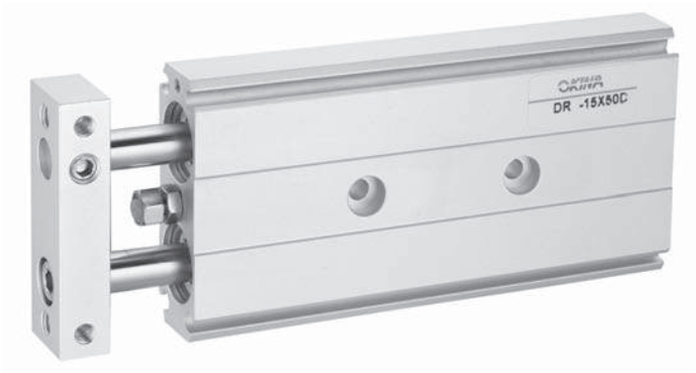
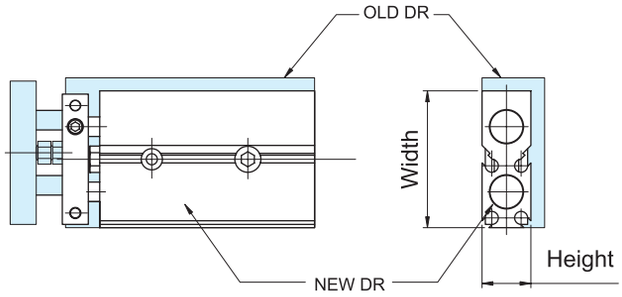


Compact Type



How to order

DR S 10 50 RT 1

Bearing type

S	Slide bearing
L	Ball bushing bearing

Bore size/Stroke (mm)

Bore size	Standard strokes
10	10,20,30,40,50,75
15	10,20,30,40,50,75,100
20	
25	
32	

Auto switch type

Perpendicular	In-line	Style
RTV	RT	Reed switch
RTNV	RTN	NPN
RTPV	RTP	PNP

(Reft to P.79 for detailed auto switch specifications)

Number of auto switch

Specifications

Model	DR-10	DR-15	DR-20	DR-25	DR-32
Bore size (mm)	10	15	20	25	32
Fluid	Air (non-lube)				
Proof pressure (MPa)	1.05				
Maximum operating pressure (MPa)	0.7				
Minimum operating pressure (MPa)	0.1		0.05		
Ambient and fluid temperature (°C)	-10°C~60°C (with no freezing)				
Piston speed (mm/s)	30 to 800	30 to 700		30 to 600	
Cushion	Rubber bumper on both sides				
Stroke adjustable range (mm)	0 to -5 compared to the standard stroke				
Port size	M5x0.8				PT 1/8

* Note 1) The maximum piston speed shown in the table above is for extension.
The maximum piston speed for retraction is approximately 70% that for extension.

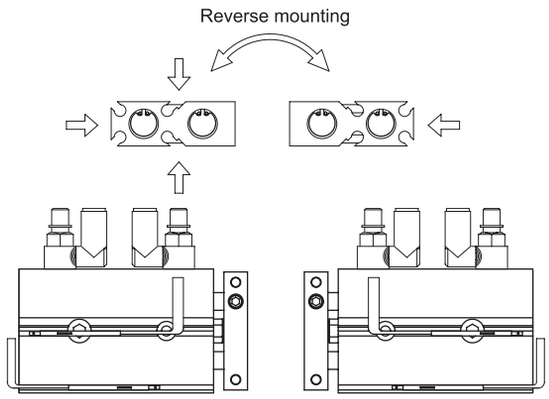
Standard / Special Strokes

(mm)

Model	Standard strokes	Special order - Long stroke
DR-10	10, 20, 30, 40, 50, 75	80 to150
DR-15	10, 20, 30, 40, 50, 75, 100	110 to 150
DR-20		110 to 200
DR-25		
DR-32		

