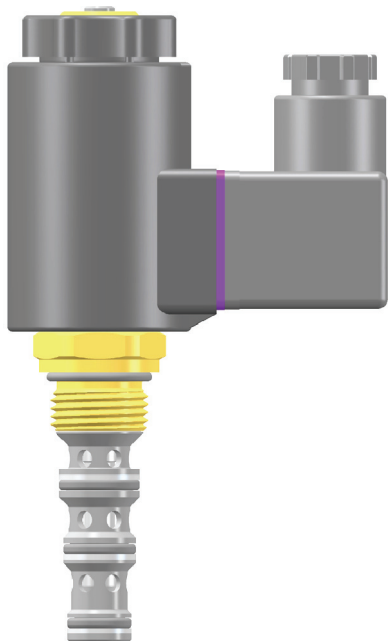


4/2 Solenoid Directional Cartridge Valve 5 mm Spool Type, Direct Acting Series WK42A ...



- Pmax 250 bar / Qmax 30 l/min

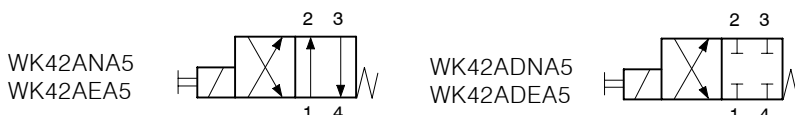
- High flow rates
- Wet-armature solenoid with p_{max}-rated core tube and slip-on coil
- Coils can be changed without opening hydraulic envelope
- All exposed steel parts are zinc-plated to ISO 4042
- 3/4"-16 UNF Mounting Thread
- BUCHER cavity type AN
- Line mounting body (G 3/8") is available
- Can be fitted in "VV" stacking assemblies

1. Description

The WK42A ... series of 4/2 directional valves are solenoid actuated screw-in cartridges, nominal size 5 mm. They are direct acting, spool type units. The range is based on the 3/4"-16 UNF mounting thread. The straightforward design delivers an outstanding Price/Performance ratio and good Δp -Q

characteristics. All exposed steel parts are zinc-plated to ISO 4042, and the valves are suitable for use in the harshest operating environments. The core tube/slip-on coil design allows coils to be changed without opening the hydraulic envelope, even when the valve is under pressure. Coils can be secured at any angle through 360° and are available with the common electrical connectors. The valves are designed to be fitted with a normal 24 A/F OE spanner in BUCHER cavity type AN but can also be installed in some other makes of 3/4"-16 UNF cavity. For customers who manufacture their own manifold blocks, we offer form tool sets for sale or hire. The G 3/8" threaded body GANA is available for line mounting applications. In combination with other cartridges from series WK...-6 and series W1... the valves can be fitting in BUCHER "VV" stacking assemblies.

