

# Pressure relief valves

**RE 25 860/11.11**

1/12

Replaces:

RE 25 860/10.10

Pressure relief valves

**0532 ...**  
**R 917 ...**

Valves for line connections

Valves for block installation

 $p_{\max} = 350 \text{ bar}$   
 $Q_{\max} = 120 \text{ l/min}$ 

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## Features

- Type of connection for pipeline installation and block installation
- Adjustment methods such as hand wheel, lead-seal capable, fixed, hand wheel with scale (with and without lock)

## Application

In conveying and handling equipment, agricultural engineering, in municipal-vehicles and in general mechanical engineering.

## Note

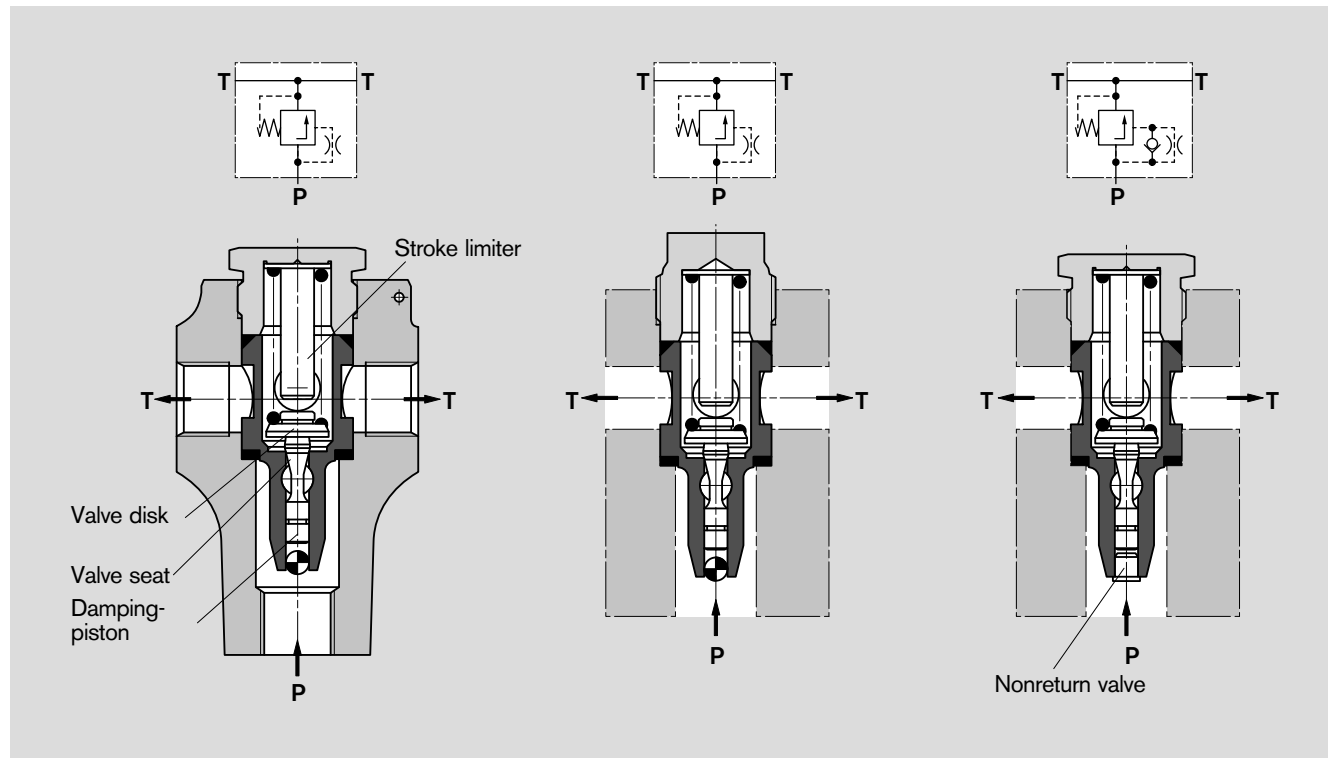
The versions "Safety valves TÜV German Technical Inspection Agency model approved" in accordance with the Pressure Equipment Directive 97/23/EG are used to safeguard hydraulic accumulators, see technical data sheet RDEF 50 153.

