



Metalworking



Reduction Sleeves for ETP Toolholders



2018.2

Accessories

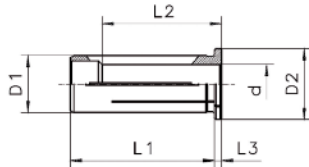
Reduction Sleeves for ETP Toolholders

The reduction sleeves are designed to fit with the ETP Toolholders. They are specially suited for high precision clamping of cylindrical tool shanks per DIN 6335 form HA, HB and HE, as well as tool shanks per DIN 1835 form B, C, D and E.

The special design of the reduction sleeves allows an efficient use of coolant through cutting tools.

Outer-Ø of reduction sleeve corresponds to the type.

HS12 = Ø 12 mm
 HS20 = Ø 20 mm
 HS25 = Ø 25 mm
 HS32 = Ø 32 mm



Benefits and features

- Standard version HS suited for internal cooling**
 Metal-to-metal seal for cutting tools with internal coolant channels.
- HS-CF version suited for peripheral cooling**
 The coolant flush reduction sleeves HS-CF can be used for peripheral cooling due to their coolant channels.
- Accurate precision**
 High runout accuracy $\leq 3 \mu\text{m}$ (0.00012 inch).
- High flexibility**
 Clamping of different tool shank diameters. 12, 20, 25, 32 mm and 1/2", 3/4", 1", 1 1/4".
- Power increase**
 When using reduction sleeves the transmittable torque is increased.

Reduction Sleeves mm to mm

Item description	d [mm]	Part no.	D1 [mm]	D2 [mm]	L1 [mm]	L2 [mm]	L3 [mm]
Reduction Sleeves HS 12-MB (Micro Bore)							
○ HS 12-MB / 1 mm	1.000	R1912.01009	12	16	40	20	4
○ HS 12-MB / 1,5 mm	1.500	R1912.01509	12	16	40	20	4
○ HS 12-MB / 2 mm	2.000	R1912.02009	12	16	40	20	4
○ HS 12-MB / 2,5 mm	2.500	R1912.02509	12	16	40	20	4
Reduction Sleeves HS 12							
● HS 12 / 3 mm	3.000	R1912.03000	12	16	40	29	4
● HS 12 / 4 mm	4.000	R1912.04000	12	16	40	29	4
● HS 12 / 5 mm	5.000	R1912.05000	12	16	40	29	4
● HS 12 / 6 mm	6.000	R1912.06000	12	16	40	36	4
○ HS 12 / 7 mm	7.000	R1912.07000	12	16	40	37	4
● HS 12 / 8 mm	8.000	R1912.08000	12	16	40	37	4
○ HS 12 / 9 mm	9.000	R1912.09000	12	16	40	37	4
● HS 12 / 10 mm	10.000	R1912.10000	12	16	40	40	4

