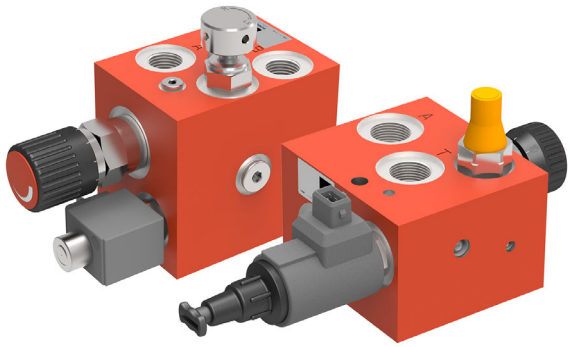
Flow Control Valve, Solenoid Operated

Series MTKE, MTQE



- manual adjustment of constant flow rate
- electrically operated (ON/OFF) flow-control valve
- the constant flow setting is maintained even after the valve has been switched off
- pressure relief function for the constant flow can be supplied
- mechanical changeover for Open Centre and Closed Centre systems

1 Description

1.1 General

Series MTKE and MTQE flow control valves are monoblock designs with an integral flow divider. They divide the flow entering at port P into a constant flow portion (A) and a surplus flow (T). The constant flow rate is manually adjustable with a hand-knob.
Via a 2-way ON/OFF valve, the entire supply flow can be diverted to tank with virtually no back-pressure. A pressure relief function for the constant flow can be incorporated.

The unique advantage of these flow control valves is that the constant flow setting is maintained even after the valve has been switched off.

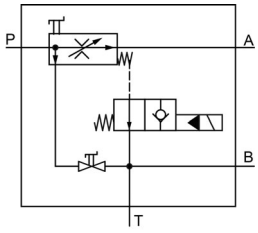
Flow control valves in the MTKE series can be mechanically switched over for use with Open Centre or Closed Centre systems.

1.2 Application examples

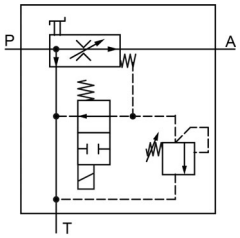
- Harvesters
- Municipal vehicles
- Forestry equipment
- Towed machines
- Construction machines

2 Symbols

2.1 MTKE



2.2 MTQE



A	Constant-flow portion	P	Pump
B	Return flow from actuator	T	Tank

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3 Technical data

Hydraulic characteristics	Unit	Description, value
Working pressure, max.	bar	300
Nominal flow Q (inlet flow)	l/min	max. 70
Constant flow, fixed setting [1]	l/min	3, 6, 9, 12, 16, 25, 32, 40, 50, 65
Constant flow, adjustable [1]	l/min	VA = 0 - 12 VB = 0 - 25 VK = 0 - 35 VC = 0 - 50 VD = 0 - 65
Control accuracy	%	±5
Pressure differential Δp	bar	3,5 … 5
Hydraulic fluid		Mineral oil to DIN 51524 (for other fluids, please contact Bucher Hydraulics)
Cleanliness class for the hydraulic fluid		ISO 4406 class 20/18/15
Oil temperature range	°C	-20 … +80
Viscosity range	mm^2/s	10 … 300
Leakage, constant flow at min. scale position [2]	cm^3/min	max. 50 (for MTKE.../20” max. 250)
Electrical characteristics	**Unit**	**Description, value**
Design		high pressure; wet armature
Supply voltage, DC	VDC	12 or 24 via electrical control
Power consumption	Watt	16
Power-on time (duty cycle)		100 %
Protection class (with a properly fitted plug)		AMP Junior Timer IP65 Deutsch plug IP67 (DIN EN 60529)
Electrical connection		AMP Junior Timer plug connector (2-pole) Deutsch plug DT04-2P-EP04

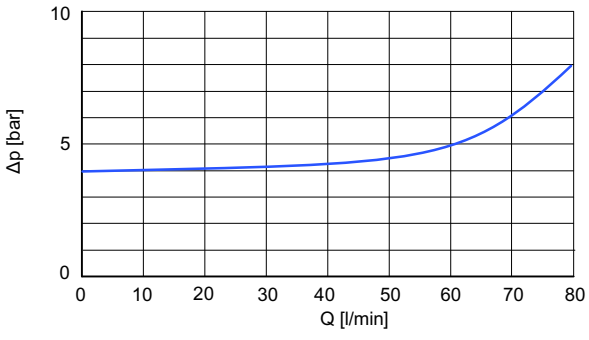
1) For other constant flow rates, contact Bucher Hydraulics.

2) Measured with unloaded surplus flow.

