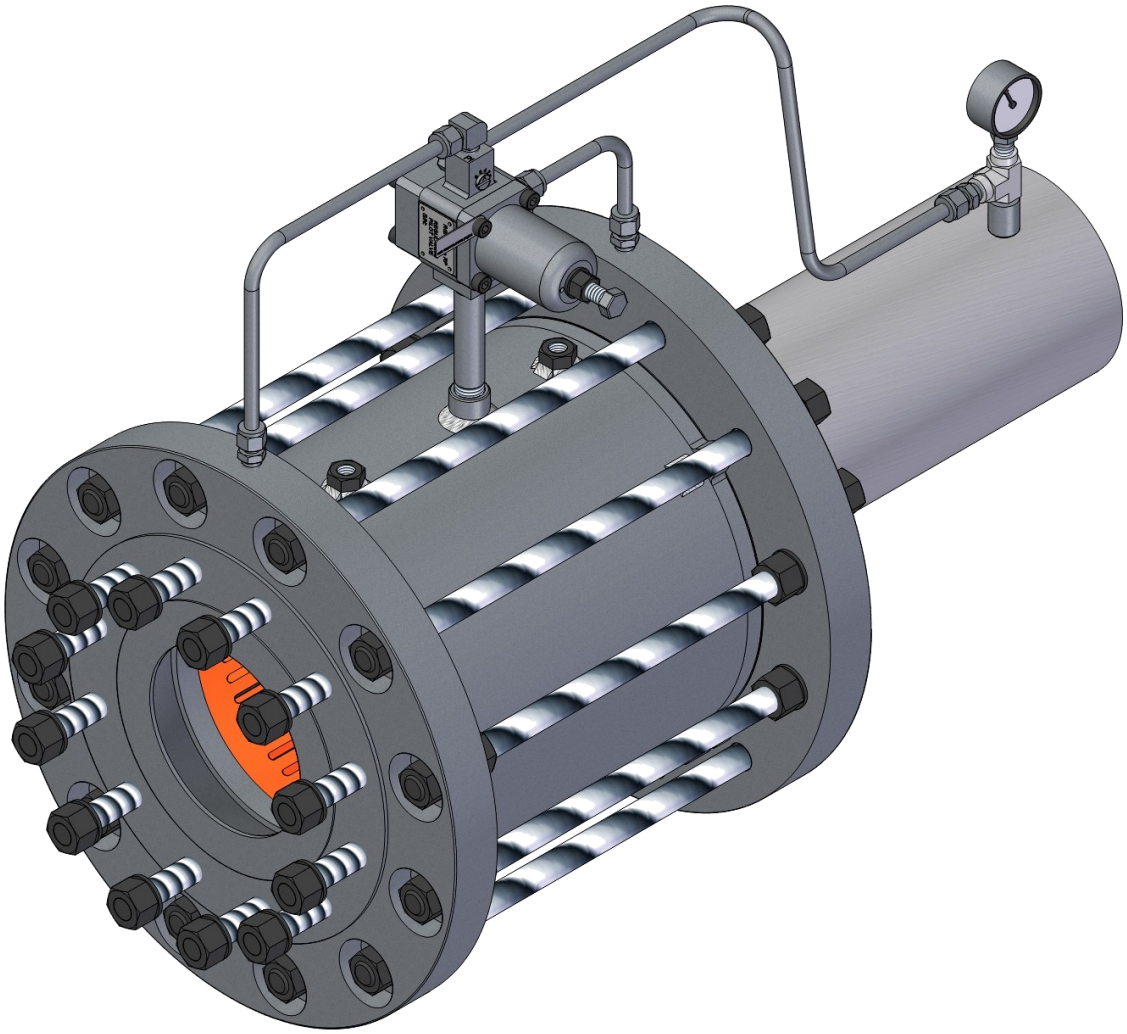
RGR PRESSURE REDUCING REGULATOR

Series: PR



RGR PRESSURE REDUCING REGULATOR

Series: PR

Model: PR 80, PR 80S and PR 81 / Pilot RP 29

The **PR 80 / 81 regulator and RP pilot** combination reduces pressure in gas or liquid systems. The pilot, a small spring loaded diaphragm regulator, establishes the reduced pressure setting.

See INSTALATION, OPERATING AND SAFETY MANUAL for RGR RP Pilot valve.

PR 80, PR 80S or PR 81 Regulator :

The RP 29 pilot works with both types of regulators.

The regulator consists of a body, closures, an elastic tube, and a core.

The valve position (open, partially open or closed) is determined by the position of the tube.

If the tube is seated tightly around the core, the valve is "closed". If the tube is pushed out, against the body, the valve is "wide open". When the tube is between the "closed" and "wide open" positions, the valve is "partially open" or "throttling".

The "Jacket" is the (annular) space between the tube and the body. The relationship of the "Jacket" to "Inlet" pressure determines the position of the tube. If the Jacket is vented to atmosphere or to downstream with sufficient differential pressure, the inlet pressure will stretch the tube against the body. If the jacket pressure is equal to the inlet pressure, the initial tension (from stretching the tube over the core) will keep the tube seated against the core.

The regulator body and closures have ports (bosses) to access the inlet (I-boss), downstream (D-boss), and jacket (J-boss) pressures.

See INSTALATION, OPERATING AND SAFETY MANUAL for RGR PR Regulating valve.

TABLE 1 : RP 29 PILOT SPRING RANGES

Control pressure		Figure No	Spring Colour	Max. Pressure (Bar)	
Bar	Psig			Inlet & Jacket Port	All other Ports
0.2 - 0.7	3 - 10	11554-KRA	Gray	100	21
0.6 - 1.7	8 - 25	11554-LRA	White	100	21
1.4 - 5.1	20 - 75	11554-MRA	Brown	100	21
4.1 - 10.3	60 - 150	11554-NRA	Nickel	100	68
8.6 - 24.1	125 - 350	11554-QRA	Yellow	100	68
20.7 - 41.0	300 - 600	11554-SRA	Black/Orange	100	68

DESCRIPTION AND APPLICATION - GENERAL DESCRIPTION FOR PR 80 (PR 81) REGULATORS

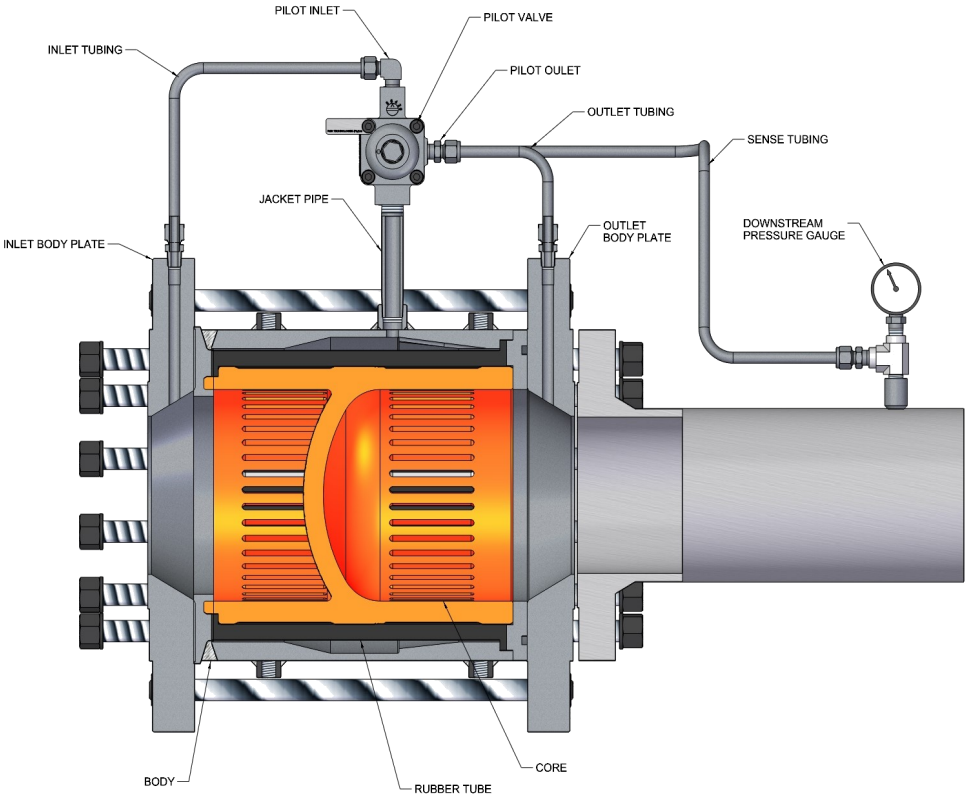
- Consists of PR 80 / RP 29 and PR 80 BP regulators installed in-line.
- Refer also to a separate section describing the PR 80 BP and PR 80 / RP 29 regulators, if required.
- For pressure reducing applications, where high reduction ratios are required, such as underground mining water supply systems. For Class 150 & Class 300 valves, maximum turn down ratio 4:1 and for Class 600 & Class 900, maximum turn down ratio 5:1.
- PR 80 / RP 29 regulator / pilot is used for first stage pressure reduction, PR 80 BP as a second stage backpressure regulator.

