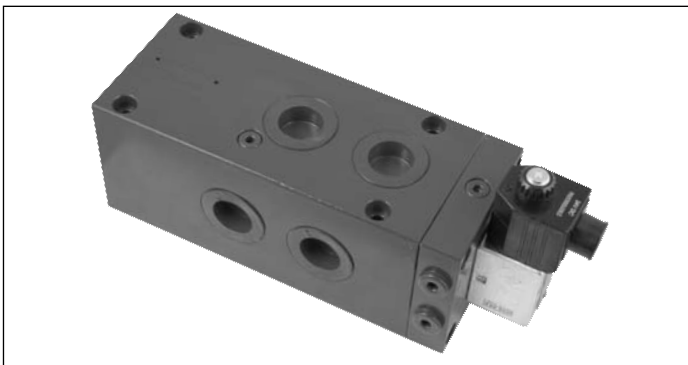


6/2 ways/positions piloted flow diverters - Size 16 L7556... (VS400)

RE 18302-11

Edition: 12.2012

Replaces: 07.12



Size 16

Series 00

Maximum operating pressure 310 bar (4500 psi)

Maximum flow 220 l/min (58.1 gpm)

Ports G 1

**NEW spool position sensor available for this valve.
See RE18300-30**

General specifications

6 way 2 position valve.

Directional spool valve hydraulically piloted through solenoid control.

Solenoid with easily removable coil fastened by a ring nut.

Wet pin tube for DC coil, with push rod for mechanical override in case of voltage shortage.

Unrestricted 360° orientation of DC coil.

Control spool held in normal position by return spring.

Connectors available: DIN 43650 – ISO 4400, AMP

Junior, DT04-2P (Deutsch), Free leads.

Contents

Ordering details	2
Symbols	2
Functional description	3
Technical data	3
Characteristic curves	5
External dimensions and fittings	6
Electric connection	7

Ordering details

01	02	03	04	05	06	07
L	7	55	6	6B		0

Family

01	Compact directional valve	L
----	---------------------------	----------

Type

02	Flow diverters	7
----	----------------	----------

Ports

03	G 1 DIN3852	6
----	-------------	----------

Control type

04	Without pilot solenoid valve	00
	With pilot solenoid valve one coil, without mechanical detent	10
	With pilot solenoid valve two coils, with mechanical detent	1D

Configuration, pilot and drain type

05	Internal pilot and drain	1
	External pilot and drain	2
	External pilot and internal drain	3
	External drain and internal pilot	4

Voltage supply

		31	07	04	03	01	00	
06	Without coil	-	-	-	-	-	●	00
	12 V DC	●	●	●	●	●	-	0B
	13 V DC	-	-	-	-	●	-	AD
	24 V DC	●	●	●	●	●	-	OC
	27 V DC	-	-	-	-	●	-	AC
	48 V DC	-	-	●	-	●	-	OD
	110 V DC	-	-	-	-	●	-	OE

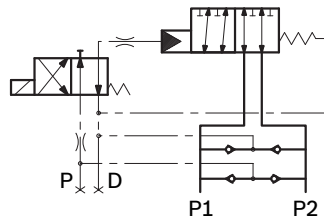
Electric connections

07	Without coils	00
	With coils, without mating connector DIN EN 175301-803 ¹⁾	01
	With coils, with bi-directional diode, without mating connector vertical Amp-Junior	03
	With coils, with bi-directional diode, without mating connector horizontal Amp-Junior	04
	With coils, with bi-directional diode, without mating connector DT04-2P	07
	With coils and bipolar sheathed lead 350mm (13,8 in) long	31

