MANIK®
ENGINEERS
INDIA

Made In India for the World Since 1978

PRODUCT OVERVIEW 2025

www.manikengineeers.com

ABOUT US...!

Manik Engineers, a pioneer since 1978 in "Make in India" automation for refrigeration plants, is truly following the dream of the Honourable Prime- Minister Narendra Modi's, Make in India initiative.

We offer a diverse range of products:

- Ammonia solenoid valves
- Liquid level controllers
- Pressure / Temperature Regulating Valves
- Stop Valves, Regulating Valves, Stop-Check Valves, Filters
- In Line Check (Non-Return) Valves
- Safety Valves
- Hot Gas Defrosting system for gravity and pump recirculation plants
- Screw & Piston compressor capacity controllers
- Sensors, Transmitters, Indicators, & Controllers for temperature, pressure, relative humidity, carbon dioxide, and ethylene.

Crafting the future of monitoring and logging systems with our precision-engineered dataloggers, cutting-edge web-based solutions, centralized plant monitoring, and innovative mobile applications.

Our precision controls and energy-saving innovations have earned acclaim from renowned OEMs and industry giants in beverages, pharmaceuticals, and more, fostering India's growth in the various sectors.

MNCs, both Indian and foreign, including Ranbaxy Laboratories, Lupin Laboratories, Ajanta Pharma, Cipla, Novartis, Nestle, Coca-Cola India, and PepsiCo Holdings India, have been our satisfied customers for the past 47 years.

"We've earned the trust of renowned brands, making us the undeniable and reliable choice in the industry."

Empowering Refrigeration, Leading Innovation:

Ammonia Refrigeration Specialists: Harnessing the power of natural refrigerants for peak efficiency.

Sustainability Champions: Pioneering environmentally-friendly practices with minimal ozone depletion potential (ODP) and negligible global warming potential (GWP), ensuring greener & safer future.

Eco-Friendly Cooling: Dedicated to energy savings & efficient operations.

Comprehensive Support: Elevating plant performance, sustainable designs, and more.

Equipment Experts: Providing solutions for refrigeration systems.

Automation Innovators: Leading the way with cutting-edge technology.

Our Products are very popular in

Refrigeration Contracting Companies

Cold Storages

Seafood Processing

Meat Processing

Breweries

Dairies

Ice-Cream Manufacturers

Juice Industries

Pharmaceutical Industries

Chemical Industries

Maximum Working Pressure 80 BAR

HIGH PRESSURE STAINLESS STEEL VALVES

For installations in seaside areas and outdoors applications where the air is highly humid and corrosive, Stainless Steel Valves are recommended which provide elevated surface protection against corrosion. These valves are also recommended in applications where regular surface treatment is carried out to prevent fungal and bacterial growth.

STOP VALVES : MHPSV-SS

The Manik MHPSV-SS Valves have been specially designed for such applications. The MHPSV-SS Stop Valves are refrigerant shut-off valves designed to be socket-welded or butt-welded directly to steel piping, thereby eliminating potential leaky flanges or threaded joints and simplifying installation. These valves fit all requirements of the latest refrigeration technology and have desired flow characteristics with a low pressure drop design. The MHPSV-SS has specialised internal back- seating support which allows the shaft seal (packing gland) to be replaced while the valve is still under working condition. Interchangeable handwheel or seal cap available. These valves are available in angle and globe types. The Teflon seat lends durability to the seating surface.

FEATURES :

- **Maximum working pressure:** 80 Bar g (1160 psi g)
- **Fluid temperature range:** -60°C to + 150°C (–76°F to 302°F)
- **Application:** Ammonia, Fluorocarbons, Carbon Dioxide
- **Material: Body:** CF8 Cast Stainless Steel Body
- **Internals:** SS304 • **Seat:** PTFE
- **Connections:** DN-10-40 – Socket/Butt Weld
- DN 50-200 – Butt Weld. • Reliable Back Seating.

REGULATING VALVES : MHPRG-SS A & B

The Manik MHPRG-SS Valves have been specially designed for such applications. There are two types of MHPRG hand regulating valve MHPRG-A-ss and MHPRG-B-SS are ideal for metering or flashing expansion of liquid refrigerants. These valves are available in angle and globe types. These valves have stainless steel stems with back seating for seal replacement under working conditions. MHPRG valve available in two variants- MHPRG-A-SS for liquid expansion lines and MHPRG-B-SS for liquid line flow regulation purpose. These valves are specifically designed as per international guidelines for refrigerating installations, specific flow conditions, and line characteristics. The MHPRG can also be used as a stop valve when the regulating function is not required. Interchangeable handwheel or seal cap available.Yellow seal caps or handwheels distinguish them from shut-off valves.

FEATURES :

- **Maximum working pressure:** 80 Bar g (1160 psi g)
- **Fluid temperature range:** -60°C to + 150°C (–76°F to 302°F)
- **Application:** Ammonia, Fluorocarbons, Carbon Dioxide
- **Material: Body:** CF8 Cast Stainless Steel Body
- **Internals:** SS304 • **Seat:** PTFE
- **Connections:** DN-10-40 – Socket/Butt Weld
- DN 50-100 – Butt Weld. • Reliable Back Seating.

STOP CHECK VALVES AND CHECK VALVES : MHPSCV-SS & MHPCV-SS

The Manik MHPSCV-SS Valves have been specially designed for such applications. MHPSCV-SS is a combination stop valve and normally-spring-closed check valve.Whereas MHPCV -SS is a simple angle-type check valve. Both of these are available in an angle way only. Valves open wide for full flow in the arrow's direction on the valve body and promptly reseat when reverse flow occurs. Optimum opening characteristics are attained due to Precisely Cut Ports (MHPSCV-SS/MHPCV-SS 50-65).Primary characteristics of these valves include efficient functioning at low differential pressure,easy inspection and maintenance.These valves have stainless steel stems with back seating for seal replacementunder working conditions. The internal design minimizes pulsations.

FEATURES :

- **Maximum working pressure:** 80 Bar g (1160 psi g)
- **Fluid temperature range:** -60°C to + 150°C (–76°F to 302°F)
- **Application:** Ammonia, Fluorocarbons, Carbon Dioxide
- **Material:** Body: CF8 Cast Stainless Steel Body
- **Internals:** SS304 • **Seat:** PTFE
- **Connections:** DN-15-40 – Socket/Butt Weld
- DN 50-125 – Butt Weld. • Reliable Back Seating.

FILTER VALVES : MHPFV-SS

The Manik MHPFV-SS Valves have been specially designed for such applications. MHPFV-SS Filters are designed to facilitate the removal of foreign materials from refrigeration systems. They help to maintain and clean dirt and weld slag easily. These valves are available in angle and globe types. These filters are generally used to reduce downtime from the risk of unwanted breakdowns and are used ahead of key equipment such as Ammonia Pumps and Compressors etc. in the refrigeration plants during-commissioning and where uninterrupted filtration of the refrigerant is required. Filter Mesh are available across the following mesh sizes 100μ (US150), 150μ (US100), 250μ (US60) and 500μ (US35).

For other sizes, please contact Manik Engineers.

FEATURES :

- **Maximum working pressure:** 80 Bar g (1160 psi g)
- **Fluid temperature range:** -60°C to + 150°C (–76°F to 302°F)
- **Application:** Ammonia, Fluorocarbons, Carbon Dioxide
- **Material: Body:** CF8 Cast Stainless Steel Body
- **Internals:** SS304 • **Seat:** PTFE
- **Connections:** DN-15-40 – Socket/Butt Weld
- DN 50-200 – Butt Weld. • Reliable Back Seating.

All the MHP-SS series valves across sizes are registered as per the design registration numbers : 525661-011, 525662-001, 525654-001, 525657-001, 525656-001, 525655-001

Maximum Working Pressure 55 BAR

HIGH PRESSURE VALVES

STOP VALVES : MHPSV

The MHPSV Stop Valves are refrigerant shut-off valves designed to be socket-welded or butt-welded directly to steel piping, thereby eliminating potential leaky flanges or threaded joints and simplifying installation. These valves fit all requirements of the latest refrigeration technology and have desired flow characteristics with a low pressure drop design. The MHPSV has specialised internal back- seating support which allows the shaft seal (packing gland) to be replaced while the valve is still under working condition. Interchangeable handwheel or seal cap available. These valves are available in angle and globe types. The Teflon seat lends durability to the seating surface.

FEATURES :
Maximum working pressure: 798 psi g (55 bar g).
Fluid temperature range: -60°C to + 150°C (–76°F to 302°F).
Application: Ammonia, Fluorocarbons, Carbon Dioxide.
Material: Body: LCC A352 Cast Steel Body
Internals: SS304 **Seat:** PTFE
Connections: DN10-40 – Socket/Butt Weld,
DN50-300 – Butt Weld. Reliable Back Seating.

STOP CHECK VALVES AND CHECK VALVES : MHPSCV & MHPCV

MHPSCV is a combination stop valve and normally-spring-closed check valve. Whereas MHPCV is a simple angle-type check valve. Both of these are available in an angle way only. Valves open wide for full flow in the arrow's direction on the valve body and promptly reset when reverse flow occurs. Optimum opening characteristics are attained due to Precisely Cut Ports (MHPSCV/MHPCV 50-125).Primary characteristics of these valves include efficient functioning at low differential pressure,easy inspection and maintenance. These valves have stainless steel stems with back seating for seal replacement under working conditions. The internal design minimizes pulsations.

FEATURES :
Maximum working pressure: 798 psi g (55 bar g).
Fluid temperature range: -60°C to + 150°C (–76°F to 302°F).
Application: Ammonia, Fluorocarbons, Carbon Dioxide.
Material: Body: LCC A352 Cast Steel Body **Valve Cone:** SS304
Valve Stem: SS304 **Packing Gland:** SS304 **Seat:** PTFE
Connections: DN15-125 – Socket/Butt Weld
Reliable Back Seating.

REGULATING VALVES : MHPRG-A & B

There are two types of MHPRG hand regulating valve MHPRG-A and MHPRG-B are ideal for metering or flashing expansion of liquid refrigerants. These valves are available in angle and globe types. These valves have stainless steel stems with back seating for seal replacement under working conditions. MHPRG valve available in two variants- MHPRG-A for liquid expansion lines and MHPRG-B for liquid line flow regulation purpose. These valves are specifically designed as per international guidelines for refrigerating installations, specific flow conditions, and line characteristics. The MHPRG can also be used as a stop valve when the regulating function is not required. Interchangeable handwheel or seal cap available. Yellow seal caps or handwheels distinguish them from shut-off valves.

FEATURES :
Maximum working pressure: 798 psi g (55 bar g).
Fluid temperature range: -60°C to + 150°C (–76°F to 302°F).
Application: Ammonia, Fluorocarbons, Carbon Dioxide.
Material: Body: LCC A352 Cast Steel Body
Valve Cone: SS304 **Valve Stem:** SS304
Packing Gland: SS304 **Seat:** PTFE
Connections: DN10-100 – Socket/Butt Weld
Reliable Back Seating.

FILTER VALVES : MHPFV

MHPFV Filters are designed to facilitate the removal of foreign materials from refrigeration systems. They help to maintain and clean dirt and weld slag easily. These valves are available in angle and globe types.
These filters are generally used to reduce downtime from the risk of unwanted breakdowns and are used ahead of key equipment such as Ammonia Pumps and Compressors etc. in the refrigeration plants during commissioning and where uninterrupted filtration of the refrigerant is required.
Filter Mesh are available across the following mesh sizes 100μ (US150), 150μ (US100), 250μ (US60) and 500μ (US35).
For other sizes, please contact Manik Engineers.

FEATURES :
Maximum working pressure: 798 psi g (55 bar g).
Fluid temperature range: -60°C to + 150°C (–76°F to 302°F).
Application: Ammonia, Fluorocarbons, Carbon Dioxide.
Material: Body: LCC A352 Cast Steel Body
Filter Mesh: SS304
Filter type: Standard / Pleated
Connections: DN15-40– Socket/Butt Weld,
DN50-200 - Butt Weld.

All the MHP series valves across sizes are registered as per the design registration numbers : 525661-011, 525662-001, 525654-001, 525657-001, 525656-001, 525655-001

MANIK SERVICE VALVES : MGV7/MGV8

MGV7 MGV8

These specially designed refrigerant Manik Service valves, purge, and transducer valves feature tough, cast steel bodies, compact size, and polished stainless steel stems. Special gland Design prevents Leakage. Safety stems are designed to be non removable from the body to avoid dangerous stem "blow out". MGV7 is straightway valve whereas, MGV8 is angleway services valve. **MGV8 is available in Cast Steel as well as Cast Stainless Steel.**

Inlet port options :
1/4", 3/8", 1/2" BSP/NPT Male Female as well as Butt Weld.

Inlet Port length options :
50mm, 100mm, 150mm.

Outlet port options :
1/4", 3/8", 1/2" BSP/NPT Male Female.

Available accessories :
Weld nipple, Blind Nut, Reducing Connector.

Scan QR code for detailed catalog.

LINE STRAINER : TA

TA 5 / 15 TA 7 TA 17 / 20 TA 25

TA32 TA 40 / 50 TA 65 / 80 TA 100 / 125

Strainer type TA with interchangeable filter insert is used in lines carrying fluorinated refrigerants, ammonia, water, brine, oil, and gas. Retains contaminants, e.g. slag, and weld beads and swarf. Strainers are available from 15NB to 125NB size with counter flanges.

PISTON TYPE CHECK VALVES WITH MANUAL BYPASS : MCK-1

The MCK-1 are flanged, heavy-duty, piston-type check valves control the flow of refrigerant. Valves open wide for flow in the direction of the arrow on the valve body. Valves close tight when flow reversals occur. The piston design minimizes pulsations.

Valves open when inlet pressure exceeds outlet pressure (1 psid [.07 bar] minimum), thereby lifting the piston/seat assembly and allowing flow through the valve.

MANIK VALVE STATION : MVS

MVS is a highly versatile product that seamlessly integrates the functions of a stop valve, filter valve, solenoid valve, pressure regulating control valve, and stop check valve into a single, cost-effective package. Its advantages include significant cost savings and improved installation efficiency. By eliminating the need for extensive pipe cutting, welding, assembly, and insulation, while also reducing freight expenses, it provides an economical solution. Additionally, its compact valve body not only conserves space but also enhances installation efficiency. MVS is available in various sizes ranging from DN15 to DN32, with connection options that include Socket and Butt Weld.

Maximum working pressure: 55 bar g (798 psig)

Fluid temperature range: -60°C to + 150°C (-76°F to 302°F)

MVS 15 has fixed positions 1, 2, and 3, serving as a stop valve, filter valve, and solenoid valve, respectively.

ORDERING CODE FOR MVS -15 MVS 15-XX-X		
MATERIAL	**CODE**	**POSITION 4**
		STOP VALVE
FOR STEEL	CS	REGULATING VALVE - A TYPE
		REGULATING VALVE - B TYPE
		STOP CHECK VALVE
FOR STAINLESS STEEL	SS	CHECK VALVE

MVS15 WITH CAST STEEL AND STOP VALVE AT POSITION 4 **MVS 15-CS-1**

For MVS 20-32, position 1 is fixed as stop valve, and position 2 is also fixed as filter valve for all applications.

ORDERING CODE FOR MVS 20-32 MVS-XX-XX-XXX-XX					
CONNECTION DN	**MATERIAL**	**CODE**	**POSITION 3**	**CODE**	**POSITION 4**
20	FOR STEEL	CS	PRESSURE REGULATOR	A	STOP VALVE
25			PRESSURE REGULATOR WITH ELECTRIC SHUT-OFF	AS	REGULATING VALVE - A TYPE
32	FOR STAINLESS STEEL	SS	ELECTRIC WIDE OPENING	AB	REGULATING VALVE - B TYPE
			DUAL REGULATOR	AD	STOP CHECK VALVE
			DIFFERENTIAL REGULATOR	AL	CHECK VALVE
			RESEATING RELIEF REGULATOR	AK	
			OUTLET PRESSURE REGULATOR	AO	
			PNEUMATICALLY COMPENSATED REGULATOR	AP	

NON RETURN VALVES : MNV

MNV - 15 to 125NB

Check valve type MNV can be used in liquid, suction and hot gas lines in refrigeration and air conditioning plant with ammonia. MNV can also be used in refrigerating systems with fluorinated refrigerants. When the MNV is used in liquid lines where cold, thick oil or impurities may be present, it is recommended that the standard spring be replaced by a special spring. Available from 15NB to 125NB size.

FEATURES :

- Ensures correct direction of flow,
- Prevents back-condensation from warm evaporator to cold evaporator.
- Fitted with damping piston that makes the valves suitable for installation in lines where pulsation can occur, e.g. in the discharge line from the compressor. Designed to meet the strict quality demands and safety requirements for refrigeration installations, specified by the international classification societies.

SOLENOID VALVES FOR AMMONIA

SA SERIES

SA SERIES

Type SA5A3 solenoid valve is the direct acting type & type SA17A3, SA32P3, SA42P3, SA50P3 are higher capacity pilot operated solenoid valves for refrigeration & air conditioning applications.

FEATURES :

- Refrigerants : R717 (NH3), R22, R134A etc.
- Temperature of medium -40°C to + 80°C
- Single coil (type MKC-33) for all SA series valves.

MRASV 3 TO 40 AND DMRASV 10 TO 20

MRASV solenoid valve is of two types: 1. Direct operated 2. Pilot operated.

It can be used for ammonia as well as other fluorinated refrigerants in suction, liquid and hot gas lines.

There is another variant which is DMRASV. It has an assisted lift mechanism which is specifically designed to open and keep the valve open even when the differential pressure across the valve is "ZERO" bar. The DMRASV can be used for similar refrigerants as MRASV.

