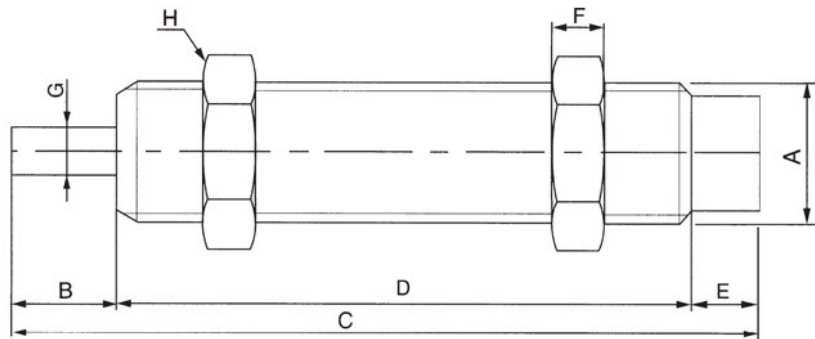


■ Specification

Item	Stroke mm	Max. energy absorbed Nm	Max. energy absorbed/hour Nm	Max. effective weight Kg			Max. shock speed m/s			Working Temperature °C
				1	2	3	1	2	3	
AD-1410	10	20	25,000	80			3			-10~80
AD-2016	16	25	30,000	200			3.5			-10~80
AD-2525	25	85	70,000	400			3.5			-10~80
AD-2540	40	100	80,000	700			3.5			-10~80
AD-3650	50	300	100,000	1400			3			-10~80
AD-4225	25	260	125,000	3000			3.5			-10~80
AD-4250	50	500	150,000	4000			4.5			-10~80
AD-4275	75	750	180,000	6000			4.5			-10~80
AD-6450	50	12,000	1500,000	12727			1.5			-10~80
AD-64100	100	24,000	2000,000	18181			1.5			-10~80
AD-64150	150	36,000	2500,000	23636			1.5			-10~80

● Without cushion cover

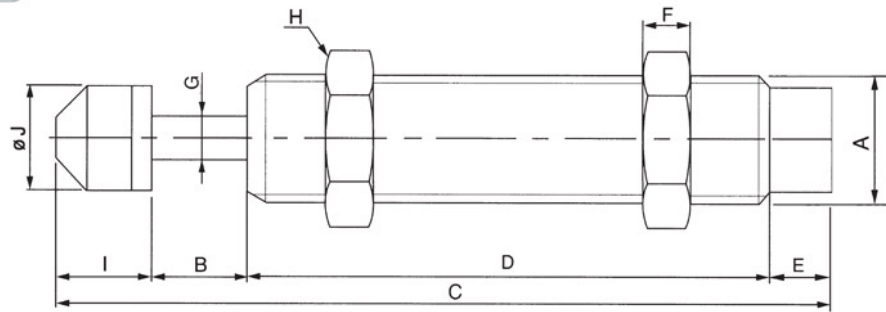


■ Figure Dimension

Specification/Type	A	B	C	D	E	F	G	H
AC-0806	M8x1.0	6	44	33	5	3	2.8	11
AC-1005	M10x1.0	5	32.7	22.9	4.8	3	3	12.7
AC-1008	M10x1.0	8	51	38	5	3	3	12.7
AC-1210	M12x1.0	10	60	45.5	4.5	4	3	14
AC-1412	M14x1.5	12	88	67	9	6	4	19
AC-1416	M14x1.5	16	111	86	9	6	4	19

## AC / AD Series Shock Absorber

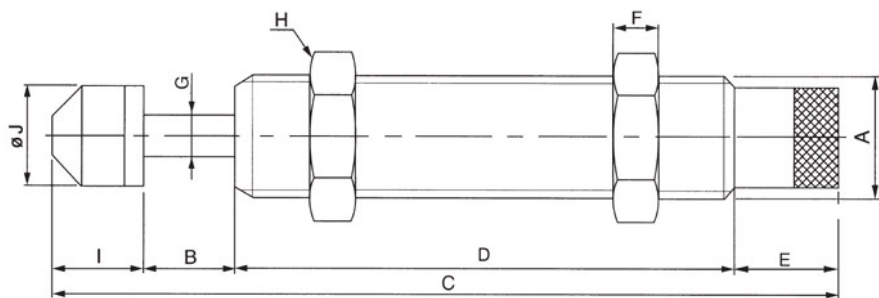
● With cushion cover



■ Figure Dimension

Specification/Type	A	B	C	D	E	F	G	H	J
AC-0806	M8x1.0	6	52.4	33	5	3	2.8	11	6.6
AC-1005	M10x1.0	5	41.2	22.9	4.8	3	3	12.7	8.6
AC-1008	M10x1.0	8	59.5	38	5	3	3	12.7	8.6
AC-1210	M12x1.0	10	69.5	45.5	4.5	4	3	14	10.3
AC-1412	M14x1.5	12	102.5	67	9	6	4	19	12
AC-1416	M14x1.5	16	125.5	86	9	6	4	19	12
AC-2020	M20x1.5	20	146.5	101	9	8	6	26	18
AC-2050	M20x1.5	50	233.5	158	9	8	6	26	18
AC-2525	M25x1.5	25	154.3	101	10	10	8	32	22
AC-2540	M25x1.5	40	208.3	127	10	10	8	32	22
AC-3660	M36x1.5	60	243	134	11	15	10	46	35

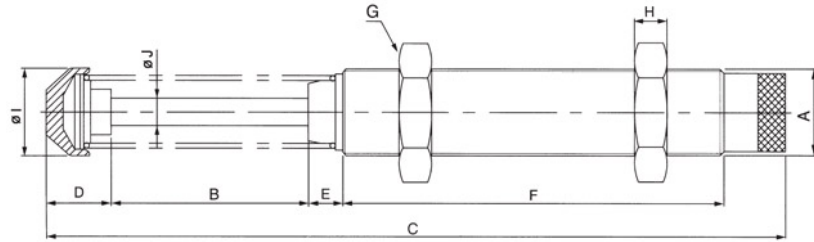
● Adjustable Type



■ Figure Dimension

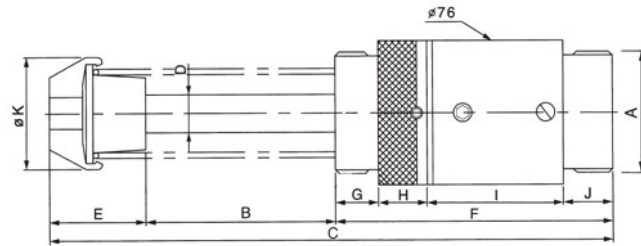
Specification/Type	A	B	C	D	E	F	G	H	I	J
AD-1410	M14x1.5	10	113.5	73	16	6	4	19	14.5	12
AD-2016	M20x1.5	16	149.5	101	16	8	6	26	16.5	18
AD-2525	M25x1.5	25	161.8	101	17.5	10	8	32	18.3	22
AD-2540	M25x1.5	40	215.8	127	17.5	10	8	32	31.3	22

● Adjustable Type



■ Figure Dimension

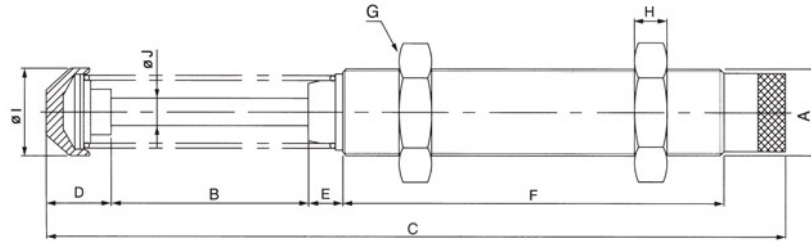
Specification/Type	A	B	C	D	E	F	G	H	I	J
AD-3650	M36x1.5	50	242	21	17	146	46	15	35	10
AD-4225	M42x1.5	25	186.5	34	26	104.5	50	15	44.5	12
AD-4250	M42x1.5	50	241	34	26	134	50	15	44.5	12
AD-4275	M42x1.5	75	301.5	39	26	164.5	50	15	44.5	12



■ Figure Dimension

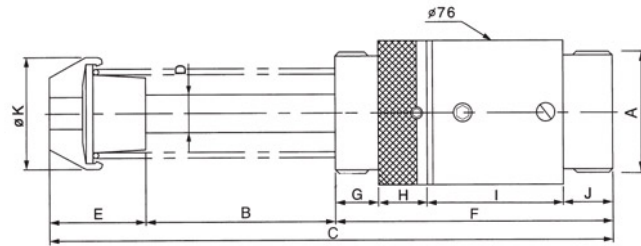
Specification/Type	A	B	C	D	E	F	G	H	I	J	K
AD-6450	2 1/2 -UNF(63.5)	50	247.8	20	51.8	146	23	20	77	26	59
AD-64100	2 1/2 -UNF(63.5)	100	347.8	20	51.8	196	23	20	127	26	59
AD-64150	2 1/2 -UNF(63.5)	150	467.8	20	61.8	256	23	20	187	26	59

● Adjustable Type



■ Figure Dimension

Specification/Type	A	B	C	D	E	F	G	H	I	J
AD-3650	M36x1.5	50	242	21	17	146	46	15	35	10
AD-4225	M42x1.5	25	186.5	34	26	104.5	50	15	44.5	12
AD-4250	M42x1.5	50	241	34	26	134	50	15	44.5	12
AD-4275	M42x1.5	75	301.5	39	26	164.5	50	15	44.5	12