2. Symbols



3. Characteristics

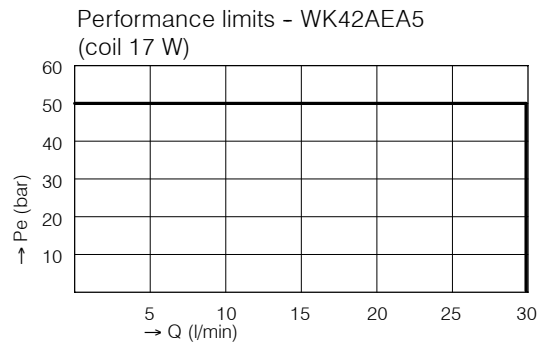
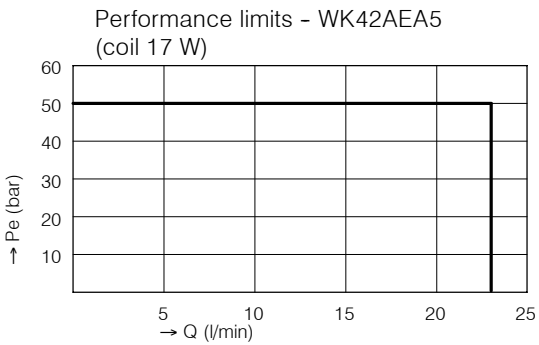
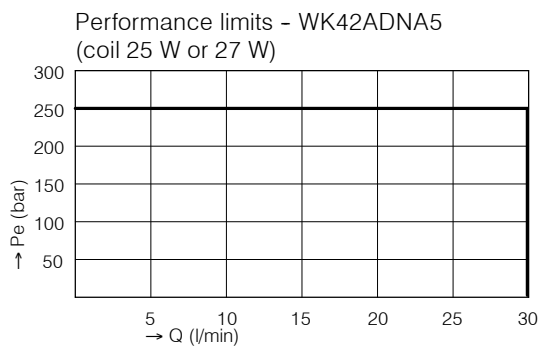
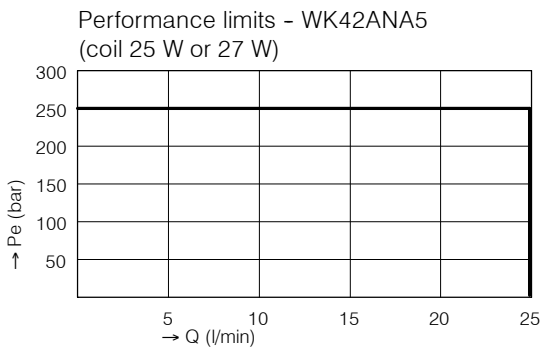
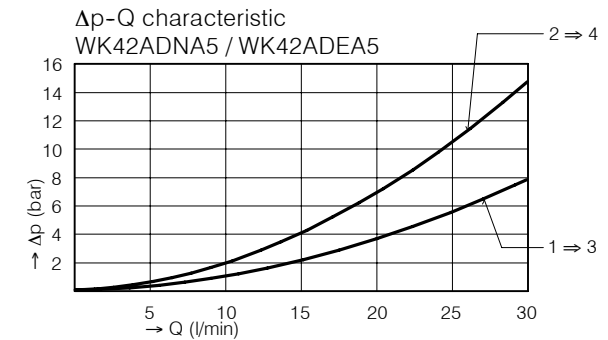
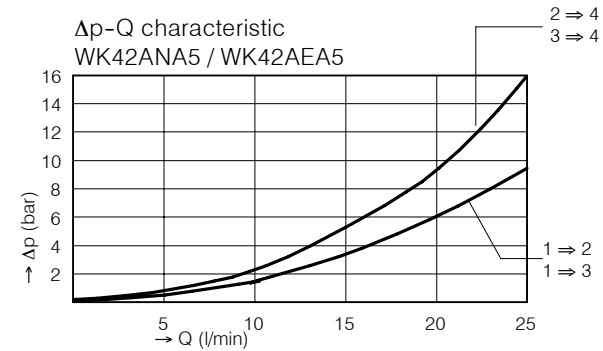
Type		4/2 solenoid directional valve
Design		direct acting, spool type
Mounting method		screw-in cartridge
Size		5 mm nominal size, BUCHER cavity AN
Mass	kg	0.40
Mounting attitude		unrestricted
Flow direction		see symbols
Operating pressure	bar	to 250 in 1, 2, 3 and 4
Flow rate Q max.	l/min	30
Fluids		Hydraulic oils HL and HLP to DIN 51 524 other fluids - contact BUCHER
Fluid temperature range	°C	-25 ... +80
Ambient temperature range	°C	-25 ... +50
Viscosity range	cSt	10 ... 500, recommended 15 ... 250
Minimum fluid cleanliness		18/14 to ISO 4406 /CETOP RP70H 8 ... 9 to NAS 1638
Standard voltages	VAC VDC	115, 230 50 ... 60 Hz 12, 24
Nom. voltage tolerance	%	± 10
Nom. power consumption	W	VAC: optionally 17 or 25 VDC: optionally 17 or 27
Duty cycle	% ED	100 % energisation

Enclosure protection
Electrical connection

IP 65 to DIN 40050
3-pin square plug to DIN 43 650 / ISO 4400 (standard)
other connectors - see data sheet ..120110..

