Check and metering valve flangeable

A-VBC-90-FC

08.47.83 - X - Y - Z

RE 18309-07
Edition: 03.2016
Replaces: 07.2012

Description

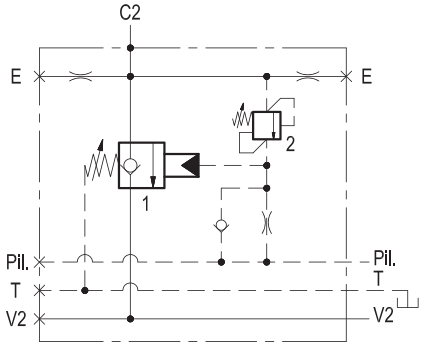
Upstream flow (V2 - C2) to the cylinder is free through a check valve, and reverse flow (C2 - V2) is locked/metered by a leak free spool (1) which provides fine metering in the initial opening stroke. The spool, normally held closed by an adjustable spring force, is remotely controlled by joystick pilot pressure; the pilot pressure required to move the spool is load independent because the spring is vented to Tank. The valve includes a small relief cartridge (2) which senses C2 pressure and opens under overload or shock conditions in order to pilot wide open the metering spool and to allow cylinder pressure to be relieved downstream through the main hose (V2) and through the main control valve. For better safety and compact assembly, the C2 port is gasket mounted directly on the actuator.

Technical data

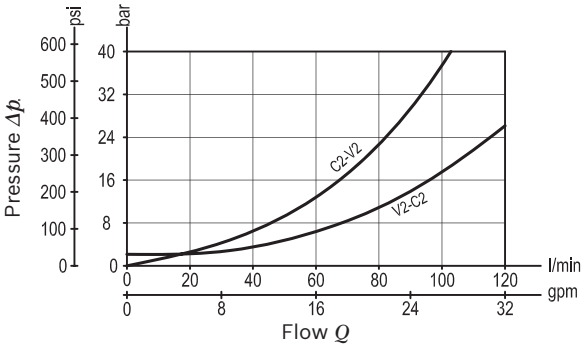
Max. operating pressure	420 bar (6000 psi)
Max. flow	120 l/min. (32 gpm)
Weight	4 kg (8.8 lbs)
Flange seal kit [1]	E00000000000001 (R930004531)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
This valve is designed to be pipe mounted on boom cylinders of hydraulic excavators, and, with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Note: the Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “E” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1] Seals for 10 valves.



Characteristic curve



Ordering code

08.47.83	X	Y	Z

Check and metering valve

Adjustments

03 Leakproof inner hex. socket screw

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
40	Valve 1	7-15 (100-220)	4 (58)	7.5 (109) “cracking”
	Valve 2	350-460 (5000-6600)	228 (3306)	350 (5000) “5 l/min”

Port sizes	V2	C2	E-Pil-T
63	G 1/2	1/2” SAE 6000	G 1/4

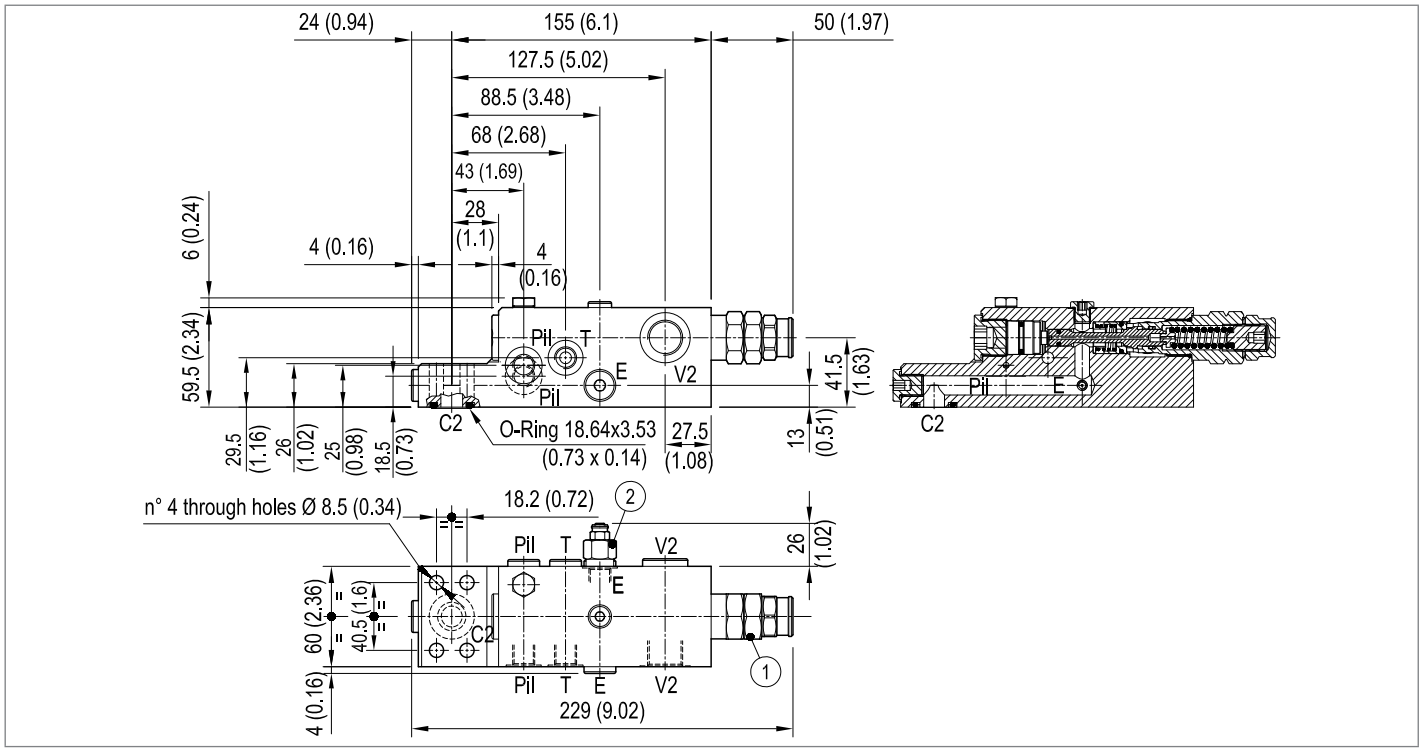
Tamper resistant cap
ordering code 11.04.31.001
Mat. no. R930000777
for Valve 2

Preferred types

Type	Material number
08478303634000B	R930043634

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

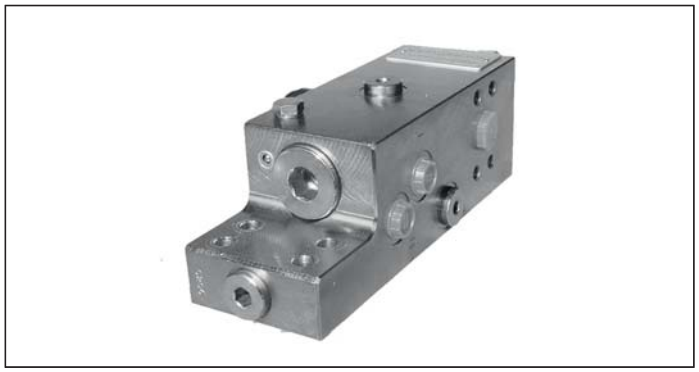
Bosch Rexroth Oil Control S.p.A., RE 18309-07/03.2016

Check and metering valve flangeable

A-VBC-33-FC

08.49.26 - X - Y - Z

RE 18309-08
Edition: 03.2016
Replaces: 04.2010



Description

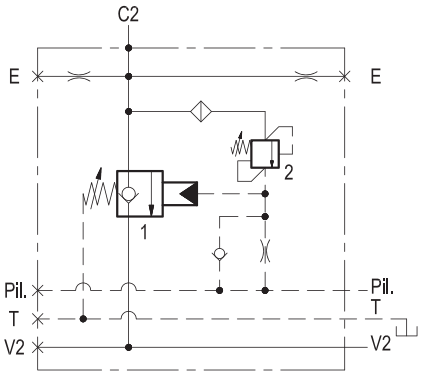
Upstream flow (V2 - C2) to the cylinder is free through a check valve, and reverse flow (C2 - V2) is locked/metered by a leak free spool (1) which provides fine metering in the initial opening stroke. The spool, normally held closed by an adjustable spring force, is remotely controlled by joy-stick pilot pressure; the pilot pressure required to move the spool is load independent because the spring is vented to Tank. The valve includes a small relief cartridge (2) which senses C2 pressure and opens under overload or shock conditions in order to pilot wide open the metering spool and to allow cylinder pressure to be relieved downstream through the main hose (V2) and through the main control valve. For better safety and compact assembly, the C2 port is gasket mounted directly on the actuator.

Technical data

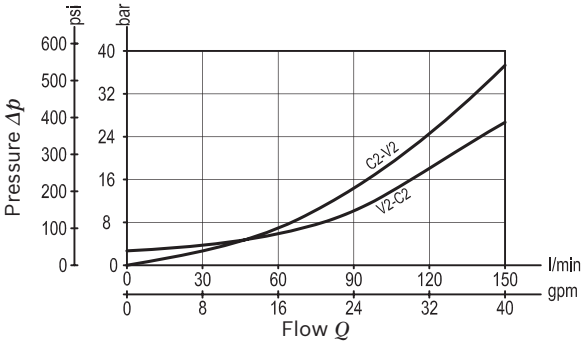
Max. operating pressure	420 bar (6000 psi)
Max. flow	150 l/min. (40 gpm)
Weight	6 kg (13.2 lbs)
Flange seal kit [1)]	E00000000000001 (R930004531)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
This valve is designed to be pipe mounted on boom cylinders of hydraulic excavators, and, with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Note: the Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “E” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1)] Seals for 10 valves.



