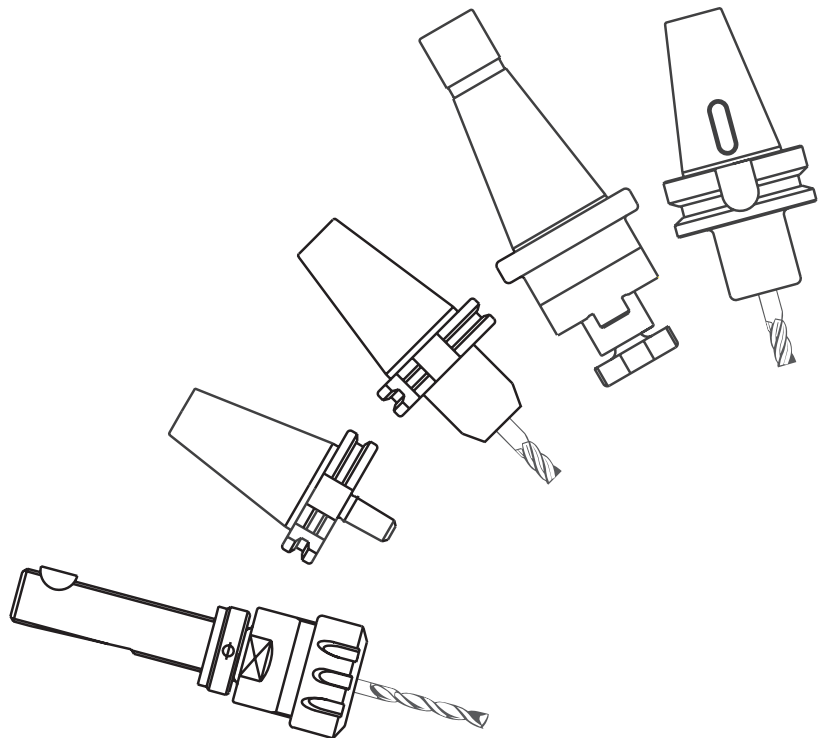


PRECISION CNC HOLDERS





Why Morris CNC Holders?

Standard Features of Morris Precision Holders

- Taper Shank accuracy meets AT-3 standards, the highest specification of the machine tool holders. The precision taper shank maintained a maximum surface contact to provide the rigidity required for heavy and accurate machining. This prevents the damages to the machine spindle taper due to vibration during heavy cutting operation.
- Surface finish: Max Ra 0.25. Surface finish Ra 0.25 of the taper shank protects the machine spindle against damages, thus ensures longer life for both machine spindle and cutting tools. The better the surface finish, the higher the contact area. If the contact area is high the rigidity of the holder is better.
- The Run-Out between shank OD to the ID is maintained within 3 microns*.
- Thread finish to the 4g tolerance.
- High tensile strength casehardened steel used for tool holders, results in good performance and longer life of tool holders. Using high alloy casehardened steel ensures rigidity and long life.
- All precision holders are balanced to class G6.3 at 20,000 R.P.M**.

*Applicable only for precision holders.

**BT 50, ISO 50, SK 50 holders are not balanced

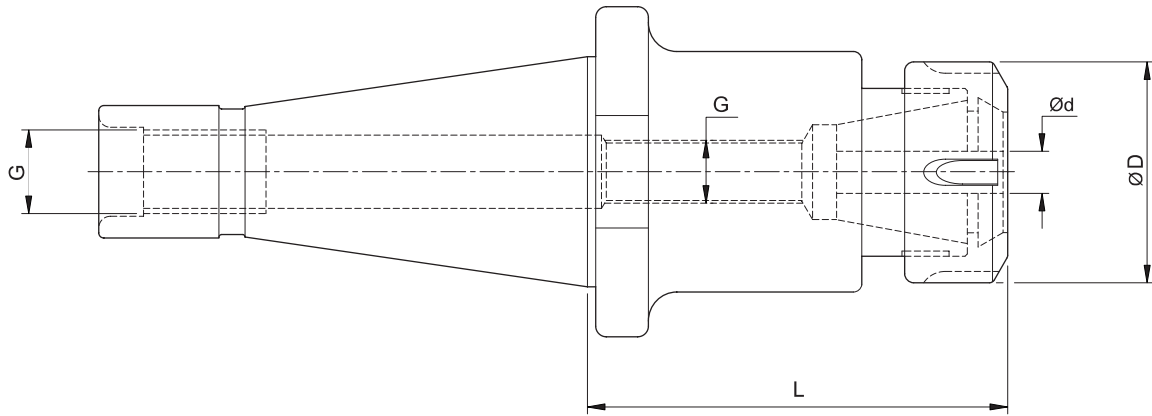
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TOOL HOLDERS WITH DIN-2080 SHANKS

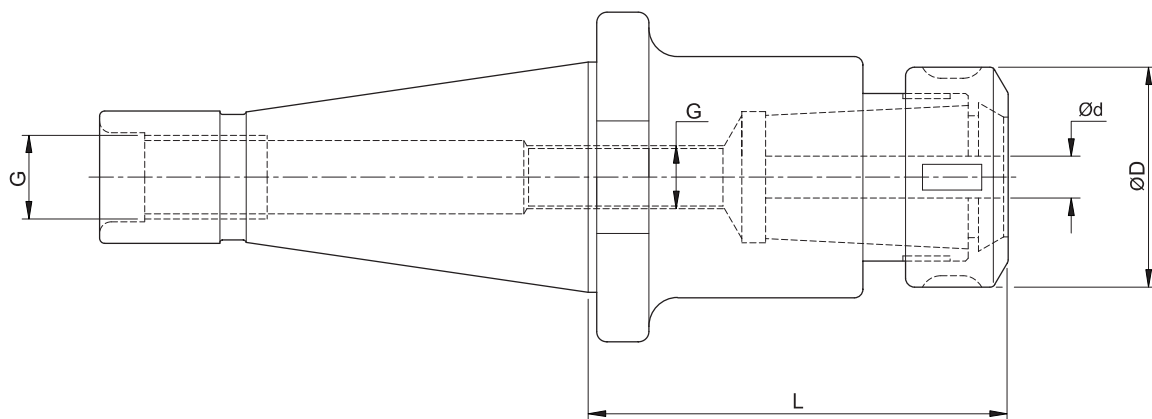
Collet Chuck Holder

WCCH / ER -
SHANK to DIN 2080



Collet Chuck Holder

WCCH / RDO -
SHANK to DIN 2080



Collet Chuck Holder

Type	Collet Type	Range Ød	D	ISO 30			ISO 40			ISO 50		
				L	G1	G	L	G1	G	L	G1	G
WCCH / ER 16	ER 16	1 - 10	28	43	M12	M12	63	M12	M16	100	M12	M24
WCCH / ER 20	ER 20	1 - 13	34	43	M12	M12	70	M12	M16	100	M12	M24
WCCH / ER 25	ER 25	1 - 16	42	43	M12	M12	50	M12	M16	100	M12	M24
WCCH / ER 32	ER 32	2 - 20	50	50	M12	M12	50	M12	M16	100	M12	M24
WCCH / ER 40	ER 40	3 - 26	63				55	M12	M16	100	M12	M24
WCCH / ER 50	ER 50	10 - 34	78				78	M12	M16	100	M12	M24

Example for ordering : **WCCH / ER 16 - 63 / ISO 40**

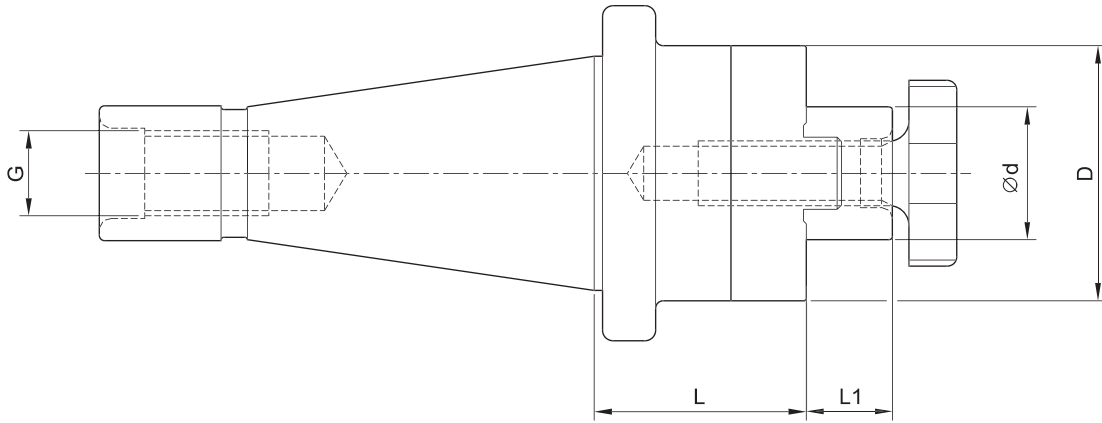
Collet Chuck Holder

Type	Collet Type	Range Ød	D	ISO 40			ISO 50		
				L	G1	G	L	G1	G
WCCH / RDO 25	RDO 25	1.5 - 16	43	50	M12	M16	65	M12	M24
WCCH / RDO 35	RDO 35	1.5 - 25	60	50	M12	M16	65	M12	M24
WCCH / RDO 44	RDO 44	3.5 - 32	72	65	M12	M16	75	M12	M24

