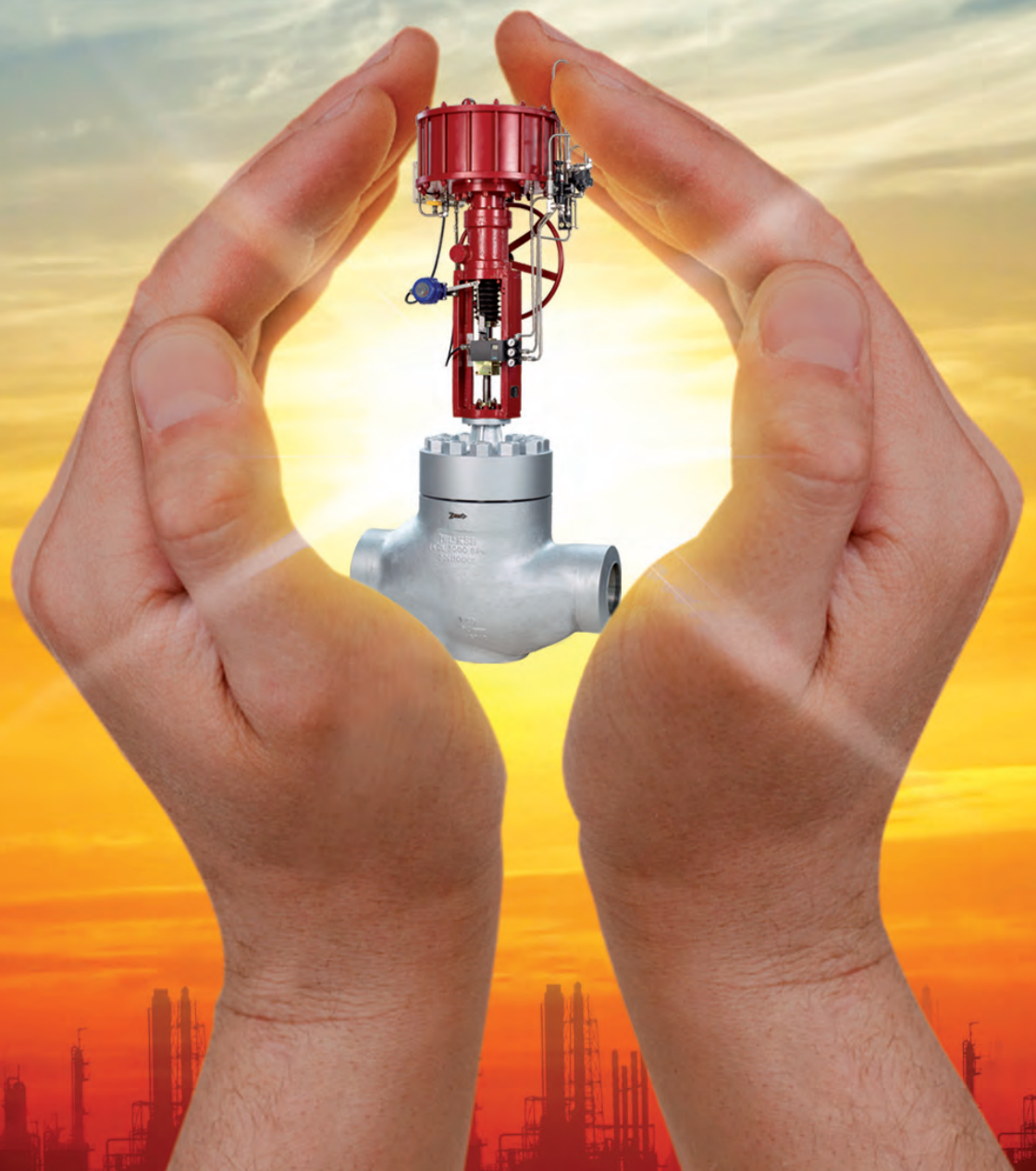


► Our technology. Your success.
Pumps • Valves • Service



Control Valves

Controls . Protects . Performs



KSB Group. Experience since 1871.

KSB develops, produces and sells efficient solutions worldwide for reliable and cost effective handling of fluids. Rooted in Germany and established across the globe with subsidiary production and sales companies, KSB focuses on providing top quality, technically outstanding, engineering solutions and services to customers. Today, KSB is not just a technology leader in fluid dynamics but a total solution provider with about 16200 employees worldwide and has a turnover of more than 2 billion Euro with an active presence in more than 100 countries.