Characteristic curve



Ordering code

08.49.26	X	Y	Z

Check and metering valve flangeable

Pilot ratio

03	Leakproof inner hex. socket screw

Port sizes	V2 - C2	E - Pil - T
63	1/2” SAE 6000	G 1/4

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
11	Valve 1	6-15 (87-220)	5 (73)	7.5 (109) “cracking”
	Valve 2	350-460 (5000-6000)	228 (3306)	350 (5000) “5 l/min”

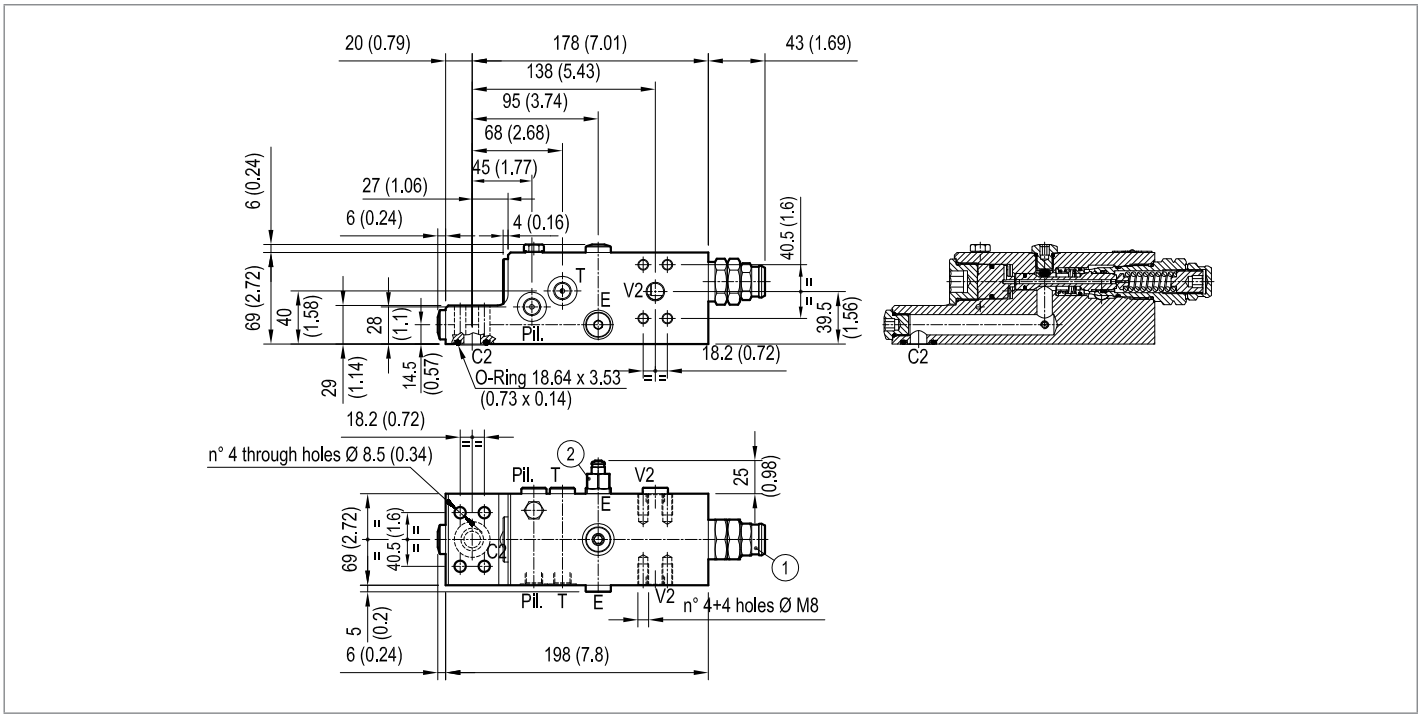
Tamper resistant cap
code 11.04.30.001 Mat. no. R930000194 for Valve 1
code 11.04.31.001 Mat. no. R930000777 for Valve 2

Preferred types

Type	Material number
08492603631100A	R930050749

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

Bosch Rexroth Oil Control S.p.A., RE 18309-08/03.2016

Check and metering valve flangeable

A-VBC-33-FC

08.47.84 - X - Y - Z

RE 18309-09
Edition: 03.2016
Replaces: 07.2011

Description

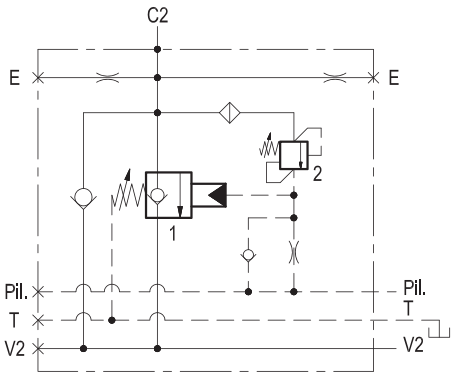
Upstream flow (V2 - C2) to the cylinder is free through a check valve, and reverse flow (C2 - V2) is locked/metered by a leak free spool (1) which provides fine metering in the initial opening stroke. The spool, normally held closed by an adjustable spring force, is remotely controlled by joy-stick pilot pressure; the pilot pressure required to move the spool is load independent because the spring is vented to Tank. The valve includes a small relief cartridge (2) which senses C2 pressure and opens under overload or shock conditions in order to pilot wide open the metering spool and to allow cylinder pressure to be relieved downstream through the main hose (V2) and through the main control valve. For better safety and compact assembly, the C2 port is gasket mounted directly on the actuator.

Technical data

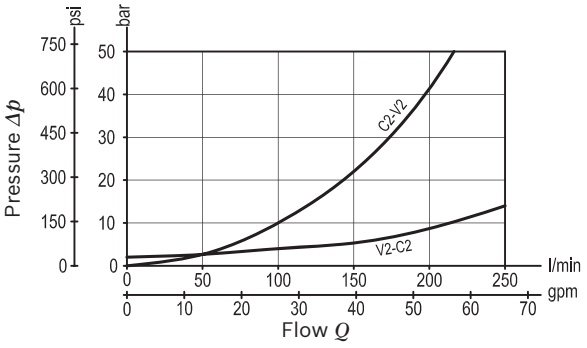
Max. operating pressure	420 bar (6000 psi)
Max. flow	250 l/min. (66 gpm)
Weight	8 kg (17.6 lbs)
Flange seal kit [1]	E00000000000002 (R930004532)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
This valve is designed to be pipe mounted on boom cylinders of hydraulic excavators, and, with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Note: the Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “E” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1] Seals for 10 valves.



Characteristic curve



Ordering code

08.47.84	X	Y	Z

Check and metering valve flangeable

Pilot ratio

03	Leakproof inner hex. socket screw

Port sizes	V2 - C2	E - Pil - T
72	3/4” SAE 6000	G 1/4

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
40	Valve 1	6-15 (87-220)	5 (73)	7.5 (109) “cracking”
	Valve 2	350-460 (5000-6000)	228 (3306)	350 (5000) “5 l/min”

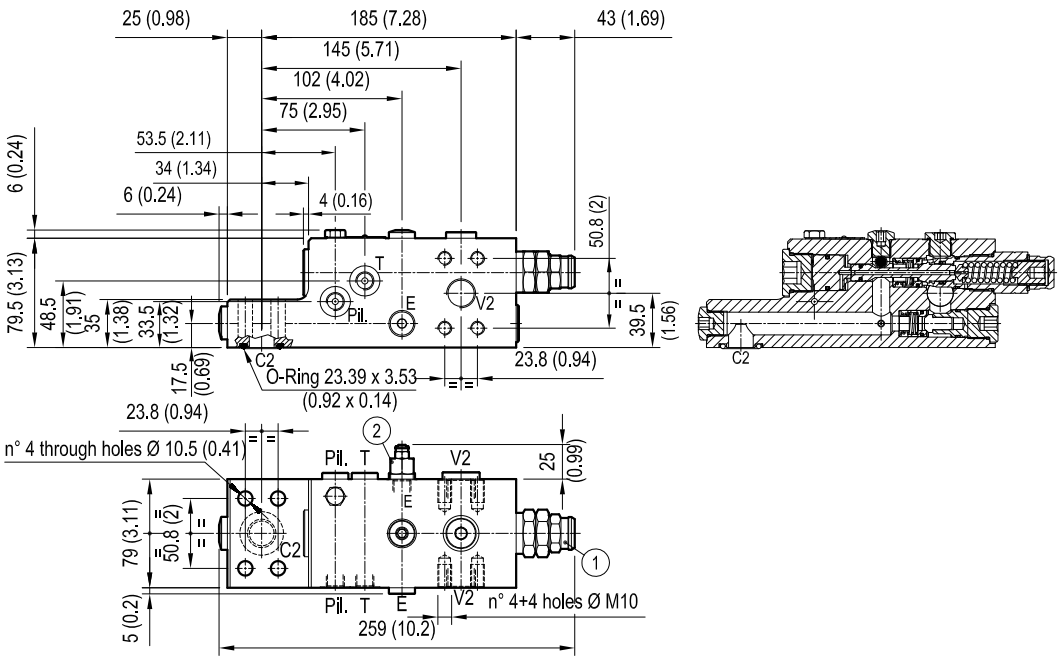
Tamper resistant cap
code 11.04.30.001 Mat. no. R930000194 for Valve 1
code 11.04.31.001 Mat. no. R930000777 for Valve 2

Preferred types

Type	Material number
08478403724000C	R930006459

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

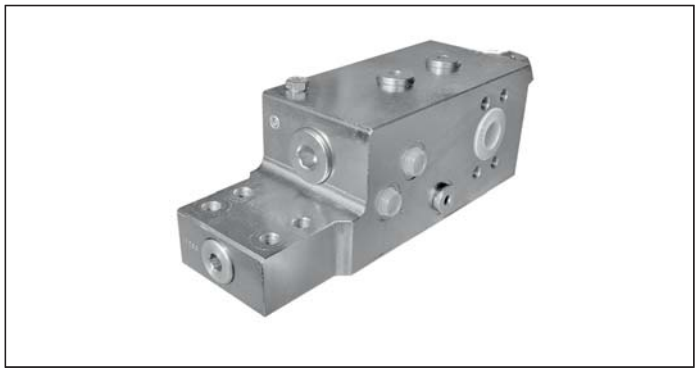
Bosch Rexroth Oil Control S.p.A., RE 18309-09/03.2016