■ Figure Dimension

Specification/Type	A	B	C	D	E	F	G	H	I	J	K
AD-6450	2 1/2 -UNF(63.5)	50	247.8	20	51.8	146	23	20	77	26	59
AD-64100	2 1/2 -UNF(63.5)	100	347.8	20	51.8	196	23	20	127	26	59
AD-64150	2 1/2 -UNF(63.5)	150	467.8	20	61.8	256	23	20	187	26	59

Accessories for cylinder

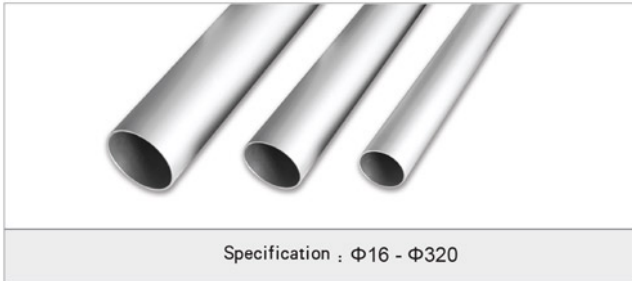
45 Piston rod



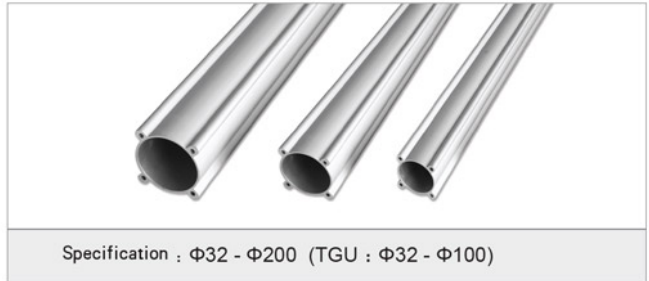
304 Stainless steel Piston rod



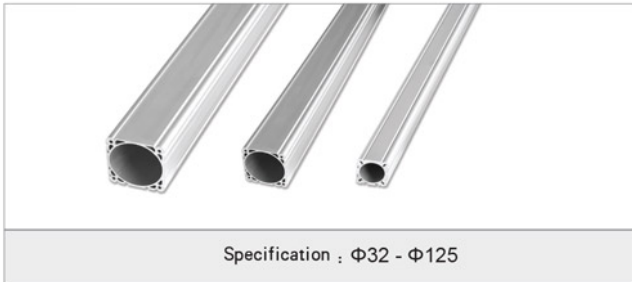
TGC/TGG Bore



TGU/TGI Bore



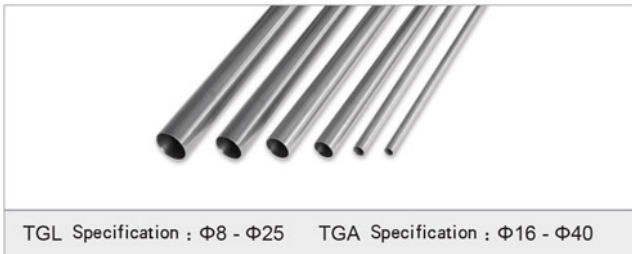
TGD Bore



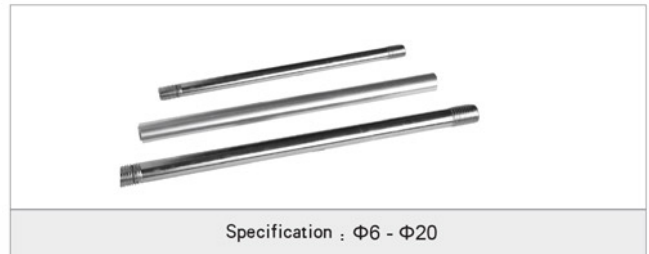
TGN Bore



TGL/TGA Bore



TGC/TGI Tie rod



Accessories for cylinder

TGD Cylinder kits (ISO6431&VDMA24562)



TGG Cylinder kits (ISO6431&VDMA24562)



TGI Cylinder kits (ISO6431&VDMA24562)



TGC Cylinder kits



TGU Cylinder kits



ADVU Cylinder kits



ACP Cylinder kits



TGN/CQ2B Cylinder kits



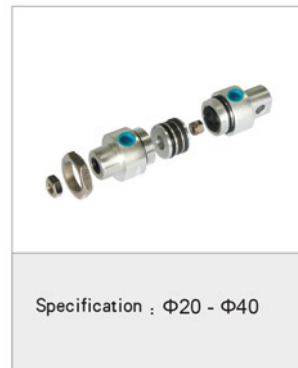
TGL Cylinder kits (ISO6432)



TGA Cylinder kits



TGM Cylinder kits



## ● Ordering Code

## TGD/TGI/TGG Installing Accessories

Accord : ISO15552(ISO6431)  
VDMA24562

**TGD**

Type:  
TGD TGI TGG

**32**

Bore size

**LB**

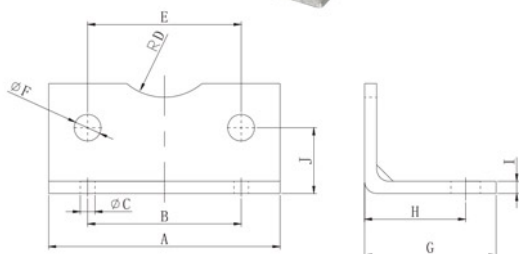
Accessory Type

**Blank**

Blank: standard style  
F: Cast iron material

TGD:  $\Phi 32-\Phi 125$   
TGI:  $\Phi 32-\Phi 200$   
TGG:  $\Phi 32-\Phi 320$

## ● LB

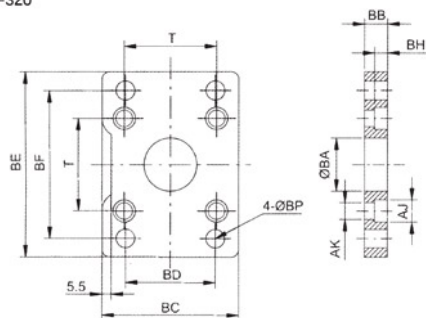


Bore	A	B	C	D	E	G	H	I	F	J
32	46.5	32	7	16	32.5	30.5	23	4	7	15.75
40	52.5	36	9	19	38	37	26.5	4	7	17
50	65	45	9	21	46.5	41.5	30.5	4	9	21.75
63	75	50	9	24	56.5	44.5	32.5	4	9	21.75
80	94.5	63	12	24	72	56	41	5	11	27
100	114.5	75	14	29	89	58.5	40	5	11	26.5

## ● FA、FB

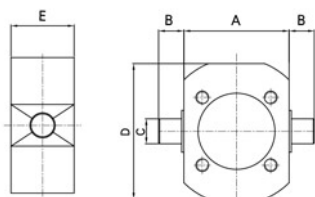


Cast iron specification :  
 $\Phi 32-320$



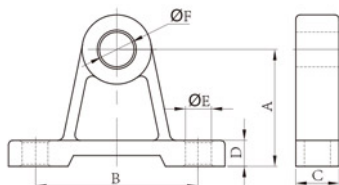
Bore	BP	BB	BC	BD	BE	BF
32	7	10	45	32	80	64
40	9	10	52	36	90	72
50	9	12	65	45	110	90
63	9	12	76	50	120	100
80	12	16	94	63	150	126
100	14	16	112	75	175	150
125	16.5	20	139	90	218	180
160	18.5	20	180	115	280	230
200	24	25	220	135	320	270
250	26	25	280	165	395	330
320	33	30	353	200	475	400

## ● TC型



Bore	32	40	50	63	80	100	125	160	200	250	320
A	50	63	75	90	110	132	160	200	250	320	400
B	12	16	16	20	20	25	25	32	32	40	50
C	12	16	16	20	20	25	25	32	32	40	50
D	50	60	75	90	110	132	160	203	250	320	400
E	30	32	34	41	44	48	48	38	50	60	70

## ● TCM



Bore	32	40	50	63	80	100	125	160	200
A	40	54	54	70	70	90	90	110	110
B	60	75	75	85	85	115	115	140	140
C	12	16	16	20	20	25	25	32	32
D	11	11	11	11	11	19	19	24	24
E	9	12	12	12	12	18	18	22	22
F	12	16	16	20	20	25	25	32	32

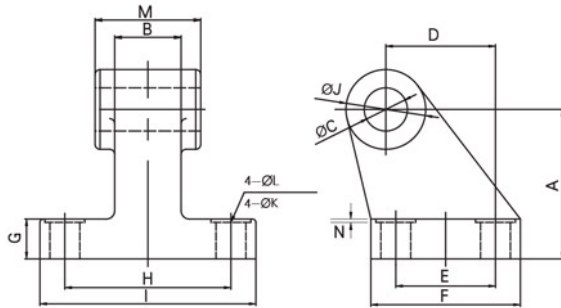
## TGD/TGI/TGG Installing Accessories

Accord : ISO15552 (ISO6431)  
VDMA24562

### ● CR

(Used with CB)

Cast iron specification :  $\Phi 32-320$   
Aluminium specification :  $\Phi 32-100$

