

2- and 3-Way Flow Control Valve

Series MTKK.. and MTKL..



- can be individually combined into customised functional systems
- rugged, uncomplicated, reliable operation
- flow rates are unaffected by temperature change or when the higher load pressure alternates between the outlet ports
- these valves do not require maintenance. This lowers costs and reduces the risk of a system failure.

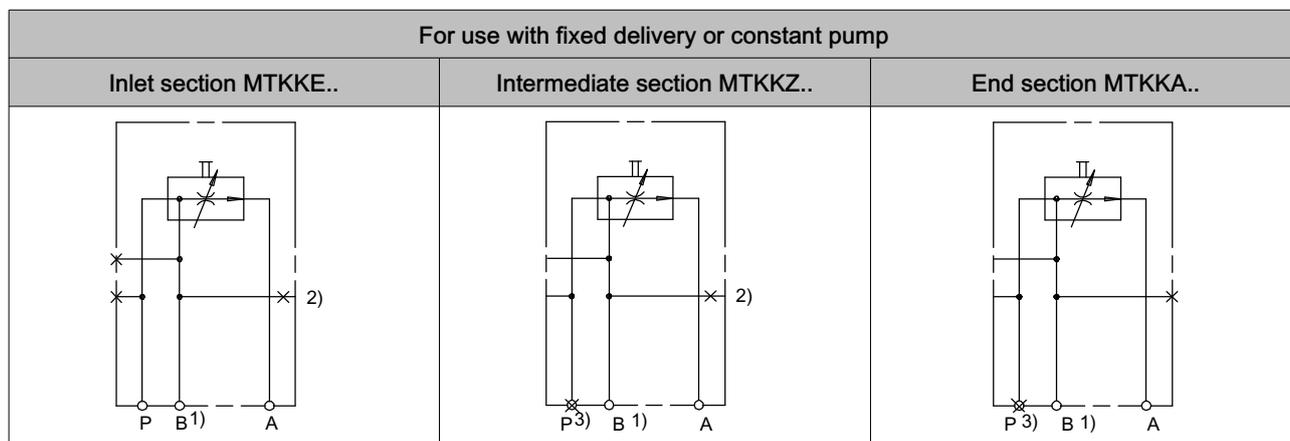
1 Description

Series MTK.. 2/3-way flow control valves provide a constant, pressure-compensated, flow of hydraulic fluid. Any surplus inlet flow can be used elsewhere. The constant flow setting can be fixed or adjustable. The individual units can

be block-mounted; the required number of individual functions can be assembled into one valve block without any interconnecting pipework. Valve blocks can incorporate both series and parallel circuits.

2 Symbols

2.1 Valve type MTKK



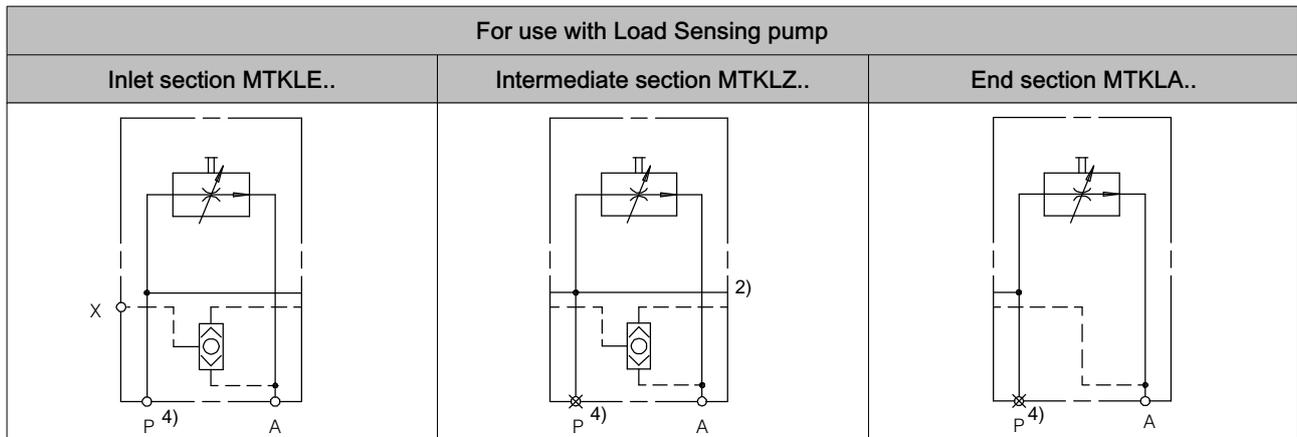
- 1) With fixed/ constant pump, B is plugged except when the actuator flow A is being fed in again for series supply to a down-stream flow control valve.
- 2) Can be plugged when serial/ series circuit is not required. Surplus flow is then lead out of B.
- 3) P plugged when in series circuit.