4. Performance characteristics

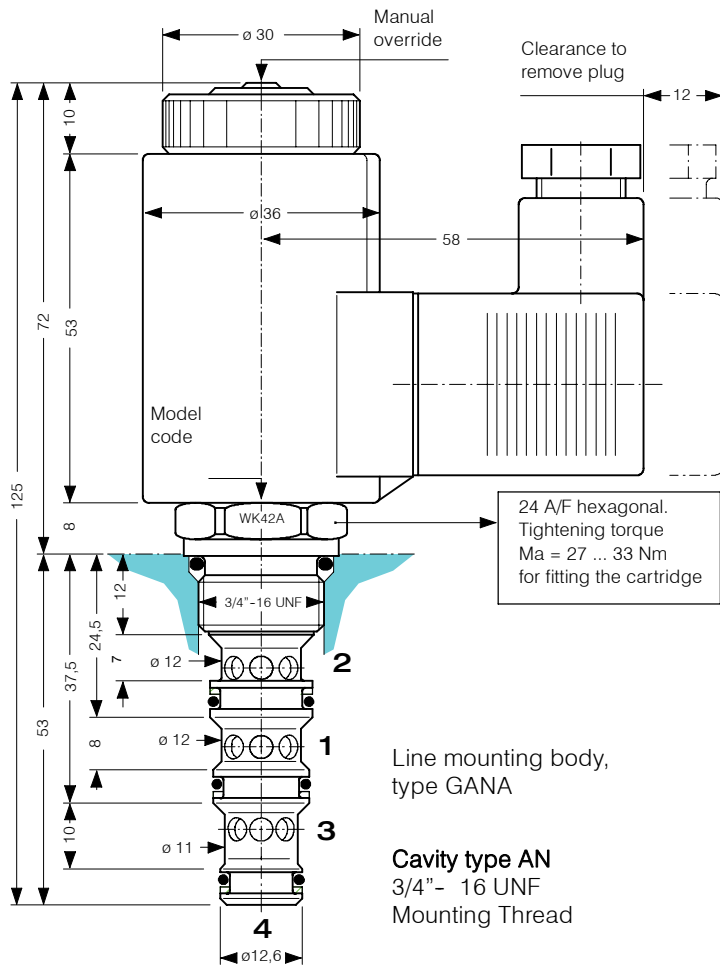
Oil viscosity 33 cSt solenoid at steady-state temperature, 10% under-voltage



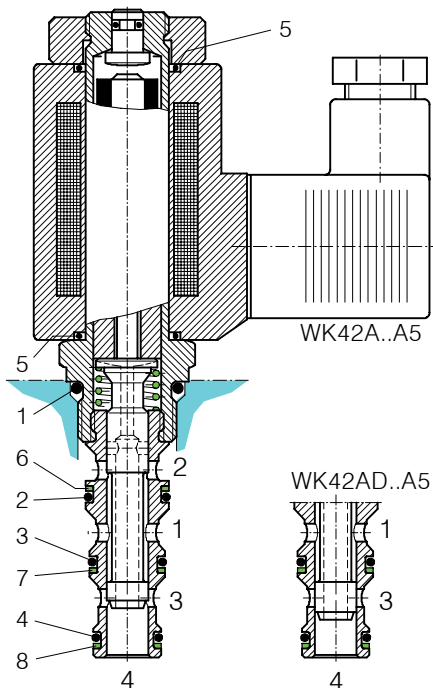
Switching times	WK42ANA5 27/25 W	WK42AEA5 17 W	WK42ADNA5 27/25 W	WK42ADEA5 17 W
Solenoid ON	32 ... 80 ms	45 ... 80 ms	32 ... 80 ms	45 ... 80 ms
Solenoid OFF	15 ... 60 ms	20 ... 45 ms	15 ... 60 ms	20 ... 45 ms

These times are strongly influenced by fluid pressure, flow rate and viscosity.