Example for ordering : **WCCH / RDO 25 - 50 / ISO 40**

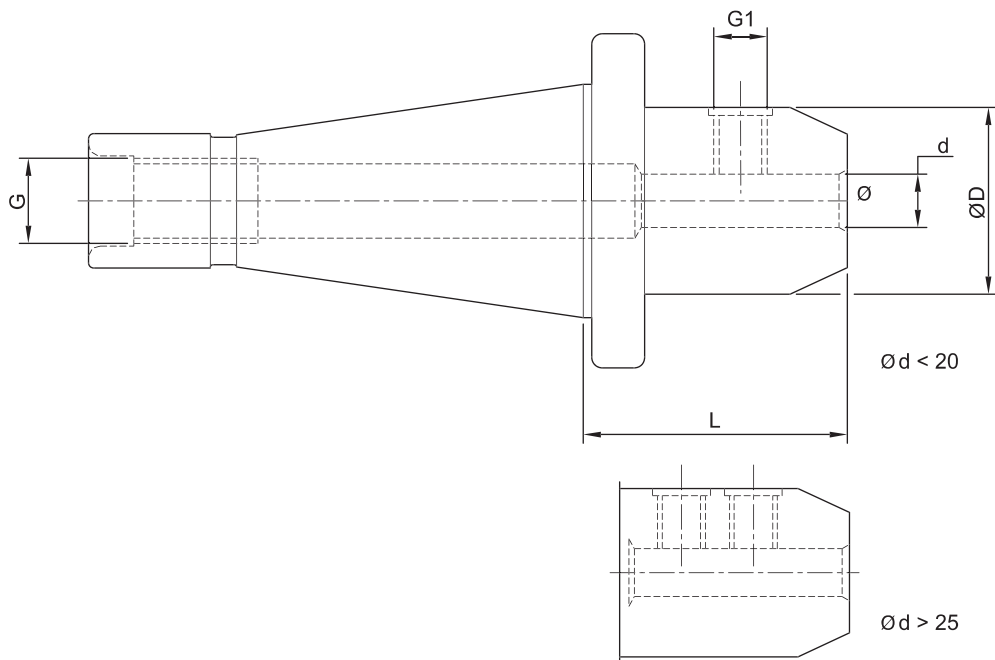
Universal Face Mill / Shell Mill Holder

WFSH /
SHANK to DIN 2080



Side Lock Holder (Weldon)

WSLH /
SHANK to DIN 2080



Universal Face Mill / Shell Mill Holder

Type	Taper	Ød	L	L ₁	D	G
WFSH	ISO 30	16	35	17	32	M12
		22	35	19	40	M12
		27	35	21	48	M12
		32	50	24	58	M12
WFSH	ISO 40	16	52	17	32	M16
		22	52	19	40	M16
		27	52	21	48	M16
		32	52	24	58	M16
		40	52	27	70	M16
WFSH	ISO 50	16	55	17	32	M24
		22	55	19	40	M24
		27	55	21	48	M24
		32	55	24	58	M24
		40	55	27	70	M24
		50	55	30	90	M24

Example for ordering : **WFSH / 16 - 52 / ISO 40**

Side Lock Holder

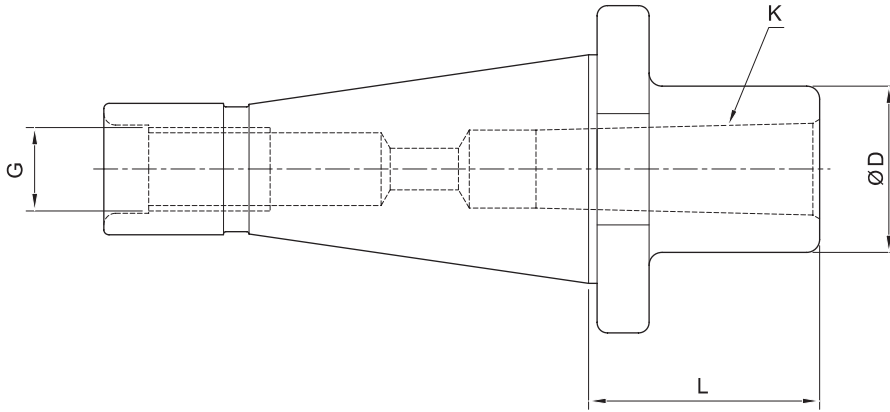
Type	Ød	D	ISO 30			ISO 40			ISO 50		
			L	G1	G	L	G1	G	L	G1	G
WSLH 06	06	25	40	M6	M12	50	M6	M16	63	M6	M24
WSLH 08	08	28	40	M8	M12	50	M8	M16	63	M8	M24
WSLH 10	10	35	40	M10	M12	50	M10	M16	63	M10	M24
WSLH 12	12	42	40	M12	M12	50	M12	M16	63	M12	M24
WSLH 14	14	44	40	M12	M12	50	M12	M16	63	M12	M24
WSLH 16	16	48	50	M14	M12	63	M14	M16	63	M12	M24
WSLH 18	18	50	63	M12	M12	63	M12	M16	63	M12	M24
WSLH 20	20	52	63	M16	M12	63	M16	M16	63	M16	M24
WSLH 25	25	65				80	M18	M16	80	M18	M24
WSLH 32	32	72				80	M20	M16	80	M20	M24
WSLH 40	40	90							90	M20	M24
WSLH 50	50	100							100	M24	M24

Example for ordering : **WSLH / 10 - 50 / ISO 40**

Note: Customised projection length, manufactured on request.

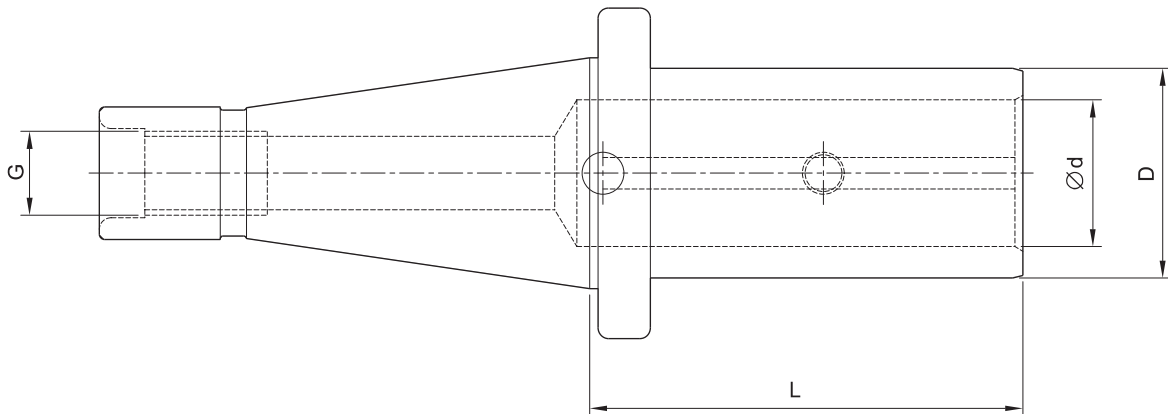
Morse Taper Holder

WMTA /
SHANK to DIN 2080



Automotive Shank Holder

WASH /
SHANK to DIN 2080



Morse Taper Holder

Type	Taper	K	L	D	G
WMTA	ISO 30	MT1	50	25	M12
		MT2	60	32	M12
		MT3	75	40	M12
WMTA	ISO 40	MT1	50	25	M16
		MT2	50	32	M16
		MT3	70	40	M16
		MT4	95	48	M16
WMTA	ISO 50	MT1	45	25	M24
		MT2	60	32	M24
		MT3	65	40	M24
		MT4	75	48	M24
		MT5	105	63	M24

