



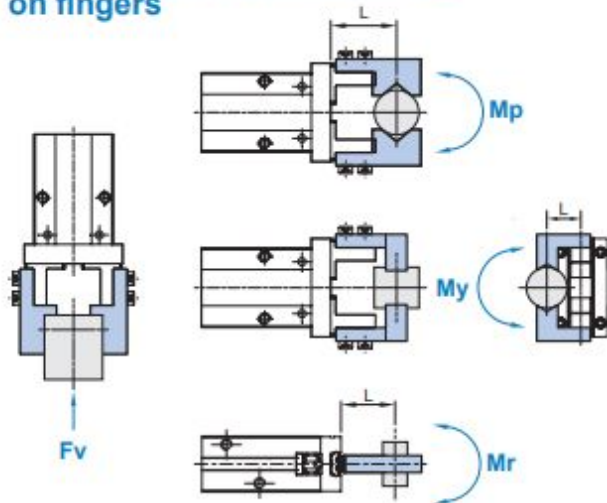
Features

- Integral linear guide used for high rigidity and high precision.
- The material of finger is martensitic stainless steel.
- Body thickness tolerance $\pm 0.05\text{mm}$.
- Bottom pin holes for accurate re-locating.
- Grooves on the body for sensor switch to be inserted into.
- The gripping stroke of long-stroke type is approximately double compare with standard type.
- Standard with magnet.

Specification

Acting type	Double acting / Single acting					
Tube I.D. (mm)	6	10	16	20	25	
Opening / Closing stroke (mm)	4	4(8)	6(12)	10(18)	14(22)	
Port size	M3×0.5		M5×0.8			
Medium	Air					
Operating pressure range	Double acting	0.15~0.7	0.2~0.7	0.1~0.7 MPa		
	Single acting	–	0.35~0.7	0.25~0.7 MPa		
Ambient temperature	-10~+60°C (No freezing)					
Repeatability	$\pm 0.01\text{ mm}$					
Max. frequency	180 (120) cycle / min					
Lubricator	Not required					
Sensor switch (*2)	*1	RDE, RDE-D: Non-contact				
Weight (g)	Double acting	27	55(56)	124(125)	250(252)	461(463)
	Single acting	–	[53]	[124]	[244]	[450]
		–	70	145	270	490

Confirmation of external force on fingers

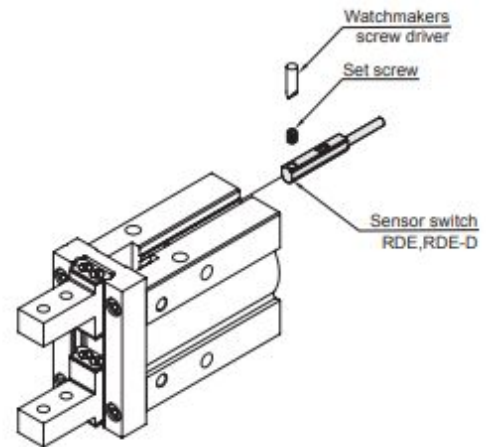


L: distance to the point at which the load is applied (mm)

Tube I.D. (mm)	Allowable vertical load Fv (N)	Maximum allowable moment		
		Pitch moment Mp (N-m)	Yaw moment My (N-m)	Roll moment Mr (N-m)
6	10	0.04	0.04	0.08
10	58	0.26	0.26	0.53
16	98	0.68	0.68	1.36
20	147	1.32	1.32	2.65
25	255	1.94	1.94	3.88

* Values for load and moment in the table indicate static values.

