

Vickers by Danfoss

Valvistor proportional slip-in cartridge valve

K(B)TG4V-3 Pilot Stage
K(B)FTG4V-3 Pilot Stage



Valvistor with KBTG4V-3
as pilot valve

Danfoss' Vickers® Valvistor® line is now extended with the addition of K(B)TG4V-3 and K(B)FTG4V-3 pilot stage proportional valves. The new features and benefits of the higher performance and on-board electronics (OBE) open up new applications and markets. The non-feed-back valves offer performance that is comparable to conventional feedback valves. As its name implies, the Valvistor design has a main poppet valve that amplifies a low flow rate through the pilot circuit, similar to a transistor. This innovative design achieves servo-type control of the main poppet, without using an electrical

main poppet position feedback transducer on the Slip-in cartridge valve.

Features and benefits of the new valves include:

- Integral hydraulic feedback on main stage — Closed-loop, main-stage performance is achieved without using a main-stage LVDT.
- Pilot stage selected to meet specific requirements — Cost-effective design results in design flexibility.
- Pilot flow is directed to the load — Higher flow efficiency is achieved since the flow is not wasted to the tank.

- IP65 and IP67 environmental protection rated best in class — More reliable performance in harsh environments.

Applications include injection and blow molding, rubber molding, press, die-casting, offshore, civil engineering, marine, primary metal, and mobile applications.

The tables below show existing Valvistor configurations and the new extended configurations with K(B)TG4V-3 and K(B)FTG4V-3 as pilot valves.

High Performance

Pilot Valve Model Code & Part Number	EXTENDED CONFIGURATION		EXTENDED CONFIGURATIONS	
	Non-OBE Valve Package		OBE valve Package	
	KFTG4V-3-2B13N-Z-M-U-H7-10 506834		KBFTG4V-3-2B13N-Z-M1-PE7-H7-11, 5996165-001 KBFTG4V-3-2B13N-Z-M2-PE7-H7-11, 5996350-001	
STEP RESPONSE (ms) DELTA P TESTED	OPEN 10 BAR	CLOSE 10 BAR	OPEN 10 BAR	CLOSE 10 BAR
NG16	51	33	35	25
NG25	88	50	50	30
NG32	135	71	70	45
NG40	249	108	130	65
NG50	290	167	170	100
NG63	352	250	200	150
HYSTERESIS	1%	1%	1%	1%

Notes: Valvistor full flow reached at around 70% command input of K(B)F with 13N spool. For M2 version, the command input range is 4-12ma, valve is fully open at 4ma, and fully closed at 12ma.

Standard Performance

EXTENDED CONFIGURATION		EXTENDED CONFIGURATIONS	
Pilot Valve Model Code & Part Number	Non-OBE Valve Package KTG4V-3-2B08N-M-U-H7-60-EN427 02-398752 Other configurations available. Contact Danfoss		OBE valve Package KBTG4V-3-2B08N-M1-PE7-H7-10-EN427 02-398750 KBTG4V-3-2B08N-M2-PE7-H7-10-EN427 02-398751
	OPEN 10 BAR	CLOSE 10 BAR	OPEN 10 BAR CLOSE 10 BAR
STEP RESPONSE (ms) DELTA P TESTED			
NG16	50	40	38 24
NG25	85	60	66 36
NG32	130	85	101 51
NG40	240	130	186 78
NG50	280	200	217 120
NG63	340	300	264 180
HYSTERESIS	<5	<5	<5 <5

Notes: For M2 version, the commandinputrange is 4-12ma, valve is fully openat 4ma, and fully closed at 12ma.

Economical Solution

EXISTING CONFIGURATION		EXTENDED CONFIGURATIONS	
Pilot Valve Model Code & Part Number	Non-OBE Valve Package KTG4V-3S-2B08N-M-U-H5-60-EN427 02-154581 Other configurations available. Contact Danfoss		OBE Valve Package KBTG4V-3S-2B08N-M1-PE7-H5-10-EN427 02-397168 KBTG4V-3S-2B08N-M2-PE7-H5-10-EN427 02-398753
	OPEN 10 BAR	CLOSE 10 BAR	OPEN 10 BAR CLOSE 10 BAR
STEP RESPONSE (ms) DELTA P TESTED			
NG16	50	40	38 24
NG25	85	60	66 36
NG32	130	85	101 51
NG40	240	130	186 78
NG50	280	200	217 120
NG63	340	300	264 180
HYSTERESIS	<8%	<8%	<8% <8%

Notes: For M2 version, the command input range is 4-12ma, valve is fully open at 4ma, and fully closed at 12ma.

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