

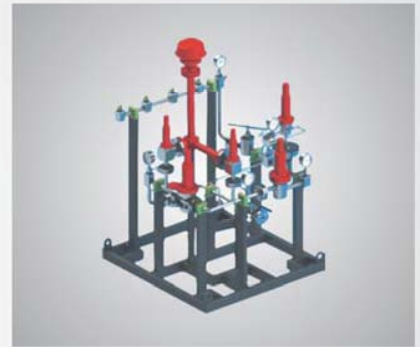
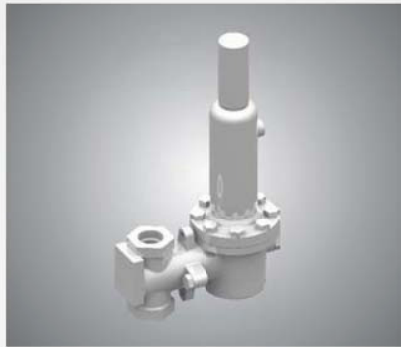
**DELIVERING EXCELLENCE,
GLOBALLY.**

Nirmal ™
INDUSTRIAL CONTROLS PVT. LTD.

Expertise that delivers



EXPERTISE THAT DELIVERS



GLOBAL STANDARD OF EXCELLENCE

QUALITY ASSURANCE

The Quality Assurance system of Nirmal ensures that innovative solutions are delivered through processes which are assessed, approved & certified to ISO 9001:2008 Quality Assurance standard. Strict adherence to procedures by disciplined and dedicated work force and internal audits, guarantee that the quality system is implemented across all stages, from incoming raw materials to final test and delivery. One of the most prestigious accolades earned is the U & R Stamp Certification which authorizes the use of the symbol of American Society of Mechanical Engineers (ASME). It assures customers that the stamped products are built in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. Nirmal is the first Indian manufacturer to get its products certified with stringent European Standards EN-334 & EN-14382 for Pressure Regulators and Safety Shut Off Valves ensuring world-class product performance & accuracy.



ISO 9001:2008



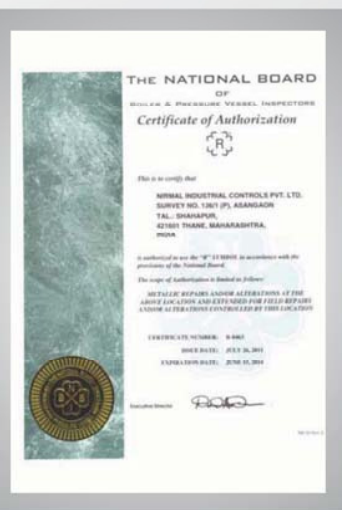
PED/97/23/EC (CE) Compliance Certificate



Type Test Certificate to EN-334 & 14382



ASME U & R Stamp Certificate



WORLD-CLASS FACILITIES

INFRASTRUCTURE & FACILITIES

Nirmal's 60,000 sq. feet unit at Asangaon comprises state-of-the-art equipment like Overhead Crane, Hydra, N/C Band Saw Machine, High Pressure Compressor, VMC, HMC & CNC Machining Centers, Automatic Welding (Saw) Machine, Shrink Packing Machine, Foam Packing Machine etc.



Stores



High Pressure Compressor



Automatic Welding Machine



CNC Machine

Being a quality conscious company, testing is an area we lay special emphasis on. Our testing facilities include Computerised Flow Test Lab, CMM Test, Ultrasonic Test, Magnetic Particle Test, Pneumatic High Pressure Test Setup upto 700 Barg, Helium Leak Test, Spring Load Test, D. P. Test, Hydro Test, Radiography, PMI Test etc.



Computerised Flow Test Lab



CMM Test



Automated Pressure Regulator Test Setup



PMI Test

SOLUTIONS FOR NATURAL GAS SECTOR

Gas Conditioning Skids:-



Nirmal offers complete Gas Conditioning System for Power Plants & Fertilizers as well as Gas Conditioning Equipments.