ATTENTION!:

To be complied with when using series MTKKZ or MTKKE flow control valves connected in series with pressure on surplus flow. If the flow from the motor with the constant flow is routed to tank, and a further flow control valve is connected downstream, option 15 must be used (see Section 8.1, MTKKZ.../15). This option is never required with the MTKKA..

2.2 Valve type MTKL

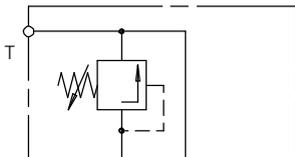


4) Can be used as optional P inlet. Plug unused ports.

2.3 Additional section

Inlet or Intermediate section with pressure relief valve

MTKDEPB-1M22



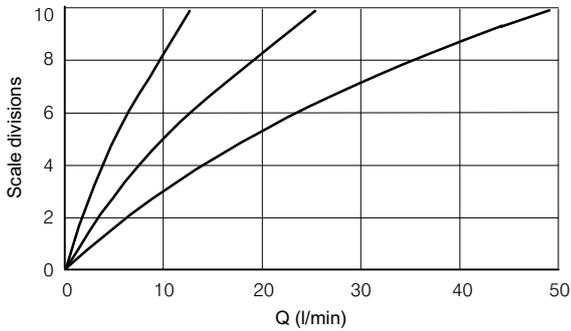
3 Technical data

General characteristics	Description, value, unit
Operating pressure	max. 315 bar
Inlet flow	max. 65 l/min
Controlled flow, fixed setting (for other contact Bucher)	3 l/min, 6 l/min, 9 l/min, 12 l/min, 16 l/min, 20 l/min, 25 l/min
Controlled flow, adjustable (Q_0 to Q_{max} . = approx. one turn at the rotary knob)	VE = 0 ... 6 l/min VB = 0 ... 25 l/min VG = 0 ... 8 l/min VH = 0 ... 35 l/min VA = 0 ... 12 l/min VC = 0 ... 50 l/min VK = 0 ... 20 l/min VD = 0 ... 65 l/min
Min. pressure drops, Δp at the pressure compensator	3 bar ... 5 bar
Fluid temperature range	-20 °C ... +80 °C
Recommended viscosity range	10 mm ² /s (cSt) ... 300 mm ² /s (cSt)
Leakage, controlled flow (with unloaded surplus flow)	max. 50 cm ³ /min for MTKK.../15 max. 250 cm ³ /min
Fluids	mineral oil to DIN 51524 (other fluids on request)
Fluid cleanliness	ISO 4406 class 20/18/15

4 Characteristic curves

Flow P -> A

The values below relate to a viscosity of 33 mm²/s (cSt)



The graphs are only intended to show the general nature of the function. No definitive relationship between flow and scale should be assumed.

5 Valve types

The individual units are available in either of two functional ranges:

MTKK: Is intended for use in systems with fixed delivery or constant pump

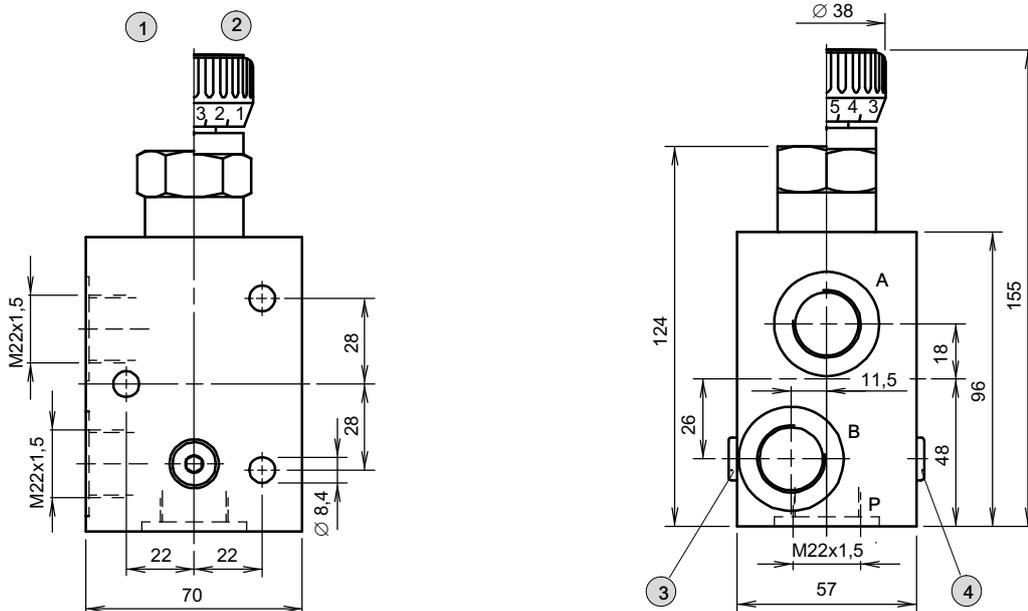
Additional compo.: To complete the range, Bucher offers inlet and intermediate sections for pressure relief protection of individual units or block assemblies.

MTKL: Is used in systems with Load Sensing pump. See also section 8, application examples

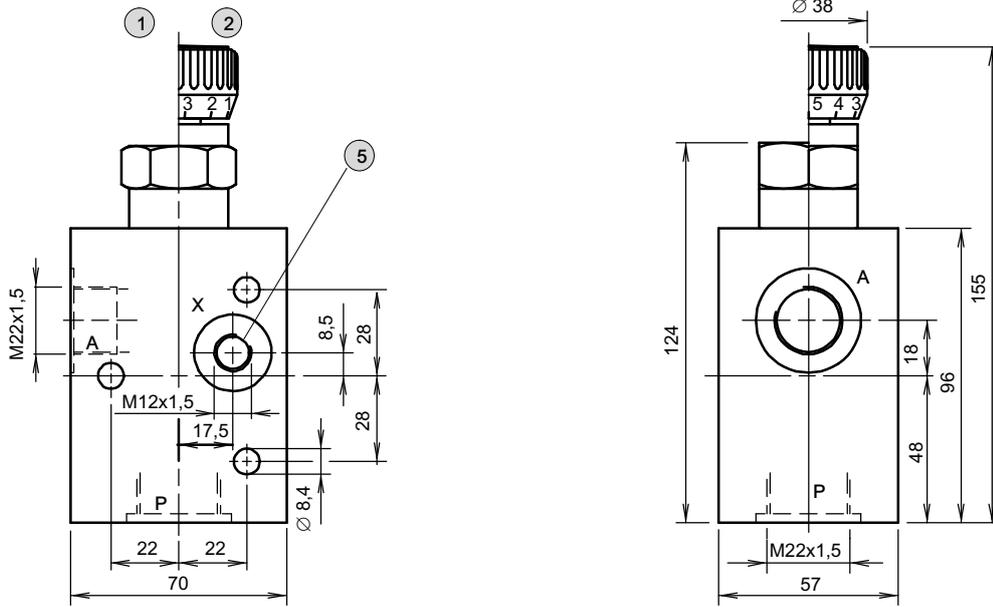
6 Dimensions

6.1 flow control valves

Valve type MTKK..



