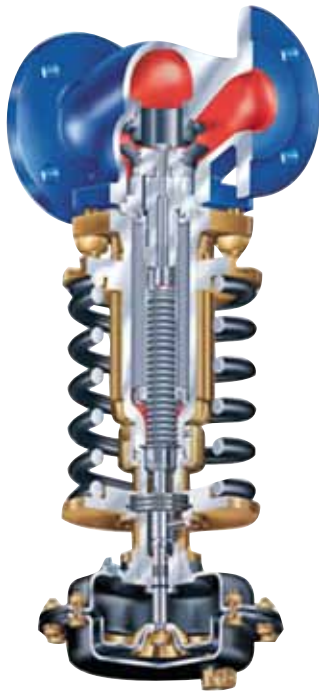


## ARI pressure reducing valve, cast iron, ductile iron or grey cast iron, DN 15-100, PN 16/25/40, flanges, self operated.



### General

- ARI pressure reducing valve for steam, neutral gases, vapors, and liquids.
- Regulates a high upstream pressure to a smaller downstream pressure.
- The valve closes when the downstream pressure rises.
- Simple change of spring and actuator.
- Diameter independent ranges.
- 5 exchangeable actuator sizes (DMA 40-DMA 400).
- 3 exchangeable spring sizes.
- Pressure balanced by stainless steel bellow.
- Face-to-face design according to DIN EN 558.
- Program ARI-VASI for calculation of the size of the valve.
- Diaphragm actuator:
  - Rolling diaphragm.
  - Connection through a central thread.
  - Stem connection with a fast coupling.

### Options

- Different materials.
- Designs for other media, for example hot water.
- Other pressure ratings.
- NBR-rubber.

### Materials

	VM 7780 <sup>1</sup>	VM 7781	VM 7782
Body	cast iron EN-JL1040	ductile iron EN-JS1049	grey cast iron 1.0619+N
Screwed seat ring	stainless steel X20Cr13+QT	stainless steel X20Cr13+QT	stainless steel 1.4021+QT
Gasket	Pure graphite	Pure graphite	Pure graphite
Bush housing	ductile iron EN-JS1049	ductile iron EN-GJS-400-18U-LT	cast iron EN-GJMB-350-10
Disc unit	stainless steel X20Cr13+QT	stainless steel X20Cr13+QT	stainless steel 1.4021+QT
O-ring actuator <sup>2</sup>	EPDM	EPDM	EPDM
Stem actuator	stainless steel X6CrNiMoTi17-12-2	stainless steel X6CrNiMoTi17-12-2	stainless steel 1.4571
Diaphragm actuator	EPDM	EPDM	EPDM

1. Not allowed to be operated in systems acc. to TRD 110.

2. -40°C - +130°C.

### Technical Data Pressure Reducing valve

DN	15	20	25	32	40	50	65	80	100
Pressure rating PN 16 (VM 7780)•	•	•	•	•	•	•	•	•	•
Pressure rating PN 25 (VM 7781)•	•	•	•	•	•	•	•	•	•
Pressure rating PN 40 (VM 7782)•	•	•	•	•	•	•	•	•	•
Kvs-value* m <sup>3</sup> /h	3,2	5	8	12,5	20	32	50	80	125
Seat* Ø	18	22	25	32	40	50	65	80	100
Max diff. pressure Δp (bar)	40	40	25	25	25	25	20	20	20

\* Used to calculate pressure drop.

(• = standard)

### Technical Data Actuator

cm <sup>2</sup>	40	40	80	160	250	400
Pressure ranges (bar)	8-16	4,5-10	2-5	0,8-2,5	0,5-1,2	0,2-0,6
Max PN	20	20	10	6	2,5	1,6

### Max Working Pressure (e) at Various Temperatures<sup>1</sup>

	-60°C - <-10°C <sup>2</sup>	-10°C-+120°C	+150°C	+200°C	250°C	300°C	350°C
PN 16 (VM 7780)	-	16	14,4	12,8	11,2	9,6	-
PN 25 (VM 7781)	on request	25	24,3	23	21,8	20	17,5
PN 40 (VM 7782)	30	40	38,1	35	32	28	25,7

