Rexroth
Bosch Group

Pressure relief valves

RE 25 860/11.11 1/12
Replaces:
RE 25 860/10.10
Pressure relief valves

0 532 …
R 917 …

Valves for line connections

Valves for block installation

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

Contents

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.

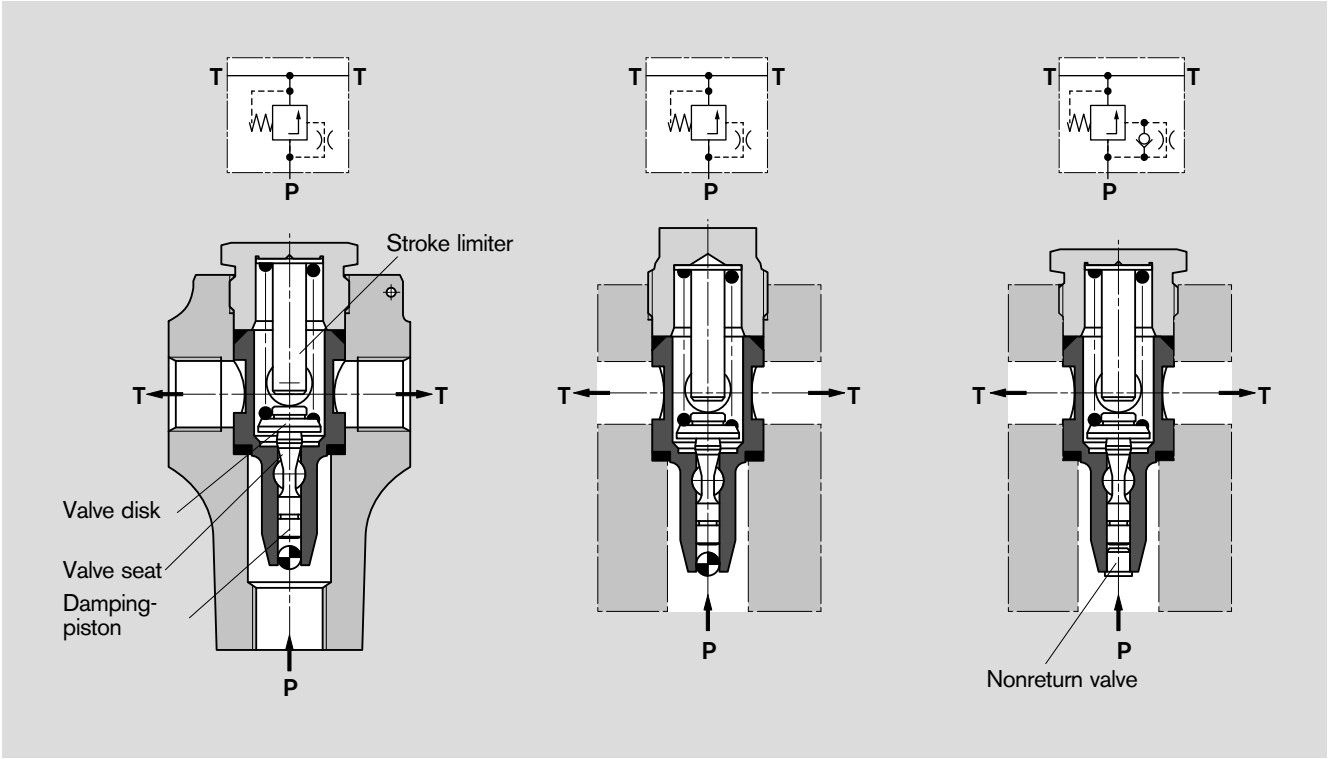
Note

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.