PRINCIPLE OF OPERATION

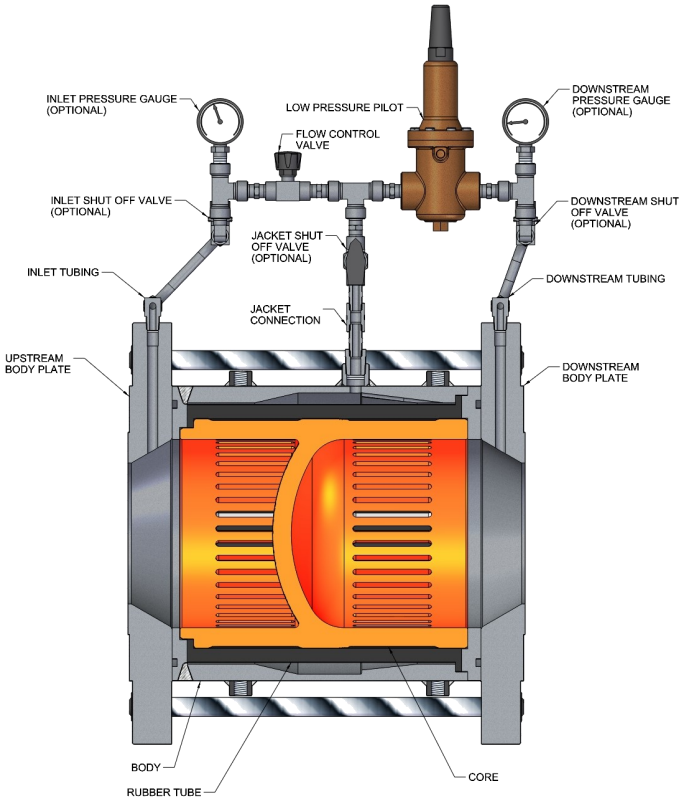
- Refer also to the drawing " **Principle of Operation** " available from RGR Technologies or Agents.
- The regulator - pilot combination maintains a constant downstream line pressure by controlling the amount of fluid or gas passed through the regulator.
- When outlet line pressure is above the set pressure of the pilot, the pilot remains closed. The closed pilot seals the regulator jacket from the downstream line, so the jacket pressure (Pj) equalizes with the inlet pressure (Pi), closing the regulator.
- When outlet line pressure falls below the set pressure of the pilot, the pilot opens and allows the fluid in the jacket to flow out to the downstream line. At the same time, the fluid flowing from the inlet into the jacket is choked by the restricting orifice, so the flow into the jacket is less than the flow out, and the jacket pressure drops, opening the regulator.
- While the line is flowing the pilot remains open, but as the downstream pressure starts to rise, the pilot starts throttling, and the flow out of the regulator jacket is balanced by the flow in. During this action, the jacket pressure is still lower than inlet line pressure, and the regulator valve will also be throttling.
- When downstream pressure rises to equal the set pressure of the pilot, the pilot stays at an equilibrium throttling position so that flow into jacket through the restricting orifice equals flow exiting through the pilot. The regulator-pilot combination stay in their equilibrium position until the flow conditions change.
- The Regulator may be installed in horizontal or vertical pipe runs. Upstream and downstream line block valves are recommended to isolate the regulator for periodic maintenance. Allow at least five pipe diameters downstream straight piping for turbulence dissipation.
- A pressure sense line made of 1/4" O.D. or larger tubing is installed from the RP pilot "Sense Port" to a port about ten pipe diameters downstream of the regulator.

For low pressure applications, alternative pilot valves are available that can be operated without the downstream sense line. These pilot valves do not have a built in adjustable (restricting) orifice, and therefore a needle control valve is fitted on the inlet side of the pilot valve.

TYPICAL PR REGULATOR VALVE CONFIGURATIONS



SECTION VIEW OF PR 80 REGULATOR WITH RP 29 PILOT AND SENSE LINE



SECTION VIEW OF LOW PRESSURE PR 80 REGULATOR
WITH FLOW CONTROL VALVE AND LP PILOT

RGR SURGE RELIEF/BACK PRESSURE REGULATOR

Series: PR/BP

Model: PR 80 BP and PR 81 BP

- The PR 80 BP or PR 81 BP regulator is a pressure loaded valve consisting of a standard model 80 (or model 81) RGR regulator connected through a loading manifold to a nitrogen accumulator of suitable volume. This manifold allows the regulator jacket and accumulator to be loaded to any desired pressure.
- The model PR 80 BP or PR 81 BP regulator can be used either as a surge reliever (to protect pipework from pressure surges) or as a backpressure control in-line regulator.
- In backpressure control mode, the regulator is frequently used as second stage pressure reducer, for achieving high pressure reduction ratios (by providing backpressure to another first stage pressure reducing regulator).

PRINCIPLE OF OPERATION

- The "set pressure" is defined as the inlet pressure at which flow starts. The "loading pressure" is the pressure to which the jacket and accumulator are loaded with the tube fully contracted on the core.
- Before flow can even start, the inlet pressure must expand the tube against the loading pressure by forcing it away from the core until the ends of the outlet slots are just beginning to be uncovered. Before the regulator opens, the inlet pressure must rise to a value equal to the loading pressure, plus the tube expanding pressure, plus the rise in jacket pressure as the tube expands to opening position. This rise in pressure equals the sum of the following three components:

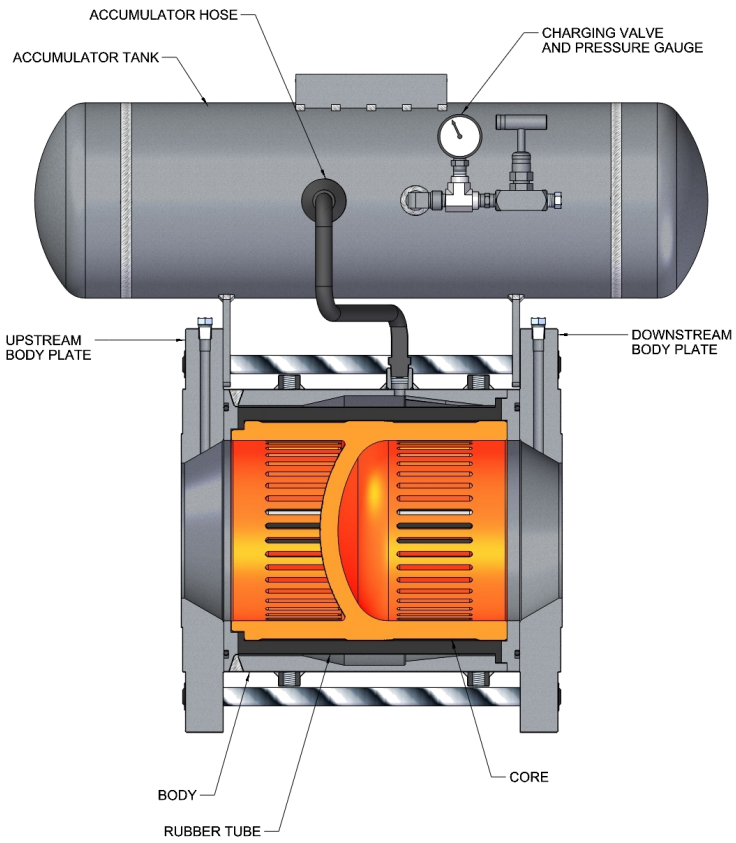
  1. The loading pressure.