Both the MRASV and DMRASV can be ordered as a complete valve assembly or as different components viz. valve body, coil and flanges can be ordered separately. DMRASV is available in sizes 10, 15 & 20mm port sizes.

MS SERIES

These high quality valves are compact, strong and reliable. Stainless steel pistons with Teflon seals are used to overcome the problem of valve sticking due to dirt or lack of oil. Pilot seats are polished stainless steel on Teflon discs and main valve seats align for tight closing. These valves can be used in liquid, suction, hot gas, discharge, pump lines etc., where a strong opening, tight closing valve is required.

FEATURES :

- All Valves are spring closing.
- All Valves have Teflon seat. One Solenoid Coil fits all Valves.
- Close-coupled strainers are available.
- Non Asbestos gasket, 300 PSI (21 bar) MOPD.
- MS2A (4 mm Port).
- MS6A (4 mm Port) with Manual Bypass.
- MS8A½" (15 mm Connection) in Ductile Iron Body.
- MS7A¾" - 1¼" (20 - 32 mm Connection) in Ductile Iron Body.
- Suitable for Ammonia, CO_2, R-22, R134a, R404a and other refrigerants.

MS4A SERIES

The Manik MS4A Series Valves are robust and reliable series of solenoid valves with superior design to overcome dirt and sticky oil during operation.

FEATURES:

- For Ammonia, R22, R134a and other refrigerants.
- Electric Shut-Off / Back Pressure regulation.
- Safe Working Pressure: 400 psig (28 bar g)
- Flanges provided for easy installation.

ADVANTAGES:

- Highly dirt-resistant design with Teflon piston seals.
- Reliable dry, oil-free operation.
- Easy-to-replace screw-on pilot modules (fits all sizes).
- Teflon seating with stainless steel spring for durability.
- Manual stems placed on top to avoid dirt/rust jamming.
- Non-asbestos gaskets as standard.

PRESSURE AND TEMPERATURE REGULATORS

MULTI-FUNCTION REGULATOR VALVE : MFR

The Manik MFR is a specially designed Multifunction temperature/pressure regulator for various refrigeration applications. These valves have V-cut cones for precise regulation. They can be used in any type of refrigeration plants such as Direct Expansion, Overfeed, Gravity.

These valves are used with pilot valves and the function/operation is decided based on the type of pilot valves selected.

The MFR valves are of 2 types – Single Function valves and Three Function valves.

The single function valve can have single pilot valve fitted to the main valves whereas, the three function valves can have up to 3 pilot valves fitted to them for multi-functioning. The MFR can be used as Back-Pressure regulator, Differential pressure regulator, Outlet Pressure regulator or as Direct solenoid Valves.

FEATURES :

- Available from 15NB to 125NB.
- Multifunction Valve. i.e Multiple applications are possible with different pilot valves.
- Very low opening differential of 0.2 Bar (3 psi) across all sizes.
- Precise Control and operation.
- Variable capacity options available for the same main valve.
- Direct screwed in pilot valves.
- Connection for pressure/temperature gauge.
- Inbuilt Strainer to prevent failure due to dirt/debris.
- Strainer can be cleaned without opening complete valve.
- Top cover can be mounted in any position.
- Durable Teflon seating.
- Minimum maintenance required.
- Single function valves can be upgraded to three function valves.
- Manual bypass operation available for maintenance and servicing.

MA4A SERIES

The Manik 4A Series Valves are robust and reliable series of regulating modular valves with superior design to overcome dirt and sticky oil during operation. Multiple models are available for various control applications in ammonia refrigeration plants. The Valves are mainly used for Pressure regulation (MA4A). For Ammonia, R22, R134a and other refrigerants.

FEATURES :

- Electric Shut-Off / Back Pressure regulation.
- Flanges provided for easy installation.

SPECIFICATIONS

- **Safe Working Pressure:** 400 psig (28 bar g)
- **Available Sizes:** 3/4" to 2"
- **Body:** EN GJS 400/18 LT
- **Piston:** Stainless Steel with Teflon Seating
- **Main Seat:** Integral for 3/4" through 1 1/4"; Stainless Steel for 1 1/2" and 2"
- **Gaskets:** Non-asbestos.
- **Manual Spindle:** Steel, plated.
- **Pilots:** Stainless steel
- **Pilot Orifice:** Stainless steel
- **Flanges:** Forged steel, IS2062
- **Safe Working Pressure:** 465 psig (32 bar g).
- **Operating Temperature:** –60/+120°C

OIL SEPARATOR CONTROL VALVE : MOSCV

The Manik Oil Separator Pressure Control Valve is used for the control of discharge pressure of the compressor. The valve aims to provide quick pressure build-up of oil pressure. Additionally, the MOSCV acts as a non-return valve in the discharge line.

The MOSCV operates on differential pressure. When the differential pressure across the oil separator and the suction side goes above 2 Bar (28 psi), the valve is fully opened. A differential pressure of 0.6 bar (8psi) is required for Low-pressure applications. These valves are available from 65 NB to 200 NB in butt weld angle type only.

PILOT VALVES FOR SPM / MA4A

The pilot valves when used in conjunction with SPM valves can act as constant pressure regulators, Capacity regulators, Crank case pressure regulators, refrigerant pressure regulator and many more. They are suitable for all sizes of SPM valves. More than one pilot valves can be connected in series or parallel depending upon the type of SPM valve selected to cater to multiple applications.

Use of pilot valves for multifunction

- Constant Pressure controlled - MPR-LP / MPR-HP
- Differential Pressure controlled - MPR-DPL / MPR-DPH
- Solenoid operated pilot valve - Normally Closed/Open - MPSV-NC / MPSV-NO
- Control on pressure with relation to a reference pressure: - MPR-OL / MPR-OH

SPM3 - 3 PILOT PORT VALVES WITH COMBINED PILOT VALVES:
The SPM3 series main valves can be configured with up to 3 pilot valves (2 in series and 1 in parallel). Common applications for these valves are Electric shut off(MPSV NO/NC) with pressure regulation(MPR LP/HP), Electrical over ride for pressure regulation (MPSV NO/NC in parallel with MPR LP/HP), Electrical operation for 2 different pressure regulation (MPSV NO/NC + MPR LP in parallel with MPR LP), Differential pressure regulation combined with electrical shut off (MPSV NO/NC + MPR DPL/DPH) and many others.

1. BACK PRESSURE REGULATOR : MPR LP/HP

MPR-LP MPR-HP

FOR BACK-PRESSURE REGULATION (MPR LP/HP):
The Pilot valves MPR LP/HP are used with SPM/MA4A Valves for back pressure regulation in refrigeration system to control evaporator/ accumulator pressure, ammonia pump pressure, condenser pressure.

MPR LP available in following ranges
-0.66 to 10 Bar & -0.66 to 2 Bar, -0.66 to 7 Bar
MPR HP available in following ranges
4-22 Bar & 4-28 Bar.

2. PILOT SOLENOID VALVE : MPSV NO/NC

MPSV-NC MPSV-NO

AS SOLENOID VALVE NORMALLY OPEN/CLOSE (MPSV NO/NC):

The Pilot Valves MPSV NO/NC are used with SPM/MA4A Valves when the Main valve is required to be operated as Normally Open or Normally Closed Solenoid Valves for ON/OFF regulation. These pilots are also used in conjunction with other Pilot valve so toggle their regulating function electrically.

3. DIFFERENTIAL PRESSURE REGULATOR : MPR DPL/DPH

MPR-DPL MPR-DPH

DIFFERENTIAL PRESSURE REGULATION (MPR DPL/DPH):
The Pilot Valves MPR DPL/DPH are used with SPM valves for Condenser liquid control during defrosting by maintaining a differential pressure between receiver and hot gas pressure. It is also used for oil pressure control during start-ups. These valves are also used for liquid pump differential pressure regulation, which is very important in some types of pump circulation systems.

MPR DPL available in following ranges -
-0.66 to 10 Bar & -0.66 to 2 Bar, -0.66 to 7 Bar

MPR DPH available in following ranges -
4-22 Bar & 4-28 Bar,

4. OUTLET PRESSURE REGULATOR : MPR OL/OH

MPR-OL MPR-OH

FOR OUTLET PRESSURE REGULATION (MPR OL/OH):

The Pilot Valves MPR OL/OH are used with SPM valves for outlet pressure regulation for compressor crankcase pressure regulation during start-ups or after defrosts. It is also used for Hot-gas bypass applications to regulate suction pressure or intermediate pressure when it drops below the set value.

MPR OL available in following ranges -
-0.66 to 10 Bar & -0.66 to 2 Bar, -0.66 to 7Bar

MPR OH available in following ranges -
4-22 Bar & 4-28 Bar,

MANIK PRESSURE REGULATING VALVE : MPRV

Manik Pressure Regulating Valve can be used for hot gas defrosting (drain lines), refrigerant pump bypass (to ensure min. flow in refrigerant pumps) and for several other functions in refrigeration and freezing plants for pressure regulation.
MPRV is installed on the Evaporator side of Overfeed Ammonia refrigeration plant with Hot-Gas Defrosting Systems. It is used to regulate pressure in the evaporator during defrosting. The outlet of the MPRV is connected after the SPMLX (Wet-return suction valve).
Range : 0 – 7 bar
Working Pressure : Max. work pressure: 32 bar, Test pressure 42 bar
Connection : ½ inch Butt weld Flange

GAS POWERED SOLENOID VALVES

GAS POWERED SUCTION STOP VALVE : MCK2

These heavy-duty, flanged, gas-powered suction stop valves are designed to control the flow of refrigerant in large industrial and commercial applications. They remain normally open via a spring and require no pressure drop to operate. Valves are best installed on their side for better conveyance of liquid overfeed or oil and to avoid trapping. A single pilot solenoid valve is required to control a higher pressure refrigerant gas which closes these valves during defrosting.

GAS POWERED SOLENOID VALVE : MS9B

These strong, heavy-duty, gas-powered solenoid valves are designed to control the flow of refrigerant in large commercial and industrial applications. They require no pressure drop to operate and have no internal bleed to suction. A dual pilot solenoid valve assembly introduces a high pressure refrigerant source which closes these valves. To open valves, pressure is bled-off back through the low pressure bleed pilot valve and upstream line pressure plus the spring causes the valve to open wide.

TWO-STEP SOLENOID VALVE : MTSV

The Manik Two-Step Solenoid Valves type MTSV are specially designed two-stage solenoid valves for refrigeration plants with Hot-gas defrosting systems to gradually introduce flow of refrigerant. They are mounted with 2 pilot solenoid valves and operate with external pressure. These valves are suited where high opening differential is required. These valves can be used in any type of refrigeration plants such as Direct Expansion, Overfeed, Gravity.

The MTSV has 2 opening ports (Peripheral and Main). The MTSV operates in 2 stages:

- In the 1st stage, the valve's peripheral port opens to about 10% of the capacity of the valve after electrical supply is applied to pilot solenoid valves.
- The 2nd stage where the main opens automatically when the differential pressure across the valve reaches 1.5 Bar.

This type of opening ensures moderated introduction of the flow into the line and helps avoid liquid hammers in the system.

FEATURES :

- Available in sizes from 32NB to 125NB.
- High opening differential.
- High-capacity solenoid valves.
- Direct screwed in pilot valves.
- Connection for pressure/temperature gauge.
- Durable Teflon seating.
- Minimum maintenance required.
- Manual bypass operation available for maintenance and servicing.

LOW SIDE FLOAT VALVE : LSFV-4/5/6

The LSFV 4-6 liquid level regulators are designed to maintain stable liquid level regulation even during momentary changes in load. This feature makes them an ideal choice for use on the low-pressure side of refrigeration, freezing, and air conditioning systems that use common types of refrigerants, including ammonia. With the LSFV 4-6 regulators, you can be rest assured that your system will maintain a consistent level of performance, even in the face of sudden changes in operating conditions.

FEATURES :

- Reliable function
- Stable regulation, even during momentary load change
- Liquid injection into the float housing or directly into the evaporator through external pipe connection
- Orifice assembly and filter can be replaced without evacuating the float housing
- Can be supplied without float housing for direct installation in the system (special order only)
- Can be used as pilot float for ALMV-L if mounted with special orifice (diameter ⌀ 2.5 mm)

MODULATING LIQUID LEVEL REGULATORS : ALMV-L AND ALMV-H

ALMV-L-80 ALMV-L-125

For modulating liquid level control in refrigeration, freezing and air conditioning plant, a system comprising a modulating servo-controlled main expansion valve type ALMV-L , controlled by a pilot float valve type SV, is used. ALMV-L and SV systems are used on the evaporator side. ALMV-L and SV systems are used on the condenser side. The system is suitable for use with ammonia or fluorinated refrigerants. The ALMV-L can be used in liquid lines to or from

- evaporators
- separators
- intermediate coolers
- condensers
- receivers

Modulating liquid level regulation provides liquid injection that is proportional to the actual capacity. This gives a constant amount of flashgas, thus ensuring stable regulation and economic operation because variations in pressure and temperature are held to a minimum.

FEATURES

- Applicable to all common, non-flammable refrigerants, including R 717, and non-corrosive gases/liquids - dependent on sealing material compatability
- ALMV-L are based on SPM valve family housings
- Manual operation possible
- Position indicator available
- Simple installation

MANIK ELECTRONIC EXPANSION VALVE : MEEV-20

MEEV are electrically operated expansion valves designed for ammonia refrigerating plant.
The individual capacities are indicated with a number forming part of the type designation. The number represents the size of the orifice of the valve in question.
A valve with orifice 3 will for example be designated MEEV 20-3.
The orifice assembly is replaceable.

FEATURES :

- For HCFC, HFC, R717 (Ammonia) and R744 (CO_2).
- The valve requires no adjustment.
- Wide regulation range.
- Replaceable orifice assembly.
- Wide range of coils for D.C. and A.C.
- Quick reaction in whole range of stated capacity.
- In some applications MEEV 20 can be used both as expansion valve and solenoid valve.

LIQUID EYE : MLE / DMLE

NEW PRODUCT

MLE-25-1" NPT MLE-40-NF MLE-40-R

DMLE 25-15 DMLE 40-25-NF DMLE 65-40

FEATURES :

- Provides clear visual indication of actual liquid levels in refrigeration systems.
- Two types of glass provided - Reflex - Suitable for viewing in Dark areas & Clear - Suitable for viewing well lit areas.
- Long neck housing for easy welding and insulation clearance in low-temperature areas.
- Optional **frost-free shield** ensures visibility under frosting conditions.
- Compatible with **ammonia, R22, R134a, CO_2,** and other approved refrigerants.

Available in two types :

MLE : Single viewing glass, suitable for vessels/receivers/liquid columns.

DMLE : Dual viewing glasses, suitable for inline installation .

Typical applications :

Refrigerant receivers, Level columns, Accumulators, Inter coolers,Suction lines, Oil lines, Liquid lines

MANIK LEVEL SWITCH : MLS39

MLS-39-HLI

MS VERSION

MLS-39-SS-HLI

STAINLESS STEEL VERSION

The Manik MLS39 is a refrigerant liquid level switch used to electrically indicate or control a liquid level by opening or closing a SPDT/DPDT switch. The Float Chamber is made of Cast Steel which can sustain high pressures upto 50Bars. The float chamber is also available in Cast Stainless Steel (CF8) which provides robust corrosion-free design. Long lasting independent LED Lamps provide quick indication of High and Low level even from a distance. The precise and reliable electromechanical design provides long life performance for almost any application. For ease of installation, switch assembly position rotates 360°.

MLS 39 is used for various applications such as liquid level control in evaporators, protection switch for high and low level in pump re-circulatory vessels.

Liquid operating point can be easily adjusted. MSL39 is supplied with weldable flanges which is very easy to install, service and repair.

FEATURES :

- Safe Working Pressure → 55 bar
- Operating Temperature → -60°C to 150°C
- Suitable for NH3, R-22, R404a etc
- Flange connection → ¾" or 1" BW/SW.
- Mechanically adjustable operating points.
- Electromagnetic Heavy Duty Snap Acting
- 10A switch.
- Easily replaceable switch box unit.
- DIN connector for Electrical connection.
- Flame proof version available on request.

LIQUID LEVEL CONTROLLER : 39FI

39 FI

39 FI SS

39F-FLP

Level Controller with Indicator Type_39FI

Stand Alone Amplifier

Amplifier with Stainless steel enclosure

Panel Mounting Amplifier

The Liquid Level Controllers are available in 2 models.

TYPE 39FI

The Liquid Controller consists of a float chamber and an electronic controller. It can be used on all non corrosive liquids such as Ammonia, Toluene, Freon etc.

The electronic controller has a bar graph display module installed to continuously display the rising & falling of liquid level inside the float chamber. The level controller is used to control the liquid level in various refrigeration applications. These level controllers can also be used as a protection against too high & too low liquid levels.

FEATURES :

- Refrigerant R717 (NH3), HFC, HCFC.
- Differential Adjustable between 10 to 40 mm.
- Max operating pressure for float housing 19 bar.
- Enclosure for float housing IP 65
- Amplifier / controller is available in IP 65 wall mounting enclosure or DIN 1/4 for panel mounting enclosure.
- Float Chamber and Amplifier are also available in flame proof enclosure.

REFLEX / FROST FREE LIQUID LEVEL GLASSES : MGLG 150 - 2000

MGLG- SS

MGLG-300-R

MGLG-1100-NF

MGLG-1600-NF

STAINLESS STEEL VERSION

MS VERSION

MGLG are Manik Glass level gauges made from special low temperature steel plates that are designed to meet the requirements of modern industrial refrigeration. They are supplied with stop valves (MGLG-SV) for connection and isolation to the refrigeration system. The MGLG provides an accurate easy reading of the refrigerant level inside the pressure vessel over which they are mounted. The top and the base frame are mounted together with the help of SS Allen bolts. This makes it easy for insulation, inspection and service onsite, if required.