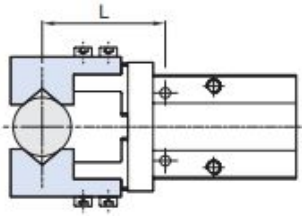
Installation of sensor switch



Allowable load calculation

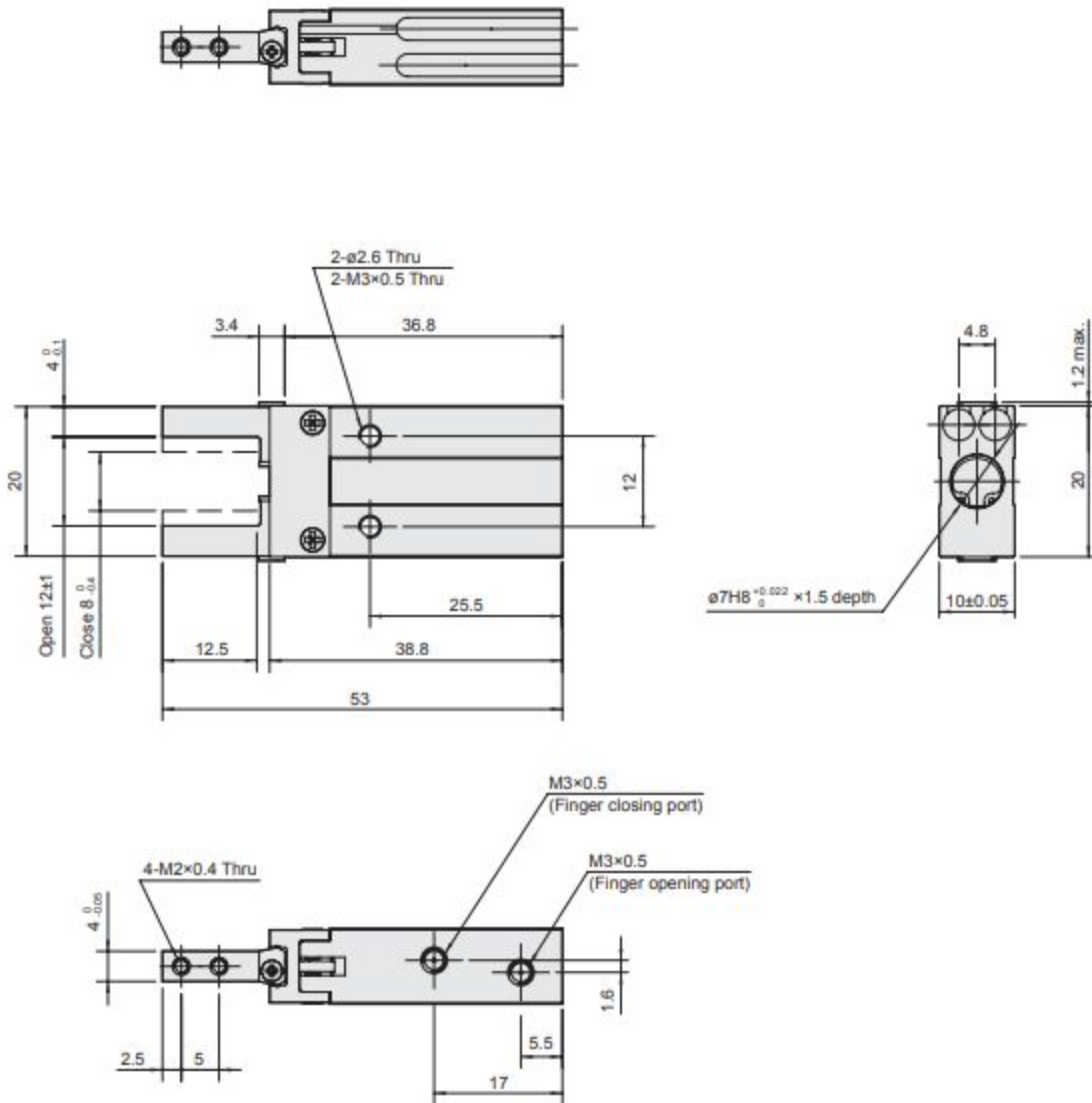
$$\text{Allowable load } F(N) = \frac{M(\text{maximum allowable moment})(N \cdot m)}{L(m)}$$

