Cantilever Shafts (Pilot – Both Ends Threaded)

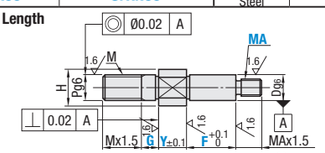
Standard / Stepped

Cantilever Shafts – Pilot – Both Ends Threaded Standard

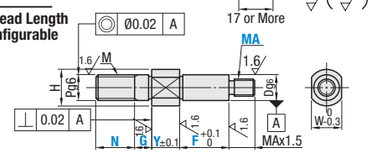
RoHS10

Type		Material	Surface Treatment
Thread Length Fixed	Thread Length Configurable		
FXCC	FXNCC	1045 Carbon Steel or Equivalent	Black Oxide
PFXCC	PFXNCC		Electroless Nickel Plating
SFXCC	SFXNCC	304 Stainless Steel	—

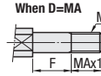
Thread Length Fixed



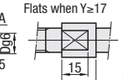
Thread Length Configurable



When D=MA



Dimensions of Wrench Flats when Y≥17



6.3 (1.6)

Refer to the table on **P.915** for thread undercut dimensions. This type may have centering holes depending on dimensions.

Part Number Type	No.	Dg_6		1 mm Increment Y	F	G	N	MA (Coarse)	Pg_6	M (Coarse)	H	W	Available Types: Thread Length Fixed FXCC	PFXCC	SFXCC	Thread Length Config. FXNCC	PFXNCC	SFXNCC
Thread Length Fixed FXCC PFXCC SFXCC	3	3	-0.002 -0.008	2–30	3–50	3–8	3–6	3	3	M3	7	5	•	•	•	•	•	•
	3A										11	9	•	•	—	•	—	—
	4	4	-0.004 -0.012				4–8	3 4	4	M4	8	6	•	•	•	•	•	•
	4A										12	10	•	•	—	•	—	—
	5	5					5–10	3 4 5	5	M5	9	7	•	•	•	•	•	•
	5A										13	17	•	•	—	•	—	—
	6	6			5–100	5–10	6–12	4 5 6	6	M6	10	8	•	•	•	•	•	•
	6A										14	12	•	•	—	•	—	—
	8	8	-0.005 -0.014				8–16	5 6 8	8	M8	12	10	•	•	•	•	•	•
	8A										16	14	•	•	—	•	—	—
	10	10					10–20	6 8 10	10	M10	15	13	•	•	•	•	•	•
	10A										20	17	•	•	—	•	—	—
	12	12	-0.006 -0.017	2–60		5–15	12–24	6 8 10 12	12	M12	17	14	•	•	•	•	•	•
Thread Length Configurable FXNCC PFXNCC SFXNCC	13	13									18	15	•	•	•	•	•	•
	15	15						8 10 12 (15)			20	17	•	•	•	•	•	•
	16	16									21	18	•	•	•	•	•	•
	17	17						10 12 (15) 16			23	20	•	•	•	•	•	•
	18	18											•	•	•	•	•	•
	20	20	-0.007 -0.020	4–60	10–150	5–20	20–40	10 12 (15) 16 20	20	M20	26	24	•	•	•	•	•	•
	20A								16	M16			•	•	•	•	•	•
	22	22							20	M20	28	25	•	•	•	•	•	•
	22A								16	M16			•	•	•	•	•	•
	25	25						10 12 (15) 16 20 24 (25)	20	M20	31	27	•	•	•	•	•	•
	25A								16	M16			•	•	•	•	•	•
	30	30						12 (15) 16 20 24 (25) 30	20	M20	36	32	•	•	•	•	•	•
	30A								16	M16			•	•	•	•	•	•

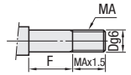
MA dimensions with ( ) (M15 and M25) are Fine Thread. Specify MSC instead of MA. N dimension can only be specified for the Thread Length Configurable Type.

Cantilever Shafts – Pilot – Both Ends Threaded Stepped

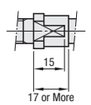
RoHS10

Type	Material	Surface Treatment
FXDC	1045 Carbon Steel or Equivalent	Black Oxide
PFXDC		Electroless Nickel Plating
SFXDC	304 Stainless Steel	—

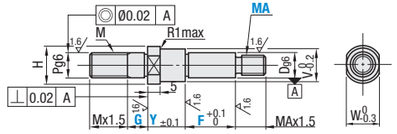
When D=MA



Dimensions of Wrench Flats when W<V, Y ≥17



6.3 (1.6)



Refer to the table on **P.915** for thread undercut dimensions. This type may have centering holes depending on dimensions.

Part Number Type	No.	Dg_6		1 mm Increment Y	F	G	MA (Coarse) Selection	Pg_6	M (Coarse Thread)	V	H	W
FXDC PFXDC SFXDC	3	3	-0.002 -0.008	7–30	3–50	3–8	3	3	M3	5	7	5
	3A									9	11	9
	4	4	-0.004 -0.012				3 4	4	M4	6	8	6
	4A									10	12	10
	5	5					3 4 5	5	M5	7	9	7
	5A									11	13	11
	6	6		7–60	5–75	5–10	4 5 6	6	M6	8	10	8
	6A									12	14	12
	8	8	-0.005 -0.014				5 6 8	8	M8	10	12	10
	8A									14	16	14
	10	10					6 8 10	10	M10	13	15	13
	10A									18	20	17
	12	12	-0.006 -0.017		10–75	5–15	6 8 10 12	12	M12	15	17	14
	13	13								16	18	15
	15	15					8 10 12 (15)			18	20	17
	16	16								19	21	18
	17	17					10 12 (15) 16			20	23	20
	18	18								21		
	20	20	-0.007 -0.020	7–60		5–20	10 12 (15) 16 20	20	M20	24	26	24
	20A							16	M16			
	22	22						20	M20	26	28	25
	22A							16	M16			
	25	25					10 12 (15) 16 20 24 (25)	20	M20	29	31	27
	25A							16	M16			
	30	30					12 (15) 16 20 24 (25) 30	20	M20	34	36	32
	30A							16	M16			

MA dimensions with ( ) (M15 and M25) are Fine Thread. Specify MSC instead of MA. When W<V, width across flats W reaches outer diameter V.