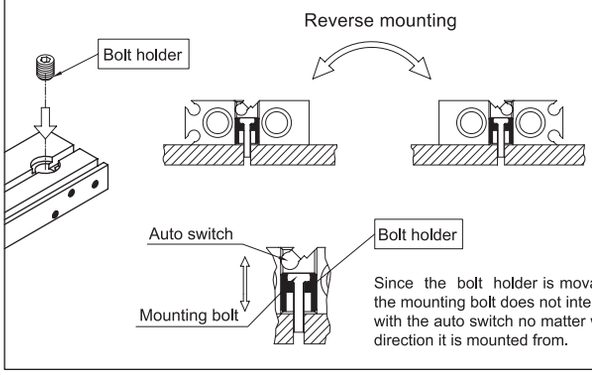
Superior mounting

Auto switches can be installed from 3 directions.



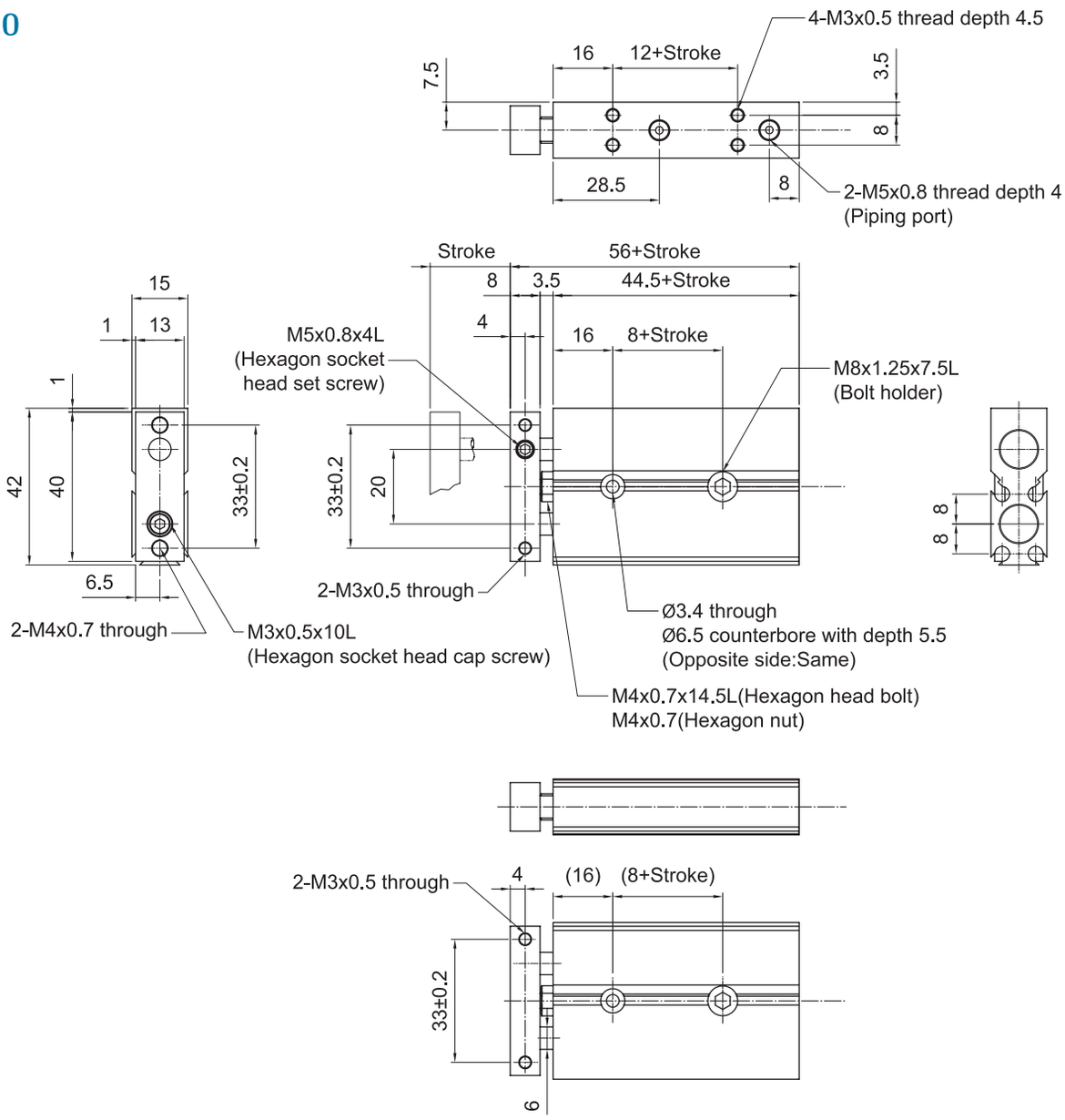
Symmetric mounting

Reverse mounting mechanism

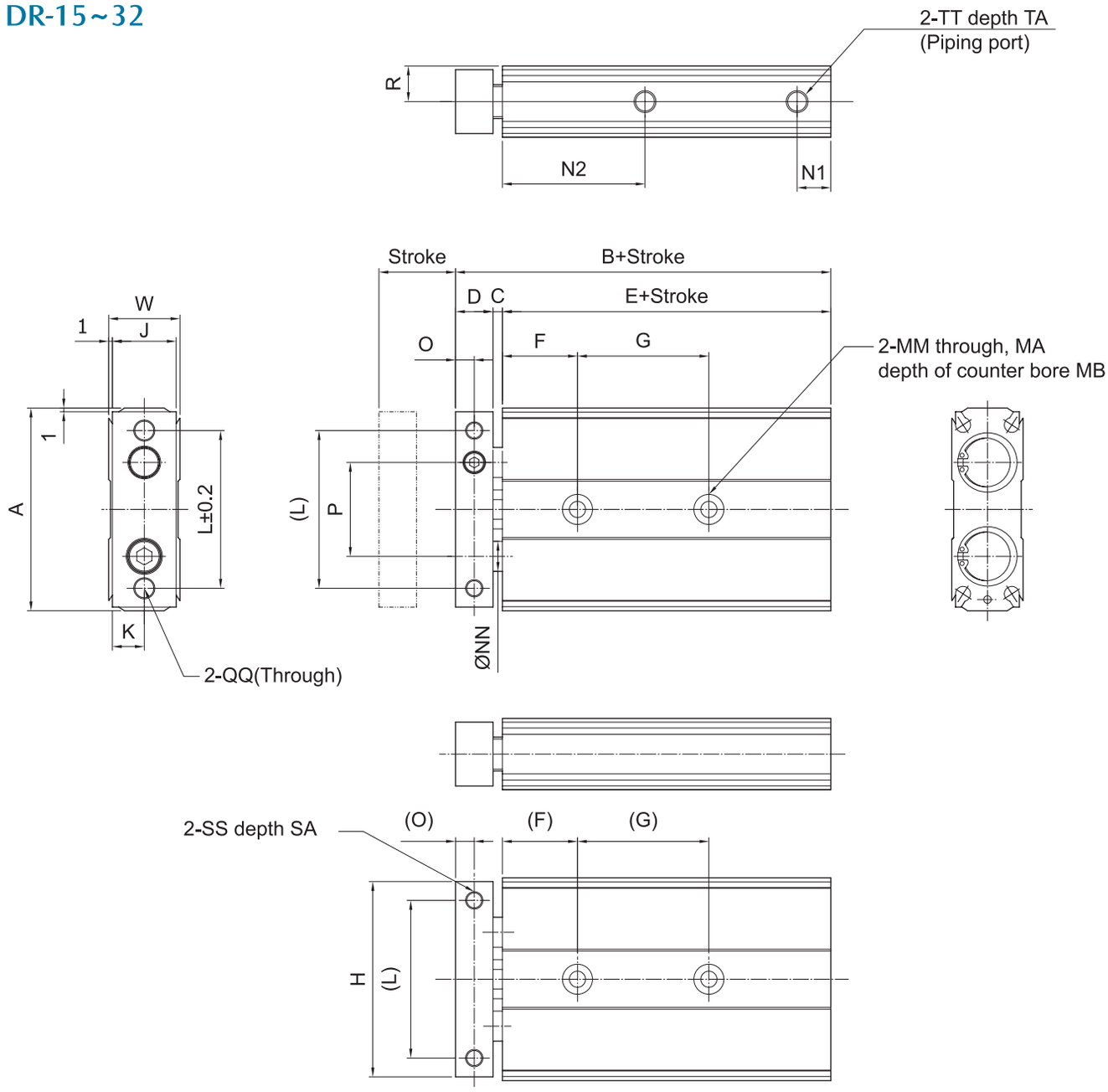


Since the bolt holder is movable, the mounting bolt does not interfere with the auto switch no matter what direction it is mounted from.

DR-10



DR-15~32



Model	A	B	C	D	E	F	H	J	K	L	MA	MB	MM	N1	N2	NN	O
DR-15	54	70	2.5	10	57.5	20	52	17	8.5	42	4.3	8	4.3	9	38	8	5
DR-20	62	84	4.5	12	67.5	25	60	22	11	50	5.3	9.5	5.5	9	45	10	6
