



Selection table



Applications



Motor selection



Controller



Feature

- Good repeatability accuracy ± 0.02 .
- Pre-lubricated before shipment.
- Better radial load capacity compared to MEQI.
- Ball screw drive, various strokes and leads available.
- Compatible with external magnetic sensors.

Motor type	Servo / Step	Transmission	Ball screw
Environment	Standard	Guide type	Linear rail

Specification

Model	METI								
Size	32			40			50		
Positioning repeatability (mm)	±0.02								
Lead *1 (mm)	1	2	5	10	20	5	10	20	
Ball screw (ø)	C7ø8			C7ø12			C7ø16		
Stroke (mm)	50, 100			50, 100, 150			50, 100, 150		
Anti-rotation tolerance (°)	±0.4								
Start torque (N.m)	<0.05	<0.1	<0.05	<0.1	<0.2	<0.2	<0.25	<0.3	
Sensor switch	RDC(V), RQC(V) 								
With AC servo motor (W)	50 (100)					200 (400)			
Max. speed (mm/s)	50	100	250	500	1000	250	500	1000	
Max. axial force (N)	720 (1600)	360 (800)	140 (320)	70 (160)	35 (80)	680 (1400)	340 (700)	170 (350)	
With step motor	□42					□56			
Max. speed (mm/s)	50	100	250	500	1000	250	500	1000	
Max. thrust force at top speed *2 (N)	325	162	65	32	16	110	55	27	

*1. Special accuracy and lead is available.

*2. Due to the characteristics of a step motor, thrust force is low at high speed. Lowering the operating speed can further increase the thrust force.

Order example

Electric cylinder without motor						Optional with step motor (*2)								
METI—		32	L02	—	100	—	BC	—	S42	—	CK10	03	N	015
Model		①	②		③		④		⑤		⑥	⑦	⑧	⑨
①	②	③				⑤				⑥	⑦			
Size	Ball screw lead	Stroke	Size	Flange (For motor installation)			Controller	Motor	Motor + Encoder cable					
32	L01	1 mm	50, 100	32	Applicable motor brand (*1)		Dimensions		Size	CK10	SM	01	1 m (CM20 only)	
	L02	2 mm	50, 100, 150	40, 50	M	Mitsubishi Yaskawa Delta	10	50/100W servo	32, 40		(for S42, S56)		015	1.5 m (CK10 only)
40 50	L05	5 mm					P	Panasonic	40	200/400W servo	50	CM20 *	BM	03
	L10	10 mm		10	50/100W servo	32, 40			(for B42, B56)	05	5 m			
	L20	20 mm		40	400W servo	50			* Sensors would be needed.					
Motor position				Motor position		I/O type		I/O cable length						
BC	Direct connection			S	Mindman	42	□42 Step NEMA 17	32, 40	N	NPN	015	1.5 m (stanadrd)		
BA	Turned			B		56	□56 Step NEMA 23	50		03	3 m			

*1. Motor not included. Please refer to the "Motor Selection Table"



*1. Motor not included. Please refer to the "Motor Selection Table". 

*2. For the optional transmission cable (CK10-C035) for controller management. 

Life – Axial force relationship chart

The estimated service life under an axial load of F is shown in the plot. The environmental condition is 25°C, and a safety factor of 1.5 is used for both the ball screw and ball bearing.

Life – Moment relationship chart

The estimated service life under a moment load of M is shown in the plot. The value of M uses the max value of the application. The environmental condition is 25°C, and a safety factor of 1.5 is used for the linear rail.

Service life determination

The service life of the product is determined by the lowest value from the two service life charts above.

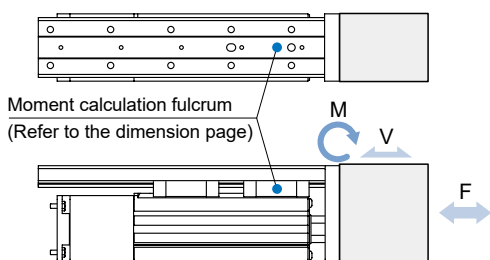
* It is recommended to check the shaft for lubrication replenishment every 100 km of operation.