Reduction Sleeves mm to mm

Item description	d [mm]	Part no.	D1 [mm]	D2 [mm]	L1 [mm]	L2 [mm]	L3 [mm]
Reduction Sleeves HS 12-CF							
○ HS 12-CF / 3 mm	3.000	R1912.03002	12	16	40	29	4
● HS 12-CF / 4 mm	4.000	R1912.04002	12	16	40	29	4
○ HS 12-CF / 5 mm	5.000	R1912.05002	12	16	40	29	4
● HS 12-CF / 6 mm	6.000	R1912.06002	12	16	40	36	4
○ HS 12-CF / 8 mm	8.000	R1912.08002	12	16	40	37	4
Reduction Sleeves HS 20							
● HS 20 / 3 mm	3.000	R1920.03000	20	25	50	28	4
● HS 20 / 4 mm	4.000	R1920.04000	20	25	50	28	4
● HS 20 / 5 mm	5.000	R1920.05000	20	25	50	28	4
● HS 20 / 6 mm	6.000	R1920.06000	20	25	50	36	4
○ HS 20 / 7 mm	7.000	R1920.07000	20	25	50	38	4
● HS 20 / 8 mm	8.000	R1920.08000	20	25	50	37	4
○ HS 20 / 9 mm	9.000	R1920.09000	20	25	50	38	4
● HS 20 / 10 mm	10.000	R1920.10000	20	25	50	40	4
○ HS 20 / 11 mm	11.000	R1920.11000	20	25	50	40	4
● HS 20 / 12 mm	12.000	R1920.12000	20	25	50	45	4
○ HS 20 / 13 mm	13.000	R1920.13000	20	25	50	45	4
● HS 20 / 14 mm	14.000	R1920.14000	20	25	50	45	4
○ HS 20 / 15 mm	15.000	R1920.15000	20	25	50	45	4
● HS 20 / 16 mm	16.000	R1920.16000	20	25	50	48	4
● HS 20 / 18 mm	18.000	R1920.18000	20	25	50	48	4
Reduction Sleeves HS 20-CF							
○ HS 20-CF / 3 mm	3.000	R1920.03002	20	25	50	28	4
○ HS 20-CF / 4 mm	4.000	R1920.04002	20	25	50	28	4
○ HS 20-CF / 5 mm	5.000	R1920.05002	20	25	50	28	4
○ HS 20-CF / 6 mm	6.000	R1920.06002	20	25	50	36	4
○ HS 20-CF / 8 mm	8.000	R1920.08002	20	25	50	37	4
○ HS 20-CF / 10 mm	10.000	R1920.10002	20	25	50	40	4
● HS 20-CF / 12 mm	12.000	R1920.12002	20	25	50	45	4
○ HS 20-CF / 14 mm	14.000	R1920.14002	20	25	50	45	4
○ HS 20-CF / 16 mm	16.000	R1920.16002	20	25	50	48	4
Reduction Sleeves HS 25							
● HS 25 / 3 mm	3.000	R1925.03000	25	30	56	29	4
● HS 25 / 4 mm	4.000	R1925.04000	25	30	56	29	4
● HS 25 / 5 mm	5.000	R1925.05000	25	30	56	29	4
● HS 25 / 6 mm	6.000	R1925.06000	25	30	56	37	4
○ HS 25 / 7 mm	7.000	R1925.07000	25	30	56	37	4
● HS 25 / 8 mm	8.000	R1925.08000	25	30	56	37	4
○ HS 25 / 9 mm	9.000	R1925.09000	25	30	56	38	4
● HS 25 / 10 mm	10.000	R1925.10000	25	30	56	40	4
● HS 25 / 12 mm	12.000	R1925.12000	25	30	56	46	4
● HS 25 / 14 mm	14.000	R1925.14000	25	30	56	47	4
● HS 25 / 16 mm	16.000	R1925.16000	25	30	56	48	4
● HS 25 / 18 mm	18.000	R1925.18000	25	30	56	48	4
● HS 25 / 20 mm	20.000	R1925.20000	25	30	56	50	4
Reduction Sleeves HS 32							
○ HS 32 / 3 mm	3.000	R1932.03000	32	36	60	29	4
○ HS 32 / 4 mm	4.000	R1932.04000	32	36	60	29	4
○ HS 32 / 5 mm	5.000	R1932.05000	32	36	60	29	4
● HS 32 / 6 mm	6.000	R1932.06000	32	36	60	36	4
○ HS 32 / 7 mm	7.000	R1932.07000	32	36	60	37	4
● HS 32 / 8 mm	8.000	R1932.08000	32	36	60	36	4
○ HS 32 / 9 mm	9.000	R1932.09000	32	36	60	37	4
● HS 32 / 10 mm	10.000	R1932.10000	32	36	60	40	4
○ HS 32 / 11 mm	11.000	R1932.11000	32	36	60	40	4
● HS 32 / 12 mm	12.000	R1932.12000	32	36	60	45	4
○ HS 32 / 13 mm	13.000	R1932.13000	32	36	60	45	4
● HS 32 / 14 mm	14.000	R1932.14000	32	36	60	46	4
○ HS 32 / 15 mm	15.000	R1932.15000	32	36	60	46	4
● HS 32 / 16 mm	16.000	R1932.16000	32	36	60	48	4
○ HS 32 / 17 mm	17.000	R1932.17000	32	36	60	48	4
● HS 32 / 18 mm	18.000	R1932.18000	32	36	60	49	4
○ HS 32 / 19 mm	19.000	R1932.19000	32	36	60	49	4
● HS 32 / 20 mm	20.000	R1932.20000	32	36	60	50	4
● HS 32 / 22 mm	22.000	R1932.22000	32	36	60	50	4
● HS 32 / 25 mm	25.000	R1932.25000	32	36	60	56	4
Reduction Sleeves HS 32-CF							
○ HS 32-CF / 6 mm	6.000	R1932.06002	32	36	60	36	4
○ HS 32-CF / 8 mm	8.000	R1932.08002	32	36	60	36	4
○ HS 32-CF / 10 mm	10.000	R1932.10002	32	36	60	40	4
○ HS 32-CF / 12 mm	12.000	R1932.12002	32	36	60	45	4
○ HS 32-CF / 14 mm	14.000	R1932.14002	32	36	60	46	4
○ HS 32-CF / 16 mm	16.000	R1932.16002	32	36	60	48	4
○ HS 32-CF / 18 mm	18.000	R1932.18002	32	36	60	49	4
○ HS 32-CF / 20 mm	20.000	R1932.20002	32	36	60	50	4
○ HS 32-CF / 25 mm	25.000	R1932.25002	32	36	60	56	4



