ONUS- Excellence in the Gas Handling System Since 1995



#### ABOUT ONUS

Onus Group has two companies Onus Equipments Pt It & Onus Engineering. Both are leading manufacturer and supplier in the field of Pressure Reducing Valves, Pressure Reducing complete system, Safety valve and laboratory gas purification system for various Gas like Nitrogen, Hydrogen, Helium etc. Onus providing complete solution for Hydrogen and Nitrogen banks by providing complete manifolds for truck mounted or stationary units, we are carrying out complete laboratory and hospital piping (Tubing) system for various utility like gas, vacuum, water etc. We are also dealing with flame arrestor, Self breather valve etc. We have also designing and manufacturing hot water system using PHE and electrical heater, laboratory chilled water system. We have very strong technical back up for any kind of tailor made items designing and manufacturing. Our factory is well equipped with various machines to deal with such items. We are dealing with all kinds of industries like API mfg. Plants, pharmaceuticals, chemicals, oil and gas and very strong back history. Our main strength is quality, timely delivery and very strong site support. We serve very successfully for all kind of industries from last 30 year.

### CERTIFICATES



We offer complete Hydrogen Unloading / Pressure Reducing Stations to suit your specific process requirement, right from pigtail and manifold pressure reducing station, safety shut off, safety interlocks, flow measurement etc., generally, supplied as complete skid mounted ready to use unit.



TECHNICAL SPECIFICATION	
SIZE	15 NB – 125 NB
INLET PRESSURE RANGE	0 – 250 bars
FLOW RANGE	0 – 10,000 Nm3/Hr
SET PRESSURE RANGE	0 – 85 Kg/cm2
BODY	Carbon Steel, Stainless Steel (304/316/304L/316L), Monel Hastelloy 'C'.
TRIM	Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS316L Body) Haste Alloy 'C' (For CS/SS Body, Monel, HAC body) Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS316L Body) Haste Alloy 'C' (For CS/SS)
END CONNECTION	Flange End / Screwed End



### VALVES



## DIRECT OPERATED PRESSURE CONTROL VALVE

Direct Acting Downstream Pressure Regulating Valves – also, called as Pressure Reducing Valves – are meant for reducing the source pressure and regulating the outlet / downstream pressure at the pre-determined set value required for the processes. With direct acting Regulators precise pressure control can be achieved at specified process requirements.

## PILOT OPERATED PRESSURE CONTROL VALVE

These Pilot Actuated Pressure Control valves have an edge over conventional control valves as these do not require any auxiliary inputs like pneumatic line, electricity or hydraulic line. These PCV operate on the basis of signal received from line fluid itself.

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	TECHNICAL SPECIFICATION
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BODY	Carbon Steel, Stainless Steel (304/316/304L/316L), Monel Hastelloy 'C'.
TRIM	Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS316L Body) Haste Alloy 'C' (For CS/SS Body, Monel, HAC body) Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS316L Body) Haste Alloy 'C' (For CS/SS)
END CONNECTION	Flange End / Screwed End

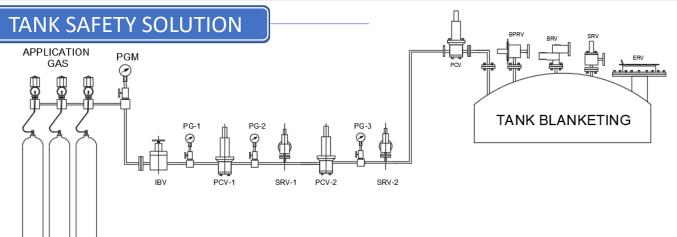
## BLANKETING PRESSURE REGULATOR

Self-actuated lever operated direct acting regulators are the best solution for low pressure applications like blanketing. These are designed to control the set outlet pressure precisely irrespective of variations in inlet pressure and flow rate for the process. Blanketing pressure regulator provides an economical solution for precise pressure control with high accuracies at low pressure requirements for process



TECHNICAL SPECIFICATION	
SIZE	15 NB – 125 NB
INLET PRESSURE RANGE	0 – 250 bars
FLOW RANGE	0 – 10,000 Nm3/Hr
SET PRESSURE RANGE	0 – 85 Kg/cm2
BODY	Carbon Steel, Stainless Steel (304/316/304L/316L), Monel Hastelloy 'C'.
TRIM	Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS316L Body) Haste Alloy 'C' (For CS/SS Body, Monel, HAC body) Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS316L Body) Haste Alloy 'C' (For CS/SS)
END CONNECTION	Flange End / Screwed End





### SAFETY RELIEF VALVE



Spring Loaded Safety Valves or Safety Relief Valves are the most commonly used relieving safety device. Spring Loaded Safety Relief Valves are designed to automatically discharge the accumulation of fluid from any pressure containing system, preventing a predetermined safe pressure being exceeded and protecting plant & personnel.

TECHNICAL SPECIFICATION	
SIZE	15 NB – 250 NB
BODY	Carbon Steel, Stainless Steel (304/316/304L/316L), CS/SS , Hastelloy 'C'.
TRIM	Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS 316 L Body) Haste Alloy 'C' (For CS/SS Body, HAC body)



### BACK PRESSURE RELIEF VALVE

A back pressure regulator is a device used to accurately control the pressure of a system, through opening just as much as is needed to return to normal pressure levels. The back pressure regulator keeps a steady pressure by regulating flow through it as it reacts to the pressure levels of the system to keep good stability. Back pressure relief valve is throttling relief valve used to protect vessels, equipment & piping system from over pressure while maintaining a steady system pressure at the desired level. A smooth throttling action minimizes pressure surge during operation.