MIL. The journey begins.

30 years of experience and expertise has carved a niche platform for MIL Controls Limited (A KSB Company), formerly known as Masoneilan (India) Limited. Together with a strong R&D, state-of-the-art production & testing facilities, experienced work force and loyal customer base, MIL, today is a name synonymous with critical control valves for process

industries in India and abroad. With a large installed base of more than two hundred thousand control valves, MIL has a marked presence in the nation's power stations, oil refining (upstream & downstream), petrochemical and fertilizer plants and believes in, "Understanding customer needs, offering optimum solutions and after sales service, at affordable cost, on time."

Exterior view of large valve manufacturing plant, near Kochi Kerala (India)



KSB Italia S.p.A. History and success since 1925.

KSB Italia S.p.A. operates in the market as a reliable supplier of pumps, valves, systems and service based on a solid tradition and human relationship.

The success is reached with the satisfaction of respecting the environment, the Country's rules and customization unit of pumps, valves, of high technological level and attention to our customers, employees and KSB Group laws.

On the 1st May 2015, KSB Italia S.p.A. celebrated 90 years of activities. Throughout the years, the company has prioritized investment in people in order to create value. This is the management policy adopted, which besides being founded on respect for people, aims to enhance and develop individual skill sets, due to the belief that human resources are an important asset of vital importance for a successful business and form the basis of the innovation process.



The power. To win over challenges.

With proven expertise across sectors including thermal, nuclear, fertilizer, oil & gas, petrochemicals and other core industries, MIL is equipped to cater to severe conditions prevalent in various process industries and provide novel concepts and customized solutions for tough process control applications in all industry sectors.

Energy Sector

MIL's credentials have proved that its control valves can deliver high performances at both captive power plants and utility power plants including supercritical units from 660 MW to 1000 MW. MIL can cater to the most demanding design challenges and applications, thereby powering the power generation industry.



Start-up Feed Control valve
MIL 91000 14" , 3000# ASME for 660 MW
Supercritical Thermal Power station, Bihar



BFP Min. Recirculation Control valve
MIL 91000 8" , 3000# ASME for 660 MW
Supercritical Thermal Power Station,
Madhya Pradesh



Super Heater Spray Control valve
MIL 91000, 6" , 2500# ASME for 660 MW
Supercritical Thermal Power Station,
Maharashtra



Soot Blower Pressure Reduction Control valve
MIL 91000, 4 3100# ASME, for 800 MW
Supercritical Thermal Power Station,
Andhra Pradesh

Oil & Gas / Refining / Petrochemical Sectors

Control valves have become key components in offshore and onshore oil & gas industry, both upstream and downstream where applications are demanding due to the high pressure and adverse corrosive conditions experienced on production platforms and refineries. The indelible imprint of MIL quality has made its mark in the Indian fertilizer industry as well, with Ammonia, Urea let down valves and low noise valves for steam applications that are being used at renowned facilities. We have the proud distinction of being associated with the supply of Cryogenic control valves including Bellows sealed & Vacuum jacketed valves for Cryogenic test facilities.



Seawater Service Control valve
MIL 41000, 32", 300# ASME Super Duplex for
Al Jubail, KSA



Hot High Pressure Separator Level Control valve
MIL 77000, 4" x 6", 1500# ASME for
Refinery complex, Uttar Pradesh

Charge Gas Compressor Antisurge valve
MIL 41000, 12", 300# ASME for
Petrochemical complex, Haryana

Amine Regeneration Control valve
MIL 78000, 6", 1500# ASME,
for Refinery complex, Uttar Pradesh

Wide Range. Diverse Applications.

MIL offers a diverse range of products for all core sectors in the process industry. From feed water to chemicals, from petroleum to heavy water, from cryogenic fluids to corrosive fluids and toxic

materials, MIL provides products with customized design features and material to meet the specific requirement of the industry.

