

A high-precision metal reamer, the Gühring HR 500 short S/D, is shown in a vertical orientation. The tool has a long, cylindrical body with a series of longitudinal grooves and a sharp, multi-fluted cutting edge. It is positioned above a dark, rectangular workpiece that has three similar reamers already inserted into it, demonstrating its use in machining blind and through-holes. The background is a soft, out-of-focus blue-grey.

GÜHRING

HR 500 short S/D

The high-performance reamer for machining
blind and through-holes



HR 500 short S/D

Flexible reaming like never before

A single tool for blind and
through-hole machining

Gühring is expanding the HR 500 range:

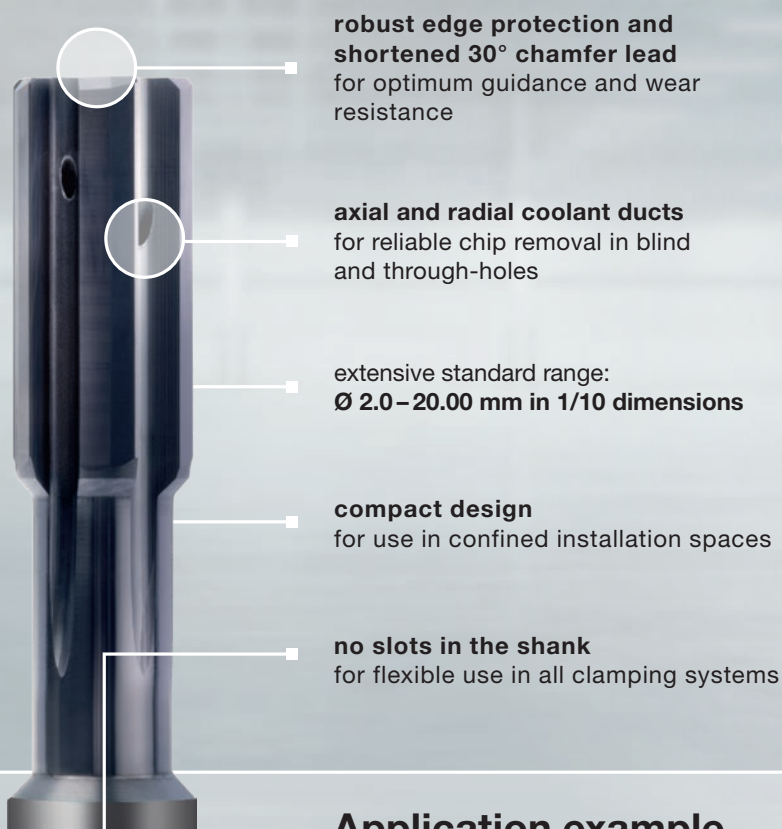
The HR 500 short S/D is a solid carbide high-performance reamer for machining blind and through-holes using just a single tool.

Thanks to its universal tool concept, it covers a wide range of applications and is suitable for a wide variety of reaming operations and components.

Whether it's subsequent centre drilling, cross hole, transverse drilling or free-cutting: the HR 500 short S/D enables tool turnover and storage costs to be significantly reduced. This makes the high-performance reamer a cost-effective solution even for small lot sizes when requirements vary.

x cycle time reduced by 8 seconds
x 1 reamer saved

- X** compact design for machining operations with limited installation space
- X** innovative coolant supply for process-reliable chip removal
- X** hybrid tool concept for a wide range of operating conditions



Application example

Component:	Form insert X38CrMoV5		
Tool:	#6130, Ø 16 H7		
Customer objective:	Reduce the number of tools and storage costs		
Difficulty:	Blind holes and through holes with a reamer		
Cutting data:	Gühring	Competition	
	Hybrid solution	Tool 1 Blind hole	Tool 2 Through hole
	v_c 160 m/min	v_c 120 m/min	v_c 120 m/min
	f 1.8 mm/rev	f 1.0 mm/rev	f 1.0 mm/rev
Tool change cycle:	0	1	
Machining time:	2.07 sec.	4.95 sec.	
Total cycle time:	4.07 sec.	11.95 sec.	



