

DELIVERING EXCELLENCE GLOBALLY



D.V. Desai, Chairman

MISSION STATEMENT

We strive to be a learning organisation which is Growth-oriented, Knowledge-based, Progressive, Innovative & Profitable, in the field of Process Control Valves, Instruments and Technology serving the needs of customers through high quality and cost-effective products and services with concern for people and safety, by a disciplined and dedicated work force practicing participative style of leadership and management to achieve progress, prosperity and happiness.

CORE VALUES

In our journey of striving for excellence, we ensure that our values are always firmly rooted to establish a strong global foundation enhancing a promising future. We are:

- An organisation having respect for every individual
- An organisation where passion and commitment is the driving force
- An organisation where trust and freedom empowers all the people associated with us
- ♦ An organisation encouraging a culture of **learning and adaptability**
- An organisation that excels beyond boundaries through teamwork
- ♦ An organisation where **customer focus** is at the core of all activities

PROVIDING EXPERTISE ON A GLOBAL FRONTIER

Established in 1973, Nirmal became the pioneer of Self Actuated Pressure Control Valves and Allied Process Control Systems and Solutions. Nirmal offers its expertise globally to all major industries namely **Oil & Gas, Petrochemical & Refineries, Pharmaceutical, Steel & Power, Food & Dairy, Plastic and Nuclear Power Industries.** Today, Nirmal has been successfully established as the "Expertise that delivers".

At Nirmal, we are fully equipped to cater to the ever changing needs of our discerning customers. Investing in R&D & adhering to world-class quality standards, we have always strived to come up with innovative and customized solutions that help our customers scale new horizons.

At Nirmal, we believe that our responsibilities are not just limited to delivering customized products but, we are equally involved with customers to provide complete solution from concept to commissioning along with timely and regular follow-up.

With each product supply, Nirmal offers a formal 'Product Instruction & After Sales Commissioning Support', which includes value added features such as **0** & **M** manual, comprehensive literature & customer training program. A Technical Support Team is always available to answer any queries regarding our products & services. We also conduct various training programs for young engineers of the industry as we believe that with the right knowledge, the youth today can transform our tomorrow.

GLOBAL STANDARD OF EXCELLENCE

QUALITY ASSURANCE

- Nirmal's Integrated Management System is certified to applicable industrial standards.
- Our Quality Assurance system of Nirmal ensures that innovative solutions are delivered through processes which are assessed, approved & certified to ISO 9001:2015 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.
- Occupational health and safety management system of Nirmal is certified to BS OHSAS 18001: 2007 standard which ensures to control and improve health and safety performance.
- We are also certified to ISO 14001:2015 Standard which specifies the requirements for an environmental management system that an organization can use to enhance its environmental performance.
- 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.
- We have also received ASME/UV/NB Certification for our Safety Relief Valves.
- Our TTS Series Flame Arrestor with integral Pressure & Vacuum Relief Valve are type approved according to ATEX Directive 94/9/EC and B.S EN ISO 16852 by SGS Baseefa UK.
- One of the prestigious accolades earned is the U & R Stamp Certification which authorizes the use of the symbol of American Society of Mechanical Engineers (ASME) for fabrication of pressure vessel. It assures customers that the stamped products are built in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code.









ISO 9001:2015

CERTIFICATE OF AUTHORIZATION



BS OHSAS 18001 - 2007



ASME/UV Certification

(1)

BUREAU

Resport of provide runs of a fabrical appoints and an political pay of an inflament, as on a good of the payment couplets to senter on case as unfluind aux responds executions, for electron or a Tribulation planter is in the contract planter, in a fabricant or equality plant, only the for the fabricant of a senter of the contract of

- H.Lund



ASME U Stamp Certificate

ASME R Stamp Certificate

ATEX Certificate

PED/97/23/EC (CE) & Type Test Certificate to EN 334 & 14382

WORLD-CLASS FACILITIES

INFRASTRUCTURE & FACILITIES

Nirmal facility at Asangaon spread over 5 Acres of land with more than 1,00,000 sq. feet shop floor area and comprises state-of-the-art equipment like Automatic Material Handling Facility, N/C Band Saw Machine, High Pressure Compressor, VMC, HMC & CNC Machining Centers, Automatic Welding (Saw) Machine, Shrink Packing Machine, Foam Packing Machine, Rolling Machine etc.