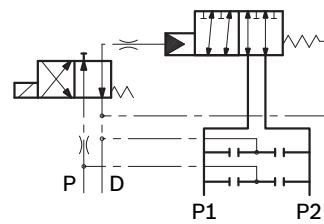
● = Available - = Not available

Symbols

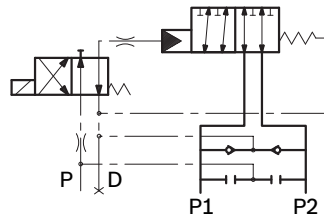
Internal pilot and drain



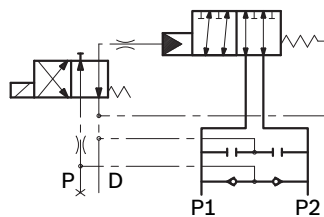
External pilot and drain



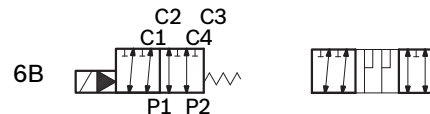
External pilot and internal drain



External drain and internal pilot

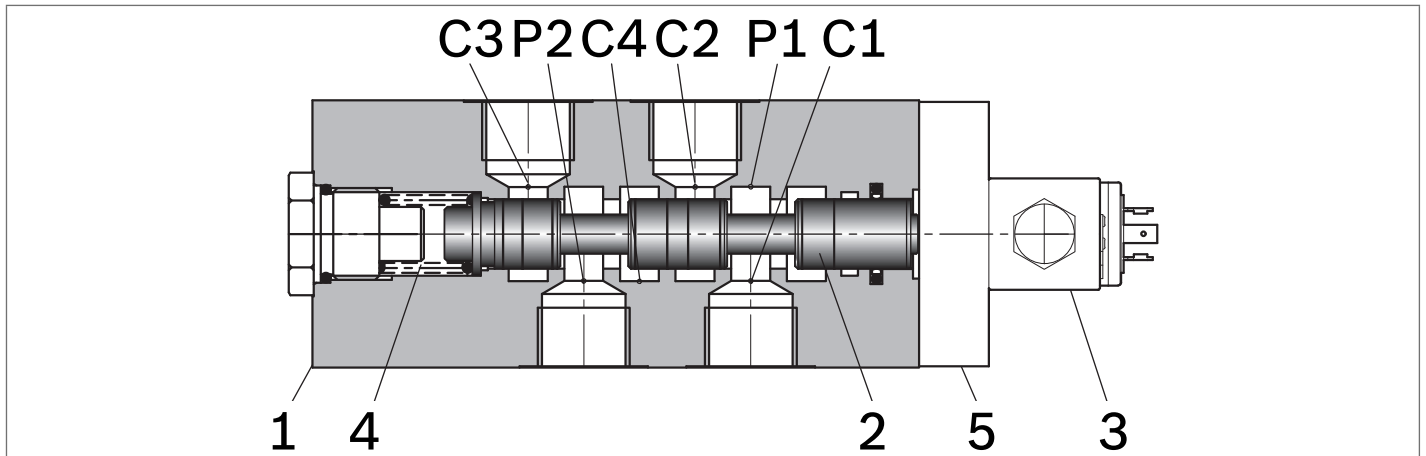


Spool variants



1) For connectors ordering code see data sheet RE 18325-90.

Functional description



A valve basically consists of a housing (1), a control spool (2), a return spring (4), a 4/2 solenoid valve (3), a face mounted plate for optional drain and/or external hydraulic pilot.

The valve is designed to connect two inlet lines P1 – P2 (normally a set of hoses) and divert them to either the outlet ports (C1 – C4) with spool in position “0”, when the solenoid is de-energized, or to the outlet ports (C2 – C3)

with spool in position “1”, when the solenoid is energized. In fact, energizing the solenoid valve (3), the pilot pressure, after exceeding the 18 bar (261 psi) threshold, pushes the control spool (2) from position “0” into position “1”. With the solenoid de-energized, the return spring (4) pushes back the spool (2) and holds it in position “0”. The coil of the solenoid valve is fastened to the tube by a ring nut.