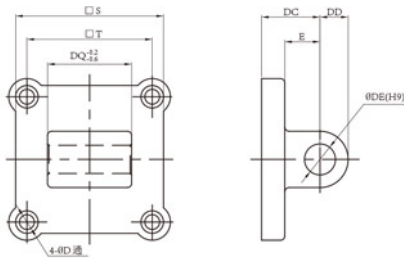


Bore	32	40	50	63	80	100	125
A	32	36	45	50	63	71	90
C	10	12	12	16	16	20	25
D	21	24	33	37	47	55	70
E	18	22	30	35	40	50	60
F	31	35	45	50	60	70	90
G	8	10	12	12	14	15	20
H	38	41	50	52	66	76	94
I	51	54	65	67	86	96	124
J	20	22	24	30	30	38	44
K	6.6	6.6	9	9	11	11	14
L	11	11	15	15	18	18	20
M	25.8	27.8	31.8	39.8	49.8	59.8	70
N	1.6	1.6	1.6	1.6	2.5	2.5	3.2

### ● CA

(Used with CB)

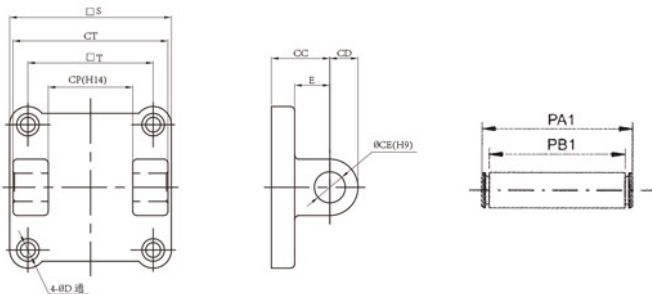
Cast iron specification :  $\Phi 32-320$   
Aluminium specification :  $\Phi 32-100$



Bore	S	T	DC	DD	E	DE
32	45	26	22	10	12	10
40	52	28	25	12	15	12
50	65	32	27	12	17	12
63	76	40	32	15	22	16
80	94	50	36	16	24	16
100	112	60	41	20	25	20
125	139	70	50	25	35	25
160	180	90	55	30	35	30
200	220	90	60	30	36	30
250	280	110	70	41	46	40
320	353	120	80	46	52	45

### ● CB

Cast iron specification :  $\Phi 32-320$   
Aluminium specification :  $\Phi 32-100$



Bore	S	PB1	CC	CD	E	CE	CT	PA1
32	45	45	22	10	12	10	26	51
40	52	52	25	12	15	12	28	59
50	65	60	27	12	17	12	32	67
63	76	70	32	15	22	16	40	78
80	94	90	36	16	24	16	50	98
100	112	110	41	20	25	20	60	120
125	139	130	50	24	33	25	70	140
160	180	170	55	30	35	30	90	181
200	220	170	60	30	36	30	90	181
250	280	200	70	30	46	40	110	220
320	353	220	80	30	52	45	120	240



## TGC (SC) / TGU (SU) Cylinder Accessories

● ordering code

TGC

cylinder series  
TGC TGU

32

Bore

LB

accessories code

Blank: standard style  
F<sub>2</sub>: Cast iron material

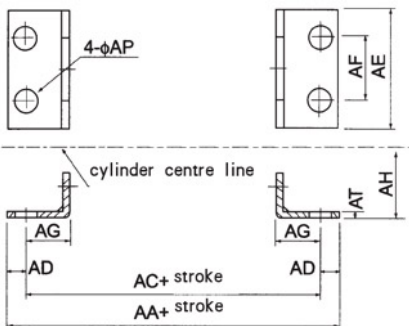
TGC:  $\Phi 32$ - $\Phi 250$   
TGU:  $\Phi 32$ - $\Phi 100$

### ■ accessories table

Model /accessories	LB	FA	FB	CA	CB	TC
TGU	●	●	●	●	●	×
TGUD/TGUJ	●	●	●	×	×	×
TGC	●	●	●	●	●	●
TGCD/TGCJ	●	●	●	×	×	●
TGCT	●	●	●	×	×	×

### ■ figure dimension

● LB



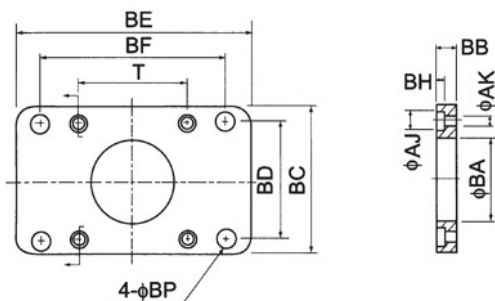
Bore	32	40	50	63	80	100	125	160	200	250
AA	153	169	173	184	199	209	221	246	276	323
AC	134	140	149	158	167	173	185	206	226	273
AD	9,5	14,5	12	13	16	18	18	20	25	25
AE	50	57	68	80	97	112	136	174	214	267
AF	33	36	47	56	70	84	104	134	163	201
AG	20,5	23,5	28	31	30	30	35	40	50	60
AH	28	30	36,5	41	49	57	70	91	113,5	141
AP	9	12	12	12	14	14	17	17	22	26
AT	3	3	3	3	4	4	6	8	9	15

● FA

● FB



Cast iron specification :  
 $\Phi 32$ -250

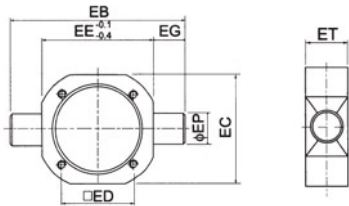


Bore	32	40	50	63	80	100	125	160	200	250
BA	28,3	32,3	38,3	38,3	47,3	47,3	-	-	-	-
BB	10	10	10	12	16	16	20	20	25	25
BC	47	52	65	76	95	115	135	173	213	255
BD	33	36	47	56	70	84	104	134	163	201
BE	72	84	104	116	143	162	196	248	286	256
BF	58	70	86	98	119	138	168	212	250	312
BH	6,5	6,5	6,5	8,5	10,5	10,5	-	-	-	-
AJ	10,5	10,5	10,5	13,5	16,5	16,5	-	-	-	-
AK	6,5	6,5	6,5	8,5	10,5	10,5	-	-	-	-
BP	7	7	9	9	11	11	14	18	18	22
T	33	37	47	56	70	84	104	134	163	202

### TGC (SC) / TGU (SU) Cylinder Accessories

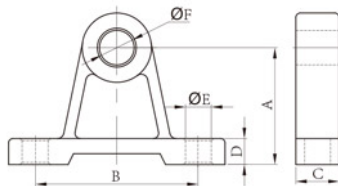
● TC

Cast iron specification :  
Φ32-250



Bore	EB	EC	ED	EE	EG	EP	ET	S
32	87	53	33	55	16	16	30	37.5
40	113	63	37	63	25	25	30	45.5
50	126	76	47	76	25	25	30	55.5
63	138	88	56	88	25	25	30	69
80	164	114	70	114	25	25	35	87.5
100	182	132	84	132	25	25	40	107.5
125	208	-	104	158	25	25	40	136
160	272	-	134	200	36	36	46	174
200	318	-	163	246	36	36	46	214
250	394	-	202	304	40	45	56	267

● TCM

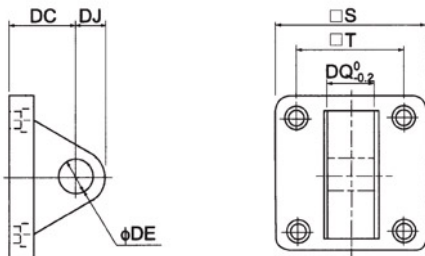


Bore	32	40	50	63	80	100	125	160	200	250
A	54	50	50	50	70	70	85	130	130	160
B	75	80	80	80	85	85	105	140	140	165
C	16	23	23	23	23	23	25	36	36	45
D	11	12	12	12	12	12	20	25	25	28
E	12	11	11	11	13	13	18	22	22	26
F	16	25	25	25	25	25	25	36	36	45

● CA

(Used with CB)

Cast iron specification : Φ32-250  
Aluminium specification : Φ32-100

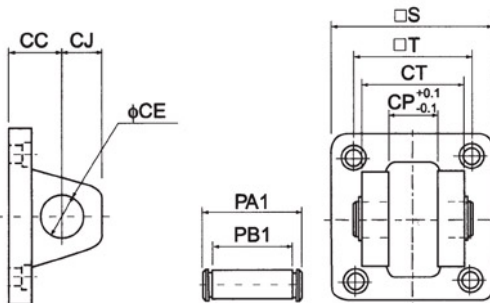


Bore	32	40	50	63	80	100	125	160	200	250
S	48	50	62	75	94	112	135	173	213	255
T	33	37	47	56	70	84	104	134	163	202
DC	34	34	34	34	48	48	32	40	60	70
DD	14	14	15	15	20	20	52	68	90	106
DE	12	14	14	14	20	20	20	28	28	36
DJ	14	14	15	15	20	20	17	19.5	23	24
DQ	16	20	20	20	32	32	31.7	39.7	39.7	49.7

● CB

(Used with CA)

Cast iron specification : Φ32-250  
Aluminium specification : Φ32-100

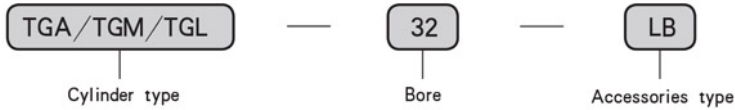


Bore	32	40	50	63	80	100	125	160	200	250
CC	19	19	19	19	32	32	32	40	60	70
CD	5	5	3	3	8	8	14	15	23	24
CE	12	14	14	14	20	20	20	28	28	36
CJ	13	13	15	15	21	21	52	68	90	106
CP	16.3	20.3	20.3	20.3	32.3	32.3	32.1	40.1	40.1	50.1
CT	32	44	52	52	64	64	64	80	80	100
PA1	41	51.8	60.3	60.3	73.8	73.8	73	90.2	90.2	130
PB1	33.5	45.5	54	54	65.5	65.5	64.8	80.8	80.8	108
S	48	50	62	75	94	112	135	173	213	255
T	33	37	47	56	70	84	-	-	-	-