4 Performance graph

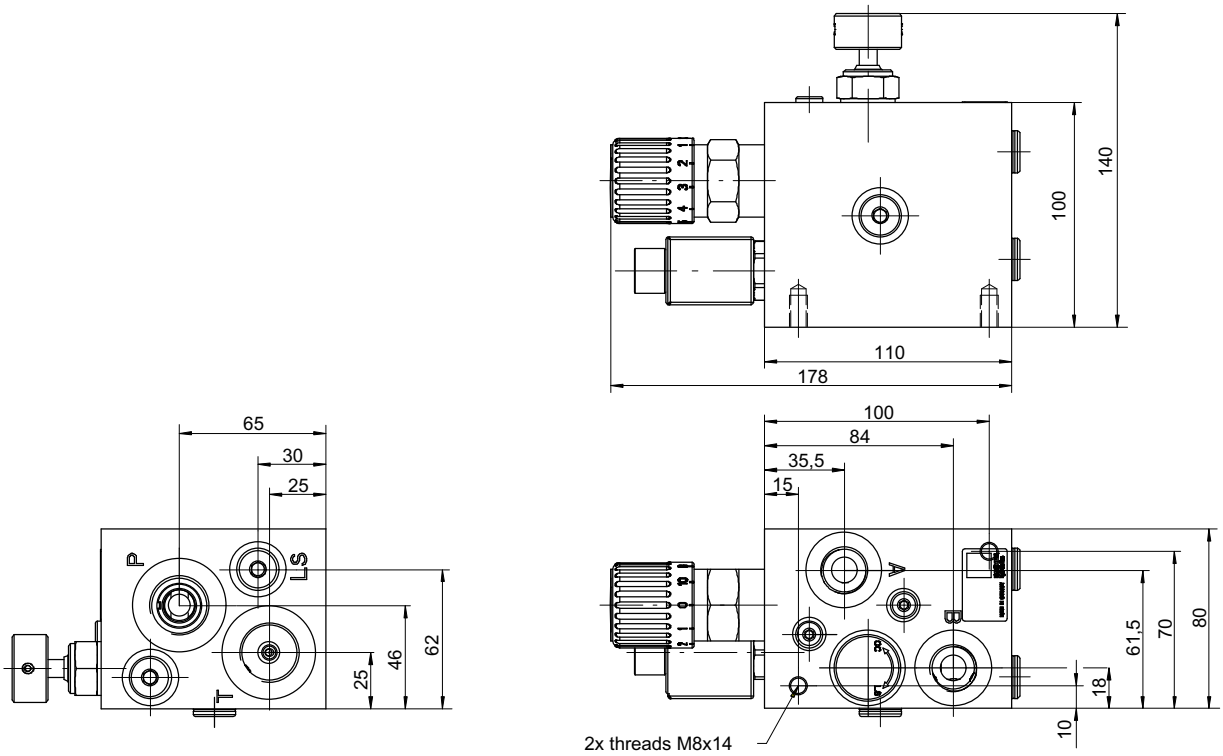
4.1 Pressure drop with off-load bypass P -> R

Values refer to an viscosity of 33 mm^2/s.



5 Dimensions

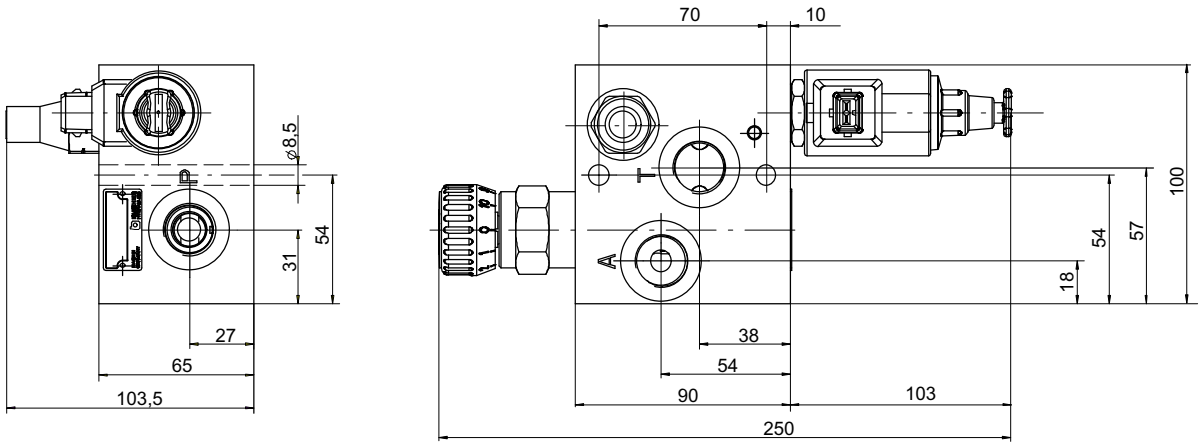
5.1 MTKE



5.1.1 Port threads

Port	MTKE…-.G..
P	G¾“
T	
A	G½“
B	
LS	G¼“

5.2 MTQE



5.2.1 Port threads

Port	MTQE…-.M..
P	M22 x 1,5
A	
T	

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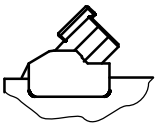
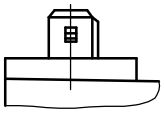
6 Plug Type

6.1 Solenoid connector

Deutsch plug DT04-2P-EP04 T	AMP Junior Timer J
	

7 Ordering information

M T K E | V A | * | - | * | M 2 2 | / | J 2 4 | P = 1)

Flow control valve, solenoid operated = MTKE, MTQE

Constant flow
fixed setting = **
adjustable
0 … 12 l/min = VA
0 … 25 l/min = VB
0 … 35 l/min = VK
0 … 50 l/min = VC
0 … 65 l/min = VD

Type of operation
solenoid = *
solenoid + basic manual override = N

Design stage (to be filled inby the factory)

Ports
A, P, T
M22x1,5 (MTQE) = M22
G 1/2” (MTKE) = G12

Plug type
Deutsch plug = T
AMP Junior Timer = J

Supply voltage, ON/OFF solenoid
DC 12 Volt = 12
DC 24 Volt = 24

1) Specify the required pressure setting in plain text.

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Classification: 430.310.330