Technical data

General		
Valve weight	kg (lbs)	15.2 (33.5)
Mounting position		unrestricted
Ambient Temperature	°C (°F)	-20....+50 (-4....+122) (NBR seals)
Hydraulic		
Maximum operating pressure with external drain	bar (psi)	310 (4500)
Maximum operating pressure with internal drain	bar (psi)	210 (3045)
Maximum inlet flow	l/min (gpm)	220 (58.1)
Minimum pilot pressure	bar (psi)	18 (261)
Internal pilot switching pressure between P1 and P2	bar (psi)	18 (261)
Hydraulic fluid		
General properties: it must have physical lubricating and chemical properties suitable for use in hydraulic systems such as, for example:		Mineral oil based hydraulic fluids HL (DIN 51524 part 1). Mineral oil based hydraulic fluids HLP (DIN 51524 part 2). For use of environmentally acceptable fluids (vegetable or polyglycol base) please consult us.
Fluid Temperature	°C (°F)	-20....+80 (-4....+176) (NBR seals)
Permissible degree of fluid contamination		ISO 4572: $\beta_x \geq 75$ X = 12...15 ISO 4406: class 20/18/15 NAS 1638: class 9
Viscosity range	mm ² /s	5....420
Internal leakage with 100 bar (1450 psi) secondary pressure at C	cc/min (in ³ /min)	min.20 (1.2) max. 60 (3.6)

4 **L7556... (VS400)** | 6/2 ways/positions piloted flow diverters - Size 16
 Technical data

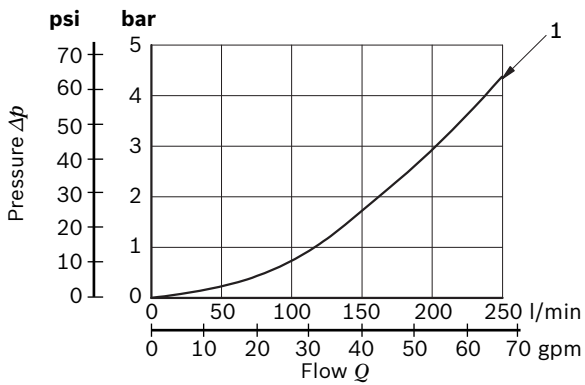
Electrical							
Voltage type		DC					
Voltage tolerance (nominal voltage)	%	-10 +10					
Duty		Continuous (100%), with ambient temperature ≤ 50°C (122°F)					
Coil wire temperature not to be exceeded	°C (°F)	150 (302)					
Insulation class		H					
Compliance with		Low Voltage Directive LVD 73/23/EC (2006/95/EC), 2004/108/EC					
Coil weight with connection EN 175301-803	kg (lbs)	0.215 (0.44)					
Voltage	V	12	13	24	27	48	110
Voltage type		DC	DC	DC	DC	DC	DC
Power consumption	W	26	26	26	26	26	26
Current (nominal at 20 °C (68 °F))	A	2.15	2.00	1.10	1.00	0.54	0.27
Resistance (nominal at 20 °C (68 °F))	Ω	5.5	6.5	22	28	89	413

Note

For applications with different specifications consult us

Code	Voltage (V)	Connector type	Coil description	Marking	Coil Mat no.
OB 01	12 DC	EN 175301- 803 (Ex. DIN 43650)	C3601 12DC	12 DC	R933000044
OB 03	12 DC	AMP JUNIOR	C3603 12DC	12 DC	R933000047
OB 04	12 DC	AMP JUNIOR Horizontal	C3604 12DC	12 DC	R933002913
OB 07	12 DC	DEUTSCH DT 04-2P	C3607 12DC	12 DC	R933000048
OB 31	12 DC	Cable 350 mm long	C3631 12DC	12 DC	R933000045
AD 01	13 DC	EN 175301-803 (Ex. DIN 43650)	C3601 13DC	13 DC	R933000051
AD 07	13 DC	DEUTSCH DT 04-2P	C3607 13DC	13 DC	R933000049
OC 01	24 DC	EN 175301-803 (Ex. DIN 43650)	C3601 24DC	24 DC	R933000053
OC 03	24 DC	AMP JUNIOR	C3603 24DC	24 DC	R933000057
OC 04	24 DC	AMP JUNIOR Horizontal	C3604 24DC	24 DC	R933002914
OC 07	24 DC	DEUTSCH DT 04-2P	C3607 24DC	24 DC	R933000058
OC 31	24 DC	Cable 350 mm long	C3637 24DC	24 DC	R933000055
AC 01	27 DC	EN 175301-803 (Ex. DIN 43650)	C3601 27DC	27 DC	R933000056
AC 07	27 DC	DEUTSCH DT 04-2P	C3607 27DC	27 DC	R933000050
OD 01	48 DC	EN 175301-803 (Ex. DIN 43650)	C3601 48DC	48 DC	R933000059
OD 04	48 DC	AMP JUNIOR Horizontal	C3604 48DC	48 DC	R933002915
OE 01	110 DC	EN 175301-803 (Ex. DIN 43650)	C3601 110DC	110 DC	R933000061