  2. The tube expanding pressure.

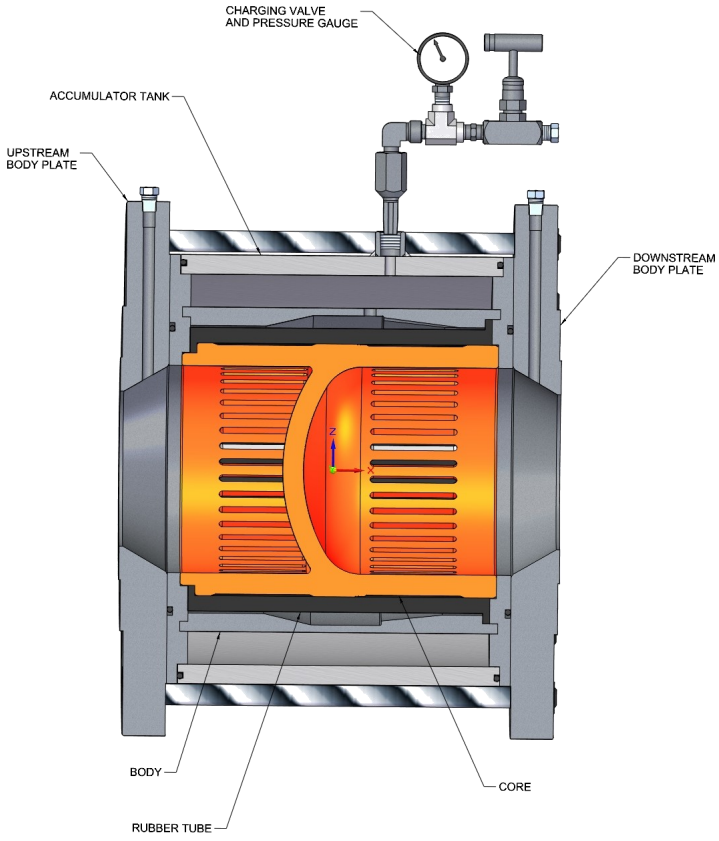
  3. The rise in jacket pressure (amount in excess of loading pressure) as the tube expands to the position where flow just starts.
- In order to produce a flow rate equal to the maximum rated capacity for the given conditions, the inlet pressure must increase 5% to 8% above the set pressure. This makes the inlet pressure under rated flow equal to the expanding pressure plus 110 to 115% of the loading pressure.
- After the regulator has opened, it will shut off tightly again as soon as the inlet pressure drops to the closing pressure. The closing pressure will be less than the opening pressure.

FEATURES OF THE REGULATOR

- The nitrogen accumulator is charged from an external source of nitrogen gas pressure, with the aid of a separate loading hose assembly (gas loading line) which can be supplied on request. This allows the user to vary the loading pressure.
- Model 80 BP or 81 BP regulator is supplied complete with accumulator, gas loading valve and pressure gauge.
- There are no external moving parts which can be damaged, encrusted or corroded; thus reliable operation in harsh environments is assured. The only internal moving part is the flexible rubber tube.
- The resilient seal of the rubber tube against the core assures tightness, even with impurities present in the medium. The regulator will always function in safety relief mode even after a long period of inactivity.



SECTION VIEW OF PR 80 REGULATOR WITH RGR AC ACCUMULATOR



SECTION VIEW OF PR 80 REGULATOR WITH BUILT-IN ACCUMULATOR

RGR DUAL STAGE PRESSURE REDUCING REGULATOR COMBINATION

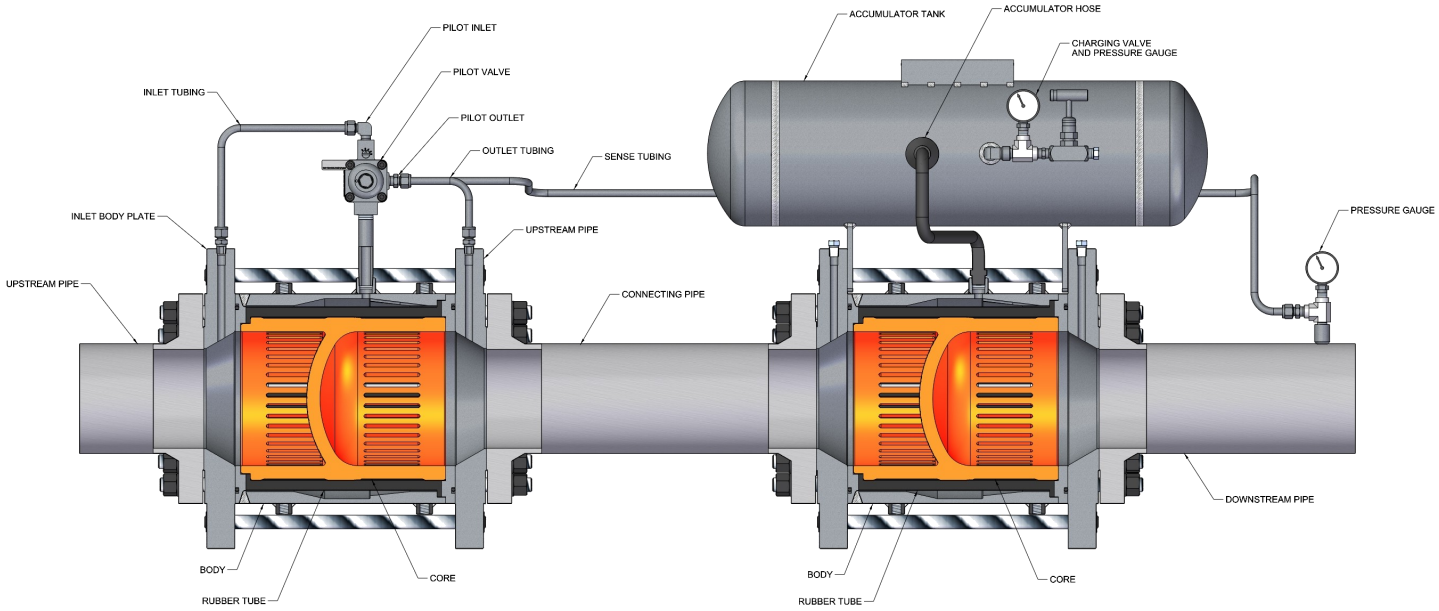
With RGR PR 80 and PR 80 BP REGULATORS

DESCRIPTION AND APPLICATION—GENERAL DESCRIPTION FOR PR 80 REGULATORS ONLY

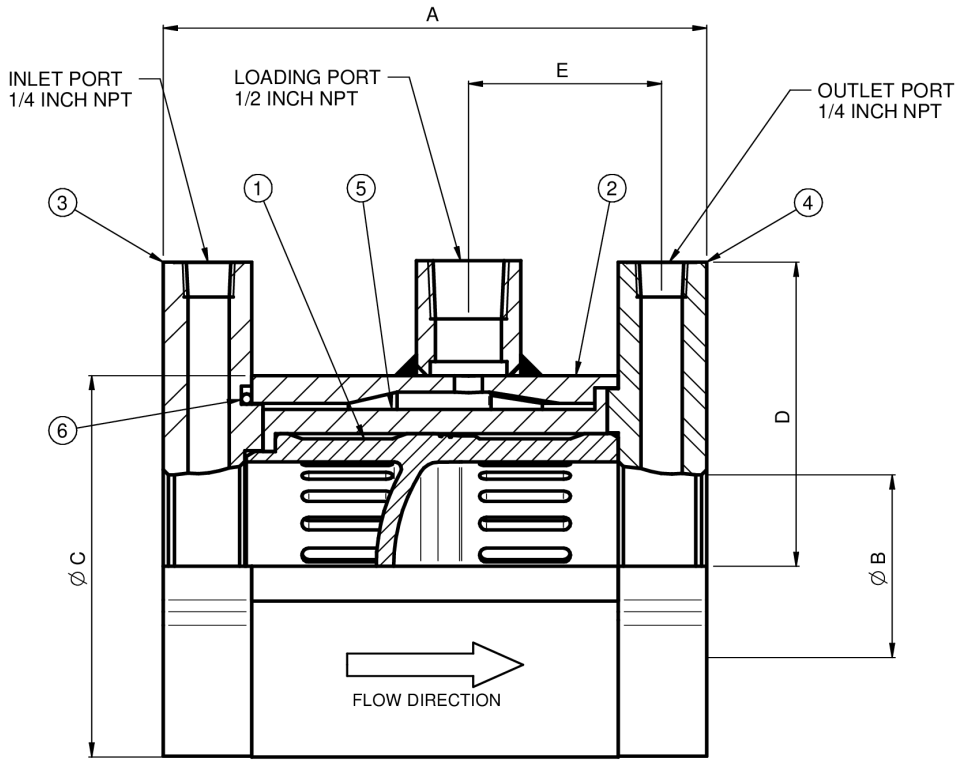
- Consists of PR 80 / RP 29 and PR 80 BP regulators installed in-line.
- Refer also to the sections describing the PR 80 BP and PR 80 /RP 29 regulators, if required.
- For pressure reducing applications, where high reduction ratios are required, such as underground mining water supply systems.
- PR 80 / RP 29 regulator is used for first stage pressure reduction, PR 80 BP as a second stage backpressure regulator.