# Function

This model series is based on a valve in seat design with damping piston. The punched valve seat serves to ensure high density, the damping piston prevents any valve vibration. It produces a flat control characteristic, i.e., even at an increasing flow rate the set opening pressure is for the most part maintained. This is achieved by the effect of the flow forces on the valve disk, whereby the valve continues to open as the flow rate increases.

Versatile version variants are available:

- Housing for pipeline installation with and without measuring connection.
- Valve cartridges for block installation.
- Various adjustment methods such as hand wheel, lead-seal capable, fixed, hand wheel with scale (with and without lock).
- Check valve before damping piston for fast response times.

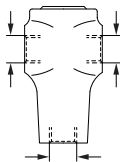



## Technical data

|   |  |
|---|--|
| Design  | Seat valve with damping  |
| Line connections                              | for pipeline installation and block installation   |
| Installation position                         | Optional   |
| Ambient temperature                           | –30...+80 °C   |
| Pressure medium                               | Hydraulic oils based on mineral oil acc. to DIN/ISO, other, e.g. environmentally-compatible fluids available on request  |
| Viscosity                                     | 10...800 mm <sup>2</sup> /s permissible range<br>20...100 mm <sup>2</sup> /s recommended range<br>...2000 mm <sup>2</sup> /s for start permissible range   |
| Pressure medium temperature                   | –30 °C...+80 °C with NBR sealings, NBR = Perbunan®<br>–15 °C...+120 °C with FKM sealings, FKM = Viton®   |
| Filtration                                    | Oil contamination Class 19/16 in accordance with ISO/DIS 4406, or Class 10 in accordance with NAS 1638 to be achieved using filter $\beta_{25} = 75$   |
| Direction of flow rate                        | shown by symbol or marking   |
| Operating pressure For line installation      | P: max. permissible 350 bar, depending on number of load changes and temperature. Counter values on request.<br>T: max. permissible 210 bar (NBR) or 80 bar (FKM), depending on number of load changes and temperature. Counter values on request. |
| For block installation                        | P: In accordance with set pressure.<br>T: NBR max. 210 bar, FM max. 80 bar   |
| MTTFd:  | max. 150 years, PRV with set value > 210 bar: B10 value on request   |
| Cracking pressure (tolerance $p_{nom} +5\%$ ) | Set at flow 0.1 l/min  |
| Leakage oil flow                              | Max. 1 cm <sup>3</sup> /min  |
| Flow  | Max. 120 l/min, depending on set pressure and line Ø, see chapter "Characteristics"  |

## Pressure relief valves for line installation



| Threaded port  | Version |  | Seals                       | Set pressure *<br>[bar] | Weight<br>[kg] | Material No.    |     |               |
|--|---------|--|-----------------------------|-------------------------|----------------|-----------------|-----|---------------|
| <div>M 18 x 1,5</div>  | Fixed   |  | NBR                         | 10                      | 0.9            | 0 532 001 031   |     |               |
|  |         |  | FKM                         | 10                      |                | 0 532 001 115   |     |               |
|  |         |  | NBR                         | 12                      |                | 0 532 001 156   |     |               |
|  |         |  |                             | 15                      |                | 0 532 001 004   |     |               |
|  |         |  |                             | 20                      |                | 0 532 001 012   |     |               |
|  |         |  |                             | 25                      |                | 0 532 001 011   |     |               |
|  |         |  |                             | 30                      |                | 0 532 001 014   |     |               |
|  |         |  |                             | 40                      |                | 0 532 001 027   |     |               |
|  |         |  |                             | 50                      |                | 0 532 001 020   |     |               |
|  |         |  |                             | 60                      |                | 0 532 001 018   |     |               |
|  |         |  |                             | 70                      |                | 0 532 001 005   |     |               |
|  |         |  |                             | 80                      |                | 0 532 001 006   |     |               |
|  |         |  |                             | 90                      |                | 0 532 001 026   |     |               |
|  |         |  |                             | 100                     |                | 0 532 001 007   |     |               |
|  |         |  |                             | 110                     |                | 0 532 001 024   |     |               |
|  |         |  |                             | 140                     |                | 0 532 001 008   |     |               |
|  |         |  |                             | 140                     |                | R 917 002 956** |     |               |
|  |         |  |                             | 150                     |                | R 917 002 975** |     |               |
|  |         |  |                             | 150                     |                | 0 532 001 009   |     |               |
|  |         |  |                             | 170                     |                | 0 532 001 028   |     |               |
|  |         |  |                             | 180                     |                | 0 532 001 022   |     |               |
|  |         |  |                             | 190                     |                | 0 532 001 021   |     |               |
|  |         |  | 200                         | 0 532 001 023           |                |                 |     |               |
|  |         |  | 210                         | 0 532 001 013           |                |                 |     |               |
|  |         |  | 210                         | 0 532 001 154           |                |                 |     |               |
|  |         |  | 210                         | R 917 002 960**         |                |                 |     |               |
|  |         |  | Fixed, with nonreturn valve |                         |                |                 | 230 | 0 532 001 019 |
|  |         |  | Fixed                       |                         |                |                 | 250 | 0 532 001 016 |
|  |         |  |                             |                         |                |                 | 300 | 0 532 001 030 |