Example for ordering : **WMTA / MT1 - 50 / ISO 40**

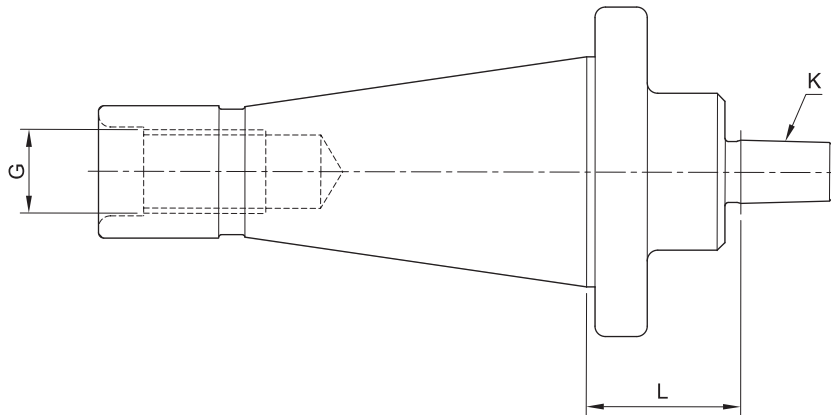
Automotive Shank Holder

Type	Taper	D	L	Ød	G
WASH	ISO 40	55	90	28	M16
		63	150	36	M16
WASH	ISO 50	55	100	28	M24
		63	100	36	M24
		80	110	48	M24

Example for ordering : **WASH / 28 - 90 / ISO 40**

Drill Chuck Arbor

WDCA /
FOR DRILL CHUCKS WITH DIN 238-1 / JACOBS TAPER



Drill Chuck Arbor

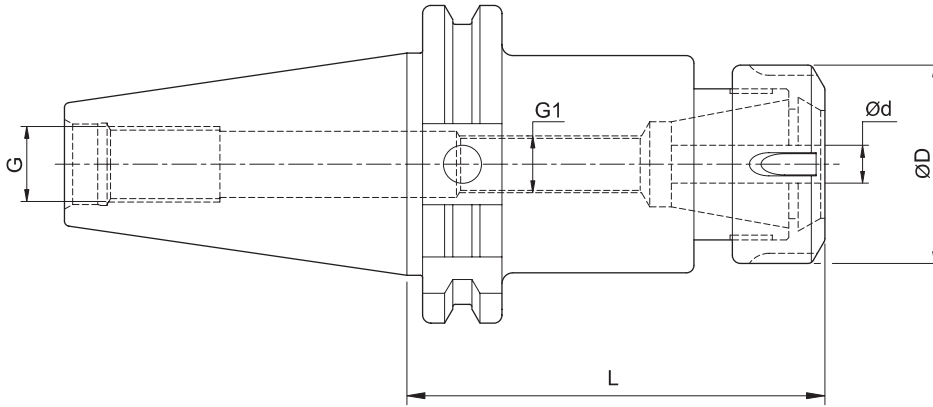
Type	Taper	K	L	G
WDCA	ISO 30	B12	18	M12
		B16	18	M12
WDCA	ISO 40	B16	22	M16
		B18	22	M16
WDCA	ISO 50	B16	25	M24
		B18	25	M24

Example for ordering : **WDCA / B16 - 22 / ISO 40**

TOOL HOLDERS WITH DIN-69871/A SHANKS

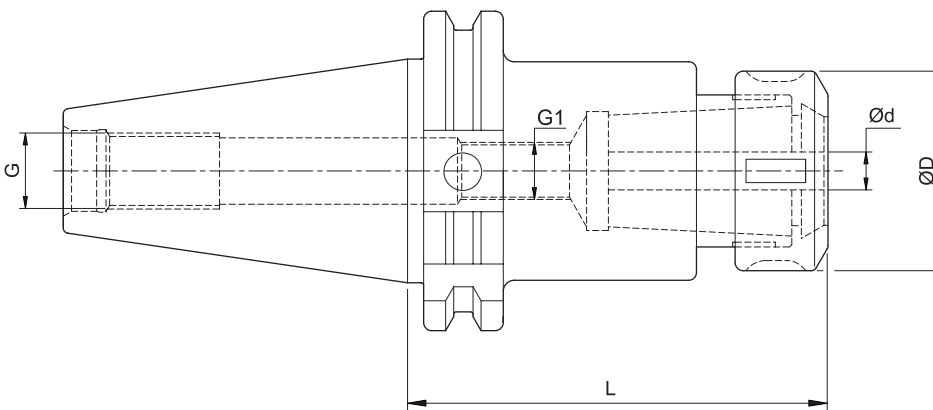
Collet Chuck Holder

WCCH / ER -
SHANK to DIN 69871 / A



Collet Chuck Holder

WCCH / RDO -
SHANK to DIN 69871 / A



Collet Chuck Holder

Type	Collet Type	Range Ød	D	SK 30			SK 40			SK 50		
				L	G1	G	L	G1	G	L	G1	G
WCCH / ER 16	ER 16	1 - 10	28	70	M12	M12	70	M12	M16	100	M12	M24
				100	M12	M12	100	M12	M16	150	M12	M24
							150	M12	M16			
WCCH / ER 20	ER 20	1 - 13	34	70	M12	M12	70	M12	M16	100	M12	M24
				100	M12	M12	100	M12	M16	150	M12	M24
							150	M12	M16			
WCCH / ER 25	ER 25	1 - 16	42	60	M12	M12	70	M12	M16	100	M12	M24
							100	M12	M16	150	M12	M24
							150	M12	M16			
WCCH / ER 32	ER 32	2 - 20	50	65	M12	M12	70	M12	M16	100	M12	M24
							100	M12	M16	160	M12	M24
							150	M12	M16			
WCCH / ER 40	ER 40	3 - 26	63				80	M12	M16	100	M12	M24
							100	M12	M16	160	M12	M24
							150	M12	M16			
WCCH / ER 50	ER 50	10 - 34	78						100	M12	M24	

Example for ordering : **WCCH / ER 16 - 70 / SK 40**
 Form B (Coolent through Flange) : **WCCH - B / ER 16 - 70 / SK 40**

Balanced Holders : **WCCH / ER 16 P - 70 / SK 40**
 For Holders with Sealing disk : **WCCH-B / ERC16-70 / SK40**

Collet Chuck Holder

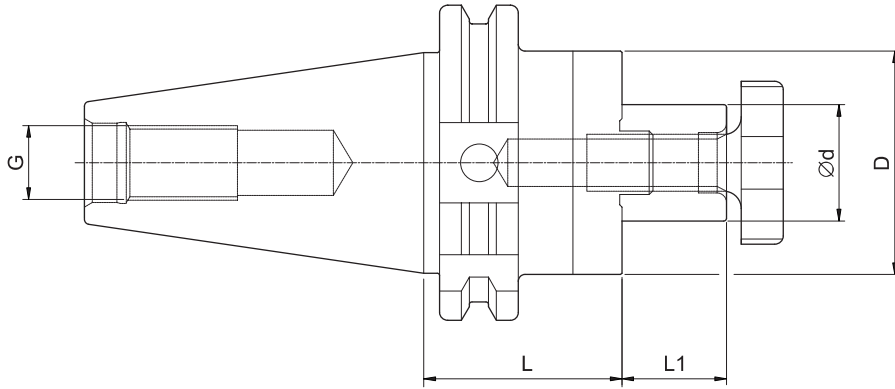
Type	Collet Type	Range of Ød	D	SK 30			SK 40			SK 50		
				L	G1	G	L	G1	G	L	G1	G
WCCH / RDO 25	RDO 25	1.5 - 16	43	70	M12	M12	70	M12	M16	75	M12	M25
WCCH / RDO 35	RDO 35	1.5 - 25	60	70	M12	M12	70	M12	M16	85	M12	M24
WCCH / RDO 44	RDO 44	3.5 - 32	72				90	M12	M16	90	M12	M24

Example for ordering : **WCCH / RDO 25 - 70 / SK 40**
 Form B (Coolent through Flange) : **WCCH - B / RDO 25 - 70 / SK 40**

Balanced Holders: **WCCH / RDO 25 P - 70 / SK 40**

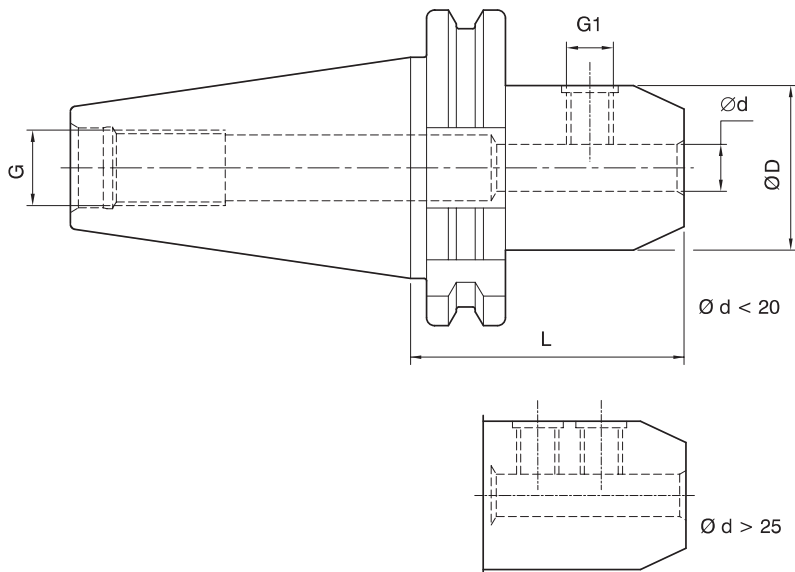
Universal Face Mill / Shell Mill Holder

WFSH /
SHANK to DIN 69871 / A



Side Lock Holder (Weldon)