All gauges are supplied with a built-in safety system (non-return device) and in case a glass gets damaged, the safety system due to the pressure of the refrigerant, shall prevent refrigerant loss to an absolute minimum.

FEATURES

- **Refrigerants:** Applicable to HCFC, HFC and R717 (Ammonia).
- **Temperature range:** –10/+100°C (–14/+212°F) or –50/+30°C (–58/+86°F)
- Maximum operating pressure: 25 bar g (363 psi g)
- Equipped with boron silicate glass, hardened by an accurately controlled heat treatment process

HOT GAS DEFROSTING SYSTEM

The Manik Hot-gas Defrost Station is an efficient way to defrost your coils and save on your time as well as electricity bills. Frosting on your coils can be melted by introducing Hot discharge gas from the compressor. This can be achieved by the Manik Hot-gas Defrost station with includes valve station and the intelligent electronic defrost control panel. With an automated Panel, no external electric heaters or water spray systems with drains are required which make the coil defrosting process easy and trouble-free. The Manik Defrost controller can be set to run at periodic intervals throughout the day. Hence after initial set-up the complete system runs without any human interference. These are available for both Gravity and Overfeed Systems.

CONSTANT FLOW VALVE : FRVA

Automatic Liquid Flow regulator Type FRVA
For Mechanical Pumped (Ammonia) Liquid Overfeed Systems

FEATURES :

- External Adjustment
- Eliminates System Balancing
- "Frost Free" Neck
- Easy Setting Scale
- Integral Check Valve
- Design Pressure (MWP): 27.6 bar (400 psig)
- Available up to 400 TR systems.
- Automatic Flow Regulator, is used as a liquid control device for Ammonia Overfeed Systems.

This Automatic Flow Regulator, once set, maintains a constant flow rate of liquid to the evaporator. It also serves as a check valve to prevent back flow into the liquid line from the evaporator during pressure reversals which occur during hot gas defrost.

AUTOMATIC LIQUID DRAINER / FLOAT DRAINER : ALD

The Type ALD Automatic Liquid Drainer is a combination of a Type MLS39, a 13mm (1/2") Port Size Type SA17A3 Solenoid Valve Assembly, a 3/4" and a 1/4" Hand Expansion Valve, as well as necessary pipe and fittings, complete for field assembly as shown on Figure 1. All are heavy duty devices intended for use with Ammonia, R-22, R-502 and other common refrigerants.

PURPOSE : It is the purpose of the Type ALD Automatic Liquid Drainer to permit flow of liquid refrigerant only and to prevent the flow of vapor refrigerant. It is intended for use in draining liquid from defrosting evaporators, or heat recovery condensers, into a lower pressure portion of the system.

DEFROST RELIEF REGULATOR : MDRV

MDRV is angle-way construction defrost relief valve, with variable opening pressure between (ΔP): 29 - 116 psi (2 - 8 bar). The valve is also designed to work as stop valve with metal to metal back seating facility which allows to replace spindle seal even when valves are under pressure. While designing the valve fluttering due to low velocity and low density are also considered. It is possible to use the valves with wide variation in capacity demands, i.e. from maximum efficiency to part load. A special material O-ring gives excellent sealing over the seat area. Available in 3/4" and 1" SW connections.

TWO-STEP HOT-GAS SOLENOID VALVE : MS4D

NEW PRODUCT

The MS4D is a Two Step Solenoid Valve which opens to 10% of the rated flow in the 1st step (soft open) and opens completely in the 2nd step. The type of operation, helps prevent probable liquid hammers in the system. The valve is direct replacement for MS4A valves with better versatility. Due to its special design, this valve can be used to replace dual solenoid systems of Soft-gas and Hot-gas in Hot-Gas defrosting systems with a single valve. **It is available in 20-50NB sizes.**

DEFROST CONTROLLER : FROST MASTER

Frost Control is a complete electronic controller with real time for hot gas / electrical / water defrost system from MANIK Engineers.

FEATURES :

The MANIK Frost Master is designed to control the evaporator operations for large ammonia and halocarbon refrigeration systems. The MANIK Frost Master performs the functions of following independent control systems:

- Evaporator valve group status monitor
- Multi-Function defrost clock
- Remote communication
- Automatic defrost cycle with real time clock

SAFETY VALVES : MSRV SERIES

MSRV 15 WITH CONNECTOR & FLANGES

MSRV 20 / 25 WITH CONNECTOR & FLANGES

Safety Valves are most important safety devices in any refrigeration plant. MSRV are designed to provide emergency relief from excessive pressure in refrigerant-containing vessels. They are built in strict conformance with AAR standard 1 requirements for safety relief devices. This code requires pressure vessels of all refrigeration systems to be protected by a pressure relief device or other approved means to safely relieve pressure in the event of fire or other abnormal conditions.

FEATURES :

- Body : LCC A352 Cast Steel Body
- Internals : SS304
- Operating Range : -50°C to +55°C
- Set Pressure Range : 5 MPa (75 PSI/5bar) to 25 MPa (360 PSI/25 bar)
- Operation Range : 5% of set value
- Connections : Threaded/Flanged/Connector

* Calibration certificate provided with each valve.

* Accessories: Manik Make Safety Relief Valve indicator can be directly mounted on safety valve outlet.

MODELS

Model No.	Threaded Connection BSP	Welded Connection BW
MSRV15	¾" X 1"	½" X ¾"
MSRV20	1" X 1 ¼"	¾" X 1"
MSRV25	1" X 1 ¼"	1" X 1 ¼"

SAFETY VALVES : SH SERIES

SH56 01/ 02

SH56 13 / 04

Designed to provide emergency relief from excessive pressure in refrigerant-containing vessels, they are built in strict conformance with ASME Boiler and Pressure Vessel Code requirements for safety relief devices. Their capacities are rated by the National Board of Boiler and Pressure Vessel Inspectors. These tamper-resistant valves are accurately set and sealed by qualified technicians at the factory. These Manik Engineers pressure-relief valves help meet the requirements of ANSI/ASHRAE 15-2014 Safety Code for Mechanical Refrigeration as well as other worldwide codes. Where dual pressure-relief valves are required, Manik Engineers can provide the three-way valves and other components necessary for assembly.

MODELS

Model No.	Threaded Connection NPT
SH5600A	½" X ¾"
SH5601	½" X 1"
SH5602/SH5632R	¾" X 1"
SH5613/SH5633R	1" X 1 ¼"
SH5604/SH5634R	1 ¼" X 1 ½"

DUAL MANIFOLDS : MDM2, MDM3 AND MDM 4

MDM2 WITH FLANGES

MDM3

MDM4

Dual Manifolds are used where dual pressure-relief valves are required. Manik Engineers can provide the three-way valves and other components necessary for assembly. With this type of arrangement, safety valves can be serviced without compromising the safety of the plant/vessel by keeping either of the safety valve always under operation. It is a standard practice to have Dual manifolds on pressure vessels in modern refrigeration.

FEATURES:

Body: LCC A352 Cast Steel Body

Internals: SS304

Dual Manifold connections: MDM2/MDM4: Threaded/Flanged SW
MDM3: Threaded/Connector

MODELS

Model No.	Inlet/Outlet	Suitable Safety Valve
MDM2	½" X ½" BSP	MSRV15
MDM3	½" X ½" NPT	SH5600A
	½" X ½" NPT	SH5601
	¾" X ¾" NPT	SH5602
MDM4	1" X 1" BSP	MSRV20
	1 ¼" X 1 ¼" BSP	MSRV25
MDM-SH	1" X 1 " NPT	SH5613
	1 ¼" X 1 ¼" NPT	SH5604

SAFETY VALVE INDICATOR / RELIEF VENT INDICATOR

FEATURES

- Simple, innovative device to detect pressure relief events in pressurized systems.
- Installed on the outlet of a **Pressure Relief Valve (PRV)**.
- Acts as an early warning system against the release of refrigerants (e.g., **ammonia, Freon**) or **steam/compressed gases**.
- Provides **clear visual indication** of pressure relief events, even if intermittent.
- Helps operators quickly identify system breaches.
- Enhances **safety**, reduces **downtime**, and prevents **costly losses**.
- Reliable and **cost-effective solution** to detect unnoticed system pressure releases.

Model No. Safety Valve Indicator	Suitable For
SFI 25	MSRV15
SFI 40	MSRV20 / 25

DEAD MAN'S VALVE : MDMV

MDMV means Dead Man's Valve. It is used for very fast oil or water drain. MDMV is specially designed to drain oil and water from closed loop refrigerant systems under pressure. The valve is self-closing on release of the handle, which provides protection to operator against refrigerant leaks which can release gas inadvertently into the atmosphere. To avoid hydraulic pressure build-up between the stop valve and the MDMV an essential relief component is included as part of the cone assembly, which will open at 25 bar (363 psi). MDMV is designed to conform to all the safety rules and regulations specified by national and international standards for industrial refrigeration. **Available in 1/2" and 3/4" SW connections**.

MODEL NO.	CONNECTION
MDMV-15-BW / MDMV-15-BW SS	1/2" X 1/2" Butt Weld
MDMV-15-SW / MDMV-15-SW SS	1/2" X 1/2" Socket Weld
MDMV-15-BSP / MDMV-15-BSP SS	1/2" X 1/2" BSP threading
MDMV-20-BW / MDMV-20-BW SS	3/4" X 3/4" Butt Weld
MDMV-20-SW / MDMV-20-SW SS	3/4" X 3/4" Socket Weld
MDMV-20-BSP / MDMV-20-SW SS	3/4" X 3/4" BSP threading

MAN TRAP ALARM : MTA

MAN TRAP ALARM kit:

Consisting of control unit with acoustic-visual warning. It comes complete with buffer battery and luminous emergency in-room pushbutton.

APPLICATIONS:

"Man in room" safety system for Low Temperature Rooms/Chambers.

SYSTEM DESCRIPTION:

The MAN TRAP ALARM kit allows a person trapped inside the cold room to activate an acoustic-luminous alarm installed outside the room and call for help. The system will work even in the event of a temporary power cut thanks to the buffer battery on the external unit. Special SS Switches with Heater are available are Very Low Temperature Rooms.

The Cold Room Alarm Unit is available in 3 different models 4, 8 or 16 Input. The 4 input unit can be used for 4 cold rooms, 8 input unit for 8 rooms and 16 input unit for 16 rooms. Thus giving the flexibility and low cost.

COMPONENT PARTS:

- Emergency pushbutton to be fitted inside cold room. This is a luminous pushbutton with a N.C. contact. The pushbutton is illuminated by LEDs, thus making it easy to find even in the dark.
- Acoustic-visual alarm control unit to be fitted outside the room. Features a siren and a flashing light and a buffer battery to provide power in the event of a black-out. Also has a clean contact (closed when alarm is active) that can be used to inhibit refrigeration, switch on the interior room light or activate other devices such as a dialer for remote alarm activation.

EMERGENCY PRESSURE CONTROL SYSTEM: MEPCS-01

The Manik "Emergency Pressure Control System", MEPCS-01 is designed to maintain strict safety in refrigeration plants. The controller provides a 2 level system to alert the plant operators/personnel and also operate safety systems in case, the system pressure goes beyond the set critical pressure. This controller is designed as per AAR Standard 1.

AMMONIA LEAK DETECTOR : LDS

Ammonia Detector with Panel | PLC | Panel Mounting

The Manik Ammonia Leak Detector provides precise, stable readings and even in demanding environments are simple to operate, fast, reliable and built to last.

- Ensures **safety and efficiency** in environments where ammonia is used or stored.
- Ideal for **industrial, commercial, and residential** applications.
- Built with **cutting-edge technology,robust construction,** and a **user-friendly interface**.

System Components:

1. Standalone Controller
   - Houses the control system and display interface.
   - Provides **real-time monitoring** and **alerts**.
   - Available in two variants: **1. Microcontroller-based** **2. PLC-based**
2. Ammonia Sensor Transmitter
   - Detects ammonia concentrations.
   - Sends data to the controller for analysis and response.

FEATURES:

- Three Level Alarm & Indication for each channel
  1. First - Contamination 2. Second - Early Warning 3. Final - Alarm

These alarms have been designed as per international guidelines.
The alarm levels are site adjustable from 0-1000ppm.

- Multi-point Alarm Units.
- Alarm Hooter(90dB) for quick detection in noisy environments.
- Continuous monitoring
- Easy maintenance / calibration
- RS485 Modbus protocol support for PLC / SCADA interface.
- Individual Channel Output available for Control Equipment.

Advantages of PLC Based Over Standard Controller –

- SMS Facility available for upto 5 Numbers when Alarm is detected.
- Datalogging feature provided to keeps logs of Ammonia Leaks
- 7" TFT Graphic Touch Screen provided for Interface.
- Support for upto 32Channels.
- Customisable Calibration range for each channel.

AMMONIA SENSOR TRANSMITTER : AST

Semiconductor | Electrochemical | AST-SV

AMMONIA SENSORS

Ammonia Sensor (AST) :
The Manik GP-SA stand-alone detector represents one of the lines in a new generation of gas detectors featuring an integrated microprocessor. The detector continuously monitors the ammonia concentration for 0-1000 ppm range. In the Manik GP-SA detector the sensor signal is converted to a linear output signal of 4-20 mA.

Available in Electrochemical and Semiconductor type.
Ammonia Sensors for Vent Line (AST-SV) are also available for installation on vent lines of safety valves to detect safety valve operation.

SPECIFICATION

Parameter	Electrochemical Sensor	Semiconductor Sensor
Suitability for Refrigeration	Highly suitable for detecting low ppm levels of ammonia leaks	Suitable for general leak detection, not ideal for low ppm
Accuracy	High-preferred for safety-critical zones like machine rooms	Moderate - Lower than electrochemical as it is susceptible to other gases with strong smell.
Response Time	Fast-enables quick reaction to leaks	Slower-not ideal for real-time alerting in critical zones
Interference Resistance	Good selectivity-less prone to interference	Susceptible to interference from other gases and humidity
Maintenance	Needs periodic calibration and eventual sensor replacement	Requires less frequent calibration but prone to long-term drift
Operating Conditions	Stable in controlled indoor environments	Better for variable and humid environments
Lifespan in Industrial Use	1-2 years (affected by high ammonia exposure)	3-5 years
Installation Zones	Recommended for **machine rooms, compressor areas**	Suitable for **ventilation ducts, general plant monitoring**
Cost	Higher, but justified for safety-critical detection	More economical for broad area coverage

The overall performance of the instrument is obtained by combining the stated accuracy and any uncertainty due to the measurement process.

HANDHELD AMMONIA GAS LEAK DETECTOR : HLD

FEATURES :

- Microprocessor controlled device
- Customized calibration optional possible
- Display of the calibrated gas concentration
- Values from 1 ppm up to 2000 ppm (Optional 1 up to 1000 ppm Automatic measuring range charge over)
- Various optional Accessories, variable acoustic signal depending on concentration (can be switched OFF), automatic zero setting on air after switch ON.

REFRIGERANT SENSOR TRANSMITTER : RST

Suitable for Gases : R404A, R134A, R507A.

RST

The Manik RST stand-alone detector represents one of the lines in a new generation of gas detectors featuring an integrated microprocessor. The detector continuously monitors the gas concentration, whether it is in the 0-100% LEL range (lower explosion level) or the 0-1000 ppm range, in connection with e.g. refrigerants.

FEATURES:

In the Manik RST detector the sensor signal is converted to a linear output signal of 4-20 mA.

AUTOMATIC AIR PURGER FOR REFRIGERATION PLANTS : MSGP-2E / MSGP-2E-SS

Removes Non condensable gases / Air from refrigeration plants. Fully factory assembled unit. Can be used as multi point purger with **MANIK** make "AIR PURGER CONTROLLER"

No need to install above condenser / receiver.

Can be installed in plant room / ground level.

All standard MANIK controls are externally installed, can be serviced / replaced externally.

MSGP-2E

ADVANTAGES OF AIR PURGER

- Fully automatic gas purger for refrigeration plants
- Automatic purger continually functions to scavenge and remove air from System
- Maintains condensing temperature at nearly optimum operating conditions
- Reduces the concentration of non-condensable gases to a negligible Percentage
- No need of separate refrigeration system
- Eliminates the labour associated with personnel regularly removing air by manual operation

* **Water bubbler and water SV available separately.**

* **PLC Based Purger Controller available separately.**

* **Also Available in Stainless Steel version.**

AMMONIA DEHYDRATOR : WDO-MHP / WDO-MHP-SS

WDO-MHP

System Cleaner removes the Water, Dirt and Oil from Ammonia System that air purger leaves behind

The MANIK WDO is the only system cleaner that boosts

- Lower Installation Cost
- Self Regulating Operating
- Shortest Payback Time
- Energy-Neutral Operation
- Very Low Maintenance

How you can tell if there's water in your system ?

Air-purger only removes non-condensible like air. If your air-purger has been venting air, it's been leaving behind the water vapour that's always in the air. If your recirculating evaporator is operating a few degrees warmer than the pressure indicates, this could be due to water in Ammonia. If water comes out of your oil pot before the oil, there is water in your system.

You can easily measure the concentration of Water in your system with the graduated Ammonia Sampling Container.