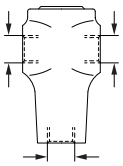


Technical data

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^2/s permissible range 20...100 mm^2/s recommended range ...2000 mm^2/s for start permissible range
Pressure medium temperature		–30 °C...+80 °C with NBR sealings, NBR = Perbunan® –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. 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. 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^3/min
Flow		Max. 120 l/min, depending on set pressure and line Ø, see chapter “Characteristics”

Pressure relief valves for line installation

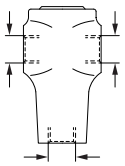



Threaded port	Version		Seals	Set pressure * [bar]	Weight [kg]	Material No.
M 18 x 1,5 	Fixed		NBR	10	0.9	0 532 001 031
			FKM	10		0 532 001 115
			NBR	12		0 532 001 156
				15		0 532 001 004
				20		0 532 001 012
				25		0 532 001 011
				30		0 532 001 014
				40		0 532 001 027
				50		0 532 001 020
				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
	Fixed, with nonreturn valve			210		R 917 002 960 **
	Fixed			230		0 532 001 019
				250		0 532 001 016
				300		0 532 001 030

NBR = Perbunan®, FKM = Viton®

* 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

Threaded port	Version		Seals	Set pressure* [bar]	Weight [kg]	Material No.
$G^1/_2$ ISO 228	Fixed, with nonreturn valve		NBR	320	0.9	0 532 001 131
M 18 x 1.5 	Adjustable		NBR	10...15	1.0	0 532 002 010
				15...50		R 917 002 939**
				15...50		0 532 002 005
				7...67		0 532 002 052
				40...100		R 917 002 936**
				40...100		0 532 002 003
				50...300		R 917 002 938**
				50...300		0 532 002 007
			FKM	50...300		0 532 002 020
			NBR	50...350		0 532 002 064
				70...180		R 917 002 937**
				70...180		0 532 002 001
				100...250		0 532 002 004
$G^1/_2$ ISO 228			NBR	100...250		R 917 002 932**
				50...300		0 532 002 044
$G^1/_2$ ISO 228	Fixed, with nonreturn valve			50...350		0 532 002 059
M 18 x 1.5	Adjustable, long adjusting shaft		NBR	1...10	1.2	0 532 003 014
	Adjustable			1...35		0 532 003 035
				15...80		0 532 003 016
				15...150		0 532 003 001
				30...200		0 532 003 003
				30...200		R 917 005 060**
				50...250		0 532 003 002
				50...300		0 532 003 009
$G^1/_2$ ISO 228				50...300		0 532 003 034
M 18 x 1.5	Adjustable			0...250	1.2	0 532 008 002

