

# 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.

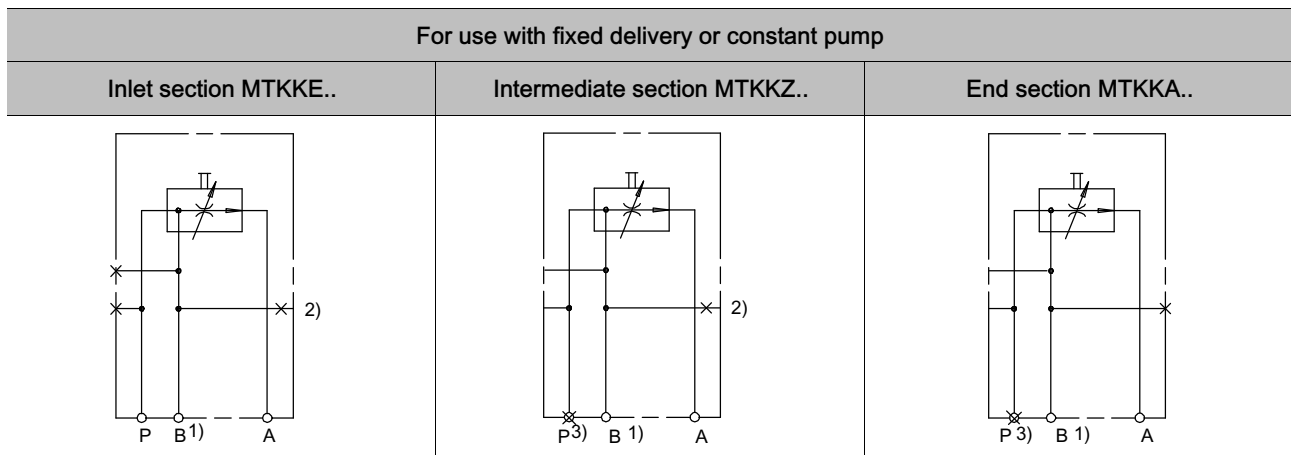
## 1 Description

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.

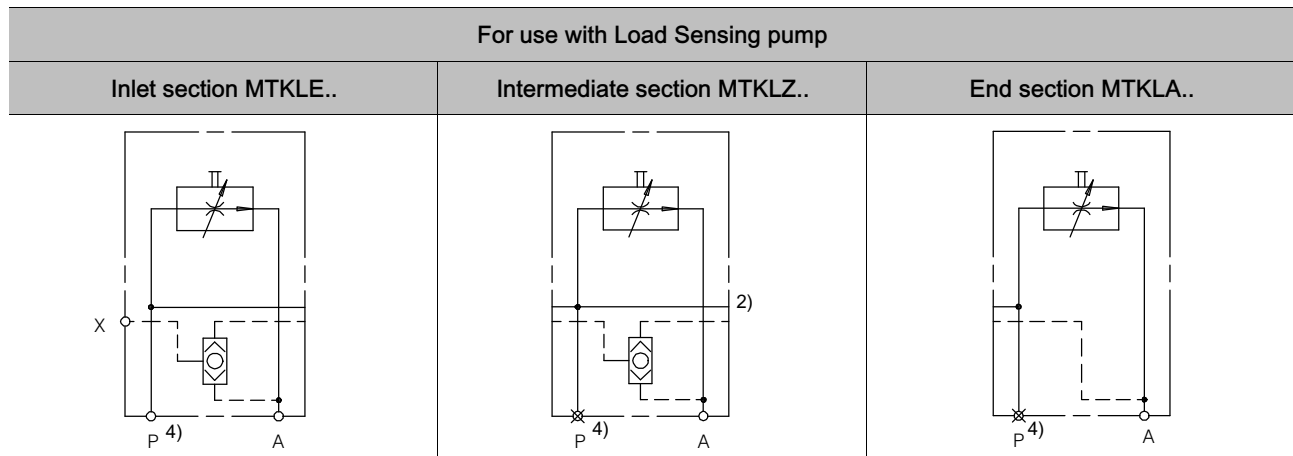
3) P plugged when in series circuit.



#### 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

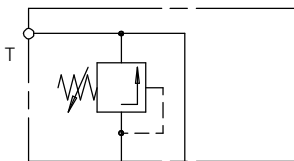


4) Can be used as optional P inlet. Plug unused ports.