High-performance reamers, H7 series

Article no. **6130**

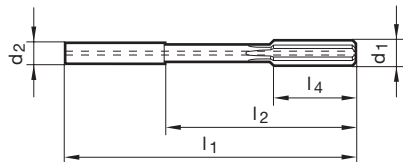


cutting data see page 7



P	M	K	N	S	H
●	○	○	○	●	

H7 series in accordance with DIN 1420 • extremely unequal flute spacing
• intermediate dimensions of Ø 1.95-20.1 mm possible • for clamping in hydraulic and shrink fit chucks



Article no.

6130

d1 mm	d2 h6 mm	l1 mm	l2 mm	l4 mm	Z	Order no.
2.00	4.00	50.0	22.0	8.0	4	6130 2.000
2.10	4.00	50.0	22.0	8.0	4	6130 2.100
2.20	4.00	50.0	22.0	8.0	4	6130 2.200
2.30	4.00	50.0	22.0	8.0	4	6130 2.300
2.40	4.00	50.0	22.0	8.0	4	6130 2.400
2.50	4.00	50.0	22.0	8.0	4	6130 2.500
2.60	4.00	50.0	22.0	8.0	4	6130 2.600
2.70	4.00	50.0	22.0	8.0	4	6130 2.700
2.80	4.00	50.0	22.0	8.0	4	6130 2.800
2.90	4.00	50.0	22.0	8.0	4	6130 2.900
3.00	4.00	50.0	22.0	10.0	4	6130 3.000
3.10	4.00	50.0	22.0	10.0	4	6130 3.100
3.20	4.00	50.0	22.0	10.0	4	6130 3.200
3.30	4.00	50.0	22.0	10.0	4	6130 3.300
3.40	4.00	50.0	22.0	10.0	4	6130 3.400
3.50	4.00	50.0	22.0	10.0	4	6130 3.500
3.60	4.00	50.0	22.0	10.0	4	6130 3.600
3.70	4.00	50.0	22.0	10.0	4	6130 3.700
3.80	4.00	50.0	22.0	10.0	4	6130 3.800
3.90	4.00	50.0	22.0	10.0	4	6130 3.900
4.00	4.00	50.0	22.0	10.0	4	6130 4.000
4.10	4.00	50.0	22.0	10.0	4	6130 4.100
4.20	6.00	58.0	22.0	10.0	4	6130 4.200
4.30	6.00	58.0	22.0	10.0	4	6130 4.300
4.40	6.00	58.0	22.0	10.0	4	6130 4.400
4.50	6.00	58.0	22.0	10.0	4	6130 4.500
4.60	6.00	58.0	22.0	10.0	4	6130 4.600
4.70	6.00	58.0	22.0	10.0	4	6130 4.700
4.80	6.00	58.0	22.0	10.0	4	6130 4.800
4.90	6.00	58.0	22.0	10.0	4	6130 4.900
5.00	6.00	58.0	22.0	10.0	4	6130 5.000
5.10	6.00	58.0	22.0	10.0	4	6130 5.100
5.20	6.00	58.0	22.0	10.0	4	6130 5.200
5.30	6.00	58.0	22.0	10.0	4	6130 5.300
5.40	6.00	58.0	22.0	10.0	4	6130 5.400
5.50	6.00	58.0	22.0	10.0	4	6130 5.500
5.60	6.00	58.0	22.0	10.0	4	6130 5.600
5.70	6.00	58.0	22.0	10.0	4	6130 5.700
5.80	6.00	58.0	22.0	10.0	4	6130 5.800
5.90	6.00	58.0	22.0	10.0	4	6130 5.900
6.00	6.00	58.0	22.0	10.0	4	6130 6.000
6.10	6.00	58.0	22.0	10.0	4	6130 6.100
6.20	8.00	76.0	40.0	16.0	6	6130 6.200
6.30	8.00	76.0	40.0	16.0	6	6130 6.300
6.40	8.00	76.0	40.0	16.0	6	6130 6.400
6.50	8.00	76.0	40.0	16.0	6	6130 6.500
6.60	8.00	76.0	40.0	16.0	6	6130 6.600
6.70	8.00	76.0	40.0	16.0	6	6130 6.700
6.80	8.00	76.0	40.0	16.0	6	6130 6.800
6.90	8.00	76.0	40.0	16.0	6	6130 6.900
7.00	8.00	76.0	40.0	16.0	6	6130 7.000
7.10	8.00	76.0	40.0	16.0	6	6130 7.100
7.20	8.00	76.0	40.0	16.0	6	6130 7.200
7.30	8.00	76.0	40.0	16.0	6	6130 7.300
7.40	8.00	76.0	40.0	16.0	6	6130 7.400
7.50	8.00	76.0	40.0	16.0	6	6130 7.500
7.60	8.00	76.0	40.0	16.0	6	6130 7.600
7.70	8.00	76.0	40.0	16.0	6	6130 7.700
7.80	8.00	76.0	40.0	16.0	6	6130 7.800
7.90	8.00	76.0	40.0	16.0	6	6130 7.900
8.00	8.00	76.0	40.0	16.0	6	6130 8.000
8.10	8.00	76.0	40.0	16.0	6	6130 8.100
8.20	10.00	76.0	36.0	19.0	6	6130 8.200
8.30	10.00	76.0	36.0	19.0	6	6130 8.300
8.40	10.00	76.0	36.0	19.0	6	6130 8.400
8.50	10.00	76.0	36.0	19.0	6	6130 8.500



