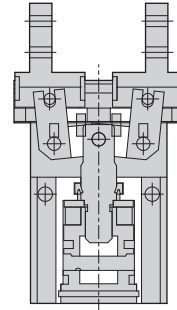
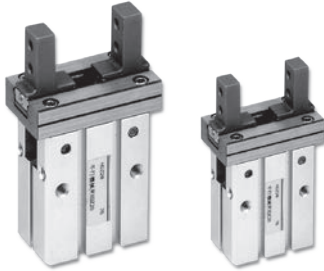


# HDZ series - Parallel gripper

Operation specification and Ordering expression

CHELIC PNEUMATIC

## Internal structure



**HDS**  
Angular  
Gripper

**HDM**  
180° Angular  
Gripper

**HDP**  
Parallel  
Gripper

**HDF**  
Parallel  
Gripper

**HDZ**  
Parallel  
Gripper

**HDZL**  
Parallel  
Gripper

**HDW**  
Parallel  
Gripper

**HDL**  
Gripper

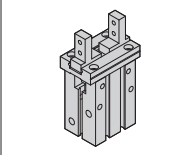
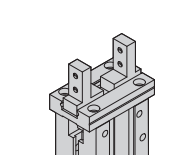
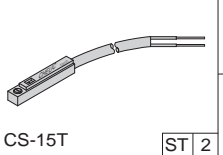
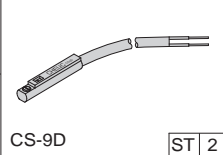
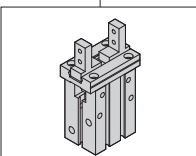
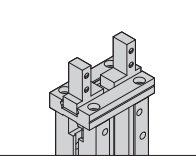
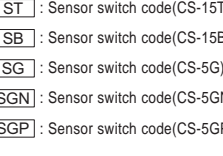
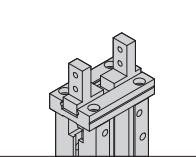
**HDT**  
Gripper

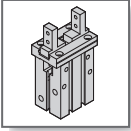
**HDR**  
Gripper

## Specification

Item	Model	HDZ-10	HDZ-16	HDZ-20	HDZ-25	HDZ-32	HDZ-40
Bore size		Ø10	Ø16	Ø20	Ø25	Ø32	Ø40
Fluid		Air					
Type of operation		Double acting					
Pressure range	kgf/cm <sup>2</sup> (kpa)	2~7(200~700)		1 ~ 7 ( 100 ~ 700 )			
Range of service temperature	°C	0 ~ 60°					
Max. operation frequency	min	100				60	
Lever open/close accuracy		± 0.01 mm				± 0.02 mm	
Lever open/close stroke		4	6	10	14	22	30
Lubrication		Without lubricator					

## How to order

<b>HDZ</b>	<b>16</b>	-	-	<b>ST</b>	<b>2</b>
Model	Bore size			Type of operation	Sensor switch
	10 - Ø 10 mm 16 - Ø 16 mm 20 - Ø 20 mm 25 - Ø 25 mm 32 - Ø 32 mm 40 - Ø 40 mm				
<b>HDZ series :</b> Standard double acting Parallel gripper				None : Standard	
					
<b>HRZ series :</b> single acting Parallel gripper				<b>[B]</b> : Side tapped mounting	None : Without sensor switch <b>[ST]</b> : Sensor switch code(CS-15T) <b>[SB]</b> : Sensor switch code(CS-15B) <b>[SG]</b> : Sensor switch code(CS-5G) <b>[SGN]</b> : Sensor switch code(CS-5GN) <b>[SGP]</b> : Sensor switch code(CS-5GP) <b>[2]</b> : Number of sensor switch 1 = 1 PCS 2 = 2 PCS
					<b>[SD]</b> : Sensor switch code(CS-9D) <b>[SB]</b> : Sensor switch code(CS-9B) <b>[SH]</b> : Sensor switch code(CS-9H) <b>[SDN]</b> : Sensor switch code(CS-9DN) <b>[SDP]</b> : Sensor switch code(CS-9DP) <b>[SG]</b> : Sensor switch code(CS-8G) <b>[SGN]</b> : Sensor switch code(CS-8GN) <b>[SGP]</b> : Sensor switch code(CS-8GP) ※ CS-9H use for voltage AC / DC 5 ~ 240V <b>[2]</b> : Number of sensor switch 1 = 1 PCS 2 = 2 PCS
				<b>[C]</b> : Through-holes in opening / closing direction	<b>HDZ Ø10 only suitable for 15T(B) sensor switch</b>

