

GENERAL INFORMATION

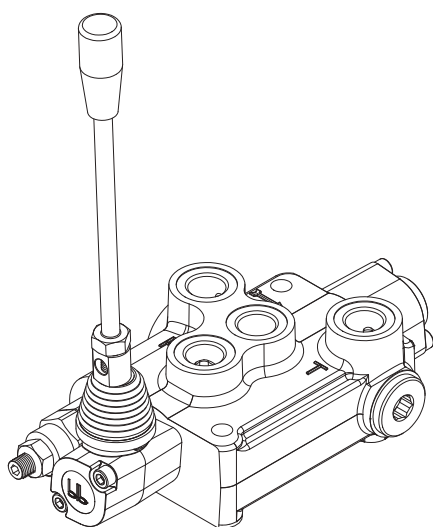
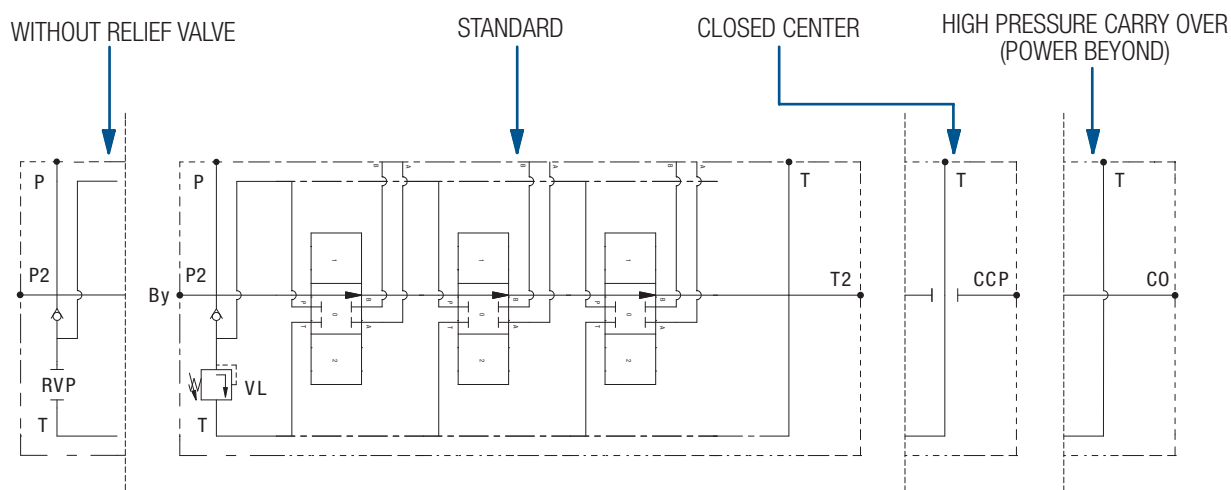
BM70 / BM100

This booklet is meant to be a technical deepening on directional control valves of the BM70 and BM100 series. These monoblock valves are characterized by a single body having following features:

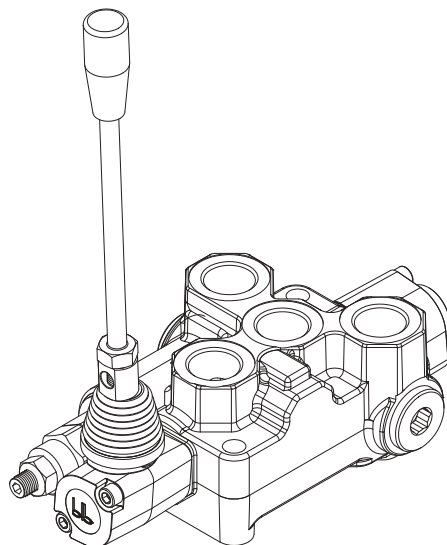
- **Sound construction.**
- **Compact size.**
- **Reduced weight.**

The absence of tie rods and intermediate seals allow monoblock valves to provide:

- **Improved dependability.**
- **Sturdy valves body for fewer leak points.**
- **Lower maintenance.**



