

# Check valves "union" type with disk counterseat



# RM

DIN PN 16 - 40 — DN 15 to 50 mm  
ANSI 150 - 300 — 1/2" to 2"

RM 12, 33, 34, 35

## Application

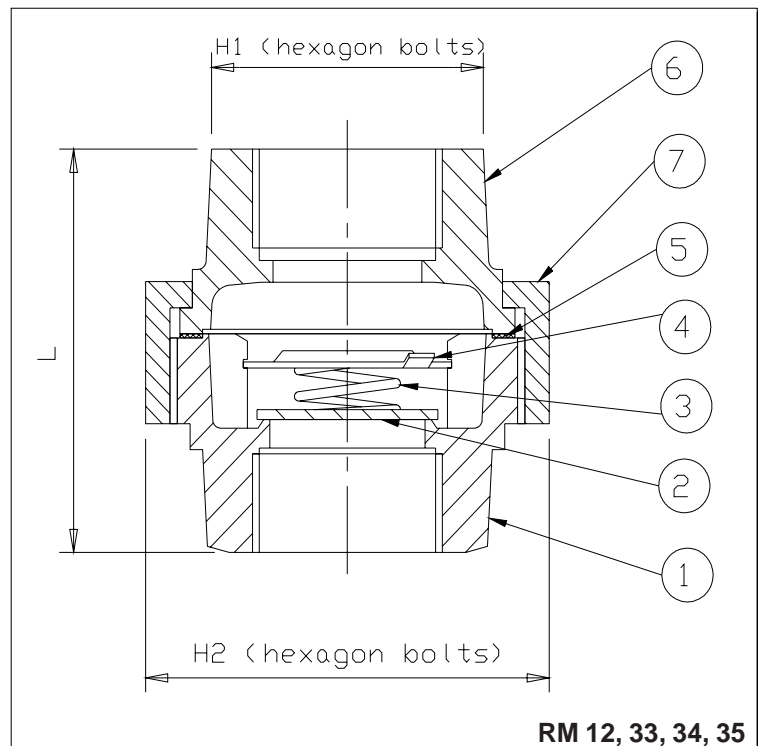
The RM check valves, with conical disk counterseat form, are used to avoid the return of liquids, gases and steam in pipings. They are also indicated to be applied as feet valve in pumping lines, ventilation or vacuum arrester elements and with security devices in rotation lines.

## Main characteristics

- Compact construction, it saves space;
- Body in union form, is not necessary the installation of this accessory;
- Reduced stroke, it softens the closing blow;
- Soon closing time, it minimizes the reflux;
- Long useful life;
- Minimum maintenance;
- It can be installed in any position.

## Presentation

It is basically composed of body, cover and nut in threaded union form, seat, disk, retaining plate and spring.



Check

## Technical competence, materials and connections

Model		RM 12	RM 33	RM 34	RM 35	
Nominal diameter	(mm)	15	20	25	40	50
	(pol)	1/2"	3/4"	1"	1.1/2"	2"
Max. service pressure.	(bar man.)	16 13 11	40	34	32	29
Max. correspondent temp.	(°C)	120 200 250	120	200	300	400
Materials	1	Body and seat	ASTM B124-2	ASTM A 473-410	ASTM A 182 F304	ASTM A 182 F316
	2	Disk	AISI 420		AISI 316	
	3	Spring	AISI 316			
	4	Retaining plate	AISI 316			
	5*	Body-cover gasket	Hydraulic card board			
	6	Cover	ASTM B 124-2	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316
	7	Coupling nut	ASTM B 124-2	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316
Connections	Thread	BSP ou NPT				
	Weld	SW				

\*Recommended spare parts

## Measures and weights

Model	RM 12, 33, 34, 35					
Nominal diameter	(mm)	15	20	25	40	50
	(pol)	1/2"	3/4"	1"	1.1/2"	2"
Measures	(mm)					
L		60	72	84	95	110
H <sub>1</sub>		32	36	46	60	75
H <sub>2</sub>		46	60	70	96	110
Approx. weight	(kg)	0,5	0,6	0,8	2,0	2,7

**Optionals**

- Synthetic rubber (Perbunan) or sealing, by means of price increa

**Installation**

It can be mounted in any position, r the flow indicating arrow on the b When installed downstream of compressors drove by piston, is it intercalate a compensation chambe

**Operation**

The input flow pressure displaces of the valve against the spring for Opening Pressure chart) in direction giving passage to the fluid. Interrupti flow, the backpressure downstrear the disk (2) in direction to the seat, valve.