Article no.						6130
d1 mm	d2 h6 mm	l1 mm	l2 mm	l4 mm	Z	Order no.
8.60	10.00	76.0	36.0	19.0	6	6130 8.600
8.70	10.00	76.0	36.0	19.0	6	6130 8.700
8.80	10.00	76.0	36.0	19.0	6	6130 8.800
8.90	10.00	76.0	36.0	19.0	6	6130 8.900
9.00	10.00	76.0	36.0	19.0	6	6130 9.000
9.10	10.00	76.0	36.0	19.0	6	6130 9.100
9.20	10.00	76.0	36.0	19.0	6	6130 9.200
9.30	10.00	76.0	36.0	19.0	6	6130 9.300
9.40	10.00	76.0	36.0	19.0	6	6130 9.400
9.50	10.00	76.0	36.0	19.0	6	6130 9.500
9.60	10.00	76.0	36.0	19.0	6	6130 9.600
9.70	10.00	76.0	36.0	19.0	6	6130 9.700
9.80	10.00	76.0	36.0	19.0	6	6130 9.800
9.90	10.00	76.0	36.0	19.0	6	6130 9.900
10.00	10.00	76.0	36.0	19.0	6	6130 10.000
10.10	10.00	76.0	36.0	19.0	6	6130 10.100
10.20	12.00	80.0	35.0	19.0	6	6130 10.200
10.30	12.00	80.0	35.0	19.0	6	6130 10.300
10.40	12.00	80.0	35.0	19.0	6	6130 10.400
10.50	12.00	80.0	35.0	19.0	6	6130 10.500
10.60	12.00	80.0	35.0	19.0	6	6130 10.600
10.70	12.00	80.0	35.0	19.0	6	6130 10.700
10.80	12.00	80.0	35.0	19.0	6	6130 10.800
10.90	12.00	80.0	35.0	19.0	6	6130 10.900
11.00	12.00	80.0	35.0	19.0	6	6130 11.000
11.10	12.00	80.0	35.0	19.0	6	6130 11.100
11.20	12.00	80.0	35.0	19.0	6	6130 11.200
11.30	12.00	80.0	35.0	19.0	6	6130 11.300
11.40	12.00	80.0	35.0	19.0	6	6130 11.400
11.50	12.00	80.0	35.0	19.0	6	6130 11.500
11.60	12.00	80.0	35.0	19.0	6	6130 11.600
11.70	12.00	80.0	35.0	19.0	6	6130 11.700
11.80	12.00	80.0	35.0	19.0	6	6130 11.800
11.90	12.00	80.0	35.0	19.0	6	6130 11.900
12.00	12.00	80.0	35.0	19.0	6	6130 12.000
12.10	12.00	80.0	35.0	19.0	6	6130 12.100
12.20	14.00	90.0	45.0	22.0	6	6130 12.200
12.30	14.00	90.0	45.0	22.0	6	6130 12.300
12.40	14.00	90.0	45.0	22.0	6	6130 12.400
12.50	14.00	90.0	45.0	22.0	6	6130 12.500
12.60	14.00	90.0	45.0	22.0	6	6130 12.600
12.70	14.00	90.0	45.0	22.0	6	6130 12.700
12.80	14.00	90.0	45.0	22.0	6	6130 12.800
12.90	14.00	90.0	45.0	22.0	6	6130 12.900
13.00	14.00	90.0	45.0	22.0	6	6130 13.000
13.10	14.00	90.0	45.0	22.0	6	6130 13.100
13.20	14.00	90.0	45.0	22.0	6	6130 13.200
13.30	14.00	90.0	45.0	22.0	6	6130 13.300
13.40	14.00	90.0	45.0	22.0	6	6130 13.400
13.50	14.00	90.0	45.0	22.0	6	6130 13.500
13.60	14.00	90.0	45.0	22.0	6	6130 13.600
13.70	14.00	90.0	45.0	22.0	6	6130 13.700
13.80	14.00	90.0	45.0	22.0	6	6130 13.800
13.90	14.00	90.0	45.0	22.0	6	6130 13.900
14.00	14.00	90.0	45.0	22.0	6	6130 14.000
14.10	14.00	90.0	45.0	22.0	6	6130 14.100
14.20	16.00	90.0	42.0	22.0	6	6130 14.200
14.30	16.00	90.0	42.0	22.0	6	6130 14.300
14.40	16.00	90.0	42.0	22.0	6	6130 14.400
14.50	16.00	90.0	42.0	22.0	6	6130 14.500
14.60	16.00	90.0	42.0	22.0	6	6130 14.600
14.70	16.00	90.0	42.0	22.0	6	6130 14.700
14.80	16.00	90.0	42.0	22.0	6	6130 14.800
14.90	16.00	90.0	42.0	22.0	6	6130 14.900
15.00	16.00	90.0	42.0	22.0	6	6130 15.000
15.10	16.00	90.0	42.0	22.0	6	6130 15.100
15.20	16.00	90.0	42.0	22.0	6	6130 15.200
15.30	16.00	90.0	42.0	22.0	6	6130 15.300
15.40	16.00	90.0	42.0	22.0	6	6130 15.400
15.50	16.00	90.0	42.0	22.0	6	6130 15.500
15.60	16.00	90.0	42.0	22.0	6	6130 15.600
15.70	16.00	90.0	42.0	22.0	6	6130 15.700
15.80	16.00	90.0	42.0	22.0	6	6130 15.800
15.90	16.00	90.0	42.0	22.0	6	6130 15.900
16.00	16.00	90.0	42.0	22.0	6	6130 16.000
16.10	16.00	90.0	42.0	22.0	6	6130 16.100
16.20	18.00	100.0	52.0	25.0	6	6130 16.200
16.30	18.00	100.0	52.0	25.0	6	6130 16.300
16.40	18.00	100.0	52.0	25.0	6	6130 16.400
16.50	18.00	100.0	52.0	25.0	6	6130 16.500
16.60	18.00	100.0	52.0	25.0	6	6130 16.600
16.70	18.00	100.0	52.0	25.0	6	6130 16.700
16.80	18.00	100.0	52.0	25.0	6	6130 16.800
16.90	18.00	100.0	52.0	25.0	6	6130 16.900