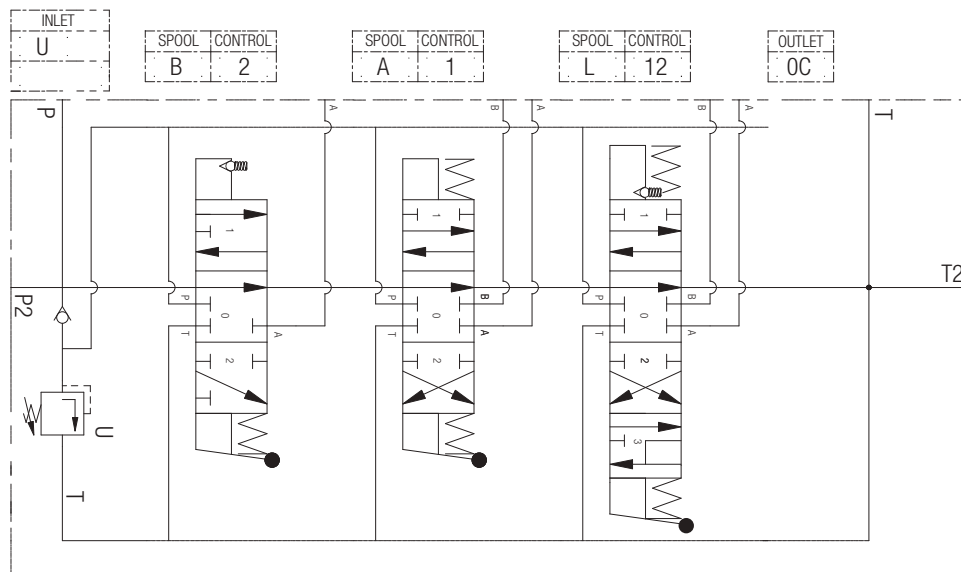
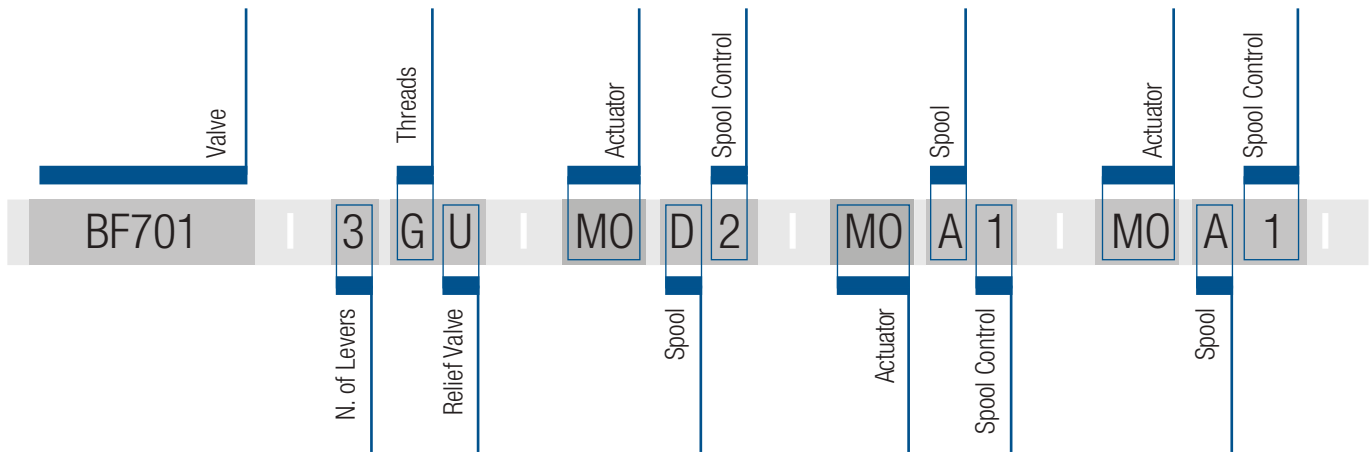
BM70



BM100

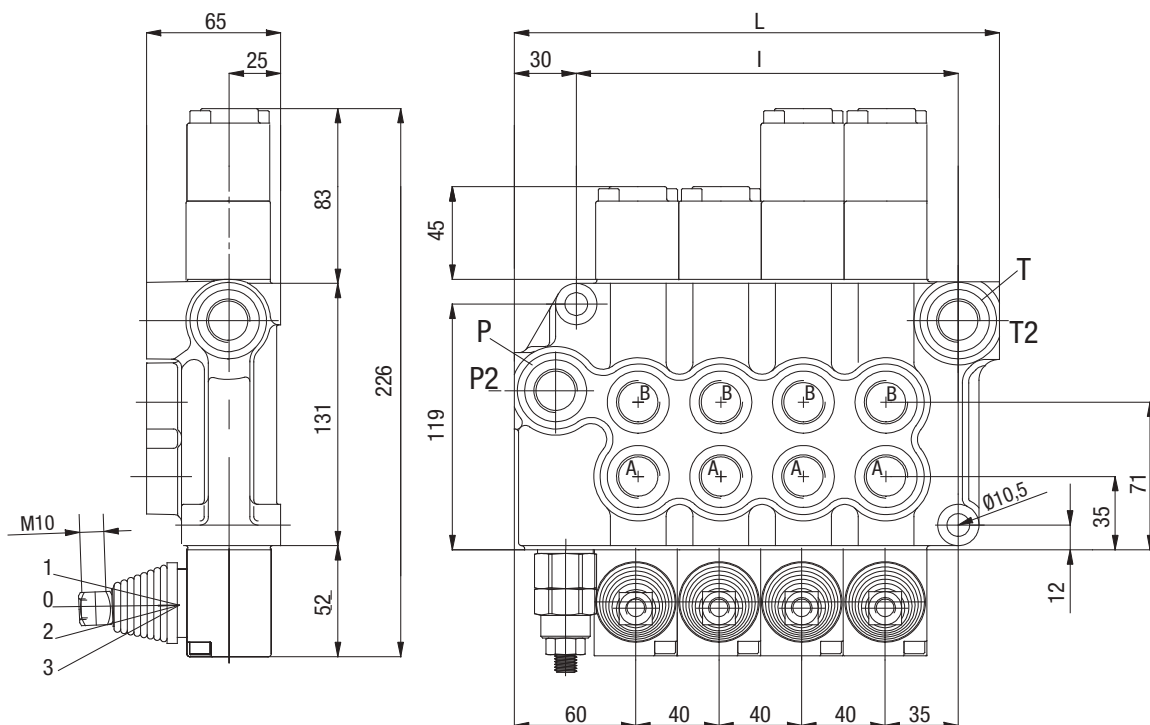
DESIGNATION

BM70 / BM100



TECHNICAL SPECIFICATIONS

BM70



TECHNICAL CHARACTERISTICS

NOMINAL FLOW	70 l/min	18.5 GPM
MAX FLOW	80 l/min	21,5 GPM
MAX FLOW - Electrical control	60 l/min	16 GPM
NOMINAL PRESSURE	250 bar	3600 PSI
MAX PRESSURE ON PORTS	320 bar	4700 PSI
MAX PRESSURE ON PORTS - Electrical control	160 bar	2300 PSI
MAX PRESSURE ON TANK-LINE	80 bar	1100 PSI