Check and metering valve flangeable

A-VBC-42-FC

08.47.85 - X - 72 - Z

RE 18309-10
Edition: 03.2016
Replaces: 04.2010



Description

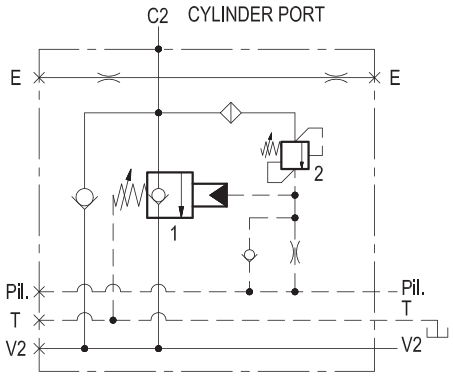
Upstream flow (V2 - C2) to the cylinder is free through the 2 check valves, and reverse flow (C2 - V2) is locked/ metered by a leak free spool (1) which provides fine metering in the initial opening stroke. The spool, normally held closed by an adjustable spring force, is remotely controlled by joystick pilot pressure; the pilot pressure required to move the spool is load independent because the spring is vented to Tank. The valve includes a small relief cartridge (2) which senses C2 pressure and opens under overload or shock conditions in order to pilot wide open the metering spool and to allow cylinder pressure to be relieved downstream through the main hose (V2) and through the main control valve. For better safety and compact assembly, the C2 port is gasket mounted directly on the actuator.

Technical data

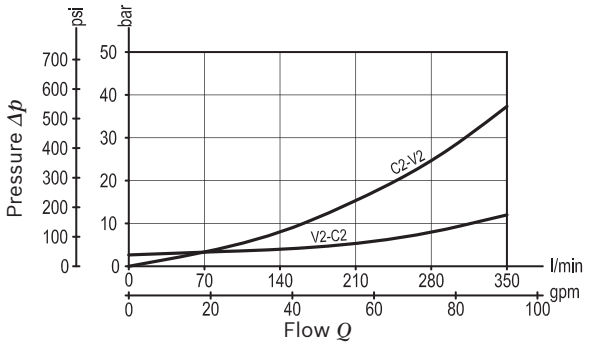
Max. operating pressure	420 bar (6000 psi)
Max. flow	350 l/min. (93 gpm)
Weight	12.2 kg (26.9 lbs)
Flange seal kit [1)]	E00000000000002 (R930004532)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
This valve is designed to be pipe mounted on boom cylinders of hydraulic excavators, and, with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Note: the Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “E” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1)] Seals for 10 valves.



Characteristic curve



Ordering code

08.47.85	X	72	Z

Check and metering valve flangeable

Pilot ratio

= 03 Leakproof inner hex. socket screw

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
= 60	Valve 1	6-20 (87-290)	5.7 (83)	7.5 (109) “cracking”
	Valve 2	350-460 (5000-6000)	228 (3306)	350 (5000) “5 l/min”

Port sizes	V2 - C2	E - Pil - T
	3/4” SAE 6000	G 1/4

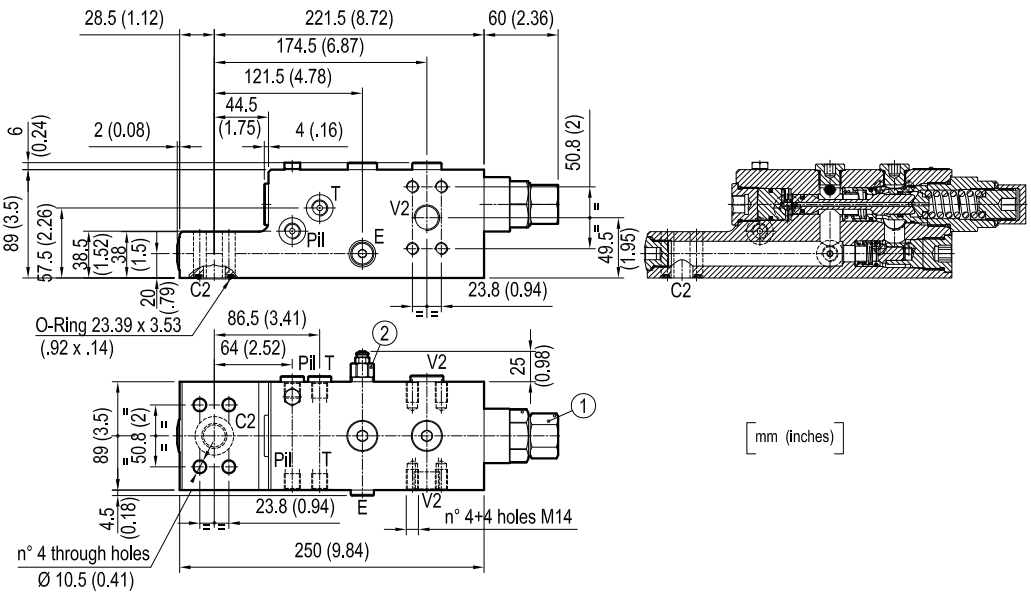
Tamper resistant cap
ordering code 11.04.31.001
Mat. no. R930000777
for Valve 2

Preferred types

Type	Material number
08478503726000E	R930050747

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-mcv@boschrexroth.com
www.boschrexroth.com/compacthydraulics

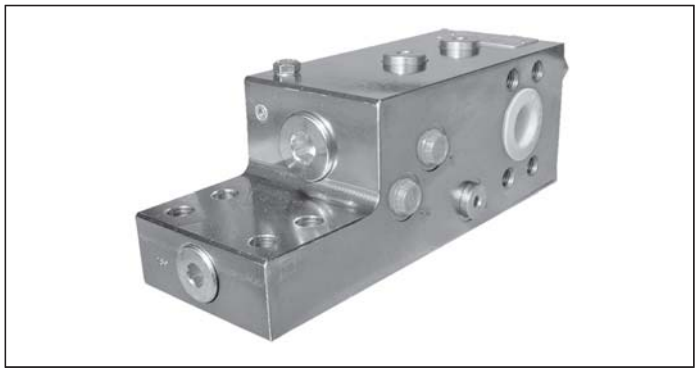
Bosch Rexroth Oil Control S.p.A., RE 18309-10/03.2016

Check and metering valve flangeable

A-VBC-42-FC

08.47.85 - X - 73 - Z

RE 18309-11
Edition: 03.2016
Replaces: 07.2011



Description

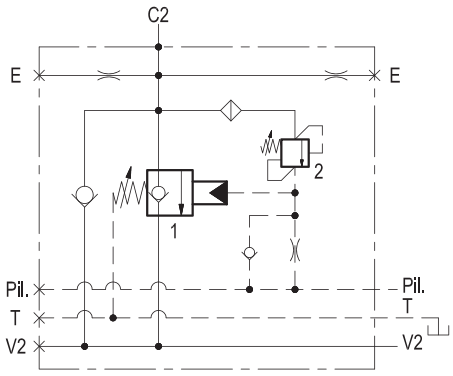
Upstream flow (V2 - C2) to the cylinder is free through a check valve, and reverse flow (C2 - V2) is locked/metered by a leak free spool (1) which provides fine metering in the initial opening stroke. The spool, normally held closed by an adjustable spring force, is remotely controlled by joy-stick pilot pressure; the pilot pressure required to move the spool is load independent because the spring is vented to Tank. The valve includes a small relief cartridge (2) which senses C2 pressure and opens under overload or shock conditions in order to pilot wide open the metering spool and to allow cylinder pressure to be relieved downstream through the main hose (V2) and through the main control valve. For better safety and compact assembly, the C2 port is gasket mounted directly on the actuator.

Technical data

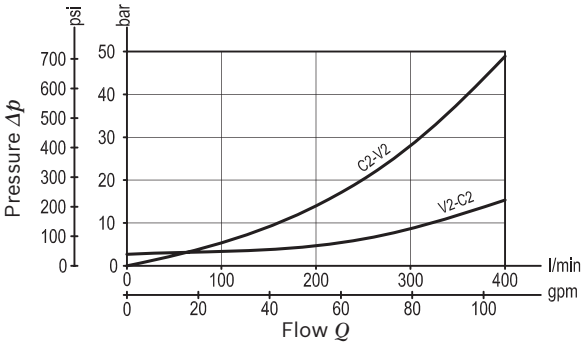
Max. operating pressure	420 bar (6000 psi)
Max. flow	400 l/min. (106 gpm)
Weight	12 kg (26.5 lbs)
Flange seal kit [1)]	E00000000000003 (R930004533)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
This valve is designed to be pipe mounted on boom cylinders of hydraulic excavators, and, with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Note: the Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “E” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1)] Seals for 10 valves.