Control Valves

MIL 21000/70000 Series Single Seated Heavy Top Guided Control Valves



Standard sizes & rating
½" to 10": ASME 150# to ASME 2500#

Seat leakage class (as per FCI 70.2)
Standard: Class IV
Optional: Class V & Class VI

- Heavy top guiding ensures plug stability
- Wide temperature capability for standard bonnets (-270C to 4270C)
- Tight shut-off options
- Optional Drilled hole plug for noise or cavitation attenuation
- Optional clamped seat ring for easy seat removal
- Cryogenic applications
- Low emission packing systems
- Optional angle body (MIL 70000)

MIL 41000/71000 Series Single Seated Heavy Duty Cage Guided Globe Control Valves



Standard sizes & rating
½" to 36": ASME 150# to ASME 4500#

Seat leakage class (as per FCI 70.2)
Standard: Class III & Class IV
Optional: Class V

- High allowable pressure drops
- High capacity with low pressure recovery
- Standardised high performance material
- Clamped Seal ring to facilitate easy removal
- Tight shut-off options
- Anti-cavitation / low noise trims
- Cryogenic applications
- Optional angle body (MIL 71000)

MIL 78000 Series Multi-stage Anti-cavitation and Low Noise Control Valves



Standard sizes & rating
½" to 6": ASME 150# to ASME 2500#

Seat leakage class (as per FCI 70.2)
Standard: Class IV & V
Optional: Class VI

- Multi-step axial flow high resistance trim
- Anti-clog design with separable liner/spacer
- High allowable pressure drops with low pressure recovery
- Adiabatic flow with friction
- Standardised high performance material
- Expanding gas trims available
- Soft seated options

MIL 91000 Series Multi-stage Multi-path Axial Flow Control Valves



Standard sizes & rating
¾" to 20": ASME 150# to ASME 4500#

Seat leakage class (as per FCI 70.2)
Standard: Class V
Optional: Class VI

- Tortuous flow path with high impedance for energy absorption
- Limits trim velocity
- Varying and expanding flow path
- Pressure recovery factor as high as 0.9999
- As many as 40 pressure dropping stages
- Dynamically stable, flow tending to open design
- Modified equal % characteristics with 100:1 rangeability

MIL 10000 Series Double Ported Top & Bottom Guided Control Valves



Standard sizes & rating
3/4" to 16": ASME 150# to 1500#

Seat leakage class
(as per FCI 70.2)
Standard: Class II
Optional: Class III & Class VI

- Double ported top & bottom guided control valves
- High allowable pressure drop
- High capacity with low pressure recovery
- Invertible body and plug
- Large flow area suitable for viscous flow

MIL 22000 Series Bellows Sealed Valves for Critical Service



Standard sizes & rating
1/4" to 4": ASME 150# to 2500#

Seat leakage class <math>< 1 \times 10^{-5}</math>
mbar l/sec across seat

- Seal welded bellows sealed valves
- Mountable with Pneumatic or Electrical Actuators
- High cyclic life special bellows
- Secondary packing with leak-off connection
- In built over - travel & anti-rotation protection
- Colmonoy coated seats

MIL 25000 Series Self-draining Compact Globe Control Valves



Standard sizes & rating
1": ASME 150# to 300#

Seat leakage class
(as per FCI 70.2)
Standard: Class IV
Optional: Class V & Class VI

- Streamlined trip valves
- Compact valve design
- No-cavity design
- Quick operating time

MIL 27000 Series Compact Globe Control Valves



Standard sizes & rating
1/2" - 2": ASME 150# to 300#

Seat leakage class
(as per FCI 70.2)
Standard: Class IV & VI
Optional: Class V

- Compact and light weight construction
- Rugged, shank guiding
- Tight shut-off
- Field -reversible actuator
- Optional compact top mounted hand wheel

MIL 29000 Series Micropak Micro flow Control Valves



Standard sizes & rating
1/2" to 1": ASME 150# to 1500#

Seat leakage class
(as per FCI 70.2)
Standard : Class IV
Optional : Class V

- Compact construction with field-reversible rolling diaphragm type actuator
- Cv adjustable at site to fine tune site conditions
- Rangeability of 500:1 to handle variations in flow
- Integral bonnet - No leaks & lesser soft parts
- Hardened trim for better longevity

MIL 50000 Series Cryogenic Valves



Standard sizes & rating
1/2" to 4": ASME 150# to 2500#

Seat leakage class
(as per FCI 70.2)
Standard: Class IV
Optional: Class V & Class VI

- Cryogenic control valves
- Extended body construction
- Heavy guided extended tubular plug
- Zig-zag flow path
- Body-bonnet bolting outside the cold box

MIL 76000 Series High Pressure Letdown Control Valves



Standard sizes & rating
1" to 2": ASME 150# to 2500#

Seat leakage class
(as per FCI 70.2)
Standard: Class IV
Optional: Class V

- High pressure letdown control valves
- Unbalanced plug design without seal rings
- Larger flow paths
- Smooth axial flow
- Multi-stage pressure reduction for high pressure drop