PRINCIPLE OF OPERATION

- PR 80 / RP 29 regulator operates as it would on its own; sensing/controlling required downstream pressure.
- Operation in normal pressure reducing mode. (thus sense line connected downstream of second regulator)
- PR 80 BP only provides ‘backpressure’ to first valve, thus spreading total pressure drop over two valves. (Thus total pressure drop can be increased without undue wear on regulators)
- Control of first regulator is thus independent of second regulator, which eliminates stability or ‘hunting’ problems often occurring in multi-regulator control systems.
- Pressure resulting in the line between regulators remains constant at a value slightly higher than the setting on the nitrogen accumulator.



SECTION VIEW OF PRESSURE REDUCING REGULATORS



Item Number	Title	Material
1	CORE	CAST WCB OR SG IRON
2	BODY FABRICATION	ST52 - ZINC PLATED
3	INLET PLATE	EN3A - ZINC PLATED
4	OUTLET PLATE	CARBON STEEL - ZINC PLATED
5	RUBBER TUBE	NITRILE RUBBER (SEE NOTE)
6	O-RINGS	NBR (NITRILE)
7*	CAP SCREWS	A2 STAINLESS

* ITEM NOT SHOWN

NOTE:
1) VALVE CAN BE SUPPLIED WITHOUT ITEMS 1 AND 5
2) STANDARD TRIM SPECIFIED ABOVE
3) OTHER MATERIALS AVAILABLE ON REQUEST
4) VARIOUS TUBE MATERIALS FOR DIFFERENT MEDIA AVAILABLE ON REQUEST
5) STUDS AND NUTS REQUIRED FOR BOLTING THE VALVE BETWEEN PIPE FLANGES ARE NOT SUPPLIED WITH THE VALVE

DIMENSIONAL TABLE

LOW PRESSURE: PN 25 / ASME CLASS 150						
SIZE	A	B	C	D	E	Kg
40	127	38	69	83	52	45
50	152	52	83	87	63	6
80	197	76	102	136	81	11
MEDIUM PRESSURE: PN 40 / ASME CLASS 300						
SIZE	A	B	C	D	E	Kg
40	132	38	78	93	64	5.5
50	156	52	88	111	68	7.2
80	201	76	110	150	85	14.5

STUDS AND NUTS REQUIRED FOR BOLTING VALVE BETWEEN PIPING FLANGES

PIPE FLANGES: LOW PRESSURE: ASME CLASS 150						
SIZE	NO HOLES	HOLE OD	PCD	STUD SIZE	STUD LENGTH	NUTS
40	4	16	98.6	M12	190	8
50	4	19	120.5	M16	230	8
80	4	19	152.5	M16	275	8

PIPE FLANGES: LOW PRESSURE: BS4504 T25/3						
SIZE	NO HOLES	HOLE OD	PCD	STUD SIZE	STUD LENGTH	NUTS
40	4	16	110	M12	200	8
50	4	18	125	M16	240	8
80	8	18	160	M16	285	16

PIPE FLANGES: MEDIUM PRESSURE: ASME CLASS 300						
SIZE	NO HOLES	HOLE OD	PCD	STUD SIZE	STUD LENGTH	NUTS
40	4	23	114.5	M20	225	8
50	8	23	127	M16	255	16
80	8	23	168.5	M20	310	16

PIPE FLANGES: MEDIUM PRESSURE: BS4504 T40/3						
SIZE	NO HOLES	HOLE OD	PCD	STUD SIZE	STUD LENGTH	NUTS
40	4	18	110	M16	220	8
50	4	18	125	M16	240	8
80	8	18	160	M14	285	16

RGR TECHNOLOGIES (PTY) LTD.

	NAME	DATE
DRAWN	Gary	23/02/2021
CHECKED		

PR SERIES PRESSURE REGULATING VALVE
40-80 NB CLASS 150-300
RGR PR MODEL 80 FABRICATED WAFER

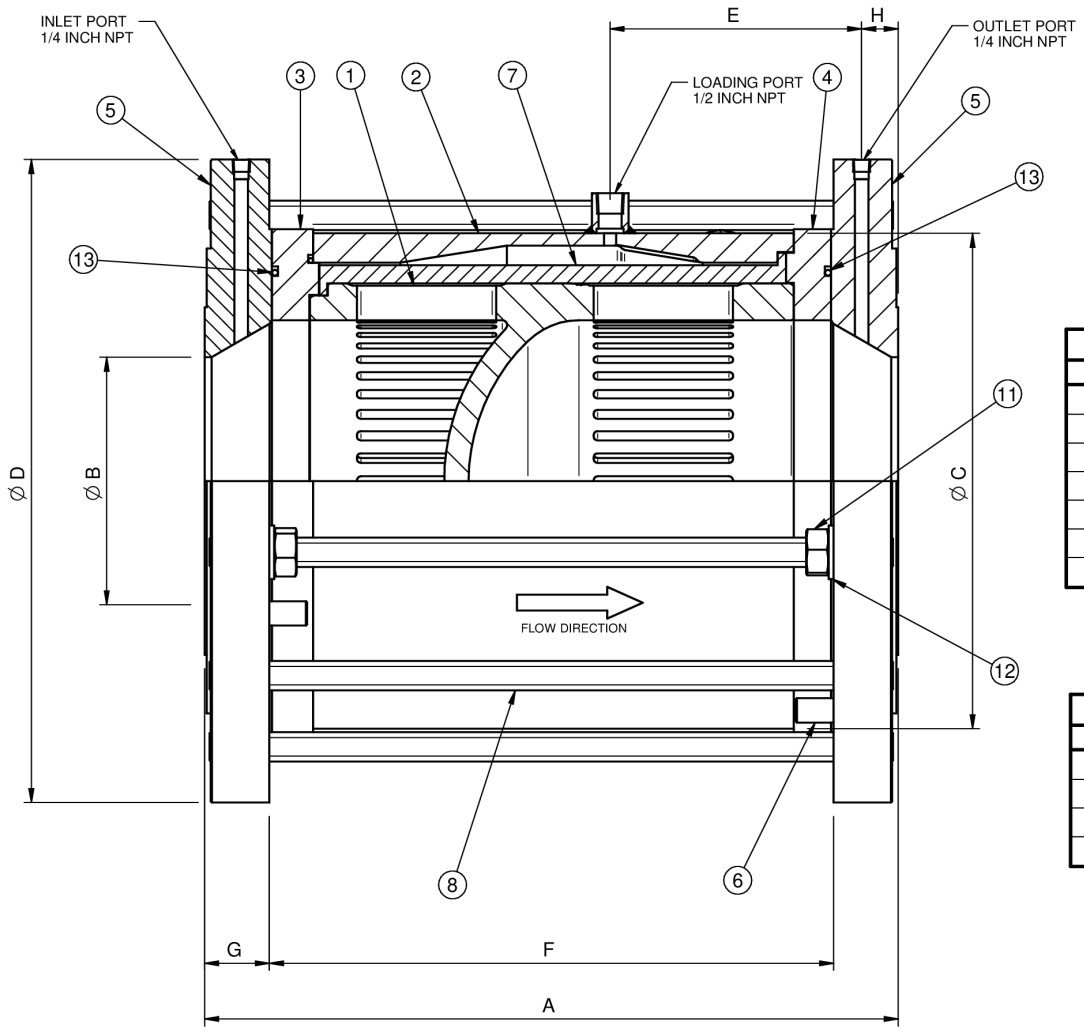
MACHINE 6.3 U.O.S
GENERAL TOLERANCE TO RGRC-13-02
BREAK SHARP EDGES 0.5x45°

A2 | DRW NO. PR 40-80 CL150-300 WAFER | REV 1

SCALE 1:1

FILE NO. PR40-80 CL150-300 WAFER.dft

WEIGHT: 6.99 kg | SHEET 2 OF 2



Item Number	Title	Material
1	CORE	CAST WCB OR SG IRON
2	BODY FABRICATION	ST52 - ZINC PLATED
3	INLET COVER PLATE	MILD STEEL PLATE - ZINC PLATED
4	OUTLET COVER PLATE	MILD STEEL PLATE - ZINC PLATED
5	LINE FLANGES (SEE NOTE)	MILD STEEL PLATE - ZINC PLATED
6	DOWEL PINS	GR431 STAINLESS STEEL
7	RUBBER TUBE	NITRILE RUBBER (SEE NOTE)
8	STUD	GR 8.8 ZINC PLATED
9*	CAP SCREWS	A2 STAINLESS
10*	STUD NUTS (SAME AS 11)	GR 8.8 PLATED
11	JACKING NUTS	GR 8.8 PLATED
12	WASHERS	GR 8.8 PLATED
13	O-RINGS	NBR (NITRILE)