NBR = Perbunan<sup>®</sup>, FKM = Viton<sup>®</sup>

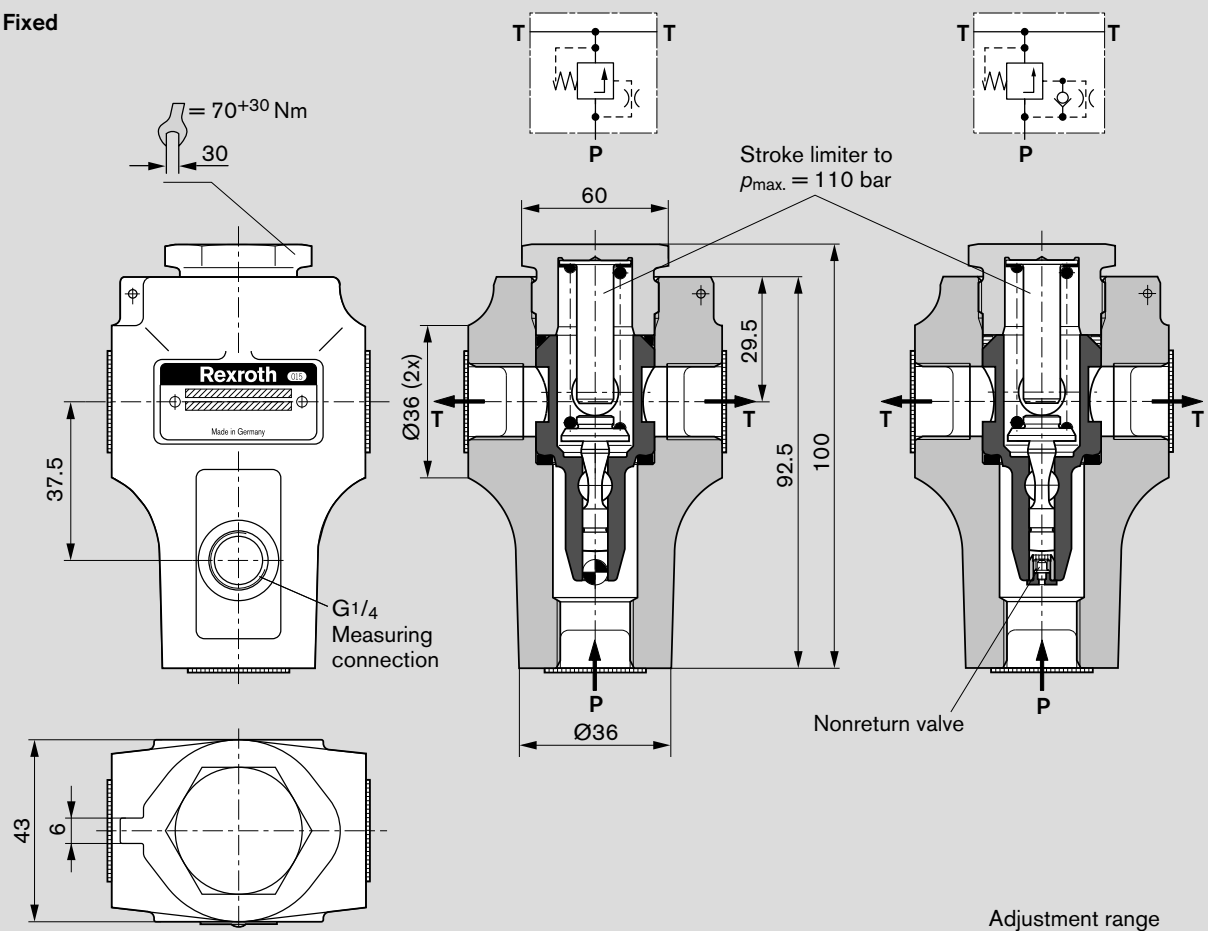
\*  $p_{nom} + 5\%$  at  $Q = 0.1$  l/min, with back flow unloaded