TGA/TGM/TGL Installing Accessories

Accord : ISO6432

● Ordering Code



■ accessories table

Accessories / model	TGA	TGAC	TGSA	TGAD	TGCD	TGAJ	TGACJ	TGAR	TGARC
FA	●	●	●	●	●	●	●	×	×
LB	●	●	●	●	●	●	●	×	×
SDB	●	●	●	×	×	×	×	×	×

■ accessories table

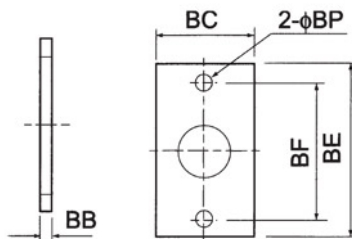
Accessories / model	TGM	TGSM	TGMD	TGMJ
FB	●	●	●	●
LB	●	●	●	●
SDB	●	●	×	×

■ Figure Dimension

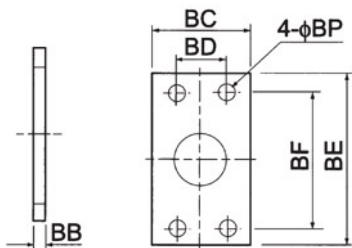
● FA



●  $\phi 16 \sim \phi 25$



●  $\phi 32 \sim \phi 40$

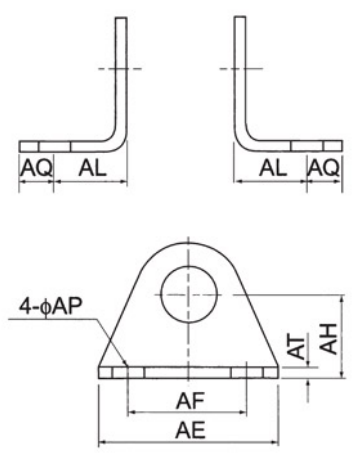


Bore	BB	BC	BD	BE	BF	BP
16	3	26	—	52	40	5.5
20	4	38	—	64	50	6.5
25	4	38	—	64	50	6.5
32	4	47	33	72	58	6.5
40	4	50	36	84	70	6.5

TGA/TGM/TGL Installing Accessories

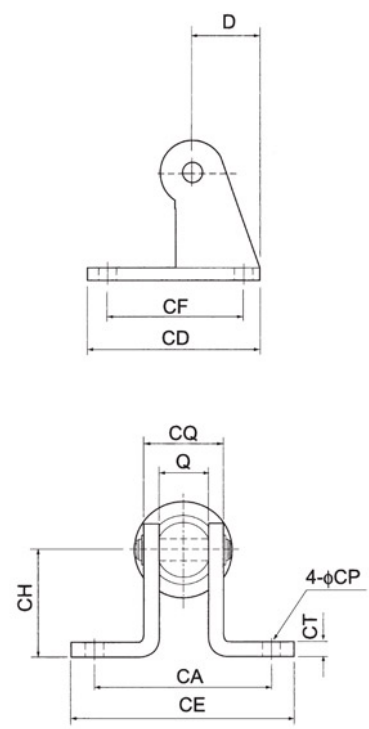
Accord : ISO6432

● LB



Bore	AE	AF	AL	AO	AP	AT	AH
16	44	32	13	6	5,5	3	20
20	54	40	15	8	6,5	3	25
25	54	40	15	8	6,5	3	25
32	59	45	25	8	6,5	4	32
40	64	50	25	8	6,5	4,5	36

● SDB



Bore	D	Q	CA	CD	CE	CF	CH	CT	CP	CQ
16	16	12	-	23	-	12	20	2,3	5,5	16,5
20	21	16	51	48	67	32	32	3	6,5	22
25	21	16	51	48	67	32	32	3	6,5	22
32	27	16	51	52	67	36	36	4	6,5	24
40	27	20	55	56	71	40	40	4	6,5	28

## Connecting Accessories

international common standard

Rod End Eye—E Joint (EJ) or U



Floating Joint—F Joint (FJ)



Rod End Fork—Y (Y+Pin)



Cast iron material

Rod End Axes—I Joint (IJ)



Cast iron material

### Ordering Code

TGC

Cylinder type

50

Bore size

Y

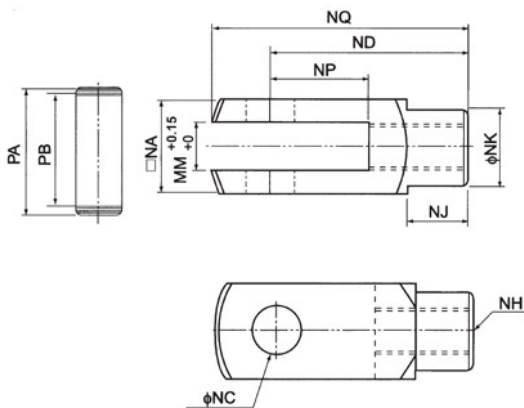
I: Rod End Axes  
Y: Rod End Fork  
F: Floating Joint  
U: Rod End Eye



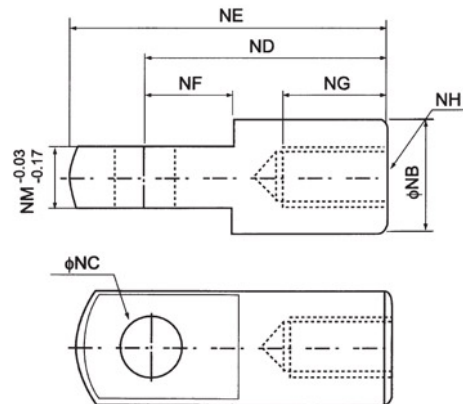
Blank, standard style  
F: Cast iron material

### Figure Dimension

#### Rod End Fork—Y



#### Rod End Axes—I

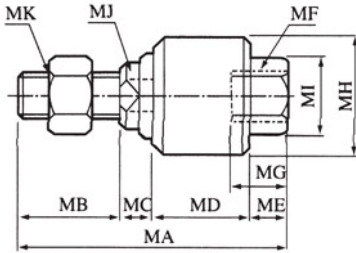


## Connecting Accessories

international common standard

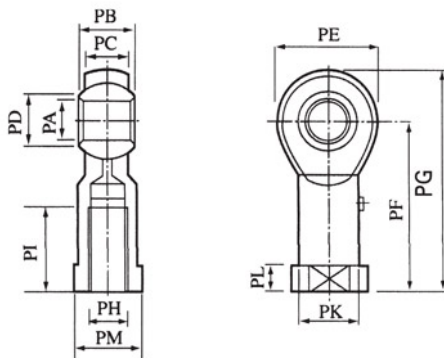
Bore	NA	NB	NC	ND	NE	NF	NG	NH	NJ	NK	NM	NP	NQ	PA	PB
32	19	20	10	40	52	15	20	M10x1.25	12	18	10	20	52	25	19.5
40	25.4	24	12	48	67	24	20	M12x1.25	20	23	12	24	62	32.8	26.5
50	32	32	16	64	89	32	23	M16x1.5	22	30	16	32	83	39.3	33
63	32	32	16	64	89	32	23	M16x1.5	22	30	16	32	83	39.3	33
80	44.4	40	20	80	112	40	30	M20x1.5	30	39	20	40	105	53.3	45
100	44.4	40	20	80	112	40	30	M20x1.5	30	39	20	40	105	53.3	45
125	55	—	30	110	155	50	56	M27x2.0	—	—	30	54	148	64	55.6
160	70	—	35	144	201	50	72	M36x2.0	—	—	35	72	191	80	70.6
200	70	—	35	144	201	50	72	M36x2.0	—	—	35	72	191	80	70.6