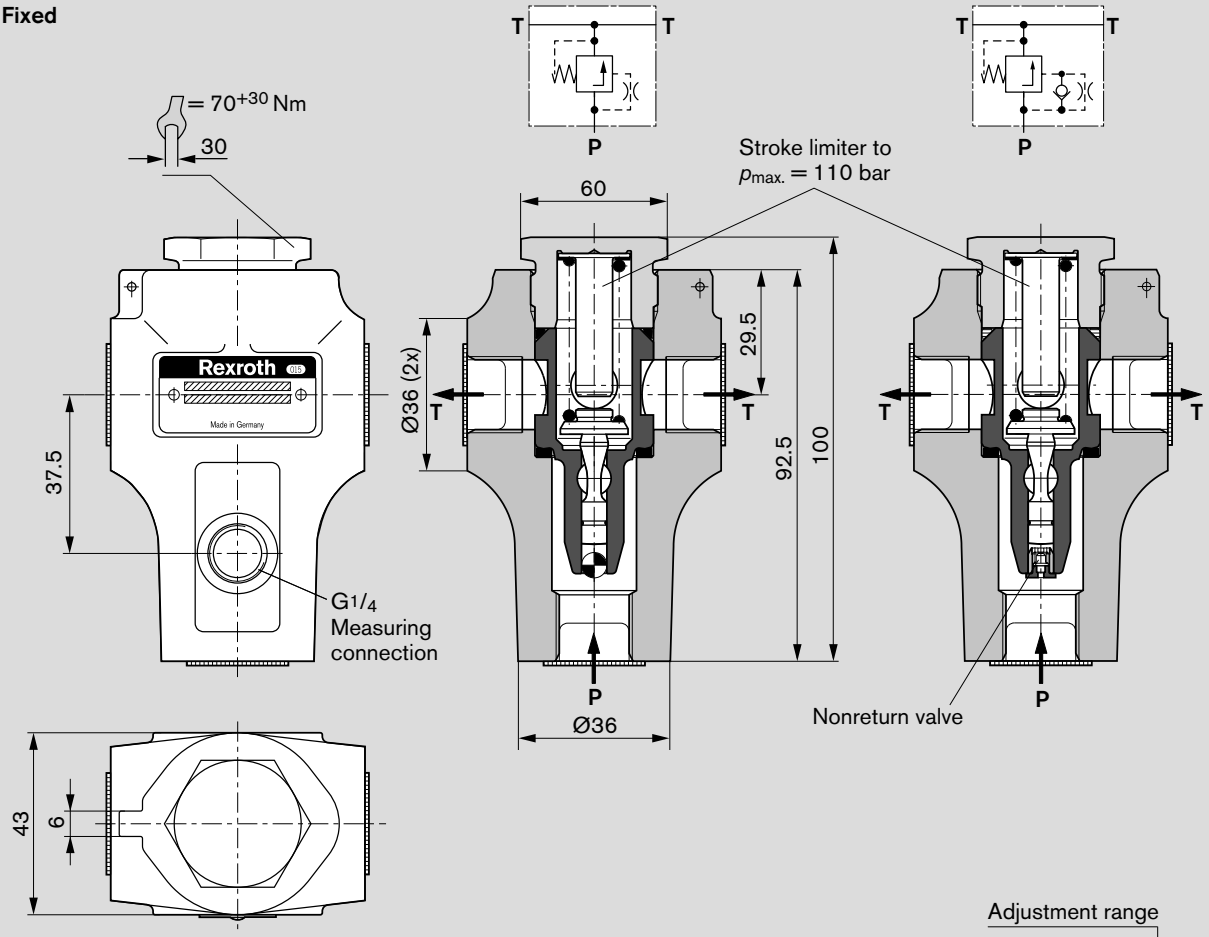
NBR = Perbunan®, FKM = Viton®

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

