, i.e. for Ø 6.3 mm (nom. size ER20) order sealing washer d1 = 6.5 mm (code no. 06,520).

Ordering example

Ø d1	= 3.5
nom. size	= ER 20
Guhring no./Code no.	= 4335 03,520

					Series Number	4335
nominal size	d_1 mm	Sealing Range	d_2 mm	B mm	Order Code	EDP Numbers
ER16	3	2.5 to 3	13	4	3.016	9043350030160
ER20	3	2.5 to 3	16	4	3.020	9043350030200
ER25	3	2.5 to 3	21	4	3.025	9043350030250
ER32	3	2.5 to 3	27	4	3.032	9043350030320
ER16	3.5	3 to 3.5	13	4	3.516	9043350035160
ER20	3.5	3 to 3.5	16	4	3.520	9043350035200
ER25	3.5	3 to 3.5	21	4	3.525	9043350035250
ER32	3.5	3 to 3.5	27	4	3.532	9043350035320
ER40	3.5	3 to 3.5	33.5	4	3.540	9043350035400
ER16	4	3.5 to 4	13	4	4.016	9043350040160
ER20	4	3.5 to 4	16	4	4.020	9043350040200
ER25	4	3.5 to 4	21	4	4.025	9043350040250
ER32	4	3.5 to 4	27	4	4.032	9043350040320
ER40	4	3.5 to 4	33.5	4	4.040	9043350040400
ER16	4.5	4 to 4.5	13	4	4.516	9043350045160
ER20	4.5	4 to 4.5	16	4	4.520	9043350045200
ER25	4.5	4 to 4.5	21	4	4.525	9043350045250
ER32	4.5	4 to 4.5	27	4	4.532	9043350045320
ER40	4.5	4 to 4.5	33.5	4	4.540	9043350045400
ER16	5	4.5 to 5	13	4	5.016	9043350050160
ER20	5	4.5 to 5	16	4	5.020	9043350050200
ER25	5	4.5 to 5	21	4	5.025	9043350050250
ER32	5	4.5 to 5	27	4	5.032	9043350050320
ER40	5	4.5 to 5	33.5	4	5.040	9043350050400
ER16	5.5	5 to 5.5	13	4	5.516	9043350055160
ER20	5.5	5 to 5.5	16	4	5.520	9043350055200
ER25	5.5	5 to 5.5	21	4	5.525	9043350055250
ER32	5.5	5 to 5.5	27	4	5.532	9043350055320
ER40	5.5	5 to 5.5	33.5	4	5.540	9043350055400
ER16	6	5.5 to 6	13	4	6.016	9043350060160
ER20	6	5.5 to 6	16	4	6.020	9043350060200
ER25	6	5.5 to 6	21	4	6.025	9043350060250
ER32	6	5.5 to 6	27	4	6.032	9043350060320
ER40	6	5.5 to 6	33.5	4	6.040	9043350060400
ER16	6.5	6 to 6.5	13	4	6.516	9043350065160
ER20	6.5	6 to 6.5	16	4	6.520	9043350065200
ER25	6.5	6 to 6.5	21	4	6.525	9043350065250
ER32	6.5	6 to 6.5	27	4	6.532	9043350065320
ER40	6.5	6 to 6.5	33.5	4	6.540	9043350065400

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Sealing washers

					Series Number	4335
nominal size	d_1 mm	Sealing Range	d_2 mm	B mm	Order Code	EDP Numbers
ER16	7	6.5 to 7	13	4	7.016	9043350070160
ER20	7	6.5 to 7	16	4	7.020	9043350070200
ER25	7	6.5 to 7	21	4	7.025	9043350070250
ER32	7	6.5 to 7	27	4	7.032	9043350070320
ER40	7	6.5 to 7	33.5	4	7.040	9043350070400
ER16	7.5	7 to 7.5	13	4	7.516	9043350075160
ER20	7.5	7 to 7.5	16	4	7.520	9043350075200
ER25	7.5	7 to 7.5	21	4	7.525	9043350075250
ER32	7.5	7 to 7.5	27	4	7.532	9043350075320
ER40	7.5	7 to 7.5	33.5	4	7.540	9043350075400
ER16	8	7.5 to 8	13	4	8.016	9043350080160
ER20	8	7.5 to 8	16	4	8.020	9043350080200
ER25	8	7.5 to 8	21	4	8.025	9043350080250
ER32	8	7.5 to 8	27	4	8.032	9043350080320
ER40	8	7.5 to 8	33.5	4	8.040	9043350080400
ER16	8.5	8 to 8.5	13	4	8.516	9043350085160
ER20	8.5	8 to 8.5	16	4	8.520	9043350085200
ER25	8.5	8 to 8.5	21	4	8.525	9043350085250
ER32	8.5	8 to 8.5	27	4	8.532	9043350085320
ER40	8.5	8 to 8.5	33.5	4	8.540	9043350085400
ER16	9	8.5 to 9	13	4	9.016	9043350090160
ER20	9	8.5 to 9	16	4	9.020	9043350090200
ER25	9	8.5 to 9	21	4	9.025	9043350090250
ER32	9	8.5 to 9	27	4	9.032	9043350090320
ER40	9	8.5 to 9	33.5	4	9.040	9043350090400
ER16	9.5	9 to 9.5	13	4	9.516	9043350095160
ER20	9.5	9 to 9.5	16	4	9.520	9043350095200
ER25	9.5	9 to 9.5	21	4	9.525	9043350095250
ER32	9.5	9 to 9.5	27	4	9.532	9043350095320
ER40	9.5	9 to 9.5	33.5	4	9.540	9043350095400
ER16	10	9.5 to 10	13	4	10.016	9043350100160
ER20	10	9.5 to 10	16	4	10.020	9043350100200
ER25	10	9.5 to 10	21	4	10.025	9043350100250
ER32	10	9.5 to 10	27	4	10.032	9043350100320
ER40	10	9.5 to 10	33.5	4	10.040	9043350100400
ER20	10.5	10 to 10.5	16	4	10.520	9043350105200
ER25	10.5	10 to 10.5	21	4	10.525	9043350105250
ER32	10.5	10 to 10.5	27	4	10.532	9043350105320
ER40	10.5	10 to 10.5	33.5	4	10.540	9043350105400
ER20	11	10.5 to 11	16	4	11.020	9043350110200
ER25	11	10.5 to 11	21	4	11.025	9043350110250
ER32	11	10.5 to 11	27	4	11.032	9043350110320
ER40	11	10.5 to 11	33.5	4	11.040	9043350110400
ER20	11.5	11 to 11.5	16	4	11.520	9043350115200
ER25	11.5	11 to 11.5	21	4	11.525	9043350115250
ER32	11.5	11 to 11.5	27	4	11.532	9043350115320
ER40	11.5	11 to 11.5	33.5	4	11.540	9043350115400
ER20	12	11.5 to 12	16	4	12.020	9043350120200
ER25	12	11.5 to 12	21	4	12.025	9043350120250
ER32	12	11.5 to 12	27	4	12.032	9043350120320
ER40	12	11.5 to 12	33.5	4	12.040	9043350120400
ER20	12.5	12 to 12.5	16	4	12.520	9043350125200
ER25	12.5	12 to 12.5	21	4	12.525	9043350125250
ER32	12.5	12 to 12.5	27	4	12.532	9043350125320
ER40	12.5	12 to 12.5	33.5	4	12.540	9043350125400

Sealing washers

					Series Number	4335
nominal size	d_1 mm	Sealing Range	d_2 mm	B mm	Order Code	EDP Numbers
ER20	13	12.5 to 13	16	4	13.020	9043350130200
ER25	13	12.5 to 13	21	4	13.025	9043350130250
ER32	13	12.5 to 13	27	4	13.032	9043350130320
ER40	13	12.5 to 13	33.5	4	13.040	9043350130400
ER25	13.5	13 to 13.5	21	4	13.525	9043350135250
ER32	13.5	13 to 13.5	27	4	13.532	9043350135320
ER40	13.5	13 to 13.5	33.5	4	13.540	9043350135400
ER25	14	13.5 to 14	21	4	14.025	9043350140250
ER32	14	13.5 to 14	27	4	14.032	9043350140320
ER40	14	13.5 to 14	33.5	4	14.040	9043350140400
ER25	14.5	14 to 14.5	21	4	14.525	9043350145250
ER32	14.5	14 to 14.5	27	4	14.532	9043350145320
ER40	14.5	14 to 14.5	33.5	4	14.540	9043350145400
ER25	15	14.5 to 15	21	4	15.025	9043350150250
ER32	15	14.5 to 15	27	4	15.032	9043350150320
ER40	15	14.5 to 15	33.5	4	15.040	9043350150400
ER25	15.5	15 to 15.5	21	4	15.525	9043350155250
ER32	15.5	15 to 15.5	27	4	15.532	9043350155320
ER40	15.5	15 to 15.5	33.5	4	15.540	9043350155400
ER25	16	15.5 to 16	21	4	16.025	9043350160250
ER32	16	15.5 to 16	27	4	16.032	9043350160320
ER40	16	15.5 to 16	33.5	4	16.040	9043350160400
ER32	16.5	16 to 16.5	27	4	16.532	9043350165320
ER40	16.5	16 to 16.5	33.5	4	16.540	9043350165400
ER32	17	16.5 to 17	27	4	17.032	9043350170320
ER40	17	16.5 to 17	33.5	4	17.040	9043350170400
ER32	17.5	17 to 17.5	27	4	17.532	9043350175320
ER40	17.5	17 to 17.5	33.5	4	17.540	9043350175400
ER32	18	17.5 to 18	27	4	18.032	9043350180320
ER40	18	17.5 to 18	33.5	4	18.040	9043350180400
ER32	18.5	18 to 18.5	27	4	18.532	9043350185320
ER40	18.5	18 to 18.5	33.5	4	18.540	9043350185400
ER32	19	18.5 to 19	27	4	19.032	9043350190320
ER40	19	18.5 to 19	33.5	4	19.040	9043350190400
ER32	19.5	19 to 19.5	27	4	19.532	9043350195320
ER40	19.5	19 to 19.5	33.5	4	19.540	9043350195400
ER32	20	19.5 to 20	27	4	20.032	9043350200320
ER40	20	19.5 to 20	33.5	4	20.040	9043350200400
ER40	20.5	20 to 20.5	33.5	4	20.540	9043350205400
ER40	21	20.5 to 21	33.5	4	21.040	9043350210400
ER40	21.5	21 to 21.5	33.5	4	21.540	9043350215400
ER40	22	21.5 to 22	33.5	4	22.040	9043350220400
ER40	22.5	22 to 22.5	33.5	4	22.540	9043350225400
ER40	23	22.5 to 23	33.5	4	23.040	9043350230400
ER40	23.5	23 to 23.5	33.5	4	23.540	9043350235400
ER40	24	23.5 to 24	33.5	4	24.040	9043350240400
ER40	24.5	24 to 24.5	33.5	4	24.540	9043350245400
ER40	25	24.5 to 25	33.5	4	25.040	9043350250400
ER40	25.5	25 to 25.5	33.5	4	25.540	9043350255400
ER40	26	25.5 to 26	33.5	4	26.040	9043350260400

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Retaining nuts, system DIN ISO 15488

Product information

- for collets DIN ISO 15488
- for increased clamping version IC/ER for glide ring
- for application with internal cooling with sealing washer Guhring no. 4335

Scope of delivery

- increased clamping force version: incl. glide ring
- version for internal cooling IC/ER: order sealing washer Guhring no. 4335 separately

Series Number **4306**

for sealing washer no. 4335	with glide ring	nominal size	d_2 mm	l_1 mm	G	max. torque	EDP Numbers
–	–	ER16 mini	22	18.0	M19x1.0	55	9043060162000
–	–	ER20 mini	28	19.0	M24x1.0	75	9043060202000
–	–	ER25 mini	35	20.0	M30x1.0	100	9043060252000
–	–	ER11 (4008E)	19	11.3	M14x0.75	25	9043060110000
–	–	ER16 (426E)	28	17.5	M22x1.5	55	9043060160000
–	–	ER20 (428E)	34	19.0	M25x1.5	75	9043060200000
–	–	ER25 (430E)	42	20.0	M32x1.5	100	9043060250000
–	–	ER32 (470E)	50	22.5	M40x1.5	140	9043060320000
–	–	ER40 (472E)	63	25.5	M50x1.5	200	9043060400000
x	–	IC/ER16 mini	22	22.0	M19x1.0	55	9043060163000
x	–	IC/ER20 mini	28	24.0	M24x1.0	75	9043060203000
x	–	IC/ER25 mini	35	25.0	M30x1.0	100	9043060253000
x	–	IC/ER16	28	22.5	M22x1.5	55	9043060166000
x	–	IC/ER20	34	24.0	M25x1.5	75	9043060206000
x	–	IC/ER25	42	25.0	M32x1.5	100	9043060256000
x	–	IC/ER32	50	27.5	M40x1.5	140	9043060326000
x	–	IC/ER40	63	30.5	M50x1.5	200	9043060406000
–	x	ER16	28	20.3	M22x1.5	55	9043060164000
–	x	ER20	34	21.8	M25x1.5	75	9043060204000
–	x	ER25	42	22.4	M32x1.5	100	9043060254000
–	x	ER32	50	25.0	M40x1.5	140	9043060324000
–	x	ER40	63	28.3	M50x1.5	200	9043060404000
x	x	IC/ER16	28	22.7	M22x1.5	55	9043060165000
x	x	IC/ER20	34	24.2	M25x1.5	75	9043060205000
x	x	IC/ER25	42	25.2	M32x1.5	100	9043060255000
x	x	IC/ER32	50	27.4	M40x1.5	140	9043060325000
x	x	IC/ER40	63	30.7	M50x1.5	200	9043060405000

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GÜHROJET HSK-A milling arbors

Product information
- to hold face milling cutters
- balancing quality: G6.3 / 15,000 rev./min
- to DIN 69882-3
- for centralised or decentralised internal cooling, therefore process and tool life improvement
- bore-Ø 40 mm has four additional holes with internal thread for milling heads with tool attachment DIN 2079 and increased tight fitting diameter D2

Scope of delivery
- incl. milling retainer screw Guhring no. 4908 and driving keys

GÜHROJET

							Series Number	4362
HSK-A d_3	arbor-Ø d_1 mm	d_2 mm	l_1 mm	l_2 mm	kg	Order Code		EDP Numbers
63	22	50	50	19	1.1	22.063		**9043620220630**
63	27	60	60	21	1.3	27.063		**9043620270630**
63	32	78	60	24	1.5	32.063		**9043620320630**
63	40	120	60	27	2.7	40.063		**9043620400630**
63	40	89	60	27	2.7	140.063		**9043621400630**
80	27	60	50	21	1.8	27.080		**9043620270800**
80	32	78	50	24	2.1	32.080		**9043620320800**
80	40	120	60	27	3.3	40.080		**9043620400800**
80	40	89	60	27	3.3	140.080		**9043621400800**
80	60	160	70	40	6.3	60.080		**9043620600800**
100	27	60	50	21	2.9	27.100		**9043620271000**
100	32	78	50	24	3.3	32.100		**9043620321000**
100	40	120	60	27	4.2	40.100		**9043620401000**
100	40	89	60	27	4.2	140.100		**9043621401000**
100	60	160	70	40	7.2	60.100		**9043620601000**

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GÜHROJET ISO taper milling arbors

Product information

- to hold face milling cutters
- balancing quality: G6.3 / 15,000 rev./min
- ISO taper to DIN 69871 form AD/B
- for centralised or decentralised internal cooling, therefore process and tool life improvement
- coolant supply form AD/B
- bore-Ø 40 mm has four additional holes with internal thread for milling heads with tool attachment DIN 2079 and increased tight fitting diameter D2

Scope of delivery

- incl. milling retainer screw Guhring no. 4908 and driving keys

GÜHROJET

						Series Number	4231
ISO taper	arbor-Ø d_1 mm	d_2 mm	l_1 mm	l_2 mm	Order Code		EDP Numbers
40	16	38	35	17	16.040		**9042310160400**
40	22	48	35	19	22.040		**9042310220400**
40	27	58	40	21	27.040		**9042310270400**
40	32	78	50	24	32.040		**9042310320400**
40	40	88	50	27	40.040		**9042311400400**
50	22	48	35	19	22.050		**9042310220500**
50	27	58	40	21	27.050		**9042310270500**
50	32	78	50	24	32.050		**9042310320500**
50	40	88	50	27	40.050		**9042310400500**

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GÜHROJET MAS/BT milling arbors

Product information

- to hold face milling cutters
- balancing quality: G6.3 / 15,000 rev./min
- MAS/BT to JIS B 6339 form AD/B
- for centralised or decentralised internal cooling, therefore process and tool life improvement
- coolant supply form AD/B (*version AD without coolant supply over collar and without GÜHROJET)
- clamping-Ø 40 with 4 additional tapped holes to hold milling heads with tool attachment DIN 2079 and larger contact-Ø d2