HIGH PRESSURE: PN 100 / ASME CLASS 600									
SIZE	A	B	C *	D	E	F	G	H	Kg
50	256	50	139	290	91	165	45	18	47
80	329	80	190	350	116	224	52	30	93
100	394	100	245	410	140	289	52	31	155
150	508	150	349	498	178	378	65	40	309
200	610	200	429	584	206	454	78	46	527
250	752	250	508	686	244	559	97	59	945
300	820	300	602	756	282	626	97	59	1300

* DEPENDS ON THE DIAMETER OF THE PIPELINE FLANGES

ULTRA HIGH PRESSURE: PN 160 / ASME CLASS 900									
SIZE	A	B	C *	D	E	F	G	H	Kg
50	262	50	149	340	93	165	48	28	71
80	341	80	200	370	122	224	58	31	122
100	417	100	270	445	149	287	64	31	236
150	545	150	372	560	188	395	75	40	457

* DEPENDS ON THE DIAMETER OF THE PIPELINE FLANGES

RGR TECHNOLOGIES (PTY) LTD.

	NAME	DATE
DRAWN	Gary	25/02/2021
CHECKED		

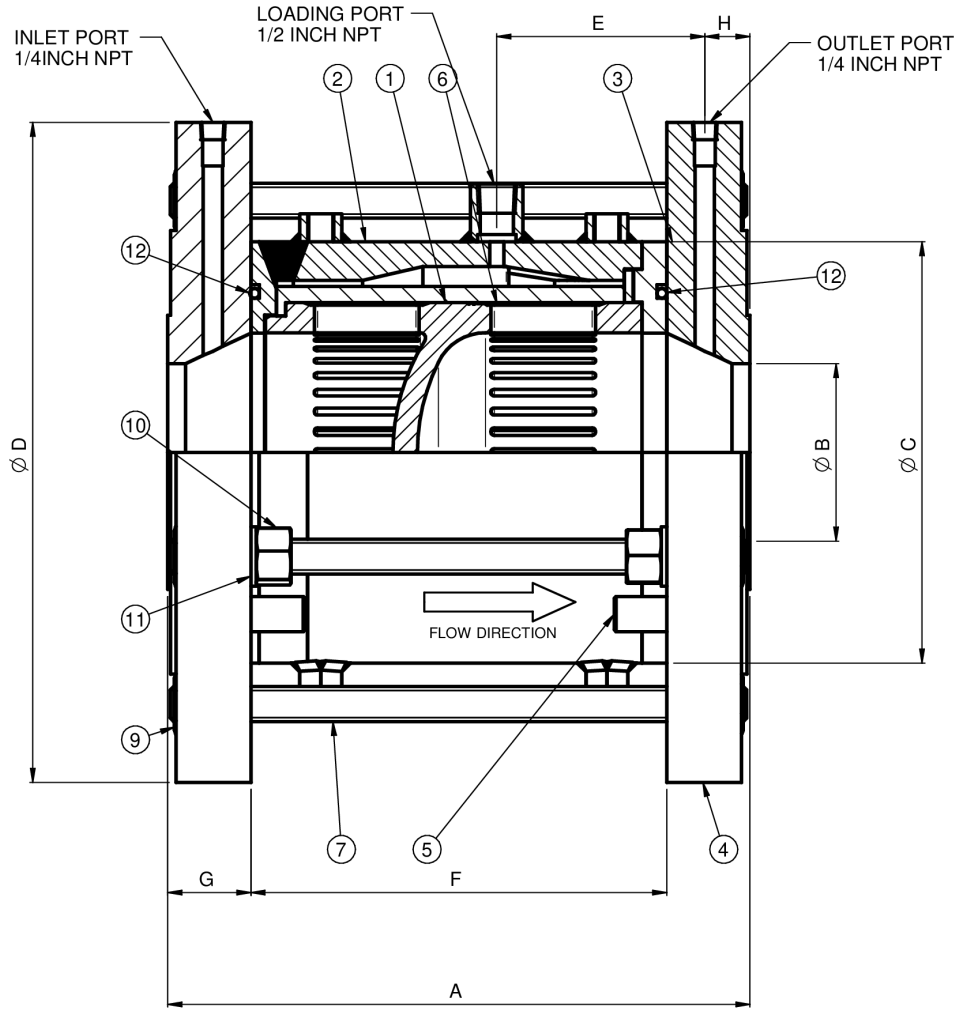
PR SERIES PRESSURE REGULATING VALVE
50-300 NB CLASS 600-900 FLANGED
RGR PR MODEL 80 FLANGED

MACHINE 6.3 U.O.S
GENERAL TOLERANCE TO RGRC-13-02
BREAK SHARP EDGES 0.5x45°

A2 | DRW NO. PR50-300 CL600-900 FLANGED | REV 1

SCALE 1:2.86 | FILE NO. PR50-300 CL600-900 FLANGED.dft

WEIGHT 1001.84 kg | SHEET 1 OF 1



Item Number	Title	Material
1	CORE	CAST WCB OR SG IRON
2	BODY FABRICATION	ST52 - ZINC PLATED
3	OUTLET PLATE	EN3A - ZINC PLATED
4	LINE FLANGES (SEE NOTE)	CARBON STEEL - ZINC PLATED
5	DOWEL PINS	GR431 STAINLESS STEEL
6	RUBBER TUBE	NITRILE RUBBER (SEE NOTE)
7	STUD	GR 8.8 ZINC PLATED
8*	CAP SCREWS	A2 STAINLESS
9	NUTS	GR 8.8 PLATED
10	JACKING NUTS	GR 8.8 PLATED
11	WASHERS	GR 8.8 PLATED
12	O-RINGS	NBR (NITRILE)

* ITEM NOT SHOWN

NOTE:
1) VALVE CAN BE SUPPLIED WITHOUT ITEMS 1 AND 6
2) STANDARD TRIM SPECIFIED ABOVE
3) OTHER MATERIALS AVAILABLE ON REQUEST
4) VARIOUS TUBE MATERIALS FOR DIFFERENT MEDIA AVAILABLE ON REQUEST
5) LINE FLANGES DRILLED AND TAPPED FOR ANSI, BS OR SABS STANDARDS.
6) STUDS AND NUTS FOR FITTING VALVES INTO PIPLINES ARE SUPPLIED ON REQUEST ONLY.

LOW PRESSURE: PN 25 / ASME CLASS 150									
SIZE	A	B	C	D	E	F	G	H	Kg
100	314	102	219	349	116	232	41	23	70
150	422	152	305	448	125	327	48	27	133
MEDIUM PRESSURE: PN 40 / ASME CLASS 300									
SIZE	A	B	C	D	E	F	G	H	Kg
100	333	102	241	378	125	238	48	27	92
150	429	152	318	454	156	333	48	27	170

NOTE: ALL STUDS (ITEMS 7,9,10 AND 11) ABOVE THE CENTRE LINE MUST BE REMOVED BEFORE REGULATOR BODY SECTION CAN BE REMOVED FROM THE LINE. WHEN INSTALLING THE REGULATOR IN A CONFINED AREA, SUFFICIENT DISTANCE (DIM 'A') MUST BE ALLOWED FROM THE END OF THE FLANGE (INLET OR OUTLET) FOR REMOVAL OF STUDS.

RGR TECHNOLOGIES (PTY) LTD.