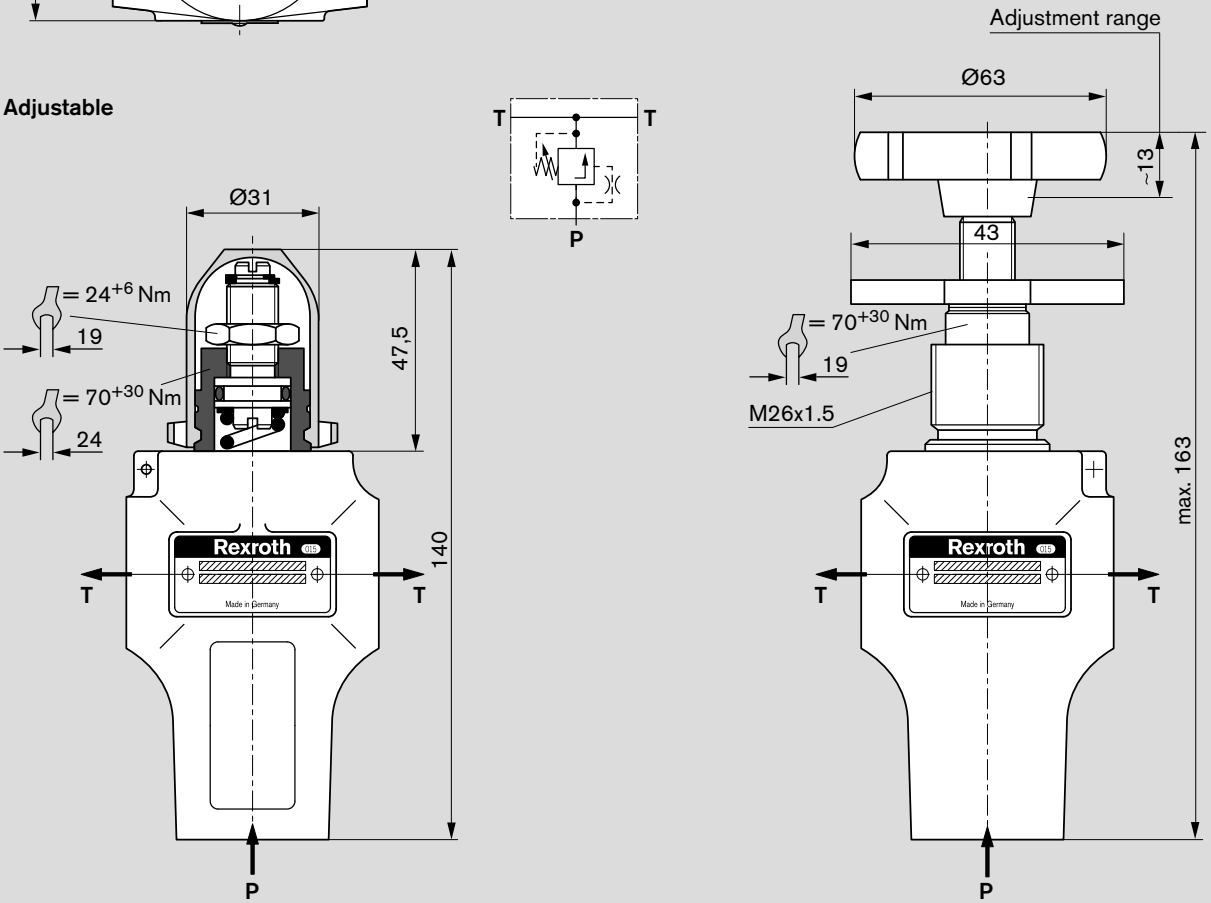
** Pressure relief valve zinc-plated and transparent-passivated, special options upon request