Scope of delivery

- incl. milling retainer screw Guhring no. 4908 and driving keys

- BT-50 on request

GÜHROJET

						Series Number	4230
BT	arbor-Ø d_1 mm	d_2 mm	l_1 mm	l_2 mm	Order Code		EDP Numbers
30*	16	38	40	17	16.030		**9042300160300**
30*	22	48	40	19	22.030		**9042300220300**
30*	27	58	40	21	27.030		**9042300270300**
30*	32	78	50	24	32.030		**9042300320300**
40	16	38	40	17	16.040		**9042300160400**
40	22	48	40	19	22.040		**9042300220400**
40	27	58	40	21	27.040		**9042300270400**
40	32	78	50	24	32.040		**9042300320400**
40	40	88	50	27	40.040		**9042300400400**

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HSK-A shell milling arbors

Product information

- to hold shell mills DIN 841, arbor-type single angle cutters DIN 842 with keyway, shell mills DIN 1880 with keyway an milling cutters with inserts DIN 1830
- bore-Ø 40 and 50 mm has four additional holes with internal thread for milling heads with tool attachment DIN 2079

Scope of delivery

- completely assembled with milling cutter retaining screw, Guhring no. 4908, drive dogs, Guhring no. 4922 and feather key Guhring no. 4923

Series Number 4361

HSK-A d_3	arbor-Ø d_1 mm	d_2 mm	l_1 mm	l_2 mm	kg	Order Code	EDP Numbers
32	16	40	45	17	0.27	16.032	9043610160320
32	22	50	50	19	0.4	22.032	9043610220320
40	16	40	45	17	0.4	16.040	9043610160400
40	22	50	50	19	0.5	22.040	9043610220400
50	16	40	45	17	0.6	16.050	9043610160500
50	22	50	50	19	0.8	22.050	9043610220500
50	27	60	55	21	1	27.050	9043610270500
63	16	40	45	17	0.9	16.063	9043610160630
63	22	50	50	19	1	22.063	9043610220630
63	27	60	55	21	1.3	27.063	9043610270630
63	32	78	55	24	1.6	32.063	9043610320630
63	40	89	60	27	2.1	40.063	9043610400630
80	16	40	45	17	2.1	16.080	9043610160800
80	22	50	50	19	2.3	22.080	9043610220800
80	27	60	55	21	2.5	27.080	9043610270800
80	32	78	55	24	2.6	32.080	9043610320800
80	40	89	60	27	3.4	40.080	9043610400800
100	22	50	50	19	2.5	22.100	9043610221000
100	27	60	55	21	2.8	27.100	9043610271000
100	32	78	55	24	3.1	32.100	9043610321000
100	40	89	60	27	3.7	40.100	9043610401000
100	50	120	70	30	5.6	50.100	9043610501000

Positioning of accessories

Feather keys DIN 6885 A

Scope of delivery

- minimum order quantity 10

Series Number 4923

for arbor-Ø mm	l_1 mm	b mm	EDP Numbers
16	14	4	9049230040160
22	16	6	9049230060220
27	19	7	9049230070270
32	22	8	9049230080320
40	25	10	9049230100400
50	28	12	9049230120500

Drive dog sets for shell milling arbors

	Series Number			4922
for arbor-Ø mm	Form	h mm	b mm	EDP Numbers
16	B	9.25	8	**9049220160000**
22	B	11.00	10	**9049220220000**
27	A	12.75	12	**9049220270000**
32	A	16.50	14	**9049220320000**
40	A	20.00	16	**9049220400000**
50	A	27.50	18	**9049220500000**

Screws DIN EN ISO 4762 (former DIN 912)

Scope of delivery

- minimum order quantity 10

	Series Number			4907
for arbor-Ø mm	G	l_2 mm	Strength class	EDP Numbers
16	M4	10	8.8	**9049070041000**
22/27	M5	12	8.8	**9049070051200**
32	M6	16	8.8	**9049070061600**
40	M6	20	8.8	**9049070062000**
50	M8	25	8.8	**9049070082500**
40	M12	65	10.9	**9049070126500**

Milling cutter retaining screws

Product information

- to DIN 6367
- on request with internal cooling

	Series Number			4908
for arbor-Ø mm	G	l_1 mm	l_2 mm	EDP Numbers
16	M8	6	16	**9049080160000**
22	M10	7	18	**9049080220000**
27	M12	8	22	**9049080270000**
32	M16	9	26	**9049080320000**
40	M20	10	30	**9049080400000**
50	M24	12	36	**9049080500000**
60	M30	14	45	**9049080600000**

Socket wrenches for retaining screws

	Series Number		4909
for arbor-Ø mm	d_1 mm	l_2 mm	EDP Numbers
16	22	180	**9049090160000**
22	28	200	**9049090220000**
27	35	225	**9049090270000**
32	42	250	**9049090320000**
40	52	280	**9049090400000**
50	63	315	**9049090500000**
60	76	355	**9049090600000**

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HSK-A blanks

Product information

- material: nitrided steel, hardened and ground taper (yellow in scale drawing), blank unhardened for further machining

Series Number 4983

HSK-A d_3	d_1 mm	d_2 mm	l_1 mm	l_2 mm	l_3 mm	kg	Order Code	EDP Numbers
63	63	53	150	108	26	3.55	150.063	**9049831500630**
32	41	26	175	140	20	1.62	175.032	**9049831750320**
40	51	34	205	170	20	3.02	205.040	**9049832050400**
50	64	42	235	193	26	5.42	235.050	**9049832350500**
63	81	53	235	193	26	8.71	235.063	**9049832350630**
80	101	67	235	193	26	13.63	235.080	**9049832350800**
100	126	85	250	205	29	22.71	250.100	**9049832501000**

HSK-C blanks

Product information

- material: nitrided steel, hardened and ground taper (yellow in scale drawing), blank unhardened for further machining
- machining not permitted in l3 area

Series Number 4982

HSK-C d_3	d_1 mm	l_1 mm	l_2 mm	l_3 mm	kg	Order Code	EDP Numbers
32	41	150	139	11	1.5	50.032	**9049820500320**
40	51	180	169	11	2.81	63.040	**9049820630400**
50	64	200	186	14	4.92	80.050	**9049820800500**
50	64	90	76	14	2.15	100.050	**9049821000500**
63	81	200	186	14	7.9	112.063	**9049821120630**
80	101	210	193	17	12.9	120.080	**9049821200800**
63	81	100	86	14	3.89	125.063	**9049821250630**
100	124	225	208	17	21.7	145.100	**9049821451000**

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MODULE
TECHNOLOGY AND ADVANTAGES

Pinpoint accurate tool setting. Thanks to closely arranged setting screws for radial and axial adjustment corrections can be made in close proximity to the measuring point. With a wide choice of chucks (hydraulic, shrink fit or HPC) and interfaces such as HSK and SK your module can be perfectly set without a problem.

Advantages:

- wobble-free tool setting
- quick µ-accurate setting
- optimal setting results for multi-flute PCD/CBN fine machining tools or Guhring's HR 500 6-fluted high-performance reamer
- reduced settlement properties provides highest accuracy over a long period
- suitable for use in combination with monolythic special tools

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Module 6x6 HSK-A alignment adapter

Product information

- for the highly accurate alignment of all modular flanges 6x6
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- suitable for MQL and conventional cooling
- balancing quality G6.3 / 15,000 rev./min
- 6 balancing threads M6

Scope of delivery

- incl. 6 screws for radial adjustment
- incl. 6 clamping screws

- order intermediate tube Guhring no. 4716 separately
- order coolant delivery set Guhring no. 4949, MQL coolant delivery set Guhring no. 4939 oder 4940 separately

- further dimensions on request

			Series Number	4723
HSK-A d_3 mm	d_1 mm	l_1 mm	Order Code	EDP Numbers
63	60	60	60.063	**9047230600630**
63	70	60	70.063	**9047230700630**
63	80	60	80.063	**9047230800630**
63	100	65	100.063	**9047231000630**
63	117	65	117.063	**9047231170630**
80	70	60	70.080	**9047230700800**
80	80	60	80.080	**9047230800800**
80	100	65	100.080	**9047231000800**
80	117	65	117.080	**9047231170800**
80	140	75	140.080	**9047231400800**
100	70	55	70.100	**9047230701000**
100	80	55	80.100	**9047230801000**
100	100	65	100.100	**9047231001000**
100	117	65	117.100	**9047231171000**
100	140	75	140.100	**9047231401000**

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Modul 6x6 ISO taper alignment adapter

Product information

- ISO taper to DIN 69871 form AD/B
- for the highly accurate alignment of all modular flanges 6x6
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- suitable for MQL and conventional cooling
- balancing quality G6.3 / 15,000 rev./min
- 6 balancing threads M6

Scope of delivery

- incl. 6 screws for radial adjustment
- incl. 6 clamping screws
- incl. threaded pins

- order pull studs separately

- SK50/BT holder on request

				Series Number	4725
ISO taper	d_1 mm	l_1 mm	Order Code		EDP Numbers
40	60	50	60.040		**9047250600400**
40	70	50	70.040		**9047250700400**
40	80	55	80.040		**9047250800400**
40	100	60	100.040		**9047251000400**

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Modul 6x6 hydraulic chuck flange

Product information

- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6

Scope of delivery

- incl. adjustment screw Guhring no. 4941 for conventional cooling
- incl. angular alignment set Guhring no. 4715
- incl. 6 clamping screws
- incl. hexagon chuck key Guhring no. 4912

- order intermediate tube Guhring no. 4716 separately
- for other clamping Ø apply reduction bushes Guhring no. 4368 or 4369

- MQL version on request

Series Number **4722**

Module-Ø d_3 mm	for shank Ø d_1 h6 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	incl. setting screw Guh. no. 4941	intermediate sleeve tube Guhring no. 4716	SW	Order Code	EDP Numbers
70	12	32	40	75	45	45	**9049410121000**	**9047160140200**	4	12.070	**9047220120700**
80	12	32	50	77.5	45	44	**9049410121000**	**9047160140500**	5	12.080	**9047220120800**
80	20	42	50	82.5	50	51.5	**9049410201000**	**9047160140400**	5	20.080	**9047220200800**
100	32	64	64	103	60	84	**9049410321000**	**9047160140200**	6	32.100	**9047220321000**

Modul 6x6 shrink fit chuck flange

Product information

- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with axial damping screw for optimal concentricity

Scope of delivery

- incl. adjustment screw with axial force
- damping Guh. no. 4941
- incl. 6 angular alignment sets Guhring no. 4715
- incl. 6 clamping screws
- order intermediate tube Guhring no. 4716 separately
- further dimensions on request

Series Number	4717

Module- Ø d_3 mm	for shank Ø d_1 h6 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	incl. setting screw Guh. no. 4941	intermediate sleeve tube Guhring no. 4716	Order Code	EDP Numbers
60	6	21	27	70	36	56	**9049410061000**	**9047160140100**	6.060	**9047170060600**
60	8	21	27	70	36	56	**9049410081000**	**9047160140100**	8.060	**9047170080600**
60	10	24	32	70	40	56	**9049410101000**	**9047160140200**	10.060	**9047170100600**
60	12	24	32	70	45	56	**9049410121000**	**9047160140300**	12.060	**9047170120600**
70	12	24	32	75	45	60	**9049410121000**	**9047160140200**	12.070	**9047170120700**
70	14	27	34	75	45	60	**9049410141000**	**9047160140200**	14.070	**9047170140700**
70	16	27	34	75	48	60	**9049410161000**	**9047160140400**	16.070	**9047170160700**
80	18	33	42	80	48	65	**9049410181000**	**9047160140500**	18.080	**9047170180800**
80	20	33	42	80	50	65	**9049410201000**	**9047160140400**	20.080	**9047170200800**
100	25	44	52	80	56	61	**9049410251000**	**9047160200100**	25.100	**9047170251000**
100	32	44	52	80	60	61	**9049410321000**	**9047160200200**	32.100	**9047170321000**

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Modul 6x6 HPC clamping chuck flange

Product information
- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- highest concentricity, clamping force and rigidity thanks to mech. tension gearing
- suitable for internal cooling up to 80 bar
- positive damping characteristics
- for tool shank tolerance h6

Scope of delivery
- incl. hexagon chuck key Guhring no. 4912
- incl. 6 angular alignment sets Guhring no. 4715
- incl. 6 clamping screws

- order intermediate tube Guhring no. 4716 separately
- order clamping sleeves Guhring nos. 4302, 4235, 4236, 4237 separately

Series Number 4714

Module-Ø d_3 mm	Nominal Size	for shank Ø d_1 h6 mm	d_2 mm	d_4 mm	l_1 mm	l_5 mm	Intermediate sleeve tube Guh. no. 4716	SW	Order Code	EDP Numbers
70	20	3 - 20	40	50	87	20	**9047160200300**	4	20.070	**9047140200700**
80	20	3 - 20	40	50	73	20	**9047160200300**	4	20.080	**9047140200800**
100	25	20 - 32	63	63	118	-	**9047160200300**	4	25.100	**9047140251000**

Modul 6x6 HSK adaptor flange

Product information
- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- suitable for MQL and conventional cooling
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration

Scope of delivery
- incl. MQL 4-point clamping set Guhring no. 4930
- incl. brass lock ring Guhring no. 4953
- incl. 6 angular alignment sets Guhring no. 4715
- incl. 6 clamping screws
- incl. intermediate tube

Series Number 4363

HSK-C d_1 mm	Module-Ø d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	Order Code	EDP Numbers
32	60	30	26	36	2.5	24.060	**9043630240600**
40	70	35	30	40	3	30.070	**9043630300700**
50	80	40	35	45	4	38.080	**9043630380800**
63	100	50	43	55	5	48.100	**9043630481000**
80	117	60	50	62	6	60.110	**9043630601100**
100	140	80	70	82	8	75.140	**9043630751400**

Modul 4x4 HSK-A alignment adaptor

Product information
- for the highly accurate alignment of all modular flanges 4x4
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- suitable for MQL and conventional cooling
- balancing quality G6.3 / 15,000 rev./min
- 6 balancing threads M6

Scope of delivery
- incl. 4 screws for radial adjustment
- incl. 4 clamping screws

- order coolant delivery set Guhring no. 4949, MQL coolant delivery set Guhring no. 4939 or 4940 separately
- order intermediate tube Guhring no. 4716 separately

- further dimensions on request

Series Number 4297

HSK-A d_3 mm	d_1 mm	l_1 mm	Order Code	EDP Numbers
63	60	60	60.063	**9042970600630**
63	70	60	70.063	**9042970700630**
63	80	60	80.063	**9042970800630**
63	100	65	100.063	**9042971000630**
63	117	65	117.063	**9042971170630**
80	70	60	70.080	**9042970700800**
80	80	60	80.080	**9042970800800**
80	100	65	100.080	**9042971000800**
80	117	65	117.080	**9042971170800**
80	140	75	140.080	**9042971400800**
100	70	55	70.100	**9042970701000**
100	80	55	80.100	**9042970801000**
100	100	65	100.100	**9042971001000**
100	117	65	117.100	**9042971171000**
100	140	75	140.100	**9042971401000**

Modul 4x4 ISO taper alignment adaptor

Product information
- ISO taper to DIN 69871 form AD/B
- for the highly accurate alignment of all modular flanges 4x4
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- suitable for MQL and conventional cooling
- balancing quality G6.3 / 15,000 rev./min
- 6 balancing threads M6

Scope of delivery
- incl. 4 screws for radial adjustment
- incl. 4 clamping screws

- order intermediate tube Guhring no. 4716 separately
- order pull studs separately

- SK50/BT holder on request

Series Number 4724

ISO taper	d_1 mm	l_1 mm	Order Code	EDP Numbers
40	60	50	60.040	**9047240600400**
40	70	50	70.040	**9047240700400**
40	80	55	80.040	**9047240800400**
40	100	60	100.040	**9047241000400**

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Modul 4x4 hydraulic chuck flange

Product information

- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6

Scope of delivery

- incl. adjustment screw Guhring no. 4941 for conventional cooling
- incl. angular alignment set Guhring no. 4715
- incl. 4 clamping screws
- incl. hexagon chuck key Guhring no. 4912

- order intermediate tube Guhring no. 4716 separately
- for other clamping Ø apply reduction bushes Guhring no. 4368 or 4369