\*\* Pressure relief valve zinc-plated and transparent-passivated, special options upon request

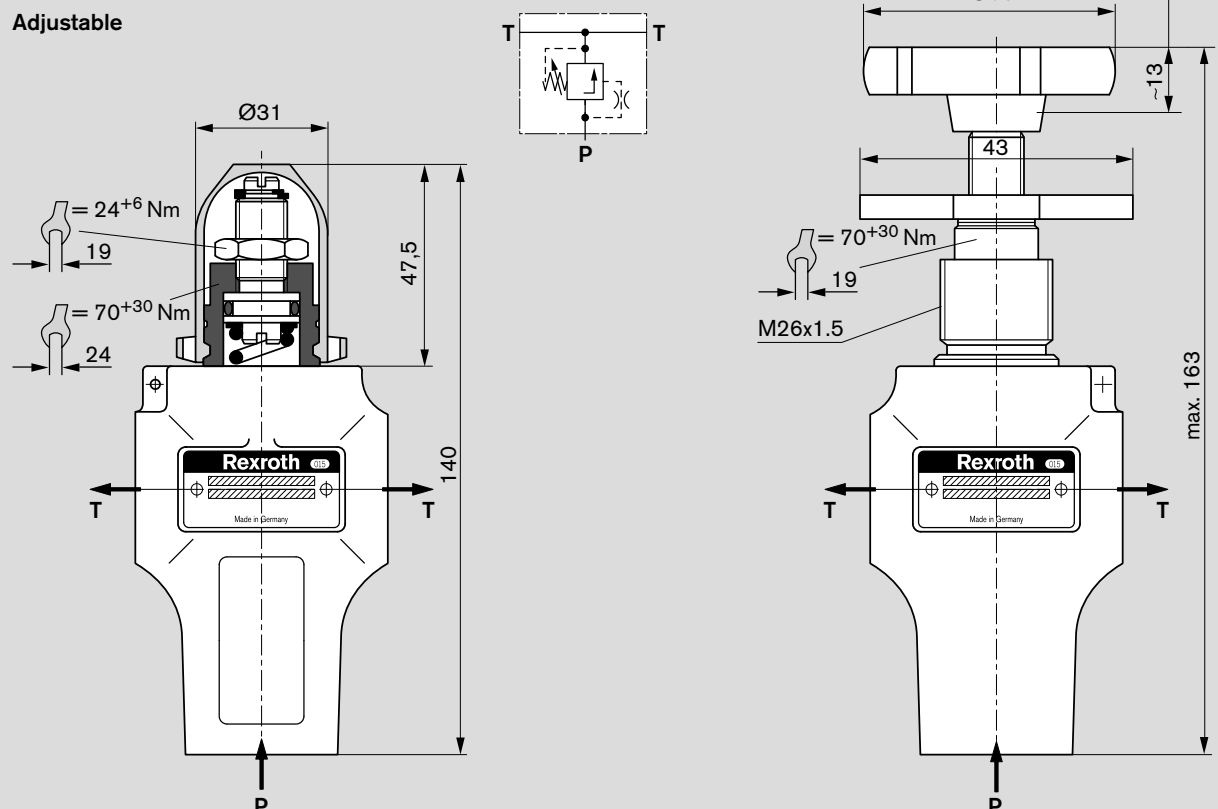
NBR = Perbunan<sup>®</sup>, FKM = Viton<sup>®</sup>  
 \*  $p_{nom}$  +5 % at  $Q = 0.1$  l/min, with back flow unloaded  
 \*\* Pressure relief valve zinc-plated and transparent-passivated, special options upon request