Device dimensions

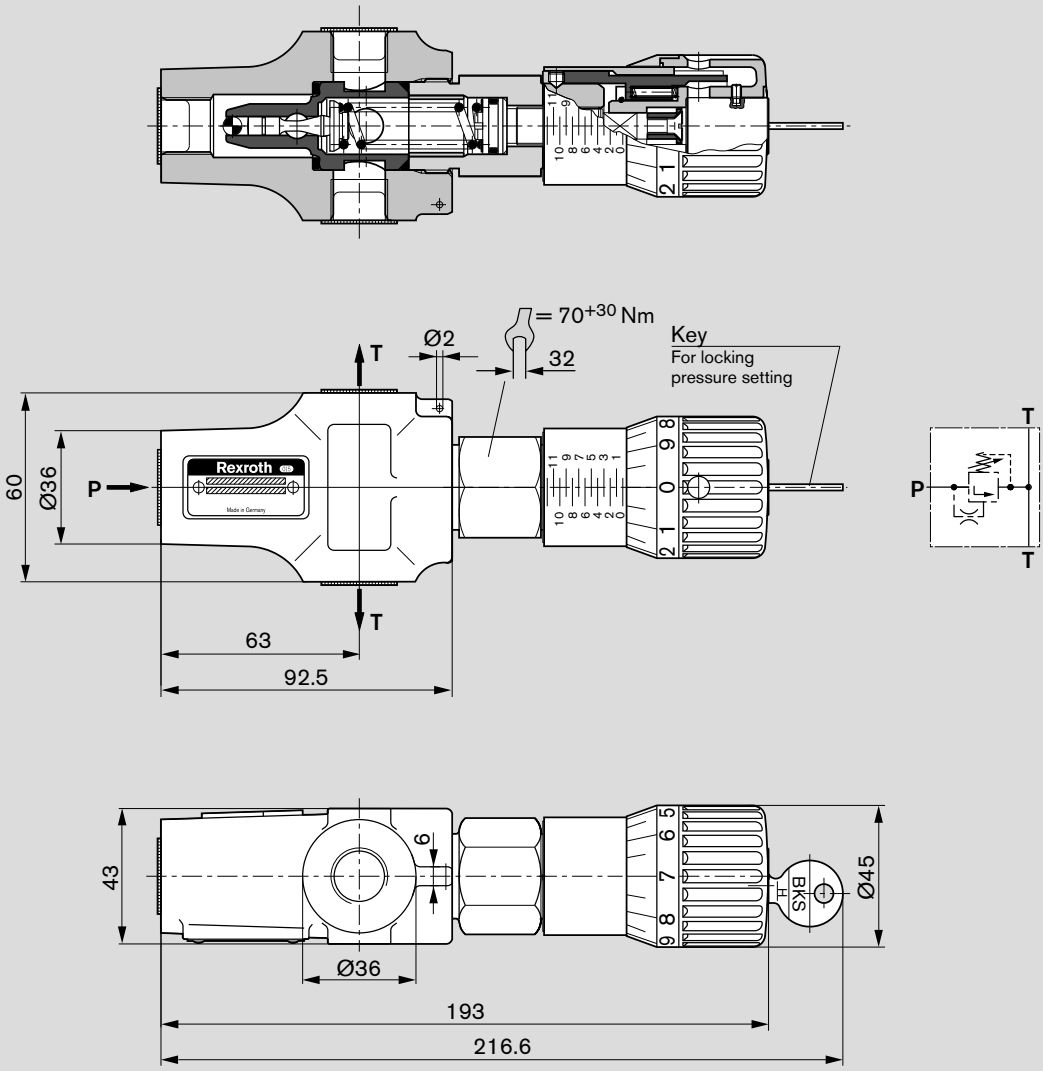
Fixed



Adjustable

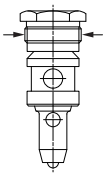


Device dimensions (Continued)



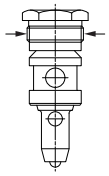
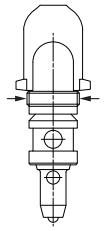
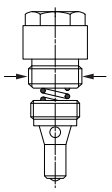
Pressure relief valves for block installation

Threaded port	Version		Seals	Set pressure* [bar]	Weight [kg]	Material No.
M 30 x 1.5	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
	Fixed, with nonreturn valve			320		0 532 001 145
				330		0 532 001 173