WSLH /
SHANK to DIN 69871 / A



Universal Face Mill / Shell Mill Holder

Type	Taper	Ød	L	L ₁	D	G
WFSH	SK 40	16	55	17	32	M16
		22	55	19	40	M16
		22	100	19	40	M16
		27	55	21	48	M16
		27	100	21	48	M16
		32	60	24	58	M16
		32	100	24	58	M16
		40	60	27	70	M16
WFSH	SK 50	22	60	19	40	M24
		27	60	21	48	M24
		32	60	24	58	M24
		40	60	27	70	M24
		50	70	30	90	M24

Example for ordering : **WFSH / 16 - 55 / SK 40**

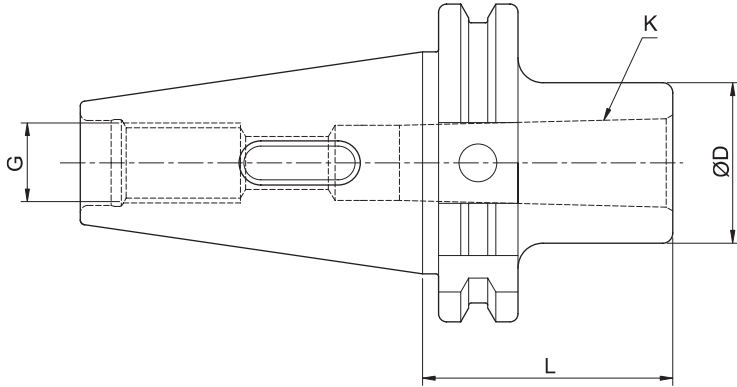
Side Lock Holder

Type	Ød	D	SK30			SK 40			SK 50		
			L	G1	G	L	G1	G	L	G1	G
WSLH 06	06	25	50	M6	M12	50	M6	M16	63	M6	M24
WSLH 08	08	28	50	M8	M12	50	M8	M16	63	M8	M24
WSLH 10	10	35	50	M10	M12	45	M10	M16	63	M10	M24
WSLH 12	12	42	50	M12	M12	45	M12	M16	63	M12	M24
WSLH 14	14	44	63	M12	M12	50	M12	M16	63	M12	M24
WSLH 16	16	48	63	M14	M12	63	M14	M16	63	M14	M24
WSLH 18	18	50	72	M14	M12	63	M14	M16	63	M14	M24
WSLH 20	20	52	72	M16	M12	63	M16	M16	63	M16	M24
WSLH 25	25	65				45 100	M18 M18	M16 M16	80	M18	M24
WSLH 32	32	72				100	M20	M16	100	M20	M24
WSLH 40	40	90				100	M20	M16	100	M20	M24
WSLH 50	50	100				100	M24	M16	125	M24	M24

Example for ordering : **WSLH / 10 - 45 / SK 40**

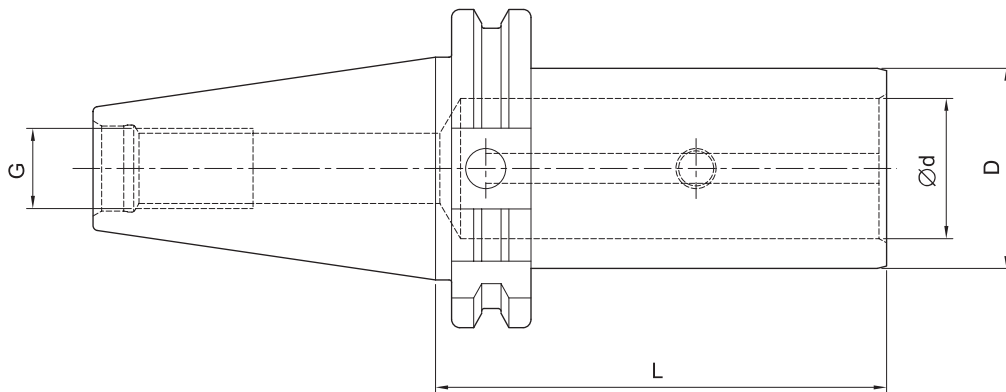
Morse Taper Holder

WMTA /
SHANK to DIN 69871 / A



Automotive Shank Holder

WASH /
SHANK to DIN 69871 / A



Morse Taper Holder

Type	Taper	K	L	D	G
WMTA	SK 30	MT1	50	25	M12
		MT2	60	32	M12
		MT3	75	40	M12
WMTA	SK 40	MT1	50	25	M16
		MT2	50	32	M16
		MT3	70	40	M16
		MT4	95	48	M16
WMTA	SK 50	MT1	45	25	M24
		MT2	60	32	M24
		MT3	65	40	M24
		MT4	95	48	M24
		MT5	105	63	M24

Example for ordering : **WMTA / MT1 - 50 / SK 40**

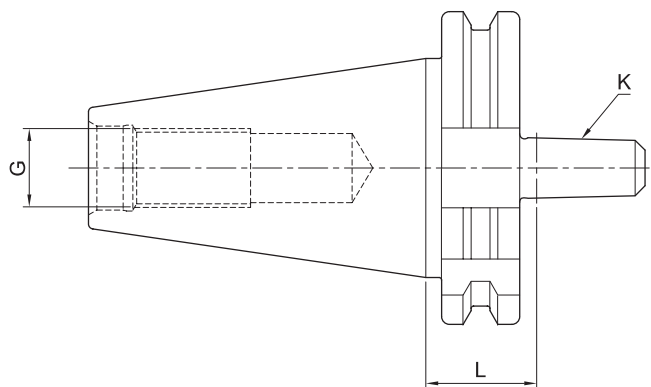
Automotive Shank Holder

Type	Taper	D	L	d	G
WASH	SK 40	55	90	28	M16
		63	150	36	M16
WASH	SK 50	55	100	28	M24
		63	100	36	M24
		80	110	48	M24

Example for ordering : **WASH / 28 - 90 / SK 40**

Drill Chuck Arbor

WDCA /
FOR DRILL CHUCKS WITH DIN 238



Drill Chuck Arbor

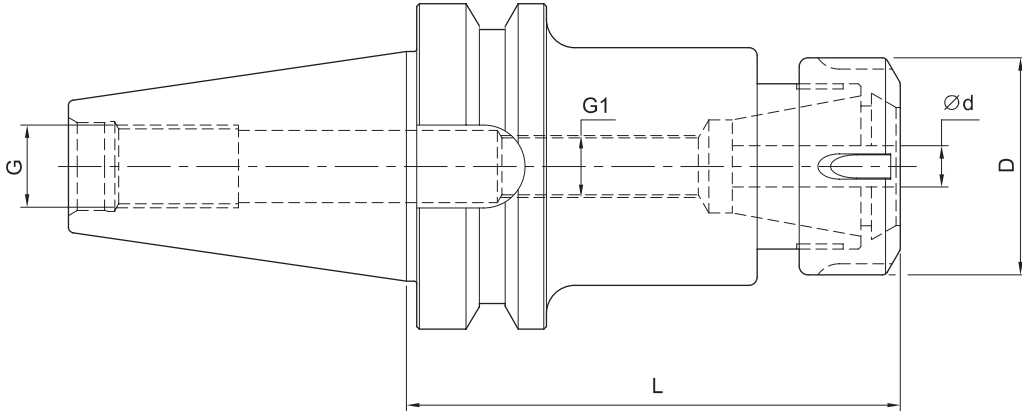
Type	Taper	K	L	G
WDCA	SK 30	B12	26	M12
		B16	26	M12
WDCA	SK 40	B12	26	M16
		B16	26	M16
		B18	26	M16
WDCA	SK 50	B12	26	M24
		B16	26	M24
		B18	26	M24