# Device dimensions

## Fixed



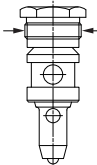

## Adjustable





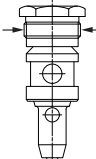

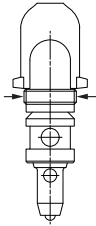



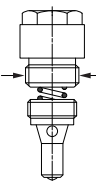

## Pressure relief valves for block installation



| Threaded port  | Version                     |  | Seals | Set pressure *<br>[bar] | Weight<br>[kg] | Material No.  |               |
|--|-----------------------------|--|-------|-------------------------|----------------|---------------|---------------|
|  | Fixed                       |  | FKM   | 5                       | 0.2            | 0 532 001 148 |               |
|  | Fixed, with nonreturn valve |  | NBR   | 6                       |                | 0 532 001 171 |               |
|  | Fixed                       |  |       | 12                      |                | 0 532 001 060 |               |
|  |                             |  |       | 15                      |                | 0 532 001 055 |               |
|  |                             |  |       | 25                      |                | 0 532 001 039 |               |
|  |                             |  |       | 30                      |                | 0 532 001 113 |               |
|  |                             |  |       | 50                      |                | 0 532 001 059 |               |
|  |                             |  |       | 60                      |                | 0 532 001 142 |               |
|  |                             |  |       | 70                      |                | 0 532 001 127 |               |
|  |                             |  |       | 80                      |                | 0 532 001 032 |               |
|  |                             |  |       | 90                      |                | 0 532 001 036 |               |
|  |                             |  |       | 120                     |                | 0 532 001 048 |               |
|  |                             |  |       | 130                     |                | 0 532 001 057 |               |
|  |                             |  |       | 150                     |                | 0 532 001 041 |               |
|  |                             |  |       | 160                     |                | 0 532 001 029 |               |
|  |                             |  |       | 170                     |                | 0 532 001 147 |               |
|  |                             |  |       | 170                     |                | 0 532 001 040 |               |
|  |                             |  |       | 180                     |                | 0 532 001 050 |               |
|  |                             |  |       | 190                     |                | 0 532 001 037 |               |
|  |                             |  |       | 200                     |                | 0 532 001 052 |               |
|  |                             |  |       | FKM                     |                | 210           | 0 532 001 176 |
|  |                             |  | NBR   | 220                     |                | 0 532 001 058 |               |
|  | Fixed, with nonreturn valve |  | HNBR  | 230                     |                | R 917 006 555 |               |
|  | Fixed                       |  | NBR   | 250                     |                | 0 532 001 051 |               |
|  |                             |  |       | 260                     |                | 0 532 001 167 |               |
|  |                             |  |       | 280                     |                | 0 532 001 061 |               |
|  |                             |  |       | FKM                     |                | 280           | 0 532 001 172 |
|  |                             |  |       | NBR                     |                | 300           | 0 532 001 043 |
|  |                             |  |       |                         |                | 320           | 0 532 001 145 |
|  | Fixed, with nonreturn valve |  | 330   |                         |                | 0 532 001 173 |               |