TECHNICAL SPECIFICATION	
SIZE	15 NB – 250 NB
BODY	Carbon Steel, Stainless Steel (304/316/304L/316L), CS/SS, Hastelloy 'C'.
TRIM	Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS 316 L Body) Haste Alloy 'C' (For CS/SS Body, HAC body)

# ONUS GROUP

### PIPE AWAY BREATHER VALVE



Breather Valves are installed on the vent nozzle of atmospheric storage tanks for providing adequate pressure and vacuum relief, which helps in preventing bulging and buckling of atmospheric storage tanks Breather valves also help considerably reducing vapor & nitrogen emission losses. Over the years we have adapted our designs for various pressure, vacuum, temperature applications. Our pallets are made with utmost precision which ensures tight shut off and reduces the chattering of the pallet considerably. The dead weight type pallets can be replaced at a later stage if your process requirements have changed.

### BREATHER VALVE WITH FLAME ARRESTOR

Breather Valve with Flame Arrestor is a tank protection device, which safeguards tank/ vessel from over pressurization or fire. This is a combination of Pressure Vacuum Relief Valve with in-built Flame Arrestor. These are generally, dead weight type for standard set pressures. If required, these can be given as spring loaded for higher set pressures.



TECHNICAL SPECIFICATION	
SIZE	15 NB – 250 NB
BODY	Carbon Steel, Stainless Steel (304/316/304L/316L), CS/SS, Hastelloy 'C'.
TRIM	Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS 316 L Body) Haste Alloy 'C' (For CS/SS Body, HAC body)

# END OF LINE FLAME ARRESTOR

End-of-line flame arrestors are fitted to the end of a pipe line or exit to a vessel to prevent flames from entering, and not, as is sometimes believed, to prevent the flame exiting the pipe or vessel. Without a weather-hood, they may be mounted in almost any orientation, but inverted mounting is not recommended as this increases the risk of heat being trapped thus causing a flash back. End of line Flame Arresters are Mainly Used For Above Ground Storage Tanks





END OF LINE FLAME ARRESTOR

In-line flame arrestors are fitted in piping systems to protect downstream equipment. it is also possible that the source of ignition could cause the flame to travel with the gas flow. If the flame could come from either direction then a bi-directional flame arrestor is required. Pipe orientation is usually not a problem unless liquid is entrained in the gas flow and would tend to collect in the arrestor. In such situations, an eccentric flame arrestor housing may be fitted to allow collection and drainage of the liquid. In line flame arrestors are mainly Used For Underground Storage Tanks And In Continuous Process Lines

TECHNICAL SPECIFICATION	
SIZE	15 NB – 400 NB
BODY	Carbon Steel, Stainless Steel (304/316/304L/316L), Monel Hastelloy 'C'.
ARRESTOR ELEMENT	Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS316 L Body) Haste Alloy 'C' (For CS/SS Body PTFE/PFA Lined, HAC body)
WHETHER HOOD	SS304, SS304 with ETFE coating

### EMERGENCY VENT VALVE

ONUS emergency relief vents are designed to provide an opening for storage tanks when exposed to overpressure that are not handled by standard tank vents. These vents provide the capacity to meet API standard 2000 for emergency venting due to fire exposure when properly sized. These vents also provide quick easy access for tank inspection and maintenance. Emergency pressure relief vents provide pressure relief only. Vacuum relief must be supplied by normal venting devices. When excessive pressure builds within the storage tank the ONUS emergency pressure relief vent hinged cover begins to open at the predetermined set pressure, relieving excess pressure. When overpressure has dissipated, the cover reseats onto the base. The hinge mechanism prevents misalignment and provides an accurate reseat.



TECHNICAL SPECIFICATION	
BODY	Carbon Steel, SS 304, SS 304L, SS 316, SS 316L
WITTED PARTS	Carbon Steel, SS 304, SS 304L, SS 316, SS 316L, Hastelloy-C, Halar Coating, PTFE lining
GASKET	PTFE, CNAF, Graphite
FASTNER	SS 304, SS 316, High Tensile Coating, Halar Coating

# **CENTRIFUGE BLANKETING**



The dangers of flash fires and explosions is inherent is many plant operations. Specifically, the combination of volatile solvents and dusts in process vessels, such as a high-speed Industrial Centrifuge, where highly flammable conditions can be created. Unless proper safety measures are undertaken, this situation can potentially lead to catastrophic fires and explosions. Methods of monitoring and avoiding such hazards are important to all those involved, not just the production operator and safety manager.

TECHNICAL SPECIFICATION	
SIZE	15 NB – 100 NB
INLET PRESSURE RANGE	0 – 20 bars
FLOW RANGE	0 – 1000 Nm3/Hr
BODY	Carbon Steel, Stainless Steel (304/316/304L/316L), Monel Hastelloy 'C'.
TRIM	Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS316L Body) Haste Alloy 'C' (For CS/SS Body, Monel, HAC body) Stainless Steel 316L (for CS/SS304/SS316/SS304L/SS316L Body) Haste Alloy 'C' (For CS/SS)
END CONNECTION	Flange End



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