Article no.						6130
d1 mm	d2 h6 mm	l1 mm	l2 mm	l4 mm	Z	Order no.
17.00	18.00	100.0	52.0	25.0	6	6130 17.000
17.10	18.00	100.0	52.0	25.0	6	6130 17.100
17.20	18.00	100.0	52.0	25.0	6	6130 17.200
17.30	18.00	100.0	52.0	25.0	6	6130 17.300
17.40	18.00	100.0	52.0	25.0	6	6130 17.400
17.50	18.00	100.0	52.0	25.0	6	6130 17.500
17.60	18.00	100.0	52.0	25.0	6	6130 17.600
17.70	18.00	100.0	52.0	25.0	6	6130 17.700
17.80	18.00	100.0	52.0	25.0	6	6130 17.800
17.90	18.00	100.0	52.0	25.0	6	6130 17.900
18.00	18.00	100.0	52.0	25.0	6	6130 18.000
18.10	18.00	100.0	52.0	25.0	6	6130 18.100
18.20	20.00	100.0	50.0	25.0	6	6130 18.200
18.30	20.00	100.0	50.0	25.0	6	6130 18.300
18.40	20.00	100.0	50.0	25.0	6	6130 18.400
18.50	20.00	100.0	50.0	25.0	6	6130 18.500
18.60	20.00	100.0	50.0	25.0	6	6130 18.600
18.70	20.00	100.0	50.0	25.0	6	6130 18.700
18.80	20.00	100.0	50.0	25.0	6	6130 18.800
18.90	20.00	100.0	50.0	25.0	6	6130 18.900
19.00	20.00	100.0	50.0	25.0	6	6130 19.000
19.10	20.00	100.0	50.0	25.0	6	6130 19.100
19.20	20.00	100.0	50.0	25.0	6	6130 19.200
19.30	20.00	100.0	50.0	25.0	6	6130 19.300
19.40	20.00	100.0	50.0	25.0	6	6130 19.400
19.50	20.00	100.0	50.0	25.0	6	6130 19.500
19.60	20.00	100.0	50.0	25.0	6	6130 19.600
19.70	20.00	100.0	50.0	25.0	6	6130 19.700
19.80	20.00	100.0	50.0	25.0	6	6130 19.800
19.90	20.00	100.0	50.0	25.0	6	6130 19.900
20.00	20.00	100.0	50.0	25.0	6	6130 20.000