	NAME	DATE
DRAWN	Gary	23/02/2021
CHECKED		

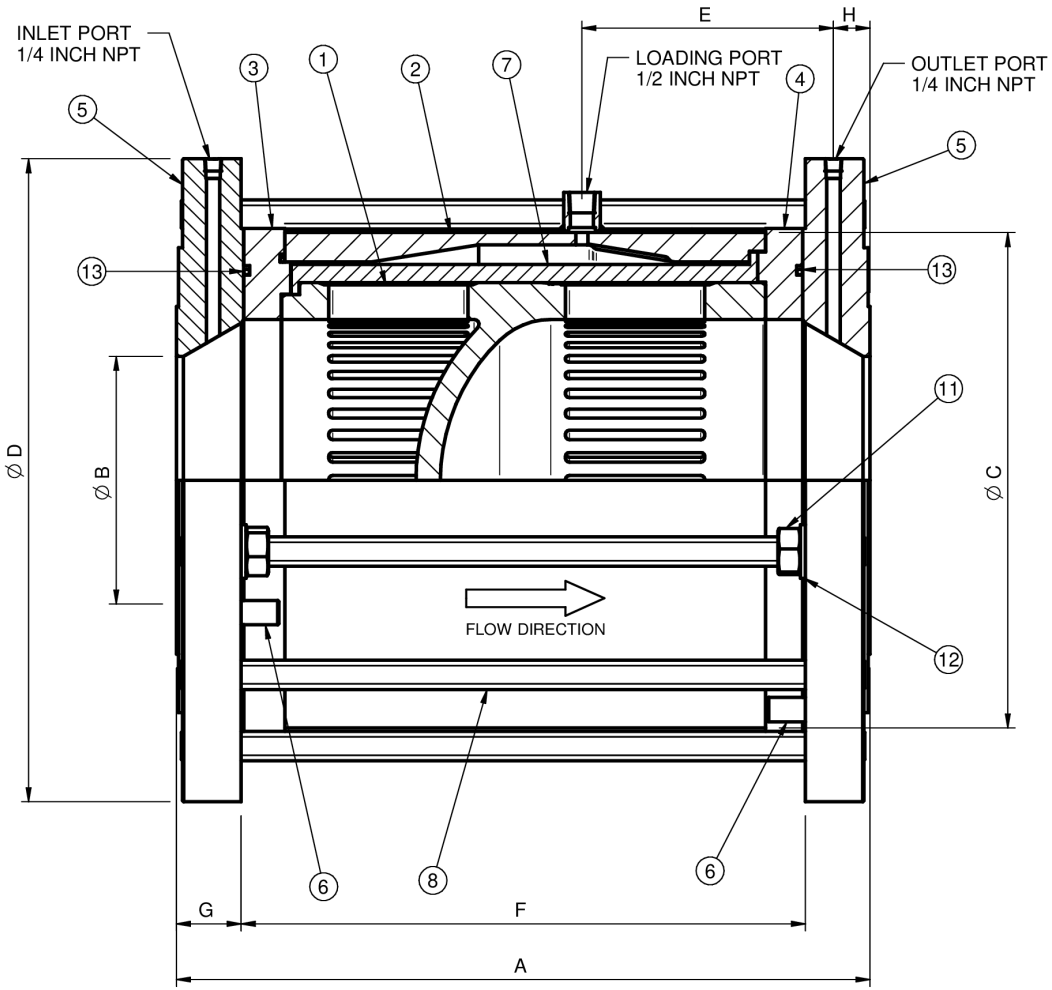
PR SERIES PRESSURE REGULATING VALVE
100-150 NB CLASS 150-300
RGR PR MODEL 80 FABRICATED FLANGED

MACHINE 6.3 U.O.S
GENERAL TOLERANCE TO RGRE-13-02
BREAK SHARP EDGES 0.5x45°

A2 | DRW NO. PR 100-150 CL150-300 FABRICATED | REV 1

SCALE 1:2 | FILE NO. PR100-150 CL150-300 FABRICATED.dft

WEIGHT: 133.73 kg | SHEET 2 OF 2



Item Number	Title	Material
1	CORE	CAST WCB OR SG IRON
2	BODY FABRICATION	ST52 - ZINC PLATED
3	INLET COVER PLATE	MILD STEEL PLATE - ZINC PLATED
4	OUTLET COVER PLATE	MILD STEEL PLATE - ZINC PLATED
5	LINE FLANGES (SEE NOTE)	MILD STEEL PLATE - ZINC PLATED
6	DOWEL PINS	GR431 STAINLESS STEEL
7	RUBBER TUBE	NITRILE RUBBER (SEE NOTE)
8	STUD	GR 8.8 ZINC PLATED
9*	CAP SCREWS	A2 STAINLESS
10*	STUD NUTS (SAME AS 11)	GR 8.8 PLATED
11	JACKING NUTS	GR 8.8 PLATED
12	WASHERS	GR 8.8 PLATED
13	O-RINGS	NBR (NITRILE)

* ITEM NOT SHOWN

NOTE:
1) VALVE CAN BE SUPPLIED WITHOUT ITEMS 1 AND 6
2) STANDARD TRIM SPECIFIED ABOVE
3) OTHER MATERIALS AVAILABLE ON REQUEST
4) VARIOUS TUBE MATERIALS FOR DIFFERENT MEDIA AVAILABLE ON REQUEST
5) LINE FLANGES DRILLED AND TAPPED FOR ANSI, BS OR SABS STANDARDS.
6) STUDS AND NUTS FOR FITTING VALVES INTO PIPELINES ARE SUPPLIED ON REQUEST ONLY.

NOTE: ALL STUDS (ITEMS 8,9,10, 11 AND 12) ABOVE THE CENTRE LINE MUST BE REMOVED BEFORE REGULATOR BODY SECTION CAN BE REMOVED FROM THE LINE. WHEN INSTALLING THE REGULATOR IN A CONFINED AREA, SUFFICIENT DISTANCE (DIM 'A') MUST BE ALLOWED FROM THE END OF THE FLANGE (INLET OR OUTLET) FOR REMOVAL OF STUDS.

LOW PRESSURE: PN 25 / ASME CLASS 150									
SIZE	A	B	C	D	E	F	G	H	Kg
200	543	203	392	527	202	448	48	22	281
250	678	254	457	581	268	581	48	22	504
300	737	304	543	670	278	642	48	22	623
MEDIUM PRESSURE: PN 40 / ASME CLASS 300									
SIZE	A	B	C	D	E	F	G	H	Kg
200	569	203	406	527	205	460	54	30	318
250	708	254	495	613	266	575	67	30	618
300	775	304	578	714	293	642	67	30	818

RGR TECHNOLOGIES (PTY) LTD.

	NAME	DATE
DRAWN	Gary	24/02/2021
CHECKED		

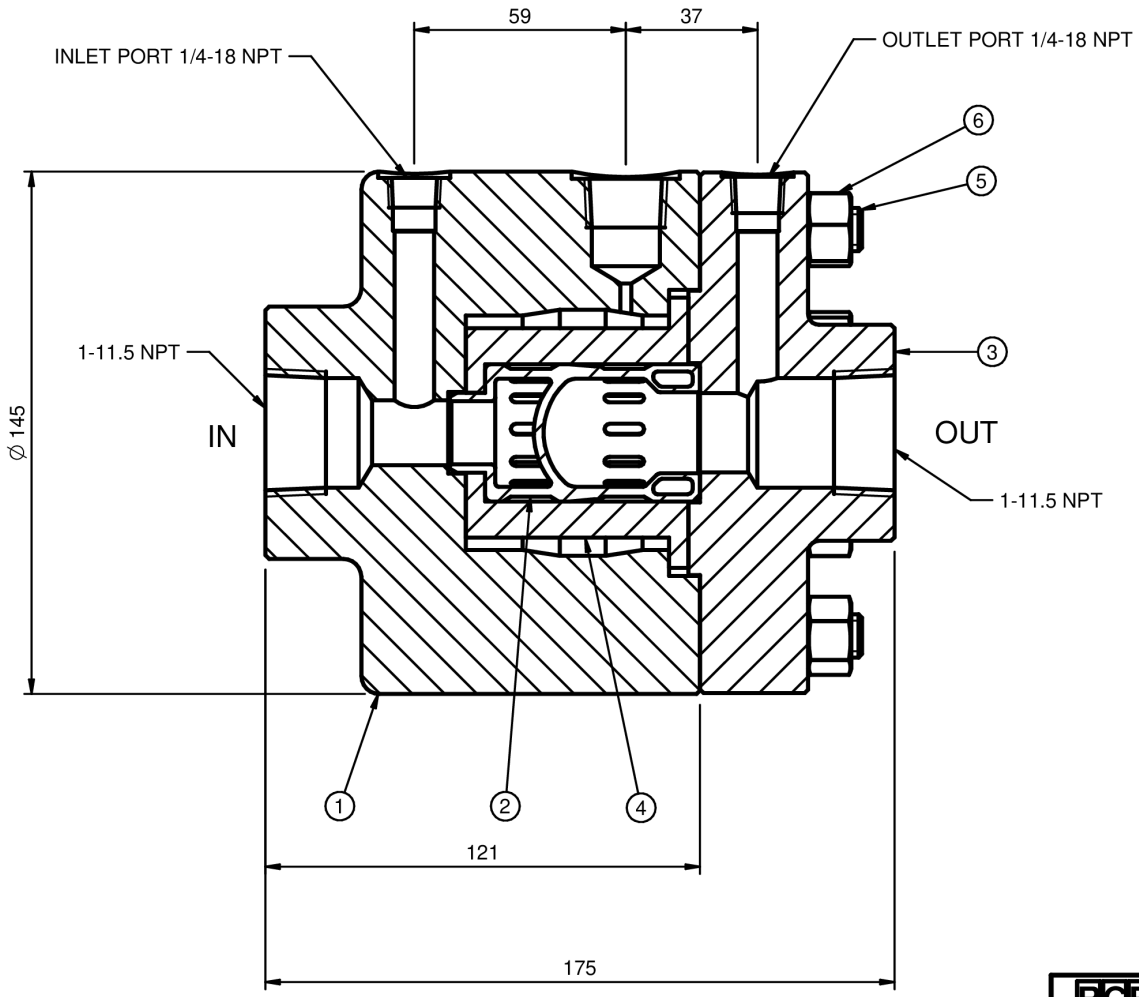
PR SERIES PRESSURE REGULATING VALVE
200-300 NB CLASS 150-300 FLANGED
RGR PR MODEL 80 FLANGED