Example for ordering : **WDCA / B12 - 26 / SK 40**

TOOL HOLDERS WITH BT MAS-403 SHANKS

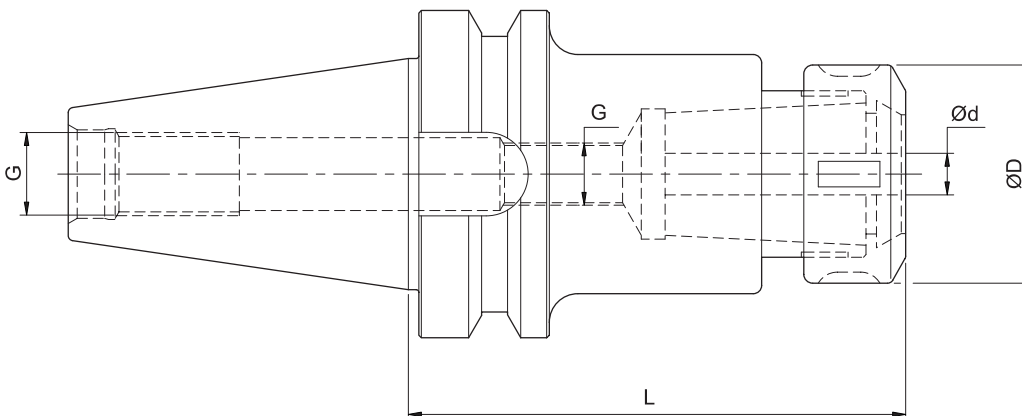
Collet Chuck Holder

WCCH / ER -
SHANK to MAS 403



Collet Chuck Holder

WCCH / RDO -
SHANK to MAS 403



Collet Chuck Holder

Type	Collet Type	Range Ød	D	BT 30			BT40			BT 50		
				L	G1	G	L	G1	G	L	G1	G
WCCH / ER 16	ER 16	1 - 10	28	80	M12	M12	70	M12	M16	100	M12	M24
				100	M12	M12	100	M12	M16	150	M12	M24
							150	M12	M16			
WCCH / ER 20	ER 20	1 - 13	34	80	M12	M12	70	M12	M16	100	M12	M24
				100	M12	M12	100	M12	M16	150	M12	M24
							150	M12	M16			
WCCH / ER 25	ER 25	1 - 16	42	60	M12	M12	70	M12	M16	100	M12	M24
				100	M12	M12	100	M12	M16	150	M12	M24
							150	M12	M16			
WCCH / ER 32	ER 32	2 - 20	50	60	M12	M12	70	M12	M16	100	M12	M24
				100	M12	M12	100	M12	M16	160	M12	M24
							150	M12	M16			
WCCH / ER 40	ER 40	3 - 26	63				80	M12	M16	100	M12	M24
							100	M12	M16	160	M12	M24
							150	M12	M16			
WCCH / ER 50	ER 50	10 - 34	78				90	M12	M16	100	M12	M24

Example for ordering : **WCCH / ER 16 - 70 / BT 40**
 Form B (Coolant through Flange) : **WCCH - B/ ER 16 - 70 / BT 40**

Balanced Holders: **WCCH / ER 16 P - 70 / BT 40**
 For Holders with sealing disk: **WCCH -B/ ERC 16 - 70 / BT 40**

Collet Chuck Holder

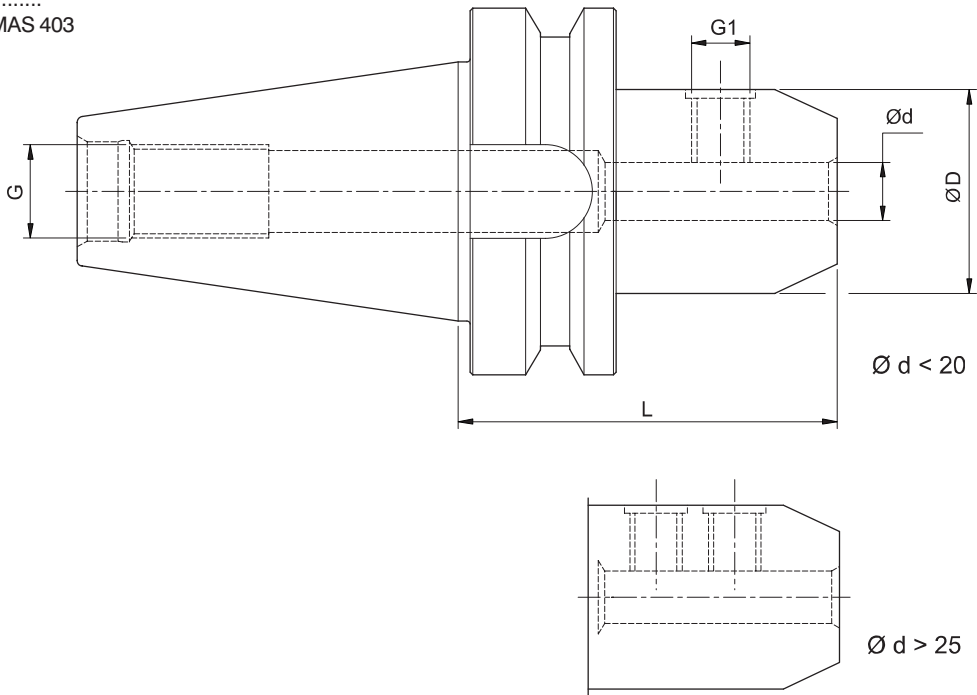
Type	Collet Type	Range Ød	D	BT 30			BT40			BT 50		
				L	G1	G	L	G1	G	L	G1	G
WCCH / RDO 25	RDO 25	1.5 - 16	43	60	M12	M12	60	M12	M16	75	M12	M24
WCCH / RDO 35	RDO 35	1.5 - 25	60	80	M12	M12	70	M12	M16	85	M12	M24
WCCH / RDO 44	RDO 44	3.5 - 32	72				90	M12	M16	90	M12	M24

Example for ordering : **WCCH / RDO 25 - 60 / BT 40**
 Form B (Coolant through Flange) : **WCCH - B/ RDO 25 - 60 / BT 40**

Balanced Holders : **WCCH / R0025 P - 60 / BT 40**

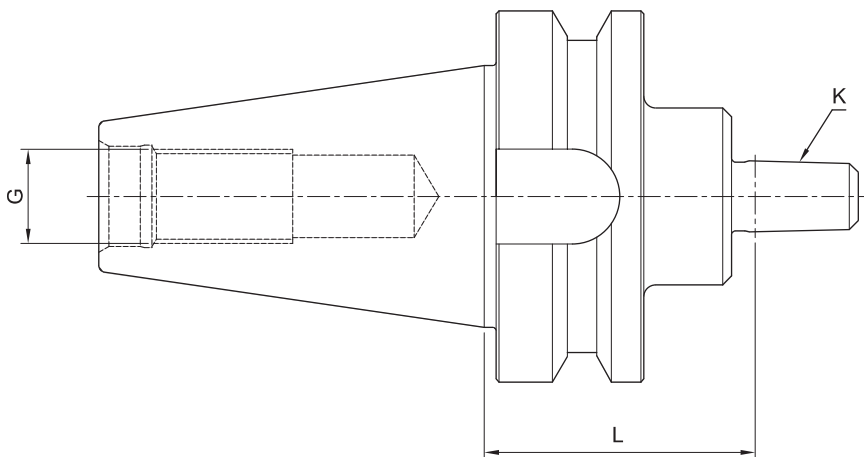
Side Lock Holder (Weldon)

WSLH /
SHANK to MAS 403



Drill Chuck Arbor

WDCA /
FOR DRILL CHUCKS WITH DIN 238-1/JACOBS TAPER



Side Lock Holder

Type	Ød	D	BT 30			BT 40			BT 50		
			L	G1	G	L	G1	G	L	G1	G
WSLH 06	06	25	50	M6	M12	50	M6	M16	70	M6	M24
WSLH 08	08	28	60	M8	M12	50	M8	M16	70	M8	M24
WSLH 10	10	35	60	M10	M12	45 65	M10 M10	M16 M16	70	M10	M24
WSLH 12	12	42	60	M12	M12	45 65	M12 M12	M16 M16	100	M12	M24
WSLH 14	14	44	60	M12	M12	65	M12	M16	100	M12	M24
WSLH 16	16	48	60	M14	M12	45 65	M14 M14	M16 M16	100	M14	M24
WSLH 18	18	50	60	M14	M12	65	M14	M16	100	M14	M24
WSLH 20	20	52	80	M16	M12	45 75	M16 M16	M16 M16	100	M16	M24
WSLH 25	25	65				45 100	M18 M18	M16 M16	115	M18	M24
WSLH 32	32	72				100	M20	M16	115	M20	M24
WSLH 40	40	90				100	M20	M16	115	M20	M24
WSLH 50	50	100							125	M24	M24