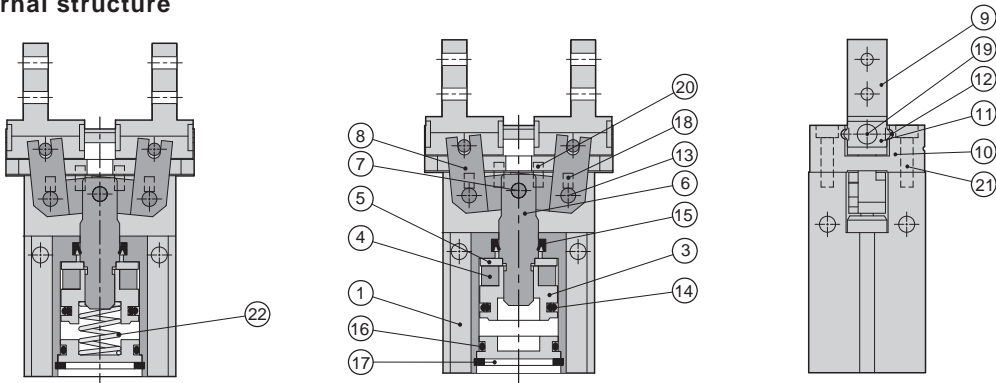


# HDZ series - Parallel gripper

## Components and Material list

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### Internal structure



● HRZ single acting normally open

### Components and Material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	12	Ball	Bearing steel
02	End cover	Aluminum alloy	13	Action lever pin	Bearing steel
03	Piston	Copper	14	Piston packing	NBR
04	Magnet	Plastic	15	Rod packing	NBR
05	Magnet cover	Copper	16	End cover o-ring	NBR
06	Piston rod	Stainless steel	17	Snap ring	Alloy steel
07	Rod pin	Bearing steel	18	Screw	Alloy steel
08	Action lever	Stainless steel (SUS440)	19	Screw	Alloy steel
09	Finger	Stainless steel (SUS440)	20	Pin	Bearing steel
10	Finger base	Stainless steel (SUS440)	21	Mounting screw	Alloy steel
11	Ball stopper	Stainless steel	22	Spring	Stainless steel

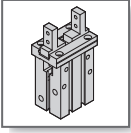
### Packing and O-Ring

Item		End cover O-Ring	Piston packing	Rod packing
Bore size mm	Number	1	1	1
HDZ - 10		∅ 10 X ∅ 1	COP - 10	DYR - 6
HDZ - 16		∅ 13.2 X ∅ 1.5	COP - 16	DYR - 8K
HDZ - 20		∅ 17.5 X ∅ 1.5	COP - 20	DYR - 10
HDZ - 25		∅ 22.5 X ∅ 1.5	COP - 25	DYR - 12
HDZ - 32		∅ 28.5 X ∅ 2	COP - 32	DYR - 16
HDZ - 40		∅ 38.5 X ∅ 2	COP - 40	DYR - 20

### Type

Operating type	Model	Bore size mm	Gripping force		Close stroke mm	Weight kg
			Outer gripping force	Inner gripping force		
Double acting	HDZ - 10	10	11	17	4	0.06
	HDZ - 16	16	34	45	6	0.14
	HDZ - 20	20	42	66	10	0.27
	HDZ - 25	25	65	104	14	0.49
	HDZ - 32	32	158	193	22	0.81
	HDZ - 40	40	254	318	30	1.37