Safety Relief Valve Testing Machine



Manufacturing Area



Stores



Automatic Welding 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



Co-ordinate Measurement Machine



Automated Pressure Regulator Test Setup



PMI Test







Painting Booth

APPROVALS

Nirmal is an approved vendor with major International Clients.



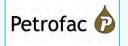






















































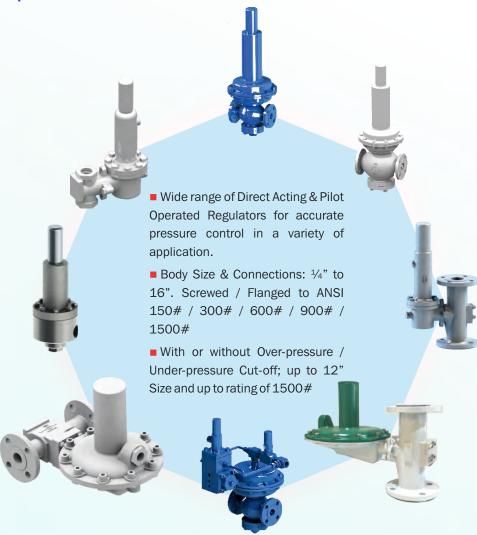




PRODUCTS FOR PROCESS INDUSTRIES

<u>Pressure Regulating Valves & Pressure Reducing Station for Process Industries</u>

Self Actuated Upstream & Downstream Pressure Control Valves



High Pressure Reducing Station with Safety Shut Off Valves



Hydrogen 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



PRODUCTS FOR PROCESS INDUSTRIES

Nitrogen Blanketing System & Tank Protection Devices

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

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 Recovery Regulator



Centrifuge Purging & Inertising Systems

ATEX certified TTS Series Flame Arrestor with integral Pressure & Vacuum Relief Valve:

- TTS Series is highly advanced pressure and vacuum relief valve for high flow capacities with a combined flame arrester unit.
- This can be used as protective system according ATEX in area subject to explosion hazards as per 94/9EC
- Type Approved according to ATEX Directive 94/9/EC and B.S EN ISO 16852 by SGS Baseefa UK.



Relief Valves for Safety Thermal & Emergency Relief



EP Series Pilot-operated Pressure Relief Valves

- 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



SAFETY RELIEF VALVES

SECURAMAX

Safety Relief Valves



ASME/UV/NB Stamp Certified Safety Relief Valves

The Safety Relief Valves have been engineered and designed to provide high quality performance standards for over pressure protection for air, gas, steam and vapour as well as liquid phase applications. This valve provides highly effective solution for various applications as in refineries, chemical industry, fertilizer plant, petrochemical industry, Oil & Gas Industry, Storage tank systems etc.



SR-07 Safety Relief Valve

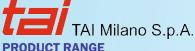
- Valve Size: 1"(DN25) 8"(DN200)
- Inlet Rating: 150# 2500#
- Outlet Rating: 150# & 300#
- End Connection: Flanged (As per ASME B16.5)
- Orifice & Mounting Dimension:As per API 526
- Maximum Set Pressure: 414 Bar



SR-08 Safety Relief Valve Screwed / flanged

- Valve Size: ½"(DN15) 1.5"(DN40)
- Inlet & Outlet Size: ½" to 1.5"
- Pressure Rating: 150# to 2500#
- End Connection: Flanged or Screwed
- Maximum Set Pressure: 420 Bar

Exclusive Representative For





Series 200 - High Pressure Steam Valve

- Sizes: Upto 6" x 10"
- Set Pressure: Upto 350 barg
- Max. Temperature: 649°C
- Overpressure: 3%
- Blowdown: 4%
- Designed in accordance with ASME sec I
- Inlet connection prepared for welding or flange ASME 600-2500



Series 3000 - Low & Medium Pressure Steam Valve

- Inlet Sizes: Upto 6"
- Orifice Sizes: H to R1 inclusive
- Set Pressure: 1.5 to 80 barg
- Max. Temperature: 543°C
- Overpressure: 3%
- Blowdown: 4%
- Full nozzle design
- Adjustable blowdown
- Designed in accordance (ASME sec-I)