Characteristic curve



Ordering code

08.47.85	X	73	Z

Check and metering valve flangeable

Pilot ratio

03	Leakproof inner hex. socket screw

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
40	Valve 1	6-15 (87-220)	3.5 (51)	7.5 (109) “cracking”
	Valve 2	350-460 (5000-6000)	228 (3306)	350 (5000) “5 l/min”

Port sizes	V2 - C2	E - Pil - T
73	1” SAE 6000	G 1/4

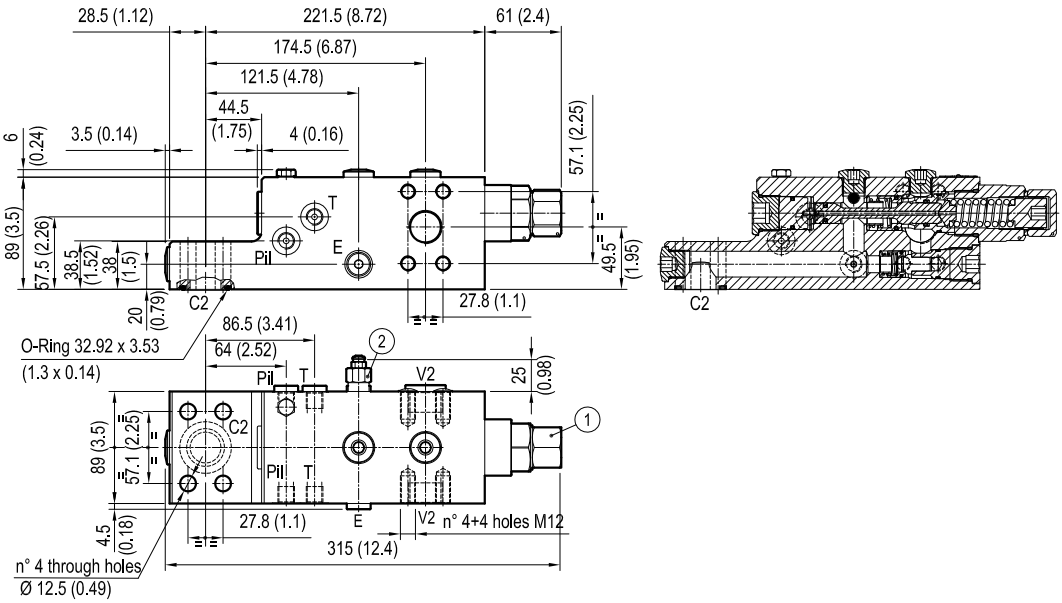
Tamper resistant cap
ordering code 11.04.31.001
Mat. no. R930000777
for Valve 2

Preferred types

Type	Material number
08478503734000C	R930006450

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

Bosch Rexroth Oil Control S.p.A., RE 18309-11/03.2016

Check and metering valve flangeable

A-VBC-42-FC

08.47.85 - X - 64 - Z

RE 18309-12
Edition: 03.2016
Replaces: 07.2011

Description

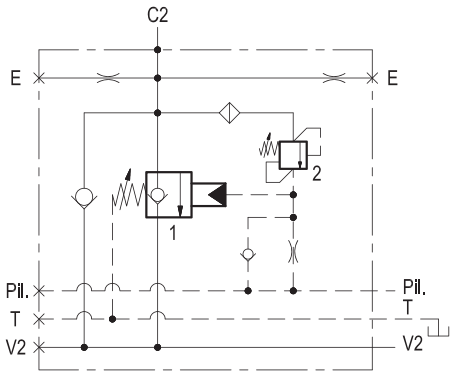
Upstream flow (V2 - C2) to the cylinder is free through a check valve, and reverse flow (C2 - V2) is locked/metered by a leak free spool (1) which provides fine metering in the initial opening stroke. The spool, normally held closed by an adjustable spring force, is remotely controlled by joy-stick pilot pressure; the pilot pressure required to move the spool is load independent because the spring is vented to Tank. The valve includes a small relief cartridge (2) which senses C2 pressure and opens under overload or shock conditions in order to pilot wide open the metering spool and to allow cylinder pressure to be relieved downstream through the main hose (V2) and through the main control valve. For better safety and compact assembly, the C2 port is gasket mounted directly on the actuator.

Technical data

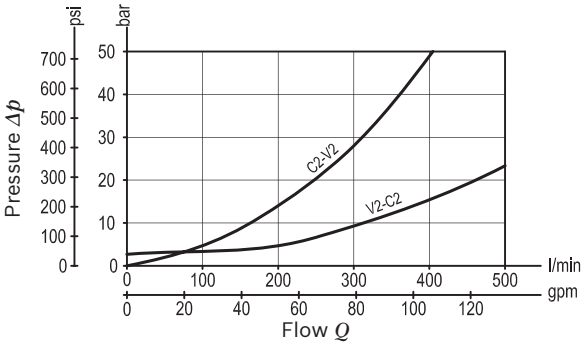
Max. operating pressure	420 bar (6000 psi)
Max. flow	500 l/min. (132 gpm)
Weight	15 kg (33.1 lbs)
Flange seal kit [1]	E00000000000004 (R930004534)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
This valve is designed to be pipe mounted on boom cylinders of hydraulic excavators, and, with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Note: the Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “E” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1] Seals for 10 valves.



Characteristic curve



Ordering code

08.47.85	X	64	Z

Check and metering valve flangeable

Pilot ratio

03	Leakproof inner hex. socket screw

Port sizes	V2 - C2	E - Pil - T
64	1 1/4” SAE 6000	G 1/4

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
40	Valve 1	6-15 (87-220)	3.5 (51)	7.5 (109) “cracking”
	Valve 2	350-460 (5000-6700)	228 (3306)	350 (5000) “5 l/min”

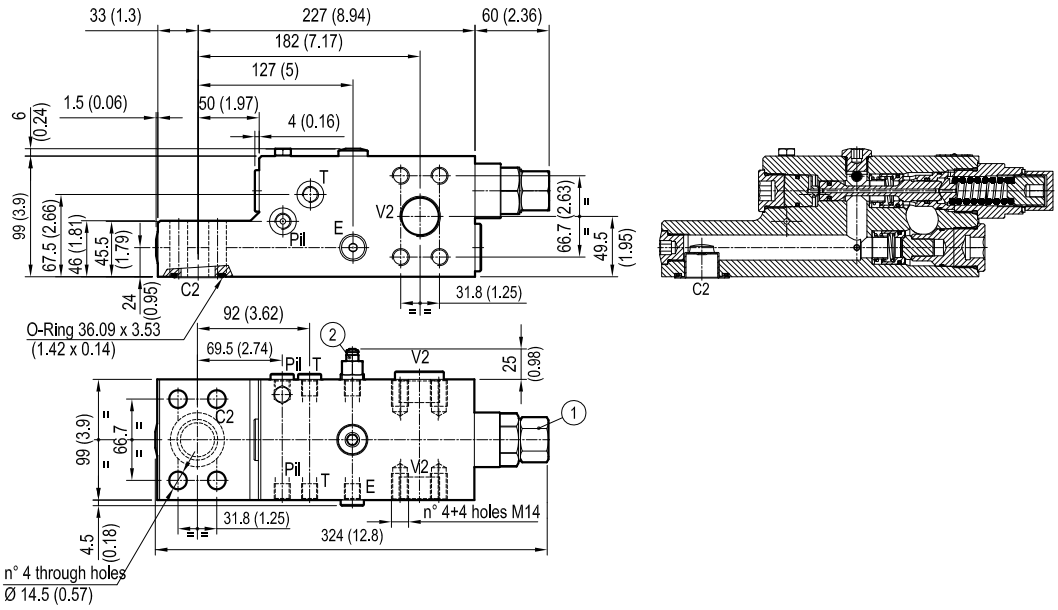
Tamper resistant cap
ordering code 11.04.31.001
Mat. no. R930000777
for Valve 2

Preferred types

Type	Material number
08478503644000D	R930050746

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

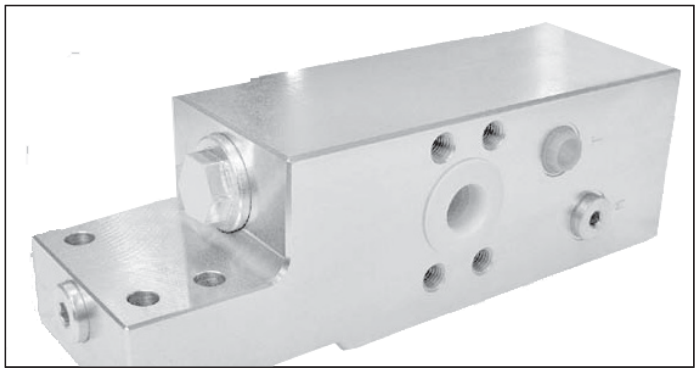
Bosch Rexroth Oil Control S.p.A., RE 18309-12/03.2016

Check and metering valve flangeable

A-VBCN-15-FC

08.35.23.07 - Y - Z

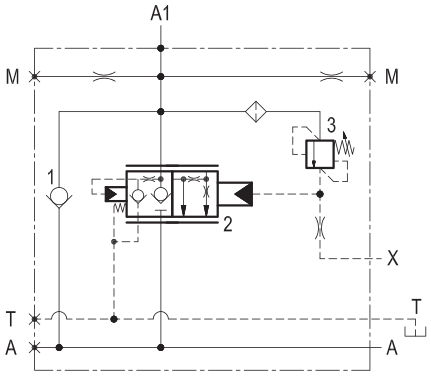
RE 18309-13
Edition: 03.2016
Replaces: 07.2012



Description

Unrestricted upstream flow (A – A1) to the cylinder is possible through the check valve (1), while downstream flow (A1 – A) is locked by the leak free main spool (2) which is held closed by the spring and by the load induced pressure. With pilot pressure at X (joystick), the spool (2) is first vented to tank then it is remotely controlled and it slides to provide metering for the downstream flow; after the initial venting, the pilot pressure required to move the spool is load independent. The downstream (A1 – A) metering curve and the cracking pressure are factory designed and set for the specific type of machine and cannot be adjusted. The valve includes a small relief cartridge (3) which senses the A1 pressure (load induced) and opens under overload or shock conditions in order to pilot fully open the main spool (2): this allows any excess of pressure at A1 to be relieved downstream through A. For better safety and compact assembly, the A1 port is gasket mounted directly on the actuator.

Note: port identified with M are not protected with calibrated orifice but in direct connection with pressure channels.