Cantilever Shafts (Pilot – Both Ends Threaded)

Hex

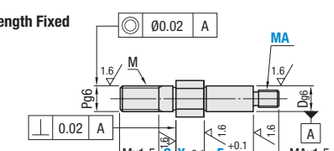
Cantilever Shafts – Pilot – Both Ends Threaded Hex

RoHS10

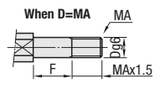
Type	Material	Surface Treatment
LXCC	1045 Carbon Steel or Equivalent	Black Oxide
PLXCC		Electroless Nickel Plating
SLXCC	304 Stainless Steel	—

6.3 (1.6)

Thread Length Fixed



When D=MA



Refer to the table below for thread undercut dimensions.

This type may have centering holes depending on dimensions.

Part Number Type	No.	Dg_6		1 mm Increment Y	F	G	MA (Coarse) Selection	Pg_6	M (Coarse Thread)	B	(C)
LXCC PLXCC SLXCC	3	3	-0.002 -0.008	2–30	3–50	3–8	3	3	M3	6	6.9
	4	4	-0.004 -0.012				3 4	4	M4		
	5	5					3 4 5	5	M5	7	8.1
	6	6		2–60	5–75	5–10	4 5 6	6	M6	8	9.2
	8	8	-0.005 -0.014				5 6 8	8	M8	10	11.5
	10	10					6 8 10	10	M10	13	15.0
	12	12	-0.006 -0.017		10–75	5–15	6 8 10 12	12	M12	14	16.2
	13	13								17	19.6
	15	15					8 10 12 (15)				
	16	16								19	21.9
	17	17					10 12 (15) 16				
	18	18								24	27.7
	20	20	-0.007 -0.020	4–60		5–20	10 12 (15) 16 20	20	M20		
	20A							16	M16		
	22	22						20	M20		
	22A							16	M16		
	25	25					10 12 (15) 16 20 24 (25)	20	M20	27	31.2
	25A							16	M16		
	30	30					12 (15) 16 20 24 (25) 30	20	M20	32	36.9
	30A							16	M16		

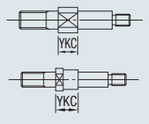
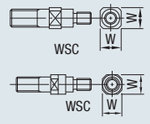
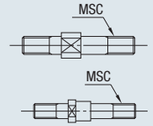
MA dimensions with ( ) (M15 and M25) are Fine Thread. Specify MSC instead of MA.

Part Number Example

Part Number	-	Y	-	F	-	G	-	N	-	MA
FXCC8	-	15	-	F25	-	G5			-	MA5
PFXNCC10	-	27	-	F10	-	G5	-	N10	-	MA6

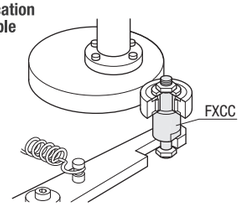
Part Number Alterations

Part Number	-	Y	-	F	-	G	-	N	-	MA (MSC)	-	(YKC / WSC)
FXCC15	-	10	-	F21	-	G7			-	MSC15	-	WSC

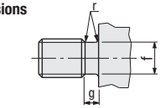
Alterations	Y Dimension Tolerance	Four Wrench Flats	Fine Thread
			
Code	YKC	WSC	MSC
Spec.	Changes Y dimension tolerance to ±0.05. Applicable to all types. **Ordering Code:** YKC	Changes from two wrench flats to four wrench flats. Applicable to Standard / Stepped Types. **Ordering Code:** WSC	Changes Thread MA to Fine Thread on the table below. Applicable to all types. Specify MSC instead of MA. **Ordering Code:** MSC12

MSC	Pitch	MSC	Pitch
M3	0.35	M12	1.0
M4	0.5	M15	
M5		M20	
M6	0.75	M25	1.5
M8	1.0	M30	
M10			

Application Example



Thread Undercut Dimensions



Coarse Thread Thread Dia. (M / MA)	g	r	f	Fine Thread Thread Dia. (MSC)	g	r	f
3	1.2–1.5	0.2–0.3	2.1–2.4	3	1.5–2.5	0.2–0.6	2.1–2.4
4			2.9–3.2	4			2.9–3.2
5			3.9–4.1	5			3.9–4.1
6	1.5–2.5	0.2–0.6	4.3–4.9	6			4.3–4.9
8			6.3–6.6	8			6.3–6.6
10			8.1–8.3	10			8.3–8.6
12	1.5–3.0	0.2–1.0	9.8–10.1	12	1.5–3.0	0.2–1.0	9.8–10.7
16			13.6–13.8	15			13.6–13.8
20	1.5–4.0		17.0–17.2	20	1.5–4.0		17.2–18.8
24	2.5–5.0	0.2–1.5	20.2–20.7	25	2.5–5.0	0.2–1.5	20.2–23.2
30			26.0–26.2	30			26.2–28.2