STANDARD THREADS

	A - B	P	T	P2	T2
G (BSP)	1/2"	1/2"	1/2"	3/4"	3/4"
F (UNF)	7/8" -14	7/8" -14	7/8" -14	1.1/16" -12	1.1/16" -12

INTERNAL OIL LEAKAGE

A - B → T	4 ÷ 8 cc/min
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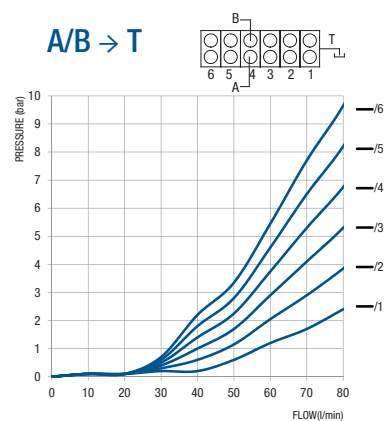
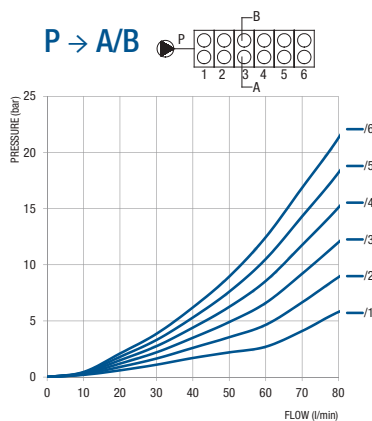
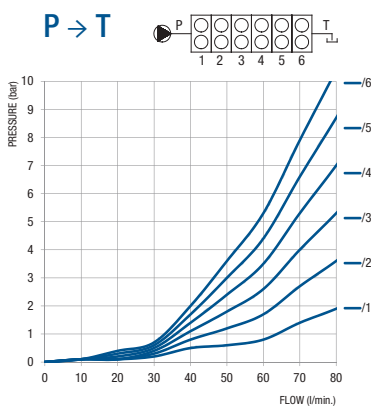
TESTING CONDITIONS

PRESSURE	100 bar
OIL TEMPERATURE	40 °C
OIL VISCOSITY	32 mm²/s

STANDARD THREADS

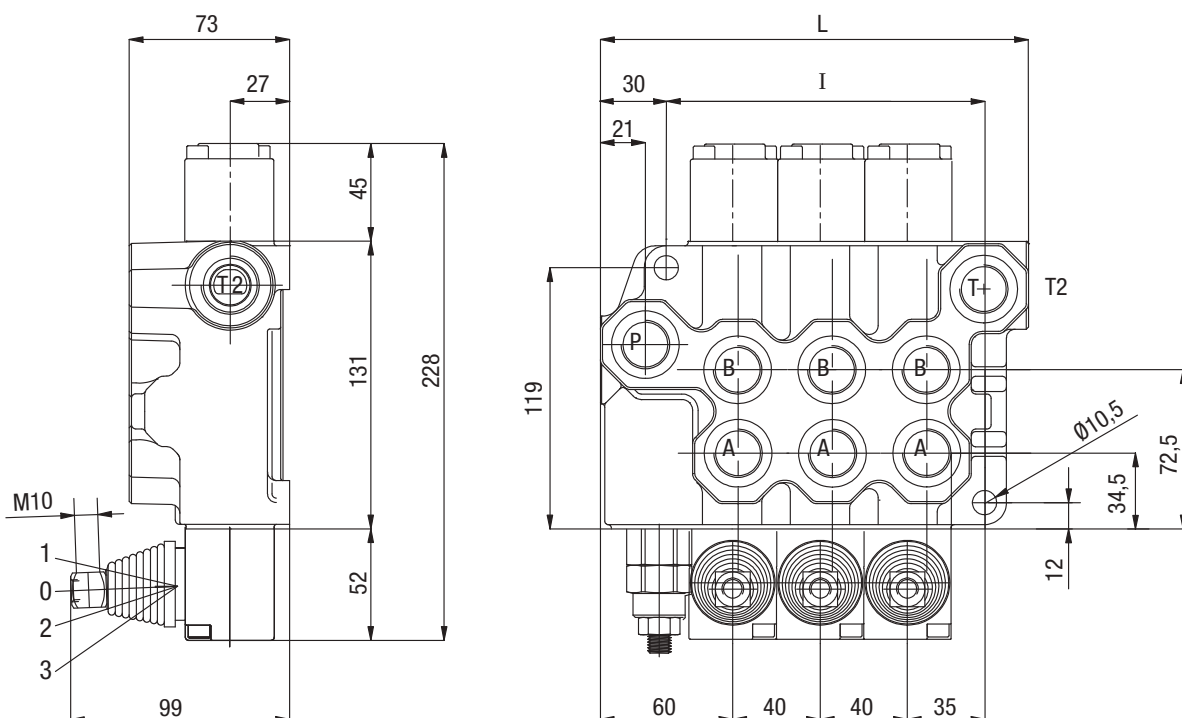
NUMBER OF SECTIONS	L (mm)	L (inch)	I (mm)	I (inch)	kg	lb
BM70/1	115	4.52	65	2.55	4.5	9.1
BM70/2	155	6.1	105	4.13	7.4	16.5
BM70/3	195	7.67	145	5.7	9.9	21.1
BM70/4	235	9.25	185	7.28	11.4	25.2
BM70/5	275	10.8	225	8.85	13.6	29.2
BM70/6	315	12.4	265	10.43	16	35.4