- MQL version on request

Series Number **4360**

Module- Ø d_3 mm	for shank Ø d_1 h6 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	incl. setting screw Guh. no. 4941	intermediate sleeve tube Guhring no. 4716	SW	Order Code	EDP Numbers
70	12	32	40	75	45	45	**9049410121000**	**9047160140200**	4	12.070	**9043600120700**
80	12	32	50	77.5	45	44	**9049410121000**	**9047160140500**	5	12.080	**9043600120800**
80	20	42	50	82.5	50	51.5	**9049410201000**	**9047160140400**	5	20.080	**9043600200800**
100	32	64	64	103	60	84	**9049410321000**	**9047160140200**	6	32.100	**9043600321000**

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Modul 4x4 shrink fit chuck flange

Product information

- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- cooling lubricant without loss and flow-disruption thanks to the use of an intermediate tube
- balancing quality G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with axial damping screw for optimal concentricity

Scope of delivery

- incl. adjustment screw with axial force
- damping Guh. no. 4941
- incl. angular alignment seten Guhring no. 4715
- incl. 4 clamping screws
- order intermediate tube Guhring no. 4716 separately
- further dimensions on request

Series Number	4760

Module-Ø d_3 mm	for shank Ø d_1 h6 mm	d_2 mm	d_4 mm	l_1 mm	l_2 mm	l_5 mm	incl. setting screw Guh. no. 4941	intermediate sleeve tube Guhring no. 4716	Order Code	EDP Numbers
60	6	21	27	70	36	56	**9049410061000**	**9047160140100**	6.060	**9047600060600**
60	8	21	27	70	36	56	**9049410081000**	**9047160140100**	8.060	**9047600080600**
60	10	24	32	70	40	56	**9049410101000**	**9047160140200**	10.060	**9047600100600**
60	12	24	32	70	45	56	**9049410121000**	**9047160140300**	12.060	**9047600120600**
70	12	24	32	75	45	60	**9049410121000**	**9047160140200**	12.070	**9047600120700**
70	14	27	34	75	45	60	**9049410141000**	**9047160140200**	14.070	**9047600140700**
70	16	27	34	75	48	60	**9049410161000**	**9047160140400**	16.070	**9047600160700**
80	18	33	42	80	48	65	**9049410181000**	**9047160140500**	18.080	**9047600180800**
80	20	33	42	80	50	65	**9049410201000**	**9047160140400**	20.080	**9047600200800**
100	25	44	52	80	56	61	**9049410251000**	**9047160200100**	25.100	**9047600251000**
100	32	44	52	80	60	61	**9049410321000**	**9047160200200**	32.100	**9047600321000**

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Modul 4x4 HSK adaptor flange

Product information

- for the highly accurate radial and axial alignment on alignment adaptors or machine spindles
- suitable for MQL and conventional cooling
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration

Scope of delivery

- incl. MQL 4-point clamping set Guhring no. 4930
- incl. brass lock ring Guhring no. 4953
- incl. 4 angular alignment sets Guhring no. 4715
- incl. 4 clamping screws
- incl. intermediate tube

Series Number 4713

HSK-C d_1 mm	Module-Ø d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	Order Code	EDP Numbers
32	60	30	26	36	2.5	24.060	**9047130240600**
40	70	35	30	40	3	30.070	**9047130300700**
50	80	40	35	45	4	38.080	**9047130380800**
63	100	50	43	55	5	48.100	**9047130481000**
80	117	60	50	62	6	60.117	**9047130601170**
100	140	80	70	82	8	75.140	**9047130751400**

Length adjustment screw for conventional cooling

Product information

- To adapt MQL tool holders to meet the requirements of conventional wet machining. For plain end shanks. The height of screw head compensates the height of MQL taper
- for MQL HSK-A shrink fit and hydraulic chucks
- for use with shank according to DIN 6535 with plain shank end for conventional cooling
- with the patented face orientated O ring axial force damping is provided which prevents concentricity errors.

Series Number 4941

for HSK-A	clamping-Ø	G	d_1 mm	l_1 mm	SW	Order Code	EDP Numbers
40	6	M5	6	15	2.5	2.500	**9049410025000**
40	6	M7x1	6	15	2.5	2.500	**9049410025000**
40	8	M7x1	6	18	3	3.000	**9049410030000**
50	6	M8x1	8	14	2.5	2.500	**9049410025000**
50	8	M8x1	7	18	3	3.000	**9049410030000**
40 / 50	10	M8x1	10	17.7	4	4.000	**9049410040000**
63/ 80/ 100	6	M10x1	9	22	2.5	2.500	**9049410025000**
63/ 80/ 100	8	M10x1	9	22	3	3.000	**9049410030000**
63/ 80/ 100	10	M10x1	10	16.2	4	4.000	**9049410040000**
40/ 50/ 63/ 80/ 100	12	M10x1	10	16.2	5	5.000	**9049410050000**
40/ 50/ 63/ 80/ 100	14	M10x1	10	17.2	5	5.000	**9049410050000**
50/ 63/ 80/ 100	16	M12x1	16	18.2	6	6.000	**9049410060000**
50/ 63/ 80/ 100	18	M12x1	16	19.2	6	6.000	**9049410060000**
50/ 63/ 80/ 100	20	M16x1	16	19.2	8	8.000	**9049410080000**
63/ 80/ 100	25	M16x1	16	22.7	8	8.000	**9049410080000**
63/ 80/ 100	32	M16x1	16	26.7	8	8.000	**9049410080000**

Intermediate sleeves for module flange and alignment adapter 6x6 and 4x4

Product information
- for sealing when machining with either coolant or MQL

Scope of delivery
- with O-ring and sealing lip

				Series Number	4716
d_1 mm	d_2 mm	l_1 mm	O-ring	Order Code	EDP Numbers
10.7	14	47.5	10x1.5	14.01	**9047160140100**
10.7	14	32.0	10x1.5	14.02	**9047160140200**
10.7	14	37.5	10x1.5	14.03	**9047160140300**
10.7	14	27.4	10x1.5	14.04	**9047160140400**
10.7	14	32.4	10x1.5	14.05	**9047160140500**
10.7	20	28.0	17x1.5	20.01	**9047160200100**
10.7	20	25.5	17x1.5	20.02	**9047160200200**
10.7	20	16.5	17x1.5	20.03	**9047160200300**

Angle alignment units for module flange and alignment adapter 6x6 and 4x4

Product information
- consisting of pressure disc and threaded pin for accurate angle alignment of module flanges

Scope of delivery
- pressure disc, threaded pin and snap ring

				Series Number	4715
for module	G	d_1 mm	l_1 mm	Order Code	EDP Numbers
60 / 70 / 80	M8x1	11.5	13	8.01	**9047150080100**
100 / 117 / 140	M10x1	13.6	19	10.01	**9047150100100**

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Floating holders with side lock holder

Product information
- straight shank d3 with whistle notch flat
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- central coolant supply max. 80 bar
- drive flat on tool shank necessary
- for tool shank tolerance h6

Scope of delivery
- for other shank Ø order reduction sleeves Guhring no. 4095 separately
- order hexagon chuck key Guhring no. 4912 separately

- further sizes with differing radial play are available on request

											Series Number	4167
d_3 g6 mm	for holder $d_{1\ h6}$ mm	recommended tool-Ø	d_4 mm	l_1 mm	l_2 mm	l_3 mm	G	SW	radial play	Order Code		EDP Numbers
20	20	up to Ø 28	49	75	50	50	1/8	4	0.12	20.020		**9041670200200**
25	25	Ø 10 - Ø 36	59	85	60	60	1/4	5	0.12	25.025		**9041670250250**
32	32	Ø 16 - Ø 60	80	92	63	80	3/8	6	0.12	32.032		**9041670320320**

Short floating holders with side lock holder

Product information
- straight shank d3 with whistle notch flat
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- central coolant supply max. 80 bar
- drive flat on tool shank necessary
- for tool shank tolerance h6

Scope of delivery
- for other shank Ø order reduction sleeves Guhring no. 4095 separately
- order hexagon chuck key Guhring no. 4912 separately

- further sizes with differing radial play are available on request

											Series Number	4169
d_3 g6 mm	for holder $d_{1\ h6}$ mm	recommended tool-Ø	d_4 mm	l_1 mm	l_2 mm	l_3 mm	G	SW	radial play	Order Code		EDP Numbers
20	10	up to Ø 14	38.5	46	25	40	1/8	3	0.08	10.020		**9041690100200**
20	16	up to Ø 22	49	46	29	46	1/8	4	0.10	16.020		**9041690160200**
20	20	up to Ø 28	49	46	29	46	1/8	4	0.12	20.020		**9041690200200**

Mini floating holders with side lock holder

Product information
- holder shank with lateral clamping surface
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- very compact design for restricted space
- central coolant supply max. 80 bar
- drive flat on tool shank necessary
- for tool shank tolerance h6

Scope of delivery
- for other shank Ø order reduction sleeves Guhring no. 4097 separately
- order hexagon chuck key Guhring no. 4912 separately
- further sizes with differing radial play are available on request

Series Number 4174

d_3 g6 mm	for holder $d_{1\ h6}$ mm	recommended tool-Ø	d_4 mm	l_1 mm	l_2 mm	l_3 mm	G	SW	radial play	Order Code	EDP Numbers
16	10	to Ø 14	30	35	20	30	1/8	2.5	0.12	10.016	**9041740100160**

Floating holder with ER collet holder

Product information
- straight shank d3 with whistle notch flat
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- for the application of internally cooled reamers use metallic sealed collets type DM Guhring no. 4175
- central coolant supply max. 80 bar

Scope of delivery
- incl. retaining nut
- order collet Guhring no. 4175 or 4307 as well as clamping key Guhring no. 4913 separately
- further sizes with differing radial play are available on request

Series Number 4098

d_3 g6 mm	recommended tool-Ø d1 mm	clamping range	d_2 mm	d_4 mm	l_1 mm	l_3 mm	l_4 mm	G	radial play	Order Code	EDP Numbers
16	bis Ø 16	ER20 Ø 1-13	34	49.5	74	40	29.5	1/8	0.06	20.016	**9040980200160**
20	Ø 4- Ø 24	ER25 Ø 2-16	42	59	84	50	35	1/8	0.06	25.020	**9040980250200**
25	bis Ø 16	ER20 Ø 1-13	34	49.5	74	60	29.5	1/4	0.08	20.025	**9040980200250**
25	Ø 4- Ø 24	ER25 Ø 2-16	42	59	84	60	35	1/4	0.08	25.025	**9040980250250**
32	Ø 6 - Ø 30	ER32 Ø 3-20	50	64	91	80	35.5	3/8	0.10	32.032	**9040980320320**
40	Ø 6 - Ø 30	ER32 Ø 3-20	50	64	91	80	35.5	1/2	0.12	32.040	**9040980320400**

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Floating side lock holder VDI DIN 69880-1

Product information
- VDI holder shank with teeth
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- central coolant supply max. 80 bar
- tool shank with special whistle notch flat necessary
- drive flat on tool shank necessary
- for tool shank tolerance h6

Scope of delivery
- for other shank Ø order reduction sleeves Guhring no. 4095 separately
- order hexagon chuck key Guhring no. 4912 separately
- further dimensions available on request

Series Number 4117

VDI	holder $d_{1\ h6}$ mm	clamping range	d_4 mm	l_1 mm	l_2 mm	l_3 mm	SW	radial play	Order Code	EDP Numbers
30	25	Ø 16-25	59	111	59	55	5	0.12	25.030	**9041170250300**
40	25	Ø 16-25	59	111	59	63	5	0.12	25.040	**9041170250400**
40	32	Ø 20-32	80	117	63	63	6	0.12	32.040	**9041170320400**
50	25	Ø 16-25	59	111	59	78	5	0.12	25.050	**9041170250500**
50	32	Ø 20-32	80	117	63	78	6	0.12	32.050	**9041170320500**

Floating ER Collet holder VDI DIN 69880-1

Product information
- VDI holder shank with teeth
- suitable for conventional and high performance multi-fluted reamers, because of no angle compensation
- for the application of internally cooled reamers use metallic sealed collets type DM Guhring no. 4175
- with coolant supply max. 80 bar

Scope of delivery
- incl. retaining nut
- order collet Guhring no. 4175 or 4307 as well as clamping key Guhring no. 4913 separately
- further sizes with differing radial play are available on request

Series Number 4116

VDI	recommended tool-Ø	clamping range	d_2 mm	d_4 mm	l_1 mm	l_3 mm	l_4 mm	radial play	Order Code	EDP Numbers
30	from Ø 20	ER25 Ø 2-16	42	59	109	55	35	0.08	25.030	**9041160250300**
40	from Ø 20	ER25 Ø 2-16	42	59	109	63	35	0.10	25.040	**9041160250400**
40	Ø 6- Ø 32	ER32 Ø 3-20	50	64	116	63	35.5	0.10	32.040	**9041160320400**
50	from Ø 20	ER25 Ø 2-16	42	59	109	78	35	0.12	25.050	**9041160250500**
50	Ø 6- Ø 32	ER32 Ø 3-20	50	64	116	78	35.5	0.12	32.050	**9041160320500**

Reduction sleeves for floating holder

Product information

- for reducing the clamping diameter in floating holders
- central coolant supply
- drive flat on tool shank necessary
- applicable in floating holders Guhring no. 4167 and 4117

Series Number 4095

d_1 mm	for shank Ø d_3 h6 mm	l_1 mm	l_2 mm	l_4 mm	Order Code	EDP Numbers
20	14	50	40	9.5	14.020	**9040950140200**
20	16	50	40	9.5	16.020	**9040950160200**
25	16	60	40	9.5	16.025	**9040950160250**
25	18	60	40	9.5	18.025	**9040950180250**
25	20	60	50	9.5	20.025	**9040950200250**
32	20	63	50	12.5	20.032	**9040950200320**
32	25	63	60	12.5	25.032	**9040950250320**

Reduction sleeves for short floating holder

Product information

- for reducing the clamping diameter in floating holders
- central coolant supply
- drive flat on tool shank necessary
- applicable in short floating holders Guhring no. 4169

Series Number 4096

d_1 mm	for shank Ø d_3 h6 mm	l_1 mm	l_2 mm	l_4 mm	Order Code	EDP Numbers
10	4	25	20	6	4.010	**9040960040100**
10	6	25	20	6	6.010	**9040960060100**
10	8	25	20	6	8.010	**9040960080100**
16	10	29	25	7	10.016	**9040960100160**
16	12	29	25	7	12.016	**9040960120160**
20	12	29	25	7	12.020	**9040960120200**
20	14	29	25	7	14.020	**9040960140200**
20	16	29	25	7	16.020	**9040960160200**

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Reduction sleeves for mini floating holder

Product information

- for reducing the clamping diameter in floating holders
- central coolant supply
- drive flat on tool shank necessary
- applicable in mini floating holders Guhring no. 4174

Series Number	4097

d_1 mm	for shank Ø d_3 h6 mm	l_1 mm	l_2 mm	l_4 mm	Order Code	EDP Numbers
10	4	20	20	5	4.010	**9040970040100**
10	6	20	20	5	6.010	**9040970060100**
10	8	20	20	5	8.010	**9040970080100**

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4-POINT CLAMPING TECHNOLOGY FOR MQL

TECHNICAL INFORMATION AND ADVANTAGES

GÜHROCLAMP

MQL BY GÜHRING

Our 4-point clamping system is suitable for radial manual clamping. Primarily designed for installation in spindles (short drilling spindles, multiple-spindle drilling heads).

Advantages:

- short, small diameter spindles with constricted spindle bearing spacing
- suitable for pressure up to 160 bar (for conventional internal cooling)
- fast response time thanks to uninterrupted MQL delivery
- compatible installation contour and application of our 4-point clamping set for conventional cooling

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4-point clamping technology for MQL

Internal contour of spindle

Installation and principle of operation

The tool is ejected automatically by the ejector being activated by the clamping jaws. The O-ring in the HSK base omitted, as it is fitted to the clamping system

Bending, torsional and tightening moment for 4-point clamping sets for MQL

① We recommend M_A max. for rough machining and milling operations. For drilling and reaming operations a lower deviation of M_A max. up to 30% is permissible. Please check the torque with a torque wrench.
② Depending on temperature and lubricating conditions these values can be up to 15% lower.
③ Due to the screwed connection, M_T max. can be lower with adaptors.

HSK-C	**max.** torque M_A [Nm] ①	Key size	**max.** drawing force [kN] ②	**max.** linear bending moment M_B [Nm] ②	**max.** transferrable torsional moment M_T [Nm] ② ③
32	3.0	2.5	8.5	72	105
40	6.0	3.0	12.5	135	180
50	12.0	4.0	24.0	330	390
63	24.0	5.0	32.0	570	680
80	40.0	6.0	45.0	1000	1570
100	60.0	8.0	53.0	1620	4200

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General notes: Our manual clamping sets must not be operated with motor-driven tools (impulse screwdriver or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. We recommend the T-handle hexagonal key, Guhring no. 4912.
For accurate setting of the maximum torque and achieving the maximum interface rigidity, we recommend the application of a torque wrench, Guhring no. 4915 with hexagonal sockets, Guhring no. 4916. Production drawings of the spindle contour to suit direct installation are available on request, including .dxf.

