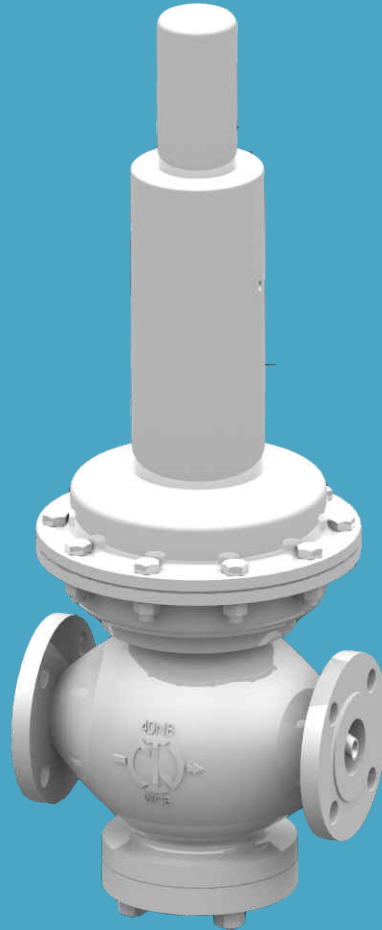


# DOWNSTREAM PRESSURE REGULATOR

## DM & DL SERIES

*Nirmal* ™

Expertise that delivers



### INTRODUCTION

The DM and DL series are general purpose self operated pressure reducing regulators, suitable for controlling many kinds of fluids. These self acting control valves keep the outlet pressure constant irrespective of variation in inlet pressure and flow through the valve.

Different soft sealing discs are available for various fluids for wide pressure and temperature range up to 200°C. Stainless Steel diaphragms are available for higher temperatures & steam service. These regulators have built in safety feature against high inlet pressure. The DL series valves are a variation of DM series, generally used for pressure settings lower than 1500 mm WCg (0.15 bar g). The DL series valves can control downstream pressure as low as 40 mm WCg.

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### KEY FEATURES

- **Easy to Maintain** : Compact design with minimum number of moving parts. Actuator Internals, Valve Disc & Trim parts can be replaced, without removing the regulator from the pipe line.
- **Glandless Construction** : Where positive zero gland leakage is required, the design scores over conventional solutions such as bellow seals etc., as the gland itself is eliminated and hence there won't be gland leakage. Glandless construction eliminates hysteresis, resulting in improvement of the sensitivity & repeatability of the valve.
- **Tight Shut Off Capability** : Special trim design eliminates wear & erosion of seating providing excellent tight shut off capability over long working life.
- **Tamper Resistant** : An adjusting screw lock nut with protective cap is standard to discourage tampering with pressure setting.
- **Wide Range of flow & differential Pressure Capability** : Wide range of body sizes and port diameters available to satisfy varied flow requirements. Regulators available for wide range of differential pressure from very high to low differential pressure with different actuator areas.
- **Safety Features** : Built-in safety against accidental very high pressure (such as failure of pressure control upstream of regulator) because design ensures better shut off at pressures higher than specified operating inlet pressure (but within the body pressure rating). Optional safety shut off feature available against rupture of pipe-line, downstream of regulator. If outlet pressure dips to very low value, due to downstream pipe rupture, optional excess flow check disc cuts off flow, restricting it to a minimal bleed.

### SPECIFICATIONS

#### Body Size & Connection :

- **Flanged** ½", ¾", 1", 1½" & 2" (Higher sizes on request)  
ANSI B16.5 Class 150 & 300 ratings (Higher on request)
- **Screwed**  
NPTF ½", ¾", 1"  
BSPF ½", ¾", 1"
- **Available Configuration** : As per different pressure and flow requirements, different diaphragm sizes are available classifying model into DM/04, DM/06, DM/08, DM/11, DM/14, DL/08, DL/11 & DL/14
- **Maximum Spring & Diaphragm Casing Pressures** : 19 Kg/cm<sup>2</sup>g for 150# & 49 Kg/cm<sup>2</sup>g for 300#
- **Maximum Inlet Pressure** : Refer Table
- **Flow Co-efficient** : 0.42 to 6.54

#### Standard Material of Construction

- **Body\*** :  
Screwed end Valves : ASTM A-105(Std), SS 304, SS316  
Flanged end Valves : ASTM A216 Gr. WCB(Std), CF8, CF8M
- **Bottom Diaphragm Casing** : Steel (Std) SS 304, SS 316 or same as body material
- **Spring Casing** : C.S
- **Internal Trim Parts\*** : SS316 (Std), Monel, Copper, Brass  
\*NACE and other special material available on request
- **Disc & Diaphragm** : Nitrile (Std), Neoprene, EPDM, Silicon, PTFE, Fluoropolymer
- **Temperature Capabilities** : -45°C to 200°C with different elastometric parts. (Special construction & SS Diaphragm available for high temperature and steam services)
- **Pressure Setting Adjustment** : May be adjusted throughout a spring range by turning the adjusting screw.
- **Pressure Registration** : Internal (Std) or downstream control line.

#### • ENQUIRY SPECIFICATIONS •

MAX. INLET PRESSURE  
SERVICE FLUID  
OUTLET PRESSURE

FLOW MIN./MAX.  
LINE/SIZE  
PERMISSIBLE BUILD-UP

SPECIFIC GRAVITY  
MAX. TEMPERATURE  
SET PRESSURE

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