Reduction Sleeves inch to inch

Item description	d [inch"]	Part no.	D1 [inch"]	D2 [inch"]	L1 [inch"]	L2 [inch"]	L3 [inch"]
Reduction Sleeves HS 1/2"							
● HS 1/2" / 1/8"	0.1250	R1913.03182	0.500	0.630	1.575	1.142	0.157
● HS 1/2" / 3/16"	0.1875	R1913.04762	0.500	0.630	1.575	1.142	0.157
● HS 1/2" / 1/4"	0.2500	R1913.06352	0.500	0.630	1.575	1.417	0.157
● HS 1/2" / 5/16"	0.3125	R1913.07942	0.500	0.630	1.575	1.457	0.157
● HS 1/2" / 3/8"	0.3750	R1913.09522	0.500	0.630	1.575	1.575	0.157
Reduction Sleeves HS 1/2"-CF							
● HS 1/2"-CF / 1/4"	0.2500	R1913.06353	0.500	0.630	1.575	1.417	0.157
● HS 1/2"-CF / 3/8"	0.3750	R1913.09523	0.500	0.630	1.575	1.575	0.157
Reduction Sleeves HS 3/4"							
● HS 3/4" / 1/8"	0.1250	R1919.03182	0.750	0.984	1.969	1.102	0.157
● HS 3/4" / 3/16"	0.1875	R1919.04762	0.750	0.984	1.969	1.102	0.157
● HS 3/4" / 1/4"	0.2500	R1919.06352	0.750	0.984	1.969	1.417	0.157
● HS 3/4" / 5/16"	0.3125	R1919.07942	0.750	0.984	1.969	1.457	0.157
● HS 3/4" / 3/8"	0.3750	R1919.09522	0.750	0.984	1.969	1.417	0.157
● HS 3/4" / 7/16"	0.4375	R1919.11112	0.750	0.984	1.969	1.575	0.157
● HS 3/4" / 1/2"	0.5000	R1919.12702	0.750	0.984	1.969	1.772	0.157
● HS 3/4" / 9/16"	0.5625	R1919.14292	0.750	0.984	1.969	1.772	0.157
● HS 3/4" / 5/8"	0.6250	R1919.15882	0.750	0.984	1.969	1.890	0.157
Reduction Sleeves HS 3/4"-CF							
● HS 3/4"-CF / 1/4"	0.2500	R1919.06353	0.750	0.984	1.969	1.417	0.157
● HS 3/4"-CF / 3/8"	0.3750	R1919.09523	0.750	0.984	1.969	1.417	0.157
● HS 3/4"-CF / 1/2"	0.5000	R1919.12703	0.750	0.984	1.969	1.772	0.157
● HS 3/4"-CF / 5/8"	0.6250	R1919.15883	0.750	0.984	1.969	1.890	0.157
Reduction Sleeves HS 1"							
● HS 1" / 1/8"	0.1250	R1926.03182	1.000	1.181	2.205	1.142	0.157
○ HS 1" / 3/16"	0.1875	R1926.04762	1.000	1.181	2.205	1.142	0.157
● HS 1" / 1/4"	0.2500	R1926.06352	1.000	1.181	2.205	1.457	0.157
○ HS 1" / 5/16"	0.3125	R1926.07942	1.000	1.181	2.205	1.457	0.157