### Floating Joint—F

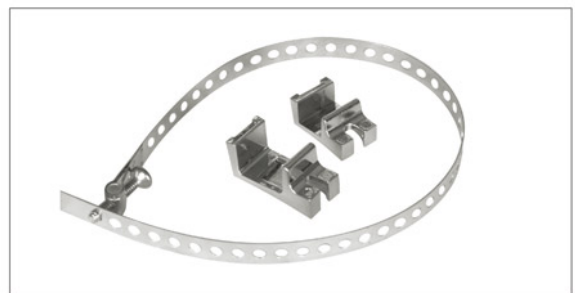
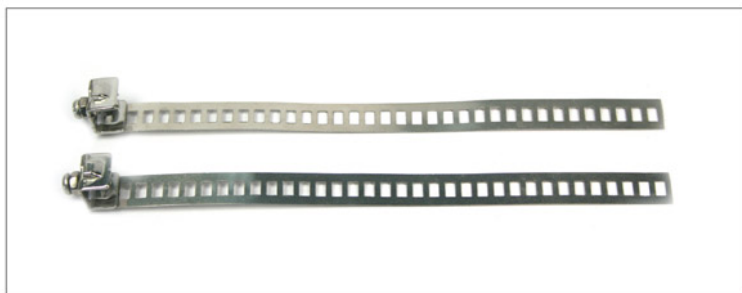
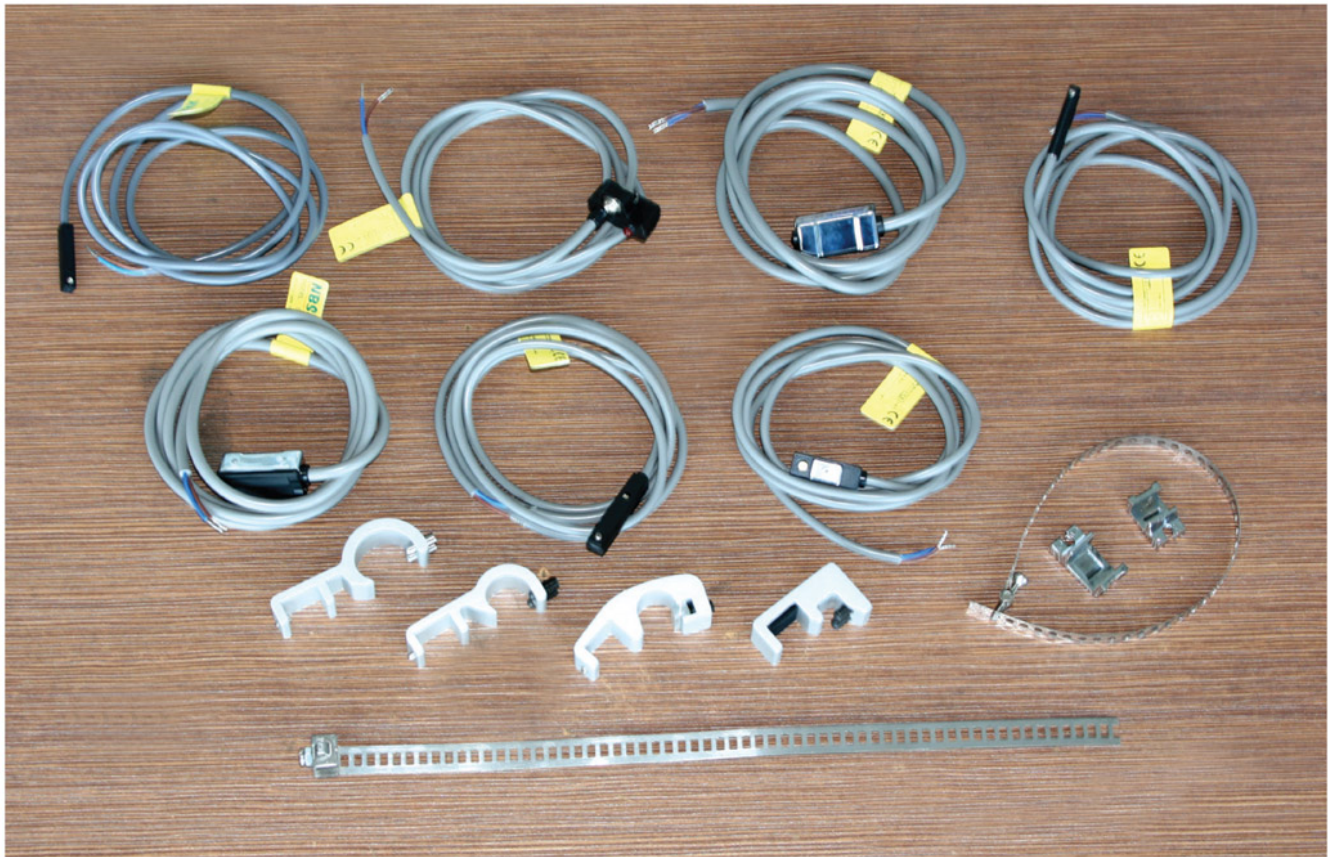


Bore	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK
20	51	20	6	17	8	M8x1.25	12	24	13	8	M8x1.25
25	58	22	7	21	8	M10x1.25	12	26	17	10	M10x1.25
32	58	22	7	21	8	M10x1.25	12	26	17	10	M10x1.25
40	58	22	8	21	7	M12x1.25	12	28	19	12	M12x1.25
50	90	27	10	41	12	M16x1.5	14	45	27	15	M16x1.5
63	90	27	10	41	12	M16x1.5	14	45	27	15	M16x1.5
80	102	29	13	46	14	M20x1.5	18	53	33	22	M20x1.5
100	102	29	13	46	14	M20x1.5	18	53	33	22	M20x1.5
125	147	54	135	77	16	M27x2.0	40	—	—	24	M27x2.0
160	251	72	18	161	18	M36x2.0	78	—	—	36	M36x2.0
200	251	72	18	161	18	M36x2.0	78	—	—	36	M36x2.0

### Rod End Eye—U



Bore	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM
20	8	12	9	10.4	22	36	47	M8x1.25	17	16	12.5	5	14
25	10	14	11	12.9	26	43	56	M10x1.25	21	19	15	6.5	17
32	10	14	11	12.9	26	43	56	M10x1.25	21	19	15	6.5	17
40	12	16	12	15.4	30	50	65	M12x1.25	24	22	17.5	6.5	19
50	16	21	15	19.3	38	64	83	M16x1.5	33	27	22	8	22
63	16	21	15	19.3	38	64	83	M16x1.5	33	27	22	8	22
80	20	25	18	24.3	46	77	100	M20x1.5	40	34	27.5	10	32
100	20	25	18	24.3	46	77	100	M20x1.5	40	34	27.5	10	32
125	30	—	37	36	70	110	145	M27x2.0	51	—	—	—	—
160	35	—	43	41	80	125	165	M36x2.0	56	—	—	—	—
200	35	—	43	41	50	125	165	M36x2.0	56	—	—	—	—



Mounting band: BK PAB PBM



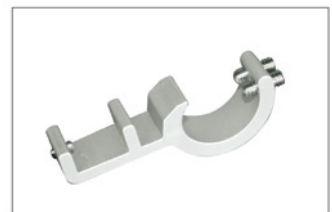
TGC series  
Use for: TGC TGG Series



IH series  
Use for: TGC TGG Series



PI series  
Use for: TGU TGI Series



PM series  
Use for: TGC TGG Series

● Ordering Code

CS1-S

N

1M

QD

Type

N: Contactless NPN  
P: Contactless PNP transistor

1M: normal length; 1m  
can be ordered by customer

within OD pinout  
blank: without OD pinout

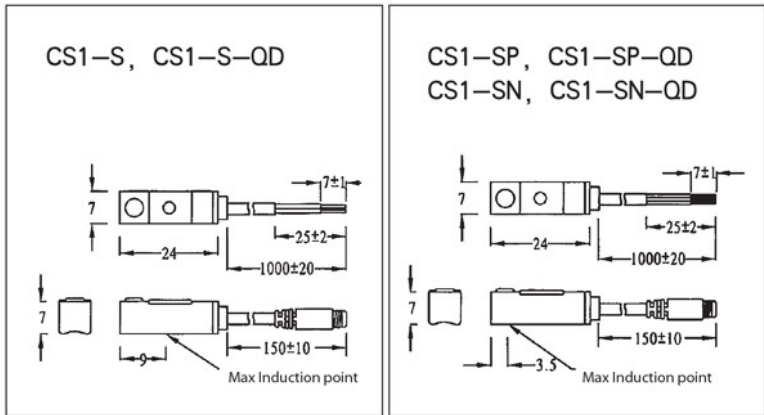
Specification	Type		Size	Voltage	User
Contact/Magnetic reed	CS1-U Series			5~240VDC/AC	Used for: TGU TGC TGI TGG
Contactless/NPN output					
Contactless/PNP output	CS1-F Series			5~30VDC	
Contact/Magnetic reed	CS1-J Series			5~240VDC/AC	Used for: TGN 
Contactless/NPN output				5~30VDC	
Contactless/PNP output					
Contact/Magnetic reed	CS1-S Series			5~240VDC/AC	Used for: TGL TGA TGM 
Contactless/NPN output				5~30VDC	
Contactless/PNP output					
Contact/magnetic reed	CS1-M Series			5~240VDC/AC	Used for: DNC 
Contactless/NPN output				5~30VDC	
Contactless/PNP output					
Contact/Magnetic reed	CS1-H Series			5~240VDC/AC	Used for: CXS / TGD 
Contactless/NPN output					
Contactless/PNP output	CS1-G Series			5~30VDC	Used for: TGN 
Contact/Magnetic reed	CS1-72 Series			5~240VDC/AC	Used for: CO2 
Contactless/NPN output				5~30VDC	
Contactless/PNP output					