NBR = Perbunan®, FKM = Viton®, HNBR = Therban®

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

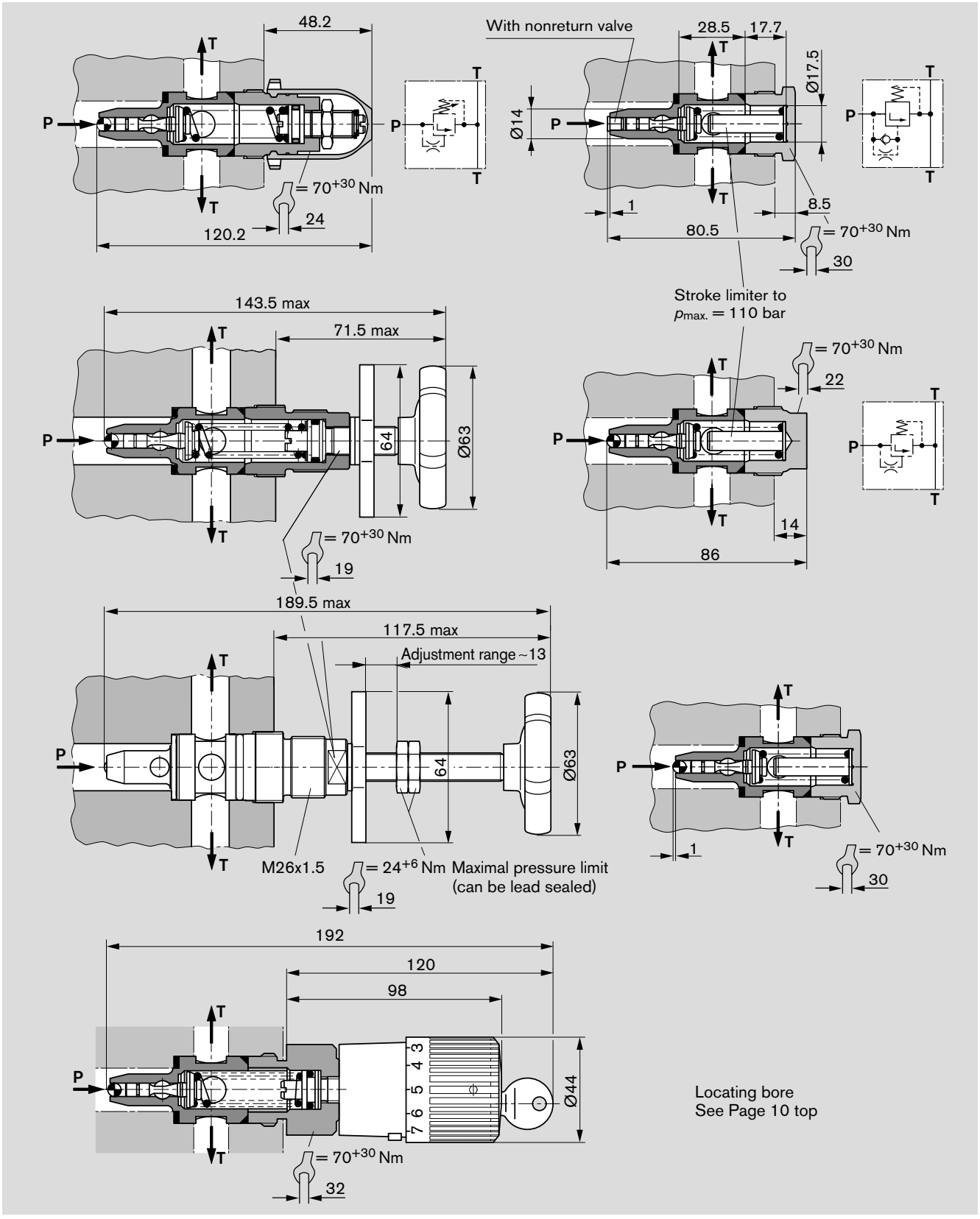
Threaded port	Version		Seals	Set pressure* [bar]	Weight [kg]	Material No.
M 30 x 1.5 	Fixed		NBR	185	0.2	0 532 001 170
				350		0 532 001 139
M 30 x 1.5 	Adjustable		NBR	1 ...10	0.3	0 532 002 068
	Adj., return loadable up to 330 bar			1 ...15		0 532 002 048
	Adjustable, preset to 35^{+2} bar		FKM	5...35		0 532 002 065
	Adjustable		NBR	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
	Adjustable, with nonreturn valve			40...200		0 532 002 051
	Adjustable			50...300		0 532 002 014
	Adjustable, with nonreturn valve			50...350		0 532 002 050
	Adjustable		FKM	50...350		0 532 002 046
	Adjustable, with nonreturn valve		NBR	50...380		0 532 002 058
	Adjustable			70...180		0 532 002 002
			FKM	70...180		0 532 002 016
	Adjustable, preset to 190^{+10} bar		NBR	100...250		0 532 002 013
	Adjustable		FKM	100...250		0 532 002 019
				100...320		0 532 002 041
M 30 x 1.5	Adjustable, long adjusting shaft		NBR	1 ...10	0.4	0 532 003 012
	Adjustable			1 ...35		0 532 003 037
				15...150		0 532 003 011
				40...280		0 532 003 033
M 30 x 1.5	Adjustable		NBR	50...315	0.5	0 532 008 001
M 26 x 1.5 	Fixed, Valve carrier for screwing-in M 24 x 1.5 See device dimensions Page 10 bottom		NBR	30	0.2	0 532 001 813
				40		0 532 001 806
				110		0 532 001 812
				175		0 532 001 805
				200		0 532 001 804