Gripping force

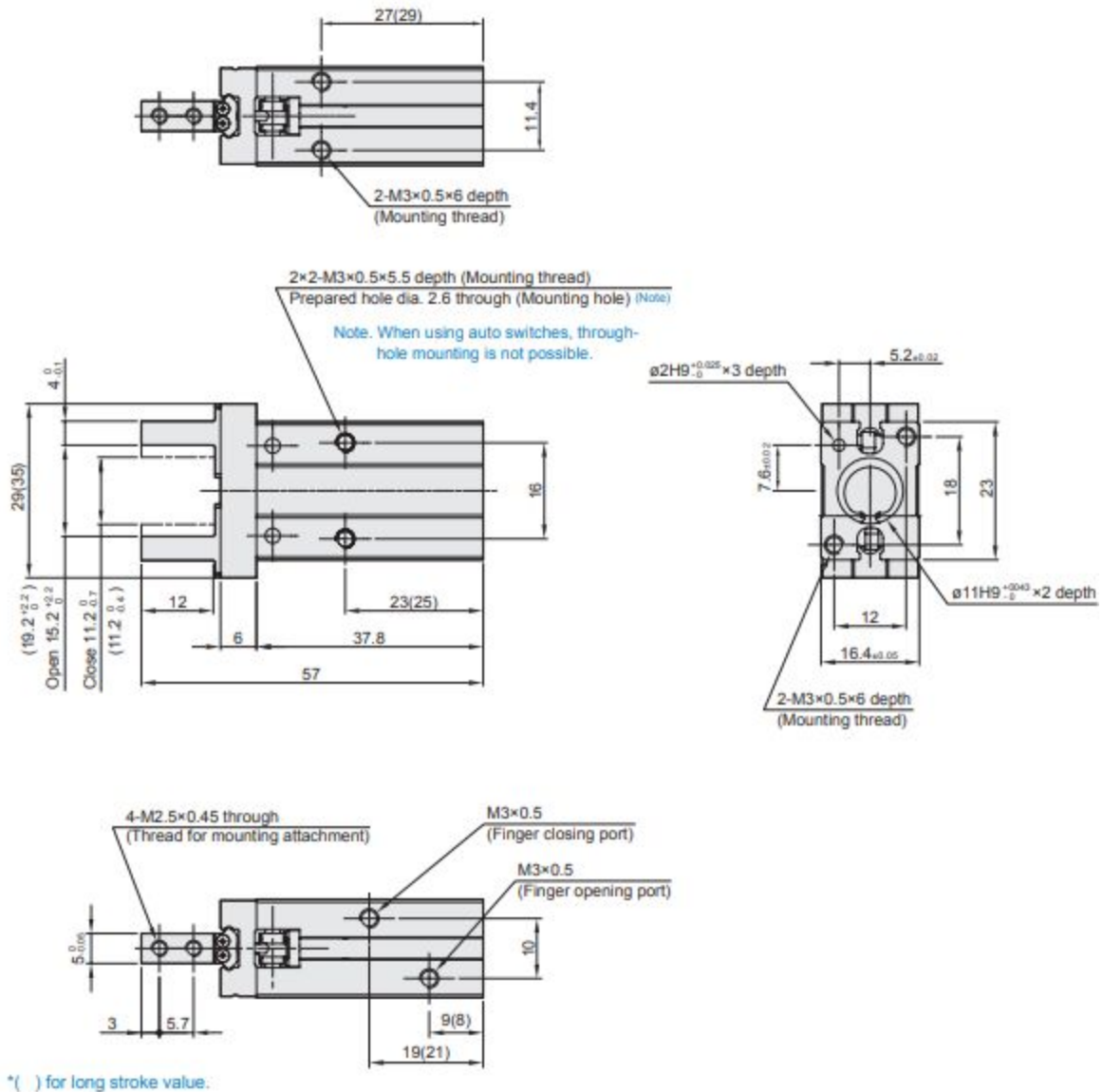


Tube I.D. (mm)		6	10	16	20	25
Double acting	External	3.3(0.3)	11(1.1)	34(3.5)	42(4.3)	65(6.6)
	Internal	6.1(0.6)	17(1.7)	45(4.6)	66(6.7)	104(10.6)
Single acting / Normally open	External	-	7.1(0.7)	27(2.8)	33(3.4)	45(4.6)
Single acting / Normally closed	Internal	-	13(1.3)	38(3.9)	57(5.8)	83(8.5)

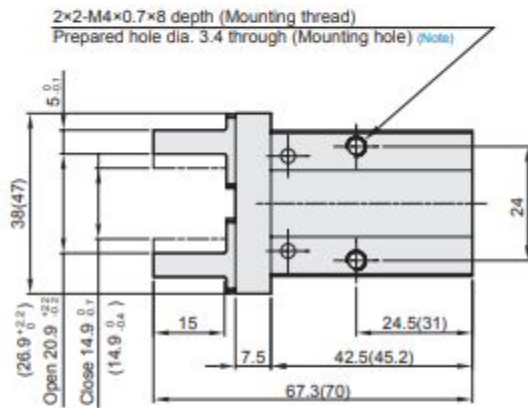
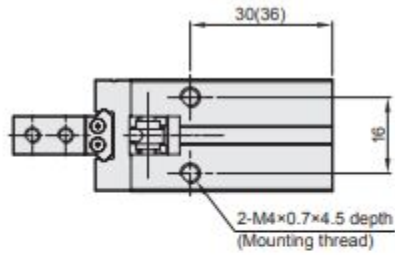
Dimensions $\varnothing 6$