PRESSURE DROP



TECHNICAL SPECIFICATIONS

BM100



TECHNICAL CHARACTERISTICS

NOMINAL FLOW	90 l/min	24 GPM
MAX FLOW	100 l/min	26 GPM
MAX FLOW - Electrical control	60 l/min	26 GPM
NOMINAL PRESSURE	250 bar	3600 PSI
MAX PRESSURE ON PORTS	320 bar	4700 PSI
MAX PRESSURE ON PORTS - Electrical control	160 bar	2300 PSI
MAX PRESSURE ON TANK-LINE	80 bar	1100 PSI

STANDARD THREADS

	A - B	P	T	P2	T2
G (BSP)	3/4"	3/4"	3/4"	3/4"	3/4"
F (UNF)	1.1/16"-12	1.1/16"-12	1.1/16"-12	1.1/16"-12	1.1/16"-12

INTERNAL OIL LEAKAGE

A - B → T	4 ÷ 8 cc/min
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TESTING CONDITIONS

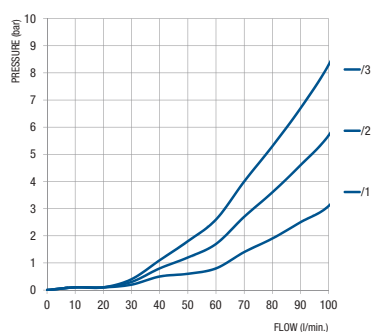
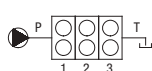
PRESSURE	100 bar
OIL TEMPERATURE	40 °C
OIL VISCOSITY	32 mm²/s

STANDARD THREADS

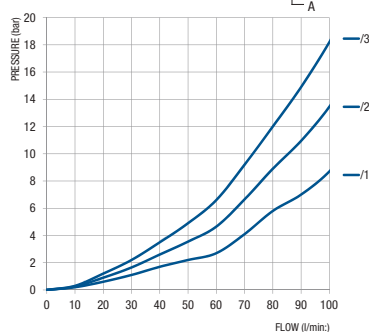
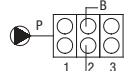
NUMBER OF SECTIONS	L		I		kg	lb
	(mm)	(inch)	(mm)	(inch)		
BM100/1	115	4.52	65	2.55	4.5	9.1
BM100/2	155	6.1	105	4.13	7.4	16.5
BM100/3	195	7.67	145	5.7	9.9	21.1

PRESSURE DROP

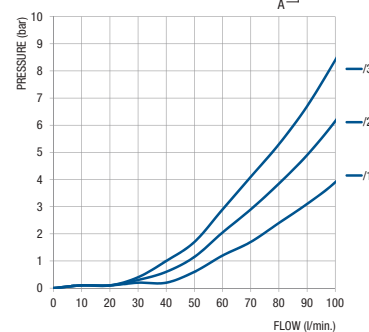
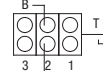
P → T