Motor output chart

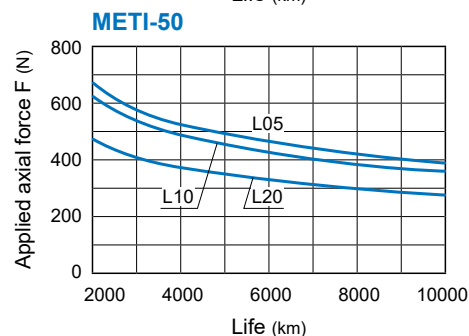
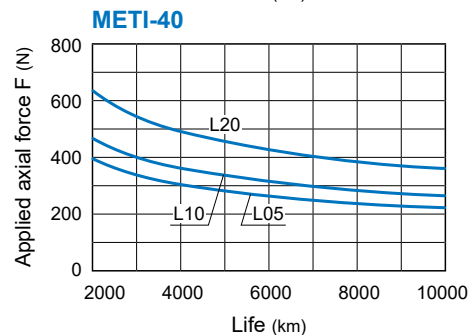
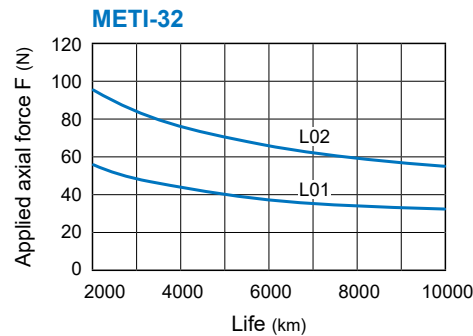
The relationship between axial output force and motor spindle speed is depicted in the plot. The default gear ratio is 1:1.

Speed chart

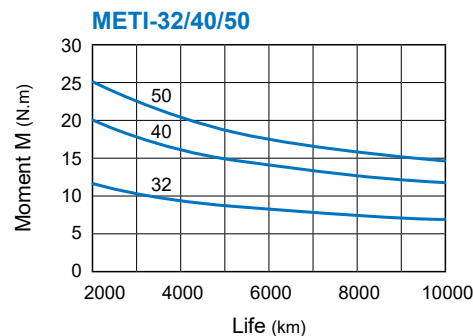
The relationship between axial velocity and motor spindle speed is depicted in the plot. The default gear ratio is 1:1.



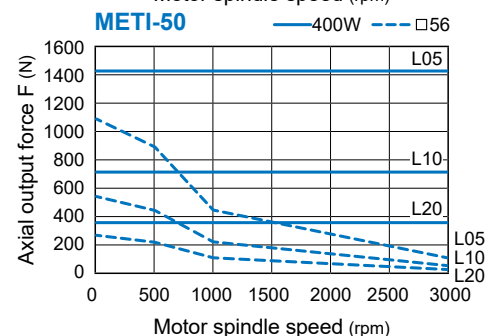
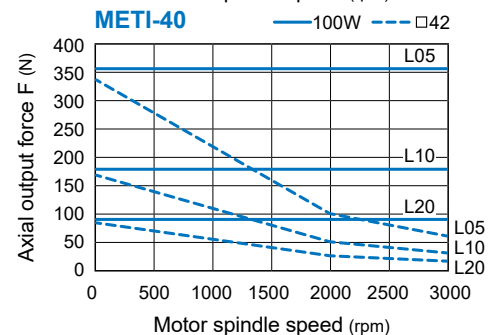
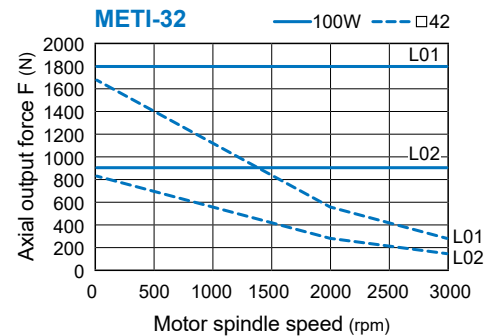
Life – Applied axial force relationship chart