NBR = Perbunan®, FKM = Viton®

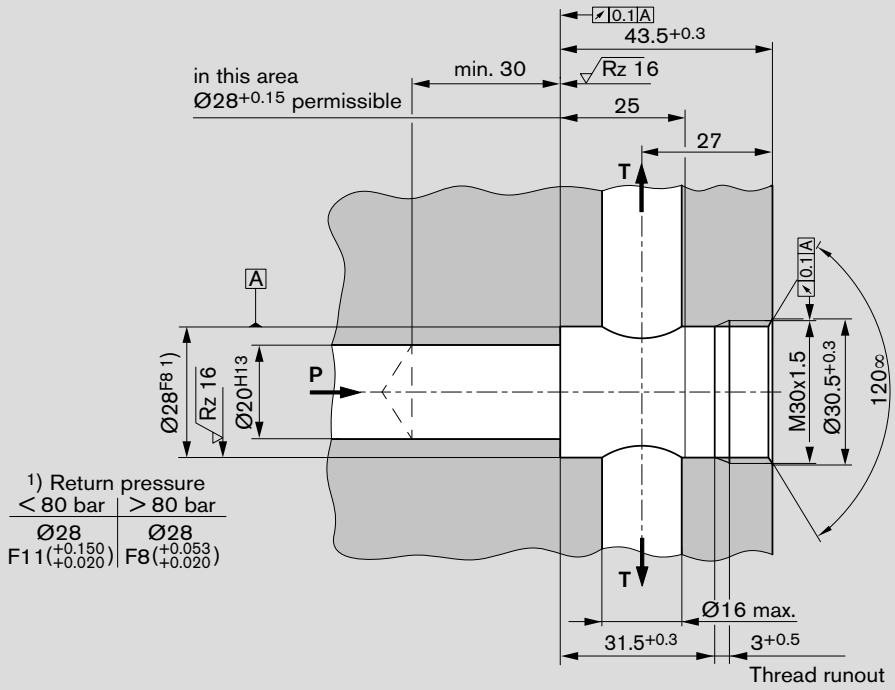
* p_{nom} +5 % at Q = 0.1 l/min, with back flow unloaded

Device dimensions

All sealing rings included loose



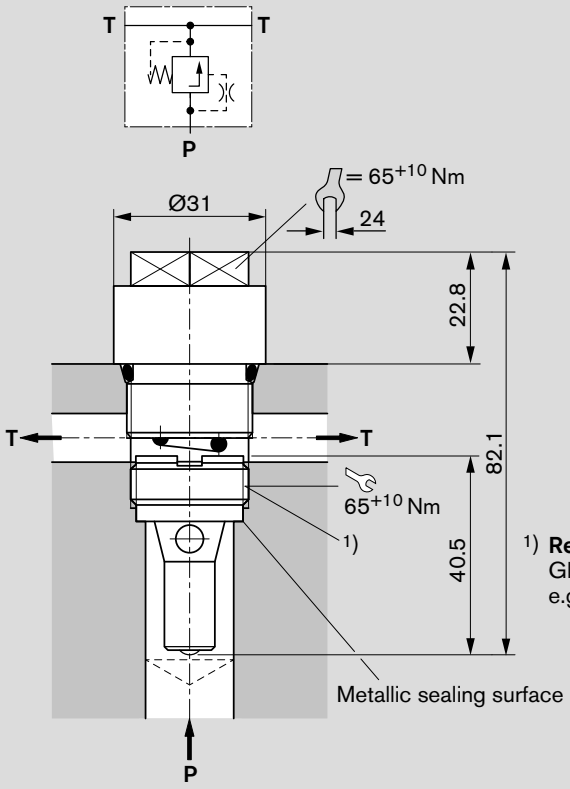
Device dimensions

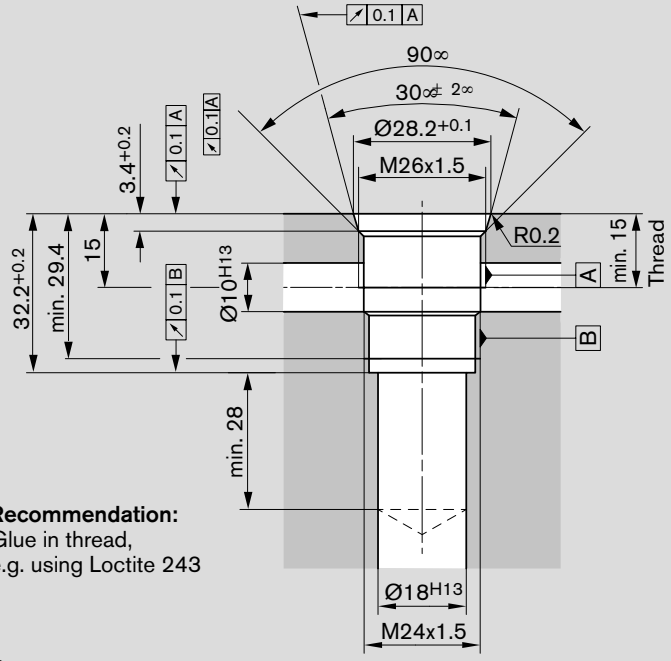


1) Return pressure

< 80 bar	> 80 bar
Ø28 F11(+0.150 +0.020)	Ø28 F8(+0.053 +0.020)