COMPRESSOR EXIT TEMPERATURE INCREASE

Water Present	0%	10%	20%
Comp Exit Temp	0°C	5.5°C	12°C

* **Also Available in Stainless Steel version.**

MOISTURE MEASURING INSTRUMENT : AMMONIA SAMPLER

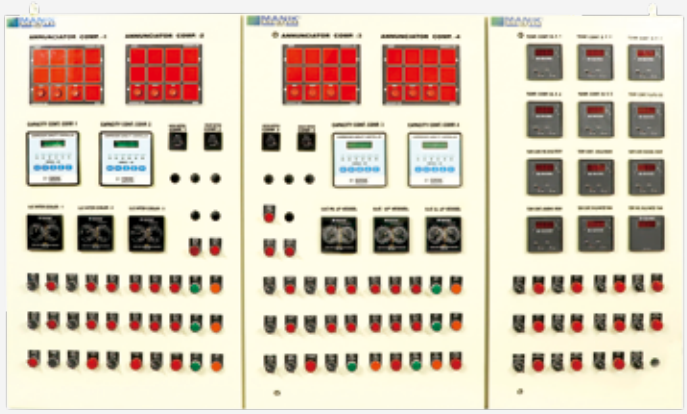
Ammonia sampler Case

This specially designed glass measurement beaker is used for measuring the amount of water in an ammonia refrigeration system. Its unique design NH_3-SAP-01 allows for fine measurement of the amount of water left over after a 100ml sample is taken from your system.

CHILLER PERFORMANCE METER

The Manik Chiller Performance Meter provides highly accurate thermal energy measurement for Chiller Systems and Condensers. With LCD Display and Robust Keypad Membrane, the meter can display instantaneous energy in KW/TR, temperature, temperature differentials, flow rate, approach temperatures and also provide feedbacks for Low Brine Flow, Low Brine Temperature, Low Condenser Water Flow and High Ammonia Temperature. The meter can also communicate with DCS/SCADA/PLC systems via RS485 Modbus.

CUSTOM AUTOMATION PANELS FOR REFRIGERATION PLANTS



Compressor Automation Panel

SS Panel

LP Vessel

Cold Room Automation Panel

Manik Engineers is a well known supplier of Electrical Automation Panels for the Refrigeration Industry. Custom Automation panels for Compressor capacity control, LP vessel Automation for Liquid Level control, Liquid Ammonia Pump Automation, Cold Room Temperature Control Panels,Hot-Gas / Gravity Defrost Panels, Complete Plant automation panels, Ammonia Leak Detector Panels and various other panels as per customer and industry needs are supplied. All Panels are fabricated from CRCA sheets and are duly powder coated. The panels are manufactured and assembled by experienced technicians. A hard-copy of wiring schematic is provided with the control panel. All wiring internal to the panel is factory-tested for continuity prior to shipment by expert technicians.

DESUPERHEATER

'Tube-in-Tube' type 'counter flow' heat exchanger gives 3% to 5% Power saving of Compressor motor.
Free hot water for

a) Boiler make-up water
b) Heating of reactors & autoclaves
c) Hot water supply for guest rooms in hotels
d) Washing & Cleaning
e) Dehumidifiers

ADVANTAGES

- Large saving in fuel & electricity bills.
- Reduced load on condenser results in possible saving of electricity for condenser pump & cooling tower fan.
- Eliminates Scaling of Condenser
- Zero Maintenance

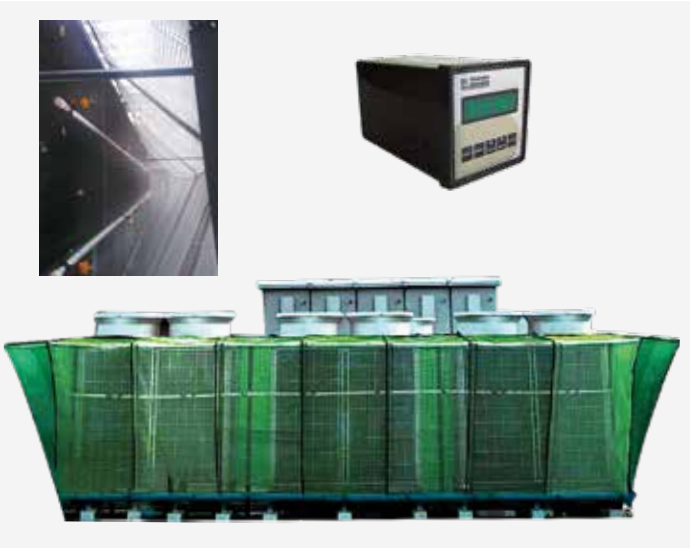
HEAT RECOVERY SYSTEM

HEAT PIPE HEAT EXCHANGER FOR ENERGY CONSERVATION
Converts hot to cold and cold to hot.
Can be used for air, water, liquid and gases medium.
Operating temperature 0°C to 600°C
Unique individual pipes which are easy to maintain / service

HEAT PIPES FOR HEAT RECOVERY

- Utilizing a heat pipe, thermal energy can be recovered from warmer air and added to cooler air.
- In temperate climates this permits energy saving to be realized through preheating of the outside air. Conversely, in hot climates the savings are associated with pre-cooling of the outside air.

ADIABATIC COOLING SYSTEM : ECONET



INTRODUCTION : EcoNet concept is based on intermittently and efficiently evaporating water on a large area in front of the heat rejection surface of Mini - Split, Rooftop, Air Cooled Chillers, Condensers and Dry Coolers.

FEATURES : Water Spray System, Quick change type plastic nozzles connected in series or parallel arrangement in order to provide uniform coverage area for an effective evaporation process. Nozzles are designed to operate with very low pressure and they can operate with normal city mains water pressure 1.5 bar g (21 psi g) / (15m) and above.

ECONET : Non metallic mesh provides an effective coverage area for an efficient evaporation surface with minimal air pressure drop Meshes are fixed in front of the heat rejection surface via spacer bars and / or fixing brackets to suit the unit configuration. Various size sectional mesh panels are either joined together to form a full mesh area or alternatively flexible mesh roll cut to fit to a required size in front of the heat rejection surface. This design provides easy maintenance and replacement for the mesh panels.

HUGE SAVINGS ON ENERGY: Based upon the chiller capacity and weather conditions, upto 10-15kw/hr can be saved. The average ROI for such systems is less than 1 year.

MICROCONTROLLER BASED COMPRESSOR CAPACITY CONTROLLER : FKD331

The microcontroller based FKD331 is a multistage electronic capacity controller for multi-cylinder reciprocating compressor or rack systems.

LCD Based unit has easy to use settings, like Set point -Low pressure (LP), Neutral Zone (NZ) & Interstage timer.

One Analog input (4 to 20mA) for pressure transmitter e.g. compressor suction or RTD Pt100

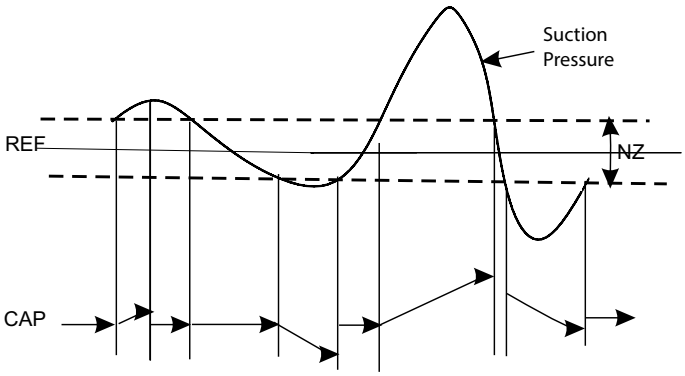
One Digital input (potential free) for Compressor On feedback

Four / Six Relay Output for Compressor Capacity Control Solenoid Valves and Compressor trip

Adjustable Neutral Zone, time delay, Calibration Optional RS232 / RS485 part for communication.

FUNCTION:

- The cut-in capacity is controlled by signals from the connected pressure transmitter and the set reference.
- Outside the reference a neutral zone is set where the capacity will neither be cut in nor out.
- Outside the neutral zone the capacity will be cut in or out if the regulation registers a will take place with the set time delays.
- If the pressure however “approaches” the neutral zone, the controller will make no changes of the cut-in capacity.
- Cut-in of steps are defined for either sequential or cyclic operation.



SCREW COMPRESSOR CAPACITY CONTROLLER : FKD-40A+41A

FKD-40A+41A is a screw compressor capacity controller widely used with various screw compressors such as KPC-Howdon, Alfa-Laval, Stal, Dunham Bush, APV- J & E Hall, KG Khosla, Sabroe, Cooling Systems CSI etc.

FKD-40A moves capacity slide by operating loading/unloading solenoid valves.

FKD-40A can be used either with RTD (Pt100 / Pt1000) input or pressure transmitter input (4-20mA)

FKD-41A is current limiter which allows to control motor current from 10% to 100% of rated current.

MICROCONTROLLER BASED COMPRESSOR CAPACITY CONTROLLER : MPRCC

The microcontroller based MPRCC is a multistage electronic capacity controller for multi-cylinder reciprocating compressor or rack systems.

LCD Based unit has easy to use settings, like Set point -Low pressure (LP), Neutral Zone (NZ), Inter-stage differential (ISD) & Interstage timer.

One Analog input (4 to 20mA) for pressure transmitter e.g. compressor suction or RTD Pt100

One Digital input (potential free) for Compressor on feedback

Four / Six Relay Output for Compressor Capacity Control Solenoid Valves and Compressor trip

Adjustable time delay for capacity control solenoid valves

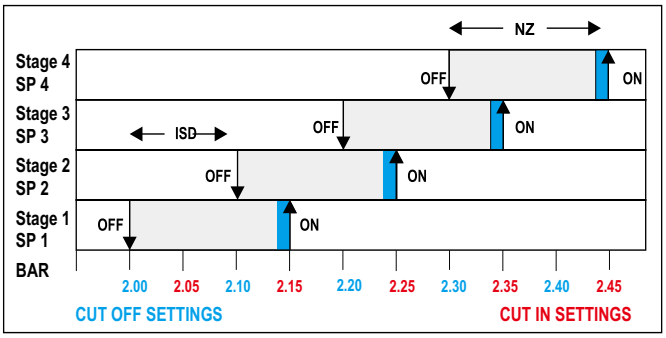
Adjustable Neutral Zone, Inter Stage Differential, Calibration

- Optional RS232 / RS485 port for communication

TYPICAL APPLICATION

MPRCC-04 unit stage control :

Set Point	2.00 bar
Neutral Zone	0.15 bar
Inter-Stage Differential	0.10 bar



ICE THICKNESS CONTROLLER

Electronic Controller Type ITC is an equipment for automatically controlling the thickness of ice around the chilling tubes in Ice Bank systems. This unit provides an ON/OFF control. When ice is formed around the chilling tube to the required thickness, it automatically cuts off the electric supply to the compressor or Solenoid valve.

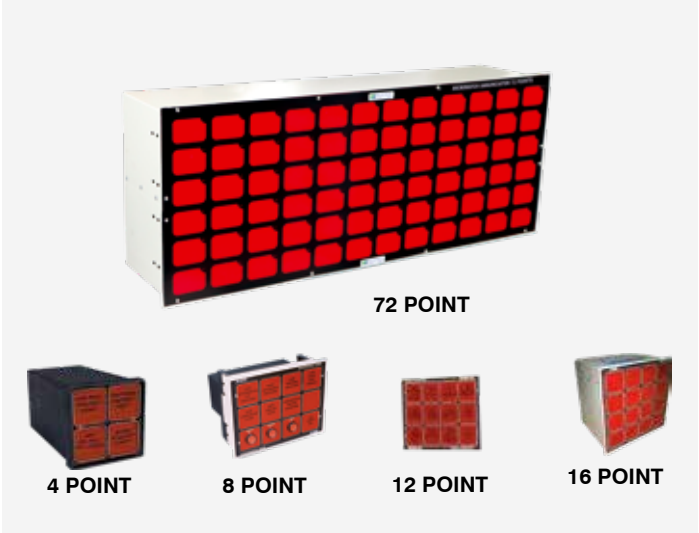
SCREW / PISTON COMPRESSOR AUTOMATION CONTROLLER : SCC40+41 / PCC331

The Manik compressor control PLC provides precise regulation, stable readings even in demanding environments are simple to operate, fast, reliable and built to last.

FEATURES :

- Operates on 230VAC, 50Hz, with inbuilt power supply for Sensors & Transmitters.
- Precise capacity control based on the successful FKD331 / FKD40+41 logic.
- 7" TFT Colour touch screen graphic display.
- Consolidated overview for multiple parameters in a single controller.
- Standard Current Looped 4-20 mA analog signal output from Transmitters.
- Direct interfacing with RTD Temperature sensors.
- Alarm Hooter(90dB) for quick detection in noisy environments.
- Robust case for long life in harsh environments.
- Easy maintenance / calibration.
- Overload protected.
- IP55 protected enclosure, for panel and wall mounting application.
- LAN / RS485 Modbus protocol for PLC / SCADA interface.

MULTI POINT ALARM ANNUNCIATORS



MICROWATCH ANNUNCIATOR

The Microwatch Annunciator is specially designed for tripping of plants such as refrigeration / air conditioning compressors, chillers etc. In such plants each & every fault is important and has to trip the compressor. The unique design has two relays, one for hooter operation & other for ALL SAFETY OK (ASO) contact, which is to be used in series with compressor starter circuit. This eliminates the use of conventional multiple contactor, Relay logic for tripping of compressor. The Microwatch accepts potential free contacts as inputs with a selectable facility for **"Make to Alarm"** (NO Type) & **"Break to Alarm"** (NC type), for each individual inputs. Preprogrammed time delays can be provided for individual windows for fault such as Low Differential Oil Pressure (OP) or Low Oil Level etc. **Available in 4,8,12,16,30 up to 70 points.**

COMPRESSOR CAPACITY CONTROLLER : PRCC & RCC

PRCC/RCC is reciprocating compressor controller widely used with Kirloskar, Alfa Laval, Sabroe, Batliboi, ACCEL reciprocating compressors. RCC works by operating loading / unloading solenoid valves of a multi cylinder compressor system.

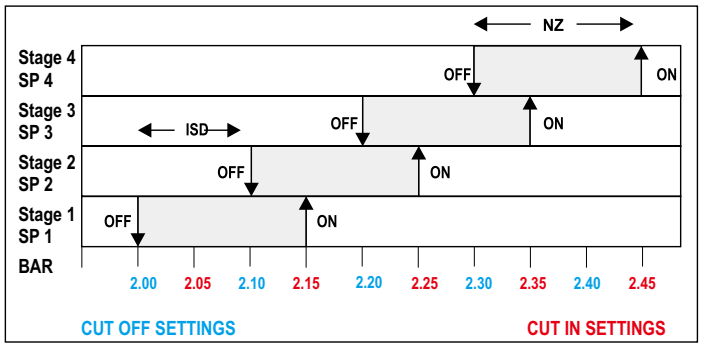
RCC can be used either with RTD (Pt 100 / Pt 1000) Input or PRCC can be used with pressure transmitter input (4 to 20mA).

The controller can be supplied with 4,6,8 steps.

TYPICAL APPLICATION

PRCC-04 unit stage control :

Set Point	2.00 bar
Neutral Zone	0.15 bar
Inter-Stage Differential	0.10 bar



MICROCONTROLLER BASED COMPRESSOR DIGITAL GAUGE BOARD : MDGB

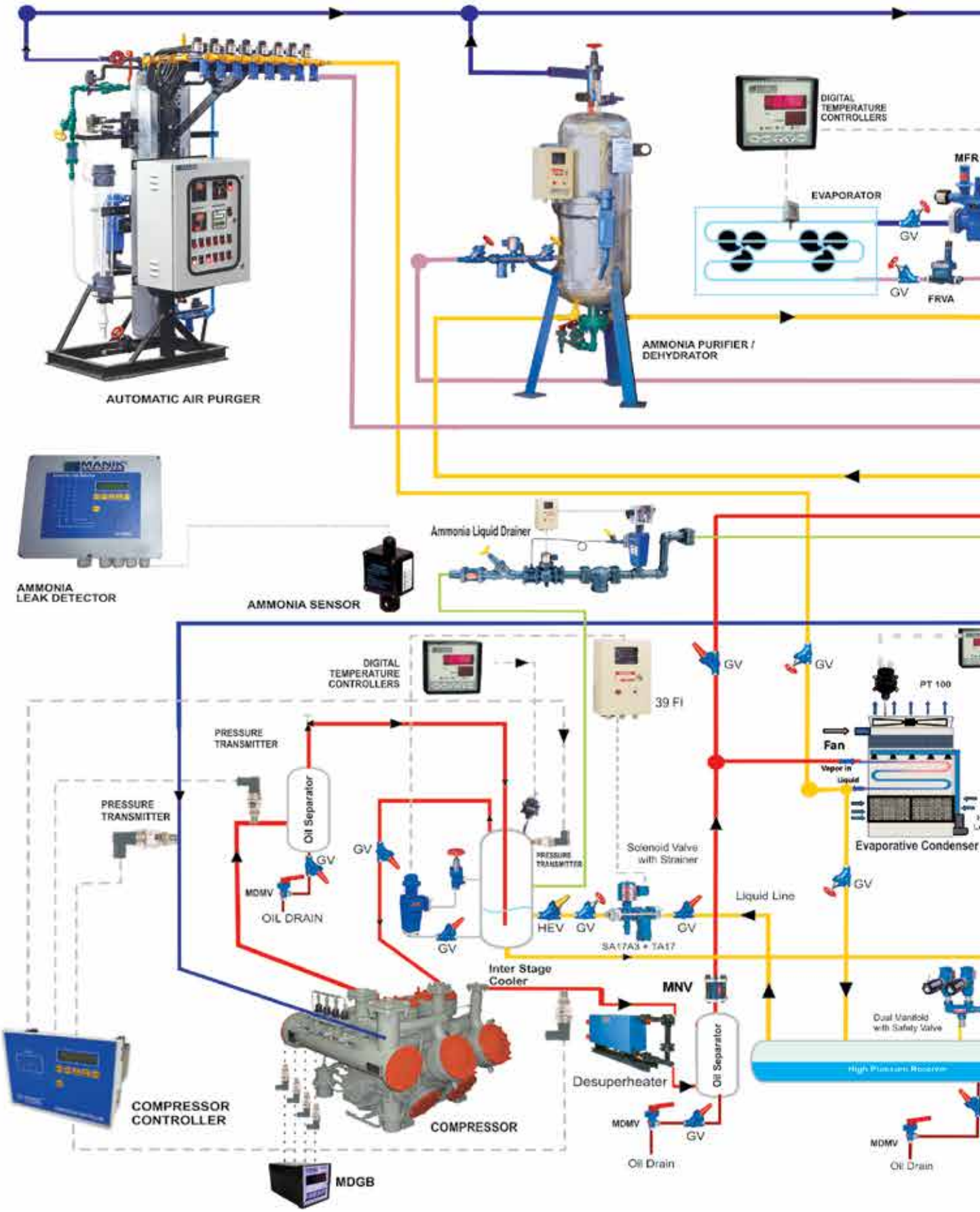
With the advancement in the technology the conventional gauge board system has to replaced by new accurate, more reliable and precise instrumentation. The failure of conventional mechanical switches, gauges always leads to unsafe and non reliable operation. This leads to damage to compressor. Also the qulaity of such controls leads to continues replacement.