## 2.3 Additional section

Inlet or Intermediate section with pressure relief valve

MTKDPEB-1M22



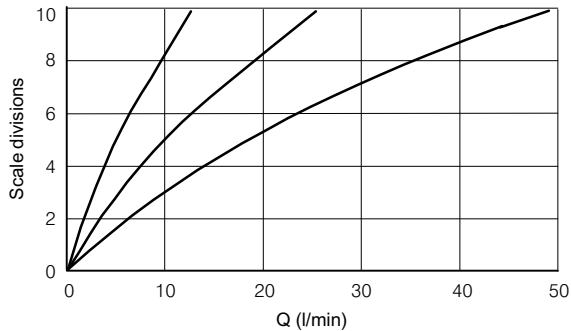
## 3 Technical data

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)	<table style="width: 100%; border: none;"> <tr> <td style="padding: 0 10px;">VE = 0 l/min ... 6 l/min</td> <td style="padding: 0 10px;">VB = 0 l/min ... 25 l/min</td> </tr> <tr> <td style="padding: 0 10px;">VG = 0 l/min ... 8 l/min</td> <td style="padding: 0 10px;">VH = 0 l/min ... 35 l/min</td> </tr> <tr> <td style="padding: 0 10px;">VA = 0 l/min ... 12 l/min</td> <td style="padding: 0 10px;">VC = 0 l/min ... 50 l/min</td> </tr> <tr> <td style="padding: 0 10px;">VK = 0 l/min ... 20 l/min</td> <td style="padding: 0 10px;">VD = 0 l/min ... 65 l/min</td> </tr> </table>	VE = 0 l/min ... 6 l/min	VB = 0 l/min ... 25 l/min	VG = 0 l/min ... 8 l/min	VH = 0 l/min ... 35 l/min	VA = 0 l/min ... 12 l/min	VC = 0 l/min ... 50 l/min	VK = 0 l/min ... 20 l/min	VD = 0 l/min ... 65 l/min
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Min. pressure drops, $\Delta p$ at the pressure compensator	3 bar ... 5 bar								
Fluid temperature range	-20 °C ... +80 °C								
Recommended viscosity range	10 mm <sup>2</sup> /s (cSt) ... 300 mm <sup>2</sup> /s (cSt)								
Leakage, controlled flow (with unloaded surplus flow)	max. 50 cm <sup>3</sup> /min for MTKK.../15 max. 250 cm <sup>3</sup> /min								
Fluids	mineral oil to DIN 51524 and DIN 51525 (other fluids on request)								
Fluid cleanliness	NAS 1638 class 9, ISO 4406 class 20/18/15								

## 4 Characteristic curves

Flow P -> A

The values below relate to a viscosity of 33 mm<sup>2</sup>/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

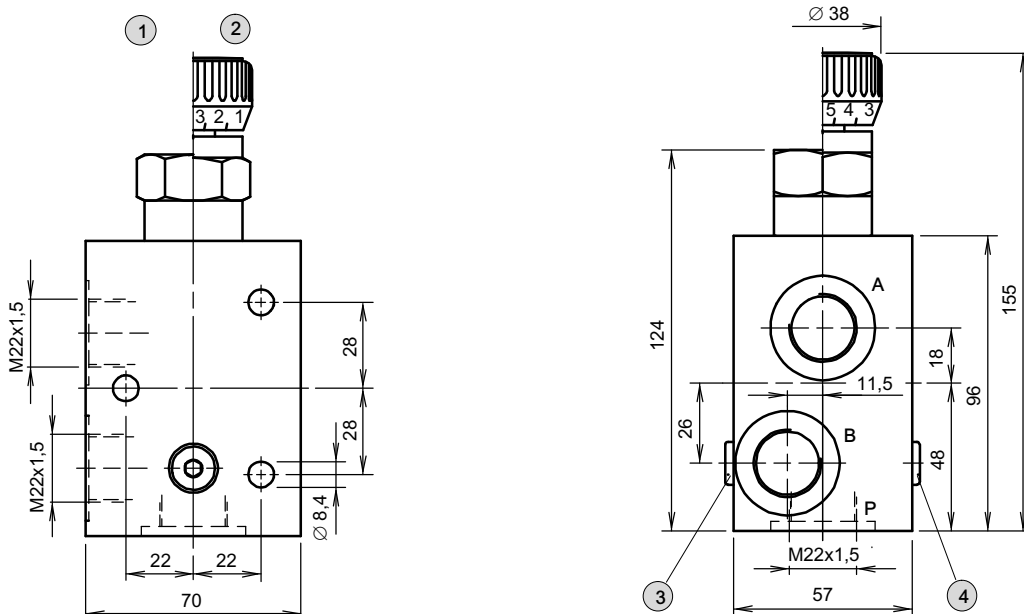
**Additional compo.:** To complete the range, Bucher offers inlet and intermediate sections for pressure relief protection of individual units or block assemblies.

