

Applications

The CORT Pressure Protection System is designed to protect equipment downstream of a pressure reducing station in a gas distribution system. It consists of a trunnion mounted ball valve complete with a SY actuator and control system supplied in a self-contained and compact unit. It is installed in the pipeline, upstream of the pressure reducing station. If there is an excessive rise of pressure downstream of the station due to an equipment or operational malfunction, it will react by shutting off the supply of high pressure gas.

Product Description

Totally self-contained unit featuring:

Ball Valve

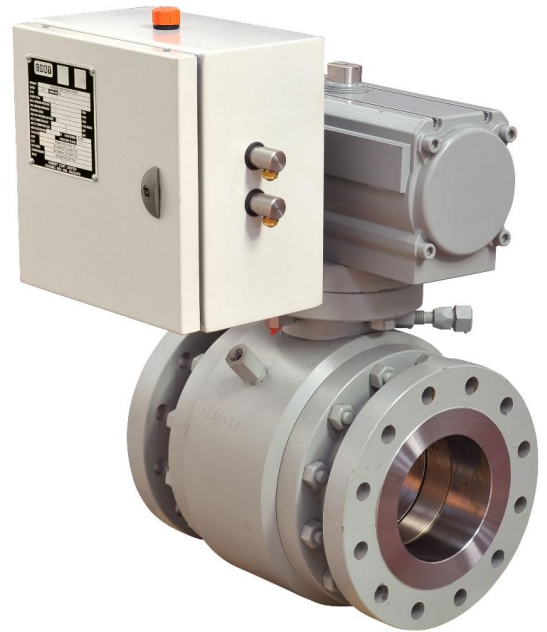
1. Trunnion mounted
2. Two piece or three piece construction
3. Double block and bleed in open and closed position
4. Antistatic device
5. Sealant injection system
6. For further details refer to Robert Cort Valves Ltd

Actuator

1. Double acting Scotch Yoke
2. Yoke design optimised to give increased torque output in breakout/reseat position
3. Low friction self-lubricating PTFE piston seals as standard
4. Nickel plated steel alloy drive shaft and hardened steel alloy yoke assembly
5. All bearing surfaces lubricated for life
6. Lapped and anodised cylinder bores
7. Acetylic resin drive shaft bearings
8. Anodised actuator body to prevent external corrosion
9. Weatherproof design to IP68
10. For further details refer to Robert Cort Valves Ltd

Control Cabinet

1. Diverter valve for balancing up and down stream pressures on the pipeline valve
2. Filter to ensure the control components are supplied with clean gas
3. Regulator to control the gas supply pressure to the actuator
4. Pressure sensor to provide shut down signal on sensing rising downstream pressure
5. Directional control valve, with manual push button, closes valve on receipt of shut down signal
6. All control components are tubed together using stainless steel tube and fittings
7. All control components are housed in a weatherproof IP65 cabinet





Product Data Sheet

PP-A Pressure Protection System (PPS)
version 2.0

Range of Supply

Bore Sizes - 2" - 12"

Pressure Ratings - ANSI class 300 and 600

Pipeline Pressure Maximum – CL 300 / CL 600, 450 psig / 1000 psig

Pipeline Pressure Minimum – CL 300 / CL 600, 250 psig / 400psig

System Ranges – 15/150psig, 50/450psig and 50/1500psig

System Sensitivity – +/- 2% of the set point

Speed of Operation – Nominal – 5 seconds, Maximum 5 – 10 seconds

Options – Falling pressures, Falling & Rising pressures, other sizes and pressure ratings are available on request

Applicable Standards

Valves

- API 6D Specification for pipeline valves
- API 6FA
- API 607
- BS 6755 Part 2

Actuators

- DIN/ISO 5211
- DIN 3337
- Iranian Gas Standards
- IGS-MS-IN-301 (1) : 1996
- IGS-MS-PL-010 (1,2, & 3) : 1994