HR 500 short S/D



Machining group	a v _c (m/min)	f (mm/rev) with nom. Ø									
		2	3	4	6	8	10	12	14	16	20
P1.1.1 Unalloyed steel, annealed, 0.15 % C, Rm 420 N/mm ² , 125 HB	160	0.25	0.40	0.55	0.95	1.25	1.50	1.65	1.75	1.85	2.00
P1.1.2 Unalloyed steel, heat-treated, 0.15 % C, Rm 420 N/mm ² , 125 HB	160	0.25	0.40	0.55	0.95	1.25	1.50	1.65	1.75	1.85	2.00
P1.1.3 Unalloyed steel, annealed, 0.45 % C, Rm 640 N/mm ² , 190 HB	160	0.25	0.40	0.55	0.95	1.25	1.50	1.65	1.75	1.85	2.00
P1.1.4 Unalloyed steel, heat-treated, 0.45 % C, Rm 640 N/mm ² , 190 HB	160	0.25	0.40	0.55	0.95	1.25	1.50	1.65	1.75	1.85	2.00
P1.1.5 Unalloyed steel, heat-treated, 0.45 % C, Rm 850 N/mm ² , 250 HB	145	0.25	0.40	0.55	0.95	1.25	1.50	1.65	1.75	1.85	2.00
P1.1.6 Unalloyed steel, annealed, 0.75 % C, Rm 915 N/mm ² , 270 HB	145	0.25	0.40	0.55	0.95	1.25	1.50	1.65	1.75	1.85	2.00
P1.1.7 Unalloyed steel, heat-treated, 0.75 % C, Rm 1020 N/mm ² , 300 HB	130	0.25	0.40	0.55	0.95	1.25	1.50	1.65	1.75	1.85	2.00
P2.1.1 Low-alloy steel, annealed, Rm 610 N/mm ² , 180 HB	160	0.25	0.35	0.50	0.90	1.15	1.40	1.55	1.65	1.70	1.90
P2.1.2 Low-alloy steel, heat-treated, Rm 930 N/mm ² , 275 HB	160	0.25	0.35	0.50	0.90	1.15	1.40	1.55	1.65	1.70	1.90
P2.1.3 Low-alloy steel, heat-treated, Rm 1020 N/mm ² , 300 HB	160	0.25	0.35	0.50	0.90	1.15	1.40	1.55	1.65	1.70	1.90
P2.1.4 Low-alloy steel, heat-treated, Rm 1190 N/mm ² , 350 HB	110	0.25	0.35	0.50	0.90	1.15	1.40	1.55	1.65	1.70	1.90
P3.1.1 High-alloy steel and tool steel, annealed, Rm 680 N/mm ² , 200 HB	160	0.20	0.35	0.45	0.85	1.10	1.30	1.45	1.50	1.60	1.75
P3.1.2 High-alloy steel and tool steel, hardened and tempered, Rm 1100 N/mm ² , 325 HB	110	0.20	0.35	0.45	0.85	1.10	1.30	1.45	1.50	1.60	1.75
M1.1.1 Stainless steel, ferritic/martensitic, with machining additives	70	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
M1.1.2 Stainless steel, ferritic/martensitic, annealed, Rm 680 N/mm ² , 200 HB	55	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
M1.1.3 Stainless steel, ferritic/martensitic, heat-treated, Rm 810 N/mm ² , 240 HB	55	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
M2.1.1 Stainless steel, austenitic, quenched, 180 HB	70	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
M2.2.1 Duplex steel, high-strength stainless steels	45	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
K1.1.1 Grey cast iron, pearlitic/ferritic, 180 HB	70	0.20	0.30	0.40	0.75	0.95	1.15	1.20	1.30	1.40	1.50
K1.1.2 Grey cast iron, pearlitic/martensitic, 260 HB	65	0.20	0.30	0.40	0.75	0.95	1.15	1.20	1.30	1.40	1.50
K1.2.1 Cast iron with spheroidal graphite, ferritic, 160 HB	85	0.20	0.30	0.40	0.75	0.95	1.15	1.20	1.30	1.40	1.50
K1.2.2 Cast iron with spheroidal graphite, pearlitic, 250 HB	85	0.20	0.30	0.40	0.75	0.95	1.15	1.20	1.30	1.40	1.50