Note 1 : L : Gripping point length = 20 mm • P : Pressure = 5 Kgf/cm<sup>2</sup>

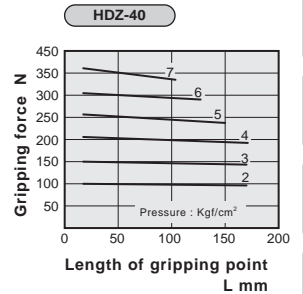
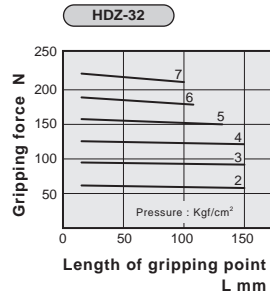
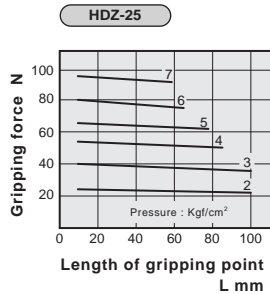
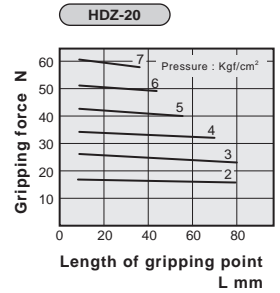
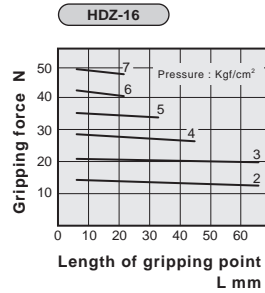
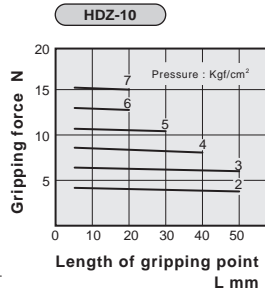
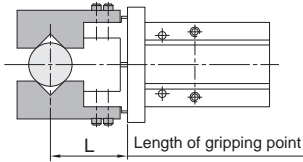


# HDZ series - Parallel gripper

## Gripping force characteristic

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### Outer gripping force characteristic



**HD5**  
Angular  
Gripper

**HDM**  
180° Angular  
Gripper

**HDP**  
Parallel  
Gripper

**HDf**  
Parallel  
Gripper

**HDZ**  
Parallel  
Gripper

**HDZL**  
Parallel  
Gripper

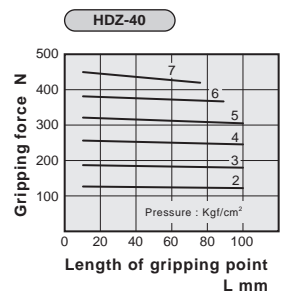
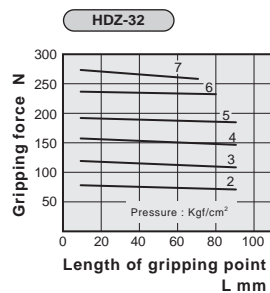
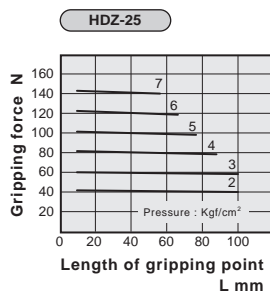
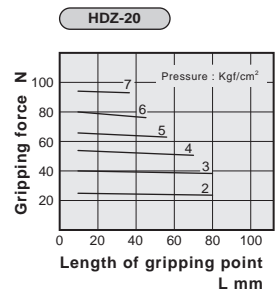
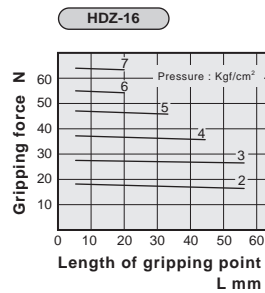
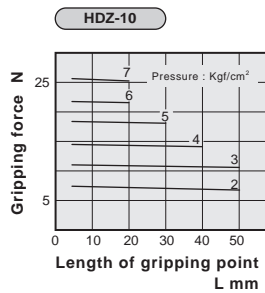
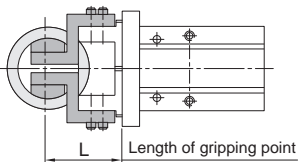
**HDW**  
Parallel  
Gripper