P → A/B



A/B → T



GENERAL INFORMATION

BF701

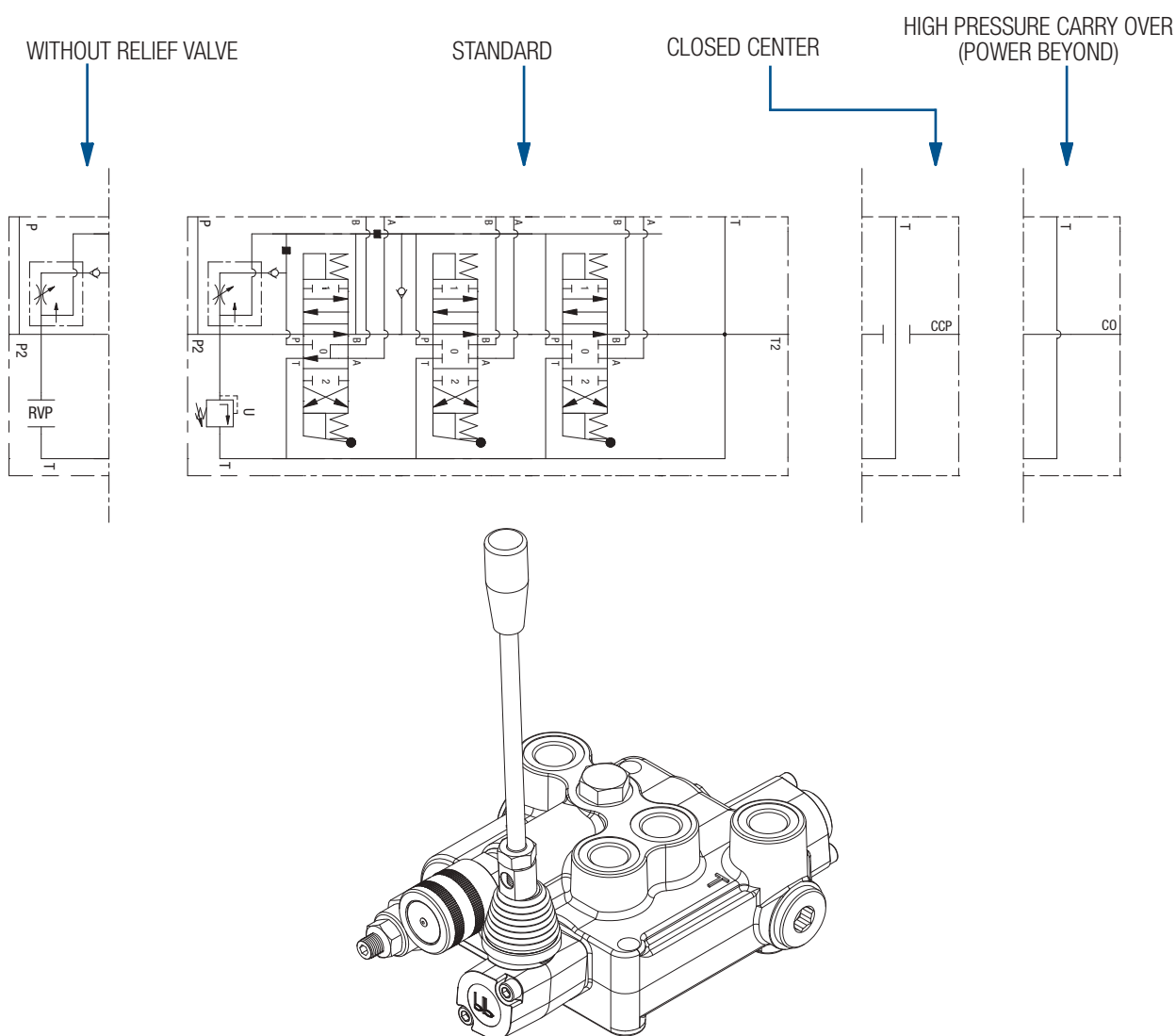
BF monoblock valves series derives from **BM** series and differs from it for having integrated in the inlet a **pressure compensated flow control either 3/ways priority (RFP) or 2/ways (RFS)**.

With **RFP** flow control, the exceeding flow is recuperated into the system and allows the simultaneous use of two spools, the first fed by the priority flow (**PF**) and the second fed by the exceeding flow (**EF**).

With **RFS** flow control, the exceeding flow goes to tank.

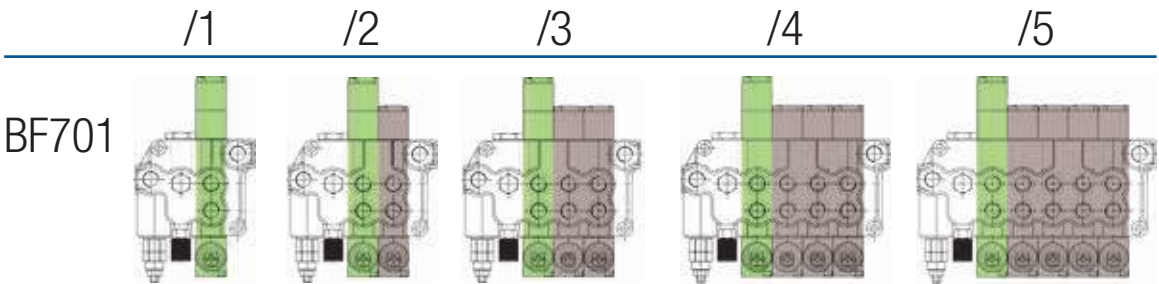
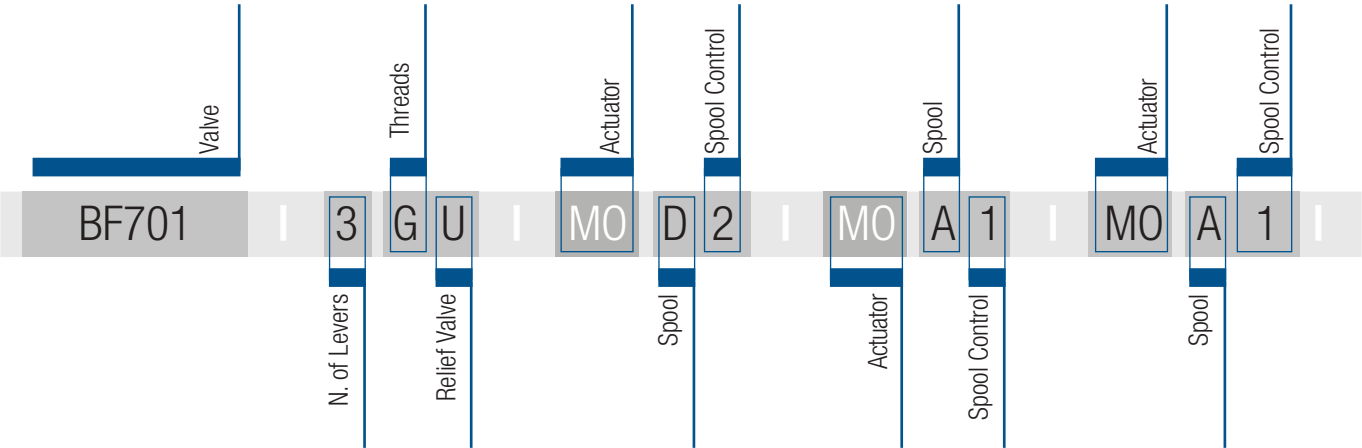
Very important characteristic is that the **flow control only works when a priority element is actuated**; if no priority element is operated, oil goes to tank eliminating loss of flow and unnecessary heating.