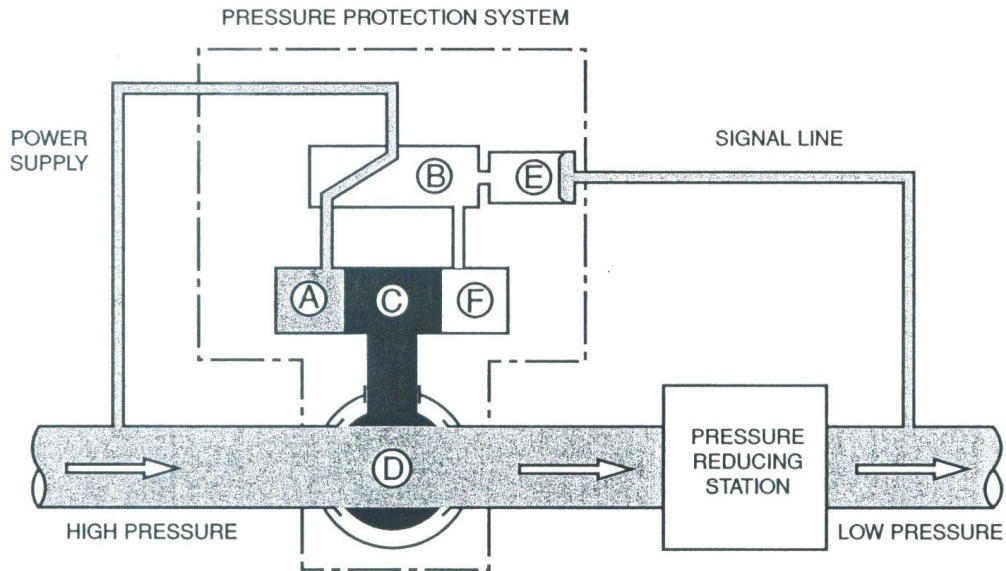
Optional Features

- System engineered for sour power and sensing gas.
- Provision of remote system reset
- Provision of remote signalling
- Materials and control functions to suit customers specific requirements.
- Min and Max Pressures to suit customer requirements
- Failsafe (PPB) options can be offered (For further details please refer to Robert Cort Valves Ltd)
- Valves outside those specified can be offered
- Valve classes outside those specified can be offered. (For further details please refer to Robert Cort Valves Ltd)

Principle of Operation

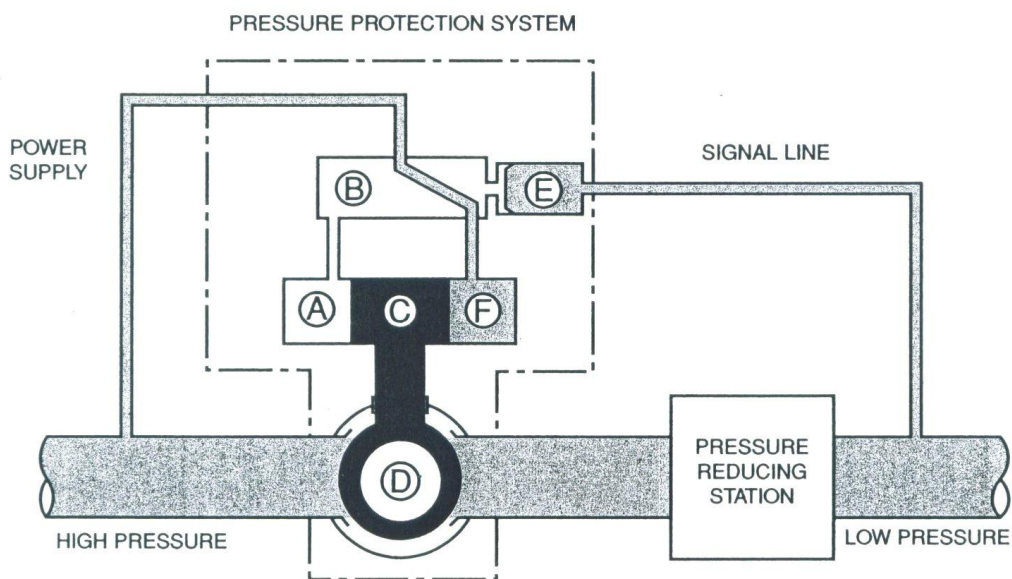
Normal Mode

The power supply is gas taken directly from the pipeline. Inside the control cabinet the gas is filtered and pressure regulated before pressurising actuator cylinder (A) via the main control valve (B). The scotch yoke actuator (C) holds the pipeline valve (D) in the open position.