DR-25	73	87	4.5	12	70.5	30	71	27	13.5	60	6.3	11	6.5	9	46	12	6
DR-32	94	100.5	4	16	80.5	30	92	35	17.5	75	6.3	11	6.5	10	56	16	8

Model	P	QQ	R	SA	SS	TA	TT	W
DR-15	25	M5x0.8	9.5	6	M4x0.7	4	M5x0.8	19
DR-20	29	M5x0.8	12	6	M4x0.7	4	M5x0.8	24
DR-25	35	M6x1.0	14.5	7.5	M5x0.8	4	M5x0.8	29
DR-32	45	M6x1.0	18.5	7.5	M5x0.8	5	Rc 1/8	37

Symbol / Stroke / Model	G			
	10,20	30,40,50	75	100
DR-15	25	35	45	55
DR-20	30	40	60	60
DR-25	30	40	60	60
DR-32	40	50	70	70

Specifications

Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm^2)	Operating pressure (MPa)						
				0.1	0.2	0.3	0.4	0.5	0.6	0.7
DR-10	6	OUT	157	15.7	31.4	47.1	62.8	78.5	94.2	110
		IN	100	10.0	20.0	30	40.0	50.0	60.0	70.0
DR-15	8	OUT	353	35.3	70.6	106	141	177	212	247
		IN	252	25.2	50.4	75.6	101	126	151	176
DR-20	10	OUT	628	62.8	126	188	251	314	377	440
		IN	471	47.1	94.2	141	188	236	283	330
DR-25	12	OUT	982	98.2	196	295	393	491	589	687
		IN	756	75.6	151	227	302	378	454	529
DR-32	16	OUT	1608	161	322	482	643	804	965	1126
		IN	1206	121	241	362	482	603	724	844

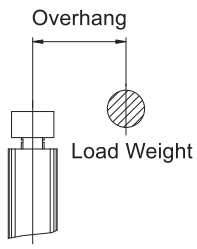
* Note) Theoretical output (N) = Pressure (MPa) x Piston area (mm^2)

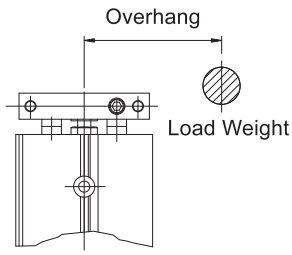
Weights

(kg)