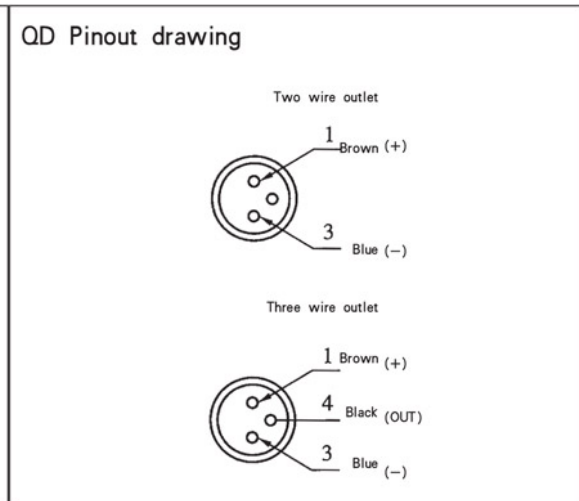
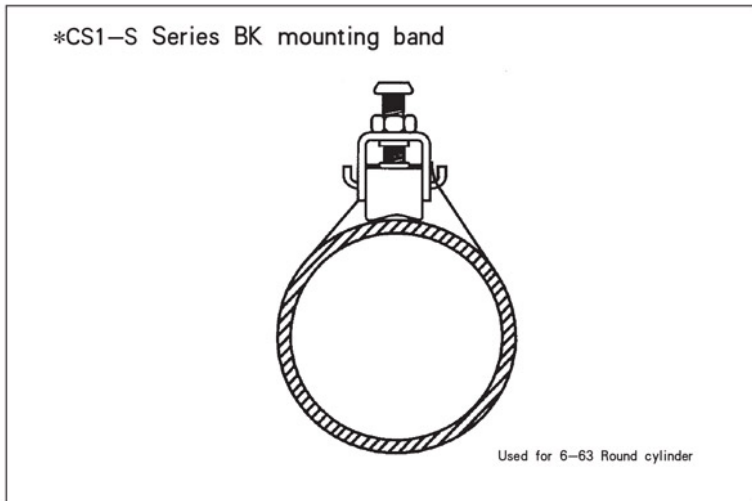
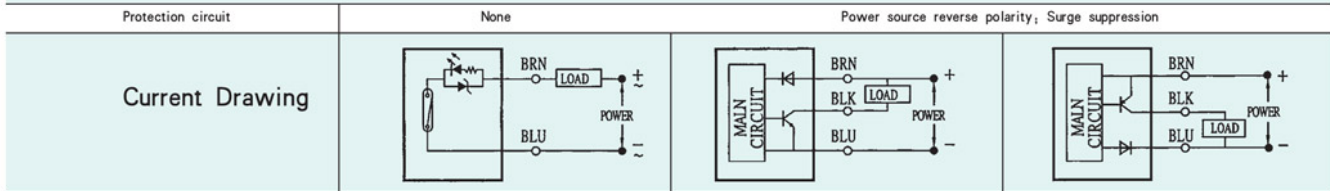
CS1-S Series



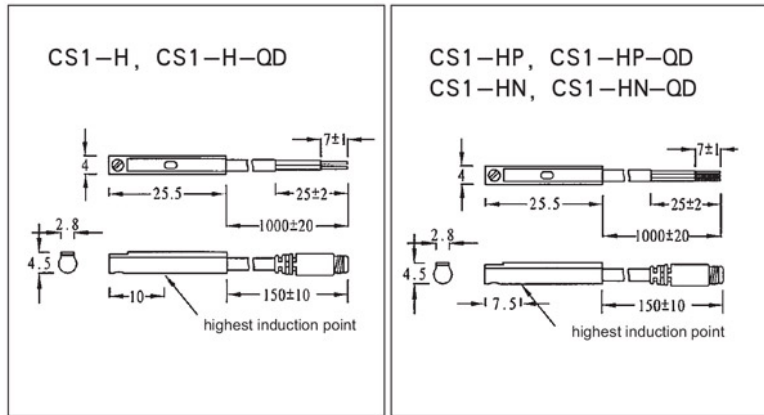
\* CS1-S series used for: TGA, TGL, TGM



Specification	CS1-S	CS1-SN	CS1-SP
Wire pattern	2-wire type	3-wire type	
Switching logic	SPST Normally open	Solidstate output Normally open	
Output	Magnetic reed contact	Contactless NPN	Contactless PNP transistor
Operating voltage	5~2400V DC/AC	5~30V DC/AC	
Switch current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	22mA @ 24V max.	20mA @ 24V max.
Voltage drop	3.5V max.	0.5V max.	
Current leakage	None	0.01mA max.	
LED indicator	Green LED	Red LED	Green LED
Wire	3, 3φ, 2C, Gray PVC	3, 3φ, 3C, Black Oil-resistant PU	
Operating Frequency	200Hz	1000Hz	
Tem range	-10~60°C (No Freeze)		
Shock	30G	50G	
Vibration	9G		
Enclosure classification	IEC529 IP67 (NEMA6)		



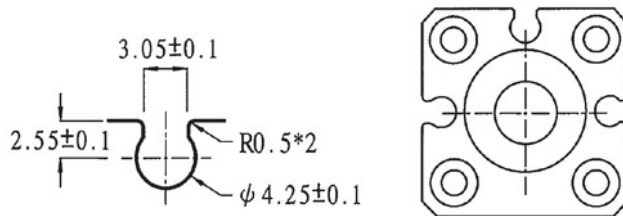
CS1-H Series



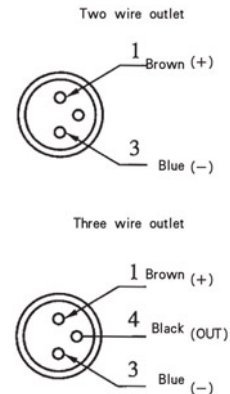
\* CS1-H series used for CXS / TGD

Specitication	CS1-H	CS1-HN	CS1-HP
Wire pattern	2-wire type	3-wire type	
Switching logic	SPST Normally open	Solidstate output Normally open	
Output	Magnetic reed contact	Contactless NPN	Contactless PNP transistor
Operating voltage	5~120V DC/AC	5~30V DC	
Switch current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	20mA @ 24V max. (Switch Active)	
Voltage drop	2.5V max.	0.5V @ 20mA max.	
Current leakage	None	0.01mA max.	
LED indicator	Red LED	Red LED	Green LED
Wire	2.8φ, 2C, Gray PVC	2.8φ, 3C, Black Oil-resistant PU	
Operating Frequency	200Hz	1000Hz	
Tem range		-10~60°C (No Freeze)	
Shock	30G	50G	
Vibration		9G	
Enclosure class itication		IEC529 IP67 (NEMA6)	
Protection circuit	None	Power source reverse polarity; Surge suppression	
Current Drawing			

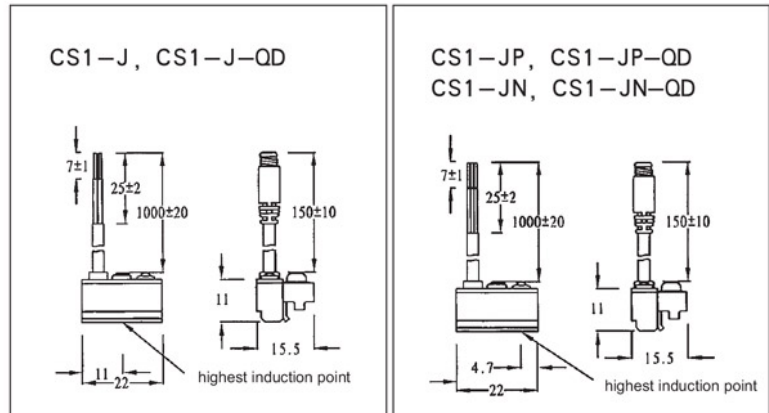
\*CS1-H Series groove size, installation means  
Used for SMC



QD Pinout drawing

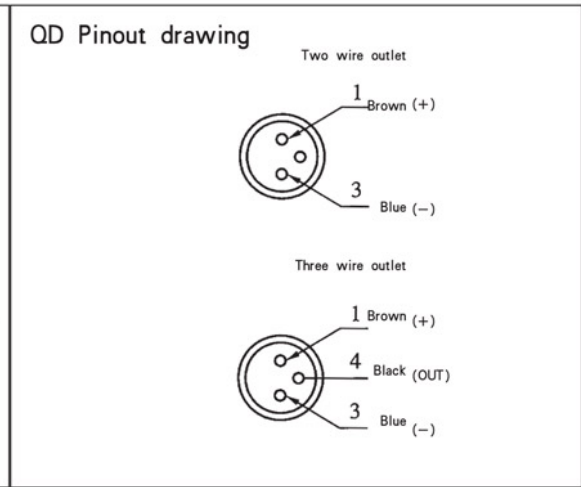
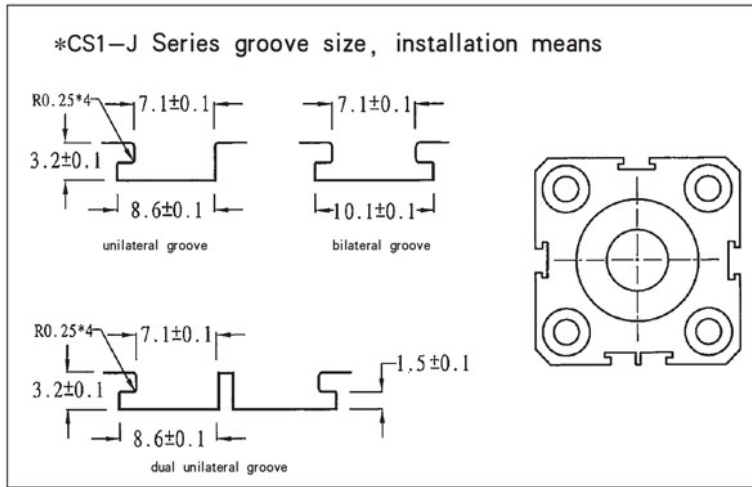
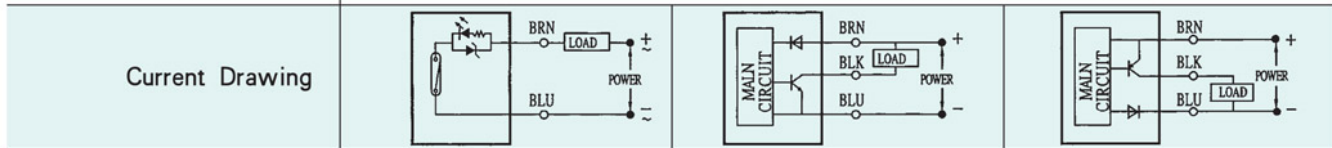