NBR = Perbunan<sup>®</sup>, FKM = Viton<sup>®</sup>, HNBR = Therban<sup>®</sup>

\*  $p_{nom} + 5\%$  at  $Q = 0.1$  l/min, with back flow unloaded

| Threaded port  | Version  |   | Seals                            | Set pressure*<br>[bar]                         | Weight<br>[kg] | Material No.  |               |
|--|--|---|----------------------------------|--|----------------|---|---------------|
| M 30 x 1.5<br>   | Fixed  |    | NBR                              | 185<br>350                                     | 0.2            | 0 532 001 170<br>0 532 001 139  |               |
| M 30 x 1.5<br>   | Adjustable   |    | NBR                              | 1 ...10  | 0.3            | 0 532 002 068   |               |
| Adj., return loadable up to 330 bar<br>Adjustable, preset to 35 <sup>+2</sup> bar                | Adjustable   |   | FKM                              | 1 ...15  |                | 0 532 002 048   |               |
|  |  |   | NBR                              | 5...35   |                | 0 532 002 065   |               |
|  |  |   |                                  | 5...35   |                | 0 532 002 062   |               |
|  |  |   |                                  | 7...67   |                | 0 532 002 042   |               |
|  |  |   |                                  | 10...15  |                | 0 532 002 011   |               |
|  |  |   |                                  | 15...50  |                | 0 532 002 012   |               |
|  |  |   |                                  | 40...100                                       |                | 0 532 002 015   |               |
|  |  |   |                                  | 40...200                                       |                | 0 532 002 051   |               |
|  |  |   |                                  | 50...300                                       |                | 0 532 002 014   |               |
|  |  |   | 50...350                         | 0 532 002 050                                  |                |   |               |
|  |  |   | FKM                              | 50...350                                       |                | 0 532 002 046   |               |
|  |  |   | NBR                              | 50...380                                       |                | 0 532 002 058   |               |
|  |  |   | FKM                              | 70...180                                       |                | 0 532 002 002   |               |
|  |  |   |                                  | 70...180                                       |                | 0 532 002 016   |               |
|  |  |   |                                  | NBR  |                | 100...250   | 0 532 002 013 |
|  |  |   | Adjustable, with nonreturn valve | FKM  |                | 100...250   | 0 532 002 019 |
|  |  |   | Adjustable                       |  |                | 100...320   | 0 532 002 041 |
|  |  |   | M 30 x 1.5                       | Adjustable, long adjusting shaft<br>Adjustable |                |  | NBR           |
| M 30 x 1.5   | Adjustable   |  | NBR                              | 50...315                                       | 0.5            | 0 532 008 001   |               |
| M 26 x 1.5<br> | Fixed,<br>Valve carrier for screwing-in<br>M 24 x 1.5<br>See device dimensions<br>Page 10 bottom |  | NBR                              | 30<br>40<br>110<br>175<br>200                  | 0.2            | 0 532 001 813<br>0 532 001 806<br>0 532 001 812<br>0 532 001 805<br>0 532 001 804   |               |