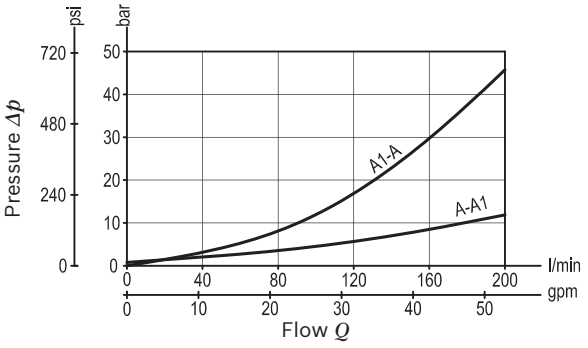
Technical data

Max. operating pressure	420 bar (6000 psi)
Max. flow	200 /min. (53 gpm)
Weight	10 kg (22 lbs)
Flange seal kit [1]	E00000000000002 (R930004532)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
MTTFd	150 years
The Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “M” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
This valve with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1] Seals for 10 valves.

Characteristic curve



Ordering code

08.35.23	07	Y	Z

Check and metering valve flangeable

07 Spool type

Port sizes	A - A1	M-T-X
72	3/4 SAE 6000	G 1/4

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
46	Valve 2			7.5 (109) “cracking”
	Valve 3	350-460 (5000-6700)	228 (3306)	350 (5000) “5 l/min”

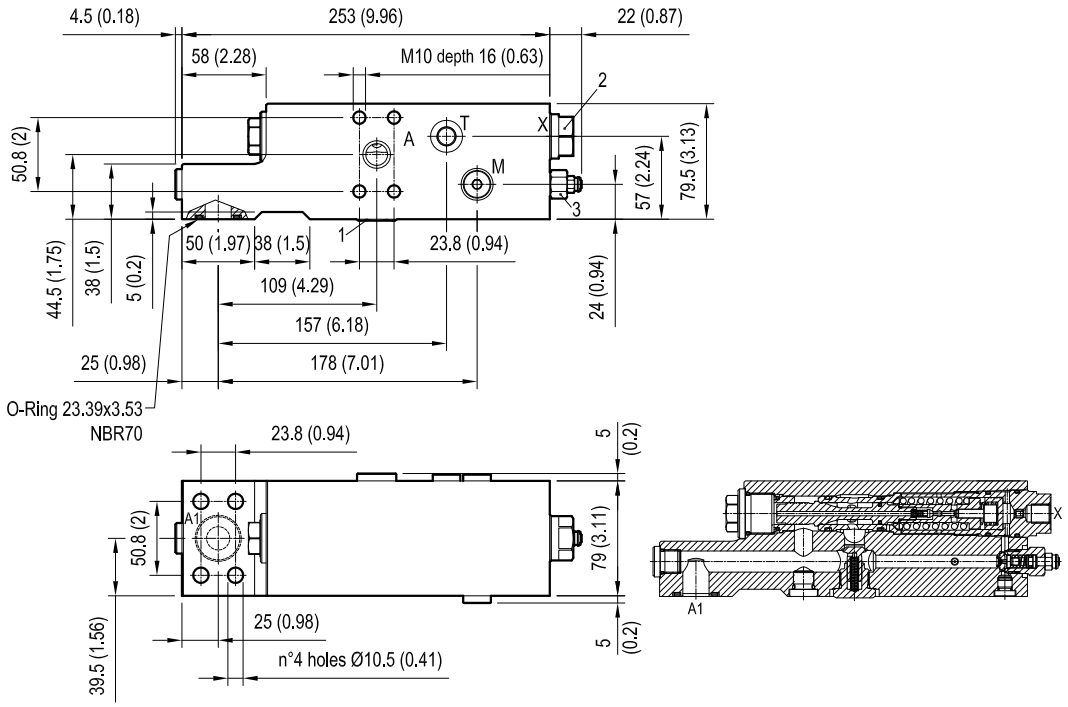
Tamper resistant cap
ordering code 11.04.31.001
Mat. no. R930000777
for Valve 3

Preferred types

Type	Material number
083523077246000	R930003567

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

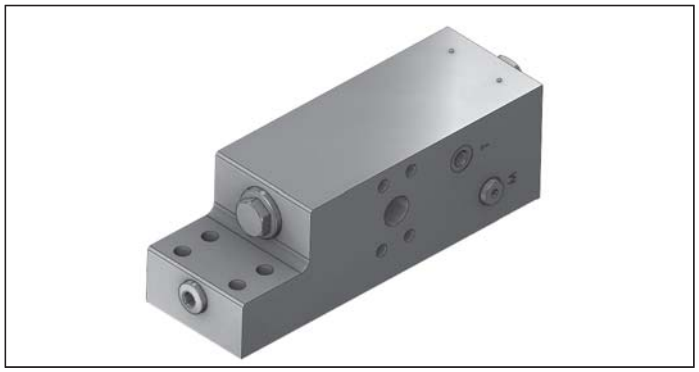
Bosch Rexroth Oil Control S.p.A., RE 18309-13/03.2016

Check and metering valve flangeable

A-VBCN-18-FC

08.37.18.18 - Y - Z

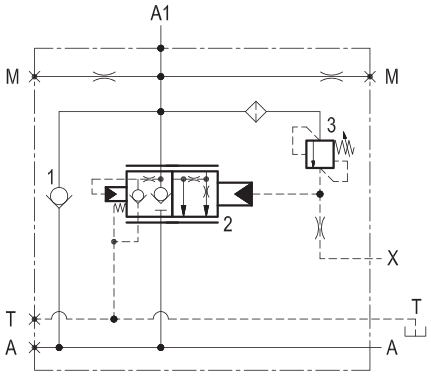
RE 18309-14
Edition: 03.2016
Replaces: 07.2012



Description

Unrestricted upstream flow (A – A1) to the cylinder is possible through the check valve (1), while downstream flow (A1 – A) is locked by the leak free main spool (2) which is held closed by the spring and by the load induced pressure. With pilot pressure at X (joystick), the spool (2) is first vented to tank then it is remotely controlled and it slides to provide metering for the downstream flow; after the initial venting, the pilot pressure required to move the spool is load independent. The downstream (A1 – A) metering curve and the cracking pressure are factory designed and set for the specific type of machine and cannot be adjusted. The valve includes a small relief cartridge (3) which senses the A1 pressure (load induced) and opens under overload or shock conditions in order to pilot fully open the main spool (2): this allows any excess of pressure at A1 to be relieved downstream through A. For better safety and compact assembly, the A1 port is gasket mounted directly on the actuator.

Note: port identified with M are not protected with calibrated orifice but in direct connection with pressure channels.



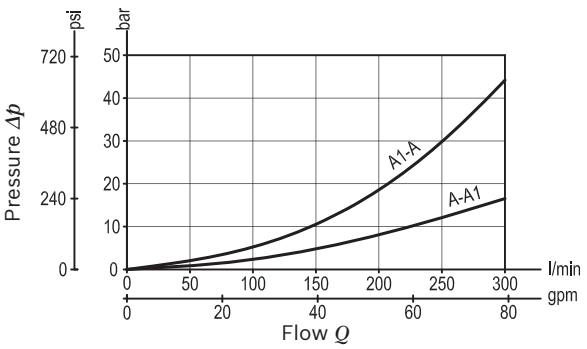
Technical data

Max. operating pressure	420 bar (6000 psi)
Max. flow	300 /min. (79 gpm)
Weight	19 kg (42 lbs)
Flange seal kit [1)]	E00000000000003 (R930004533)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
The Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “M” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
This valve with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1)] Seals for 10 valves.

Characteristic curve



Ordering code

08.37.18	18	Y	Z

Check and metering valve flangeable

18 Spool type

Port sizes	A - A1	M-T-X
73	1 SAE 6000	G 1/4

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
46	Valve 2			7.5 (109) “cracking”
	Valve 3	350-460 (5000-6700)	228 (3306)	350 (5000) “5 l/min”

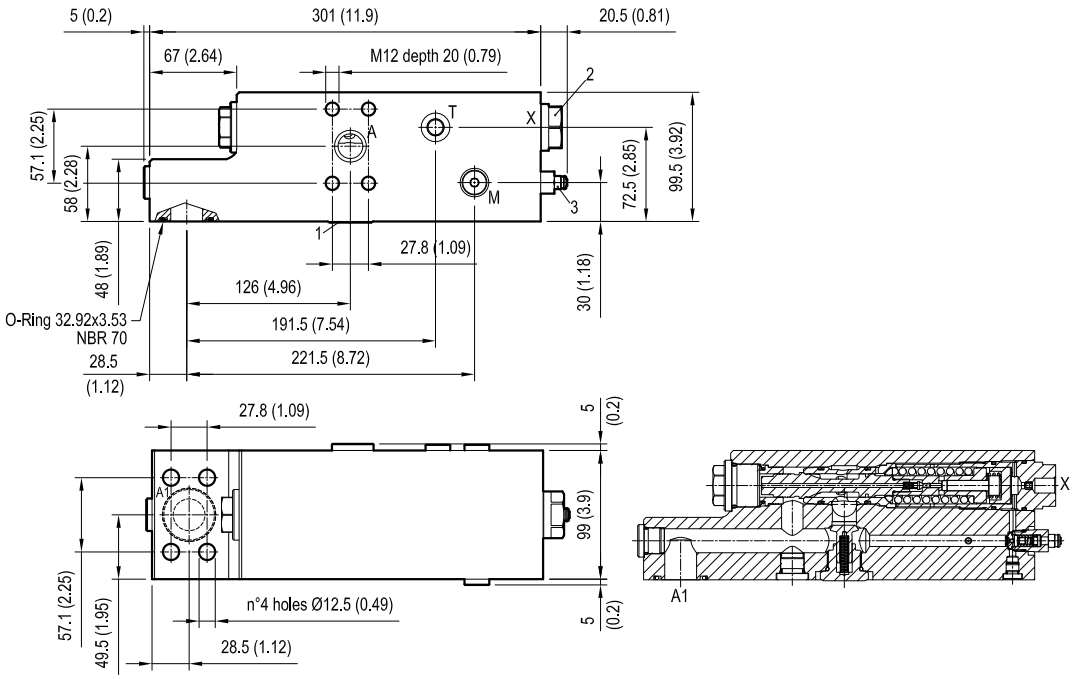
Tamper resistant cap
ordering code 11.04.31.001
Mat. no. R930000777
for Valve 3