In RFP version, non-priority sections get the whole valve flow when they are individually operated or just the exceeding flow when a priority section is operated. One or more priority elements are available.



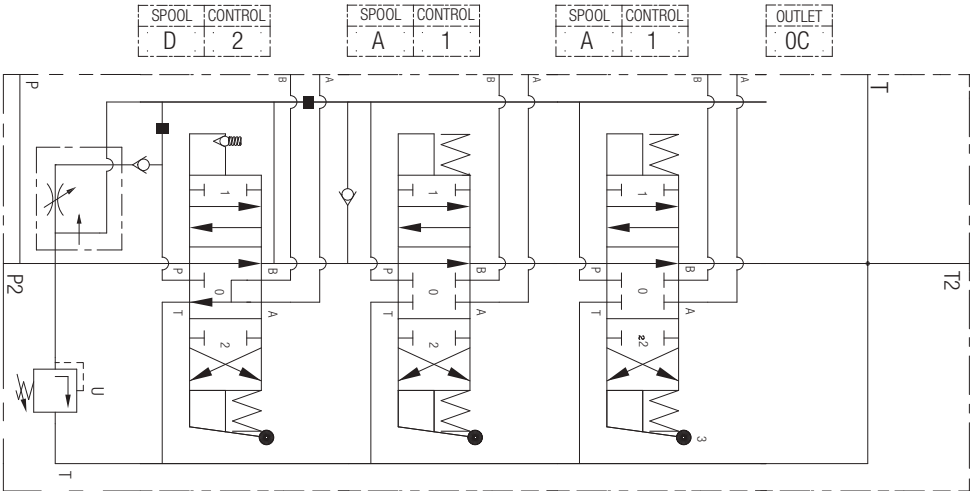
DESIGNATION

BF701



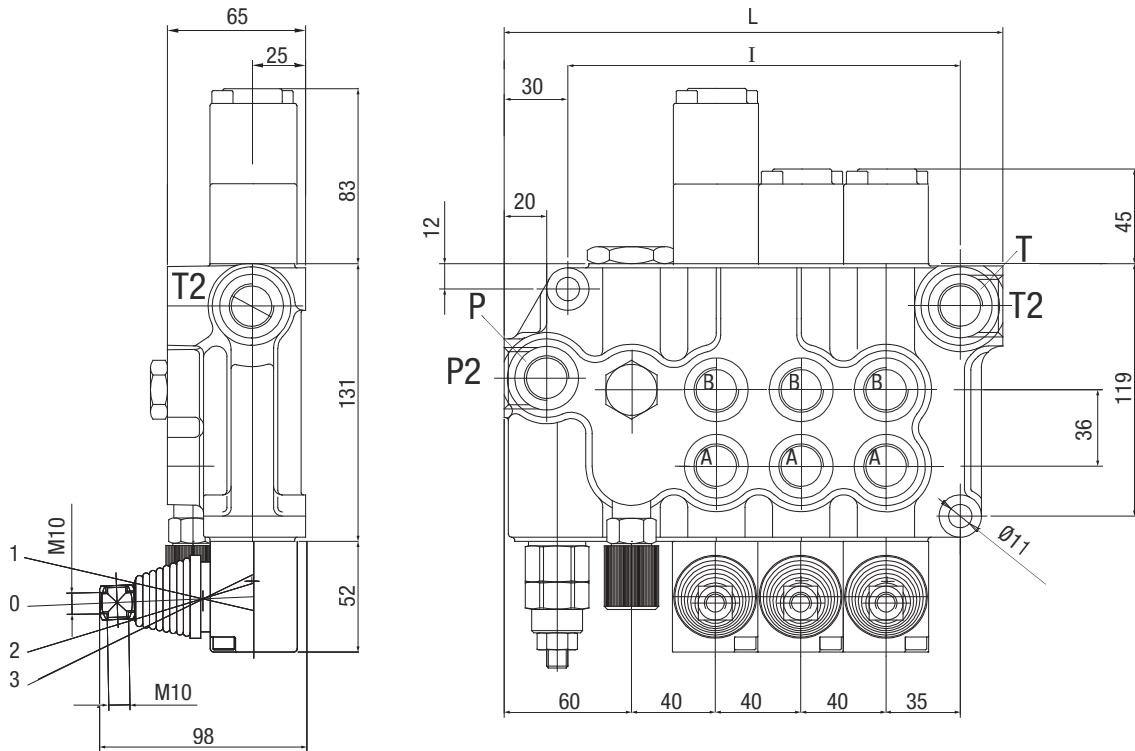
Priority Flow Element

Exceeding Flow Element



TECHNICAL SPECIFICATIONS

BF701



TECHNICAL CHARACTERISTICS

NOMINAL FLOW	70 l/min	18.5 GPM
MAX FLOW	80 l/min	21.5 GPM
NOMINAL PRESSURE	250 bar	3600 PSI
MAX PRESSURE ON PORTS	320 bar	4700 PSI
MAX PRESSURE ON TANK-LINE	80 bar	1100 PSI