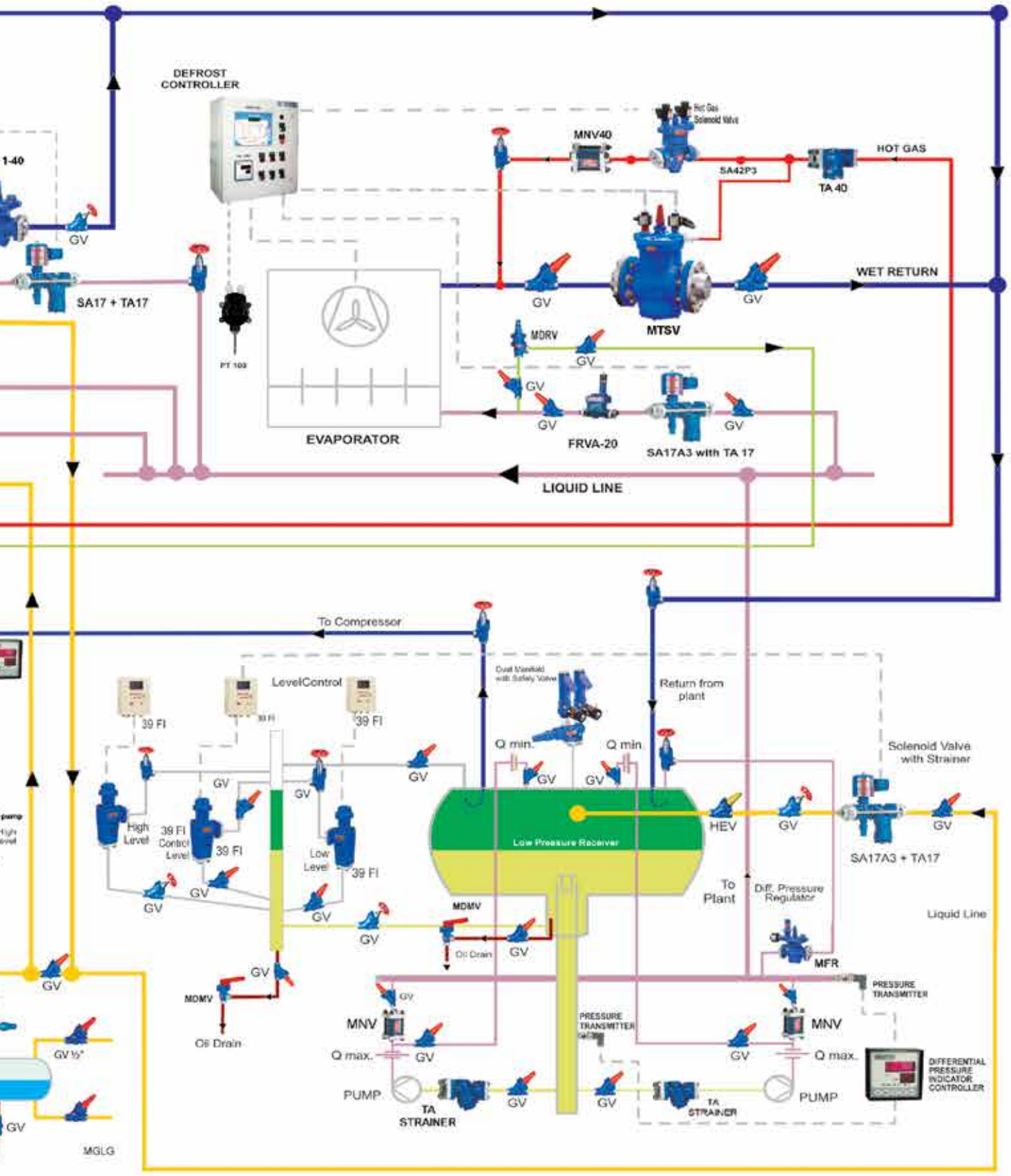
The new microcontroller based MDGB is an Digital Gauge Board for reciprocating or screw compressor. The MDGB avoids all problems associated with conventional systems and provides accurate, reliable & long lasting solution.

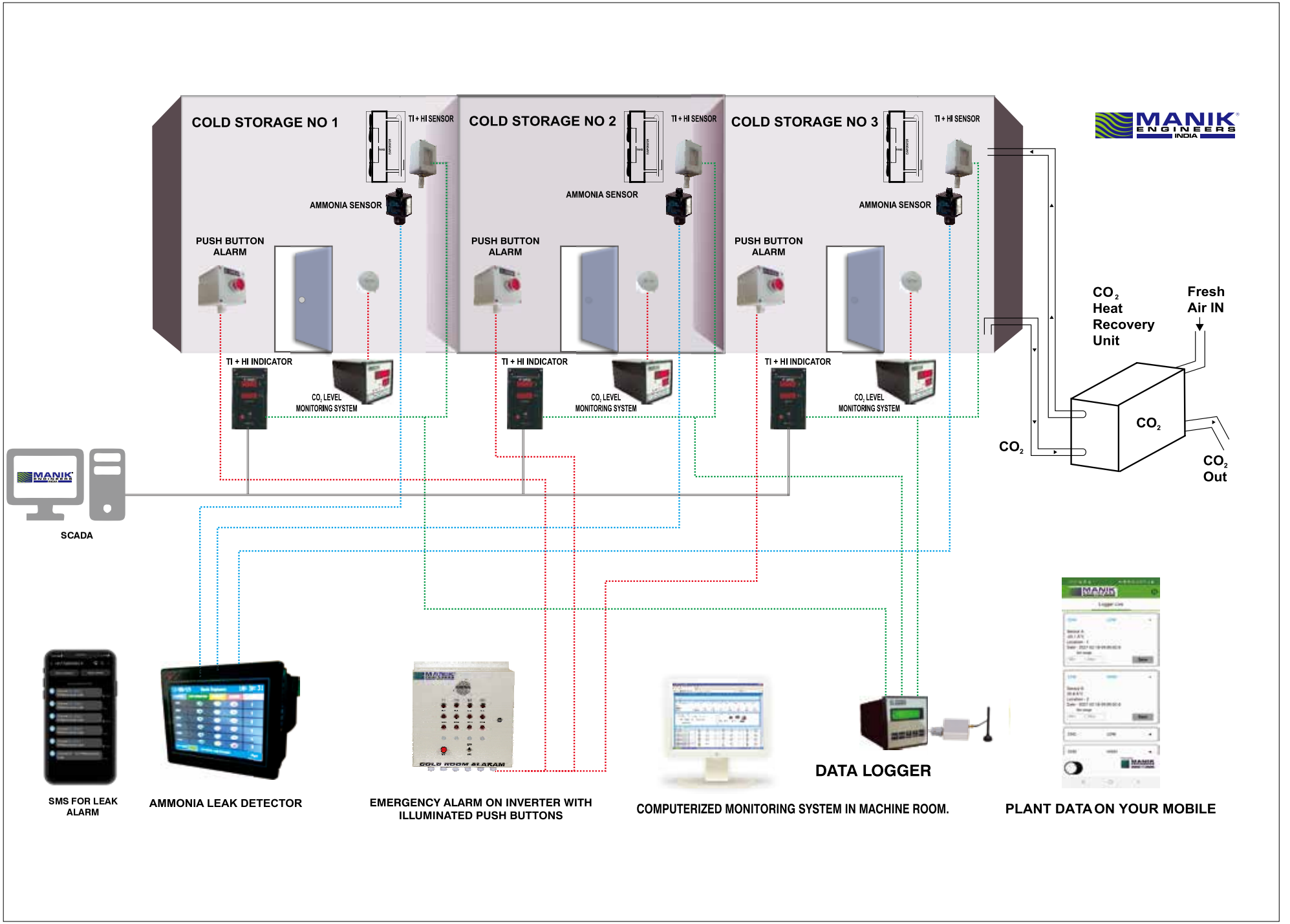
The MDGB has easy to use settings, like Set point -Low Suction Pressure (LP), High Discharge Pressure (HP) &Low Differential Oil Pressure (OP) & High Intermediate Pressure (IP) and time delay for Low Differential Oil Pressure.

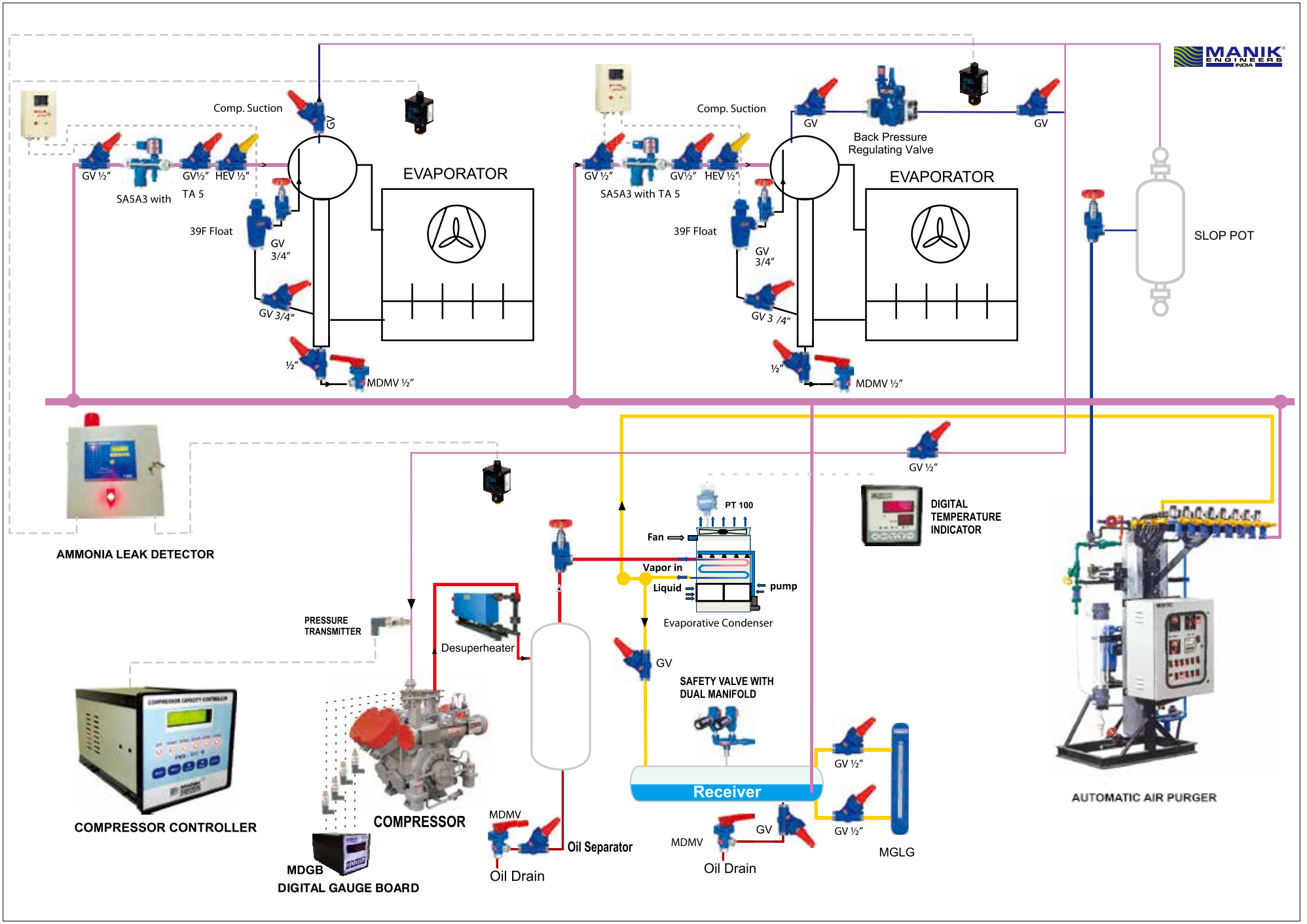
The MDGB is housed compact DIN panel mounting enclosure, which can be fitted in your standard control panel and avoids need of separate gauge board panel and tubing.

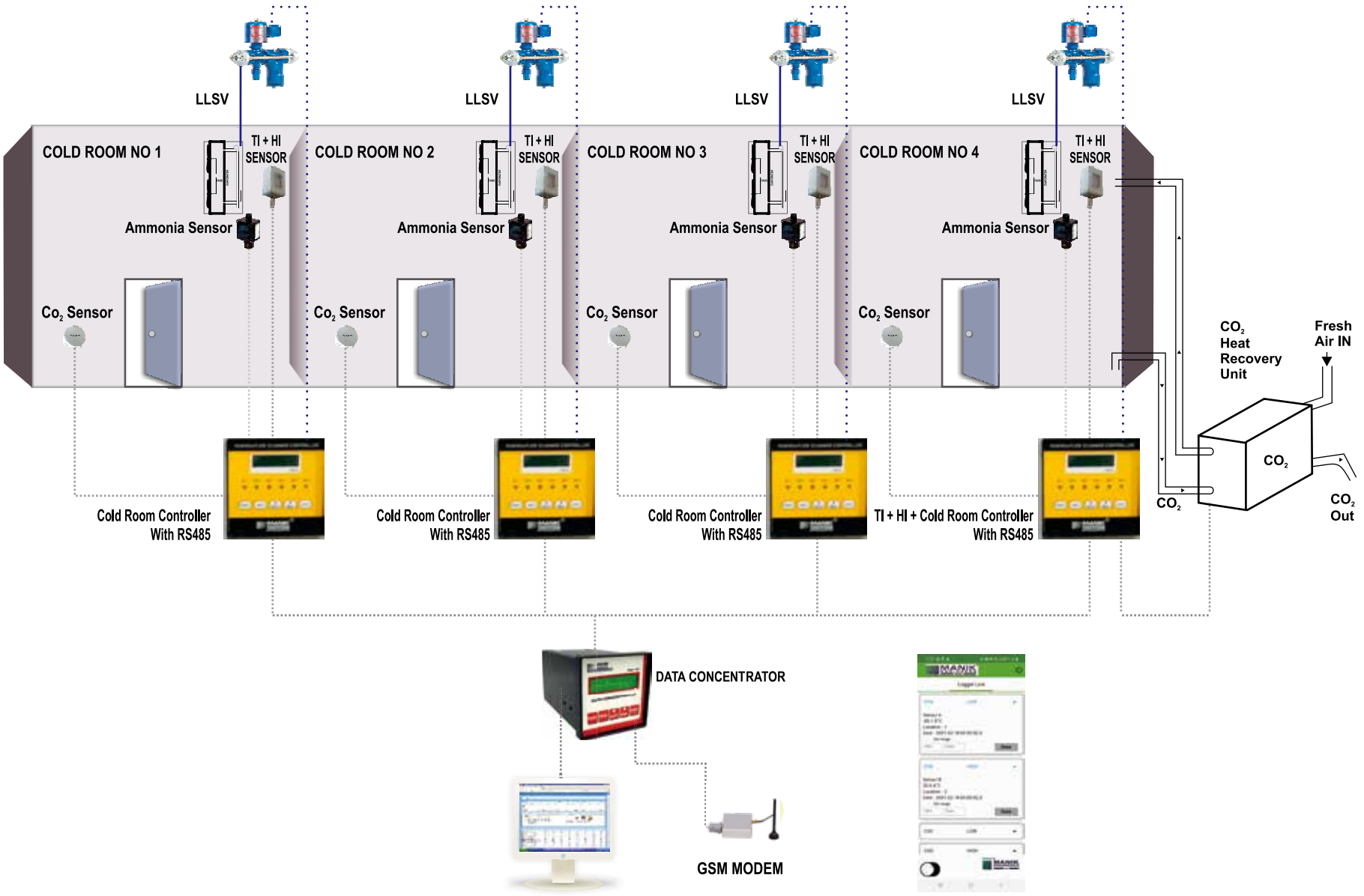
- Pressure transmitters can be installed on compressor directly.
- The MDGB has fourAnalog Input (4 to 20mA) for Pressure transmitter.
- One Digital input (potential free) for Compressor On feedback.
- Two Relay Output for Compressor Trip &Alarm.
- Optional RS232 / RS485 port for communication Optional available Software for PC monitoring Function Capacity regulation 16 Character X 2 Line LCD display provides continuous display of current pressure condition.
- The digital display with 0.1 bar resolution avoids any error of measurement as compared to conventional gauges.
- Standard operating supply Voltage is 230VAC, 50Hz. Options are available for 110VAC, 50 Hz, 230VAC, 60Hz, 10VAC, 60 Hz, 24VDC etc.