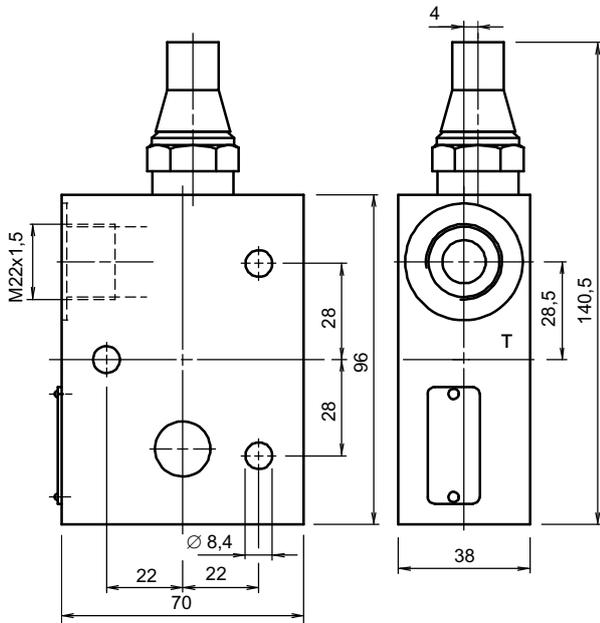
Valve type MTKL..



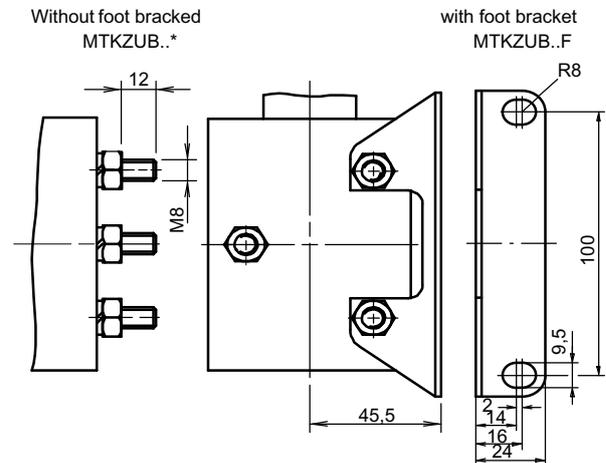
1	fixed setting	4	MTKKE.. only
2	manually adjustable	5	MTKLE.. only
3	MTKKA.. only		

6.2 Additional section

Inlet/ Intermediate section with pressure relief valve MTKDEP..



6.3 Assembling of foot bracket



7 Ordering code

7.1 Flow control valve

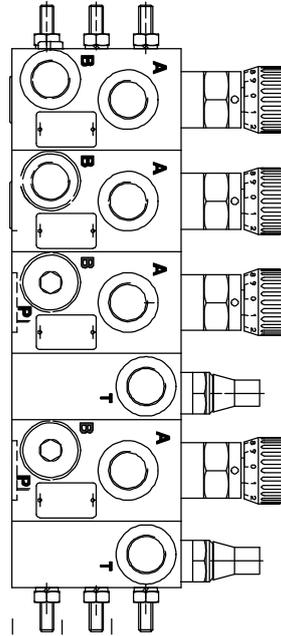
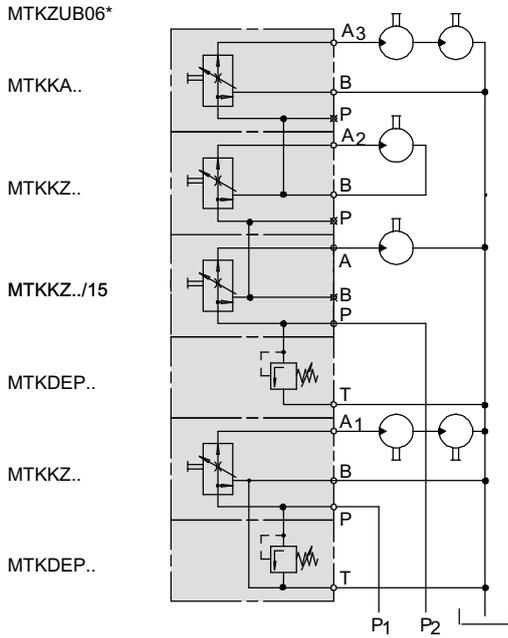
		M		T		K		L		Z		V		B		0		M		2		2		/		1		5	
Flow control valve																													
Function	for LS Pump							= L																					
	for fixed/ constant pump							= K																					
Type	Inlet section							= E																					
	Intermediate section							= Z																					
	End section							= A																					
Constant flow	fixed setting	9 l/min					= 09																						
		12 l/min					= 12																						
		etc.					= etc.																						
	manually adjustable	0 to 6 l/min					= VE		0 to 25 l/min =		VB																		
		0 to 8 l/min					= VG		0 to 35 l/min =		VH																		
		0 to 12 l/min					= VA		0 to 50 l/min =		VC																		
		0 to 20 l/min					= VK		0 to 65 l/min =		VD																		
Desing number	to be inserted by the factory																												
Port threads	A, B, P and T: M22 x 1,5							= M22																					
Option	15	= this option is absolutely essential for MTKKZ or MTKKE in 2-way operation or when connected in series with pressure on surplus flow and motor outlet direct to tank (no return circuit of the constant flow). Leave these fields blank if no option is required																											