Preferred types

Type	Material number
083718187346000	R930003755

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

Bosch Rexroth Oil Control S.p.A., RE 18309-14/03.2016

Check and metering valve flangeable

A-VBCN-15-DX-RE-FC

08.39.64 - X - Y - Z

RE 18309-15
Edition: 03.2016
Replaces: 07.2012

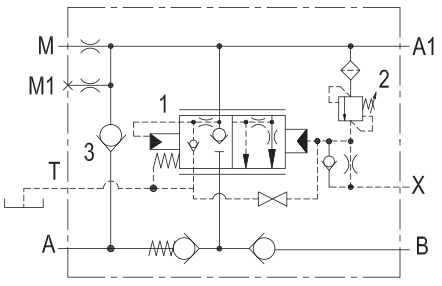
Description
Unrestricted upstream flow (A – A1) to the cylinder is possible through the check valve (1), while downstream flow (A1 – A) is locked by the leak free main spool (2) which is held closed by the spring and by the load induced pressure. With pilot pressure at X (joystick), the spool (2) is first vented to tank then it is remotely controlled and it slides to provide metering for the downstream flow; after the initial venting, the pilot pressure required to move the spool is load independent. The downstream (A1 – A) metering curve and the cracking pressure are factory designed and set for the specific type of machine and cannot be adjusted. The valve includes a small relief cartridge (3) which senses the A1 pressure (load induced) and opens under overload or shock conditions in order to pilot fully open the main spool (2): this allows any excess of pressure at A1 to be relieved downstream through A. For better safety and compact assembly, the A1 port is gasket mounted directly on the actuator.

Technical data

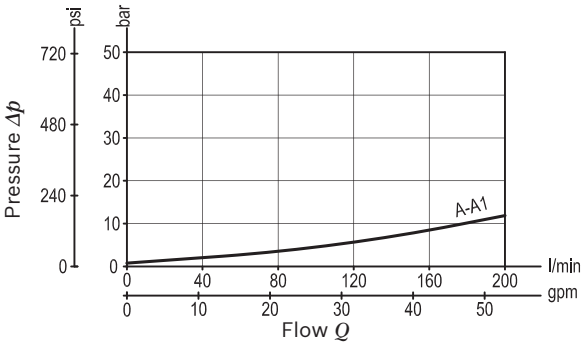
Max. operating pressure	420 bar (6000 psi)
Max. flow	200 /min. (53 gpm)
Weight	12.6 kg (27.8 lbs)
Flange seal kit [1)]	E00000000000002 (R930004532)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
MTTFd	150 years
The Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “M” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
This valve with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1)] Seals for 10 valves.



Characteristic curve



Ordering code

08.39.64	X	Y	Z

Check and metering valve flangeable

07 Spool type

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
46	Valve 1			7.5 (109) “cracking”
	Valve 2	350-460 (5000-6700)	228 (3306)	350 (5000) “5 l/min”

Port sizes	A - A1	M-M1-T-X	B
72	3/4 SAE 6000	G 1/4	1/2 SAE 6000

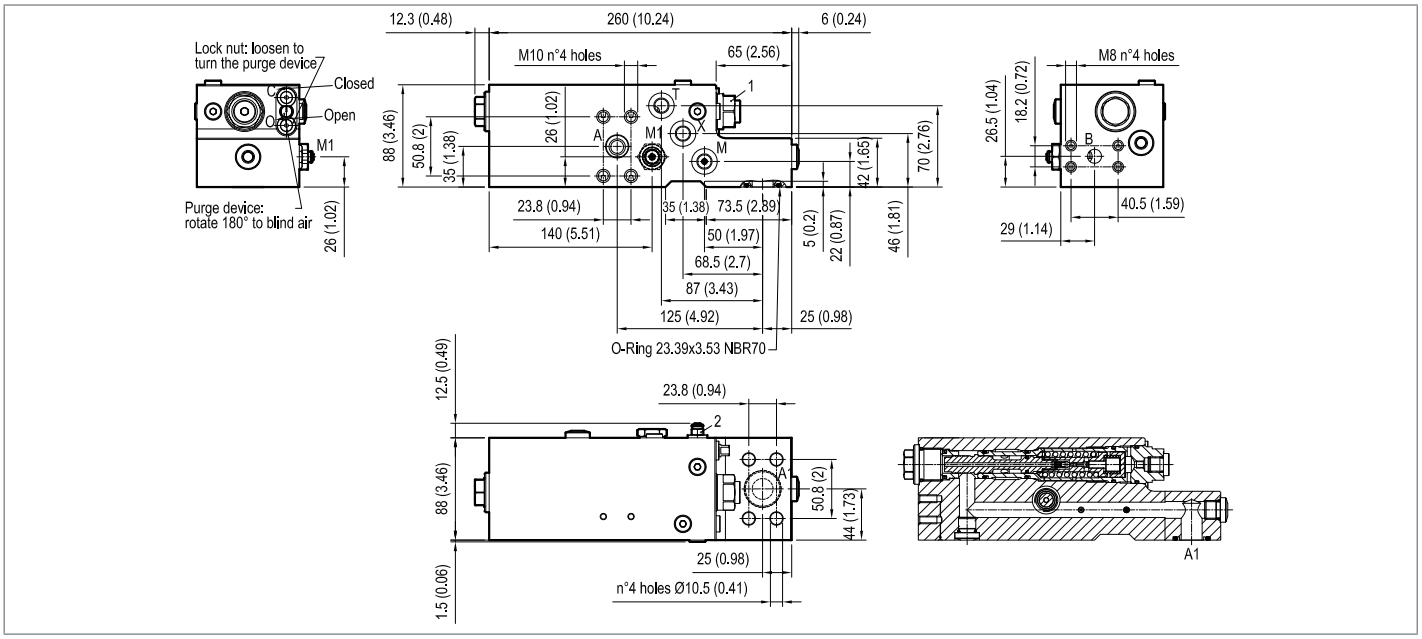
Tamper resistant cap
ordering code 11.04.31.001
Mat. no. R930000777
for Valve 2

Preferred types

Type	Material number
083964077246000	R930007044

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

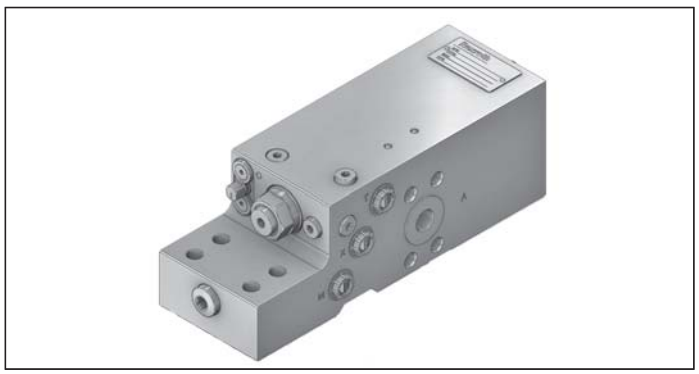
Bosch Rexroth Oil Control S.p.A., RE 18309-15/03.2016

Check and metering valve flangeable

A-VBCN-15-SX-RE-FC

08.39.65 - X - Y - Z

RE 18309-16
Edition: 03.2016
Replaces: 07.2012



Description

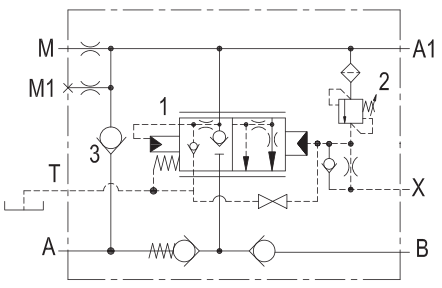
Unrestricted upstream flow (A – A1) to the cylinder is possible through the check valve (1), while downstream flow (A1 – A) is locked by the leak free main spool (2) which is held closed by the spring and by the load induced pressure. With pilot pressure at X (joystick), the spool (2) is first vented to tank then it is remotely controlled and it slides to provide metering for the downstream flow; after the initial venting, the pilot pressure required to move the spool is load independent. The downstream (A1 – A) metering curve and the cracking pressure are factory designed and set for the specific type of machine and cannot be adjusted. The valve includes a small relief cartridge (3) which senses the A1 pressure (load induced) and opens under overload or shock conditions in order to pilot fully open the main spool (2): this allows any excess of pressure at A1 to be relieved downstream through A. For better safety and compact assembly, the A1 port is gasket mounted directly on the actuator.

Technical data

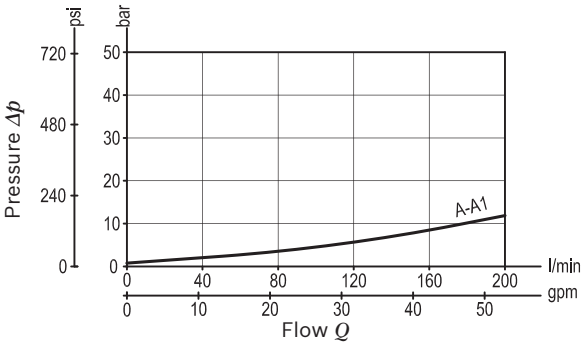
Max. operating pressure	420 bar (6000 psi)
Max. flow	200 /min. (53 gpm)
Weight	12.6 kg (27.8 lbs)
Flange seal kit [1)]	E00000000000002 (R930004532)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
The Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “M” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
This valve with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Other technical data	see data sheet 18350-50
Relief setting: at least 1.3 times the highest expected load.	