● HS 1" / 3/8"	0.3750	R1926.09522	1.000	1.181	2.205	1.496	0.157
○ HS 1" / 7/16"	0.4375	R1926.11112	1.000	1.181	2.205	1.575	0.157
● HS 1" / 1/2"	0.5000	R1926.12702	1.000	1.181	2.205	1.811	0.157
○ HS 1" / 9/16"	0.5625	R1926.14292	1.000	1.181	2.205	1.850	0.157
● HS 1" / 5/8"	0.6250	R1926.15882	1.000	1.181	2.205	1.890	0.157
○ HS 1" / 11/16"	0.6875	R1926.17462	1.000	1.181	2.205	1.890	0.157
● HS 1" / 3/4"	0.7500	R1926.19052	1.000	1.181	2.205	1.890	0.157
Reduction Sleeves HS 1"-CF							
● HS 1"-CF / 1/4"	0.2500	R1926.06353	1.000	1.181	2.205	1.457	0.157
● HS 1"-CF / 3/8"	0.3750	R1926.09523	1.000	1.181	2.205	1.496	0.157
● HS 1"-CF / 1/2"	0.5000	R1926.12703	1.000	1.181	2.205	1.811	0.157
● HS 1"-CF / 5/8"	0.6250	R1926.15883	1.000	1.181	2.205	1.890	0.157
● HS 1"-CF / 3/4"	0.7500	R1926.19053	1.000	1.181	2.205	1.890	0.157
Reduction Sleeves HS 1 1/4"							
○ HS 1 1/4" / 3/16"	0.1875	R1931.04762	1.250	1.417	2.362	1.142	0.157
○ HS 1 1/4" / 1/4"	0.2500	R1931.06352	1.250	1.417	2.362	1.417	0.157
○ HS 1 1/4" / 5/16"	0.3125	R1931.07942	1.250	1.417	2.362	1.417	0.157
● HS 1 1/4" / 3/8"	0.3750	R1931.09522	1.250	1.417	2.362	1.457	0.157
○ HS 1 1/4" / 7/16"	0.4375	R1931.11112	1.250	1.417	2.362	1.772	0.157
● HS 1 1/4" / 1/2"	0.5000	R1931.12702	1.250	1.417	2.362	1.772	0.157
○ HS 1 1/4" / 9/16"	0.5625	R1931.14292	1.250	1.417	2.362	1.811	0.157
● HS 1 1/4" / 5/8"	0.6250	R1931.15882	1.250	1.417	2.362	1.811	0.157
○ HS 1 1/4" / 11/16"	0.6875	R1931.17462	1.250	1.417	2.362	1.890	0.157
● HS 1 1/4" / 3/4"	0.7500	R1931.19052	1.250	1.417	2.362	1.969	0.157
● HS 1 1/4" / 1"	1.000	R1931.25402	1.250	1.417	2.362	2.205	0.157
Reduction Sleeves HS 1 1/4"-CF							
● HS 1 1/4"-CF / 1/2"	0.5000	R1931.12703	1.250	1.417	2.362	1.772	0.157
● HS 1 1/4"-CF / 5/8"	0.6250	R1931.15883	1.250	1.417	2.362	1.811	0.157
● HS 1 1/4"-CF / 3/4"	0.7500	R1931.19053	1.250	1.417	2.362	1.969	0.157
● HS 1 1/4"-CF / 1"	1.000	R1931.25403	1.250	1.417	2.362	2.205	0.157