Life – Moment relationship chart



Motor spindle speed – Axial output force relationship chart



Motor spindle speed – Axial velocity relationship chart

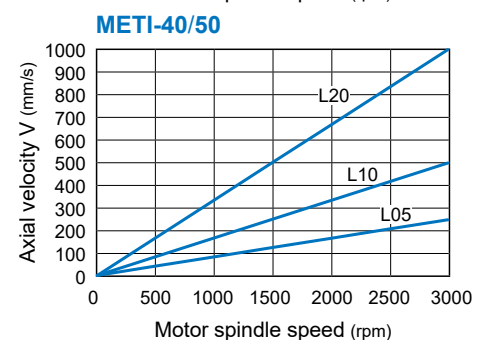
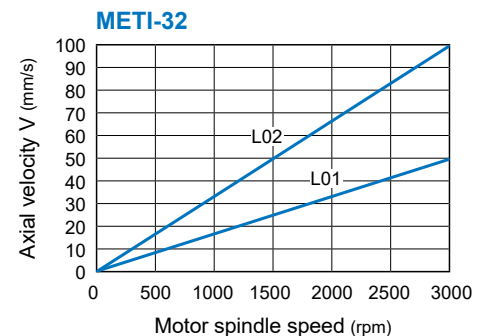
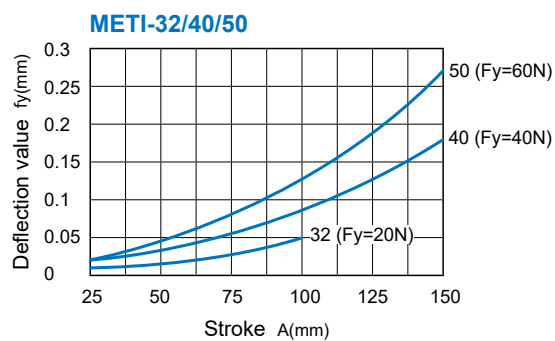
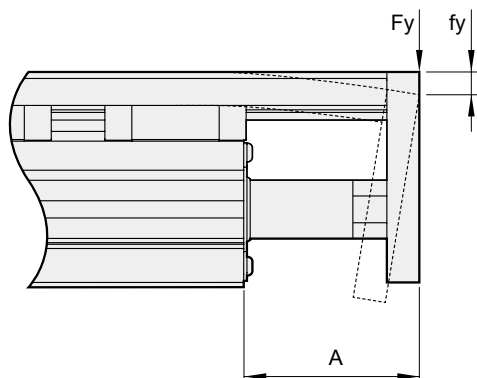
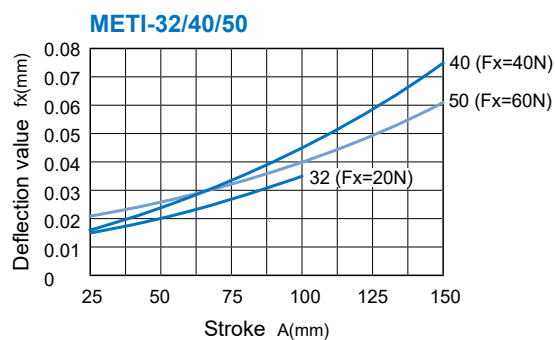
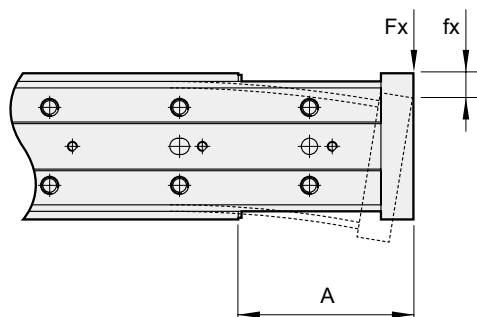