AUTOMATIC AIR PURGER
DIGITAL TEMPERATURE CONTROLLERS
EVAPORATOR
MFR
GV
GV
FRVA
AMMONIA PURIFIER / DEHYDRATOR
AMMONIA LEAK DETECTOR
AMMONIA SENSOR
Ammonia Liquid Drainer
DIGITAL TEMPERATURE CONTROLLERS
39 FI
GV
GV
PT 100
Fan
PRESSURE TRANSMITTER
PRESSURE TRANSMITTER
Oil Separator
GV
MDMV
OIL DRAIN
GV
PRESSURE TRANSMITTER
Solenoid Valve with Strainer
Evaporative Condenser
GV
Liquid Line
HEV
GV
GV
SA17A3 + TA17
Inter Stage Cooler
MNV
Dual Manifold with Safety Valve
Desuperheater
Oil Separator
MDMV
GV
Oil Drain
MDMV
Oil Drain
COMPRESSOR CONTROLLER
COMPRESSOR
MDGB


DEFROST CONTROLLER
MNV40
Hot Gas Solenoid Valve
HOT GAS
SA42P3
TA 40
GV
SA17 + TA17
PT 100
EVAPORATOR
WET RETURN
MTSV
MDRV
FRVA-20
SA17A3 with TA 17
LIQUID LINE
To Compressor
LevelControl
39 FI
Dual Manifold with Safety Valve
Return from plant
Q min.
Solenoid Valve with Strainer
High Level
39 FI Control Level
Low Level
Low Pressure Receiver
HEV
SA17A3 + TA17
To Plant
Diff. Pressure Regulator
Liquid Line
MDMV
Oil Drain
MFR
PRESSURE TRANSMITTER
MNV
Q max.
PUMP
TA STRAINER
DIFFERENTIAL PRESSURE INDICATOR CONTROLLER
GV ½"
MGLG


COLD STORAGE NO 1
COLD STORAGE NO 2
COLD STORAGE NO 3
TI + HI SENSOR
AMMONIA SENSOR
PUSH BUTTON ALARM
TI + HI INDICATOR
CO2 LEVEL MONITORING SYSTEM
MANIK ENGINEERS INDIA
CO2 Heat Recovery Unit
Fresh Air IN
CO2
CO2 Out
SCADA
SMS FOR LEAK ALARM
AMMONIA LEAK DETECTOR
EMERGENCY ALARM ON INVERTER WITH ILLUMINATED PUSH BUTTONS
COMPUTERIZED MONITORING SYSTEM IN MACHINE ROOM.
DATA LOGGER
PLANT DATA ON YOUR MOBILE


MANIK ENGINEERS INDIA
Comp. Suction
GV
GV ½"
GV½"
HEV ½"
SA5A3 with TA 5
39F Float
GV 3/4"
EVAPORATOR
½"
MDMV ½"
Back Pressure Regulating Valve
SLOP POT
AMMONIA LEAK DETECTOR
DIGITAL TEMPERATURE INDICATOR
PT 100
Fan
Vapor in
Liquid
pump
Evaporative Condenser
PRESSURE TRANSMITTER
Desuperheater
SAFETY VALVE WITH DUAL MANIFOLD
Receiver
COMPRESSOR CONTROLLER
COMPRESSOR
MDGB
DIGITAL GAUGE BOARD
MDMV
Oil Separator
Oil Drain
MGLG
AUTOMATIC AIR PURGER


LLSV
LLSV
LLSV
LLSV
COLD ROOM NO 1
COLD ROOM NO 2
COLD ROOM NO 3
COLD ROOM NO 4
TI + HI SENSOR
TI + HI SENSOR
TI + HI SENSOR
TI + HI SENSOR
Ammonia Sensor
Ammonia Sensor
Ammonia Sensor
Ammonia Sensor
Co2 Sensor
Co2 Sensor
Co2 Sensor
Co2 Sensor
CO2 Heat Recovery Unit
Fresh Air IN
CO2
CO2
CO2 Out
Cold Room Controller With RS485
Cold Room Controller With RS485
Cold Room Controller With RS485
TI + HI + Cold Room Controller With RS485
DATA CONCENTRATOR
GSM MODEM
COMPUTERIZED MONITORING SYSTEM IN MACHINE ROOM.
PLANT DATA ON YOUR MOBILE

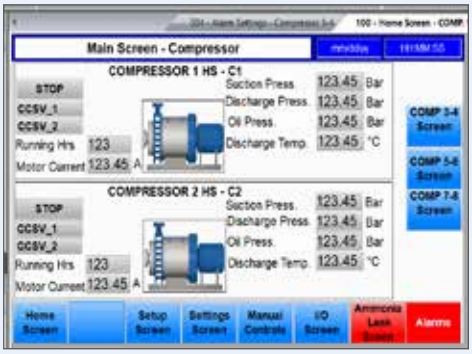
CUSTOM AUTOMATION PANELS FOR REFRIGERATION PLANTS

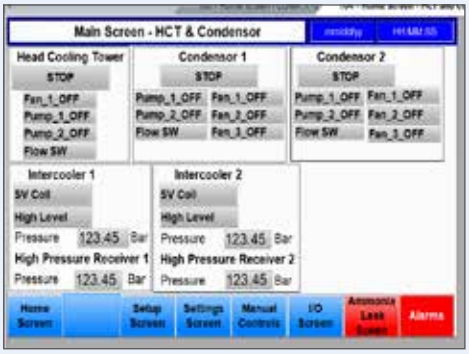
Manik Engineers provides cutting-edge solutions in Refrigeration Plant Automation through the integration of Programmable Logic Controllers (PLC) and Supervisory Control and Data Acquisition (SCADA) systems. In today's dynamic industrial landscape, efficiency, reliability, and sustainability are paramount. Our comprehensive range of automation solutions is designed to optimize the performance of refrigeration plants, ensuring precise control, real-time monitoring, and seamless operation.

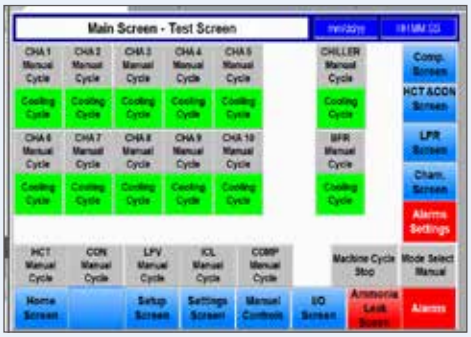
From food processing facilities to cold storage warehouses, our PLC and SCADA-based automation solutions offer unparalleled control over refrigeration systems. Whether it's maintaining precise temperature levels, managing complex compressor configurations, or optimizing energy consumption, our systems provide the intelligence and flexibility needed to meet the most demanding requirements.

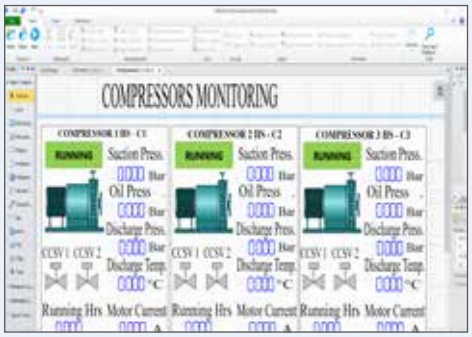
We offer a diverse array of products and solutions tailored to meet the specific needs of refrigeration plant operators. From compact PLC units to sophisticated SCADA software platforms, we offer scalable solutions suitable for installations of all sizes. Our expertise in automation engineering, coupled with advanced technologies, ensures seamless integration with existing infrastructure and future expansion possibilities.

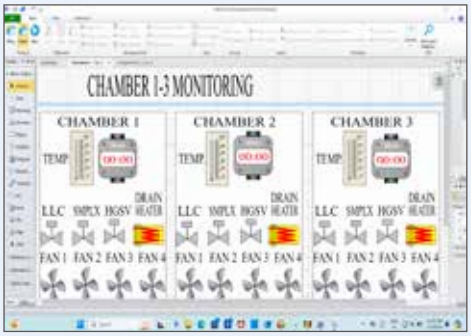
Our Refrigeration Plant Automation solutions aim to enhance efficiency, reduce downtime, and drive operational excellence in your facility. With our commitment to innovation and customer satisfaction, we are your trusted partner in achieving peak performance and sustainability in refrigeration operations.

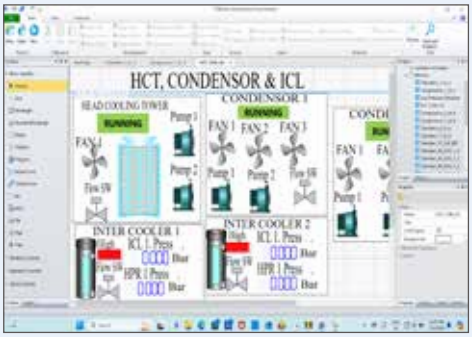


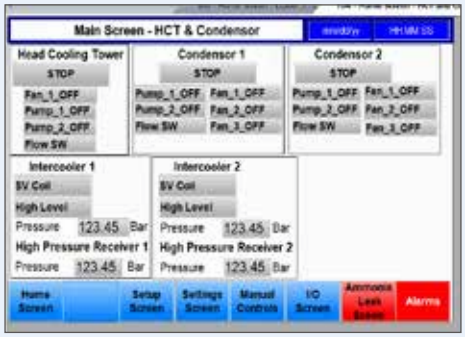












- **Get Plant Overview and Monitoring at a Glance.**
- **Elevate Productivity of Plant**
- **Improve COP**
- **Reduce Operator Dependancy**
- **Ensure Plant Safety with Event Logging**
- **Upgrade Efficiency**
- **Simplify operations**
- **Provided with Manual control for special cases**
- **From Idea to Integration: We are there all the way**

DIGITAL TEMPERATURE INDICATORS / ON-OFF CONTROLLERS

Manik Engineers Temperature Indicators/ Controllers distinguish themselves by features, construction and performance associated with only much costlier controllers.

APPLICATIONS:
ON/OFF control of temperature for,

- Cold Storages
- Refrigeration Plants
- Ice Cream Plant
- Fisheries
- Meat-processing plants
- Food Processing Units
- Pharmaceuticals
- Environmental Monitoring
- Beverages Plant

Other applications for temperature display and control include Ovens, furnaces, kilns, extruder, environmental test chambers, textile processing machinery, food processing equipment, power generating equipment, electrostatic paint shop, phosphating plants, glass annealing lehrs, thermic, fluid heating systems, boilers and similar systems.

TEMPERATURE INDICATORS

PANEL MOUNTING TYPE

Model		TDI 1R01	TDI 1R02 (S)	TDI 2R02	TDI 4R04	TDI 6R06
Dimension (HxWxD) [mm]		96 x 96 x 150	96 x 96 x 150	96 x 96 x 150	202 x 152 x 200	202 x 152 x 200
No. of Input		1	2	2	4	6
INPUT	Input	RTD - PT100 / PT1000 / 4-20 mA				
	Range	-50°C to + 200°C				
Supply		230/110 VAC OR 24 VDC				

OTHER SIZE AND TYPE

1" Display

Model		TDI 1R01-MINI	TDI 1R01-1-MINI		TDI 1R01-Gauge	TDI 1R01-FLP
Dimension (HxWxD) [mm]		96 x 48 x 100	96 x 138 x 100		125x125x75	
INPUT	Input	RTD - PT100 / PT1000 / 4-20 mA			RTD - PT100 / PT1000 / 4-20 mA	
	Range	-50°C to +150°C			-50°C to +150°C	
Supply		230/110 VAC OR 24 VDC			230/110 VAC OR 24 VDC	

WITH IP-65 ENCLOSURES

1/2" Display | 1" Display | 2" Display

Model		TDI 1R01/2-IP65	TDI 1R01-1 IP65	TDI 1R01-2 IP65
Dimension (HxWxD) [mm]		120x125x75	120x125x75	250x160x110
INPUT	Input	RTD - PT100 / PT1000 / 4-20 mA		
	Range	-50°C to + 200°C		
Supply		230/110 VAC OR 24 VDC		

WALL MOUNTING TYPE

VARIOUS DISPLAY SIZES

1/2" Display | 1" Display | 2" Display | 4" Display

Model		TDI 1R01-W	TDI 1R01-1-W	TDI 1R01-2-W	TDI 1R01-4-W	TDI 2R02-W	TDI-8R08-1
Dimension (HxWxD)[mm]		175 x 200 x 90	175 x 235 x 90	310 x 235 x 90	510 x 310 x 105	125 x 230 x 100	510 x 310 x 105
No. of Input		1	1	1	1	2	8
INPUT	Input	RTD - PT100 / PT1000 / 4-20 mA					
	Range	-50°C to + 200°C					
Supply		230/110 VAC OR 24 VDC					

TEMPERATURE CONTROLLERS

PANEL MOUNTING TYPE : SINGLE POINT INPUT & MULTI POINT OUTPUT

Model		TIC 1R01	TIC 1R02	TIC 1R03	TIC 1R04	TIC 1R05	TIC 1R06
Dimension (HxWxD)[mm]		96 x 96 X 150	96 x 96 X 150	96 x 96 X 150	96 x 96 X 150	96 x 96 X 150	96 x 96 X 150
OUTPUT	output	Relay Rated @ 10 A					
	No. of output	1	2	3	4	5	6
INPUT	Input	RTD - PT100 / PT1000 / 4-20 mA					
	Range	-50°C to + 200°C					
Supply		230/110 VAC OR 24 VDC					

2 POINT with DUAL DISPLAY

WALL MOUNTING TYPE

indicators + controllers

Model		TIC 2R02	TIC 1R01-W	TIC 2R011
Dimension (HxWxD) [mm]		96 x 96 x 150	125 x 230 x 100	96 x 96 x 150
OUTPUT	output	Relay Rated @ 10 A		
	No. of output	2	1	1
INPUT	Input	RTD - PT100 / PT1000 / 4-20 mA		
	Range	-50°C to + 200°C		
Supply		230/110 VAC OR 24 VDC		

MICROCONTROLLER BASED MULTI FUNCTION TEMPERATURE CONTROLLERS : MTIC

MTIC

MTCHI-CM

MANIK Engineers has introduced new series of Microcontroller based controllers. The new range of MTIC has many additional features, however, packed in same enclosure. Hence can be used to replace existing TIC range of Controllers

Standard DIN Enclosure 96 X 96 X 150 mm

Simple to use key board, Dual 7 Segment LED Display

Multiple Set Point options e.g. Single, Two, Three, Four, Five

Range - 100°C to +200°C, Resolution 0.1°C, Accuracy ±0.2°C

FEATURES :

- Hysteresis (Neutral Zone) adjustable 0.1°C to 10 °C
- Calibration Adjustable ±20°C
- Relay output • Optional Time delay for Relay Output
- Optional RS232 / RS485 port for communication
- Optional available Software for PC monitoring

HANDHELD DIGITAL BATTERY OPERATED TEMPERATURE INDICATOR AND TEMPERATURE CALIBRATOR

Piercing probe

Calibrator

In response to today's ever-increasing demand for speed, accuracy and performance at an affordable price, MANIK Engineers has introduced the Handheld Digital Thermometers.

The MANIK Handheld Digital 2000 Series provides precise, stable readings, even in demanding environments. They are simple to operate, fast, reliable and built to last. Some measurements take minutes using standard thermometers due to poor thermal conductivity in the item being measured. Often a highly accurate answer is not required and an indicative answer showing that the reading is above or below a desired threshold will suffice.

The Manik Temperature Calibrator is a an easy to use calibration tool which simulates RTD sensor to quickly and precisely calibrate Temperature indicators and controllers on site.

FEATURES:

- On/off switch on front side.
- Operates on easily available standard 9V battery cell.
- Available for any RTD Pt-100, Pt-1000
- Single instrument to read temperature with various installed RTD
- Speed Read for quicker indicative readings
- Robust case for long life in harsh environments

DIGITAL PRESSURE INDICATORS AND INDICATING CONTROLLERS

DPIC

MPIC

Industrial Electronic Instrumentation aims at measurement and control of process variables at maximum efficiency and minimum cost. Many times process parameters are located at remote distances and needs to be monitored / controlled at single point. "MANIK" make Digital Pressure Indicator/ Indicating Controllers are designed to serve to today's automation requirements

FEATURES:

- Precise measurement of pressure with resolution of 0.01 bar.
- Various options are available
- Pressure Indicator
- Pressure Indicating Controller Indicator Single and Multiset Point
- Differential Pressure Indicator and Indicating Controller
- Inbuilt power supply for Pressure Transmitter
- Accuracy can be up to ±0.25%
- Input 4 to 20 mA or 0 to 5 VDC or 1 to 5 VDC
- Fast response • Optional RS485 port for communication.
- Available display size ½", 1", 2", 4"

APPLICATIONS:

- Quality Control Laboratories
- Green Houses
- Refrigeration Plants Etc.
- Fisheries, meat-processing plants etc.
- Testing Chambers
- Cold Storage
- Weather stations
- Pharmaceuticals

MODELS:

- PDI1P01 Single Point Indicator
- PIC1P02 Two Point Controller
- PIC1P04 Four Point Controller
- PIC1P06 Six Point Controller
- DPIC2P02P Ammonia Pump
- PIC1P01 Single Point Controller
- PIC1P03 Three Point Controller
- PIC1P05 Five Point Controller
- DPIC2P02AP Air Purger
- MPIC- single Port control (RS485)

DIGITAL GAS INDICATORS & INDICATING CONTROLLERS

In response to today's ever-increasing demand for speed, accuracy and performance MANIK Engineers has introduced the Digital Gas Indicators & Indicating Controllers for Cold Chain Solutions. The MANIK Digital Gas Indicators & Indicating Controllers Series provides precise, stable readings, even in demanding environments. Thet are simple to operate, fast, reliable & built to last. Today's cold chain requires not only the temperature and humidity measurement but also percentage of gas for Ethylene, Carbon Die Oxide, Oxygen & Nitrogen.