Note: for applications outside these parameters, please consult us.

[1)] Seals for 10 valves.



Characteristic curve



Ordering code

08.39.65	X	Y	Z

Check and metering valve flangeable

07 Spool type

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
46	Valve 2			7.5 (109) “cracking”
	Valve 3	350-460 (5000-6000)	228 (3306)	350 (5000) “5 l/min”

Port sizes	A - A1	M-M1-T-X	B
72	3/4 SAE 6000	G 1/4	1/2 SAE 6000

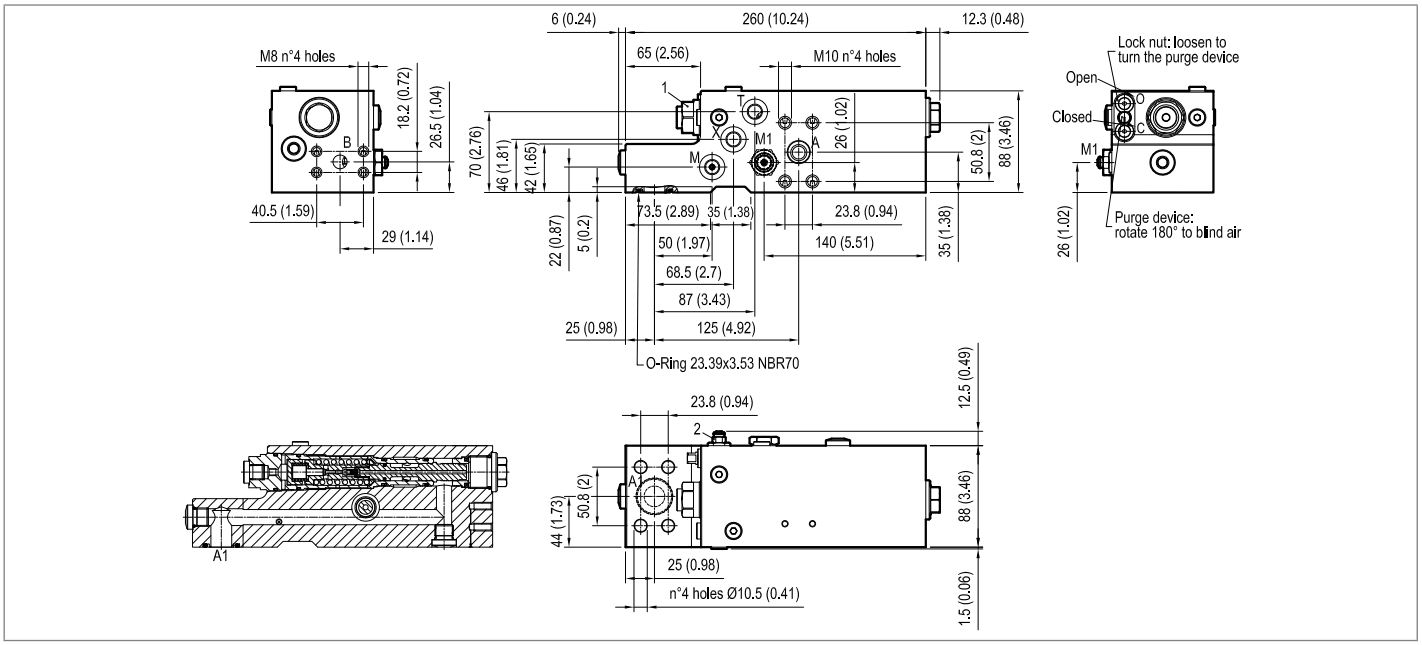
Tamper resistant cap
ordering code 11.04.31.001
Mat. no. R930000777
for Valve 2

Preferred types

Type	Material number
083965077246000	R930007045

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

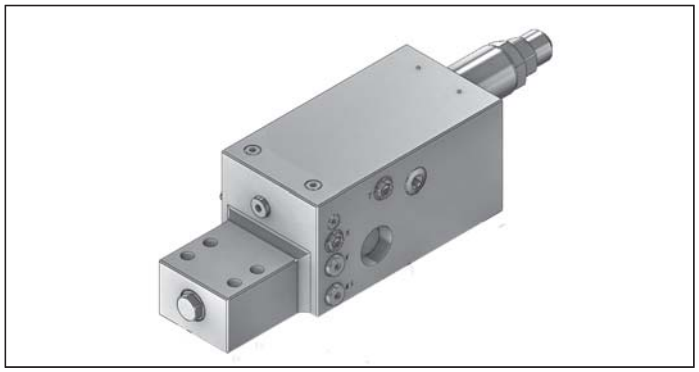
Bosch Rexroth Oil Control S.p.A., RE 18309-16/03.2016

Check and metering valve flangeable

A-VBCN-22-DX-RE-FC

08.39.38 - X - Y - Z

RE 18309-18
Edition: 03.2016
Replaces: 07.2012



Description

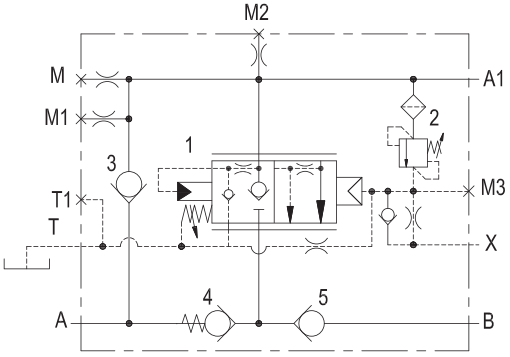
Unrestricted upstream flow (A – A1) to the cylinder is possible through the check valve (3), while downstream flow (A1 – A ,or A1 – B) is locked by the leak free main spool (1) which is held closed by the spring and by the load induced pressure. With pilot pressure at X (joystick), the spool (1) is first vented to tank then it is remotely controlled and it slides to provide fine metering for the downstream flow; after the initial venting, the pilot pressure required to move the spool is load independent. The return flow (A1 – A) is slightly pressurized by the check valve (4) and is available to re-fill the opposite end of the cylinder through the check valve (5) and port (B), in order to prevent cavitation. The valve includes a small relief cartridge (2) which senses the A1 pressure (load induced) and opens under overload or shock conditions in order to pilot fully open the main spool (1): this allows any excess of pressure at A1 to be relieved downstream through A. For better safety and compact assembly, the A1 port is flanged (gasket mounted) directly on the actuator.

Technical data

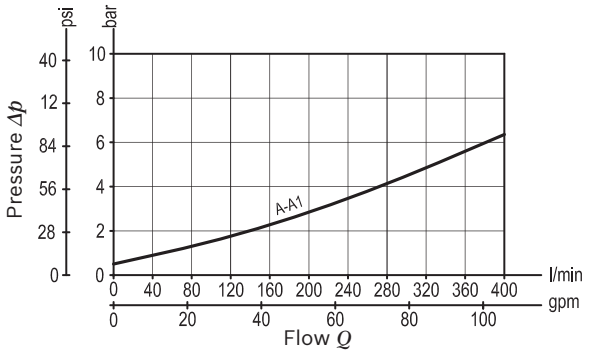
Max. operating pressure	420 bar (6000 psi)
Max. flow	400 /min. (106 gpm)
Weight	26 kg (57.3 lbs)
Flange seal kit [1)]	E00000000000003 (R930004533)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
The Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “M” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
This valve with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1)] Seals for 10 valves.



Characteristic curve



Ordering code

08.39.38	X	Y	Z

Check and metering valve flangeable

22	Spool type

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
46	Valve 1			7.5 (109) “cracking”
	Valve 2	350-460 (5000-6700)	228 (3306)	350 (5000) “5 l/min”

Port sizes	A - A1	M-M1-M2-M3-T-T1-X	B
73	1 SAE 6000	G 1/4	3/4 SAE 6000

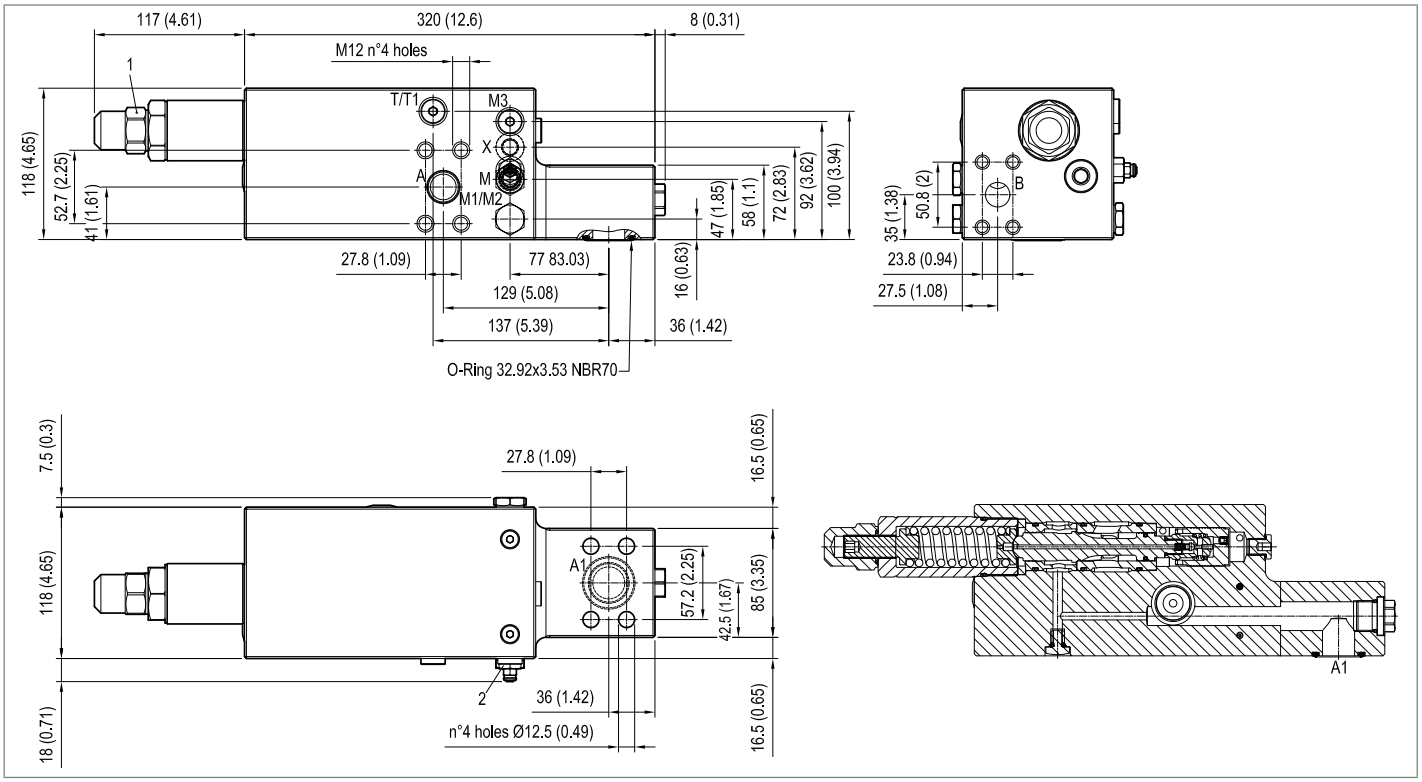
Tamper resistant cap
ordering code 11.04.31.001
Mat. no. R930000777
for Valve 2