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

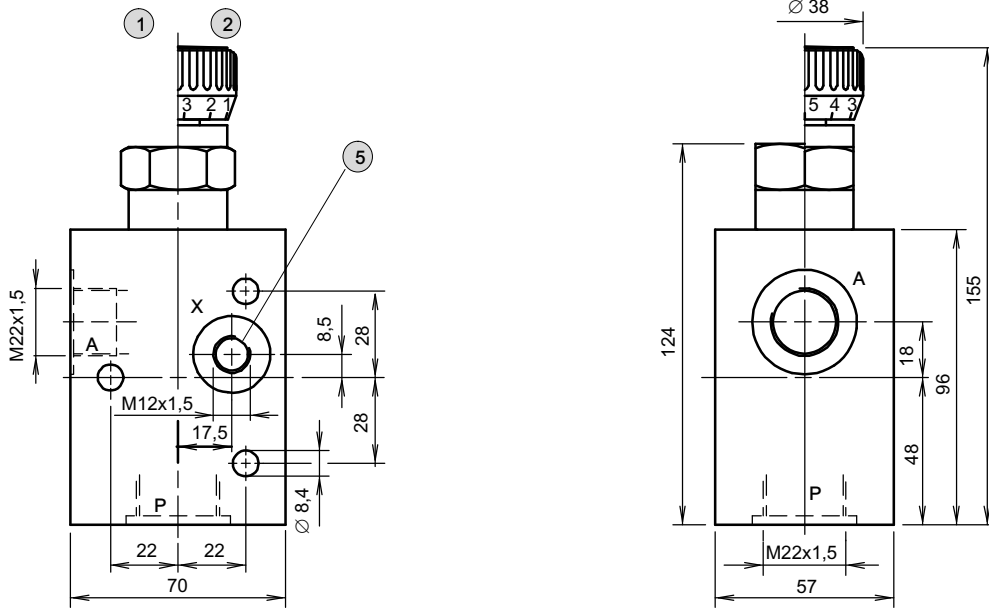
## 6 Dimensions

### 6.1 flow control valves

Valve type MTKK..



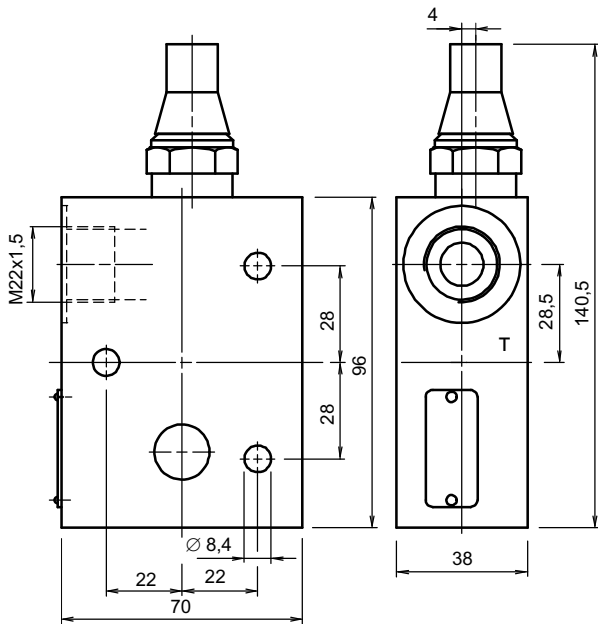
Valve type MTKL..