MQL BY GÜHRING

MQL 4-point clamping set connection dimensions for new designs

Direct installation in spindle with MQL adaptor

Short spindle adaptor with MQL delivery pipe

Adaptor (in front) with MQL delivery pipe

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GÜHROCLAMP MQL 4-point clamping sets for MQL and IC

Product information
- for radial manual HSK tool clamping
- universal application for MQL and high-pressure IC
- the central and coaxial MQL supply with constant internal diameter prevents coolant from consolidating to DIN 69090-2
- For a coolant pressure up to 160 bar

Scope of delivery
- complete as shown in illustration
- Installation and operating instructions

GÜHROCLAMP

Series Number	4930

for HSK-C	d_1 mm	d_2 mm	l_1 mm	G	SW1	SW_A	kg	Order Code	EDP Numbers
32	16.7	3	39.5	M10	2.5	3	0.05	24.100	**9049300241000**
40	20.6	4	49.5	M12	3	4	0.09	30.100	**9049300301000**
50	25.5	5	59	M16	4	5	0.18	38.100	**9049300381000**
63	33	6	76	M20	5	6	0.37	48.100	**9049300481000**
80	41	8	98	M24	6	8	0.7	60.100	**9049300601000**
100	52	10	117.5	M24	8	10	1.3	75.100	**9049300751000**

GÜHROCLAMP component parts for MQL 4-point clamping sets Guhring no. 4930

- retention screw only for adaptor
- If spindle cannot be locked, please use torque socket Guhring no. 4963

GÜHROCLAMP

Series Number				4931		4932	
for HSK-C	O-ring 1 NBR 70	O-ring 2 NBR 70	O-ring 3 NBR 70	Spindle with clamping jaws	EDP Numbers	Ejector with tube	EDP Numbers
32	10.82x1.78	6.0x1.5	-	24.000	**9049310240000**	24,100	**9049320241000**
40	13.0x2.0	7.0x1.5	4.5x1.0/5.0x1.0	30.000	**9049310300000**	30,100	**9049320301000**
50	16.0x2.0	10.0x1.5	5.5x1.0/7x1.0	38.000	**9049310380000**	38,100	**9049320381000**
63	20.3x2.4	14.0x1.5	7.0x1.0	48.000	**9049310480000**	48,100	**9049320481000**
80	24.0x3.0	16.0x2.0	10.0x1.5	60.000	**9049310600000**	60,100	**9049320601000**
100	31.34x3.53	22.0x2.0	12.0x1.70	75.000	**9049310750000**	75,100	**9049320751000**

Retention spindles for GÜHROCLAMP MQL 4-point clamping sets

Product information
- retention spindle for direct installation in spindle

Scope of delivery
- complete as shown in illustration

Series Number 4933

for HSK-C	d_1 mm	l_1 mm	G	SW	O-ring 1	O-ring 2	EDP Numbers
32	M7x0.5	17.0	M10	4	-	-	**9049330241000**
40	5.1	23.0	M 12	5	4.5x1.0	5x1	**9049330301000**
50	7.1	27.0	M 16	6	5.5x1.0	7x1.0	**9049330381000**
63	7.1	39.0	M 20	8	7.0x1.0	7.0x1.0	**9049330481000**
80	10.1	50.0	M 24	10	10.0x1.5	10.0x1.5	**9049330601000**
100	12.1	60.0	M 24	12	12.0x1.70	12.0x1.70	**9049330751000**

Adaptor for GÜHROCLAMP MQL 4-point clamping sets

Product information
- Adaptor for direct installation in spindle and spindle adaptor (integrated) for coolant delivery and sealing

Scope of delivery
- complete as shown in illustration

Series Number 4934

for HSK-C	d_1 mm	d_2 mm	d_3 mm	l_1 mm	O-ring 12xNBR70	O-ring 2NBR70	Order Code	EDP Numbers
32	4	2	6.1	19	2.0 x 1.0	3.5 x 1.0	24.100	**9049340241000**
40	5	3	5	28	3.0 x1.0	-	30.100	**9049340301000**
50	6	4	7	28	4.0 x 1.0	-	38.100	**9049340381000**
63	8	5.5	7	42	6.0 x 1.0	-	48.100	**9049340481000**
80	10.2	7.5	10	56	8.0 x 1.0	-	60.100	**9049340601000**
100	12	9.5	11.8	60	10.0 x 1.0	-	75.100	**9049340751000**

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Retention screw for GÜHROCLAMP MQL 4-point clamping sets

Product information
- necessary for installation of MQL 4-point clamping set in spindle adaptors Guhring no. 4386 and 4387
- change against standard retention bolt

Scope of delivery
- complete as shown in illustration

	Series Number	4935

for HSK-C	d_1 mm	l_1 mm	SW	O-ring 2 x NBR70	EDP Numbers
32	4.0	21.5	13	-	**9049350240000**
40	5.0	21	16	5x1.0	**9049350300000**
50	6.0	25	18	6x1.0	**9049350380000**
63	8.0	31	24	8x1.0	**9049350480000**
80	10.0	36	24	10x1.5	**9049350600000**
100	12.0	40	32	12x1.7	**9049350750000**

M contour clamping sets for MQL and IC

Product information
- HSK clamping sets compatible with M contour spindles and adaptors
- universal application for MQL and high-pressure IC
- the central, coaxial MQL supply with constant internal diameter ensures a uninterrupted coolant delivery to DIN 69090-2
- for a coolant pressure up to 160 bar
- for radial manual HSK tool clamping

Scope of delivery
- incl. adaptor with through hole for uninterupted coolant delivery
- including installation and operating instructions
- order adaptor with spigot connection Guhring no. 4616 separately
- spindle connection dimensions on request

	Series Number	4615

for HSK-C	d_1 mm	d_2 mm	d_3 mm	l_1 mm	G	SW1	SW_A	Order Code	EDP Numbers
32	16.7	3	4.1	43.4	M8x1	2.5	3	24.000	**9046150240000**
40	20.6	4	5.1	48.3	M10x1	3	4	30.000	**9046150300000**
50	22.5	5	7.1	55.3	M12x1	4	5	38.000	**9046150380000**
63	33	6	7.1	64.7	M12x1	5	6	48.000	**9046150480000**
80	41	8	10.1	75.3	M16x1	6	8	60.000	**9046150600000**
100	52	10	12.1	94.5	M18x1	8	10	75.000	**9046150750000**

Adaptor with spigot transition for M contour clamping set

Product information

- application on M contour clamping sets Guhring no. 4615 instead of adaptor with coolant transfer hole
- universal application for MQL and high-pressure IC
- for a coolant pressure up to 160 bar
- adaptor for spindles without coolant tube for uninterrupted coolant delivery

- spindle connection dimensions on request

Series Number **4616**

for HSK-C	d_1 mm	d_2 mm	d_3 mm	d_4 mm	l_1 mm	l_2 mm	O-ring 1 NBR 70	O-ring 2 NBR 70	G	Order Code	EDP Numbers
32	-	4	3	5	14.4	5.4	4x1	3x1	M8x1	24.000	**9046160240000**
40	7.7	5	4	6	22	6.5	5x1	4x1	M10x1	30.000	**9046160300000**
50	8.5	6	5	8	23	7.5	5x1	6x1	M12x1	38.000	**9046160380000**
63	10.7	8	6	8	24	7	8x1	6x1	M12x1	48.000	**9046160480000**
80	-	10	8	11.3	23.3	8.3	10x1.5	8x1.5	M12x1	60.000	**9046160600000**
100	-	12	10	13.8	30.6	9.6	12x1.5	12x1.5	M18x1	75.000	**9046160750000**

Tool for the assembly / disassembly of M contour clamping sets

Product information

- for the assembly and disassembly of M contour clamping sets Guhring no. 4615

Series Number **4624**

for HSK-C	d_1 mm	l_1 mm	EDP Numbers
32	17	119	**9046240320000**
40	21	121.5	**9046240400000**
50	26	127.5	**9046240500000**
63	34	132	**9046240630000**
80	42	143	**9046240800000**
100	53	152	**9046241000000**

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THE 4-POINT CLAMPING TECHNOLOGY FOR CONVENTIONAL COOLING

TECHNICAL INFORMATION AND ADVANTAGES

Conventional 4-point clamping sets offer enormous clamping force and optimal cooling lubricant delivery. They are suitable for radial manual HSK tool clamping.

Advantages:

- short, small diameter spindles with constricted spindle bearing spacing
- suitable for pressure up to 80 bar

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General notes: Our manual clamping sets must not be operated with motor-driven tools (impulse screwdriver or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. We recommend the T-handle hexagonal key, Guhring no. 4912. For accurate setting of the maximum torque and achieving the maximum interface rigidity, we recommend the application of a torque wrench, Guhring no. 4915 with hexagonal sockets, Guhring no. 4916. Removal of the locking ring is made by releasing the pressure ball screw. This is achieved with the use of an Allen key inserted through the opposite access hole and through the hollow threaded spindle and turned counter-clockwise. Once released, the locking ring will slide axially off. Production drawings of the spindle contour to suit direct installation are available on request, including .dxf.

Application examples

Spindle interface

Direct installation in spindle

Spindle adaptor (integrated)

Spindle adaptor (in front)

Adaptor

Basic adaptor for ISO taper spindles

HSK-C extension

HSK-A reduction

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The 4-point clamping technology for conventional cooling

Internal contour of spindle

Installation and principle of operation

The tool is ejected automatically by the ejector being activated by the clamping jaws. The O-ring in the HSK base omitted, as it is fitted to the clamping system

Bending, torsional and tightening moment for 4-point clamping sets for conventional cooling

① We recommend M_A max. for rough machining and milling operations. For drilling and reaming operations a lower deviation of M_A max. up to 30% is permissible. Please check the torque with a torque wrench.
② Depending on temperature and lubricating conditions these values can be up to 15% lower.
③ Due to the screwed connection, M_T max. can be lower with adaptors.

HSK-C	**max.** torque M_A [Nm] ①	Key size	**max.** drawing force [kN] ②	**max.** linear bending moment M_B [Nm] ②	**max.** transferable torsional moment M_T [Nm] ② ③
25	1.5	2.5	4.5	30	30
32	3.0	2.5	7.0	60	100
40	6.0	3.0	12.0	130	170
50	14.0	4.0	20.0	280	350
63	27.0	5.0	28.0	500	640
80	54.0	6.0	40.0	900	1330

4-point clamping sets for conventional cooling

Product information
- for a coolant pressure up to 80 bar
- for radial manual HSK tool clamping

Scope of delivery
- including installation and operating instructions

Series Number 4958

for HSK-C	d_1 mm	l_1 mm	G1	G2	SW1	SW2	kg	Order Code	EDP Numbers
25	13.8	34	M 8	M 4	2.5	3	0.025	19.000	**9049580190000**
32	16.7	40	M10	M 5	2.5	4	0.05	24.000	**9049580240000**
40	20.6	49	M12	M 6	3	5	0.08	30.000	**9049580300000**
50	25.5	59	M16	M 8	4	6	0.15	38.000	**9049580380000**
63	33	72	M20	M10	5	8	0.31	48.000	**9049580480000**
80	41	97	M24	M12	6	10	0.64	60.000	**9049580600000**

Component parts for 4-point clamping set Guhring no. 4958, separate or set

- retention screw only for adaptor
- If spindle cannot be locked, please use torque socket Guhring no. 4963

O-Ring Sizes

for HSK-C	O-rings 1 Viton 75	O-rings 2 NBR 70	O-rings 3 NBR 70
25	9.0 x 1.2	6.0 x 0.75	11.0 x 1.0
32	11.0 x 1.5	7.0 x 1.0	14.0 x 1.0
40	13.0 x 1.5	9.0 x 1.0	17.0 x 1.0
50	16.0 x 2.0	11.0 x 1.0	22.0 x 1.5
63	20.3 x 2.4	14.0 x 1.0	28.0 x 1.5
80	24.0 x 3.0	17.0 x 1.0	35.0 x 1.5

EDP Numbers for Series 4957 — **Set no. 4959**

for HSK-C	Clamping jaw set	Threaded spindle	Retention spindle	Ejector	Circlip	Retention screw	EDP Numbers
25	9049570010190	9049570020190	9049570030190	9049570040190	9049570050190	9049570070190	**9049590190000**
32	9049570010240	9049570020240	9049570030240	9049570040240	9049570050240	9049570070240	**9049590240000**
40	9049570010300	9049570020300	9049570030300	9049570040300	9049570050300	9049570070300	**9049590300000**
50	9049570010380	9049570020380	9049570030380	9049570040380	9049570050380	9049570070380	**9049590380000**
63	9049570010480	9049570020480	9049570030480	9049570040480	9049570050480	9049570070480	**9049590480000**
80	9049570010600	9049570020600	9049570030600	9049570040600	9049570050600	9049570070600	**9049590600000**

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HSK spindle adaptors (in front)

Product information
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.

Scope of delivery
- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. brass lock ring Guhring no. 4953
- incl. indexing pin and retention screws

- for MQL application, order as special adaptor with MQL clamping set Guhring no. 4930 and MQL retention nut, Guhring no. 4935

Series Number 4386

HSK-C d_1	d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	kg	Order Code	EDP Numbers
25	45	23	20	28	2.5	0.22	19.000	**9043860190000**
32	60	30	26	36	2.5	0.38	24.000	**9043860240000**
40	70	35	30	40	3	0.6	30.000	**9043860300000**
50	80	40	35	45	4	0.92	38.000	**9043860380000**
63	100	50	43	55	5	1.75	48.000	**9043860480000**
80	117	60	50	62	6	2.79	60.000	**9043860600000**

Short HSK spindle adaptors (integrated)

Product information
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.

Scope of delivery
- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. brass lock ring Guhring no. 4953
- incl. indexing pin and retention screws

- for MQL application, order as special adaptor with MQL clamping set Guhring no. 4930

Series Number 4385

for HSK-C	d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	kg	Order Code	EDP Numbers
32	40	27	12.5	16	2.5	0.14	24.000	**9043850240000**
40	50	33.5	15	20	3	0.26	30.000	**9043850300000**
50	63	42	17.5	25	4	0.48	38.000	**9043850380000**
63	80	55	22.5	32	5	0.99	48.000	**9043850480000**
80	100	68	27.5	40	6	1.88	60.000	**9043850600000**

ISO taper/HSK-C basic adaptor for spindles to DIN 2079

Product information
- for the conversion of SK to HSK interfaces

Scope of delivery
- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. retention screws

Series Number 4387

for ISO taper	for HSK-C	d_2 mm	d_3 mm	d_4 mm	l_1 mm	l_2 mm	l_3 mm	l_4 mm	SW	kg	Order Code	EDP Numbers
30	40	50	85	69.83	25	35	37	39	3	1.08	30.030	**9043870300300**
40	50	63	100	88.88	20	30	39.5	46.5	4	1.4	40.038	**9043870400380**
50	63	80	150	128.57	25	40	48.5	58.5	5	1.96	50.048	**9043870500480**
50	80	100	150	128.57	40	55	61.1	71.1	6	2.2	50.060	**9043870500600**

HSK-A/HSK-C reductions

Scope of delivery
- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. retention screws

Series Number 4355

HSK-A d_3	HSK-C d_1	l_1 mm	SW	kg	Order Code	EDP Numbers
40	32	60	2.5	0.42	32.040	**9043550320400**
50	32	60	2.5	0.54	32.050	**9043550320500**
50	40	70	3.0	0.69	40.050	**9043550400500**
63	32	60	2.5	1.08	32.063	**9043550320630**
63	40	70	3.0	1.15	40.063	**9043550400630**
63	50	80	4.0	1.23	50.063	**9043550500630**
80	50	90	4.0	2	50.080	**9043550500800**
80	63	100	5.0	2.69	63.080	**9043550630800**
100	50	90	4.0	2.8	50.100	**9043550501000**
100	63	100	5.0	3.31	63.100	**9043550631000**
100	80	120	6.0	5.2	80.100	**9043550801000**

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HSK-A/HSK-C extensions with MQL 4-point clamping sets

Product information
- suitable for MQL
- for single channel systems

Scope of delivery
- incl. MQL 4-point clamping set Guhring no. 4930 and adaptor for extensions
- incl. brass lock ring Guhring no. 4953

- order coolant supply set separately:
  - for automatic tool change Guhring no. 4939
  - for manual tool change Guhring no. 4940

1 MQL BY GÜHRING

					Series Number	4350
HSK-A/HSK-C d_1 / d_3	l_1 mm	SW	kg	Order Code		EDP Numbers
32	60	2.5	0.3	60.032		**9043500600320**
40	80	3.0	0.7	80.040		**9043500800400**
50	80	4.0	0.9	80.050		**9043500800500**
50	100	4.0	1.1	100.050		**9043501000500**
63	100	5.0	1.8	100.063		**9043501000630**
63	140	5.0	2.3	140.063		**9043501400630**
80	120	6.0	4.2	120.080		**9043501200800**
100	140	8.0	8	140.100		**9043501401000**

HSK-C extensions

Product information
- incl. clamping set Guhring no. 4958 for conventional cooling
- incl. brass lock ring Guhring no. 4953

					Series Number	4351
HSK-C d_1 / d_3	l_1 mm	SW	kg	Order Code		EDP Numbers
25	40	2.5	0.14	40.025		**9043510400250**
32	40	2.5	0.22	40.032		**9043510400320**
40	50	3.0	0.44	50.040		**9043510500400**
50	60	4.0	0.81	60.050		**9043510600500**
63	80	5.0	1.74	80.063		**9043510800630**

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Torque supports

Product information

- for the installation of 4-point clamping sets, if there are difficulties locking the spindle

				Series Number	4963
for HSK-C	d_1 mm	l_1 mm	SW		EDP Numbers
25	17.5	25	15		**9049630190000**
32	22.5	32	17		**9049630240000**
40	28.0	40	19		**9049630300000**
50	36.0	50	24		**9049630380000**
63	45.0	60	30		**9049630480000**
80	56.0	80	36		**9049630600000**
100	70.0	95	36		**9049630750000**

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PROCESS RELIABILITY RATHER THAN NERVE TINGLING

Guhring inspection and measuring instruments

- simple, quick and accurate measuring of the claming force of your chucks
- direct measuring of the coolant flow pressure and volume
- wireless determination of the MQL response times

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POWERCLAMP

TECHNICAL INFORMATION AND ADVANTAGES

Guhring's PowerClamp system is designed for universal applications in transfer lines, machining centers, turning centers and setting equipment,

Thanks to the centrifugal forces of the clamping jaws the PowerClamp tool clamping set is suitable for high-speed applications. The high clamping force generated by the clamping jaws enables the application for heavy machining.