K1.3.1 Malleable cast iron, ferritic, 130 HB	70	0.20	0.30	0.40	0.75	0.95	1.15	1.20	1.30	1.40	1.50
K1.3.2 Malleable cast iron, pearlitic, 230 HB	65	0.20	0.30	0.40	0.75	0.95	1.15	1.20	1.30	1.40	1.50
K2.1.1 Vermicular graphite cast iron (GJV)											
K2.2.1 Austenitic-ferritic spheroidal graphite cast iron (ADI)											
N1.1.1 Wrought aluminium alloys, non-hardened, 60 HB											
N1.1.2 Wrought aluminium alloys, hardened, 100 HB											
N2.1.1 Aluminium casting alloys, non-hardened, ≤ 12 % Si, 75 HB											
N2.1.2 Aluminium casting alloys, hardened, ≤ 12 % Si, 90 HB											
N2.1.3 Aluminium casting alloys, non-hardened, > 12 % Si, 130 HB											
N3.1.1 Copper and copper alloys: Free-machining alloy, Pb > 1 %											
N3.1.2 Copper and copper alloys: CuZn, CuSnZn											
N3.1.3 Copper and copper alloys: CuSn, lead-free copper and copper electrolyte											
N4.1.1 Non-metallic materials: Duroplastics, fibre-reinforced plastics	70	0.20	0.30	0.40	0.75	0.95	1.15	1.20	1.30	1.40	1.50
N4.1.2 Non-metallic materials: Hard rubber, wood, etc.	70	0.20	0.30	0.40	0.75	0.95	1.15	1.20	1.30	1.40	1.50
N4.1.3 Non-metallic materials: Graphite	45	0.20	0.30	0.40	0.75	0.95	1.15	1.20	1.30	1.40	1.50
S1.1.1 Heat-resistant alloys, Fe-based, annealed, 200 HB	35	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
S1.1.2 Heat-resistant alloys, Fe-based, hardened, 280 HB	35	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
S1.1.3 Heat-resistant alloys, Ni- or Co-based, annealed, 250 HB	35	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
S1.1.4 Heat-resistant alloys, Ni- or Co-based, hardened, 350 HB	35	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
S1.1.5 Heat-resistant alloys, Ni- or Co-based, cast, 320 HB	35	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
S2.1.1 Titanium alloys, pure titanium, Rm 400 N/mm ²	35	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
S2.1.2 Titanium alloys, Alpha and Beta alloys, hardened, Rm 1050 N/mm ²	35	0.10	0.15	0.20	0.35	0.45	0.55	0.60	0.65	0.70	0.75
H1.1.1 Hardened steel, hardened and tempered, < 55 HRC											
H1.1.2 Hardened steel, hardened and tempered, < 60 HRC											
H1.1.3 Hardened steel, hardened and tempered, > 60 HRC											
H2.1.1 Chilled cast iron, 400 HB											
H2.1.2 Chilled cast iron, hardened and tempered, < 55 HRC											



HR 500 short S/D

400204098/26044-VII-05 | Printed in Germany | 2026

GÜHRING

Gühring KG | P.O. Box 100247 | 72423 Albstadt | Germany
Gühring KG | Herderstrasse 50–54 | 72458 Albstadt | Germany
Telephone: +49 74 31 17-0 | info@guehring.de | www.guehring.com

No liability can be accepted for printing errors or technical changes of any kind.
Our Conditions of Sale and Terms of Payment apply. Available on request.