Valve carrier for screwing-in





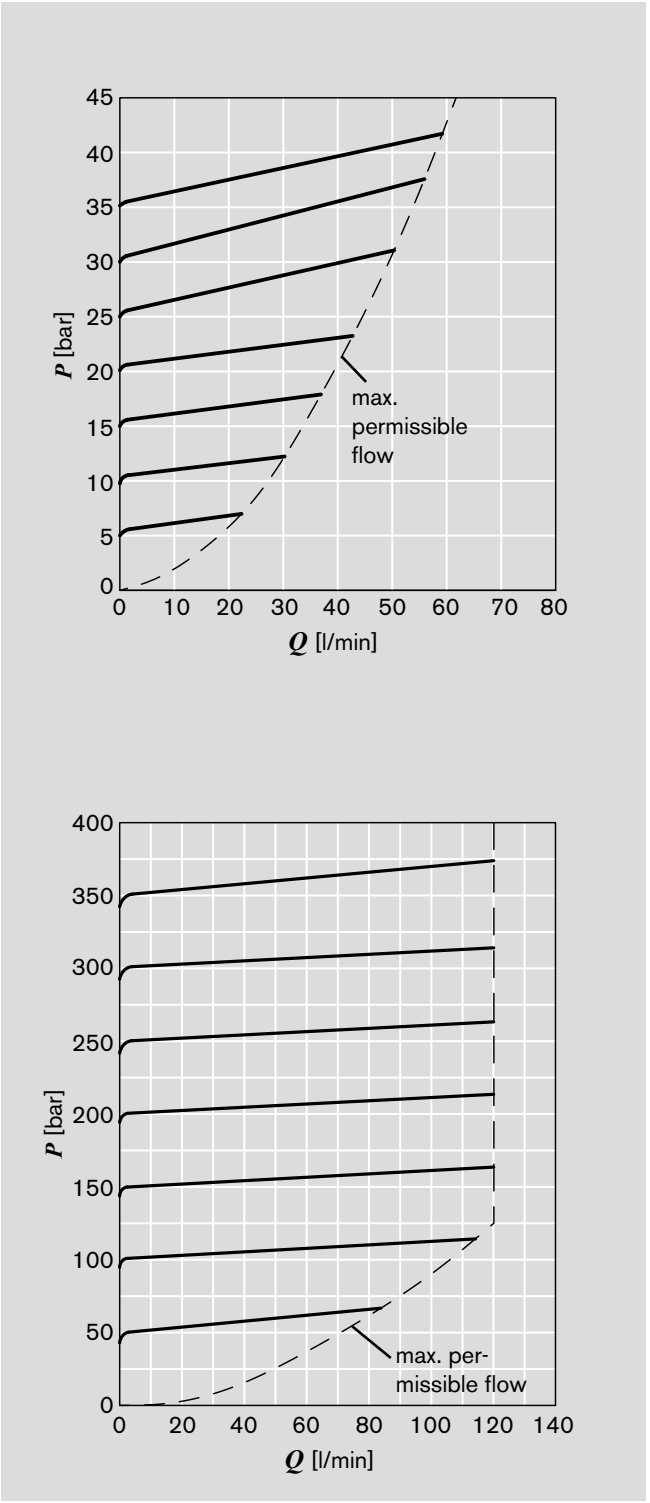
1) **Recommendation:**
Glue in thread,
e.g. using Loctite 243

This pressure relief valve for block installation with M 26 x 1.5 internal thread is designed for particularly small installation areas. The hydraulic parameters are identical with those for M 30 x 1.5 internal thread. The exact pressure setting must ultimately be made by the customer.

Curves

v 35 mm²/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

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.

Bosch Rexroth AG
Hydraulics
Product Segment Mobile Controls
Robert-Bosch-Straße 2
D-71701 Schwieberdingen
Fax +49 (0) 711-811 5 11 18 14
info.brh-stf@boschrexroth.de
www.boschrexroth.com/brm