Table bending deflection

Vertical deflection

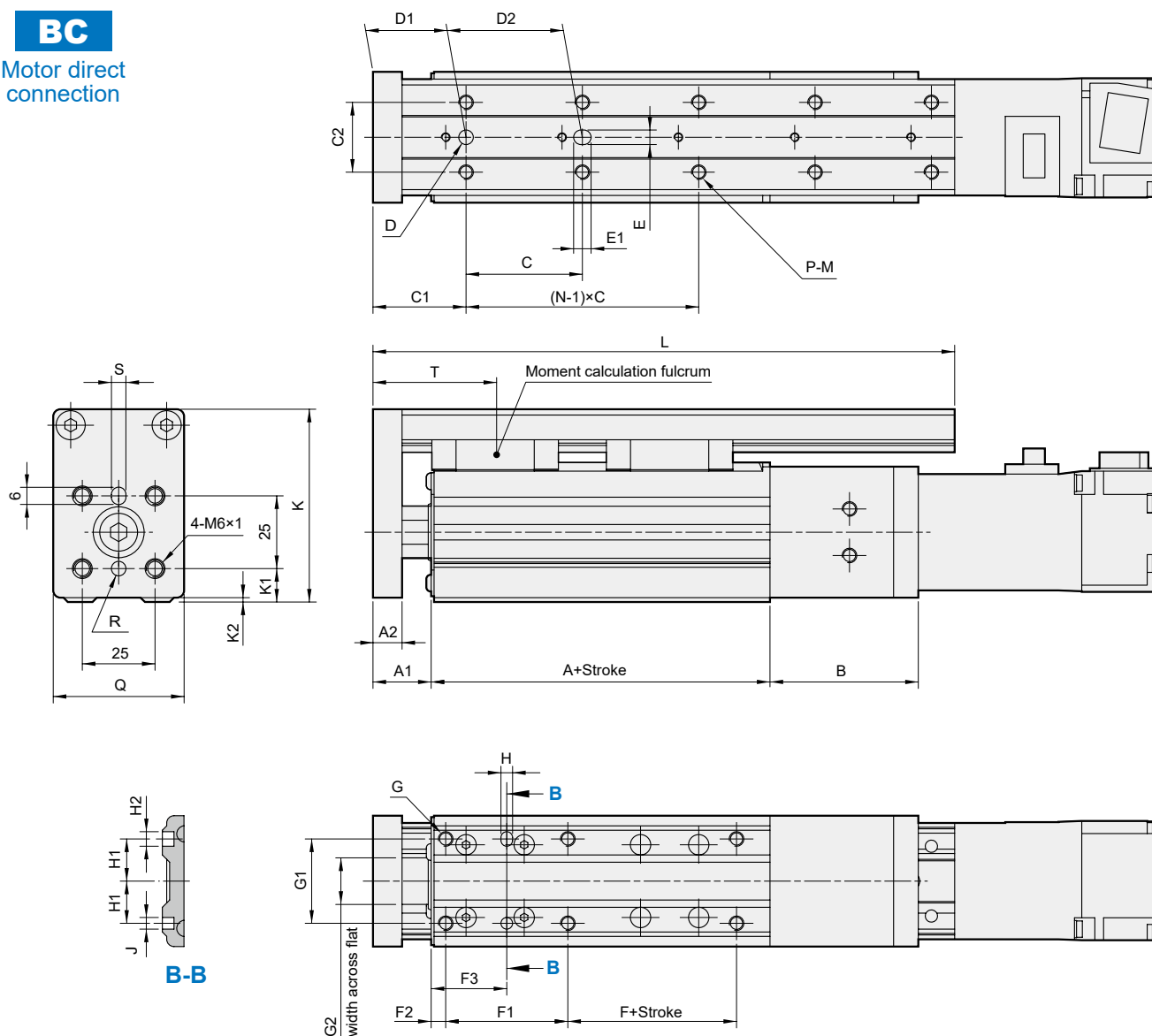


Horizontal deflection



BC

Motor direct connection



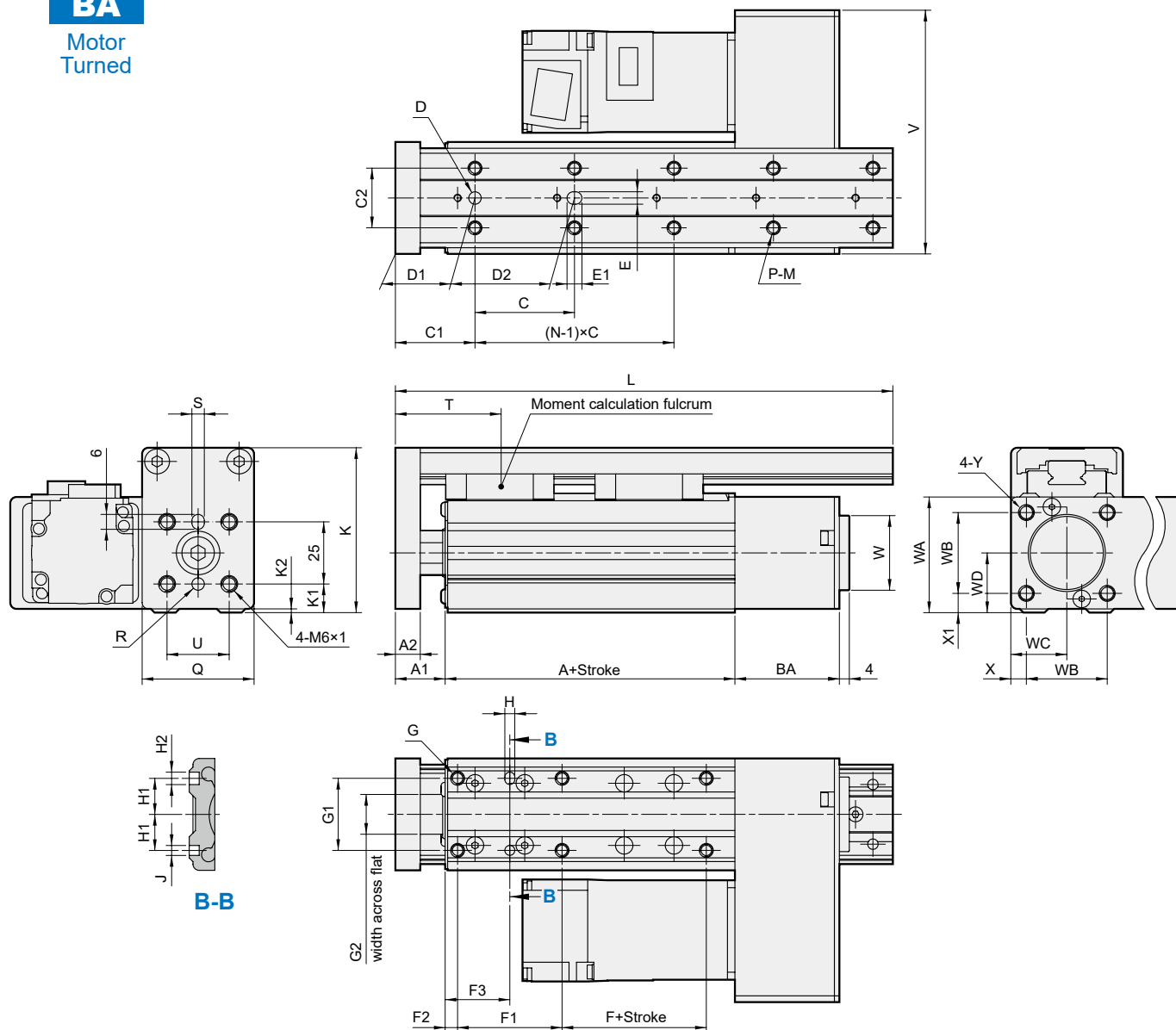
Code Spec.	A	A1	A2	B	C	C1	C2	D	D1	D2	E	E1	F	F1	F2	F3	G
32	66.5	20	10	51	40	32	24	$\varnothing 5^{+0.03}_0 \times 3.5$ dp	32	40	$5^{+0.03}_0 \times 3.5$ dp	6	8	42	5	26	6-M5×0.8×5 dp
40	110	20	11	46.5	60	26	30	$\varnothing 5^{+0.03}_0 \times 3.5$ dp	26	30	$5^{+0.03}_0 \times 3$ dp	6	10	40	20	40	6-M5×0.8×7 dp
50	127	22	15	59.5	75	43	36	$\varnothing 6^{+0.03}_0 \times 4$ dp	53	75	$6^{+0.03}_0 \times 4$ dp	7	18	36	20	38	6-M6×1×8.5 dp