- Knock Out Drum:-
Multi Cyclone / Demister Type
- Filter-Separators:-
Vane Pack / Filter Element
- QOEC:- Quick Opening End Closures
- Gas Pre Heaters:- Electric / Gas Fired Water Bath / Steam Heater
- Coalescer Filters for fine liquid particles removal
- Natural Gas Odorisers By-pass & Injection Type



Equipments & Pressure Vessels are fabricated as per ASME SEC VIII DIV 1. Our facility is also authorized to use ASME 'U' and 'R' stamp.

Gas Pressure Regulating & Metering Skids:-



Nirmal specializes in offering one stop solutions for design, development, manufacture, installation & commissioning of pre-fabricated skids for natural gas transmission and distribution applications, which include:

- City Gate Stations (CGS)
- District Regulating Stations (DRS)
- Industrial Pressure Regulating Stations (IPRS)
- Metering & Regulating Stations (MRS) for commercial & industrial installations
- Fiscal and Secondary Orifice / RPD / Turbine / Ultrasonic-based Metering Skids Compliant to AGA Standards with Flow Computer RTU SCADA Options
- CNG High Pressure Skids
- CNG Dispensers

The Standards used for Manufacturing of these Stations are:-

- ANSI B 31.8
- IGETD 13
- EN 12186
- EN 12279

The Configurations for these Stations can be customized as:-

- TWIN-STREAM HOT STAND-BY
- ACTIVE-MONITOR & WORKING-MONITOR

Pilot-operated Gas Pressure Regulators:-



D 53 Series Gas Pressure Regulator

We are the first in India to manufacture Gas Pressure Regulators with PED/97/23/EC compliance certification and also Type Test certified to EN 334 for Pressure Regulators.

- Active monitor configuration suitability
- Two path control & fast response
- Size ranging from 1" to 6"
- End connection options from ANSI 150# to ANSI 600# class
- Tight shut-off capability
- Easy online maintenance
- Double stage pilot control which can handle high variations in inlet pressure without affecting the accuracy of outlet controlled pressure
- Integral slam shut-off option with over pressure & under pressure cut-off
- Accuracy class:- up to AC 1
- Inlet pressure: 2 Barg to 100 Barg
Outlet pressure: 0.5 Barg to 60 Barg

Gain through Partnership with NIRMAL

- Access to more than three decades of engineering solution experience
- Expert knowledge of gas transmission & distribution application engineering
- Professional application engineers to assist you from concept to commissioning
- Complete station manufactured in our own factory & fully tested in our computerized flow test lab

Slam Shut Valves:-



SH4 Series Slam Shut Valve

We are the first in India to manufacture Gas Slam Shut Valves with PED/97/23/EC compliance certification and also type test certified to EN 14382.

- Size ranging from 1" to 6"
- End connection options from ANSI 150# to ANSI 600# class
- Quick response less than 2 seconds
- Manual resetting with the lever mechanism
- Capability with special trim design
- Built-in pressure equalisation which can be carried out by slightly turning the reset lever. No separate by-pass arrangement or equalizing valve is required
- Remote signals can be provided optional
- Over pressure and under pressure shut-off options available
- Optional regulators with in-built slam shut valves are also available
- Accuracy class: up to AG 1

Direct Acting Regulators:-



D81 Series Gas Pressure Regulator

These regulators are best suited for industrial, commercial gas burner applications & combustion systems. The regulators maintain constant Outlet Pressure with Inlet Pressure.

Integral Over Pressure & Under Pressure Slam Shut options available.

- Size ranging from 1/2" to 2"
- End connection options Screwed / Flanged to ANSI 150# to 600# class
- Set point adjusting screw is temper proof
- Easy online maintenance
- Tight shut-off capability
- Orientation in 360° direction
- Very high temperature ranges from 25°C to 180°C
- These pressure regulators can regulate natural gas till 100 Barg inlet pressure
- Inlet pressure up to 100 Barg
- Outlet pressure: 0.3Barg to 34 Barg

Domestic / Commercial Pressure Regulators:-



- Integral two stage pressure reduction
- Mesura' make regulators
- Integral over pressure / under pressure cut-off & creep relief
- Normal capacity 2.5 SCMH to 80 SCMH
- Inlet & outlet connections can be inline or at right angle
- Outlet pressure 20 to 300 mbar (with different springs)