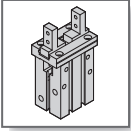
**HDL**  
Gripper

**HDT**  
Gripper

**HDR**  
Gripper

### Inner gripping force characteristic






# HDZ series - Parallel gripper

Operating type, Data, and Mounting type

CHELIC PNEUMATIC

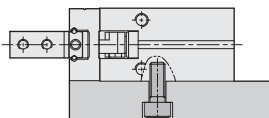
## Operating type and Data

Operating type	Model	Bore size (mm)	The smallest operating pressure (Mpa)	Thread port (mm)	Effective gripping force	
					Kgf(N)	
Double acting	HDZ - 10	10	0.22	4-M2.5x0.45P	Open	1.7 (17)
					Close	1.1 (11)
	HDZ - 16	16	0.1	4-M3x0.5P	Open	4.5 (45)
					Close	3.4 (34)
	HDZ - 20	20	0.1	4-M4x0.7P	Open	6.7 (66)
					Close	4.2 (42)
	HDZ - 25	25	0.1	4-M5x0.8P	Open	10.6(104)
					Close	6.6 (65)
	HDZ - 32	32	0.1	4-M6x1.0P	Open	19.6 (193)
					Close	16.1 (158)
	HDZ - 40	40	0.1	4-M8x1.25	Open	32.4 (318)
					Close	25.9 (254)
Normally open	HRZ - 10	10	0.36	4-M2.5x0.45P	Close	0.7 (7.1)
	HRZ - 16	16	0.3	4-M3x0.5P	Close	2.7 (27)
	HRZ - 20	20	0.2	4-M4x0.7P	Close	3.3 (33)
	HRZ - 25	25	0.2	4-M5x0.8P	Close	4.5 (45)
	HRZ - 32	32	0.2	4-M6x1.0P	Close	13.3 (131)
	HRZ - 40	40	0.1	4-M8x1.25P	Close	22.1(217)

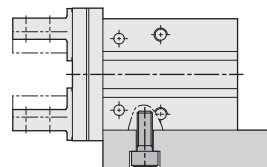
 Note : the gripping force is the force of open and close gripper which is in the length of gripping point is 30mm and acting pressure is 0.5Mpa

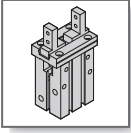
## Mounting type

1. Use the thread in the bottom



2. Use the thread in the side of body





# HDZ series - Parallel gripper

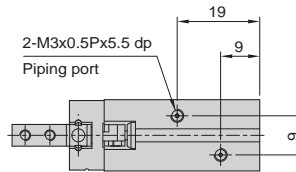
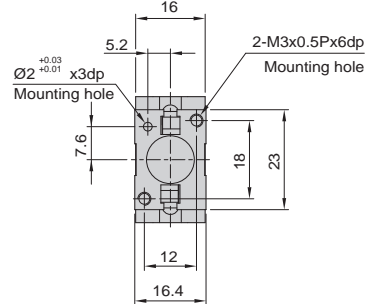
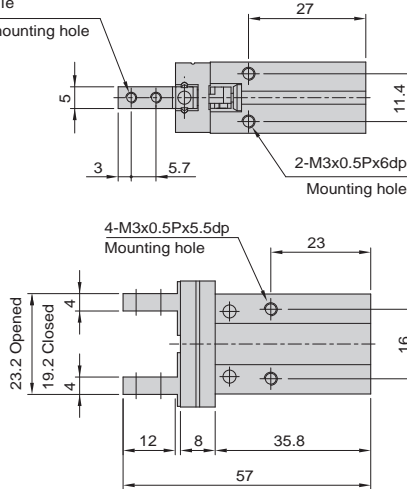
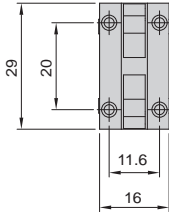
External dimension

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**HDZ - 10**  
( Double acting )  
**HRZ - 10**  
( Single acting )