Code Spec.	G1	G2	H	H1	H2	J	K	K1	K2	M	Q	R	S	T
32	29	16	$4^{+0.03}_0 \times 4$ dp	14.5	5	$\varnothing 4^{+0.03}_0 \times 4$ dp	66.3	11.5	1.5	M5×0.8×6 dp	45	$\varnothing 5^{+0.03}_0 \times 5$ dp	$5^{+0.03}_0 \times 5$ dp	42
40	34	16	$4^{+0.03}_0 \times 5$ dp	17	5	$\varnothing 4^{+0.03}_0 \times 4$ dp	71	15	1.5	M5×0.8×6 dp	53	$\varnothing 5^{+0.03}_0 \times 5$ dp	$5^{+0.03}_0 \times 5$ dp	41
50	38	21	$5^{+0.03}_0 \times 4$ dp	19	6	$\varnothing 5^{+0.03}_0 \times 4$ dp	81.5	19	1.5	M6×1.0×6 dp	64	$\varnothing 5^{+0.03}_0 \times 5$ dp	$5^{+0.03}_0 \times 5$ dp	60

Code Stroke Spec.	L			N			P		
	50	100	150	50	100	150	50	100	150
32	200	240	—	5	6	—	10	12	—
40	191	251	301	3	4	5	6	8	10
50	225	265	345	3	3	4	6	6	8

BA

Motor
Turned



* Belt installation tension: 60 N

Code Spec.	A	A1	A2	BA	C	C1	C2	D	D1	D2	E	E1	F	F1	F2	F3	G
32	66.5	20	10	42	40	32	24	$\phi 5^{+0.03}_{-0} \times 3.5$ dp	32	40	$5^{+0.03}_{-0} \times 3.5$ dp	6	8	42	5	26	6-M5×0.8×5 dp
40	110	20	11	39	60	26	30	$\phi 5^{+0.03}_{-0} \times 3.5$ dp	26	30	$5^{+0.03}_{-0} \times 3$ dp	6	10	40	20	40	6-M5×0.8×7 dp
50	127	22	15	50	75	43	36	$\phi 6^{+0.03}_{-0} \times 4$ dp	53	75	$6^{+0.03}_{-0} \times 4$ dp	7	18	36	20	38	6-M6×1×8.5 dp

Code Spec.	G1	G2	H	H1	H2	J	K	K1	K2	M	Q	R	S	T	U
32	29	16	$4^{+0.03}_{-0} \times 4$ dp	14.5	5	$\phi 4^{+0.03}_{-0} \times 4$ dp	66.3	11.5	1.5	M5×0.8×6 dp	45	$\phi 5^{+0.03}_{-0} \times 5$ dp	$5^{+0.03}_{-0} \times 5$ dp	42	25
40	34	16	$4^{+0.03}_{-0} \times 5$ dp	17	5	$\phi 4^{+0.03}_{-0} \times 4$ dp	71	15	1.5	M5×0.8×6 dp	53	$\phi 5^{+0.03}_{-0} \times 5$ dp	$5^{+0.03}_{-0} \times 5$ dp	41	25
50	38	21	$5^{+0.03}_{-0} \times 4$ dp	19	6	$\phi 5^{+0.03}_{-0} \times 4$ dp	81.5	19	1.5	M6×1.0×6 dp	64	$\phi 5^{+0.03}_{-0} \times 5$ dp	$5^{+0.03}_{-0} \times 5$ dp	60	40

Code Spec.	V	W	WA	WB	WC	WD	X	X1	Y
32	98	$\phi 30$ d11 $^{-0.06}_{-0.19}$	46.5	32.5	22.5	24	6.25	7.75	M6×1.0×16 dp
40	107	$\phi 35$ d11 $^{-0.08}_{-0.24}$	53	38	26.5	27.5	7.5	8.5	M6×1.0×17 dp
50	142	$\phi 40$ d11 $^{-0.08}_{-0.24}$	62.5	46.5	32	31.5	8.75	8.25	M8×1.0×18 dp

Code Stroke Spec.	L			N			P		
	50	100	150	50	100	150	50	100	150
32	200	240	—	5	6	—	10	12	—
40	191	251	301	3	4	5	6	8	10
50	225	265	345	3	3	4	6	6	8