

## Pneumatic Power Cylinder Specification

Sl. No.	Characteristics	Specification
1.0	POWER CYLINDER	
1.1	Type	Double acting Piston type
1.2	Duty cycle	Continuous
1.3	Cylinder Mounting types	<ul style="list-style-type: none"> <li>* Rear Trunion Mounting (Rear Clevis &amp; Trunion Bracket with Pin)</li> <li>* Front Trunion Mounting</li> <li>* Centre Trunion Mounting</li> <li>* Rear End Mounting</li> <li>* Foot Mounting</li> <li>* Flange Mounting</li> <li>* Eye Fork</li> <li>* Spherical Eye</li> </ul>
1.4	Piston Rod End	
1.5	Supply Air	Minimum : 1 Kg/cm <sup>2</sup> (g) Normal operating : (3-7) Kg/cm <sup>2</sup> (g) Maximum test pressure : 12 Kg/cm <sup>2</sup> (g)
1.6	Material	
1.6.1	Cylinder Body	Hard chrome plated (inside) seamless steel tube / Hard Anodized Aluminium
1.6.2	End Caps	Graded CI / Aluminum Alloy
1.6.3	Gland Housing	Graded CI / Aluminum Alloy
1.6.4	Piston Rod	Hard chrome plated high tensile steel (En8) / SS-304 (Non-magnetic)
1.6.5	Piston Seal, Gland Seal & Wiper Seal	PU & Nitrile Rubber (for working temperature (-30°C to 80°C) FPM/Viton (for working temperature (-20°C to 200°C)
1.6.6	Seal Rings	PU & Nitrile Rubber (for working temperature (-30°C to 80°C) FPM/Viton (for working temperature (-20°C to 200°C)
1.7	Protective cover for Piston Rod	A synthetic leather Bellow / Gaiter (collapsible type) provided to protect the Piston Rod from dirt & dust while exposed
1.8	Mounting Bracket for Positioner / SOV	Provided for different make & Model of Positioners & SOVs as per requirement of customer.
1.9	Feed-back linkage	Complete back-lash free feed-back linkage arrangement provided for different make & Model of Positioners as per requirement of customer
1.10	Manual override Arrangement	Hand Lever Assembly with locking arrangement provided for Cylinder bore upto 150 mm and stroke length 300 mm Rack & Pinion type Hand Wheel Assembly provided for bigger size Cylinder viz., Cylinder bore from 150 mm & stroke more than 300 mm and Cylinder bore 180 mm to 250 mm
1.11	Equalizer Assembly	Provided when hand lever / hand wheel is given for manual operation.

## Model / Ordering Code

CSD - XX - 000|000 - XX - XX - X - XX - XX - XX - XX - XX - XX

### Positioner

PA	Pneumatic Actuator with Positioner
PC	Power Cylinder without Positioner
PCA	Cylinder with Aluminium Barrel
PCAM	Magnetic Cylinder with Aluminium Barrel

00 Cylinder Bore in MM

00 Cylinder Stroke in MM

### Type of Positioner / Solenoid Valve

PP	Pneumatic Positioner
EP	Electro-Pneumatic Positioner
EPS	SMART type Electro-Pneumatic Positioner
EPSH	SMART type Electro-Pneumatic Positioner with HART Comm.
SS	Single Solenoid Spool type
DS	Double Solenoid Spool type
SP	Single Solenoid Poppet type
DP	Double Solenoid Poppet type
SF	Single Solenoid Flame-proof type
DF	Double Solenoid Flame-proof type

### Type of mounting

RT	Rear Trunion
FT	Front Trunion
CT	Center Trunion
FM	Foot Mounting
EM	End Mounting
FL	Flange Mounting

### Mounting Position

H	Horizontal
V	Vertical

### Manual Operation

HL	With Hand Lever Assembly
HW	With Rack & Pinion type Hand Wheel Assy
HC	With Hydraulic Cylinder type Manual Override Arrangement
NA	Without manual operation provision

### Position Transmitter

NPT	Non-Contact type External
IPT	Integral with Non-SMART Positioner (Internal / External)
SPT	Integral with SMART Positioner (Internal / External)
NA	Without Transmitter

### 24 V DC Power supply unit

PS	With power supply unit
NA	Without power supply unit

### Fail locking / stay-put Device

IAL	Fail-freeze Integral with Positioner in case of signal failure and / or air failure
AL	Air Lock Device, stay-put in case of air failure, self reset type
ALSPS	Air Lock Device with solenoid valve and pressure switch, stay-put in case of air and / or signal failure, self reset type
NA	Without air lock device