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

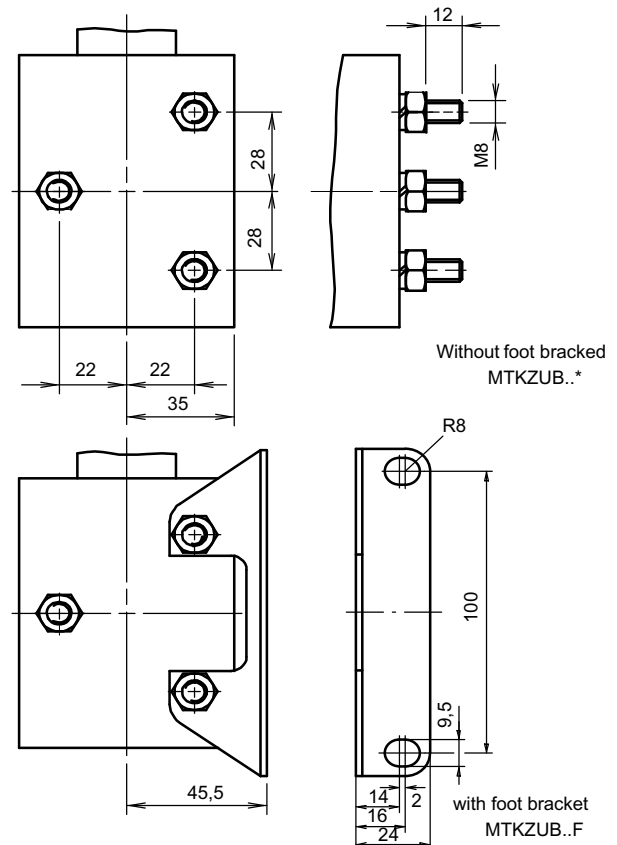
## 6.2 Additional section

Inlet/ Intermediate section with pressure relief valve MTKDEP..



## 6.3 Accessories

Block tie bolts, etc. MTKZUB..



## 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 12 l/min =		VA																		
		0 to 12 l/min					= VA		0 to 50 l/min =		VC																		
		0 to 25 l/min					= VB		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)

MTKDEPB-1M22 Ordering no. 017640

### 7.3 Accessories

		M		T		K		Z		U		B		0		3		F		/							
Serie																											
Block tie bolts, etc.																											
No. of units	1 = 01	2 = 02	3 = 03	and so on																							
Foot bracket	with																	= F									
	Without																	= *									
Option (to be inserted by the factory)																											

## 8 Applications

### 8.1 Type MTKK..

MTKZUB06\*

MTKKA..

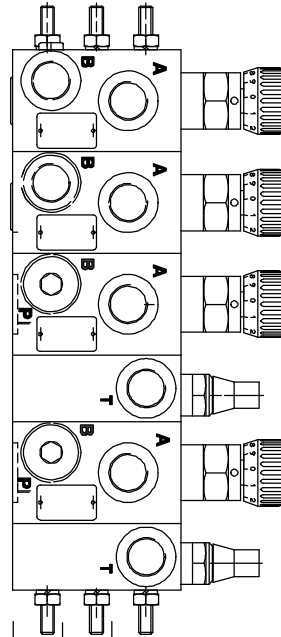
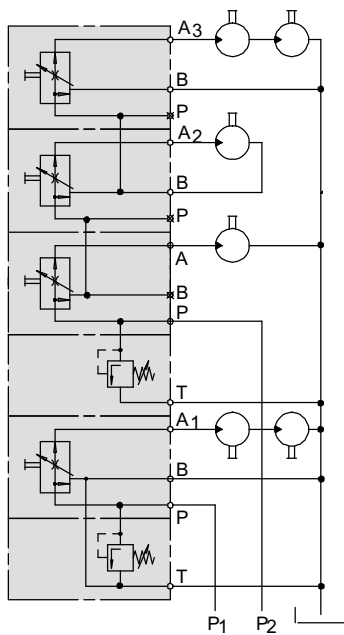
MTKKZ..

MTKKZ../15

MTKDEP..

MTKKZ..

MTKDEP..



### 8.2 Type MTKL..

MTKZUB05F

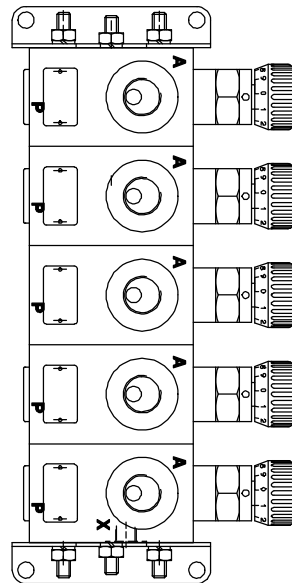
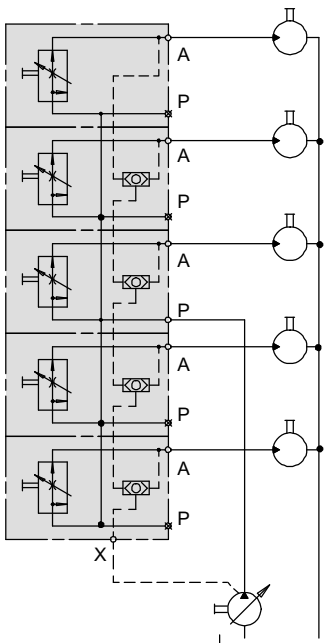
MTKLA..

MTKLZ..

MTKLZ..

MTKLZ..

MTKLE..



[info.kl@bucherhydraulics.com](mailto:info.kl@bucherhydraulics.com)

[www.bucherhydraulics.com](http://www.bucherhydraulics.com)

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Classification: 430.310.330.