5. Dimensions



6. Schematic section



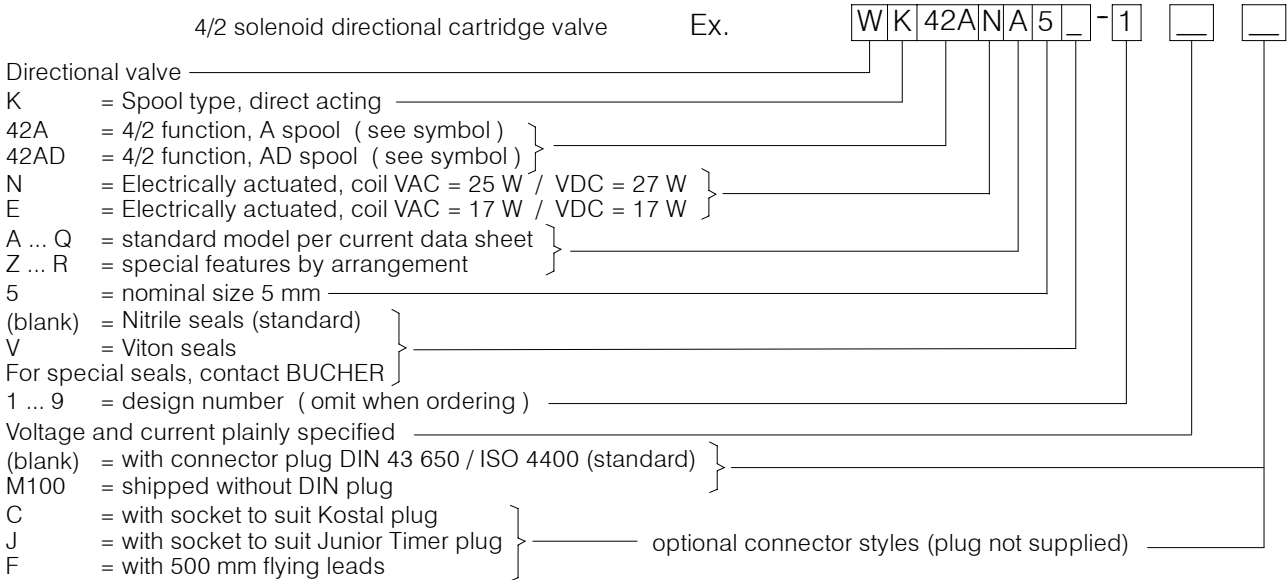
Seal kit no. DS-248, comprising:

Itm.	Qty.	Description	Dimension
1	1	O-ring no. 017	$\varnothing 17,17 \times 1,78 \text{ N90}$
2	1	O-ring no. 014	$\varnothing 12,42 \times 1,78 \text{ N90}$
3	1	O-ring no. 013	$\varnothing 10,82 \times 1,78 \text{ N90}$
4	1	O-ring no. 012	$\varnothing 9,25 \times 1,78 \text{ N90}$
5	2	O-ring	$\varnothing 16,00 \times 2,00 \text{ Viton}$
6	1	Backup ring	$\varnothing 7,8 \times 1,45 \times 1,0 \text{ FI0751}$
7	1	Backup ring	$\varnothing 9,4 \times 1,45 \times 1,0 \text{ FI0751}$
8	1	Backup ring	$\varnothing 10,7 \times 1,45 \times 1,0 \text{ FI0751}$

7. Installation and servicing

All installation and servicing must be carried out with care, and by qualified personnel only. When changing seals, the new seals must be thoroughly oiled or greased before they are fitted. Use the correct tightening torque when fitting the cartridge.

8. Model code key



9. Related data sheets

Old no.	New no.	
W-2.140	400-P-120100-E-00	Solenoid directional cartridge valves, 5 mm (overview)
W-2.141	400-P-120110-E-00	Optional coils for solenoid operated directional valves
G-4.30	400-P-720121-E-00	Line mounting body, type GANA (G 3/8")
I-32	400-P-140011-E-00	The Form tools hire programme
i-33.12	400-P-040191-E-00	BUCHER cavity type AN

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