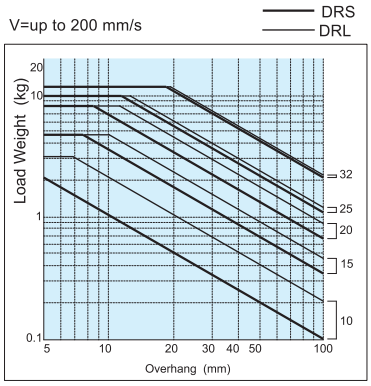
Model		Standard strokes (mm)						
		10	20	30	40	50	75	100
DR-10	S	0.10	0.11	0.13	0.14	0.16	0.20	–
	L	0.11	0.12	0.14	0.15	0.17	0.21	–
DR-15	S	0.20	0.22	0.24	0.26	0.28	0.34	0.39
	L	0.22	0.24	0.26	0.28	0.30	0.36	0.41
DR-20	S	0.35	0.37	0.40	0.42	0.45	0.51	0.58
	L	0.38	0.40	0.43	0.45	0.48	0.54	0.61
DR-25	S	0.51	0.54	0.58	0.62	0.66	0.75	0.85
	L	0.52	0.55	0.59	0.63	0.67	0.76	0.86
DR-32	S	1.02	1.08	1.13	1.19	1.25	1.39	1.53
	L	1.03	1.09	1.14	1.20	1.26	1.40	1.54

Vertical Mounting

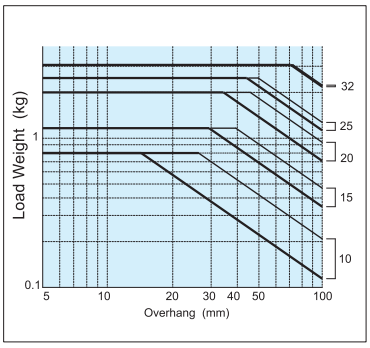




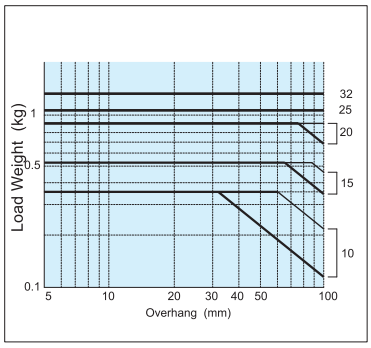
V=up to 200 mm/s



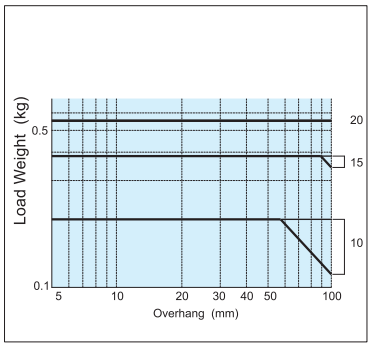
V=up to 400 mm/s



V=up to 600 mm/s

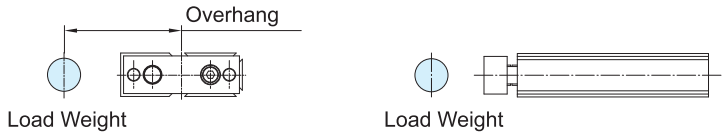


V=up to 800 mm/s
(up to 700 mm/s for 15, 20)

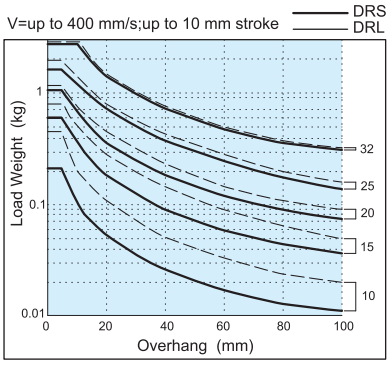


Note) V= 700 mm/s for 15, 20.