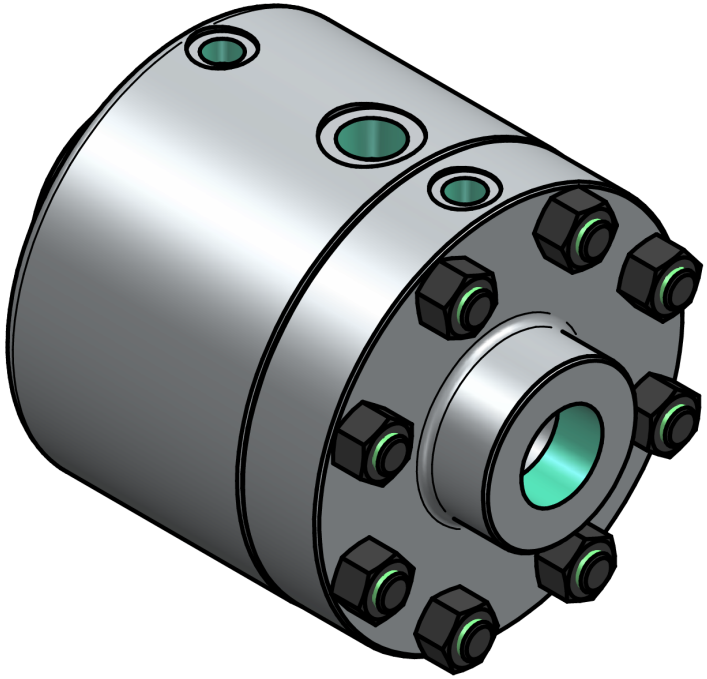
MACHINE $\sqrt{63}$ U.O.S
GENERAL TOLERANCE TO RGRC-13-02
BREAK SHARP EDGES 0.5x45°

A2 | DRW NO. PR200-300 CL150-300 FLANGED | REV 1

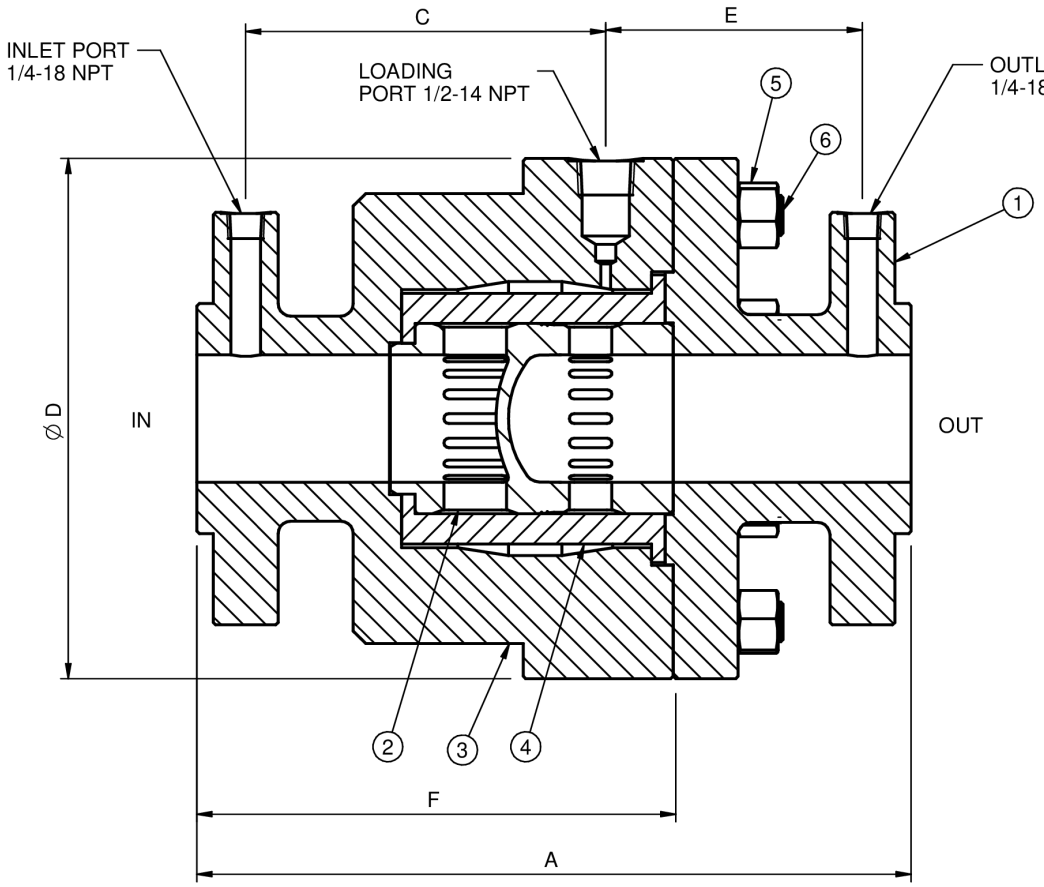
SCALE 1:2.86 | FILE NO. PR200-300 CL150-300 FLANGED.dft

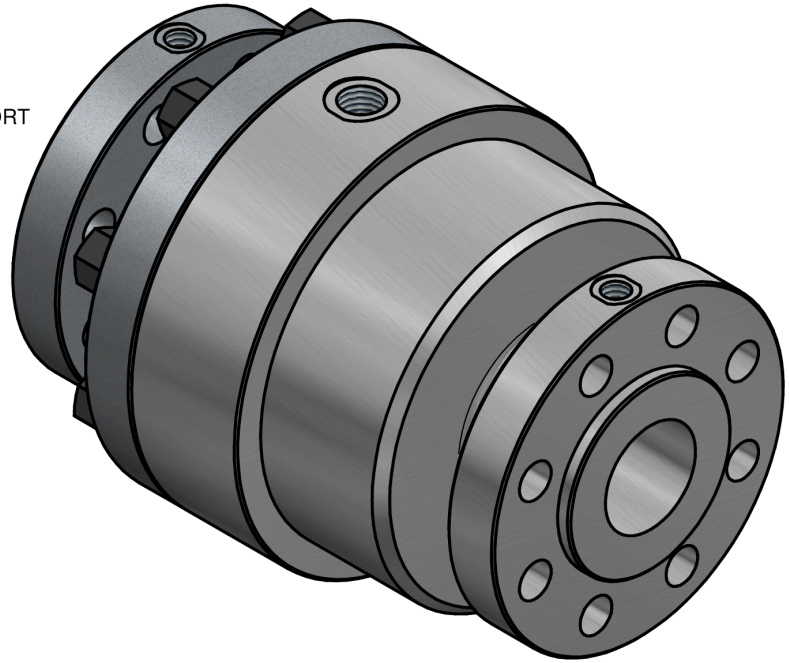
WEIGHT 4001.84 kg | SHEET 1 OF 1





RGR TECHNOLOGIES (PTY) LTD.			
	NAME	DATE	PR SERIES PRESSURE REGULATING VALVE 25 NB CLASS 600 RGR PR MODEL 80 S
DRAWN	Gary	01/02/2021	
CHECKED			
MACHINE $\sqrt{}^{6.3}$ U.O.S GENERAL TOLERANCE TO RGRC-13-02 BREAK SHARP EDGES 0.5x45° COPYRIGHT RESERVED			A4 DRW NO. PR 25 80 SOLID SCR REV 1 FILE NO. PR01680SOLIDSCRD.dft SCALE 1:2 WEIGHT: 0.00 kg SHEET 1 OF 1