Example for ordering : **WSLH / 10 - 45 / BT 40**

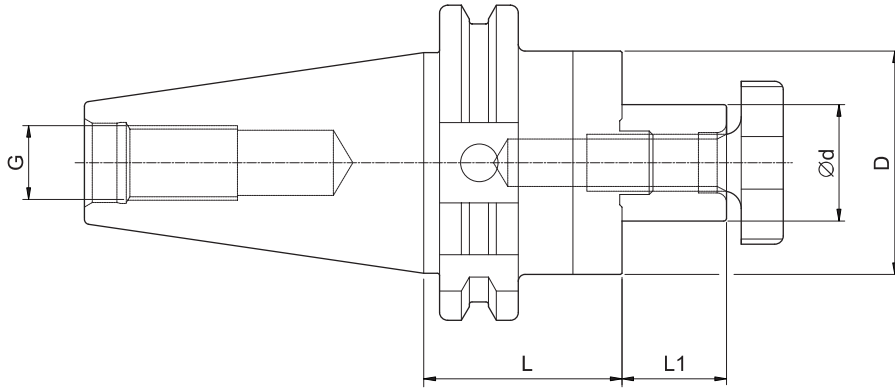
Drill Chuck Arbor

Type	Taper	K	L	G
WDCA	BT 30	B12	30	M12
		B16	30	M12
		J6	30	M12
WDCA	BT 40	B12	45	M16
		B12	90	M16
		B16	45	M16
		B16	90	M16
		B18	45	M16
		B18	90	M16
		J6	45	M16
WDCA	BT 50	B12	45	M24
		B12	105	M24
		B16	45	M24
		B16	105	M24
		B18	45	M24
		B18	105	M24
		J6	45	M24

Example for ordering : **WDCA / B16 - 45 / BT 40**

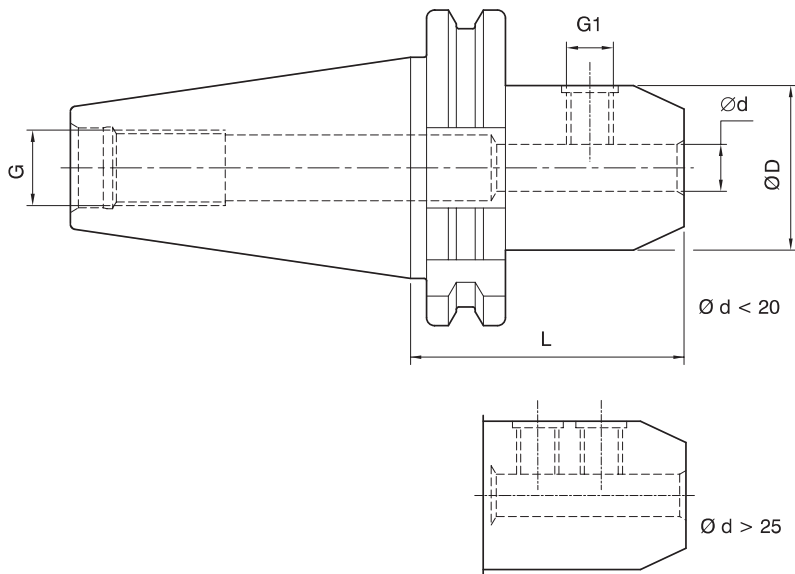
Universal Face Mill / Shell Mill Holder

WFSH /
SHANK to DIN 69871 / A



Side Lock Holder (Weldon)

WSLH /
SHANK to DIN 69871 / A



Morse Taper Holder

Type	Taper	K	L	D	G
WMTA	BT 30	MT1	45	25	M12
		MT2	60	32	M12
WMTA	BT 40	MT1	45	25	M16
		MT1	120	25	M16
		MT2	60	32	M16
		MT2	120	32	M16
		MT3	75	40	M16
		MT3	139	40	M16
		MT4	95	48	M16
		MT4	165	48	M16
WMTA	BT 50	MT1	45	25	M24
		MT1	120	25	M24
		MT1	180	25	M24
		MT2	45	32	M24
		MT2	135	32	M24
		MT2	180	32	M24
		MT3	45	40	M24
		MT3	150	40	M24
		MT3	180	40	M24
		MT4	75	50	M24
		MT4	180	50	M24
		MT5	105	70	M24

Example for ordering : **WMTA / MT1 - 45 / BT 40**

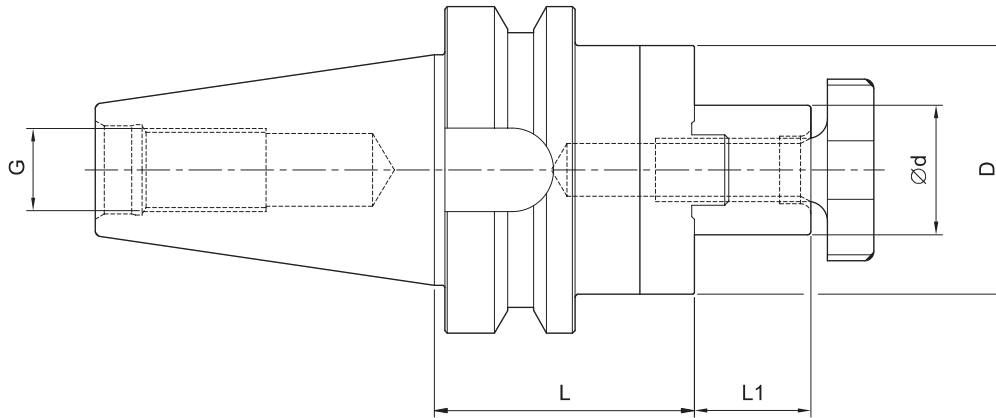
Automotive Shank Holder

Type	Taper	D	L	d	G
WASH	BT 40	55	90	28	M16
		63	125	36	M16
WASH	BT 50	55	100	28	M24
		63	100	36	M24
		80	120	48	M24

Example for ordering : **WASH 28 - 90 / BT 40**

Universal Face Mill / Shell Mill Holder

WFSH /
SHANK to MAS 403



Universal Face Mill / Shell Mill Holder

Type	Taper	Ød	L	L ₁	D	G
WFSH	BT 30	16	45	17	32	M12
		22	47	19	40	M12
		27	49	21	48	M12
		32	53	24	58	M12
WFSH	BT 40	16	55	17	32	M16
		16	100	17	32	M16
		22	55	19	40	M16
		22	100	19	40	M16
		27	55	21	48	M16
		27	100	21	48	M16
		32	60	24	58	M16
		32	100	24	58	M16
		40	70	27	70	M16
		WFSH	BT 50	16	65	17
16	100			17	32	M24
16	150			17	32	M24
22	68			19	40	M24
22	100			19	40	M24
22	150			19	40	M24
27	78			21	48	M24
27	100			21	48	M24
27	150			21	48	M24
32	78			24	58	M24
32	100			24	58	M24
32	150			24	58	M24
40	78			27	70	M24
40	100			27	70	M24
40	150			27	70	M24
50	79			30	90	M24
50	100			30	90	M24
50	150	30	90	M24		

Example for ordering : **WFSH / 16 - 55 / BT 40**

**TOOL HOLDERS WITH CYLINDRICAL SHANK
AND TRAPEZOIDAL SHANK TO DIN 6327-C**

Collet Chuck Holders with Cylinder Shank

WCCH / ER -

Fig 1

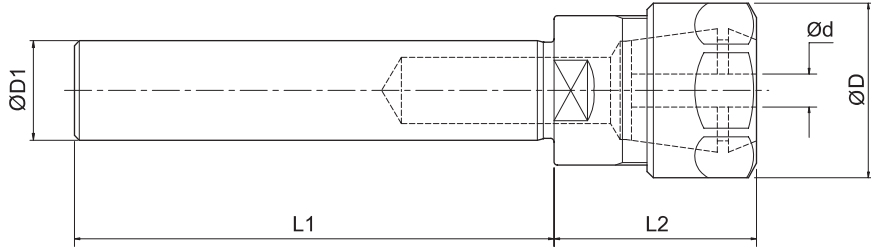
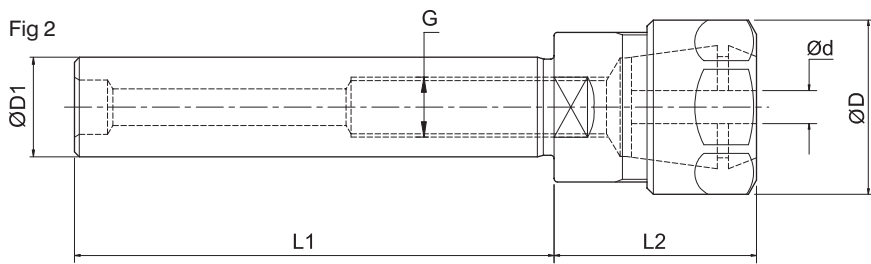


