

SCHROEDAHL

A subsidiary of **CIRCOR** International Inc.

Series BPV

Back Pressure Valve to ensure
a defined back pressure



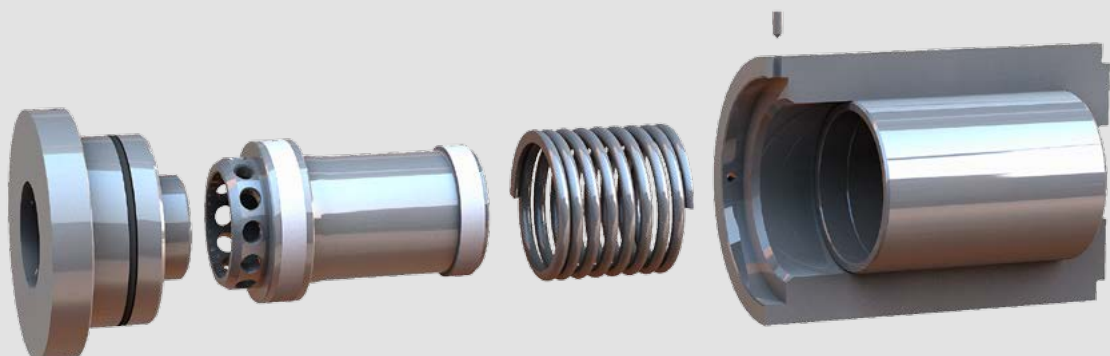
Application



Even the optimised and sophisticated pressure reduction methods of SCHROEDAHL Minimum Flow Valves and SCHROEDAHL Control Valves are put to their limits in the extreme conditions in some plants.

It is in just such cases that SCHROEDAHL Back Pressure Valves are put to work. They increase the clearance of the media evaporation pressure by generating a defined pressure differential. Unwanted evaporation and cavitation are prevented, ensuring gentle and cushioned operation.

Carefully matching the operating parameters between the Minimum Recirculation Valves together with Control and Back Pressure Valves guarantee ideal plant operation.



Description

Function

The designed pressure difference of the Back Pressure Valve pushes the bushing 204 against the compressible spring 237 in the direction of flow. That in turn releases the throttle opening on the bushing until the specified pressure difference is set. The selection of the differential pressure depends on the upstream valve, which should be protected by the BPV together with the saturation pressure of the given application.

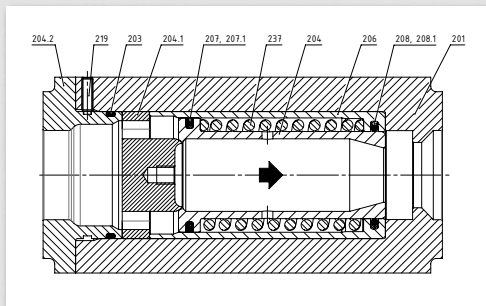


Fig. 1: BPV closed

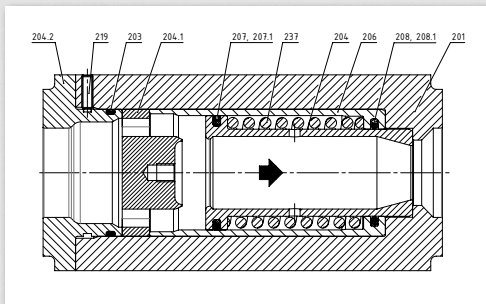


Fig. 2: BPV open

Pos.	Stück	Bezeichnung	Material
201	1	Housing	Carbon/Chromium steel
203	1	O-Ring	EPDM/NBR/FFPM...*
204	1	Control Bushing	Chromium steel/corrosion-resistant
204.1	1	Hole disc	Carbon/Chromium steel
204.2	1	Flange	Carbon/Chromium steel
206	1	Bushing	Chromium steel/corrosion-resistant
207	1	O-Ring	*
207.1	1	Ring	High performance thermoplastic
208	1	O-Ring	*
208.1	1	Ring	High performance thermoplastic
219	2	Threaded Pin	Chromium steel/corrosion-resistant
237	1	Helical Spring	Chromium steel/corrosion-resistant

* Media-dependent

Installation

The BPV is placed in the pipeline wherever a high pressure level is required. We recommend installing the BPVs just before the evaporator or feed water tank (as near as possible).