Advantages:

- simple assembly thanks to uncomplicated spindle contour
- few moving components, therefore optimal force transmission
- high clamping force, therefore excellent bending resistance
- good rotation symmetry, therefore high-speed capability
- internal coolant delivery
- secure ejector function
- coolant sealing from p > 6 bar to max. 80 bar

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PowerClamp technology

Internal contour of spindle

Installation and principle of operation

Bending, torsional and tightening moment for PowerClamp

① We recommend M_A max. for rough machining and milling operations. For drilling and reaming operations a lower deviation of M_A max. up to 30% is permissible. Please check the torque with a torque wrench.
② Depending on temperature and lubricating conditions these values can be up to 15% lower.
③ Due to the screwed connection, M_T max. can be lower with adaptors.

HSK-C	**max.** torque M_A [Nm] ①	Key size	**max.** drawing force [kN] ②	**max.** linear bending moment M_B [Nm] ②	**max.** transferable torsional moment M_T [Nm] ② ③
25	1.5	2.0	5	45	50
32	2.5	2.5	8	74	120
40	6.0	3.0	18	213	360
50	10.0	4.0	27	431	1000
63	15.0	5.0	35	703	1300
80	25.0	6.0	50	1100	2800
100	50.0	8.0	60	1620	4800

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General notes: Our manual clamping sets must not be operated with motor-driven tools (impulse screwdriver or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. We recommend the T-handle hexagonal key, Guhring no. 4912. For accurate setting of the maximum torque and achieving the maximum interface rigidity, we recommend the application of a torque wrench, Guhring no. 4915 with hexagonal sockets, Guhring no. 4916. Production drawings of the spindle contour to suit direct installation are available on request, including .dxf.

Application examples

Spindle interface

integrated spindle adaptor

Direct installation in spindle

Spindle adaptor (in front)

Adaptor

DIN 69871 AD

MAS/BT

HSK-A extention

HSK-A reduction

Tool holder for turning centers

adaptor (in front) on VDI angle holder

adaptor (in front) on VDI vertical holder

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PowerClamp sets

Product information
- the internal coolant delivery is via the cage. It is floating mounted and ensures a coolant seal above 6 bar pressure.
- for a coolant pressure up to 80 bar
- the coolant sets are not suitable for MQL

Scope of delivery
- including installation and operating instructions
- incl. threaded pin Guhring no. 4551

Series Number	4554

for HSK-C	l_1 mm	SW	kg	Order Code	EDP Numbers
25	32.1	2	0.02	19.000	**9045540190000**
32	41.6	2.5	0.05	24.000	**9045540240000**
40	49.7	3	0.09	30.000	**9045540300000**
50	62.2	4	0.18	38.000	**9045540380000**
63	74.1	5	0.37	48.000	**9045540480000**
80	96.1	6	0.73	60.000	**9045540600000**
100	117	8	1.36	75.000	**9045540750000**

Component parts for PowerClamp sets Guhring no. 4554

Series Number			4557	4555	4551
for HSK-C	O-rings 1 Ø/thickness	O-rings 2 Ø/thickness	**EDP Numbers** Tensioning nut set	**EDP Numbers** Threaded spindle	**EDP Numbers** Spring and threaded pin
25	11.5 x 1.0	7.0 x 2.0	**9045570010190**	**9045550020190**	**9045510030190**
32	14.0 x 1.5	10.0 x 2.5	**9045570010240**	**9045550020240**	**9045510030240**
40	18.0 x 1.5	12.5 x 2.5	**9045570010300**	**9045550020300**	**9045510030300**
50	22.0 x 1.5	16.0 x 3.0	**9045570010380**	**9045550020380**	**9045510030380**
63	28.0 x 2.0	21.0 x 3.0	**9045570010480**	**9045550020480**	**9045510030480**
80	36.0 x 3.0	25.0 x 4.0	**9045570010600**	**9045550020600**	**9045510030600**
100	45.0 x 3.0	32.0 x 5.0	**9045570010750**	**9045550020750**	**9045510030750**

HSK adaptors (in front)

Product information
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.
- for conventional cooling from 6 to max. 80 bar

Scope of delivery
- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- incl. indexing pin and retention screws

Series Number 4581

HSK-C d_1	d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	kg	Order Code	EDP Numbers
25	45	23	20	26.5	2	0.17	19.000	**9045810190000**
32	55	28	17.5	23	2.5	0.22	24.000	**9045810240000**
40	63	36	22.5	29	3	0.4	30.000	**9045810300000**
50	80	46	27.5	36	4	0.74	38.000	**9045810380000**
63	100	56	35	46	5	1.5	48.000	**9045810480000**
80	125	66	45	58	6	2.94	60.000	**9045810600000**
100	160	86	57	72	8	5.9	75.000	**9045810750000**

HSK spindle adaptors (in front)

Product information
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.
- for conventional cooling from 6 to max. 80 bar

Scope of delivery
- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- incl. indexing pin and retention screws

Series Number 4586

HSK-C d_1	d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	kg	Order Code	EDP Numbers
40	70	35	32.5	42.5	3	0.55	30.000	**9045860300000**
50	80	40	43	53	4	1	38.000	**9045860380000**
63	100	50	53	65	5	1.9	48.000	**9045860480000**
80	117	60	73	85	6	3.6	60.000	**9045860600000**
100	140	80	94	106	8	7.2	75.000	**9045860750000**

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HSK adaptors for turning centres

Product information
- for fixed tools
- incl. setting element to eliminate drive play with vertical tools
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.
- for conventional cooling from 6 to max. 80 bar

Scope of delivery
- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- incl. indexing pin and retention screws

Series Number 4582

HSK-C d_1	d_2 mm	d_3 mm	l_1 mm	l_2 mm	l_3 mm	SW	kg	Version	Order Code	EDP Numbers
50	84	50	35	55	55	4	0.98	l-h	38.100	**9045820381000**
50	84	50	35	55	55	4	0.98	r-h	38.200	**9045820382000**
63	100	63	40	64.5	70	5	1.74	l-h	48.100	**9045820481000**
63	100	63	40	64.5	70	5	1.74	r-h	48.200	**9045820482000**

Short HSK spindle adaptors (integrated)

Product information
- with larger axial plane
- for the transferable torsional moment the interface between spindle and flange has to be taken into consideration.
- for conventional cooling from 6 to max. 80 bar

Scope of delivery
- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- incl. threaded pin Guhring no. 4551 and tensioning screws

Series Number 4584

HSK-C	d_2 mm	d_3 mm	l_1 mm	l_2 mm	SW	kg	Order Code	EDP Numbers
32	40	27	12.5	21.1	2.5	0.16	24.000	**9045840240000**
40	50	33.5	15	25.7	3	0.28	30.000	**9045840300000**
50	63	42	17.5	32.1	4	0.55	38.000	**9045840380000**
63	80	55	22.5	40.05	5	1.14	48.000	**9045840480000**
80	100	68	27.5	51.4	6	2.2	60.000	**9045840600000**
100	125	88	30	64	8	4	75.000	**9045840750000**

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SK / HSK-C basic adaptors

Product information
- ISO taper to DIN 69871 form AD
- Form B on request
- Code no. 50,100 only applies to presetting unit
- for conventional cooling from 6 to max. 80 bar

Scope of delivery
- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953

- order clamping key and pull studs separately

Series Number 4512

ISO taper	HSK-C d_1	d_2 mm	l_1 mm	SW	kg	Order Code	EDP Numbers
40 SK	32	63.5	40	2.5	0.89	40.032	**9045120400320**
40 SK	40	63.5	40	3	0.9	40.040	**9045120400400**
40 SK	50	63.5	40	4	0.91	40.050	**9045120400500**
40 SK	63	63.5	70	5	1.38	40.063	**9045120400630**
50 SK	32	97.5	40	2.5	2.65	50.032	**9045120500320**
50 SK	40	97.5	40	3	2.67	50.040	**9045120500400**
50 SK	50	97.5	40	4	2.71	50.050	**9045120500500**
50 SK	63	97.5	40	5	2.73	50.063	**9045120500630**
50 SK	80	97.5	70	6	3.7	50.080	**9045120500800**
50 SK	100	97.5	100	8	4.87	50.100	**9045120501000**

MAS/BT / HSK-C basic adaptors

Product information
- MAS/BT to JIS 3 6339, form AD
- for conventional cooling from 6 to max. 80 bar

Scope of delivery
- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953

- order clamping key and pull studs separately

Series Number 4514

BT	HSK-C d_1	d_2 mm	l_1 mm	SW	kg	Order Code	EDP Numbers
40 BT	50	63	40	4	0.95	40.050	**9045140400500**
50 BT	40	100	50	3	2.9	50.040	**9045140500400**
50 BT	50	100	60	4	3.15	50.050	**9045140500500**
50 BT	63	100	60	5	3.69	50.063	**9045140500630**

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CAT / HSK-C basic adaptors

Product information
- CAT taper to DIN 69871 form AD
- Form B on request
- Code no. 50,100 only applies to presetting unit
- for conventional cooling from 6 to max. 80 bar

Scope of delivery
- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953

- order clamping key and pull studs separately

Series Number 4003

CAT taper	HSK-C d_1	d_2 mm	l_1 mm	SW	kg	Order Code	EDP
40	63	63.5	70	5.0	1.38	40.063	**9040030400630**
50	63	97.5	40	5.0	2.73	50.063	**9040030500630**

HSK-A/HSK-C extensions

Product information
- incl. clamping set, Guhring no. 4554
- incl. brass lock ring Guhring no. 4953
- for conventional cooling from 6 to max. 80 bar

Scope of delivery
- order coolant delivery set, Guhring no. 4949 separately

Series Number 4549

HSK-A/ HSK-C d_1 / d_3	l_1 mm	SW	kg	Order Code	EDP Numbers
32	60	2.50	0.26	60.032	**9045490600320**
40	80	3.00	0.65	80.040	**9045490800400**
50	80	4.00	0.9	80.050	**9045490800500**
50	100	4.00	1.13	100.050	**9045491000500**
63	100	5.00	1.84	100.063	**9045491000630**
63	140	5.00	2.3	140.063	**9045491400630**
80	120	6.00	3.9	120.080	**9045491200800**
80	160	6.00	5.4	160.080	**9045491600800**
100	140	8.00	7.8	140.100	**9045491401000**
100	200	8.00	10.54	200.100	**9045492001000**

Brass locking rings

Product information
- the pressure ball screw must be secured with Loctite 222

Scope of delivery
- incl. pressure ball screw, Guhring no. 4961

Series Number 4953

HSK-form	for HSK-size	d_1 mm	d_2 mm	B mm	G	EDP Numbers
C	25	25	28.0	7	M3.5	9049530250000
C	32	32	35.0	7	M4	9049530320000
C	40	40	43.5	9	M5	9049530400000
C	50	50	54.0	11	M6	9049530500000
C	63	63	68.0	14	M8	9049530630000
C	80	80	85.0	17	M10	9049530800000
C	100	100	105.0	23	M12	9049531000000
D	32	32	35.0	7	M3.5	9049530320190
D	40	40	43.5	9	M4	9049530400240
D	50	50	54.0	11	M5	9049530500300
D	63	63	68.0	14	M6	9049530630380
D	80	80	85.0	17	M8	9049530800480
D	100	100	105.0	23	M10	9049531000600
D	125	125	130.0	23	M12	9049531250750

Pressure ball screws

Product information
- Minimum order quantity 5

HSK 25/32

HSK 40 -100

Series Number 4961

for HSK	l_1 mm	G	SW	EDP Numbers
25	3.4	M3.5	2.0	9049610035000
32	4.3	M4	2.0	9049610040000
32	4.0	M4	2.0	9049610040010
40	4.6	M5	2.5	9049610050000
50	5.4	M6	3.0	9049610060000
63	7.0	M8	4.0	9049610080000
80	9.2	M10	5.0	9049610100000
100	11.4	M12	6.0	9049610120000

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MEASURING INSTRUMENTS AND GENERAL ACCESSORIES

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Taper proofing bars HSK/ISO

Product information
- to proof conentricity at machine spindles
- for HSK and ISO taper to DIN 69871
- calibration on request
- Guhring no. 4971 125,025 only in form E

Scope of delivery
- supplied in wooden case for vertical storage with inspection protocol

				Series Number	4970	4971
HSK d_1	ISO taper	d_2 mm	l_1 mm		EDP Numbers	EDP Numbers
–	40	40	320		9049703000400	—
–	50	40	320		9049703000500	—
25	–	20	140		—	9049711250250
32	–	24	180		—	9049711500320
40	–	24	180		—	9049711500400
50	–	32	236		—	9049712000500
63	–	40	346		—	9049713000630
80	–	40	346		—	9049713000800
100	–	40	349		—	9049713001000

Balancing masters for HSK spindles

Product information
- for balancing HSK spindles clamping systems: holds the clamping elements in the clamped position
- balancing quality: G2.5 / 30,000 rev./min or U < 0.5 gmm
- calibration on request

Scope of delivery
- supplied in wooden case with inspection protocol

				Series Number	4975
HSK-C d_3	d_2 mm	l_1 mm	l_2 mm		EDP Numbers
25	12	23	8		9049750250000
32	12	25	10		9049750320000
40	12	25	10		9049750400000
50	20	37.5	12.5		9049750500000
63	20	37.5	12.5		9049750630000
80	20	46	16		9049750800000
100	20	46	16		9049751000000

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Clamping force measuring instrument for HSK / SK clamping systems

The accuracy of the HSK connection does not only depend on the geometry but also on the drawing force of the HSK clamping system which plays an important part in ensuring a powerful and dimensionally accurate connection.

To ensure operational safety, a regular clamping force check of the HSK interface is recommended. An entirely mechanical clamping force measuring instrument is now available from Guhring. Its operation is based on components, which are linear adjustable in length and positioned proportional to the force. A force is associated with the alteration in length which is displayed via an analogue dial gauge.