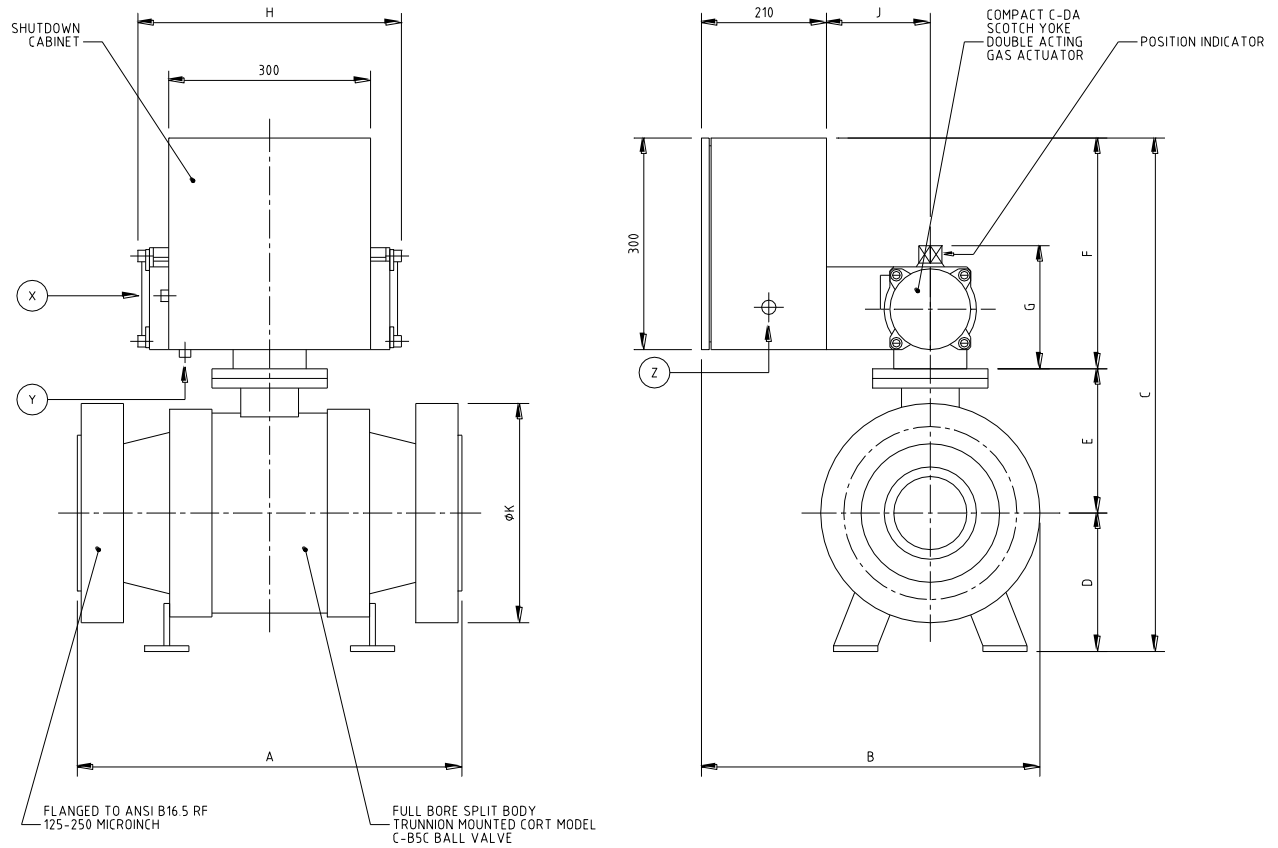


Shutdown Mode

A pressure signal line is taken to the adjustable pressure sensing valve (E) in the control cabinet from the low pressure part of the pipeline system. If an excessive pressure is detected, then the sensing valve will cause the main control valve (B) to change state. Actuator cylinder (A) will be vented and the other cylinder (F) will be pressured. As a result the pipeline valve (D) will shut. The speed of closing is adjustable and once shut the valve cannot be reopened without manual intervention.



Dimensional Outline Drawing



CLIENT PIPEWORK CONNECTIONS:

X	GAS IN	- 1/2" NPT (F)
Y	BY PASS	- 1/2" NPT (F)
Z	PRESSURE SENSOR	- 6mm COMP.

NOTES:

1. ALL DIMENSIONS IN mm
2. PAINTING FINISH GREY TO BS 381C No. 631
3. SUPPORT FEET TO VALVES 8" AND ABOVE



Product Data Sheet

PP-A Pressure Protection System (PPS)
version 2.0

Weights and Dimensions Class 300

Valve Size (inch)	Actuator Size	A	B	C	D	E	F	G	H	J	ØK	Weight (Kg)
2	DA180	216	438	410	91	120	199	129	212	90	165	50
3	DA360	283	477	517	130	177	210	151	264	111	210	86
4	DA480	305	504	560	150	195	216	163	295	112	255	128
6	DA1440	403	630	741	250	242	249	219	435	132	320	270
8	DA1920	502	680	856	310	291	255	231	468	137	380	430
10	DA3840	568	770	945	351	304	291	312	718	250	445	595

Weights and Dimensions Class 600

Valve Size (inch)	Actuator Size	A	B	C	D	E	F	G	H	J	ØK	Weight (Kg)
2	DA180	292	438	457	116	142	199	129	212	90	165	57
3	DA360	356	500	519	132	177	210	163	292	111	210	97
4	DA480	432	535	573	165	195	216	163	330	112	275	156
6	DA1440	559	695	741	250	242	249	219	435	132	355	340
8	DA1920	660	740	847	301	291	255	231	468	137	420	580
10	DA3840	787	782	959	349	319	291	312	718	250	310	850

Notes

For dimensions for 12" x CL300 and 12" x CL600 please refer to Robert Cort Valves Ltd.
All dimensions are RF.

All dimensions and weights are approximate. The information on this data sheet is accurate to the best of Robert Cort's knowledge; however we reserve the right to alter the product specification at any time.