MIL 77000 Series Multi-stage Labyrinth Lo-dB Control Valves



Standard sizes & rating
2" to 8": ASME 600# to 2500#

Seat leakage class
(as per FCI 70.2)
Standard: Class IV
Optional: Class V

- Anti-clog design
- Multi-stage, labyrinth plug
- Flow area expands towards the downstream
- Ideally suited for fluids involving gases with entrained liquids / solids or liquids with entrained solids
- Standardised high performance material

MIL 81000 Series Three Way Combining and Diverting Control Valves



Standard sizes & rating
3/4" to 12": ASME 150# to 2500#

Seat leakage class
(as per FCI 70.2)
Standard: Class IV
Optional: Class VI

- 3-way control valves
- Combining and diverting applications
- Plug stability at throttling
- High capacity
- Extra guiding

MIL 10R-21R Series Direct Operated Pressure Regulators



Standard sizes & rating
1" to 4": ASME 150# to 600#

Seat leakage class
(as per FCI 70.2)
Standard: Class II / IV

- Direct operated
- Suitable for both upstream and downstream pressure control
- Top or top and bottom guided
- Variety of diaphragm material options

Actuators & Accessories

MIL 37-38 Pneumatic Spring Diaphragm Actuators



Sizes:
11", 13", 15", 18" & 24"
Travel:
< 4"
Supply Pressure:
20 psig to 65 psig

MIL 67-68 Piston Cylinder Actuators



Sizes:
6", 12", 16", 20" & 24"
Travel:
< 12"
Supply Pressure:
60 psig to 100 psig

Electrical & Electro Hydraulic Actuators



Our Control valves can be fitted with internationally reputed makes of Electrical and Electro Hydraulic Actuators

Smart Positioners



We offer Profibus or Hart or Foundation Fieldbus based smart positioners mounted on our control valves fully compatible with all major Distributed Control Systems (DCS)

MIL 496 Rotary Limit Switch



MIL 496 Rotary Limit Switches (with SPDT / DPDT Microswitches or Proximity sensors) are used for electrically indicating one or two predetermined positions in the stroke of a control valve. They may be connected to audible alarms or signal lights for warning of valve or system malfunction or used to actuate solenoids, relays and other electrical devices.

MIL 400L Electronic Position Transmitter



MIL 400L Electronic Position Transmitters are capable of transmitting angular movements as well as linear movements of control valves (with proper linkages) as 4-20 mA output signal. To ensure high accuracy levels, MIL 400L designs operates on LVDT- Linear Variable Differential Transformer - principle.

MIL 7400 Pneumatic Positioner



MIL 7400 Pneumatic Positioners employ a force balance system to ensure that the position of the valve plug is directly proportional to the controller output pressure, regardless of packing box friction, diaphragm actuator hysteresis or off-balance forces on the valve plug.

MIL 8013 Electro Pneumatic Positioner



MIL 8013 Electro pneumatic Positioners provide precise and reliable valve positioning and superior dynamic response, by directly comparing valve stem position with controller DC output signal, providing dynamic response and positioning accuracy not obtainable with transducer and pneumatic positioner combination.

The power. To serve.

Our manufacturing sites, sales and a proficient after-sales team with prompt assistance from the service centres has been oiling the alliances for a smooth operation. Markets are close, requirements are time bound and opportunities are immense. But in order to tap all these we need to act at the right time, in the right way with the right patronage. MIL is here, close to you, to speak your mind.

High pressure test bench for testing large size valves



The power. To speak for our customers.

We think for them, we stand for them, we act for them. It's all about understanding them. MIL's strength lies in the loyalty of its strong customer base. The mutual growth in our

partnerships had humble beginnings, which grew beyond a mere deal and today stands for some great work together.



**Experience of a World
Renowned Brand**



KSB

Serving process industries since 1871

Solutions tailor made for you



which are cost-effective

**Expertise to cater every
Segment**



Nuclear, Thermal power, Refining,
Fertilizer, Aerospace & so on...

**Adding to the
Value Chain**

Reaching out to you..and With you always



through the KSB global network spread
across 5 continents



Technology that **makes its mark**

The KSB Newsletter -
don't miss out, sign up now
www.ksb.it/ksb-newsletter



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