Specifications::
- few components, therefore cost-efficient
- robust design
- battery or mains connection not required
- patented operating principle which is also adaptable to other spindle designs

Min. required pull forces for clamping systems	
taper size HSK25	2.8 kN
taper size HSK32	5 kN
taper size HSK40	6.8 kN
taper size HSK50	11 kN
taper size HSK63	18 kN
taper size HSK80	28 kN
taper size HSK100	45 kN
taper size SK/BT30	6 kN
taper size SK/BT40	12 kN
taper size SK/BT50	25 kN

Clamping force measuring instrument

Product information
- mechanical clamping force inspection instrument for HSK / SK / BT* clamping systems in machine tool spindles
- calibration on request

Scope of delivery
- supplied in wooden case with inspection protocol, calibrated, with measuring instructions
- for SK order pull studs Guhring no. 4925, 4926 separately
- for BT* order shortened special pull studs separately

				Series Number	4973	4974
HSK-A/C/E d_1	ISO taper/BT*	d_2 mm	l_1 mm		EDP Numbers	EDP Numbers
—	30	32	216		9049730300000	—
—	40	44	248		9049730400000	—
—	50	69	285		9049730500000	—
25	—	19	187		—	9049740190000
32	—	24	192		—	9049740240000
40	—	30	196		—	9049740300000
50	—	38	203		—	9049740380000
63	—	48	235		—	9049740480000
80	—	60	250		—	9049740600000
100	—	75	260		—	9049740750000

Clamping force proofing instrument Senso 3000

The hydraulic clamping technology is a well-known, proven and reliable method for the clamping of tools. Thanks to its completely closed design the system is sealed and impervious, requires extremely low maintenance and guarantees longevity. Following many years of general use, however, thermal and mechanical influences can lead to a reduction in clamping force. The result can be a poor tool life and a diminished surface quality including expensive tool breakages during machining operations.

Determining the loss of clamping force was until now extremely costly and inaccurate. It involved either determining the number of clamping screw rotations or the torque with the assistance of a proofing bar and a torque key or the expansion rate applying an accurate internal measuring instrument.

The new Guhring SENSO 3000 measuring instrument offers a precise, quick and simple as well as consistent method of measuring the clamping force. An added advantage is the mobility of the system, i.e. for measuring within machines and fixtures.

SENSO 3000 determines the clamping force of the hydraulic chuck via a pressure sensitive plug gauge. The entire length of the plug gauge is clamped in the hydraulic chuck so that when tightening the clamping screw the clamping pressure of the chuck is optimally applied. The clamping force measuring instrument displays the clamping force as an absolute measurement value on the one hand and as a percentage clamping force in relation to a reference value that can be set individually on the other. This way, SENSO 3000 can be adapted to customer specific application conditions and requirements.

The clamping force measuring instrument is supplied with a plug gauge for the respective clamping diameter as well as a carbide proofing bar for calibration purposes and a CR 2430 type battery – all in a sturdy and handy case.

Senso 3000

Scope of delivery

- supplied respectively with measuring arbor, carbide proofing arbor, battery and case

Series Number	4038
clamping diameter mm	EDP Numbers
6.0	9040380060000
8.0	9040380080000
10.0	9040380100000
12.0	9040380120000
14.0	9040380140000
16.0	9040380160000
18.0	9040380180000
20.0	9040380200000
25.0	9040380250000
32.0	9040380320000

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Flow rate measuring instrument PQ 3000

Guhring's PQ 3000 enables quick and simple measuring of pressure and volume of coolant flow directly in the machine using the actual tool applied.

Guhring has developed the PQ 3000 instrument for quick, simple and direct measuring of the existing coolant pressure and rate of flow for tools with internal cooling.

PQ 3000 enables the measuring of pressure and rate of flow of coolant when the actual tool is clamped directly in the stationary tool spindle. This way, it is possible to establish the real conditions of the relevant machine and tool configuration and measure the resulting actual rate of flow.

PQ 3000 provides the following information:

- pressure and volume flow of the coolant pump, the so-called P/Q characteristic curve
- possible pump or seal wear as well as rotary transmission losses
- possible narrowed cross sections in the line through machine, spindle and tool holder
- possible blocked filters
- possible narrowed cross sections resulting from deposits on the surface of the coolant ducts in the tool
- the coolant duct layout in the tool.

to identify and rectify possible weak points in the overall system, this way, the tool life of the applied tool can be optimized preventing tool breakage as well as chip congestion and jamming!

PQ 3000 provides data of sensors and indicates the measuring results on the display fixture. A data interface enables an evaluation via software on your PC (interface and software are available on request).

PQ 3000

Product information
- pressure checking range: 1 to 120 bar
- rate of flow checking range: 2 to 40 l/min
- diameter holder shank: 16 mm
- diameter range tool holder: ER 32 / 6 to 20 mm
- display for existing pressure P in bar also rate of flow volume Q in l/min

Scope of delivery
- clamping fixture and checking instrument
- display fixture with grip and connection socket
- checking data cable with connector plug, length 3 m
- ER 32 collet holder and sealing washer set for standard shanks with collets from 6 to 20 mm diameter
- clamping key for tensioning nut

Series Number	**4068**
clamping diameter mm	**EDP Numbers**
case complete interface and PC-Software	**9040680100000**

Coolant supply measuring instrument CC 3000

With Guhring's CC 3000 you can quickly and simply check the filtering efficiency of the coolant system.

Guhring has developed the inspection instrument CC 3000 for quick, simple and direct check of the coolant filtering efficiency.

Thanks to replaceable stainless steel filters, the user can adapt the instrument specifically to the filtering of the coolant system.
CC 3000 establishes the present condition of the individual system and displays the actual filter efficiency.

In order to analyze and rectify possible weak points of the filter system, the following information is provided:

- perfect operation of the coolant filtering system
- defective filters
- insufficient filtering for the applied tool

In addition, it is possible to determine the oil concentration of the applied soluble oil with the included refractometer.

Thus, it is possible to optimize the tool life of the applied tool, to prevent tool breakage and subsequent production stoppage!

CC 3000

Product information
- range of application 50 - 500 min-1
- suitable for coolant pressure up to 80 bar

Scope of delivery
- inspection instrument with HSK 63-A interface
- high-grade steel filter sizes 100, 200 and 300 µm
- refractometer including accessories
- magnifying glass, 8-fold magnification
- coolant delivery set guhring no. 4949 code 18,063

- order high-grade steel filter size 60 µm separately

Series Number	4076	4077
	EDP Numbers	EDP Numbers
case complete	9040760100630	
high-grade steel filter size 60, Guhring no. 4077		9040770600000
high-grade steel filter size 100, Guhring no. 4077		9040771000000
high-grade steel filter size 200, Guhring no. 4077		9040772000000
high-grade steel filter size 300, Guhring no. 4077		9040773000000

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HSK-A coolant delivery sets for conventional cooling

Product information
- leak-proof screwed connection tested to 80 bar
- to DIN 69895

Scope of delivery
- incl. union nut and O-rings

	Series Number	4949

for HSK-A	d_1 mm	α °	F	G	l_1 mm	l_2 mm	EDP Numbers
32	6	1.2	5N	M10x1	26.0	5.5	**9049490100320**
40	8	1.4	5N	M12x1	29.5	7.5	**9049490120400**
50	10	1.3	6N	M16x1	33.0	9.5	**9049490160500**
63	12	1.3	6N	M18x1	36.5	11.5	**9049490180630**
80	14	1.4	7N	M20x1.5	40.0	13.5	**9049490200800**
100	16	1.4	7N	M24x1.5	44.0	15.5	**9049490241000**

Data coding chip

Product information
- Identification systems BIS C
- for installation space to DIN 69 873
- data carrier read/write
- 511 bytes
- operating temperature 0…+70
- protection class to IEC
- product data exchange acc. to DIN 4000
- glued in bore Ø10 H11

Scope of delivery
- data coding chip
- installation in chuck and additional balancing can be ordered separately

	Series Number	4955

coding chip BIS C	EDP Numbers
10 x 4.5	**9049550100000**

Sockets

Product information
- with T-handle
- for coolant delivery sets for conventional cooling and MQL coolant delivery unit

Product information
- suitable for torque wrench Guhring no. 4915, drive 3/8‘‘
- for coolant delivery sets

Series Number			4911
for HSK	d mm	L mm	EDP Numbers
32	11.0	115	**9049110240000**
40	13.0	163	**9049110300000**
50	15.0	163	**9049110380000**
63	17.0	175	**9049110480000**
80	20.0	179	**9049110600000**
100	22.5	179	**9049110750000**

Series Number					4910
for HSK	MA Nm	d_1 mm	d_2 mm	L mm	EDP Numbers
32	7	20	14	60	**9049100240000**
40	11	20	16	60	**9049100300000**
50	15	20	18	60	**9049100380000**
63	20	20	18	60	**9049100480000**
80	25	20	20	75	**9049100600000**
100	30	22	22	80	**9049100750000**

Installation of coolant delivery set 4949

1. The HSK holder must be clean, free of swarf and undamaged.
2. Grease the O-rings prior to assembly.
3. Centrally insert the complete coolant delivery set (coolant pipe, union nut and 2 O-rings) in the HSK with the assistance of the socket spanner.
4. Screw in the coolant delivery set/coolant delivery unit and tighten (see table for torque figures)
5. Check coolant pipe for radial mobility.

Torque figures

for HSK	MA Nm
32	7
40	11
50	15
63	20
80	25
100	30

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HSK cleaning mandrels

Product information

- for cleaning internal tapers and the end faces on HSK
- by cleaning the contact surfaces accuracy, clamping torque and tool life of interfaces are improved
- the taper wipers are available in 3 designs, suitable for HSK and SK spindles and HPC precision chucks

Series Number 4914

taper type	d_1 mm	l_1 mm	EDP Numbers
HSK-25	32	125	9049140190000
HSK-32	46	140	9049140240000
HSK-40	46	145	9049140300000
HSK-50	55	155	9049140380000
HSK-63	67	170	9049140480000
HSK-80	85	180	9049140600000
HSK-100	105	200	9049140750000
HPC 14 mm	24	160	9049140140000
HPC 20 mm	24	156	9049140200000
HPC 32 mm	42	170	9049140320000
ISO taper/BT30	35	168	9049140300300
ISO taper/BT40	48	188	9049140400000
ISO taper/BT50	75	240	9049140500000

HSK cleaning cap

Product information

- for cleaning the external taper and face

Series Number 4947

for HSK-A/C/E	d_1 mm	l_1 mm	EDP Numbers
40	53	36	9049470010400
50	66	42	9049470010500
63	83	53	9049470010630
80	103	58	9049470010800
100	125	77	9049470011000

Cylindrical cleaning mandrels

Product information

- for cleaning the bore of the tool holder
- e.g. hydraulic chucks and shrink fit chucks

				Series Number	4918
d_1 mm	d_2 mm	l_2 mm	l_1 mm		EDP Numbers
6	24	37	158		9049180060000
8	24	37	158		9049180080000
10	24	47	168		9049180100000
12	24	47	168		9049180120000
14	24	47	168		9049180140000
16	24	70	176		9049180160000
18	24	70	176		9049180180000
20	24	70	176		9049180200000
25	24	80	186		9049180250000
32	30	100	221		9049180320000
40	30	105	226		9049180400000

HSK-C sealing plugs

Product information

- with high coolant pressure applications, it is imperative to seal the spindle with the sealing plug for safety reasons when the machine spindle is not fitted with a tool. The sealing plug protects the spindle from contamination.

					Series Number	4985
HSK-C	d_1 mm	l_1 mm	l_2 mm	kg		EDP Numbers
32	34	26.0	10.0	0.07		9049850320000
40	42	30.0	10.0	0.11		9049850400000
50	52	37.5	12.5	0.23		9049850500000
63	65	44.5	12.5	0.39		9049850630000
80	82	56.0	16.0	0.81		9049850800000
100	102	66.0	16.0	1.36		9049851000000

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Tool setting fixture

Product information
- for HSK shanks HSK 32, 40, 50 and 63, form A, C, E and F
- the HSK shanks are clamped vertically and horizontally at the collar. Therefore, all tapers with the same diameter of the collar can be clamped with one fixture.

Scope of delivery
- incl. holder adaptors

					Series Number	4946
for HSK-A/C	length mm	width mm	height mm	kg		EDP Numbers
32	260	130	160	9		9049464500320
40	260	130	160	9		9049464500400
50	260	130	160	9		9049464500500
63	260	130	160	9		9049464500630

Tool setting fixture

Scope of delivery
- incl. interchangeable discs Guhring no. 4991

						Series Number	4990
for HSK-A/C	for ISO taper	length mm	width mm	height mm	kg		EDP Numbers
–	40	260	130	160	9		9049904000400
–	50	260	130	160	9		9049904000500
63	–	260	130	160	9		9049904500630
80	–	260	130	160	9		9049904500800
100	–	260	130	160	9		9049904501000

Interchangeable discs

Product information
- for tool setting fixture, Guhring no. 4990

Scope of delivery
- 1 pair

			Series Number	4991
for HSK-A/C	for ISO taper	kg		EDP Numbers
–	40	1.50		9049914001000
–	50	1.50		9049914002000
32	–	0.82		9049914501000
40	–	0.85		9049914502000
50	–	0.09		9049914503000
63	–	0.12		9049914504000
80	–	0.27		9049914505000
100	–	0.46		9049914506000

Torque wrenches

Product information
- with ratchet
- torque range 1…200 Nm; with automatic short distance release; can be heard, seen and felt when the set value is reached. Release accuracy ± 4% of the scale value.

- type “D” is pre-set to 12 Nm suitable for our HPC chucks Guhring no. 4300, 4301, 4243, 4244

Series Number **4915**

type	drive	L mm	torque Nm	EDP Numbers
A	1/4“	160	1-5	**9049150050010**
B	3/8“	390	5-50	**9049150500000**
C	1/2“	480	20-200	**9049152000000**
D	1/4"	100	12	**9049150120000**

Socket/attachments

Product information
- for hexagon socket screws

Type A: 1/4“-hexagon drive
Type B: 3/8“-square drive
Type C: 1/2“-square drive
Type D: 1/4“-square drive

Series Number **4916**

SW	drive	L mm	torque wrenches type	EDP Numbers
2	1/4”	50	A	**9049160020190**
2.5	1/4”	50	A	**9049160025240**
3	1/4”	50	A	**9049160030300**
3	3/8”	50	B	**9049160030380**
4	1/4”	55	D	**9049160040000**
4	3/8”	100	B	**9049160040380**
5	3/8”	100	B	**9049160050480**
6	3/8”	100	B	**9049160060600**
8	3/8”	100	B	**9049160080750**
6	1/2”	120	C	**9049160060380**
8	1/2”	120	C	**9049160080480**
10	1/2”	140	C	**9049160100600**

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Hexagon clamping keys

Product information
- with ergonomic handle for the safe handling of our clamping devices
- * special key for HPC chucks

	Series Number	4912
SW	l_1 mm	EDP Numbers
2.0	100	9049120020000
2.5	100	9049120025000
3.0	100	9049120030000
3/4/5/6	100	9049120034560
4.0	100	9049120040000
5.0	100	9049120050000
6.0	100	9049120060000
8.0	100	9049120080000
10.0	100	9049120100000
12.0	100	9049120120000
2.5	200	9049120025010
3.0	200	9049120030010
4.0	200	9049120040010
5.0	200	9049120050010
6.0	200	9049120060010
7.0	200	9049120070010
8.0	200	9049120080010
* 4.0	125	9049120040100

Hexagon-socket offset screw keys

Product information
- for hexagon socket screws

	Series Number	4921
for threaded pin Guhring no. 4551	SW	EDP Numbers
HSK 25	0.9	9049210009000
HSK 32	1.3	9049210013000
HSK 40	1.5	9049210015000

Centrifugal rings for short spindles to DIN 69002-3

Product information
- for short spindles to DIN 69002-3

Scope of delivery
- incl. clamping screws and brass locking ring

			Series Number	4976
nom. size	d_1 mm	d_2 mm	B	EDP Numbers
25x20	25	35.0	15.7	9049760200150
32x25	32	42.5	19.7	9049760250190
32x30	32	43.5	19.7	9049760300190
40x35	40	54.0	21.7	9049760350210
50x45	50	68.0	24.7	9049760450240
63x55	63	82.0	31.7	9049760550310

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LET GUHRING REPAIR YOUR CHUCKS

Hydraulic Chuck Repair Service

Losing Your Grip?

If your hydraulic chuck is leaking fluid or allowing the cutting tool to turn even slightly within the chuck, it's time to have it repaired. Guhring repairs hydraulic chucks - both our competitors' chucks and our own - at our facility in Brookfield, Wisconsin. Guhring can repair or replace the hydraulic components within most hydraulic chucks, restoring them to like-new functionality.

A worn out toolholder can result in excessive runout, premature tool wear and even broken tools or damaged work pieces. Don't wait until damage has occurred - check your hydraulic clamping pressure with a gauge such as the Guhring Senso 3000 (or other gauge).

Hydraulic chucks create clamping pressure by increasing the hydraulic force around the sleeve (in blue), which causes the sleeve to tighten around the shank of the cutting tool. This forms a secure and even grip on the cutting tool in the chuck.

Guhring's Senso 3000 offers a quick and precise measurement of the clamping force of hydraulic chucks.

Consistent operation: Hydraulic oil is compressed via a screw and pressure piston ensuring accurate and consistent clamping of the tool.