7.2 Additional section (see sect. 2.3 and 6.2)

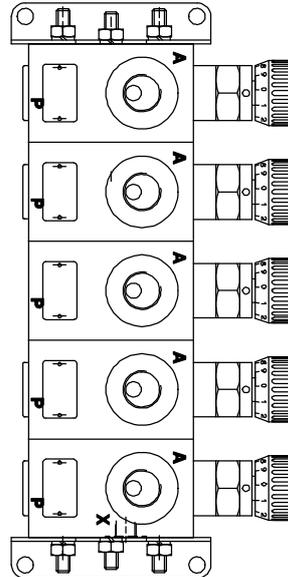
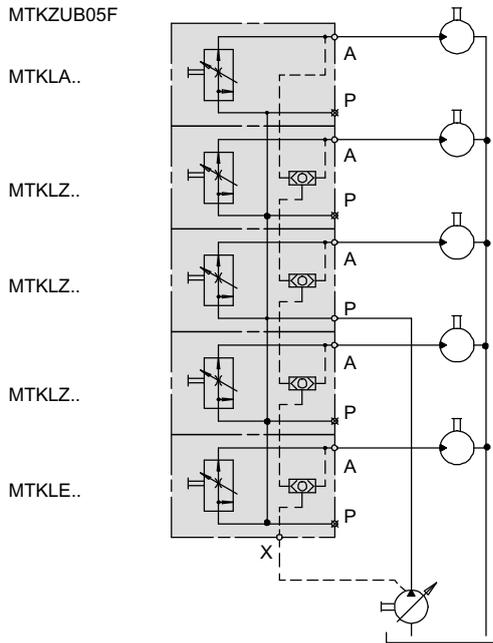
MTKDPEPB-1M22 Ordering no. 017640

8 Applications

8.1 Type MTKK..



8.2 Type MTKL..



9 Fluid

The oil for MTKK and MTKL.. products must have a minimum cleanliness level of 20/18/15 to ISO 4406.

We recommend the use of fluids that contain anti-wear additives for mixed-friction operating conditions. Fluids without appropriate additives can reduce the service life of the valves. The user is responsible for maintaining, and regularly checking the fluid quality.

10 Fluid cleanliness

Cleanliness class (RK) onto ISO 4406.

Code ISO 4406	Dirt particle number / 100 ml		
	≥ 4 µm	≥ 6 µm	≥ 14 µm
23/21/18	8000000	2000000	250000
22/20/18	4000000	1000000	250000
22/20/17	4000000	1000000	130000
22/20/16	4000000	1000000	64000
21/19/16	2000000	500000	64000
20/18/15	1000000	250000	32000
19/17/14	500000	130000	16000
18/16/13	250000	64000	8000
17/15/12	130000	32000	4000
16/14/12	64000	16000	4000
16/14/11	64000	16000	2000
15/13/10	32000	8000	1000

info.kl@bucherhydraulics.com

www.bucherhydraulics.com

© 2020 by Bucher Hydraulics GmbH, D-79771 Klettgau

All rights reserved.

Data is provided for the purpose of product description only, and must not be construed as warranted characteristics in the legal sense. The information does not relieve users from the duty of conducting their own evaluations and tests. Because the products are subject to continual improvement, we reserve the right to amend the product specifications contained in this catalogue.

Classification: 430.310.330.