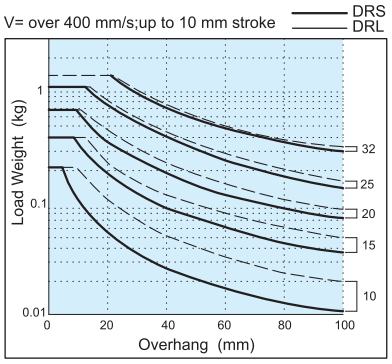
Horizontal Mounting



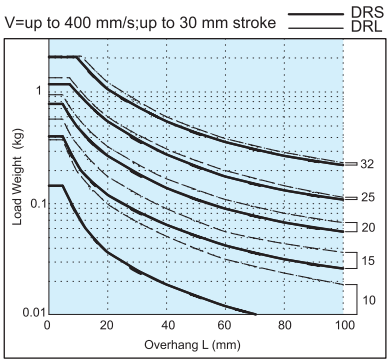
V=up to 400 mm/s;up to 10 mm stroke



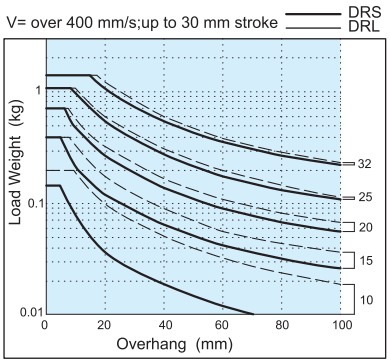
V= over 400 mm/s;up to 10 mm stroke



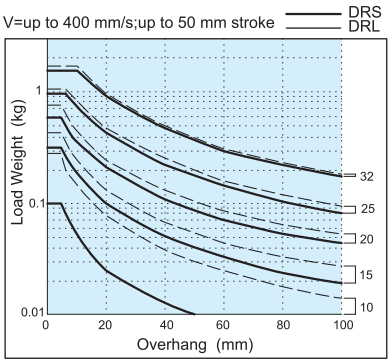
V=up to 400 mm/s;up to 30 mm stroke



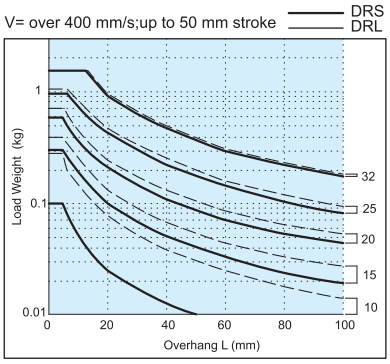
V= over 400 mm/s;up to 30 mm stroke



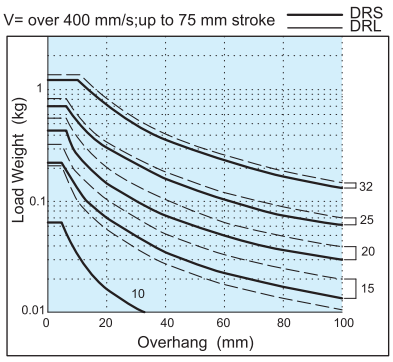
V=up to 400 mm/s;up to 50 mm stroke



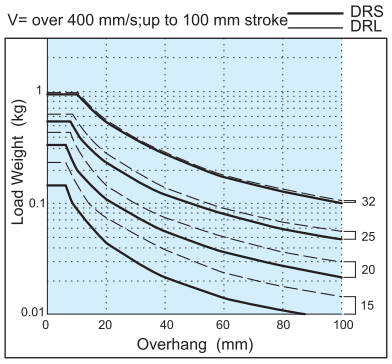
V= over 400 mm/s;up to 50 mm stroke



V= over 400 mm/s;up to 75 mm stroke



V= over 400 mm/s;up to 100 mm stroke

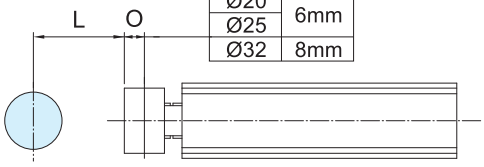


Caution

When the cylinder is horizontally mounted and the plate end does not reach the load's center of gravity, use the formula below to calculate the imaginary stroke L'that includes the distance between the loade's center of gravity and the plate end. Select the graph that corresponds to the imaginary stroke L'.

Imaginary stroke L' = (stroke) + O + L

Ø10	4mm
Ø15	5mm
Ø20	6mm
Ø25	
Ø32	8mm



(Example)

If using DR15 x 10 and L=15mm

imaginary stroke L' = 10 + 5 + 15 = 30

Therefore, the graph used for your model selection should be the one for DR15 (up to 30 mm stroke)