FEATURES:

- Standard Enclosure for panel and wall mounting application
- Operates on 230VAC, 50Hz, with inbuilt power supply for gas transmitters
- Available for gases such as Ethylene, Carbon Dioxide, Oxygen & Nitrogen.
- Robust case for long life in harsh environments

MULTI CHANNEL TEMPERATURE SCANNER

MANIK Engineers TSA series Scanner is an excellent instrument to monitor temperature/pressure from multiple points at a single point. It is extremely suitable for monitoring parameters at various places in air conditioning/refrigeration plants. An LED is provided for each channel for quick identification of the reading being displayed.
Input Sensors
RTD - PT100 or PT1000
Pressure Transmitter (4-20 mA)

FEATURES :
Display : 3 ½ Digit, ½" 7 Segment LED Display.
Supply : Standard 230 VAC
Optional : 110VAC/24VAC/DC
Output (Optional) : Potential free change over contacts for 230 VAC, 10A max. resistive load.

DIGITAL TEMPERATURE / PRESSURE / HUMIDITY SCANNER CONTROLLER WITH MODBUS : PTHSC-08, PTHSC-16

Introduction:
The PTHSC-08/16 provides dual function of monitoring and controlling pressure/ temperature/humidity for up to 8/16 inputs. Fast response time and accurate measurement makes this device perfect for Precise Control. It supports RS-485 Modbus communication for seamless interfacing and monitoring to DCS/SCADA systems.

Features:

Power supply	: 230VAC / 110VAC / 24VDC
Display	: 16X2 LCD
Auto/Manual Mode	: Auto mode as per scan time (0-99Sec) Manual Mode Advance by Keypad.
No. of Inputs	: 4 / 8 / 16 Nos.
Inputs & Ranges	: Temperature (PT100 / PT1000): -50 to +150˚C Humidity (4-20mA) : - 0 to 100%RH Pressure (4-20mA) : -1 to 5Bar, -1 to 10Bar, -1 to 25Bar
No. of Outputs	: 4 / 8 / 16 Relay outputs (1 output for each input)
Output type	: SPDT Relay. Rated current - 5A @ 230VAC
Resolution	: Pressure - 0.1 Bar Temperature - 0.1°C Humidity - 1 %RH
Enclosure	: IP54
Enclosure Mounting	: Panel mounting
Parameters Displayed	: Pressure (Bar/Psi) Temperature (˚C/ ˚F) Humidity (%RH) Set Points for each channel
LED Indications	: Each Relay Output.
Communication	: RS485 Modbus

DATA CONCENTRATOR

MDC-08

The new Manik Data-concentrator connects to various Maniks instruments such as MTIC, MPIC, Ammonia leak Detector etc over RS485 and send data from these instruments to the new Manik PC software for data logging/analysis and report generation. Upto 8 instruments can be connected to the Data-concentrator. It also has an inbuilt display to check readings of multiple instruments from a single point.

DIGITAL TEMPERATURE + RELATIVE HUMIDITY INDICATORS AND INDICATING CONTROLLERS

- Combined measurement of Temperature & Relative Humidity.
- Simultaneous display of both Parameters Temperature & Relative Humidity. Various options are available.
- Temperature + Relative Humidity Indicator.
- Temperature Indicating Controller + Relative Humidity Indicator.
- Temperature Indicator + Relative Humidity Indicator Controller
- Temperature Indicating Controller + Relative Humidity Indicator Controller
- Inbuilt power supply for Temperature + Humidity Transmitter
- Accuracy can be up to 1.5% for Relative Humidity & 0.5% for Temperature
- Humidity Range 0% to 100%. • Temperature Range-40°C to 80°C
- Fast response • Available display size ½", 1", 2", 4"

DATA LOGGER

Multipoint Temperature / Pressure / Humidity Sensors can be interfaced with the Datalogger. Direct Printer interface is available along with monitoring / storage / online viewing in real time.
WEB BASED DATA LOGGER
The unit can be controlled online and online monitoring from any web browser is possible . Now you can monitor your plant from anywhere in the world with all new web based data logger system. You can also get notifications on your mobile of HIGH/LOW set points. Mobile App can be download from www.manikengineers.com. Also available at App Store/Play store.
For demo log on to: **http://202.149.193.118:8080/mlogger1.1/**
User Name **Manik1** Password **Manik1978**

LEVEL ELECTRODE AND FLOATLESS CONTROLLER

A level electrode and floatless controller are components used in industrial processes to monitor and control liquid levels in tanks or vessels. The level electrode is a sensor that detects the level of the liquid by measuring the conductivity or capacitance of the substance. This information is then sent to the floatless controller, which processes the data and activates pumps, valves, or alarms to maintain the desired level. Unlike traditional float-based systems, which can be affected by factors like turbulence or foam, level electrodes and float-less controllers offer precise and reliable level measurement and control, making them ideal for a wide range of industrial applications.

ELECTRONIC TEMPERATURE SENSORS AND THERMOWELLS

PT100, PT1000 type RTD sensors are available for various applications such as for cold storages, refrigeration plants, food processing units, industrial processes, Heating/Cooling systems, Laboratories, Heat Exchangers etc. These are available for in various types - Pencil type for external tube fitment, standard immersion type with thermowells, Flame Proof type, Head Mounted type and Free air type for ambient temperature measurement, with various lengths and dimensions. Thermowells are available with SS304, or SS316 material with 1/2", 3/4" process connection. Special type of sensors are also available upon request.

ELECTRONIC TEMPERATURE + HUMIDITY SENSORS AND TRANSMITTERS: FKH SERIES

FEATURES

- Compact enclosure IP65.
- Highly stable.
- Humidity span 0% to 100%.
- Temperature compensated
- Resistant to volatile organic compounds.
- Accuracy + 2%
- DC operation
- Fast response

AVAILABLE MODELS

- Humidity Transmitter Voltage Output FKH14
- Humidity Transmitter Current Output FKH14-I
- Pt100 + Humidity Sensor Voltage Output FKH14R
- Pt100 + Humidity Transmitter Current Output FKH140
- Temp. Humidity Transmitter Both Current Output FKH240
- Temp. Humidity Transmitter Current Output Compensated FKH240-C

CO_2 PORTABLE HANDHELD DEVICE

- State-of-the-art non-dispersive infrared (NDIR) technology to measure carbon dioxide gas in parts-per-million (ppm)
- Data output RS232 (optional)
- Displays the current carbon dioxide temperature on a large LCD
- Displays TWA (8hours) STEL (15 minutes) Min, Max and average values
- Internal automatic self-diagnostic function
- Audible alarm, Easy to calibrate
- Measurement Range : 0 - 10000 ppm
- Measurement Temperature : 0°C - +50°C

PRESSURE TRANSMITTERS

Manik Engineers pressure transmitters offer high levels of stability and reliability with proven sputtered thin film technology and unbeatable price performance ratio in a small package size. A broad choice of electrical and pressure connections allow stock configurations to suit most applications without modification.

- Exceptional Long Term Stability.
- 1/4" NPT connection for the perfect seal.
- Available in range from -1 to 50 Bar.
- Industry Standard 4-20mA output for easy interfacing.
- Burst pressure of 100Bar.

SIGNAGES

The Manik Engineers Exit Sign is designed for extremely cold and wet-locations and is built to resist impact and corrosion.

FEATURES

- High Intensity LEDs
- Single or Double Face
- Universal Mounting
- IP65 Enclosure

MOUNTING

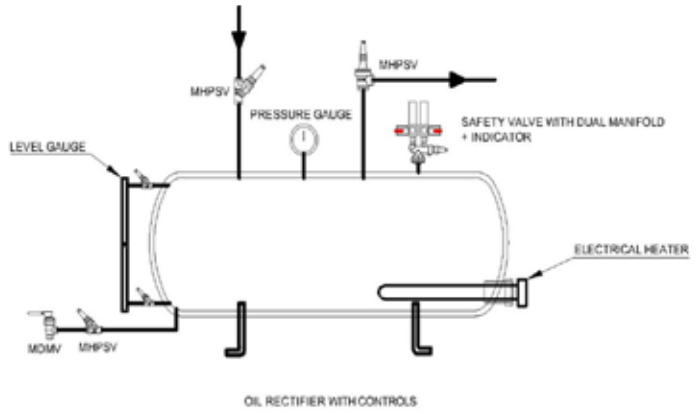
Polycarbonate mounting included for top or end mount. Intended Use. Freezers, Outdoors, Roof Tops, Factories, Warehouses, Cold Environments.

INDUSTRIAL SOLENOID VALVES : WB SERIES

FOR AIR, WATER, BRINE, STEAM AND LIGHT OIL

These valves are suitable for most types of industrial applications. Ideal for water, light oil, airline to chucking devices, brine, pilot valve to pneumatic controls, low pressure steam. Available from 1/8" port size to 2" with piston operation and stainless steel insert seat. Also available in Threaded and Flange types". "Normally Open type valves are also available on request

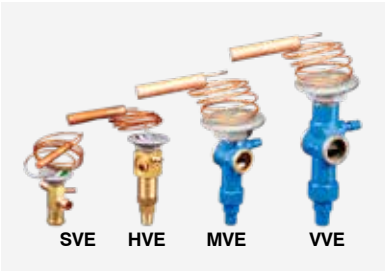
OIL RECTIFIER



OIL RECTIFIER WITH CONTROLS

Oil Pots are an integral part of the refrigeration system. They are used for separating Oil from Ammonia. Oil Pots are installed with Oil heaters that heat and evaporate Ammonia leaving back residual oil. Oil heaters of different Wattage are also supplied separately as per customer requirement.

THERMOSTATIC EXPANSION VALVE



The Thermostatic Expansion Valve (TEV) controls the flow of liquid refrigerant entering the direct expansion (DX) evaporators maintaining a constant super heat of the refrigerant vapour at the outlet of the evaporator.

Type SVE2,3,4,5,8,10 are external equaliser with solder connections.

Type HVE 7,11,16,20, MVE21,34,42 VVE52,70,100 are external equaliser with weldable flange connection. Various ranges of the power assemblies are available from +20°C to -40°C

SOLENOID VALVES FOR FLUORINATED REFRIGERANTS

MB series is a direct or pilot operated Solenoid Valve. These valves can be supplied with either Flanged type, Solder, or male / female pipe thread type connections. The problem of the integral body material seats in Solenoid Valves getting deteriorated very rapidly is eliminated by using stainless seat insert in place of usual body material.

Extended solder connections are available on request.

These valves are suitable for all fluorinated refrigerants such as R22, R502, R134A, R404A etc.

DISCHARGE GAS BYPASS VALVE : ADSRAE-2

Discharge Bypass Valve is used to bypass a portion of the hot discharge gas directly into the low side to limit the minimum evaporating pressure during periods of low load either to prevent coil icing or to avoid operating the compressor at a lower suction pressure than it was designed to operate. This valve, which opens on a decrease in suction pressure, can be set to automatically maintain a desired minimum evaporating pressure regardless of the decrease in evaporator load.

Suitable for R22, R134a, R404a, R407C

Connection : 5/8" Solder

FLOW SWITCH : FS SERIES

The FS-100 offers accurate flow detection, with 1% repeatability, over a broad range of flow settings. Its durable construction delivers long-life reliability in either water or oil. Generous flow paths keep pressure drop low. These switches are ideal for detection of improper flow rates in high volume lubrication, cooling or process systems.

SS Series flow switches are suitable for refrigeration.

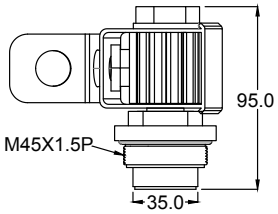
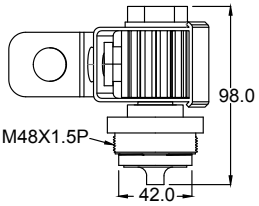
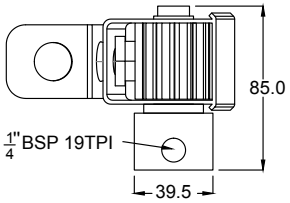
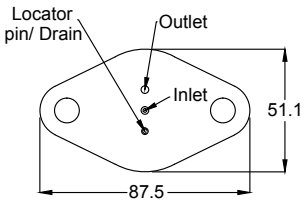
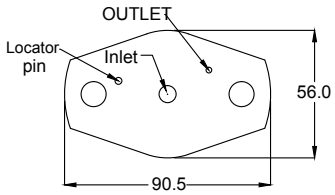
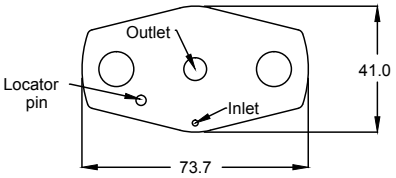
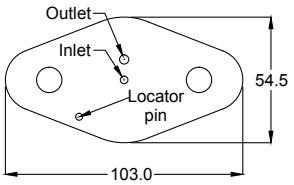
These are available in 1/2", 3/4" BSP, 5/8" UNF, as well as 1/2" / 3/4" Butt weld connections.

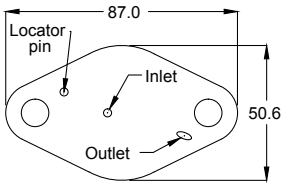
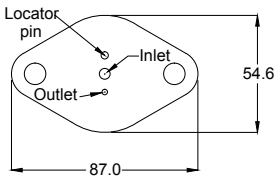
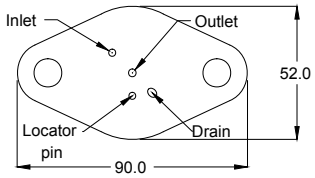
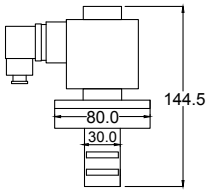
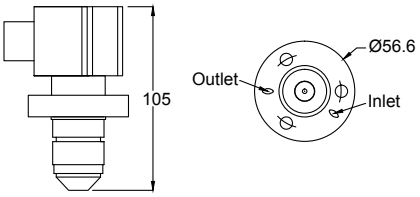
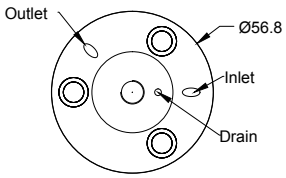
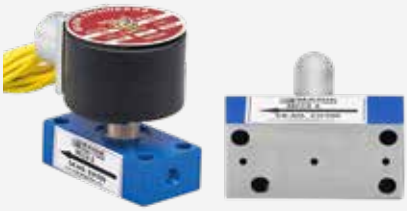
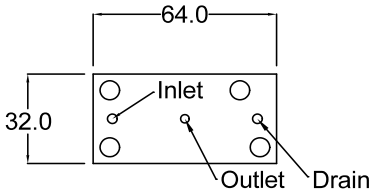
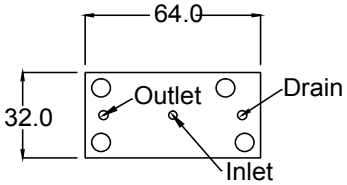
SUCTION ACCUMULATORS : MAS

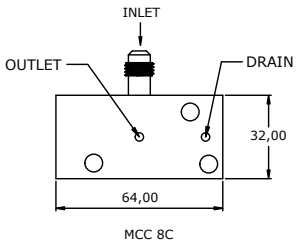
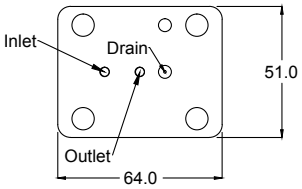
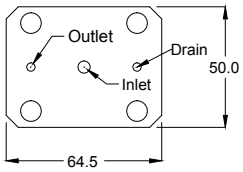
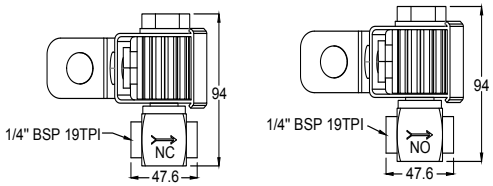
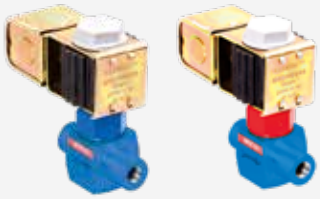
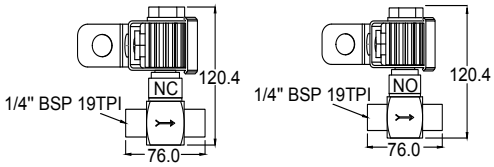
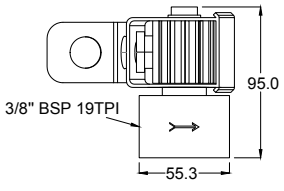
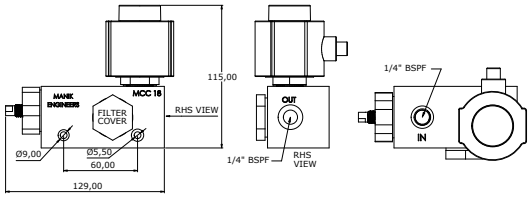
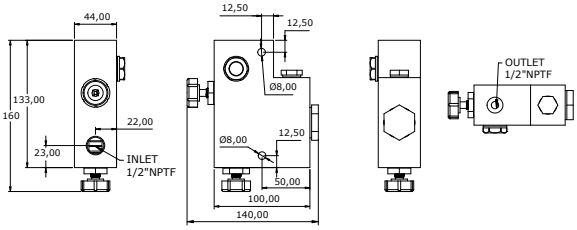
Suction Accumulators feature an inlet deflector that bends refrigerant flow to prevent internal splashing and facilitates the collection of refrigerant oil in the bottom connection of the accumulator

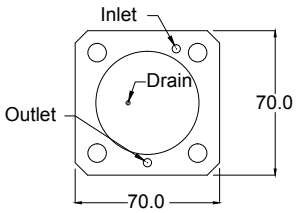
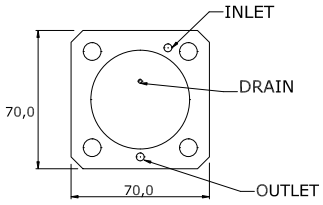
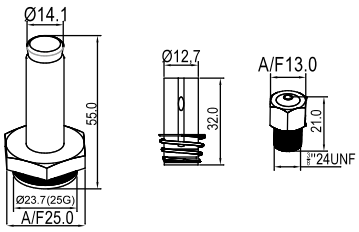
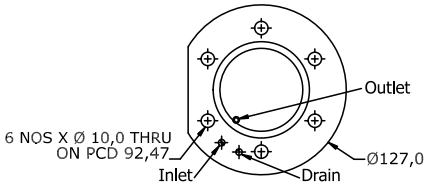
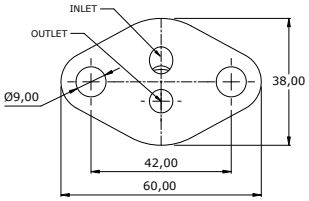
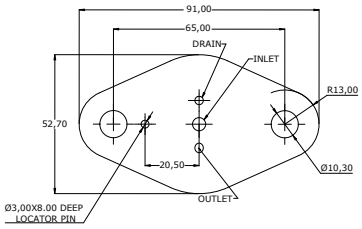
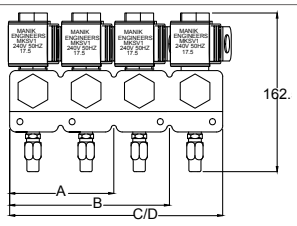
Available in 3-5 TR, 5-7 TR, 7-10 TR Models.