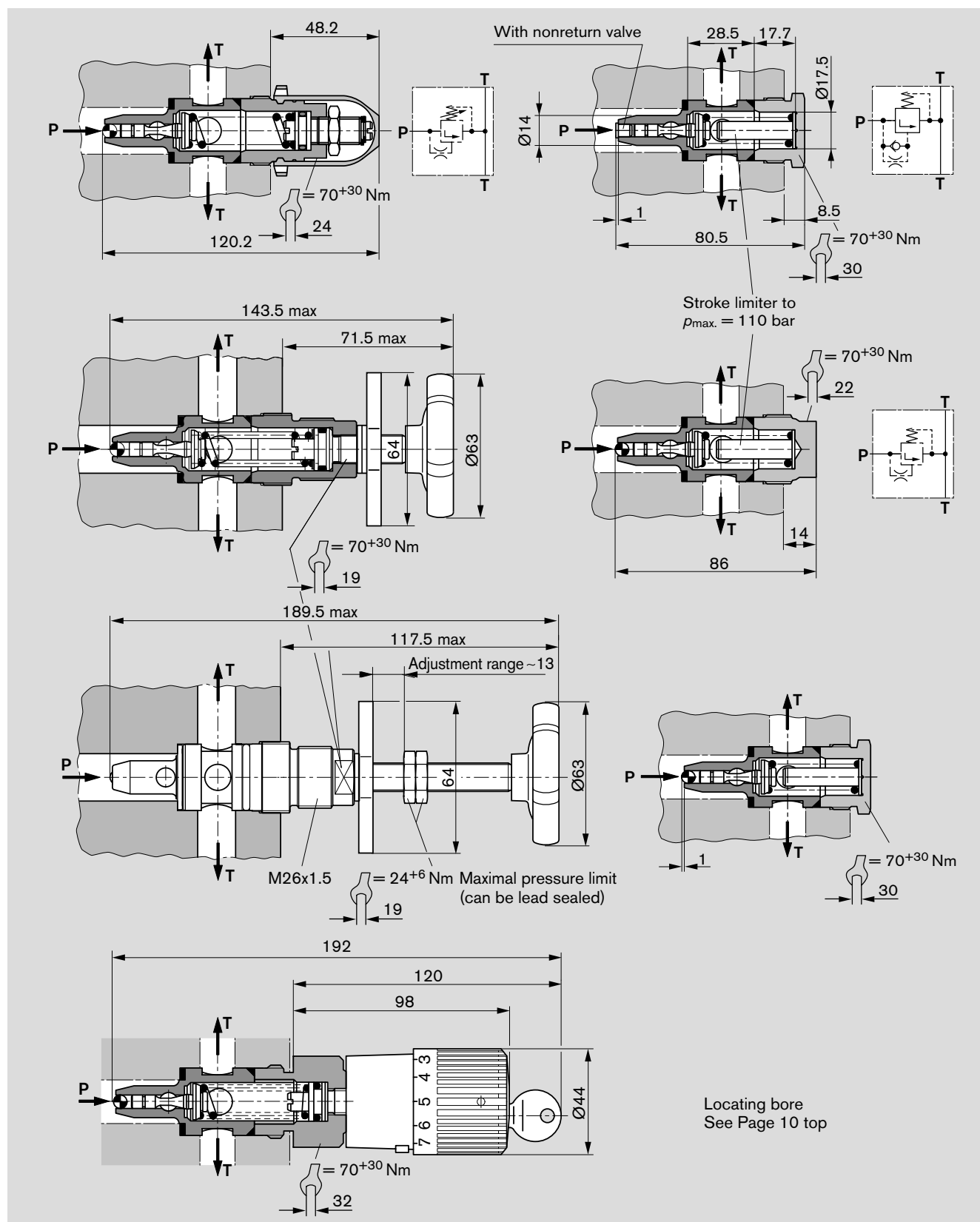
NBR = Perbunan®, FKM = Viton®

\*  $p_{nom} + 5\%$  at  $Q = 0.1$  l/min, with back flow unloaded



# Device dimensions

All sealing rings included loose



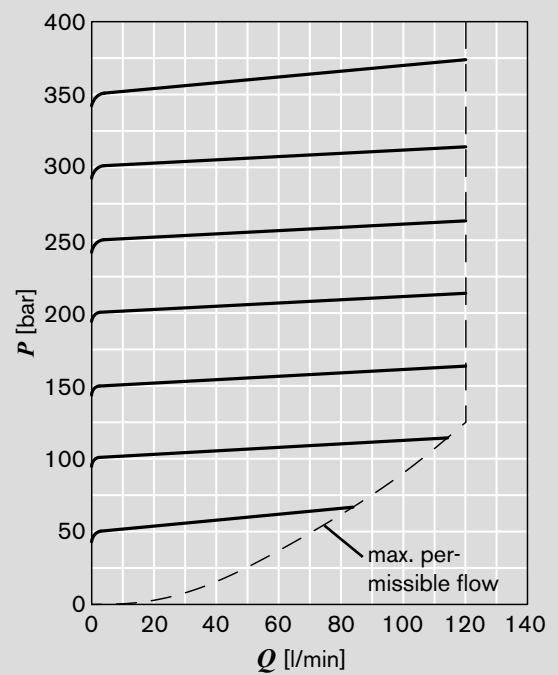
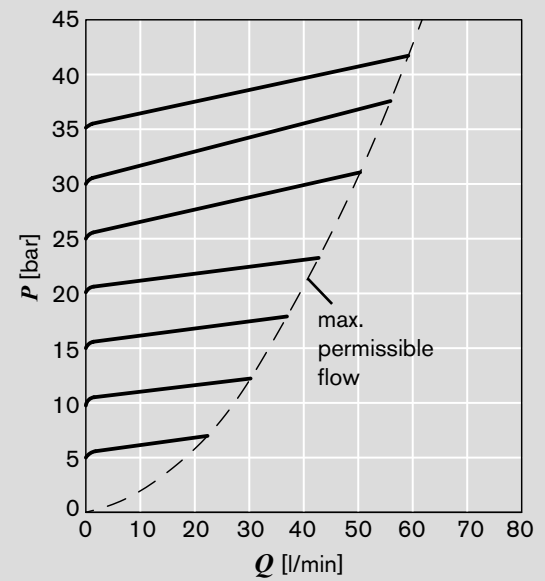


## Curves

$\nu$  35 mm<sup>2</sup>/s,  $T$  = 50 °C

Exceeding the boundaries of application will cause a disproportionate increase in pressure, and even to the functional limit of the PRV.

For lower setting limits



## Further notes

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**Special models for line installation with fatigue strength up to 350 bar on request.**

For proper use, please observe the following additional data sheets:

- Hydraulic valves for mobile applications: general information RE 64 020-B1
- Pressure relief valves: product-specific instructions RE 25 860-B2
- Pressure relief valves: repair instructions RDE 25 860-R

Information regarding the correct handling of Bosch Rexroth hydraulic products is available in our publication:  
"General Product Information for Hydraulic Products" RE 07 008.