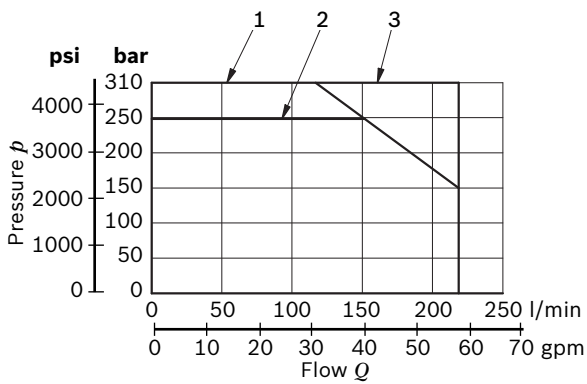
Characteristic curves



Flow path	Curve No.
P1>C1	1
P1>C2	1
P2>C3	1
P2>C4	1

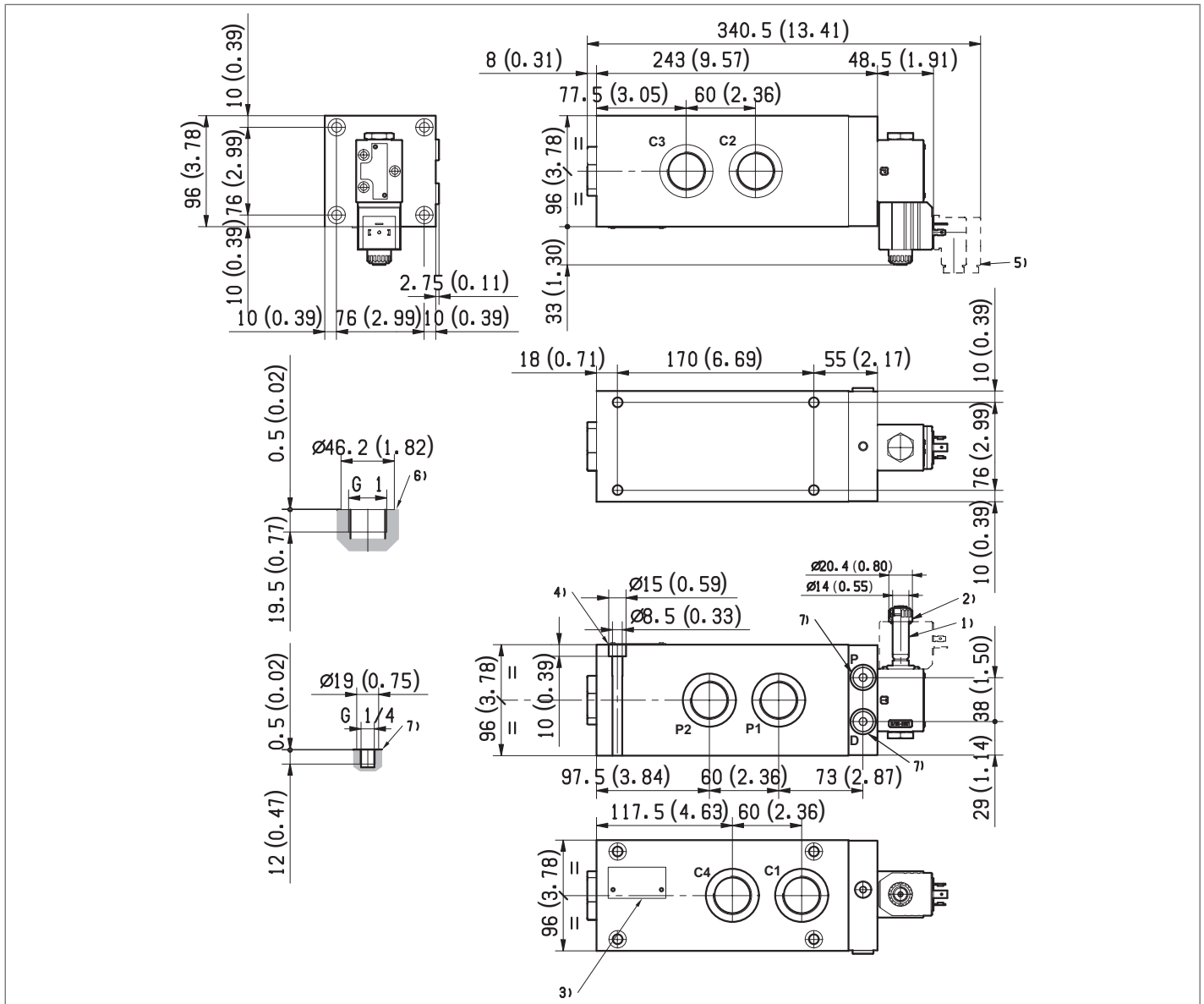
Measured with hydraulic fluid ISO-VG32 at 45° ±5 °C (113° ±9 °F); ambient temperature 20 °C (68 °F).