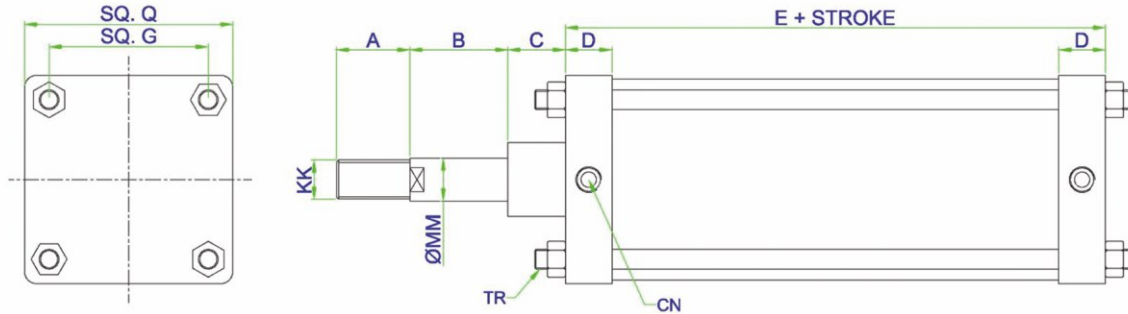
### Air filter regulator with PG

FR1	Air Filter Regulator Mini with PVC Bowl & Pressure Gauge (1/4" size)
FR2	Air Filter Regulator Standard with PVC Bowl & Pressure Gauge (1/4" Size)
FR3	Air Filter Regulator Standard with Metallic Bowl & Pressure Gauge (1/4" size)
FR4	Air Filter Standard with PVC Bowl & Pressure Gauge (1/2" size)
Fr5	Air Filter Regulator Standard with Metallic Bowl & Pressure Gauge (1/2" size)
NA	Without AFR

### Limit Switch Arrangement

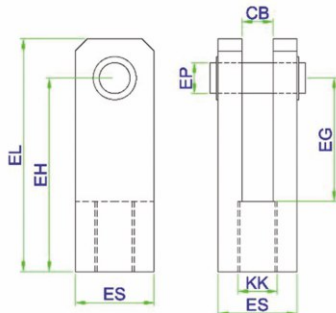
ILP	Limit Switch Arrangement (Internal / External) Integral with Positioner
LP	Limit Switch Arrangement with Proximity Switch (Standard)
FLP	Limit Switch Arrangement with Proximity Switch (Intrinsically safe)
L1	Limit Switch Arrangement with Direct 1NO+1NC Limit Switch
L2	Limit Switch Arrangement with Direct 2NO+2NC Limit Switch
LB1	Limit Switch Box with 1NO+1NC Micro Switch for both upper & lower Limits
LB2	Limit Switch Box with 2NO+2NC Micro Switch for both upper & lower Limits
FLB1	Flame-proof Limit Switch Box with 1NO+1NC Micro Switch for both upper & Lower Limits
FLB2	Flame-proof Limit Switch Box with 2NO+2NC Micro Switch for both upper & Lower Limits
NA	Without any limit switch

**BASIC CYLINDER DIMENSIONS**



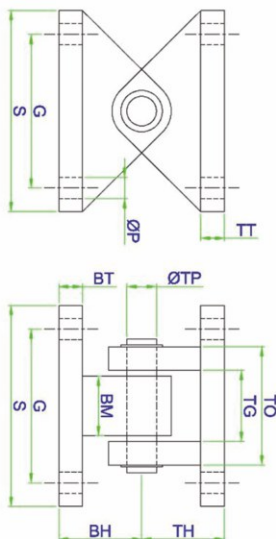
BORE	A	B	C	D	E	G	Q	KK	MM	TR	CN
63	40	60	30	24	93	58	75	M16 X 1.5	20	M8	G 1/4"
75	50	80	42	28	106	72	94	M20 X 1.5	25	M10	G 3/8"
80	50	80	42	28	106	75	100	M20 X 1.5	25	M10	G 3/8"
100	50	80	42	28	114	91	116	M20 X 1.5	25	M10	G 3/8"
125	60	80	47	38	136	110	144	M30 X 2	35	M12	G 3/8"
150	60	80	47	38	136	130	170	M30 X 2	35	M16	G 3/8"
180	80	80	52	40	152	150	194	M42 X 2	45	M16	G 1/2"
200	80	80	52	40	152	175	220	M42 X 2	45	M16	G 1/2"
250	80	80	52	50	172	210	270	M42 X 2	50	M20	G 3/4'
300	80	80	52	50	191	260	335	M42 X 2	50	M20	G 3/4'

**EYE-FORK DIMENSIONS**



BORE	CB	ES	EG	EH	EL	EP	KK
63	16	32	60	85	101	12	M16 X 1.5
75	18	38	60	93	112	16	M20 X 1.5
80	18	38	60	93	112	16	M20 X 1.5
100	20	44	70	103	125	19	M20 X 1.5
125	20	44	70	103	125	19	M30 X 2
150	25	63	100	150	182	25	M30 X 2
180	25	63	100	150	182	25	M42 X 2
200	25	63	100	150	182	25	M42 X 2
250	38	76	110	170	208	38	M42 X 2
300	38	76	110	170	208	38	M42 X 2

**REAR TRUNION DIMENSIONS**



BORE	G	S	P	BH	BM	BT	TG	TO	TH	TT	TP
63	58	75	9	30	20	8	24	40	30	8	12
75	72	94	12	35	30	10	34	60	35	10	16
80	75	100	12	35	30	10	34	60	35	10	16
100	91	116	12	51	35	15	40	70	51	15	19
125	110	144	14	51	42	15	46	84	51	15	19
150	130	170	18	70	50	20	60	100	70	20	25
180	150	194	18	70	50	20	60	100	70	20	25
200	175	220	22	80	60	25	70	120	80	25	25
250	210	270	22	90	70	30	80	140	90	30	38
300	260	335	27	100	80	30	90	160	100	30	38