Fig 2



Collet Chuck Holder With Trapezoidal Threaded Shank

WCCH / ER -
DIN 6327 - C

Fig 1

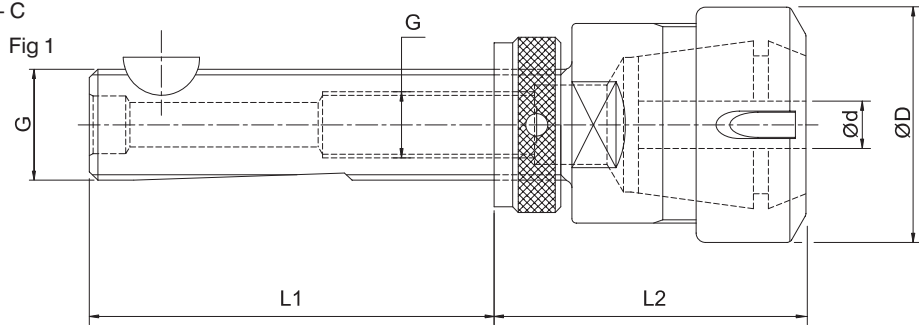
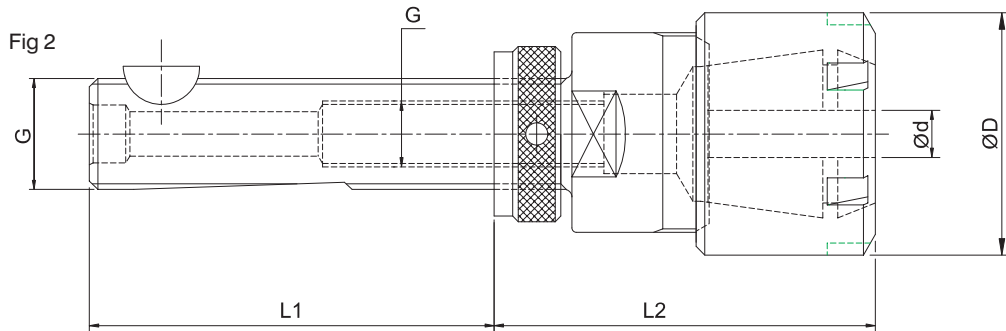


Fig 2



Collet Chuck Holder with Cylindrical Shank

Type	Collet Type	Range of Ød	D	D ₁	G	L ₁	L ₂	Fig
WCCH / ER 8M	ER 8	0.5 - 5	12	8	-	56	26.5	Fig1
				8	-	80	26.5	Fig1
WCCH / ER 11 M	ER 11	1 - 7	16	8	-	56	26.5	Fig1
				12	-	80	26.5	Fig1
				16	M8x1	100	22.5	Fig2
				16	M8x1	150	22.5	Fig2
WCCH / ER 16 M	ER 16	1 - 10	22	10	-	60	38.5	Fig1
				16	M8x1	60	38.5	Fig2
				20	M12x1	100	38.5	Fig2
WCCH / ER 20M	ER 20	1 - 13	28	16	M8x1	100	42.5	Fig2

Example for ordering : **WCCH / ER 8M - 80 / CYL 8** [M - Mini Nut]

Collet Chuck Holder With Trapezoidal Threaded Shank

Type	Collet Type	Range Ød	L ₁	L ₂	G	D	G ₁	Fig
WCCH / ER 11-46.5 / Tr 12	ER 11	1 - 7	50	46.6	Tr 12 x 1.5	19	M5	Fig1
WCCH / ER 16-53.5 / Tr 16	ER 16	1 - 10	73	53.5	Tr 16 x 1.5	28	M6	Fig1
WCCH / ER 20-59.5 / Tr 20	ER 20	1 - 13	76	59.5	Tr 20 x 2	34	M8	Fig1
WCCH / ER 25-57.0 / Tr 28	ER 25	1 - 16	83	57.0	Tr 28 x 2	42	M12	Fig1
WCCH / ER 11M-50 / Tr 12	ER 11	1 - 7	50	50	Tr 12 x 1.5	16	M5	Fig2
WCCH / ER 16M-50 / Tr 16	ER 16	1 - 10	73	50	Tr 16 x 1.5	22	M6	Fig2
WCCH / ER 16M-50 / Tr 20	ER 16	1 - 10	76	50	Tr 20 x 2	22	M6	Fig2
WCCH / ER 20M-50 / Tr 20	ER 20	1 - 13	76	50	Tr 20 x 2	28	M8	Fig2
WCCH / ER 20M-50 / Tr 28	ER 20	1 - 13	83	50	Tr 28 x 2	28	M8	Fig2
WCCH / ER 25M-50 / Tr 28	ER 25	1 - 16	83	50	Tr 28 x 2	35	M10x1	Fig2
WCCH / ER 25M-50 / Tr 36	ER 25	1 - 16	104	50	Tr 36 x 2	35	M10x1	Fig2

Example for ordering : **WCCH / ER 11 - 50 / Tr 12 x 1.5**
 : **WCCH / ER 11M-50 / Tr 12 x 1.5** [M - Mini Nut]

ACCESSORIES

Wrench

Type	A	L	Fig
ER 11M	16.8	90	A
ER 11	32.0	95	B
ER 16M	22.5	110	A
ER 16	42.0	140	B
ER 20M	29.0	120	A
ER 20	60.0	135	B
ER 25	65.0	210	C
ER 32	75.0	250	C
ER 40	90.0	290	C
ER 50	110.0	350	C
RDO 25	-	160	D
RDO 35	-	228	D
RDO 44	-	280	D

Fig : A

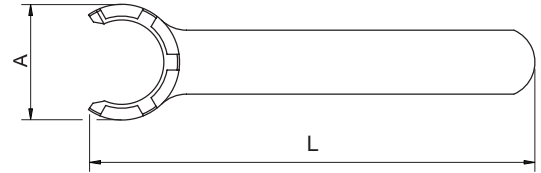


Fig : B

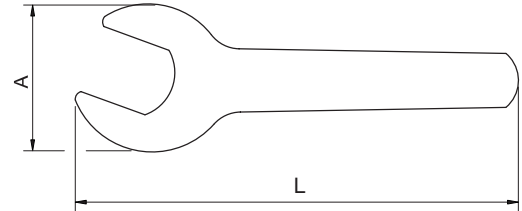


Fig : C

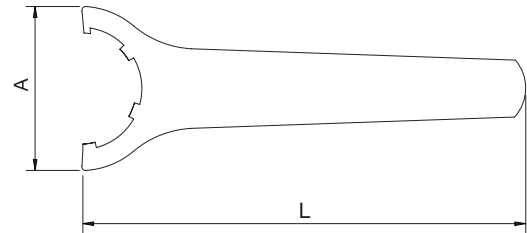
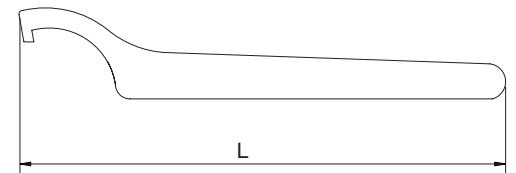


Fig : D



Collet Nut

Type	D	L	J	Fig
ER 11M	16.0	11.3	M13x0.75	A
ER 11	19.0	11.3	M14x0.75	B
ER 16M	22.0	17.0	M19x1.0	A
ER 16	28.0	17.5	M22x1.5	B
ER 20M	28.0	19.0	M24x1.0	A
ER 20	34.0	19.0	M25x1.5	B
ER 25	42.0	20.0	M32x1.5	C
ER 32	50.0	22.5	M40x1.5	C
ER 40	63.0	25.5	M50x1.5	C
ER 50	78.0	35.3	M64x2.0	C
RDO 25	43.0	24.0	M33x1.5	D
RDO 35	60.0	30.0	M48x2.0	D
RDO 44	72.0	34.0	M60x2.5	D

[M - Mini Nut]