4-M2.5x0.45P  
Thru-hole

Finger mounting hole



HDZ Ø10 only suitable for 15T(B) sensor switch

**HDS**  
Angular  
Gripper

**HDH**  
180° Angular  
Gripper

**HDH**  
Parallel  
Gripper

**HDH**  
Parallel  
Gripper

**HDZ**  
Parallel  
Gripper

**HDZL**  
Parallel  
Gripper

**HDW**  
Parallel  
Gripper

**HDL**  
Gripper

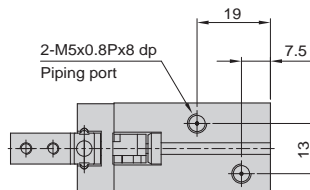
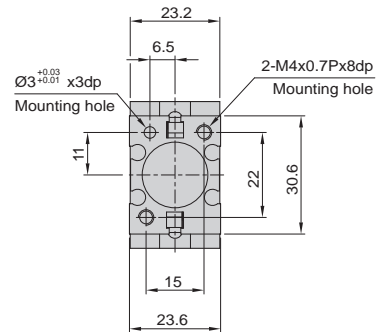
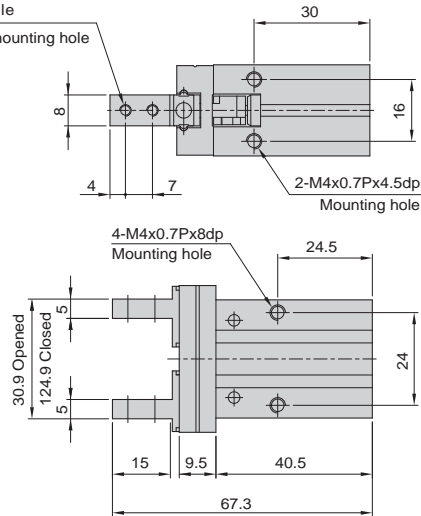
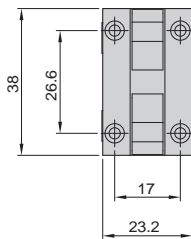
**HDT**  
Gripper

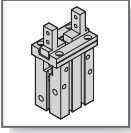
**HDR**  
Gripper

**HDZ - 16**  
( Double acting )  
**HRZ - 16**  
( Single acting )

4-M3x0.5P  
Thru-hole

Finger mounting hole



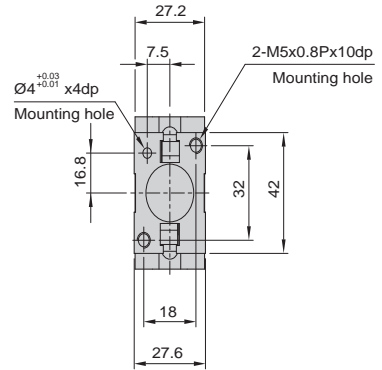
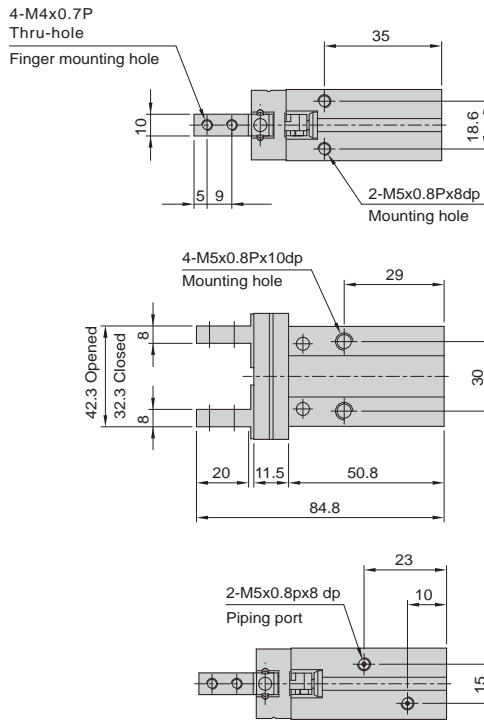
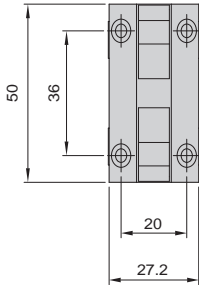