MANIK MCC Series Compressor Capacity Control Solenoid Valves MCC series compressor cylinder end unloading solenoid valves are a kind of capacity adjusting valves developed as per requirements of OEM Compressor Manufacturers. They are generally mounted on the cylinder lid of refrigeration compressor or on the body of the compressor.

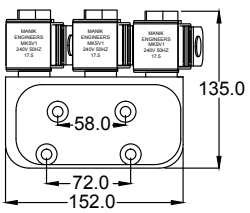
MODEL NUMBER	PHOTO	DIMENSIONS (mm)
MCC1		
MCC1-A		
MCC2		
MCC3		
MCC12		
MCC13		
MCC15		

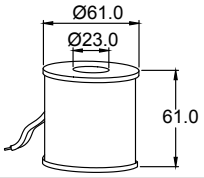
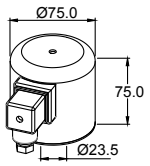
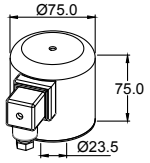
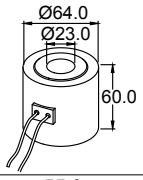
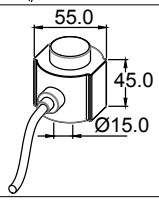
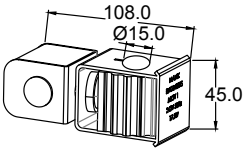
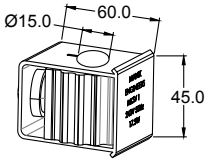
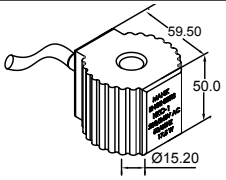
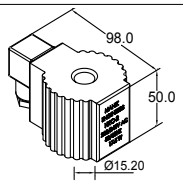
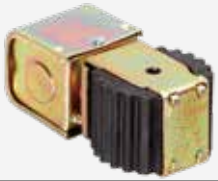
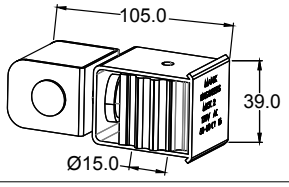
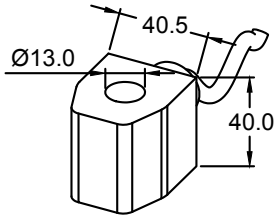
MODEL NUMBER	PHOTO	DIMENSIONS (mm)
MCC16		
MCC20		
MCC21		
MCC6 BK33		
MCC7-A		
MCC14-A		
MCC8-A		 **MCC8-A**
MCC8-B		 **MCC8-B**

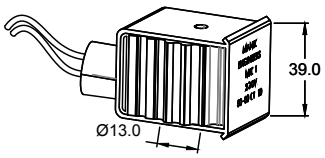
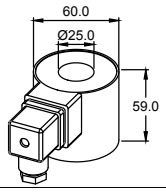
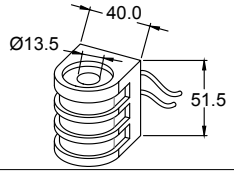
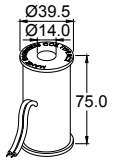
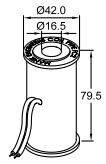
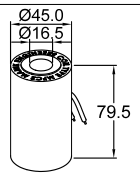
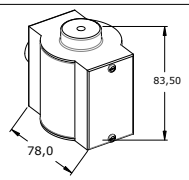
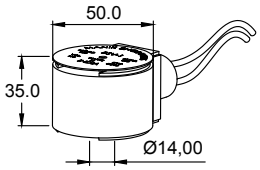
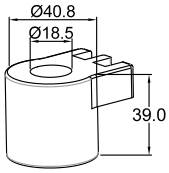
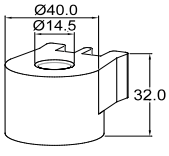
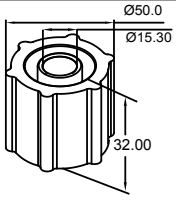
MODEL NUMBER	PHOTO	DIMENSIONS (mm)
MCC8-C		
MCC9		
MCC17		
MCC4-NC **MCC5-NO**		
MCC10-SCVH + NC **MCC11 - SCVH + NO**		
MCC19 **MCC 19-SS**		
MCC18		
MCC30		

MODEL NUMBER	PHOTO	DIMENSIONS (mm)
MCC22		
MCC23		
MCC25		
MCC27		
MCC28		
MCC29		
SVRF 104 SVRF 106 SVRF 108 SVRF 116		

POSITION	MODEL NO.	DIMENSIONS
A	SVRF 104	108 mm
B	SVRF 106	160 mm
C	SVRF 108	210 mm
D	SVRF 116	210 mm

SMO 108		

COIL TYPE	PHOTO	SUITABLE FOR FOLLOWING VALVES	VOLTAGE / WATTAGE	DIMENSIONS (mm)
KC-3		SA5A3,SA17A3, SA32P3,SA42P3,SA50P3	230 VAC 110 VAC 24 VAC **WATTAGE** : 18	
MKC-31		SA5A3, SA17A3 Suitable for MOPD / 150 PSI only	230 VAC 110 VAC 24 VAC **WATTAGE** : 18	
MKC-32		SA32P3, SA42P3, SA50P3 Suitable for MOPD / 150 PSI only	230 VAC 110 VAC 24 VAC **WATTAGE** : 18	
COIL MOULDED - MKC-33		SA5A3,SA17A3, SA32P3,SA42P3 SA50P3	230 VAC 110 VAC 24 VAC **WATTAGE** : 18	
MKSV-10 (10W) MKSV-13 (13W)		MFR, MTSV, MPSV-NC, MPSV-NO, MRASV, SVRF, CAPACITY CONTROL	230 VAC 110 VAC 24 VAC 110 VDC 24 VDC **WATTAGE** : 10W / 13W	
MKSV-1		MFR, MTSV, MPSV-NC, MPSV-NO, MRASV, SVRF, CAPACITY CONTROL	230 VAC 110 VAC 24 VAC 230 VDC 110 VDC 24 VDC **WATTAGE** : 17.5	
MKSV-1 FOR FLAMEPROOF HOUSING		MFR, MTSV, MPSV-NC, MPSV-NO, MRASV, SVRF, CAPACITY CONTROL	230 VAC 110 VAC 24 VAC 110 VDC 24 VDC **WATTAGE** : 17.5	
HKC-1		MS7A, MS8A, MSA4A	230 VAC 110 VAC 24 VDC **WATTAGE** : 18	
HKC-2		MS7A, MS8A, MSA4A	230 VAC 110 VAC 24 VDC **WATTAGE** : 18	
MKC-2		WB SERIES. E SERIES, MB SERIES	230 VAC 110 VAC 24 VAC 230 VDC 110 VDC 24 VDC **WATTAGE** : 18	
SMK-1		WB SERIES, E SERIES MB SERIES, ALCO CAPACITY CONTROL	230 VAC 110 VAC 24 VAC 230 VDC 110 VDC 24 VDC **WATTAGE** : 8	

COIL TYPE	PHOTO	SUITABLE FOR FOLLOWING VALVES	VOLTAGE / WATTAGE	DIMENSIONS (mm)
MKC1 / TKC1		WB SERIES, E SERIES, MB SERIES	230 VAC 110 VAC 24 VAC 230 VDC 110 VDC 24 VDC **WATTAGE** : 8	
BK33		CAPACITY CONTROL BK-33	230 VAC 110 VAC 24 VAC 230 VDC 110 VDC 24 VDC **WATTAGE** : 30	
MVC-1		VILTER COMPRESSOR LOADING / UNLOADING SOLENOID VALVES	230 VAC 110 VAC **WATTAGE** : 8	
FLOAT COIL - FC1		LEVEL CONTROLLER LC101AI	24 VAC **WATTAGE** : 8	
FLOAT COIL - FC2		LEVEL CONTROLLER 39F, 39FI	24 VAC **WATTAGE** : 8	
FLOAT COIL - MFC2		LEVEL CONTROLLER 39F, 39FI	24 VAC **WATTAGE** : 8	
MKC-41		REFRIGERATION SOLENOID VALVES	230 VAC **WATTAGE** : 30	
BSV1		YORK / BLUESTAR COMPRESSOR	230 VAC 110 VAC **WATTAGE** : 11	
MAS-1		AVCON AND OTHER SIMILAR MAKES	230 VAC	
MAC-1		AVCON AND OTHER SIMILAR MAKES	230 VAC 110 VAC 24 VDC	
MAGNET		MFR, MTSV, MPSV-NC, MPSV-NO, MRASV, SVRF, CAPACITY CONTROL MS7A, MS8A, MSA4A WB SERIES. E SERIES, MB SERIES	NA	


Certificate Number: MLK-IND-9001-28102023

Manik Engineers

180, Ratnadeep, Lal Bahadur Shastri Rd, Navi Peth, Sadashiv Peth, Pune, Maharashtra 411030

ISO 9001:2015

"Design Development & Manufacturing of Safety Relief valves for application of industrial refrigeration"

"Manufacturing of Controls and Valves for application of industrial refrigeration."

General Manager
Murat Levent KUTUK

Certification Date : 26.10.2023
Renewal Date : 26.10.2024
Certificate Valid Up to : 26.10.2024
Certification Period : 3 Years

Quality Certiticates and Approvals

- Safety Valves, Air Purger/WDO certified as per Module H1
- CE Certified Valves with Module H (Full Quality Asurance with Design)
- Valves Designed as per Refrigeration Standards EN12284, EN12516
- ISO 9001:2015 Approved Company
- Valves Certified for Russian Federation (EAC)
- Electronics Products are Certified as per CE and Low Voltage Directive (LVD)


Ref. No. TIC/B/9/22/93

To Whom It May Concern


EURO CERT

CERTIFICATE OF FULL QUALITY ASSURANCE (WITH DESIGN EXAMINATION & SPECIAL SURVEILLANCE OF THE FINAL ASSESSMENT ACCORDING TO EUROPEAN PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU (MODULE H1)

Certificate No. 10.07.12216
Date of Issue 20.08.2024
Valid From 20.08.2024
The Certificate is valid until 20.08.2025
subject to satisfactory annual surveillance.

Applicant/ Manufacturer (Name & Address)	MANIK ENGINEERS 80/90/91 GANRAJ APPARTMENT, TULSHIBAGHWALE COLONY, SAHAKARNAGAR, PUNE – 411009, MAHARASHTRA, INDIA.
Description of Pressure Equipment	WDO (AMMONIA DEHYDRATOR), AIR PURGER & SAFETY VALVE
Category of Pressure Equipment	IV
Against the Provisions of	EUROPEAN PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU, ANNEX III (MODULE H1)
Scope of Certification	DESIGN, PRODUCTION, FINAL INSPECTION AND TESTING OF PRESSURE EQUIPMENT
Audit Report No.	PEMH.10.07.12216AR
Conditions & Limitations	Each pressure equipment should be accompanied with manufacturer's declaration of conformity and instructions of use. The manufacturer must keep the notified body informed of any intended updating of the quality assurance system. The manufacturer must affix the CE Marking and Eurocert's identification No. to each item of pressure equipment as displayed below: CE 1128

This is to certify that EUROCERT S.A. has assessed with satisfactory results the quality assurance system of the following manufacturer and has examined the design, the technical documentation and the final assessment of the pressure equipment described above.

On behalf of EUROCERT S.A.
GEORGE K. TSIOUDIS
Director of International Markets


EURO CERT

CERTIFICATE OF FULL QUALITY ASSURANCE (WITH DESIGN EXAMINATION & SPECIAL SURVEILLANCE OF THE FINAL ASSESSMENT ACCORDING TO EUROPEAN PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU (MODULE H1)

Certificate No. 10.07.12216
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subject to satisfactory annual surveillance.

Applicant/ Manufacturer (Name & Address)	MANIK ENGINEERS 80/90/91 GANRAJ APPARTMENT, TULSHIBAGHWALE COLONY, SAHAKARNAGAR, PUNE – 411009, MAHARASHTRA, INDIA.
Description of Pressure Equipment	WDO (AMMONIA DEHYDRATOR), AIR PURGER & SAFETY VALVE
Category of Pressure Equipment	IV
Against the Provisions of	EUROPEAN PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU, ANNEX III (MODULE H1)
Scope of Certification	DESIGN, PRODUCTION, FINAL INSPECTION AND TESTING OF PRESSURE EQUIPMENT
Audit Report No.	PEMH.10.07.12216AR
Conditions & Limitations	Each pressure equipment should be accompanied with manufacturer's declaration of conformity and instructions of use. The manufacturer must keep the notified body informed of any intended updating of the quality assurance system. The manufacturer must affix the CE Marking and Eurocert's identification No. to each item of pressure equipment as displayed below: CE 1128

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On behalf of EUROCERT S.A.
GEORGE K. TSIOUDIS
Director of International Markets


EAC

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ
ДЕКЛАРАЦИЯ О СООТВЕТСТВИИ


FIRST QUALITY CERTIFICATION

FQC

CERTIFICATE OF CONFORMITY

Certificate No : 08.23.11485.204757

MANIK

Certificate Issue Date
Certificate Expiry Date
Certification Manager

FQC STANDARD UYGUNLUK DEĞERLENDİRME A.Ş.


FIRST QUALITY CERTIFICATION

FQC

ANNEX-A

Certificate No : 08.23.11485.204757

Certification Manager

FQC STANDARD UYGUNLUK DEĞERLENDİRME A.Ş.

Product Designs registered with Indian Patent Office
Also Registered with European Patent Office


EUIPO

EUROPEAN UNION INTELLECTUAL PROPERTY OFFICE
CERTIFICATE OF REGISTRATION

This Certificate of Registration is hereby issued for the Registered Community Design identified below. The corresponding entries have been recorded in the Register of Community Designs.

UFFICIO DELL'UNIONE EUROPEA PER LA PROPRIETÀ INTELLETTUALE
CERTIFICATO DI REGISTRAZIONE

Il presente Certificato di Registrazione è emesso per il Disegno o Modello Comunitario registrato descritto di seguito. I dati corrispondenti sono stati scritti nel Registro dei Disegni e Modelli Comunitari.

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The Patent Office, Government Of India
Certificate of Registration of Design

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.


ORIGINAL
GOVERNMENT OF INDIA
THE PATENT OFFICE
CERTIFICATE OF REGISTRATION OF DESIGN

Controller General of Patents, Designs and Trade Marks

PROPERTY INDIA

- MHP Series Valves (Steel and Stainless-Steel)
  - Stop Valves
  - Regulating Valves
  - Filters
  - Stop Check and Check Valves
- MRASV Series Solenoid Valves
- MS Series Solenoid Valves
- MGLG Liquid Level Gauges
- MPR Series Pilot Valves
- SA Series Solenoid Valves
- TA series Filters
- MFR Pressure/Temperature Regulators
- MGV8 Series Service Valves
- MLS39 Level Switch (Steel and Stainless-Steel)
- MDMV Dead Man's Valve
- MSGP2E Automatic Air Purger
- MDRV Defrost Relief Valve
- Ammonia sampler
- MSRV Series Safety Valves
- SH Series Safety Valves
- MDM Series Dual Manifolds
- FKD40A+41A Screw Compressor Controller
- Ammonia Dehydrator
- SVRF/SMO Series Compressor Loading/ Unloading Valves

SGS 3rd Party Certification for Products


SGS
REPORT OF INSPECTION


SGS


SGS
REPORT OF INSPECTION

VISION

Manik Engineers aims to be the Leader for providing Valves, Controls and Automation for Industrial Refrigeration worldwide assuring highest quality, safety and deliverability.

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