Fig : A

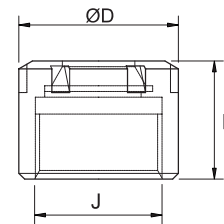


Fig : C

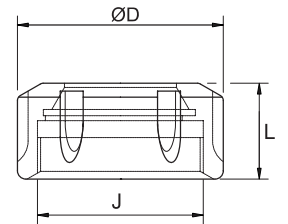


Fig : B

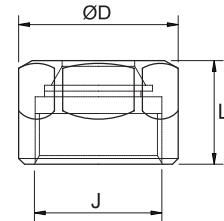
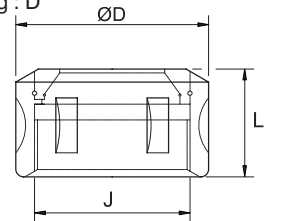
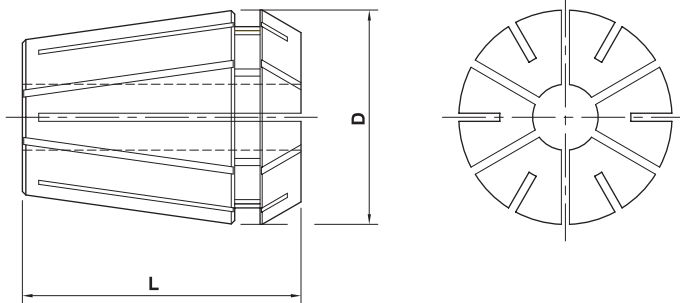


Fig : D



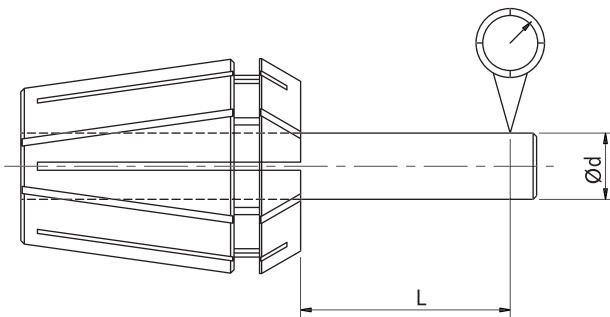
ER Collet (DIN 6499)



Type	Clamping Range	In Increment of	Collapsibility	D	L
ER 8	1 - 5	0.5	0.5	8.5	13.5
ER 11	1 - 7	0.5	0.5	11.5	18.0
ER 16	1 - 10	1	1	17.0	27.0
ER 20	1 - 13	1	1	21.0	31.0
ER 25	1 - 16	1	1	26.0	35.0
ER 32	2 - 20	1	1	33.0	40.0
ER 40	3 - 26	1	1	41.0	46.0
ER 50	10 - 34	2	2	52.0	60.0

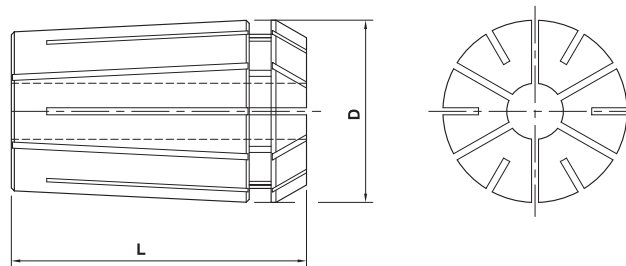
* 1mm collet will be having collapsibility of .5mm.
* Increment of .5mm will be supplied on request.

Concentricity of ER Collets



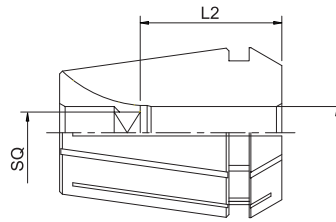
From d	To d	L	DIN	ER Standard	ER-UP Ultra Precision
1.0	1.6	6.0	0.015	0.010	0.005
1.6	3.0	10.0			
3.0	6.0	16.0			
6.0	10.0	25.0			
10.0	18.0	40.0	0.020	0.010	0.005
18.0	26.0	50.0			
26.0	34.0	60.0	0.025	0.015	0.010

RDO Collet (DIN 6388)



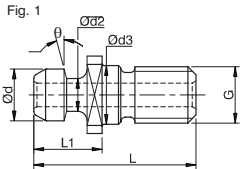
Type	Clamping Range	In Increment of	Collapsibility	D	L
RDO 25	2 - 16	0.5	0.5	25.50	40
RDO 35	2 - 25	0.5	0.5	35.05	52
RDO 44	4 - 32	0.5	0.5	43.70	60

Tap Collet

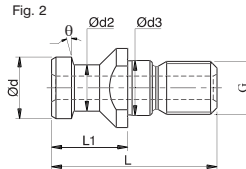


d x Sq	STD.	ER16-GB	ER25-GB	ER32-GB	d x Sq	STD.	ER16-GB	ER25-GB	ER32-GB
4.0 x 3.15/3.2	ISO, JIS				9.0 x 7.0/7.1	DIN, ISO			
4.5 x 3.4	DIN				10.0 x 8.0	DIN, ISO			
5.0 x 4.0	ISO, JIS				10.5 x 8.0	JIS			
5.5 x 4.3	DIN				11.0 x 9.0	DIN			
5.5 x 4.5	JIS				11.2 x 9.0	ISO			
6.0 x 4.5	JIS				12.0 x 9.0	DIN			
6.0 x 4.9	DIN				12.5 x 10.0	ISO, JIS			
6.2 x 5.0	JIS				14.0 x 11.0/11.2	DIN, ISO, JIS			
6.3 x 5.0	ISO				15.0 x 12.0	JIS			
7.0 x 5.5	DIN, JIS				16.0 x 12.0	DIN			
7.1 x 5.6	ISO				17.0 x 13.0	JIS			
8.0 x 6.2/6.3	DIN, ISO				18.0 x 14.0/14.5	DIN, ISO			
8.5 x 6.5	JIS				20.0 x 16.0	DIN, ISO			

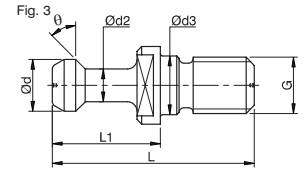
Pull Stud



JIS/ANSI
BN 164 - BT...JIS/ANSI



DIN 69872 /ISO7388
BN 164 - SK

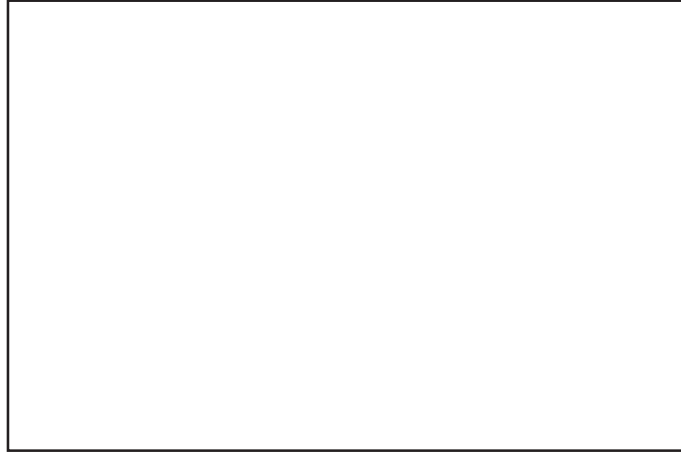


MAS 403
BN 164 - BT

Type	G	φd	φd2	φd3	L	L1	θ	Fig.
BN 164 - ISO 30	M12	13.35	9.30	13.00	34.00	11.80	45°	?
BN 164 - ISO 40	M16	13.95	12.95	17.00	44.50	16.40	45°	?
BN 164 - ISO 50	M24	29.10	19.60	25.00	65.50	25.55	45°	?
BN 164 - SK 30	M12	13.00	9.00	13.00	44.00	24.00	15°	?
BN 164 - SK 40	M16	19.00	14.00	17.00	54.00	26.00	15°	?
BN 164 - SK 50	M24	28.00	21.00	25.00	74.00	34.00	15°	?
BN 164 - BT30	M12	11.00	7.00	12.50	43.00	23.00	45°	?
BN 164 - BT30-60°	M12	11.00	7.00	12.50	43.00	23.00	60°	?
BN 164 - BT40	M16	15.00	10.00	17.00	60.00	35.00	45°	?
BN 164 - BT40-60°	M16	15.00	10.00	17.00	60.00	35.00	60°	?
BN 164 - BT40-90°	M16	15.00	10.00	17.00	60.00	35.00	90°	?
BN 164 - BT50	M24	23.00	17.00	25.00	85.00	45.00	45°	?
BN 164 - BT50-60°	M24	23.00	17.00	25.00	85.00	45.00	60°	?
BN 164 - BT50-90°	M24	23.00	17.00	25.00	85.00	45.00	90°	?

Note: Thro coolant pull stud can be supplied on request.





Morris Tooling Ltd.

No.304, Bedworth Road, Langford Coventry CV 6 6LA, ENGLAND.

Telephone: (024) 7636 9700 Fax: (024) 7636 9701

International Telephone: +44 24 7636 9700 International Fax.: +44 24 7636 9701

E-mail: mti@morristoolingin.com Website: www.morristooling.com