Series 100 - Electrically Actuated High Pressure Steam Valve

- Sizes: Upto 2½" x 4"
- Set Pressure: Upto 310 barg
- Max. Temperature: 621°C



Pilot Operated Valve for Water & Steam

- Orifice: form D to T1
- Set pressure range: 10 to 280 barg
- Temperature limit: 375°C
- Overpressure: 3%
- Blowdown: 4%
- Designed in accordance(ASME sec I)



Series 9000 - Pilot Operated Valve

- Inlet Sizes: Upto 12"
 - Orifice Sizes: D to V inclusive
- Set Pressure: 0.2 to 520 barg
- Temperature Range: -180 to 320°C
- Overpressure: 1 to 5%
- Materials: Carbon or Stainless Steel or Special alloys
- Full nozzle design: Fixed / Adjustable blowdown (2% min)
- Standard face to centre dimensions conforming to API Std. 526



Series 9010 - Low Pressure Pilot Operated Valve

- Inlet Sizes: Upto 12"
- Orifice Sizes: H to W2 inclusive
- Set Pressure: 0.01 to 0.5 barg
- Temperature Range: -196 to 100°C
- Overpressure: 5%
- Motoriola, Carbon or C
- Materials: Carbon or Stainless Steel or Special alloys
- Full nozzle design
- Blowdown: fixed < or=to 5%



LPG / NATURAL GAS REGULATORS

Mesura Nirmal Gas Controls Pvt Ltd is a joint venture company formed between Nirmal Industrial Controls Pvt Ltd & Mesura SA, France; which is part of Cavagna Group, a global leader in Natural gas & LPG domestic & commercial regulators.

Domestic / Commercial Pressure Regulators:-



B6M - Two Stage Regulator

Design for use on Domestic or Industrial applications on Natural Gas used in cabinets, building gas line with or without meter for domestic or commercial applications.

- 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)

Two Stage Regulators:-



D100M - Two Stage Regulators

Design for use on Domestic or Industrial applications on Natural Gas used in cabinets, building gas line with or without meter for domestic or commercial applications.

Domestic Meter Regulators:



M2.5 - Single Stage Regulator

The M2.5 regulator is designed for low pressure domestic applications with inlet pressure upto 200 mBar, and is available with integral under pressure cut-off(UPCO). It can be mounted in either a vertical or horizontal orientation. The M2.5 regulator is installed directly on the hub of a gas meter.

- Max. Inlet Pressure: 200 mbar
- Outlet Pressure:- 15 25 mbar
- End Connection:- DN20, ¾" BSPT
- Accuracy:- Upto AC 5
- Integrated with UPCO Device.
- Complying to T/SP/PRS/3
- Flow Capacity 2.5 SCMH
- Accuracy class: upto AG 1

High Capacity Regulators:



H464 - High Capacity Regulators

Series 46 regulators can be protected with OPSO against underpressure issues and well protected against corrosion with a consistent powder coating. They also feature an extreme temperature resistant diaphragm and stainless steel screws and bolts.

Single Stage Regulators:-



H200Z - Single Stage Regulator balanced with OPSO and UPSO

The regulator is provided with single-stage pressure reducing and it is adjustable, allowing the regulation of the downstream pressure without changing the spring that manage the pressure. The adjustment range is equal to ± 10 mbar of the nominal pressure. The regulator is painted.

Direct Operated Regulators:



942HP - Direct Operated Regulators

The 94 series direct operated regulators are designed for high pressure service and can be used either vapor or liquid applications. High pressure regulators usually reduce tank pressure to an intermediate pressure for use by another regulator. They are also used for final stage service on particular applications, as high pressure burners as well as other medium sized commercial industrial applications. Type 942HP regulator is an adjustable high pressure regulator with a wide range of outlet pressure. It is not equipped with an internal relief valve. Both types are equipped with a NPT side outlet which is normally plugged and provides opening for an outlet pressure.