Performance limits



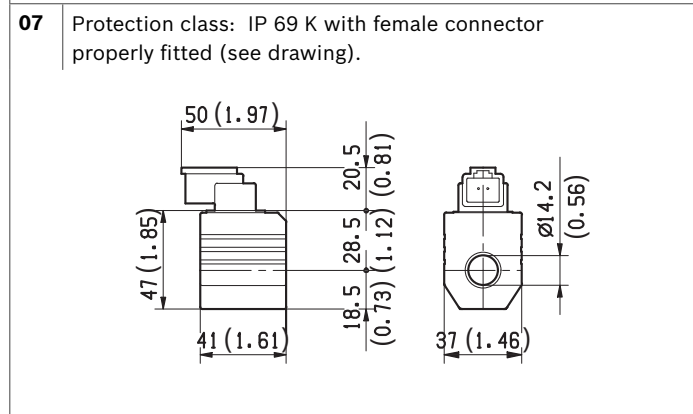
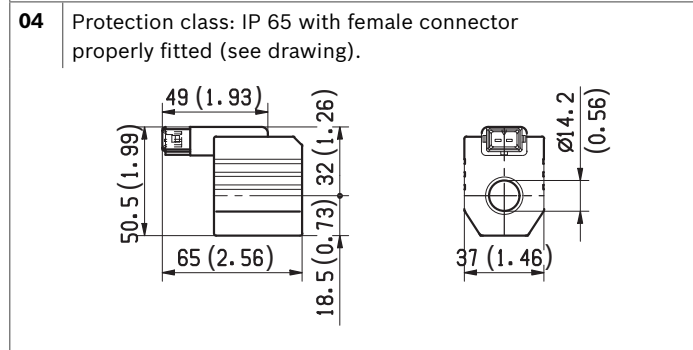
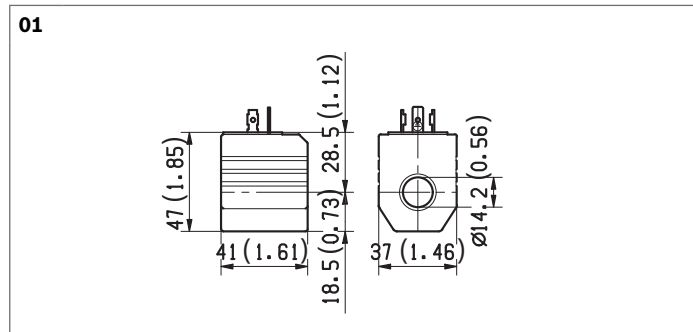
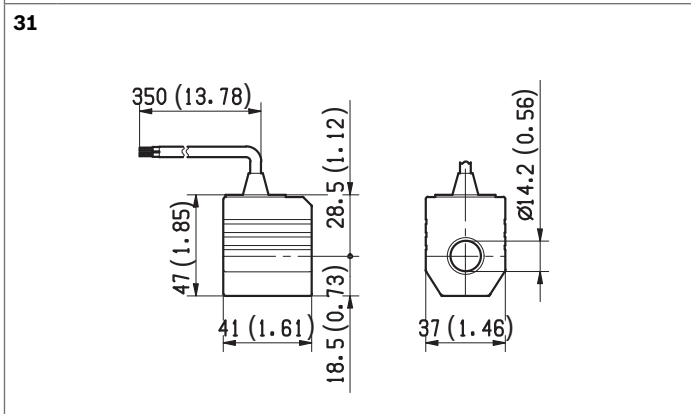
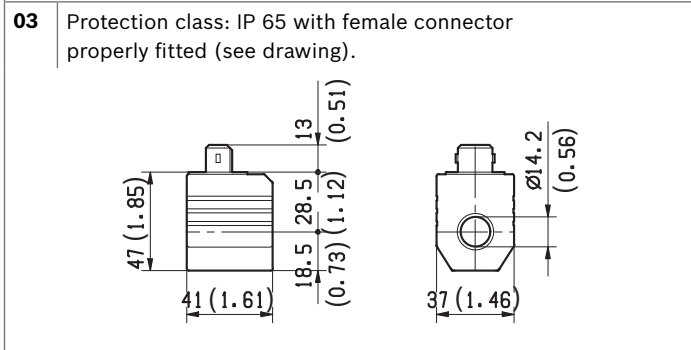
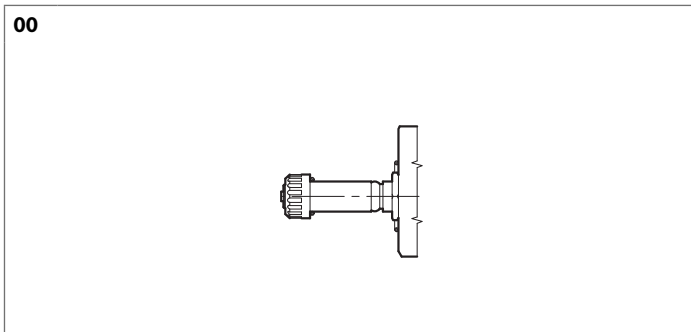
Curve 1: External drain; pilot pressure 18 bar (261 psi)
 Curve 2: Internal drain; pilot pressure 18 bar (261 psi)
 Curve 3: External drain; pilot pressure 30 bar (435 psi)

External dimensions and fittings



- 1 Solenoid tube \varnothing 14 mm (0.55 inch).
- 2 Ring nut for coil locking \varnothing 20.5 mm (0.80 inch).
Torque 3-4 Nm (2.2-3.0 ft-lb).
- 3 Identification label.
- 4 Four through installation holes recommended screws M8 with strength class DIN 8.8.
Torque 20 – 22 Nm (14.6 – 16.2 ft-lb).
- 5 Minimum clearance needed for connector removal.
- 6 Ports P1, P2, C1, C2, C3, C4.
- 7 Pilot and drain ports P, D

Electric connection



Bosch Rexroth Oil Control S.p.A.

Oleodinamica LC Division
Via Artigianale Sedrio, 12
42030 Vezzano sul Crostolo
Reggio Emilia - Italy
Tel. +39 0522 601 801
Fax +39 0522 606 226 / 601 802
compact-hydraulics-cdv@boschrexroth.com
www.boschrexroth.com/compacthydraulics

© This document, as well as the data, specifications and other information set forth in it, are the exclusive property of Bosch Rexroth Oil Control S.p.a.. It may not be reproduced or given to third parties without its consent. The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.
Subject to change.