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TECHNICAL INFORMATION

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COMPARISON OF TOOL HOLDER CHARACTERISTICS

Clamping chucks / tool holders for straight tool shanks	Shrink fit chucks / shrink fit extensions	Hydraulic chucks / HMC 3000 / reduction sleeves
Characteristics	maximum concentricity; very slender non-interference; good rigidity; high clamping force; modular lenghtening; patented dampening screw ensures concentricity	high dampening with maximum concentricity; simple handling; flexible application thanks to reduction sleeves also with GÜHROJET
Main application	drilling, countersinking, milling, reaming, universal and HSC application	reaming, drilling, countersinking, HSC application, light milling
Main feature	accurate and universal; slender; high clamping force	simple handling
Concentricity	< 3µm	< 3µm
with 5xD	< 5µm	< 5µm
Clamping force	very high	very high
Rigidity	very high	high
Dampening	low	very high
Interference contour	small / minimal	medium
Handling	good	very good / very flexible
Actuation	shrink fit device	hexagon key

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HPC precision power chucks / clamping sleeves	Straight shank holders “Weldon” / “Whistle-Notch”	Collet chucks ER
maximum clamping force and rigidity thanks to mechanical clamping transmission; high accuracy and balancing quality; flexible application thanks to clamping sleeves also with GÜHROJET	robust, cost-efficient clamping chuck for heavy machining in the lower speed and accuracy range	very flexible clamping chuck for various shank dimensions and tolerances; for lower level machining tasks
heavy HPC and fast accurate HSC milling, drilling, universal application	roughing, milling, drilling	light machining, centering, chamfering, drilling, threading; intermediate shank dimensions
highest clamping force and rigidity	simple operation; secure clamping	highly flexible
< 3µm	< 10µm	< 10µm
< 8µm	< 25µm	< 20µm
extremely high	very safe	medium
extremely high	very high	low
high	low	high
medium	large	large (mini = small)
very good / flexible	good	good
hexagon key / torque wrench	hexagon key	hook spanner

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TECHNICAL INFORMATION AND ADVANTAGES

Fig. 1:
HSK-A 63 interface,
automatic tool change

Our modular tooling system GM 300 has been developed for the application of rotating and stationary tools. 1987 we devloped the GM 300 coupling. Standardization for this interface (DIN 69893) was obtained in1991. Since 12/2001 the HSK interface is also standard to ISO 12164-1/-2. The unique design of the clamping method offers not only an ideal interface for manual clamping within the tooling system, but also an ideal interface for automatic clamping directly to the machine spindle (fig. 1) or tool holder.

Characteristic feature:
Tapered holow shank (HSK) with axial plane clamping mechanism according to DIN 69893. The most important advantages are as follows:

ISO taper DIN 2080 DIN 69871	HSK form A/C/(E) DIN 69893 part 1	HSK form B/D/(F) DIN 69893 part 2
–	HSK 40	HSK 50
SK30	HSK 50	HSK 63
SK40	HSK 63	HSK 80
SK45	HSK 80	HSK 100
SK50	HSK 100	HSK 125

Association between ISO taper - hollow taper shank

- **High static and dynamic rigidity**

The radial and axial forces generated in the tool shank provide the clamping forse necessary for extreme rigidity (fig. 2). Recommended values for the GM-300 module for manual clamping.

Fig. 2
Static deflection: Comparison between ISO taper 50 and automatic interface HSK-A 100 (A)

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TECHNICAL INFORMATION AND ADVANTAGES

• High torque transmission and defined radial positioning

The wedging effect between the hollow taper shank and the holder or spindle causes a friction contact over the full taper surface and the plane supporting face (fig. 3). Two keys engage with the shank end of the tool holder and provide form-closed, radial positioning, thereby excluding any possible setting errors.

Fig. 3
Prestressing and frictional forces of hollow taper shank at the interface.

• High tool change accuracy and repeatability

The circular form engagement of the clamping claws within the hollow tool shank provides a totally tight connection between the shank and spindle or holder respectively (fig. 3 and 4).

HSK-size D	d mm	L mm	X mm	Y mm	Z mm
32	24	50	0.002	0.002	0.002
40	30	60	0.002	0.002	0.002
50	38	75	0.002	0.002	0.002
63	48	100	0.002	0.002	0.002
100	75	150	0.002	0.002	0.002

Fig. 4
Radial and axial repeatability of interface for manual and automatic clamping

• High speed machining performance

The higher the number of revolutions the better, as this increases both the power and effectiveness of the locking of the clamping mechanism. The direct initial stress between the hollow taper shank and the spindle holder compensates for the spindle expansion generated by the centrifugal force so that there is absolutely no radial play (fig. 3). The plane clamping position prevents any slipping in the axial direction.

• Short tool changing time

Efficient tool change due to a short shank length (approx. 1/3 of the conventional ISO taper) and light weight (approx. 50% of the ISO taper).

• Simple, cost-efficient shank design

No moving components at the tool shank means no wearing parts.

• Insensitive to foreign matter

The uninterrupted design of the ring-shaped axial plane clamping simplifies the cleaning of the coupling. During automatic tool change compressed air provides ideal cleaning in the interface.

• Coding and identification

To allow for the attachment of common identification systems, a hole of 10 mm dia. and 4.5 mm depth is provided for the data media (coding chips) in the vicinity of the collar.

• Standardizing of interface

GM 300 corresponds to ISO 12164-1/DIN 69893 (fig. 5).

• Coolant feed

The tools for automatic clamping, HSK-A and E, are designed for a central coolant feed by means of a duct. Tools with manual change behind the GM 300 interface also operate with a central coolant feed. The clamping elements are entirely sealed against the entry of coolant so that fouling is prevented.

• Installation of the coolant supply set

Coolant supply sets are to be ordered separately for all GM 300 modules. The installation of the coolant duct must be carried out by the user.

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GENERAL OVERVIEW OF HSK SHANKS ISO 12164-1/DIN 69893

Form A DIN 69893 part 1

HSK-sizes 32…160

Form C DIN 69893 part 1

HSK-sizes 32…160

Form E DIN 69893 part 5

HSK-sizes 25…63

Form B DIN 69893 part 2

HSK-sizes 40…160

HSK for automatic tool change with gripper groove and index notch. Manual operation is via access hole in taper. Form B relies on driving dogs on the joint face as shank isn't slotted. Torque is transmitted through highly accurate connection.

Form D DIN 69893 part 2

HSK-sizes 40…160

HSK for manual tool change. Operation is via access hole in taper. Form D relies on driving dogs on the joint face as shank isn't slotted. Torque is transmitted through highly accurate connection.

Form F DIN 69893 part 6

HSK-sizes 50…80

HSK for automatic tool change. Torque is transmitted through highly accurate connection. Version with access hole acc. to DIN 69893-1 by arrangement.

HSK form A C E							
Nominal Ø d_1 mm	d_2 mm	l_1 mm	l_2 mm	f_1 mm	f_5 mm	d_8 mm	b_1 mm
25	19.000	13	2.5	10	-	-	-
32	24.007	16	3.2	20	10.0	4.0	7.05
40	30.007	20	4.0	20	10.0	4.6	8.05
50	38.009	25	5.0	26	12.5	6.0	10.54
63	48.010	32	6.3	26	12.5	7.5	12.54
80	60.012	40	8.0	26	16.0	8.5	16.04
100	75.013	50	10.0	29	16.0	12.0	20.02
125	95.016	63	12.5	29	-	-	25.02
160	120.016	90	16.0	31	-	-	30.02

HSK form B D F						
Nominal Ø d_1 mm	d_2 mm	l_1 mm	l_2 mm	f_1 mm	d_8 mm	b_1 mm
25	-	-	-	-	-	-
32	-	-	-	-	-	-
40	24.007	16	3.2	20	4.0	10
50	30.007	20	4.0	26	4.6	12
63	38.009	25	5.0	26	6.0	16
80	48.010	32	6.3	26	7.5	18
100	60.012	40	8.0	29	8.5	20
125	75.013	50	10.0	29	12.0	25
160	95.016	63	12.5	31	12.0	32

Because the rotational speed is the largest influencing factor together with the limits regarding the spindle or spindle bearing interface, the following r.p.m. limits for HSK interfaces have been recommended as guidelines within the HSK standards:

HSK-A/C 25	to 60.000 rev./min
HSK-A/C 32	to 50.000 rev./min
HSK-A/C 40	to 42.000 rev./min
HSK-A/C 50	to 30.000 rev./min
HSK-A/C 63	to 25.000 rev./min
HSK-A/C 80	to 20.000 rev./min
HSK-A/C 100	to 16.000 rev./min

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AUTOMATIC TOOL CLAMPING

For the automatic interface the forces are introduced axially via a draw bar. A clamping taper simultaneously causes a radial movement of the clamping segments which, in turn, engage with the clamping shoulder of the tool shank and lock the coupling absolutely play-free. The clamping mechanism increases the draw-in force on the plane face by a factor of 3.5. General application in machining centers and turning centres using an automatic tool changing method. Such clamping systems are currently being offered by Messrs. Ott, Ortlieb, Berg and Röhm (fig. 6).

Fig. 6
Spindle interfaces with clamping devices

System Ott

System Ortlieb (licence Fa. Guhring)

System Berg (licence Fa. Guhring)

System Röhm (licence Fa. Guhring)

Term definitions of HSK-A interface for automatic tooling systems

① Gripper groove: circular groove

② Index notch: sickle-shaped notch across gripper groove

③ Keyway on collar: index notch or for attachment in tool magazine or grippers. With HSK-B/D also provides form closed torque transmission to spindle.

④ Coding/identification: bore in collar for attachment of identification system (coding chip)

⑤ Thread for coolant: for attachment of coolant supply set

⑥ Keyway on taper shank: form closed torque transmission to spindle

⑦ Radial bore in taper shank: necessary for manual clamping systems

⑧ Clamping shoulder: circular chamfer for drawing in the tool

Note:
We like to point out, that HSK-A can be used alternatively to HSK-C with manual clamping systems e.g. 4-point clamping set or PowerClamp. The only difference is the overall length, which is slightly longer. That is why we have decided to have certain tool holders only as form C as standard.

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MANUAL TOOL CLAMPING

Operating instructions for manual tool clamping

- Do not exceed the maximum torque figures for the clamping screw of the 4-point clamping set and the PowerClamp system.
- The thread of the clamping screw of the manual clamping set is supplied pre-greased. Following pro-longed operating periods it may be necessary grease otherwise the require clamping force cannot be obtained.
- At tool changing the plane surface and spindle has to be cleaned. Dirt will restrain the perfect function of the tool system. The inner taper of the spindle can be cleaned with cleaning unit, Guhring no. 4914.
- The spindle should be sealed with a plug, Guhring no. 4985, when running without tool to prevent the ingress of foreign matter into the clamping sets and HSK tool systems.

Exemplary interface design

Short HSK adaptor Guhring no. **4385**

4-point clamping set Guhring no. **4958**

HSK-C hydraulic chuck Guhring no. **4367**

Reduction sleeve Guhring no. **4368**

RT 100 F Ratio drill Guhring no. **1662**

Spindle connection dimensions see page 208/209

Detailed drawings of the spindle connection contours are available on request for the following:

Guhring no. **4385** Short HSK adaptor		Guhring no. **4554** PowerClamp clamping set	
Guhring no. **4386** HSK adaptor (in front)		Guhring no. **4958** 4-point clamping set	
Guhring no. **4582** HSK adaptor (in front) for turning centres		Guhring no. **4930** MQL 4-point clamping setz	
Guhring no. **4584** HSK adaptors (integrated axial plane)		Guhring no. **4553** Al collar for adjustment	
Guhring no. **4586** HSK adaptor (in front)h		Guhring no. **4953** Brass collar	

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TECHNICAL INFORMATION AND ADVANTAGES

Guhring has considerably expanded its ISO taper and MAS-BT tool holder program. Naturally, the tool holders are of the usual high Guhring quality. This means: ISO taper and MAS-BT tool holders are produced in a special, alloyed case hardened steel with a minimum tensile strength at the core of 900 N/mm2, hardened in a low distortion hardening process to HRC 58 at a case hardening depth of 0.8 to 1.0 mm. For reasons of longevity, the surface of the tool holder is subjected to an abrasive blasting process and protected against corrosion..

Quality through precision

Guhring's demand for highest precision also applies to tool holders. Therefore, ISO taper and MAS-BT chucks are precision ground: in the vicinity of the ISO taper to Ra ≤ 0.2, at the holder face to Ra ≤ 0.4. The taper tolerance is better than AT 3 with a measuring accuracy of ≤ 1µm.

Detailed information regarding the form and positional tolerances can be found for the individual tool holders on the respective pages in the catalogue. The tolerances of the holder bore and the spigot are approximately 2/3 of the DIN tolerance.

Balancing

Tool holders suitable for increased speeds are generally pre-balanced. For this purpose, we have determined the imbalance and entered the balancing areas as well as balancing bores on the drawings. This levels out the imbalance to a large extent and up to approximately 8000 rev./min precision balancing is unnecessary. For higher revolutions, the pre-balanced tool holders must be precision balanced to G 6.3 or G 2.5 respectively.

Type AD/B

ISO taper tool holders generally produced are type AD/B. Supplied is type AD, the coolant bores at the collar are sealed with screws.

General dimensions and tolerances

The following dimensions apply to our ISO taper and MAS-BT tool holders:

SK DIN 69871

MAS/BT JIS B 6339

ISO taper	a mm	ball-Ø mm	b mm	d_1 mm	d_2 mm	d_3 mm	d_5 mm	d_6 mm	d_8 mm	d_9 mm	e_1 mm	f_1 mm	f_2 mm	f_3 mm	l_1 mm	l_5 mm	l_6 mm	l_7 mm
SK30	3.2	7	16.1	31.75	M12	13	59.3	50.00	45	4	21	11.1	19.1	35	47.80	15.00	16.4	19.0
SK40	3.2	7	16.1	44.45	M16	17	72.3	63.55	50	4	27	11.1	19.1	35	68.40	18.5	22.8	25.0
SK50	3.2	7	25.7	69.85	M24	25	107.25	97.50	80	6	42	11.1	19.1	35	101.75	30.0	35.5	37.7
BT30	2.0	8	16.1	31.75	M12	12.5	56.144	46.00	–	–	–	13.6	22.0	–	48.40	–	16.3	16.3
BT40	2.0	10	16.1	44.45	M16	17	75.679	63.00	–	4	27	16.6	27.0	–	65.35	–	22.6	22.6
BT50	3.0	15	25.7	69.85	M24	25	119.019	100.00	–	5.4	42	23.2	38.0	–	101.75	–	35.4	35.4

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EFFECTS of IMBALANCE on MACHINE SPINDLES, TOOL HOLDERS and TOOLS

Imbalance

An imbalance produces a centrifugal force during the rotation of the spindle impeding the smooth running of the tool. This imbalance influences the working process and the life span of the spindle bearings.

The centrifugal force F increases linear with the imbalance U and squared with the number of revolutions according to the formula below.

Counter balancing

To compensate for unwanted centrifugal forces, the symmetrical distribution of mass must be restored with the aim of eliminating any centrifugal forces influencing the spindle bearing. Tool holders generally have compensation holes or areas which assist in directing the total amount of all centrifugal forces influencing the axis towards zero (see DIN ISO 1940).

Eccentricity of center of gravity

The imbalance of a spindle causes its center of gravity to deviate a certain distance from the rotating axis in direction of the imbalance. This distance is called rest-eccentricity e or eccentricity of center of gravity. The heavier the weight of the balance body mass m, the greater the rest-imbalance U permissible.

$$F = U \cdot \omega$$

$$e = \frac{U}{m}$$

Calculation imbalance

Imbalance is a measure, specifying how much unsymmetrical distributed as deviates radially from the rotating axis.

Imbalance is measured in gmm. The measure of distance e determines the distance of the center of gravity of an element to the rotating axis. Imbalance is calculated as follows:

$$U = m \cdot e$$

U = imbalance in gmm
e = eccentricity of center of gravity in µm
m = mass in kg

Balancing limits

In accordance with DIN ISO 1940 the balance grade is denoted with G as well as the units gmm/kg or µm respectively and is relative to the number of revolutions. At a speed of 15.000 rev./min and a weight of 1 kg, G6.3 corresponds with a permissible center deviation between rotational axis and center of gravity axis of the spindle of 4 µm.

At twice the speed of 30,000 rev./min it would be 2 µm. If the tool holder was only half the weight, i.e. 0.5 kg, the permissible counter balancing tolerance is also halved. Aim of counter balancing is to find a compromise between the technically feasible and the economically efficient. Because the radial interchange accuracy for a brand-new HSK holder can be 2 to 3 µm and for an ISO taper shank holder can be 5 to 10 µm, it means an initial quality limit of G2.5 or G6.3 respectively at 10,000 rev./min.