# HDZ series - Parallel gripper

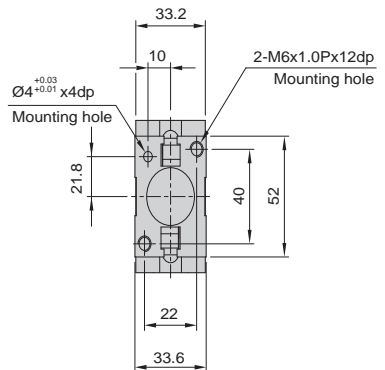
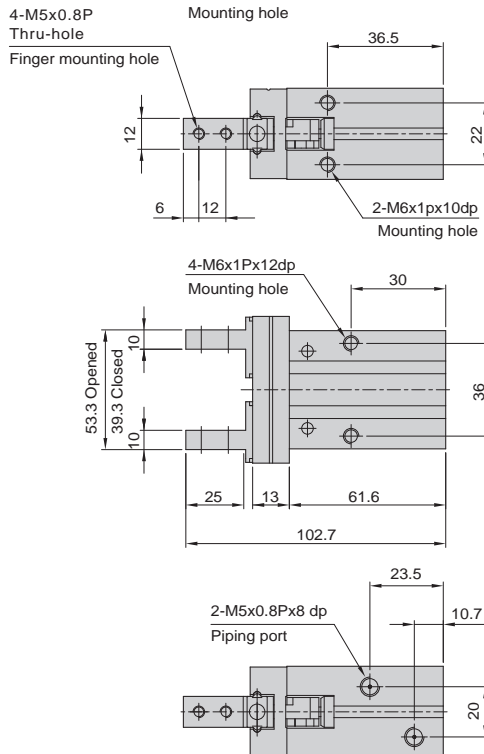
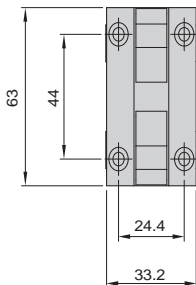
## External dimension

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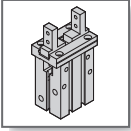
- **HDZ - 20**  
( Double acting )
- HRZ - 20**  
( Single acting )



- **HDZ - 25**  
( Double acting )
- HRZ - 25**  
( Single acting )





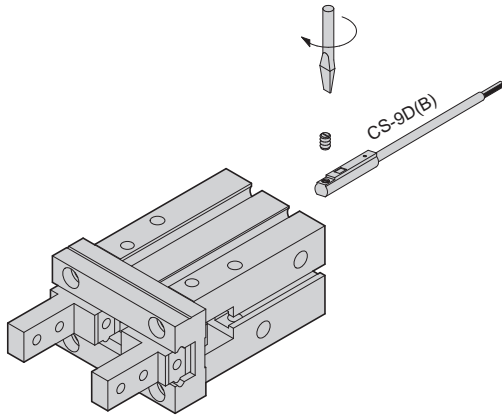


# HDZ series - Parallel gripper

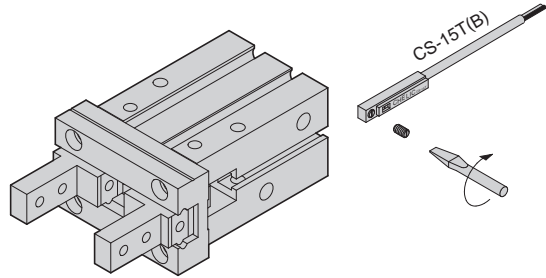
## Sensing setting and Installation

CHELIC PNEUMATIC

### ◀ Sensing setting and Installation



- CS-9D(B)  
( Please refer to P.6-2.15 Sensor switch standard )
- CS-15T(B)  
( Please refer to P.6-2.18 Sensor switch standard )



### ◀ Sensing range

Sensor switch is fixed on the cylinder body.  
The magnetic piston head will activate the sensor switch when it enters the operating range. It has 0.5mm differential.

### ◀ Operating range

When piston head moves the switch setting and adjustment will be based on the responding range generated by the magnetic field and the switch.  
(Please refer to the below table)

Unit : mm

Model	CS-9D(B/H)	
Bore size	Operating range (F)	Response differential(R)
10	—	—
16	5	1
20	8	1
25	8	1
32	10	1
40	13	1.2

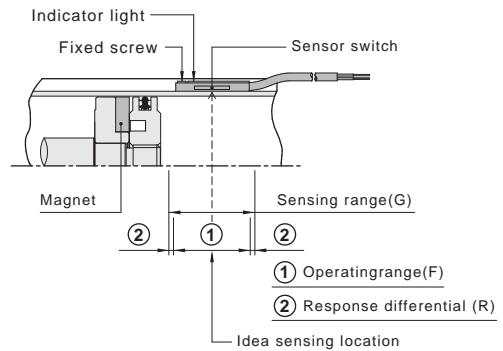
※ CS-9D ( B / H ) mounting type is in the front

Unit : mm

Model	CS-15T(B)	
Bore size	Operating range (F)	Response differential(R)
10	5	1
16	11.5	1
20	10	1
25	12	1
32	10	1.2
40	12	1.2

※ CS-15T ( B ) mounting type is in the side

### ◀ Sensor switch setting and Operating range



### ◀ Connection type