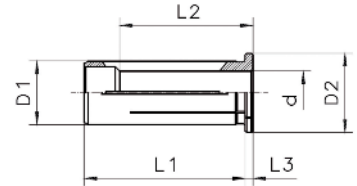
Outer-Ø of reduction sleeve corresponds to the type.

HS 1/2" = Ø 1/2"

HS 3/4" = Ø 3/4"

HS 1" = Ø 1"

HS 1 1/4" = Ø 1 1/4"



Reduction Sleeves mm to inch

Item description	d [inch"]	Part no.	D1 [mm]	D2 [mm]	L1 [mm]	L2 [mm]	L3 [mm]
Reduction Sleeves HS 12							
● HS 12 / 1/8"	0.1250	R1912.03181	12	16	40	29	4
● HS 12 / 3/16"	0.1875	R1912.04761	12	16	40	29	4
● HS 12 / 1/4"	0.2500	R1912.06351	12	16	40	29	4
● HS 12 / 5/16"	0.3125	R1912.07941	12	16	40	36	4
● HS 12 / 3/8"	0.3750	R1912.09521	12	16	40	37	4
Reduction Sleeves HS 20							
● HS 20 / 1/8"	0.1250	R1920.03181	20	25	50	28	4
● HS 20 / 3/16"	0.1875	R1920.04761	20	25	50	28	4
● HS 20 / 1/4"	0.2500	R1920.06351	20	25	50	36	4
● HS 20 / 5/16"	0.3125	R1920.07941	20	25	50	37	4
● HS 20 / 3/8"	0.3750	R1920.09521	20	25	50	36	4
● HS 20 / 7/16"	0.4375	R1920.11111	20	25	50	40	4
● HS 20 / 1/2"	0.5000	R1920.12701	20	25	50	45	4
● HS 20 / 9/16"	0.5625	R1920.14291	20	25	50	45	4
● HS 20 / 5/8"	0.6250	R1920.15881	20	25	50	48	4
Reduction Sleeves HS 25							
● HS 25 / 1/8"	0.1250	R1925.03181	25	30	56	29	4
○ HS 25 / 3/16"	0.1875	R1925.04761	25	30	56	29	4
● HS 25 / 1/4"	0.2500	R1925.06351	25	30	56	37	4
○ HS 25 / 5/16"	0.3125	R1925.07941	25	30	56	37	4
● HS 25 / 3/8"	0.3750	R1925.09521	25	30	56	38	4
○ HS 25 / 7/16"	0.4375	R1925.11111	25	30	56	40	4
● HS 25 / 1/2"	0.5000	R1925.12701	25	30	56	46	4
○ HS 25 / 9/16"	0.5625	R1925.14291	25	30	56	47	4
● HS 25 / 5/8"	0.6250	R1925.15881	25	30	56	48	4
○ HS 25 / 11/16"	0.6875	R1925.17461	25	30	56	48	4
● HS 25 / 3/4"	0.7500	R1925.19051	25	30	56	48	4
○ HS 25 / 13/16"	0.8125	R1925.20631	25	30	56	50	4
Reduction Sleeves HS 32							
○ HS 32 / 3/16"	0.1875	R1932.04761	32	36	60	29	4
○ HS 32 / 1/4"	0.2500	R1932.06351	32	36	60	36	4
○ HS 32 / 5/16"	0.3125	R1932.07941	32	36	60	36	4
● HS 32 / 3/8"	0.3750	R1932.09521	32	36	60	37	4
○ HS 32 / 7/16"	0.4375	R1932.11111	32	36	60	45	4
● HS 32 / 1/2"	0.5000	R1932.12701	32	36	60	45	4
○ HS 32 / 9/16"	0.5625	R1932.14291	32	36	60	46	4
● HS 32 / 5/8"	0.6250	R1932.15881	32	36	60	46	4
○ HS 32 / 11/16"	0.6875	R1932.17461	32	36	60	48	4
● HS 32 / 3/4"	0.7500	R1932.19051	32	36	60	50	4
○ HS 32 / 13/16"	0.8125	R1932.20631	32	36	60	50	4
● HS 32 / 7/8"	0.8750	R1932.22221	32	36	60	50	4
○ HS 32 / 15/16"	0.9375	R1932.23811	32	36	60	52	4
● HS 32 / 1"	1.000	R1932.25401	32	36	60	56	4