Sizes and pressure stages

The BPVs are supplied from DN 25 (NPS 1) to DN 150 (NPS 6) and from PN 16 (Class 150) to PN 400 (Class 2500). Special sizes on request.

Connection

They are available for installation between flanges according to EN 1092-1 and ASME. Other standards are available on request (e.g. BS, NF...).

Materials

Standard housing materials:

W.-Nr. 1.0460 (C22.8) ASTM A105

W.-Nr. 1.4404 (X2CrNiMo17132) ASTM 316L

The standard internals of the valves are made of stainless steel with a minimum chrome content of 13%. Other forged materials for housing and internals are available upon request. Selection of the seal material is done according to medium and temperature conditions. The housing material is selected according to medium, pressure and temperature conditions.

Design optimization and technical developments reserved.

Code key

BPV -

Nominal width	
DN 25	1"
DN 32	1¼"
DN 40	1½"
DN 50	2"
DN 65	2½"
DN 80	3"
DN 100	4"
DN 125	5"
DN 150	6"

Nominal pressure	
PN 16	
PN 25	Class 150
PN 40	
PN 63	Class 300
PN 100	Class 600
PN 160	Class 900
PN 250	Class 1500
PN 320	
PN 400	Class 2500

Pipeline installation	
*Install between flanges according to EN	F
*Install between flanges according to ASME	U
Special model	S

Connection type	
Waver type	Z
Flange type	K
Special type	S

Materials	
*Carbon steel EN/ ASTM: 1.0460/ A105	CS
Austemitic steel EN/ ASTM 1.4404/ 316L	SS
Special material	SX



* Standard version

Example: BPV118UZ-CS (DN 4", Class 1500, ASME Standard, water type, housing carbon steel)



SCHROEDAHL
we protect your business

Back Pressure Valve Technical Data

Customer:
 Enquiry no.:
 Prior reference:
 Order no.:
 Project:

Data sheet:
 Quantity:
 Ident-No.:

Back Pressure Valve type:

Valve inlet [in.] DN PN Code:
 Valve outlet [in.] DN PN Paint:

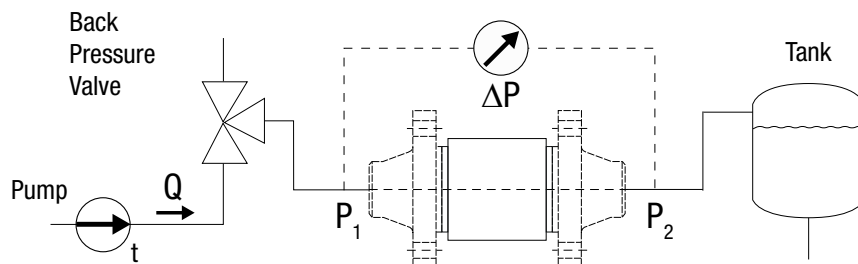
Mat.-/test certificates:
 Materials
 Housing: Internals: Seals:

Design data: Design temp.: °C
 Design pressure: bar g

Load data:
 Q = m³/h t = °C P₁* = bar g P₂ = bar g
 Medium: S.G.: kg/dm³

Notes:

Revision	Date	Description	Name	Signature



* Will be defined/approved by SCHROEDAHL

Besides the BPV Automatic Recirculation Valve for pump protection, we also have the following products in our programme:

Series TD

Type TDC

Automatic Recirculation Valve for pump protection of descaling applications



Type TDL, TDM

Automatic Recirculation Valve for pump protection



Series MRM

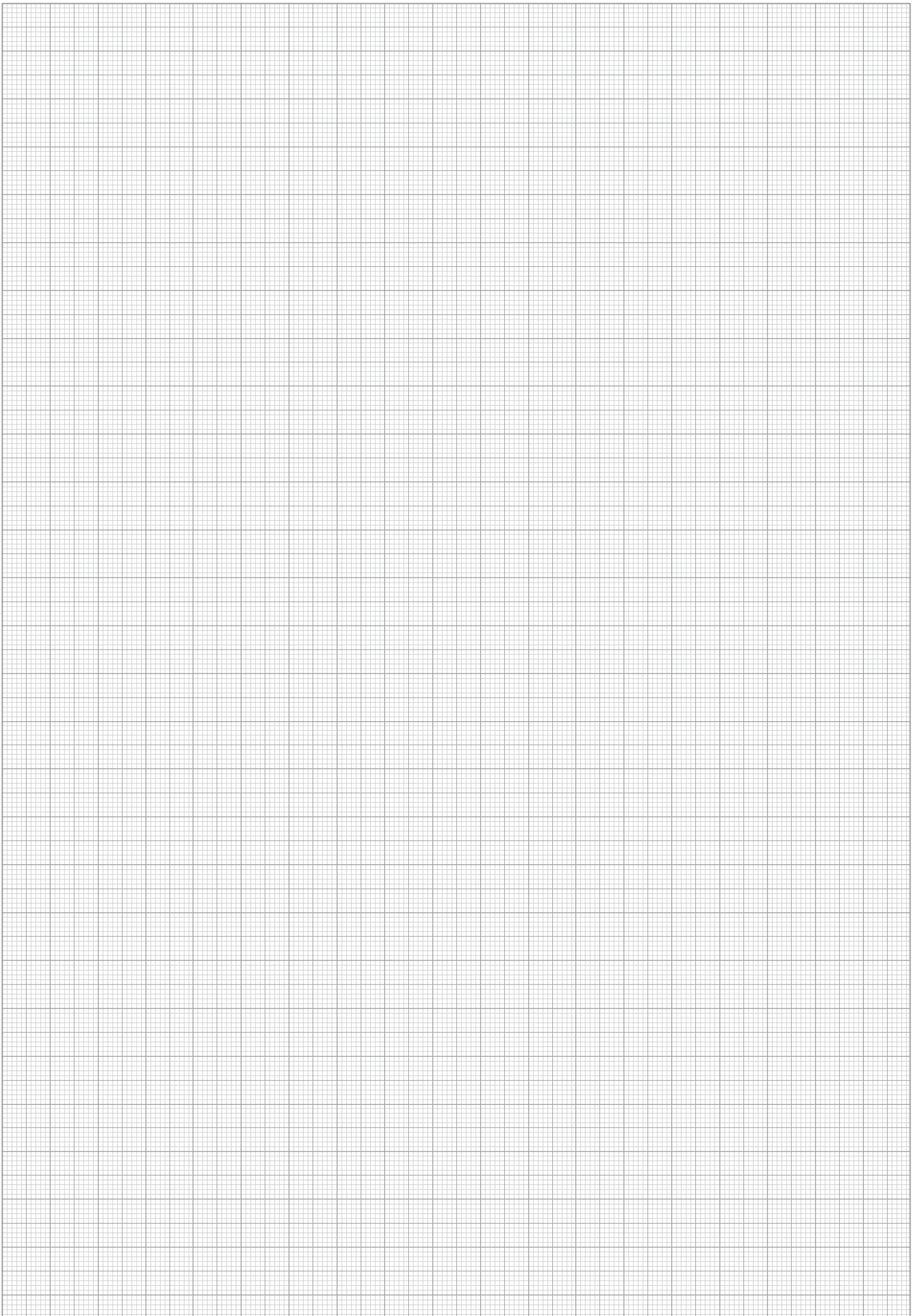
For nominal pressures up to PN 640 / Class 4500
Automatic Recirculation Valve for pump protection



Series MRK

Further development of our proved and tested
TDM technology







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