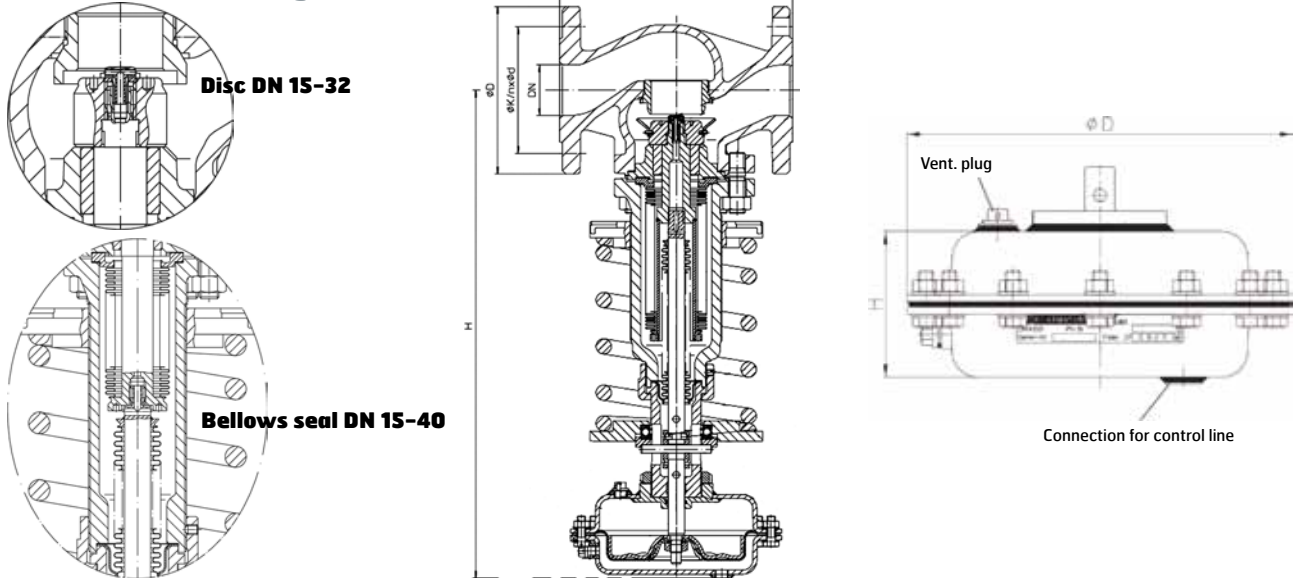
1. With steam and liquids having temperatures higher than the allowable working temperatures a water seal pot must be installed in the control line to protect the actuator diaphragm.

2. 1. Studs and nuts made of A4-70 at temperatures below -10°C.

Local conditions must be considered.

# Pressure Reducing Valve

## Dimensional Drawing



### Dimensional Data (mm) and Weight (kg) Valve

DN	15	20	25	32	40	50	65	80	100
L	130	150	160	180	200	230	290	310	350
H DMA 40	435	435	440	440	480	480	485	530	550
H DMA 80	435	435	440	440	480	480	485	530	550
H DMA 160	440	440	440	440	480	480	490	530	550
H DMA 250	455	455	460	460	500	500	505	545	585
H DMA 400	495	495	500	500	540	540	545	585	610
Ø D	95	105	115	140	150	165	185	200	220 <sup>1</sup>
Ø K	65	75	85	100	110	125	145	160	180 <sup>2</sup>
n x Ød	4x14	4x14	4x14	4x18	4x18	4x18	4x18 <sup>3</sup>	8x18	8x18 <sup>4</sup>
Weight DMA 40	17	18	19	21	26	32	39	61	79
Weight DMA 80	18	19	20	22	27	33	40	62	80
Weight DMA 160	19	20	21	23	28	34	41	63	81
Weight DMA 250	21	22	23	25	30	36	43	65	83
Weight DMA 400	26	27	28	30	35	41	48	70	85

1. 235 mm for VM 7781-7782.
2. 190 mm for VM 7781-7782.
3. 8x18 for VM 7781-7782.
4. 8x22 mm for VM 7781-7782.

### Dimensional Data (mm) Actuator

	DMA 40	DMA 80	DMA 160	DMA 250	DMA 400
D	140	170	210	250	300
H	75	75	80	90	135

## Markings

The valve is marked with DN, PN, materials, CE (DN 32-500), type no, flow direction arrow, and production year.

## Mounting

Note the flow direction arrow.

A strainer should be installed before the valve.

## Maintenance

The valve is maintenance free.

### Order Number

DN	VM 7780	VM 7781	VM 7782
15	7780015	7781015	7782015
20	7780020	7781020	7782020
25	7780025	7781025	7782025
32	7780032	7781032	7782032
40	7780040	7781040	7782040
50	7780050	7781050	7782050
65	7780065	7781065	7782065
80	7780080	7781080	7782080
100	7780100	7781100	7782100