INTERNAL OIL LEAKAGE

A - B → T	4 ÷ 8 cc/min
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TESTING CONDITIONS

PRESSURE	100 bar
OIL TEMPERATURE	40 °C
OIL VISCOSITY	32 mm²/s

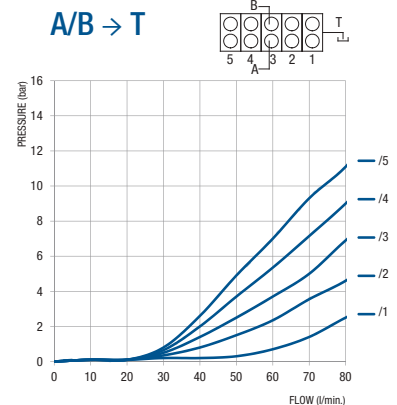
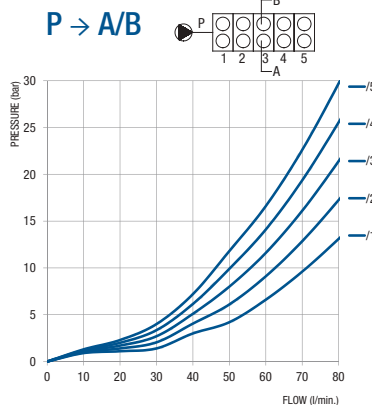
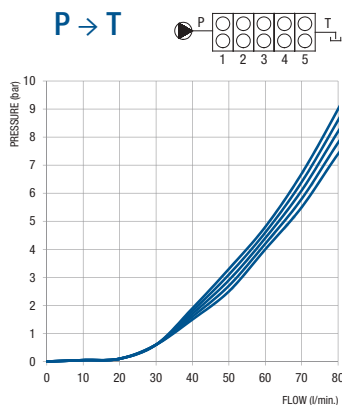
STANDARD THREADS

	A - B	P	T	P2	T2
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STANDARD THREADS

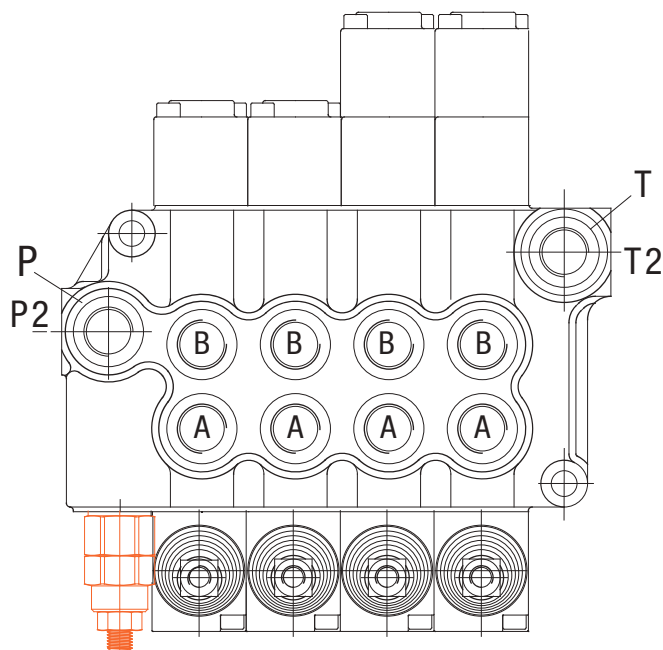
NUMBER OF SECTIONS	L (mm)	L (inch)	I (mm)	I (inch)	kg	lb
BF701/1	155	6.1	105	4.13	6.6	14.8
BF701/2	195	7.67	145	5.7	9	19.1
BF701/3	235	9.25	185	7.28	11.2	24.1
BF701/4	275	10.8	225	8.85	13.5	25.1
BF701/5	315	12.4	265	10.43	15.7	35

PRESSURE DROP

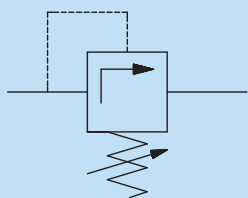


SPARE PARTS

Relief valves and accessories



RELIEF VALVE VL80



X
U
K



XB
UB
KB



VALVE X - Code 803018

VALVE U - Code 803064

VALVE K - Code 803013

VALVE XB - Code 803110

VALVE UB - Code 803076

VALVE KB - Code 803105

! - Standard setting is based on a **pre-set flow of 14 l/min.**

X: Pressure Range 30 ÷ 90 bar - STANDARD SETTING 70 bar

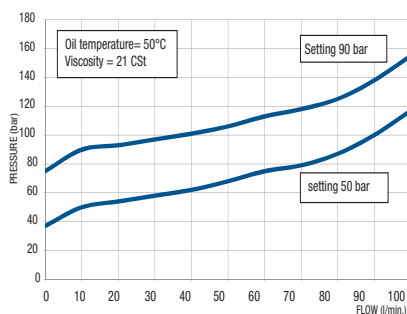
U: Pressure Range 80 ÷ 230 bar - STANDARD SETTING 140 bar