CS1-J Series

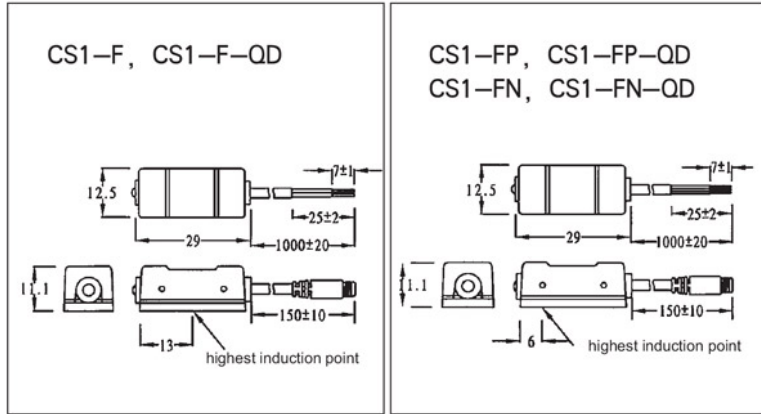


\* CS1-J series used for TGN

Specitication	CS1-J	CS1-JN	CS1-JP
Wire pattern	2-wire type	3-wire type	
Switching logic	SPST Normally open	Solidstate output Normally open	
Output	Magnetic reed contact	Contactless NPN	Contactless PNP transistor
Operating voltage	5 ~ 240V DC/AC	5 ~ 30V DC	
Switch current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	22mA @ 24V max.	20mA @ 24V max.
Voltage drop	3.5V max.	0.5V max.	
Current leakage	None	0.01mA max.	
LED indicator	Green LED	Red LED	Green LED
Wire	3.3φ, 2C, Gray PVC	3.3φ, 3C, Black Oil-resistant PU	
Operating Frequency	200Hz	100Hz	
Tem range		-10 ~ 60°C (No Freeze)	
Shock	30G	50G	
Vibration		9G	
Enclosure class itication		IEC529 IP67 (NEMA6)	
Protection circuit	None	Power source reverse polarity, Surge suppression	

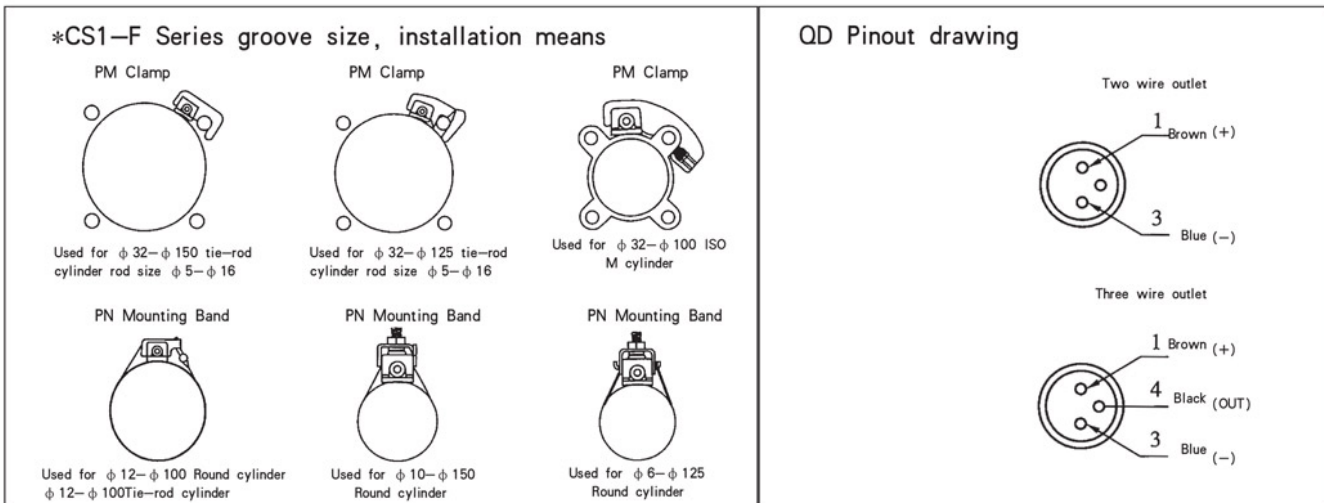


CS1-F Series

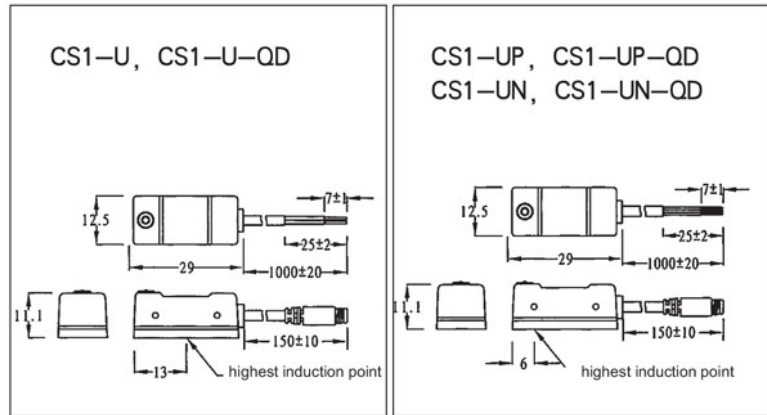


\* CS1-F Series used for: TGU, TGC, TGI, TGG

Specification	CS1-F	CS1-FN	CS1-FP
Wire pattern	2-wire type	3-wire type	
Switching logic	SPST Normally open	Solidstate output Normally open	
Output	Magnetic reed contact	Contactless NPN	Contactless PNP transistor
Operating voltage	5 ~ 240V DC/AC	5 ~ 30V DC	
Switch current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	20mA @ 24V max.	20mA @ 24V max.
Voltage drop	3.5V max.	0.5V max.	
Current leakage	None	0.01mA max.	
LED indicator	Green LED	Red LED	Green LED
Wire	4 φ , 2C, Gray PVC	4.0 φ , 3C, Black Oil-resistant PU	
Operating Frequency	200Hz	1000Hz	
Tem range	-10 ~ 60°C (No Freeze)		
Shock	30G	50G	
Vibration	9G		
Enclosure classification	IEC529 IP67 (NEMA6)		
Protection circuit	None	Power source reverse polarity; Surge suppression	
Current Drawing			



### CS1-U Series

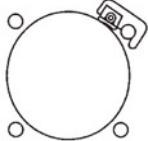


\* CS1-U Series used for: TGU, TGC, TGI, TGG

Specification	CS1-U	CS1-UN	CS1-UP
Wire pattern	2-wire type	3-wire type	
Switching logic	SPST Normally open	Solidstate output Normally open	
Output	Magnetic reed contact	Contactless NPN	Contactless PNP transistor
Operating voltage	5~120V DC/AC	10~30V DC/AC	
Switch current	100mA max.	100mA max.	
Contact rating	10W max.	3W max.	
Current consumption	None	17mA @ 24V max.	14mA @ 24V max.
Voltage drop	3.0V max.	2.0V max.	
Current leakage	None	0.01mA max.	
LED indicator	Green LED	Red LED	Green LED
Wire	2.8φ, 2C, Gray PVC	3.0φ, 3C, Black Oil-resistant PU	
Operating Frequency	200Hz	1000Hz	
Tem range	-10~60°C (No Freeze)		
Shock	30G	50G	
Vibration	9G		
Enclosure classification	IEC529 IP67 (NEMA6)		
Protection circuit	None	Power source reverse polarity; Surge suppression	
Current Drawing			

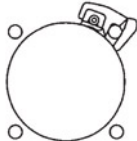
### \* CS1-U Series groove size, installation means