Domestic Meter Regulators



- Max. Inlet Pressure:- 200 mbar
- Outlet Pressure:- 15 – 25 mbar
- End Connection:- DN20, 3/4" BSPT
- Accuracy:- Up to AC - 5
- Integrated with UPCO Device.
- Complying to T/SP/PRS/3
- Flow Capacity 2.5 SCMH



PRODUCTS FOR PROCESS INDUSTRIES

Self Actuated Upstream & Downstream Pressure Control Valves

Direct Acting & Pilot Operated Regulators for accurate pressure control in a variety of application:

- Tight Shut Off Capability
- Easy to Maintain
- Body Size & Connections: 1/4" to 16". Screwed / Flanged to ANSI 150# / 300# / 600# / 900# / 1500#
- With or without Over-pressure / Under-pressure Cut-off; up to 10" Size and up to rating of 1500#
- For Downstream or Upstream Pressure Control
- Wide Range of Flow & Differential Pressure Capability



DMB Series Direct Acting Pressure Regulator



DH Series Self Actuated High Pressure Control Valves for pressure upto 250 Barg



DP 3100 Series Pilot-operated Pressure Regulators



D81 Series Direct Acting Pressure Regulators for pressure upto 100 Barg

Relief Valves for Safety Thermal & Emergency Relief

- Body Size & Connections: 1/4" to 24", Screwed / Flanged to ANSI 150# to 1500#
- Tight Shut Off Capability
- Angle Type Spring Loaded
- Globe Body Spring Loaded diaphragm type for proportionate pressure relief
- Pilot-operated for higher relief capacity at low set points



EP Series Pilot-operated Pressure Relief Valves



PB Series Pilot-operated Upstream Pressure Regulator



Centrifuge Purging & Inertising Systems

Inert Gas Blanketing

Turnkey Solutions for Tank Blanketing & Tank Protection Devices complying to API 2000.

Advantages

- Minimise vapor losses of costly solvents
- Reduce oxygen content in the vapor space and eliminates the possibility of combustion / fire hazard
- Optimum protection of storage tank from excess pressure or vacuum
- Prevents ingress of air and moisture into tank

Features

- Turnkey solution for blanketing system with safety devices along with nitrogen high pressure reducing station, for storage tanks, reactors, & centrifuges
- Simple easy to maintain and reliable design considering API 2000 requirements
- Low set point technology ensures very low nitrogen consumption & operating cost
- High speed of response to protect the tank in the event of sudden surges
- High system accuracy where extremely low set points and minimal proportional band are important
- Extensive material selection compatible to different solvents

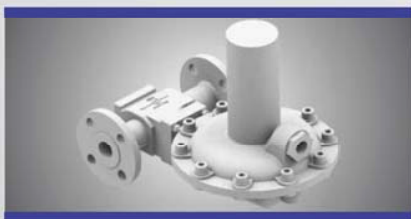
We also provide Continuous Blanketing & Purging System for Safe Operation of Centrifuge.

Tank Blanketing Regulators:

Minimum Set Pressure 1/4" WCg



B3 Series Pilot-operated Regulator



D 61 Series Direct Acting Regulator

Tank Protection Devices:

Nirmal also provides various safety devices from their enhanced product line to make the blanketing system foolproof.

- Vacuum Relief Valve
- Back Pressure Relief Valve (Vapor Recovery Regulator)

Breather Valves:

Breather Valve i.e. Pressure cum Vacuum Relief Valve.



Emergency Relief on Vent:

To ensure a large emergency relief openings in case of exposure to fire.



Flame Arrestors:

Type tested at CMRI testing cell, Dhanbad, for flame quenching.



Vapor Receiving Regulator

High Pressure Reducing Station with Safety Shut Off

We offer complete Gas Cylinder Manifold & High Pressure Reducing Stations for Nitrogen, Hydrogen, Carbon Dioxide, Oxygen, Argon, Ammonia, Chlorine and other Gases with following features:

- Skid mounted ready to use package
- Two stage pressure reduction ensuring constant outlet pressure irrespective of extensive variation in inlet pressure and flow rate
- Completely self actuated system without auxiliary power requirement
- With over-pressure shut-off in-built for safe operation without manual intervention
- Short payback period as high capacity typical two stage reduction allows maximum utilization of gas from the Cylinder / Trolley

Hydrogen Pressure Reducing Station with Safety Shut Off