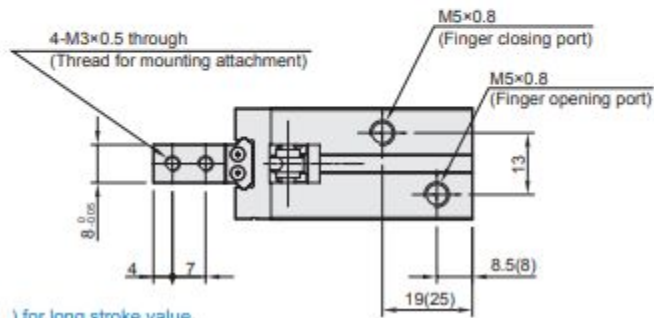
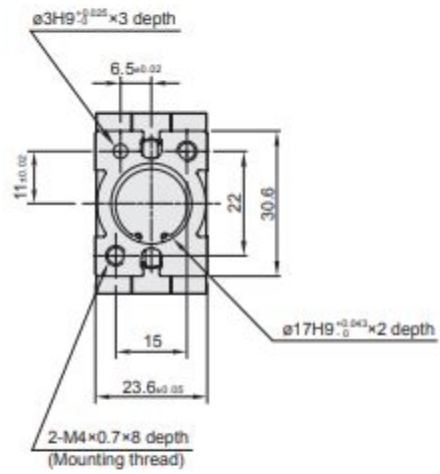
Dimensions $\phi 10$



Dimensions $\varnothing 16$

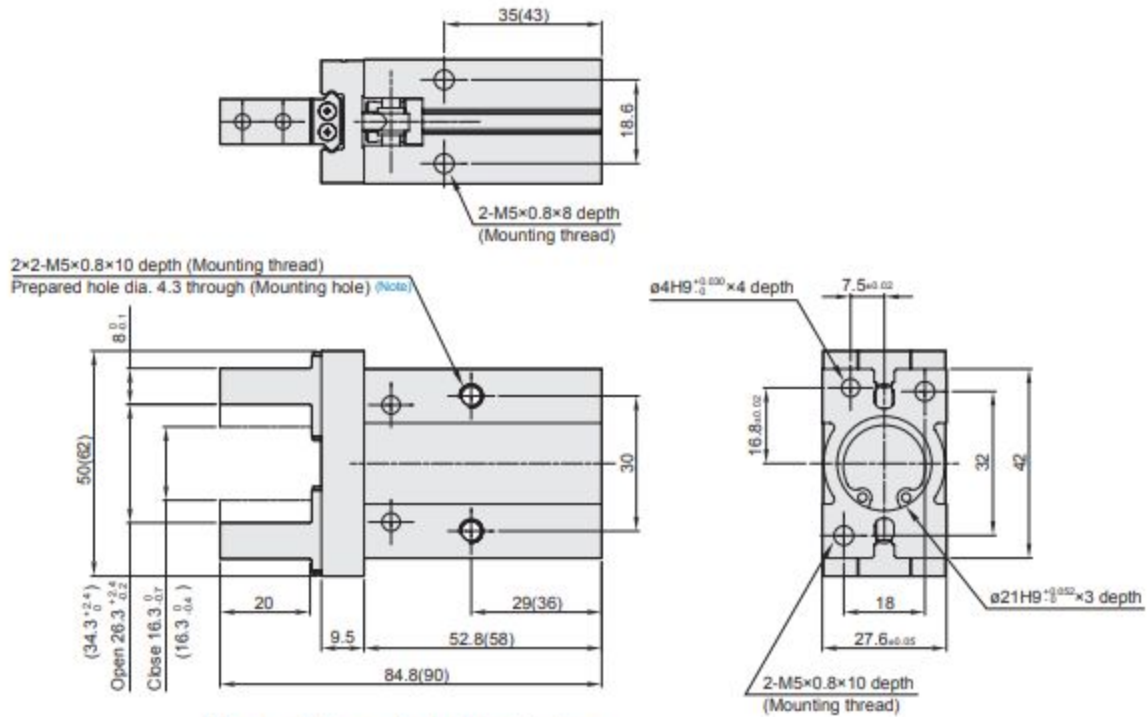


Note. Through-hole mounting is not possible when using the auto switch at the square groove.