Item Number	Quantity	Title	Material
1	1	END FLANGE ASME MACHINED	EN3A
2	1	CORE MACHINING	SG60 DUCTILE IRON
3	1	BODY MACHINED ASME (FORGED)	EN3A
4	1	RUBBER TUBE	RUBBER
5	8	NUT M16	A194 GR 2H
6	8	STUD	A193 GR B7

NOTE: FLANGED ENDS CAN BE DRILLED TO SUIT CUSTOMER REQUIREMENTS

DIMENSIONS							
SIZE	A	B	C	D	E	F	MASS (kg)
50	286	51	96	210	103	191	30
80	380	76	140	273	93	251	61

RGR TECHNOLOGIES (PTY) LTD.

	NAME	DATE
DRAWN	Gary	01/02/2021
CHECKED		

PR SERIES PRESSURE REGULATING VALVE
50 AND 80 NB CLASS 600
RGR PR MODEL 80 F

MACHINE 6.3 U.O.S
GENERAL TOLERANCE TO RGRC-13-02
BREAK SHARP EDGES 0.5x45°

SCALE 1:2

A3 | DRW NO. PR 50/80 SOLID FLANGED | REV 1

FILE NO. Draft2

WEIGHT: 0.00 kg | SHEET 1 OF 1

ACCESSORIES

PILOT VALVES

RGR RP 29 PILOT VALVE

- The RP 29 is suitable for low, medium and high pressures and is normally used with a sense line connected downstream (or upstream for back pressure applications). It is supplied in two versions: RP 11 5 00 for pressures 60 Bar and below, and RP 6 00 for pressures 60 Bar to 120 Bar. See Installation, Operating and Safety Manual for the RGR RP 29 Pilot Valve.

PILOT VALVES FOR LOW PRESSURE

- RGR can supply pilot valves from various manufacturers. These valves do not have a built-in variable orifice and are supplied with a needle control valve to carry out fine tuning of the system. Materials of construction is generally brass or bronze.

IN-LINE FILTERS

- For applications where the fluid contains solid particles, the pilot valve and the needle valve may need to be protected by installing an in-line filter before the needle control valve and the pilot valve. RGR supplies the Model FT35 filter, which consist of a stainless steel body and a replaceable filter element, and is used for applications where the pressure exceeds 40 Bar. For lower pressures, RGR supplies standard y-type brass or bronze in-line filters.

PIPELINE STRAINERS

- For applications where the fluid contains solid particles and debris, the PR Pressure Regulating Valves should be protected by installing pipeline strainers. RGR manufactures strainers to suit the pipe size and flange drilling. The strainer box is fabricated from steel piping and has a bolted lid which allows access to the strainer plate. The strainer plate is manufactured from perforated plate and is reinforced to prevent deformation of the plate if the strainer is blocked with debris. The strainer has a drain valve fitted at the bottom so that debris can be drained. Therefore, the strainer can be cleaned without removing the cover plate. The strainer is installed on the inlet side of the PR valve just after the upstream isolating valve. The pipeline strainer can be sold separately or fitted to a prefabricated skid system.

ISOLATING VALVES

- Isolating (shut-off) valves can be installed on the tubing used to connect the various components on the PR valves. These isolating valves can be fitted on the inlet, outlet and jacket tubing. The isolating valves are used to assist with maintenance of the various components connected to the PR valve.
- Isolating valves should be installed at the inlet and outlet of the PR Regulating valves so that maintenance can be carried out on the PR Regulator valves. These valves can be manually operated by a hand lever, by a gear operator, or by an electric or pneumatic actuator. RGR can supply our Reliaball or PL series ball valve.
- For mining operations and water distribution systems RGR recommends using the RGR B1 Reliaball Ball Valve Series. These ball valves are specifically designed for medium and high pressure dirty water service. For low pressure service (up to 40 Bar), RGR recommends using the RGR B1W Reliaball Ball Valve Series.
- For oil and gas (petrochemical) applications RGR recommends using the RGR PL Series Ball Valve. These valves are specifically designed for oil and gas applications.

ACCUMULATOR GAS FILLING HOSE ASSEMBLY

- The accumulator is charged with nitrogen gas using high pressure hose from a nitrogen gas cylinder. The hose consists of a two meter length of high pressure gas hose, fitted with an adaptor to fit the loading valve on the accumulator, and an adaptor to fit the nitrogen gas bottle.

PRESSURE GAUGES

- Pressure gauges can be fitted on the inlet and outlet tubing connecting the pilot valve. This is particularly useful to see your inlet and outlet pressures which assists in day to day inspections of the PR valve as well as commissioning.

ORIFICE PLATES

- Orifice plates can be supplied as per customer requirements. Orifice plates are primarily used to either create slight back pressure or to reduce flow in a piping system.

INSTRUMENTATION

- Instrumentation can be supplied as per customer requirements. The instrumentation can be fitted on the upstream and downstream pipework of prefabricated skids. The instrumentation can be flow meters or pressure transducers/sensors. RGR cannot supply the data loggers or PLC's.

FABRICATED SKID MOUNTED SYSTEMS

- Single and dual stage pressure reducing systems mounted on a fabricated skid can be manufactured for mining and water supply systems. These systems can be single or dual branches of equal size or have one branch which is smaller that the other to improve pressure control. The skid mounted pressure reducing system is fitted with isolating ball valves at the upstream and downstream ends of the skid. A pressure relief valve can be fitted to ensure that over pressurization of the system is prevented. A pipeline strainer is installed before the first pressure regulator to prevent debris from entering the valve. The sense line from the pressure regulator pilot is routed to the downstream piping after the downstream isolating valve. Other equipment such as pressure gauges and switches, pressure transducers, drain valves, electric actuators for isolating valves, and recording and monitoring equipment, can be fitted to the skid mounted system. Skid mounted systems are custom designed for each application.

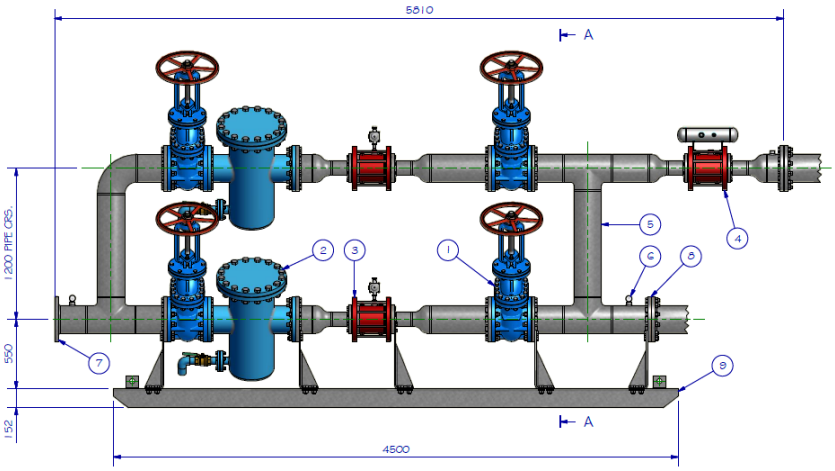


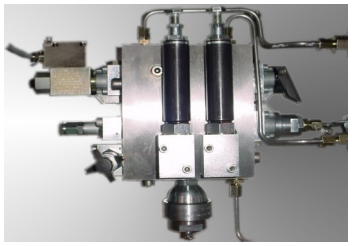
Photo Gallery



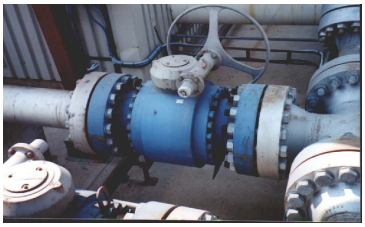










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