The following diagram shows the quality grades to DIN ISO 1940-1, i.e. the permissible rest imbalance in relation to the balance body mass for different counter balance qualities G relative to the maximum operating speed.

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EFFECTS of IMBALANCE on MACHINE SPINDLES, TOOL HOLDERS and TOOLS

Balancing machine

Guhring tool holders are balanced to G6.3/15,000 rev./min. As an option, i.e. when specified by the machine tool manufacturer, it is possible to precision balance including balancing protocol to a rest imbalance of 0.3 gmm.

Calculation the balancing grade total of the assembled system:

Spindle - tool holder - tool

Illustration of balancing grade total

$$IB_{total} = IB_{Spindle} + IB_{tool\ holder} + IB_{tool}$$

Example:

$$IB_{total} = IB_{Spindle\ (G\ 0.4)} + IB_{tool\ holder\ (G2.5)} + IB_{tool\ (G6.3)}$$

Calculation of rest imbalance

$$U = \frac{G \cdot 60}{2 \cdot \pi \cdot n} \cdot m$$

		m in g	U in gmm
$IB_{Spindle}$	$= \frac{0{,}4 \cdot 60}{2 \cdot \pi \cdot 30.000} \cdot$	15,000	= 1.910
$IB_{tool\ holder}$	$= \frac{2.5 \cdot 60}{2 \cdot \pi \cdot 30.000} \cdot$	1125	= 0.895
IB_{tool}	$= \frac{6.3 \cdot 60}{2 \cdot \pi \cdot 30.000}$	215	= 0.431

m_{total} in g: 16.340

IB_{total} in gmm: 3.236

Balancing grade conversion of the total system

$$G = IB_{total} \cdot 2 \cdot \pi \cdot \frac{n}{60 \cdot m_{ges}}$$

Example:

$$G = 3.236\ gmm \cdot 2 \cdot \pi \cdot \frac{30.000\ \frac{U}{min}}{60\ s \cdot 16340\ g} = 0{,}62$$

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TECHNICAL INFORMATION AND ADVANTAGES

Guhring's shrink fit chucks ensure an optimal connection between shrink fit chuck and shank tool.
While some manufacturers use conventional case hardened steel, Guhring applies a special, application orientated tool steel. The result is an increased expansion rate as well as improved temperature adaptability. There is no limit to the number of shrink fit insertion or withdrawal operations.

Advantages:
- short shrink fit times
- maximum clamping force
- shrink fit chucks available for tool shank diameters from 3 mm to 32 mm
- longevity

These advantages are of particular interest in the field of HSC milling, difficult and rough cutting operations, drilling, reaming and internal grinding operations as well as for woodworking.

Convincing characteristics:
- excellent concentricity
- extreme clamping force and rigidity
- improved tool life
- insignificant imbalance through rotation symmetry
- economic efficiency

A gripping principle
When shrink fitting tools in shrink fit chucks, the decisive factors for ensuring the safe clamping of the tool in the tool holder are solely the heating and cooling of the tool holder. The heating process expands the shrink fit chuck enabling a tool to be inserted or withdrawn respectively. During the cooling process it contracts again and clamps the inserted tool with maximum clamping force.
Because the shrink fit chucks can become extremely hot in localized areas during the heating process and the tools shrink fitted for insertion or withdrawal respectively possess very sharp cutting edges, it is paramount that the operator wears Kevlar gloves during the shrink fit operation to prevent burns and cuts to the hands.

Shrink fit extensions: Increase performance
Shrink fit extensions increase the scope of a tool's performance and reduce tool surface imperfections. As with shrink fit chucks, the tool is clamped in the shrink fit extension and ideally in an hydraulic chuck. Naturally, shrink fit extensions can also be clamped in shrink fit chucks.

Perfect team: Guhring shrink fit chucks and shrink fit systems
For the shrink fitting for withdrawal and insertion of tools in our shrink fit chucks we offer various shrink fit systems to satisfy individual customer requirements: From high-tech solutions with integrated, highly accurate length pre-setting and special shrink fit systems for extra long tools to the multifaceted GSS 2000 with various equipment options:

- GSS 3001
- GSS 2000

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1. The HSK holder must be clean, free of swarf and undamaged.
2. Grease the O-rings prior to assembly.
3. Centrally insert the complete coolant delivery set (coolant pipe, union nut and 2 O-rings) in the HSK with the assistance of the socket spanner.
   When inserting the MQL coolant delivery unit, it is paramount to ensure that the MQL pipe is inserted centrally and undamaged into the MQL length setting screw (do not kink).
4. Screw in the coolant delivery set/coolant delivery unit and tighten (see table for torque figures)
5. Check coolant pipe for radial mobility.

Torque figures

for HSK	MA Nm
32	7
40	11
50	15
63	20
80	25
100	30

Installation of MQL coolant delivery set 4939

Installation of MQL coolant delivery set filler 4940

Installation of MQL coolant delivery unit 4623/4924

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TECHNICAL INFORMATION AND ADVANTAGES

Clamping standard tool shanks to DIN 6535 in hydraulic chucks

Direct clamping
of tool preferred
run-out ≤ 0.003 mm

Form HA Ø 6 ... 20 mm

Form HA Ø 25 ... 32 mm

Form HB Ø 6 ... 20 mm

Clamping of tool shank
only with reduction sleeves
run-out ≤ 0.005 mm

Form HB Ø 25 ... 32 mm

Form HE Ø 6 ... 20 mm

Form HE Ø 25 ... 32 mm

General notes:
Our hydraulic chucks must not be operated with motor-driven tools (impulse screwdrivers or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. We recommend the hexagon clamping key, Guhring no. Art. 4912. A tightening moment of 10 Nm must not be exceeded.

Guhring Hydraulic chucks with increased clamping force

Hydraulic chucks are suitable for clamping rotary symmetrical tools or work pieces. Straight shank tools without drive flats may be clamped up to Ø 32 mm, but also shanks according to DIN 6535 form HA and HB up to Ø 20 mm without reduction sleeves. The given values in the table below are not to be exceeded. If the inserted length is less than the given minimum insertion depth or other tool shanks than specified above are applied, lower accuracy and breakage may occur.

Above all it is the high revolutions with High-Speed-Cutting operations that puts special demands on the tool holder. The clamping of the tool in a hydraulic chuck is, therefore, especially significant. Guhring has developed a hydraulic chuck that offers reliable and powerful clamping with higher torque figures, guaranteeing excellent tool clamping in the tool holder.

Combined with precise concentricity (max. 3 µm deviation from concentricity), a very fast and simple tool change as well as the vibration cushioning effect of the pressure chamber, the new hydraulic chuck can tackle the most demanding of machining tasks. The result is optimal tool life and excellent surface qualities or dimensional accuracy of the work piece respectively.

Considerably higher:
The clamping force of Guhring's new HSK-A hydraulic chuck in comparison to conventional chucks.

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TECHNICAL INFORMATION AND ADVANTAGES

Modern machining processes place heavy demands on tool holding. Hydraulic chucks provide excellent clamping characteristics combined with precise concentricity. Furthermore, they enable a simple and fast tool change, with the assistance of a special extraction key.
Turning the pressure screw generates sufficient pressure in the pressure chamber resulting in an elastic deformation of the clamping sleeve, providing powerful tool clamping and precise concentricity. A safe and powerful fit is guaranteed. If reduction sleeves are applied that are able to hold varying tool diameters, the tool application may be extended without problem. If such sleeves are not applied, it is essential to observe the minimum clamping length.

A summary of the advantages:

- Precise tool clamping with a maximum 3 µm deviation from concentricity
- Transmission of high torque through (excellent clamping) optimized bush clamping system
- High-speed compatibility (no centrifugal forces from clamping segments)
- Precise concentricity, therefore excellent surface qualities and dimensional accuracy of the work piece
- Rapid tool change thanks to simple operation of the clamping screw
- Optimal tool life
- Hydraulic cushioning has vibration absorbing effect

Convincing operation: the pressure medium is compressed via a screw and ensures safe positioning of the tool.

for shank-Ø in mm	**max. r.p.m. in 1/min**	max. transferable torque in Nm	min. insertion depth in mm	max. adjustment l_3 mm	max. rad. force F on chuck with 50 mm from the nose in N	operating temperature in °F	max. coolant pressure in bar
6 h_6	50 000	16	27	10	225	68 - 122	80
8 h_6	50 000	26	27	10	370	68 - 122	80
10 h_6	50 000	50	31	10	540	68 - 122	80
12 h_6	50 000	82	36	10	650	68 - 122	80
14 h_6	50 000	125	36	10	900	68 - 122	80
16 h_6	50 000	190	39	10	1410	68 - 122	80
18 h_6	50 000	275	39	10	1580	68 - 122	80
20 h_6	50 000	310	41	10	1860	68 - 122	80
25 h_6	25 000	520	47	10	4400	68 - 122	80
32 h_6	25 000	770	51	10	6500	68 - 122	80

для размещения заказа - guhring@guhring-tools.ru

INSTALLATION DIMENSIONS FOR HSK ADAPTOR

Detailed production drawing on request

Short spindle adaptor (integr.) Guh. no. 4385

HSK adaptor (in front) Guh. no. 4386/4586

Short spindle adaptor (integr.) Guh. no. 4385

for HSK/Code no.	D1	D2	D3	D4	D5	D6	d_1	d_2	d_3	d_4
32 24,000	40	27.0	16.7	32.0	12.5	M 10	4.0	M 3	M 3	2
40 30,000	50	33.5	20.6	40.5	16.0	M 12	5.0	M 4	M 4	3
50 38,000	63	42.0	25.5	52.0	20.0	M 16	6.0	M 5	M 5	4
63 48,000	80	55.0	33.0	66.0	25.0	M 20	8.0	M 6	M 6	4
80 60,000	100	68.0	41.0	82.0	32.0	M 24	10.2	M 8	M 8	5

Short spindle adaptor (integr.) Guh. no. 4385 continuation

for HSK/Code no.	clamping depth l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	b	R	D	T	locating pin DIN 1481
32 24,000	9.0	4.0	6.5	22	10	2.5	0.6	20.5	11.5	3.5	7.0	3.0	3.5	3.0	2 x 6
40 30,000	12.0	5.5	8.7	30	11	3.5	0.6	25.0	14.5	5.0	8.0	4.0	4.0	3.5	3 x 8
50 38,000	16.0	8.0	12.0	36	12	5.0	0.8	31.5	18.3	6.0	10.5	5.0	4.0	3.5	4 x 10
63 48,000	20.0	10.0	15.0	48	15	6.0	1.0	41.0	22.5	5.0	12.5	6.0	4.0	3.5	4 x 10
80 60,000	25.6	13.0	19.3	60	14	7.5	1.0	50.0	28.0	6.0	16.0	7.5	5.0	4.5	5 x 12

HSK adaptor (in front) Guh. no. 4386

for HSK/Code no.	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	l_1	l_2	l_3	l_4	l_5	l_6	l_7	T	0-ring
25 19,000	45	23	16.5	24	–	35	–	M5	M5	3.2	8.2	9.5	6.2	4.5	–	14	9	–	16x2
32 24,000	60	30	23.5	31	–	44	5	M5	M8x1	4.0	10.3	12.4	8.3	7.0	–	11	12	3.5	23x3
40 30,000	70	35	28.5	36	22	53	5	M6	M8x1	5.0	10.3	12.4	8.3	7.0	12	14	12	3.5	28x3
50 38,000	80	40	30.5	41	26	63	5	M6	M8x1	6.0	10.3	13.3	8.3	7.0	12	14	12	3.5	30x4
63 48,000	100	50	38.5	51	34	79	5	M8	M10x1	8.0	12.3	16.1	10.3	8.0	15	15	14	3.5	38x5
80 60,000	117	60	47.5	61	38	96	6	M8	M10x1	10.2	12.3	16.1	10.3	8.0	20	15	14	4.5	47x5
100 75,000	140	80	65	81	53	119	6	M10	M10x1	12.0	12.3	16.1	10.3	8.0	20	20	14	4.5	45x5

HSK adaptor (in front) Guh. no. 4586

for HSK/Code no.	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	l_1	l_2	l_3	l_4	l_5	l_6	l_7	T	0-ring
40 30,000	70	35	28.5	36	22	53	5	M6	M8x1	5.0	10.3	12.4	8.3	7.0	12	14	12	3.5	28x3
50 38,000	80	40	30.5	41	26	63	5	M6	M8x1	6.0	10.3	13.3	8.3	7.0	12	14	12	3.5	30x4
63 48,000	100	50	38.5	51	34	79	5	M8	M10x1	8.0	12.3	16.1	10.3	8.0	15	15	14	3.5	38x5
80 60,000	117	60	47.5	61	38	96	6	M8	M10x1	10.2	12.3	16.1	10.3	8.0	20	15	14	4.5	47x5
100 75,000	140	80	65.0	81	53	119	6	M10	M10x1	12.0	12.3	16.1	10.3	8.0	20	18	14	4.5	45x5

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INSTALLATION DIMENSIONS FOR HSK ADAPTOR

Detailed production drawing on request

HSK adaptor (in front) Guh. no. 4581/4584

HSK adaptor (in front) Guh. no. 4582

HSK adaptor (in front) Guh. no. 4581

for HSK/Code no.	d_1	d_2	d_3	d_4	d_5	d_6	d_7	d_8	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8
25 19,000	45	23	-	-	5	35	M5	M4	6.8	-	-	1.5	1	-	3.5	min.8
32 24,000	55	28	21.12	17	6.4	43.5	M6	M4	6	9.75	16.75	2	1	0.6	3.5	11
40 30,000	63	36	26.4	21	8	51.5	M6	M4	7	11.3	19.9	2.5	1	1	4	12
50 38,000	80	46	33	26	10	65	M8	M5	9	14.7	25.5	3	1.5	1	5	12
63 48,000	100	56	42.5	34	16	81.5	M10	M6	12	17.8	30	3.5	1.5	1	6	16
80 60,000	125	66	52.8	42	16	103	M12	M8	14	22.7	39.8	4	2	1.5	8	16
100 75,000	160	86	66	53	20	130	M16	M10	16	27.4	49	4.5	2	2	10	16

HSK adaptor (in front) Guh. no. 4584

for HSK/Code no.	d_1	d_2	d_3	d_4	d_5	d_6	d_7	d_8	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	R
32 24,000	40	27.0	21.12	17	6.4	32.0	M 3	M 4	8.8	14.80	21.75	2.0	1.0	0.6	3.5	10.0	11.9	10.10	2.0
40 30,000	50	33.5	26.40	21	8.0	40.5	M 4	M 4	11.0	18.85	27.40	2.5	1.0	1.0	4.0	12.0	13.9	12.40	2.0
50 38,000	63	42.0	33.00	26	10.0	52.0	M 5	M 5	15.0	24.75	35.50	3.0	1.5	1.0	5.0	12.0	18.4	15.50	2.5
63 48,000	80	55.0	42.50	34	16.0	66.0	M 6	M 6	17.9	30.35	42.50	3.5	1.5	1.0	6.0	16.0	23.9	20.00	3.0
80 60,000	100	68.0	52.80	42	16.0	82.0	M 8	M 8	24.3	40.25	57.30	4.0	2.0	1.5	8.0	16.0	32.9	24.80	3.5
100 75,000	125	88.0	66.00	53	20.0	106.0	M10	M10	34.4	54.45	76.00	4.5	1.5	2.0	10.0	16.0	42.4	31.40	4.5

HSK adaptor (in front) Guh. no. 4582

for HSK/Code no.	d_1	d_2	d_3	d_4	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}
50 38,000	50	7.95	10	M10	20.55	20	15	11	1	27.44	19.22	33.5	20	25
63 48,000	63	14.00	10	M12	25.00	21	18	16	1	31.70	26.00	41.0	22	26

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INTELLIGENT SOLUTIONS OPTIMIZE TM TOOL MANAGEMENT

The Guhring software can be linked to all enterprise resource planning and IT systems.

External systems such as vertical or lift systems can be controlled and managed directly via an interface.

Guhring's tool dispensing systems send reports to the materials management, the purchasing department, controlling and management and to the tool management.

By integrating the software into the existing infrastructure, the GTMS can further serve as a research tool for work planning, design and purchasing.

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Thanks to a coordinated delivery and re-grind service all production relevant working materials and tools can be optimally and punctually made available.

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With the assistance of Guhring's TM software (GTMS) it is also possible to completely automate the procurement process for tools.

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Guhring opened it's fourth reconditioning center, in Bloomfield, CT. The new facility provides reconditioned carbide tools and PVD coatings.

The other reconditioning facilities are in Brookfield, WI., New Hudson, MI., and Huntington Beach, CA.

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