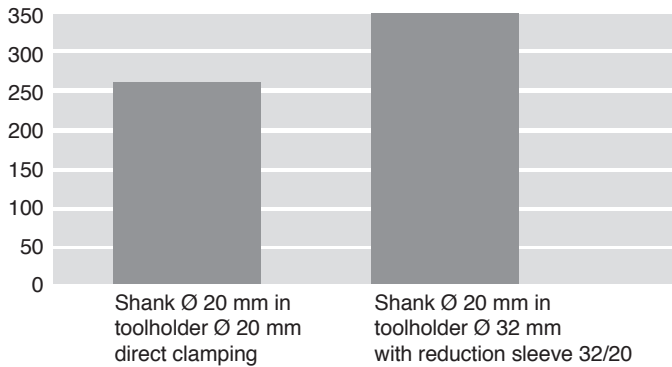
● From stock

○ On request

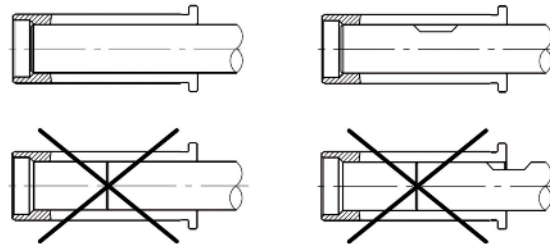
Accessories



Comparison of Transmittable Torque at Ø 20 mm



- Improper assembly can damage the concentricity of the reduction sleeve.
- Insert tools the full length of the reduction sleeve.
- Tool shank h6 or h7 can be used.
- Do not clamp reduction sleeve without a tool. Reduction Sleeve will be damaged.



HYDRO-GRIP Torque wrench

Use torque wrench to ensure correct tightening independent on user. Should be used with all HYDRO-GRIP® holders.

Torque: 6 Nm (4.4 ft · lb):

HYDRO-GRIP, HYDRO-GRIP PENCIL, ECOGRIP.

Torque: 10 Nm (7.4 ft · lb):

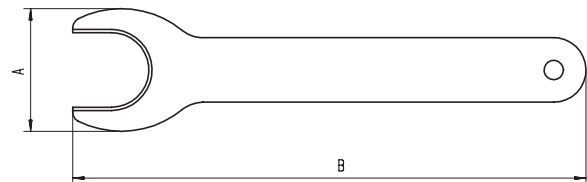
HYDRO-GRIP HD, HYDRO-FIX.



Item description	Tightening torque:	Part no.
● HYDRO-GRIP Torque wrench (5 mm Hex)	6 Nm (4.4 ft · lb)	19050
● HYDRO-GRIP HD Torque wrench (5 mm Hex)	10 Nm (7.4 ft · lb)	19052
● HYDRO-FIX Torque wrench (6 mm Hex)	10 Nm (7.4 ft · lb)	19053

Extractor

Item description	Part no.	For Sizes	A [mm]	B [mm]
● EHS 12 - 1/2"	E7321.12000	HS 12	24.6	100
● EHS 20 - 3/4"	E7321.20000	HS 20	38.0	160
● EHS 25 - 1"	E7321.25000	HS 25	51.0	180
● EHS 32 - 1 1/4"	E7321.32000	HS 32	63.0	200



The extractor helps to remove the reduction sleeve from the toolholder.