Preferred types

Type	Material number
083938227346000	R930007073

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

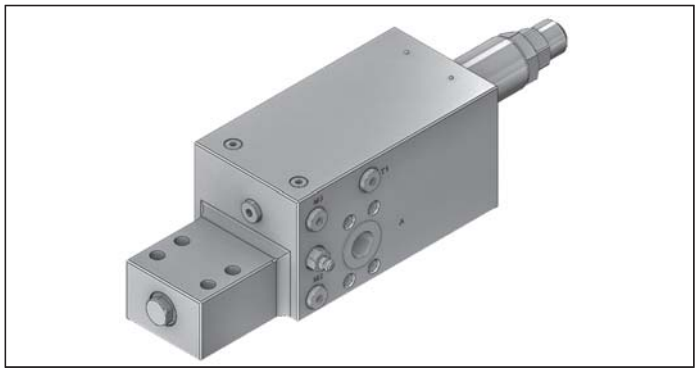
Bosch Rexroth Oil Control S.p.A., RE 18309-18/03.2016

Check and metering valve flangeable

A-VBCN-22-SX-RE-FC

08.39.37 - X - Y - Z

RE 18309-17
Edition: 03.2016
Replaces: 07.2012



Description

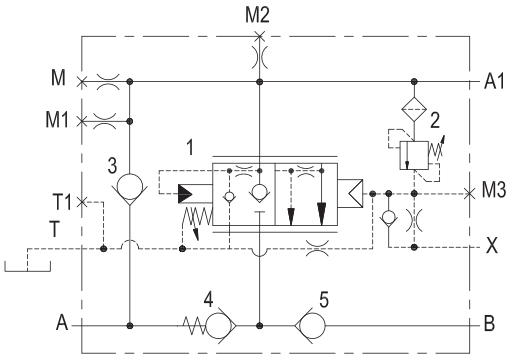
Unrestricted upstream flow (A – A1) to the cylinder is possible through the check valve (3), while downstream flow (A1 – A ,or A1 – B) is locked by the leak free main spool (1) which is held closed by the spring and by the load induced pressure. With pilot pressure at X (joystick), the spool (1) is first vented to tank then it is remotely controlled and it slides to provide fine metering for the downstream flow; after the initial venting, the pilot pressure required to move the spool is load independent. The return flow (A1 – A) is slightly pressurized by the check valve (4) and is available to re-fill the opposite end of the cylinder through the check valve (5) and port (B), in order to prevent cavitation. The valve includes a small relief cartridge (2) which senses the A1 pressure (load induced) and opens under overload or shock conditions in order to pilot fully open the main spool (1): this allows any excess of pressure at A1 to be relieved downstream through A. For better safety and compact assembly, the A1 port is flanged (gasket mounted) directly on the actuator.

Technical data

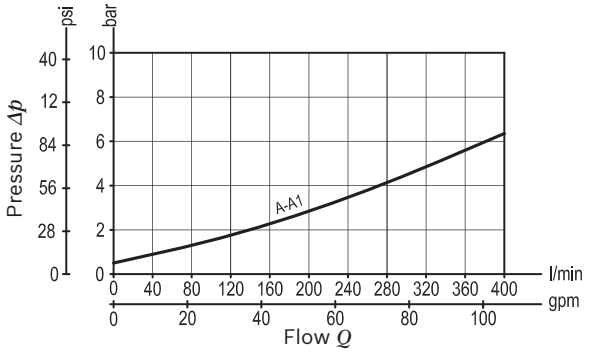
Max. operating pressure	420 bar (6000 psi)
Max. flow	400 /min. (106 gpm)
Weight	26 kg (57.3 lbs)
Flange seal kit [1)]	E00000000000003 (R930004533)
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
The Tank vented port must be connected to a “low pressure tank line” (to the joystick tank line, or to tank directly).	
The restricted “M” port must be connected to a “pressure equalizing line” in case of 2 valves fitted to 2 twin cylinders, and may be used as “outlet to tank” for emergency boom lowering in case of pilot pressure failure.	
This valve with specific adjustments, it can become part of load holding and load lowering systems designed to comply with ISO Standard 8643 (hose burst protection).	
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.

[1)] Seals for 10 valves.



Characteristic curve



Ordering code

08.39.37	X	Y	Z

Check and metering valve flangeable

22 Spool type

		SPRINGS		
		Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi)
46	Valve 1			7.5 (109) “cracking”
	Valve 2	350-460 (5000-6700)	228 (3306)	350 (5000) “5 l/min”

Port sizes	A - A1	M-M1-M2-M3-T-T1-X	B
73	1 SAE 6000	G 1/4	3/4 SAE 6000

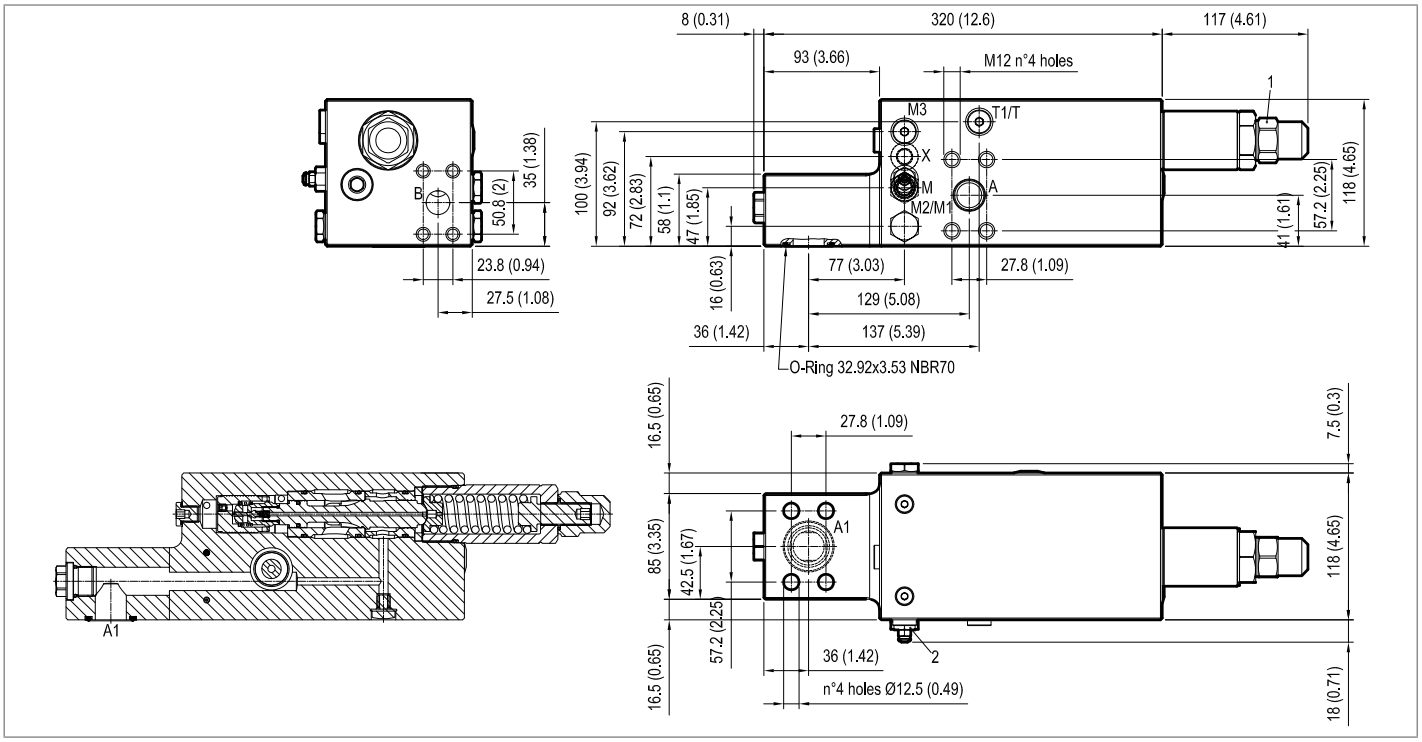
Tamper resistant cap
ordering code 11.04.31.001
Mat. no. R930000777
for Valve 2

Preferred types

Type	Material number
083937227346000	R930007072

Type	Material number

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-pib@boschrexroth.com
www.boschrexroth.com/compacthydraulics

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