The reduced stroke of the disk anc of the spring shorten the closing turr the closing blow and minimizing the reflux before the complete obstruction of the seat by disk.

**Opening pressure (in mbar)**

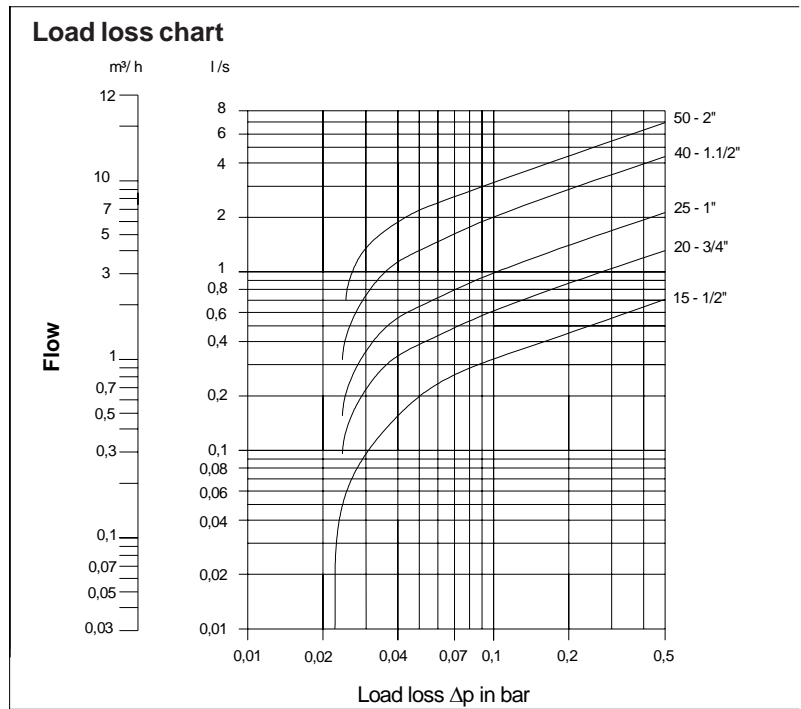
DN		Without spring	With spring		
mm	pol	↑	↑	→	↓
15	1/2"	2,6	25	23	20
20	3/4"	2,6	25	23	20
25	1"	2,6	25	23	20
40	1.1/2"	4	28	24	20
50	2"	4,2	29	25	20

**Load loss chart**

The curves of the chart prevail for water at 20°C. To determine the load loss of other liquids, the equivalent water flow is calculated, applying the following formula:

$$V_w = \sqrt{\frac{\rho}{1000}} \cdot V \quad \text{where}$$

$V_w$  = Equivalent water flow in l/sec.  
 $\rho$  = Fluid density (Service condition) in kg/m<sup>3</sup>.  
 $V$  = Fluid flow (Service condition) in liters/sec.



The values indicated on the chart are based in valves provide of spring and mounted in horizontal position. If the flow is vertical, insignificant variations will occur just within the partial opening limits.

**Important**

We must remember that in the most industrial installations, the Δp of the check valve does not cause any effect in the general performance of the system and, therefore, does not cause any influence in the choice of the valve.

**Data for sizing**

ASCA will make pleasure the sizing. For this purpose must be supplied:  
 - Service pressure and temperature;  
 - Circulating fluid  
 - Nominal diameter  
 - Thread standard (or weld)

**Standard specification**

Disk check valves "union" type model RM..... from ASCA according to prospect PR-02.10.10-I  
 Connections.....  
 Per norm.....  
 Nominal diameter.....  
 Optionals.....

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