PM Clamp



Used for φ32-φ150 tie-rod cylinder rod size φ5-φ16

PM Clamp



Used for φ32-φ125 tie-rod cylinder rod size φ5-φ16

PM Clamp



Used for φ32-φ100 ISO M cylinder

PN Mounting Band



Used for φ12-φ100 Round cylinder φ12-φ100 Tie-rod cylinder

PN Mounting Band



Used for φ10-φ150 Round cylinder

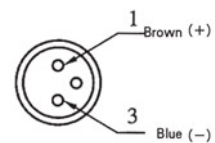
PN Mounting Band



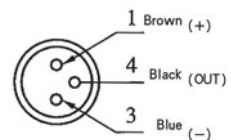
Used for φ6-φ125 Round cylinder

### QD Pinout drawing

Two wire outlet



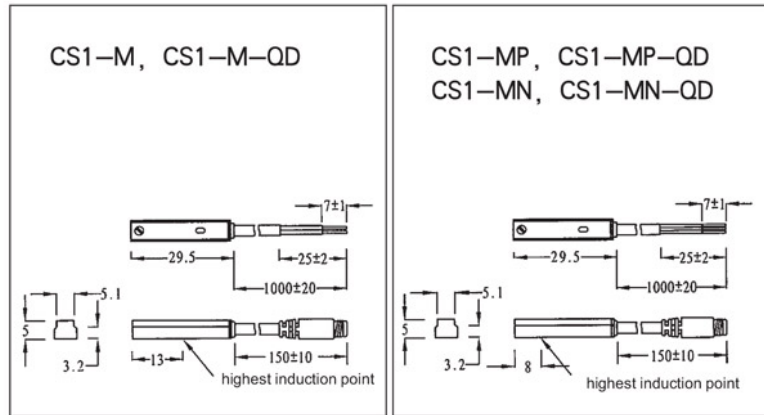
Three wire outlet



CS1-M Series

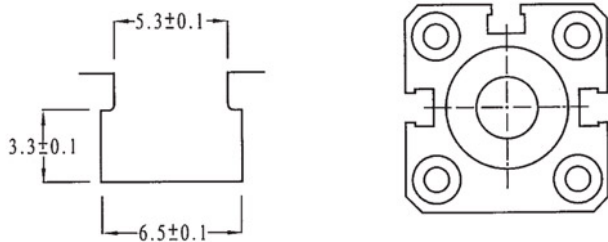


\* CS1-M Series used for :DNC

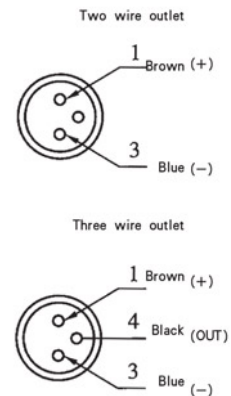


Specitication	CS1-M	CS1-MN	CS1-MP
Wire pattern	2-wire type	3-wire type	
Switching logic	SPST Normally open	Solidstate output Normally open	
Output	Magnetic reed contact	Contactless NPN	Contactless PNP transistor
Operating voltage	5~120V DC/AC	10~30V DC	
Switch current	100mA max.	100mA max.	
Contact rating	10W max.	3W max.	
Current consumption	None	17mA @ 24V max.	14mA @ 24V max.
Voltage drop	3.0V max.	2.0V max.	
Current leakage	None	0.01mA max.	
LED indicator	Red LED	Red LED	Yellow LED
Wire	2.8φ, 2C, Gray PVC	3.0φ, 3C, Black Oil-resistant PU	
Operating Frequency	200Hz	1000Hz	
Tem range	-10~60°C (No Freeze)		
Shock	30G	50G	
Vibration	9G		
Enclosure class ification	IEC529 IP67 (NEMA6)		
Protection circuit	None	Power source reverse polarity; Surge suppression	
Current Drawing			

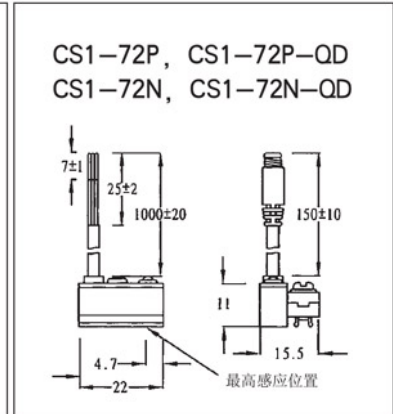
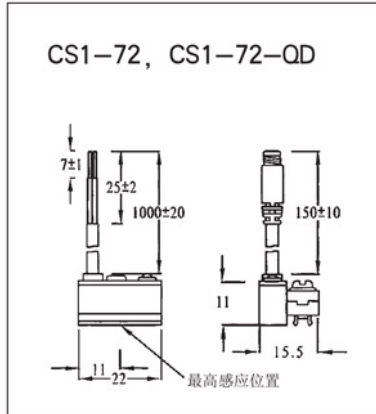
\*CS1-M Series groove size, installation means  
Used for :SMC.FESTO



QD Pinout drawing



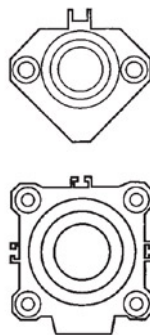
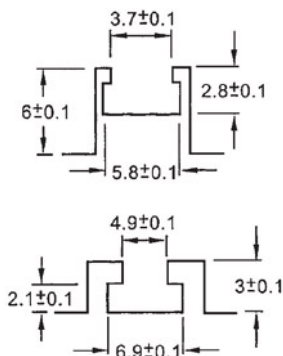
CS1-72 Series



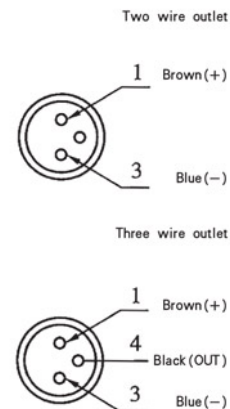
\* CS1-72 series used for: CQ2

Specitication	CS1-72	CS1-72N	CS1-72P
Wire pattern	2-wire type	3-wire type	
Switching logic	SPST Normally open	Solidstate output Normally open	
Output	Magnetic reed contact	Contactless NPN	Contactless PNP transistor
Operating voltage	5-2400V DC/AC	5-30V DC	
Switch current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	22mA @ 24V max.	20mA @ 24V max.
Voltage drop	3.5V max.	0.5V max.	
Current leakage	None	0.01mA max.	
LED indicator	Green LED	Red LED	Green LED
Wire	3, 3, 2C, Gray PVC	3, 3, 3C Black Oil-resistant PU	
Operating Frequency	200Hz	1000Hz	
Tem range		-10~60°C (No Freeze)	
Shock	30G	50G	
Vibration		9G	
Enclosure class itication		IEC529 IP67 (NEMA6)	
Protection circuit	None	Power source reverse polarity; Surge suppression	
Current Drawing			

\*CS1-72 Series groove dimensional drawing  
Used to SMC



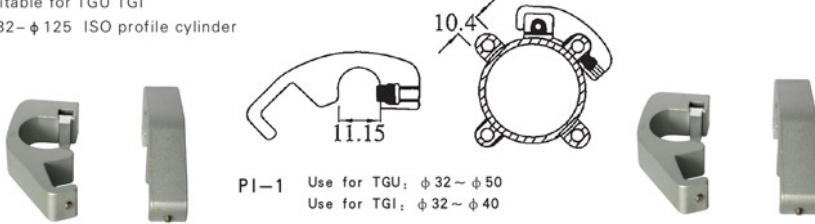
QD Pinout drawing



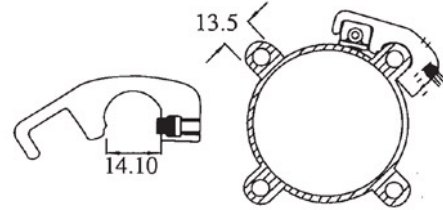
## Clamp

### PI Clamp Used for CS1-F&CS1-U sensor switch

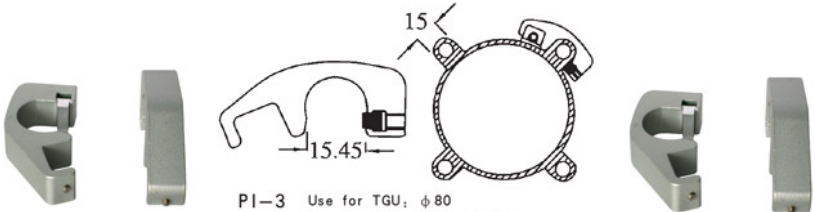
Suitable for TGU TGI  
 $\phi 32 - \phi 125$  ISO profile cylinder



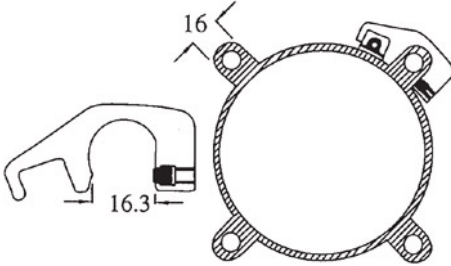
PI-1 Use for TGU:  $\phi 32 \sim \phi 50$   
 Use for TGI:  $\phi 32 \sim \phi 40$



PI-2 Use for TGU:  $\phi 63$   
 Use for TGI:  $\phi 50 \sim \phi 63$



PI-3 Use for TGU:  $\phi 80$   
 Use for TGI:  $\phi 80 \sim \phi 100$



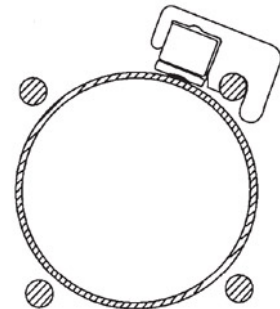
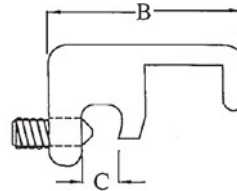
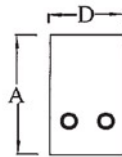
PI-4 Use for TGU:  $\phi 80$  Use for TGI:  $\phi 80 \sim \phi 100$   
 TGU100 Use for TGU:  $\phi 100$

### PM Clamp Used for CS1-F&CS1-U sensor switch

Suitable for TGC  
 $\phi 32 - \phi 200$  air, hydraulic cylinder(With tie-rod)



Size	Type	A	B	C	D
PM-6 (TGC: $\phi 32-50$ /TGG: $\phi 32-40$ )		19	31.0	6.5	12
PM-8 (TGC: $\phi 63$ /TGG: $\phi 50-63$ )		20	34.5	8.0	12
PM-10 (TGC/TGG: $\phi 80-100$ )		18	33.0	10	12
PM-12 (TGC/TGG: $\phi 125$ )		20	35.5	12	12
PM-16 (TGC/TGG: $\phi 160-200$ )		24	40.0	16	12



### PI Clamp Used for CS1-F&CS1-U sensor switch

Suitable for; tie rod diameter  $4\phi \sim 10\phi$