K: Pressure Range 150 ÷ 300 bar - STANDARD SETTING 180 bar

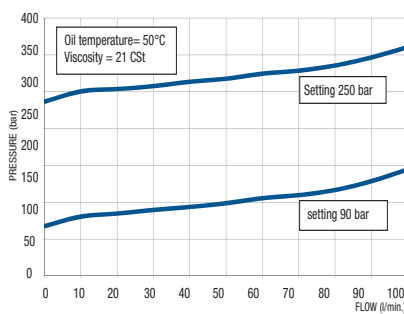
B: Prearranged for lock kit

PRESSURE RANGE VL80

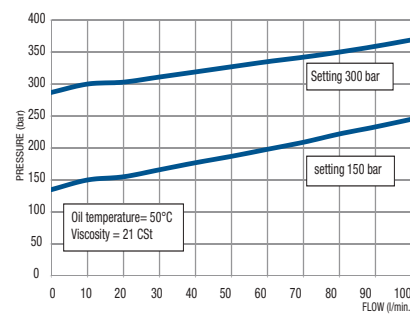
SPRING X



SPRING U



SPRING K



SPARE PARTS

PB - RELIEF VALVE LOCK KIT

Code 560945



Applied to VL_B prevents users alteration of the prearranged relief valve setting.

RVP - RELIEF VALVE PLUG

Code 832012



Replaces VL in closed center systems (i.e. John Deere tractors), in circuits where an in-line relief valve is provided or in case of two valves connected downstream by means of a carry over (power beyond) plug.

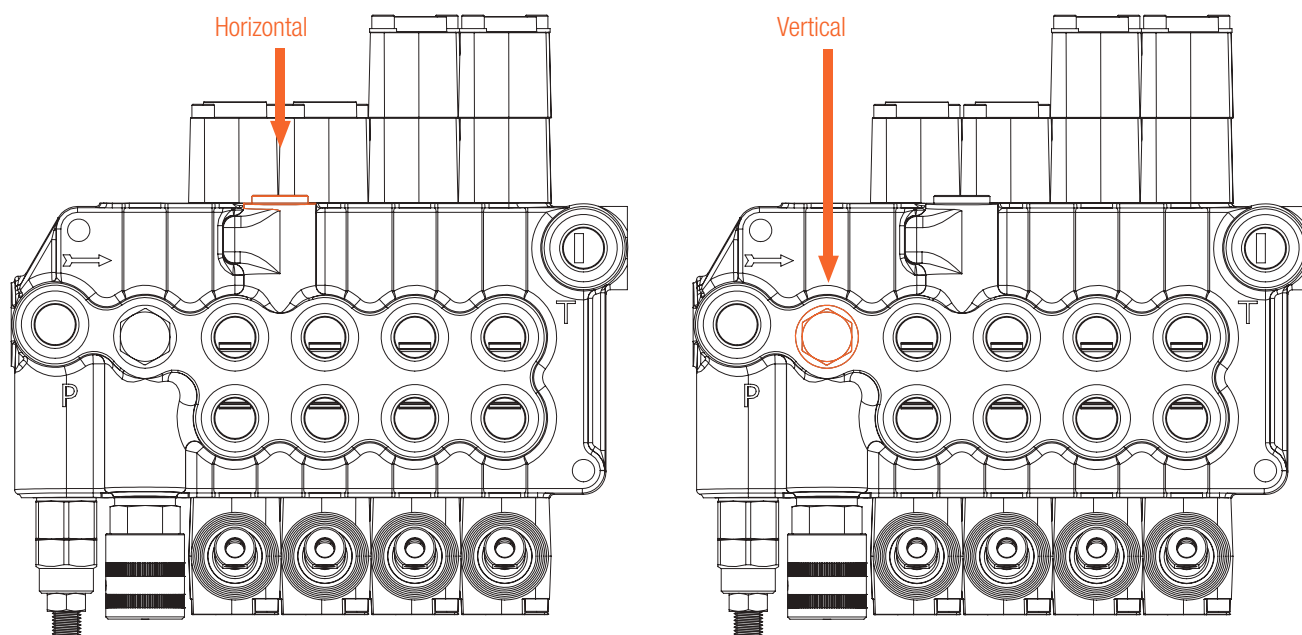
VNR - LOAD CHECK VALVE KIT (BM70 / BM100)

Code 560274



Every BLB valve is provided with a load check valve VNR; it prevents the cylinder fall when a spool is actuated and the backflow from ports to inlet.

SPARE PARTS



VNR - LOAD CHECK VALVE KIT - Horizontal (BF701)

Code 560239



Every BLB valve is provided with a load check valve VNR; it prevents the cylinder fall when a spool is actuated and the backflow from ports to inlet.

VNR - LOAD CHECK VALVE KIT - Vertical (BF701)

Code 560241



Every BLB valve is provided with a load check valve VNR; it prevents the cylinder fall when a spool is actuated and the backflow from ports to inlet.