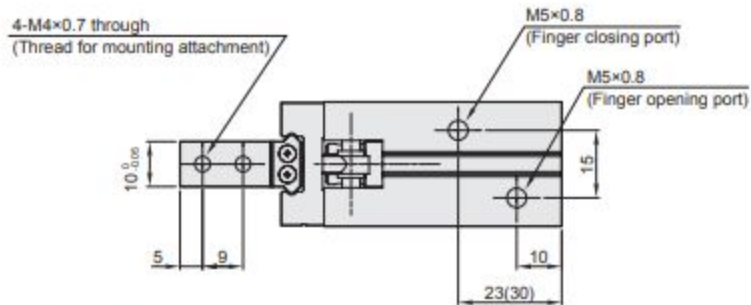


* () for long stroke value.

Dimensions $\varnothing 20$

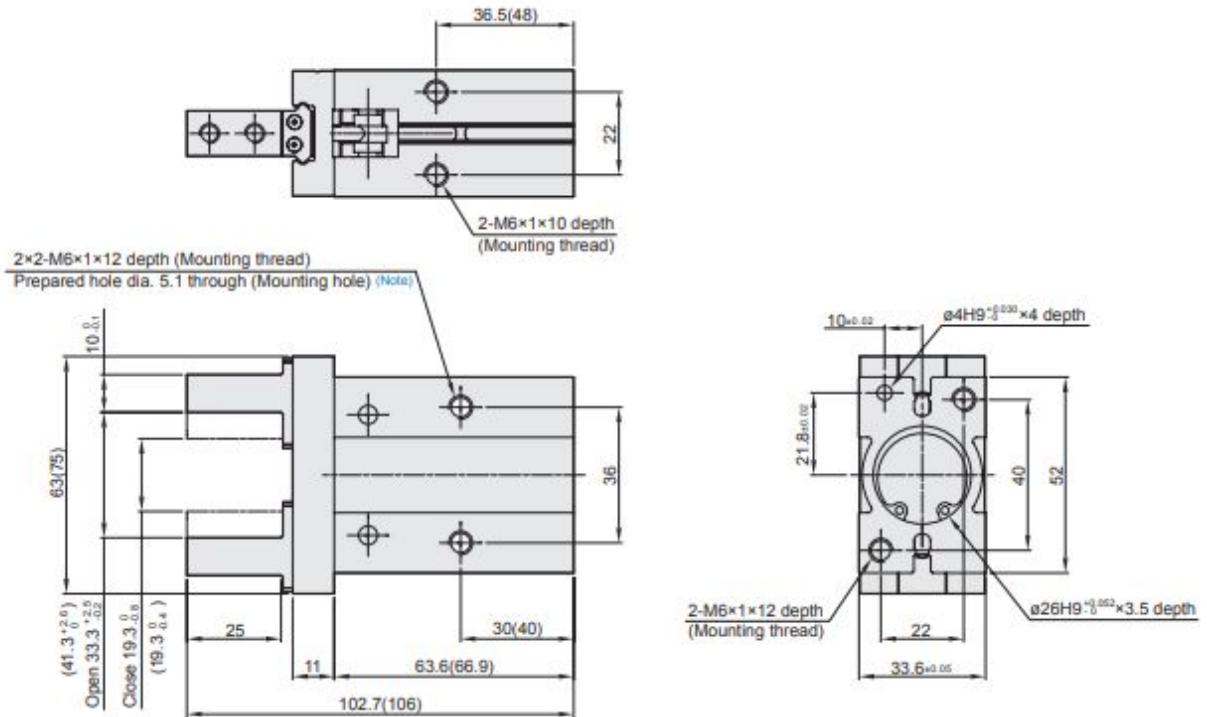


Note. Through-hole mounting is not possible when using the auto switch at the square groove.