SOLUTIONS FOR NATURAL GAS SECTOR

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 ½" 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: 0.3 Barg to 34 Barg

Pilot-operated Gas Pressure Regulators:-



D53 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 12"
- 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 overpressure & 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

Slam Shut Valves:-



SH4-2 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 12"
- 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: upto AG 1

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



SOLUTIONS FOR NATURAL GAS SECTOR

Gas Conditioning Skids:-



Gas Pressure Regulating & Fiscal Metering Skids:-



Scrubber / Knock Out Drum:-



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.

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:-

- ANSIB31.8
- IGETD 13
- EN 12186
- EN12279

The Configurations for these Stations can be customized as:-

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

Scrubber or KOD is used to remove solid & liquid particles. Two main applications of scrubber are at well heads and at compressor skid inlet. Also, it is used in many other industrial applications. It gives high efficiency even at varying pressure and flow conditions. These are low maintenance equipment's.

Types of Scrubber:-

- Vane Pack
- Multicylcone

Filter Seperator:-



In filter separators solid particles are removed in first stage and liquid particles are removed in second stage. In first stage of filtration, smaller size solid particles are removed by means of filter elements. Then gas enters the vane pack arrangement i.e. second stage filtration where liquid particles are removed.

Types of Filter:-

- Dry Gas Filter
- Wet Gas Filter



Corporate Office - Mumbai

Nirmal Industrial Controls Pvt. Ltd.

First Floor, Samriddhi, L.B.S. Road, Mulund (W), Mumbai - 400 080

Ph.: +91-22-67746200, +91-22-25608668

Fax: +91-22-25682771 Email: info@nirmalindustries.com Website: www.nirmal.co.in

Asangaon Factory

Nirmal Industrial Controls Pvt. Ltd.

Survey No. 136/1(P) Asangaon (W), Dist. Thane, Maharastra, India - 421 601

Ph.: +91-2527-661000 Fax: +91-2527-661020

International Sales

Megan Services DMCC

P.O.Box 283581, Dubai Unit No.2308, Jumeirah Bay Tower. Plot No X2, Jumeirah Lakes Towers, Dubai, UAE. Ph:+9714 4560782

Email: sales@meganinternational.ae

International Representatives

Abu Dhabi

Petro Middle East

Nigeria Falcongaz Limited

Bangladesh

Cosmos Marketing Consultants Pvt. Ltd.

Petroserv Controls & Communications WLL

Oman

Abuilyas Trading LLC

Vietnam

Petro Pro Oil Gas Trading Services Co.Ltd

Saudi Arabia

Asas Al Jood Trading Establishment

Malaysia

Hammer Engineering Sdn. Bhd.

Basem Intl. General Trading Co

South Korea

Geumgang S&T Co. Ltd.

Taiwan

Indore

Suptha Marketing Mr. Nitin Choudhari - Director

Ph.: +91-731-2593432;

Mobile: +91 9826032731

Email: suptha@airtelmail.in

+91-731-4062761

Felca International Corporation

National Representatives

Mumbai

Embee Marketing Services

Mr. Ravindra Shah - Director Ph.: +91-22-67977135 Fax: +91-22-67977135 Mobile: +91 9324620517 Email: sales@embee.in

Hyderabad

Bhavani Automation Solution

Mr. B. Shivakumar - Director Ph.: +91-40-24757057 Fax: +91-40-66828497 Mobile: +91 9848299811

New Delhi

SRG Engineering Pvt. Ltd.

Mr. Sameer Buddhiraja - Director Ph.: +91-11-27355326 Fax: +91-11-27353633 Mobile: +91 9810027498 Email: info@srgengineering.in

Bangalore

Seaton Sales.

Mr. S. N. Vaswani - Managing Director Ph.: +080-22213468/22214292/ 41125272 Fax: +080-22243591

Mobile: +91 98450 07880

Vadodara

Inel Engineers,

Mr. Vijay Langalia - Director Ph.: +91-265-2310416 Fax: +91-265-2314932 Mobile: +91 9825153564 Email: info@inelindia.com

Chennai

Servals

Mr. V. Kalyanaraman - Director Ph: + 044-64577181 Mobile: + 91 9840116010 E-mail: servalsmds@gmail.com