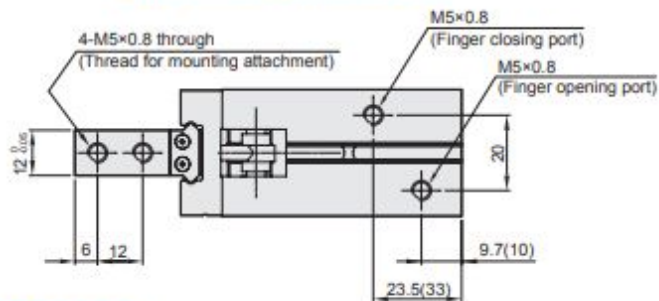


(*) for long stroke value.

Dimensions $\varnothing 25$



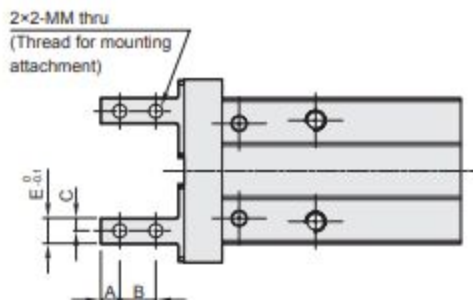
Note. Through-hole mounting is not possible when using the auto switch at the square groove.



* () for long stroke value.

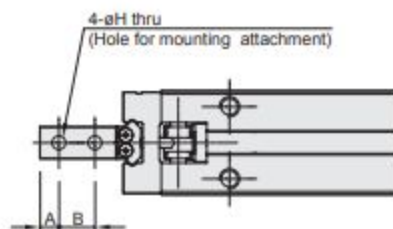
Finger option $\phi 6 \sim \phi 25$

Side tapped mounting

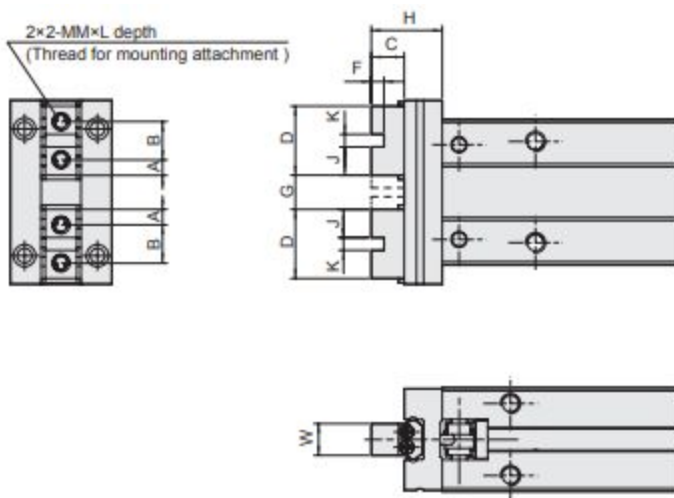


Code Tube I.D.	A	B	C	E	MM
6	2.5	5	2	4	M2×0.4
10	3	5.7	2	4	M2.5×0.45
16	4	7	2.5	5	M3×0.5
20	5	9	4	8	M4×0.7
25	6	12	5	10	M5×0.8

Through hole type



Code Tube I.D.	A	B	H
6	2.5	5	$\phi 2.4$
10	3	5.7	$\phi 2.9$
16	4	7	$\phi 3.4$
20	5	9	$\phi 4.5$
25	6	12	$\phi 5.5$



Code Tube I.D.	A	B	C	D	F	G		H	J	K	MM	L	W
						Open	Closed						
10	2.45	6	5.2	10.9	2	5.4 ^{+2.2} ₀	1.4 ⁰ _{-0.2}	11.2	4.45	2H9 ^{+0.025} ₀	M2.5×0.45	5	5 ⁰ _{-0.05}
16	3.05	8	8.3	14.1	2.5	7.4 ^{+2.2} ₀	1.4 ⁰ _{-0.2}	15.8	5.8	2.5H9 ^{+0.025} ₀	M3×0.5	6	8 ⁰ _{-0.05}
20	3.95	10	10.5	17.9	3	11.6 ^{+2.3} ₀	1.6 ⁰ _{-0.2}	20	7.45	3H9 ^{+0.025} ₀	M4×0.7	8	10 ⁰ _{-0.05}
25	4.90	12	13.1	21.8	4	16 ^{+2.5} ₀	2 ⁰ _{-0.2}	24.1	8.9	4H9 ^{+0.03} ₀	M5×0.8	10	12 ⁰ _{-0.05}