

CONFIGURATION

H	Poppet Configuration	Normally Open
N	Seal Material	Buna-N
(none)	Coil	No coil

This FLeX Series, solenoid-operated 2-way, 2-position cartridge is a direct-acting directional poppet valve with a soft shift feature. Available in either normally open or normally closed configurations, these valves feature a pressure-balanced design, low leakage, and allow flow or blocking in both directions.

This cartridge can be installed directly into a cavity in the end of many of Sun's pilot operated and ventable valves to provide integrated pilot control.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-8A
Series	P
Capacity	7 gpm
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	0.004 in ³ /min.@5000 psi
Manual Override Force Requirement	10 lbs/1000 psi @ Port 1
Viscosity Range	35 - 2000 SUS
Valve Hex Size	3/4 in.
Valve Installation Torque	20 - 25 lbf ft
U.S. Patent #	10,302,201
Seal kit - Cartridge	Buna: 990608007
Seal kit - Cartridge	Viton: 990608006
Seal and nut kit - Coil	Viton: 990740006
Model Weight	0.40 lb.

CONFIGURATION OPTIONS

Model Code Example: DTAFSHN

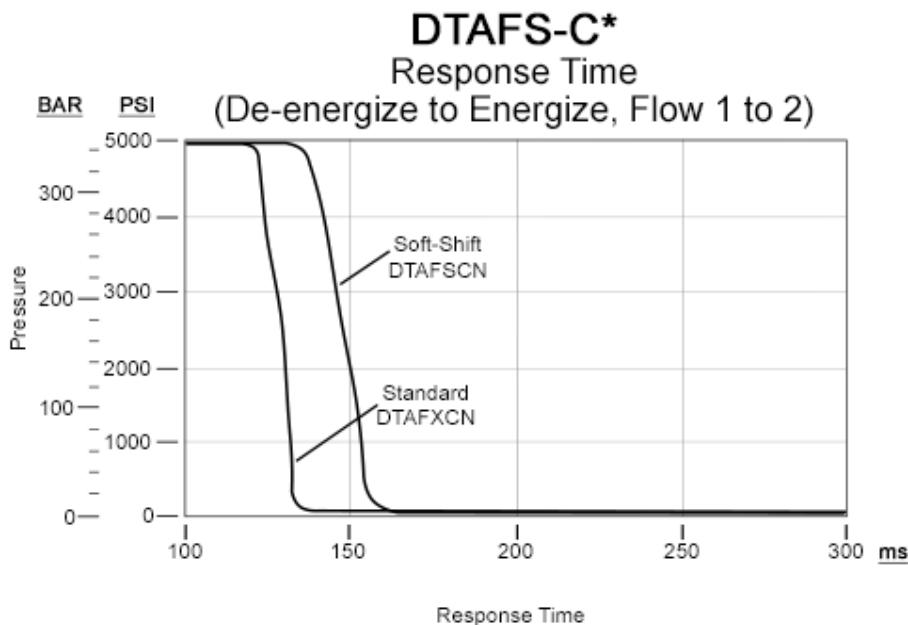
POPPET CONFIGURATION	(H)	SEAL MATERIAL	(N)	COIL *
H Normally Open		N Buna-N		No coil
C Normally Closed		E EPDM		
		V Viton		

* Additional coil options are available

TECHNICAL FEATURES

- The soft shift cartridge is interchangeable with the standard cartridge, however, the performance limits are lower.
- The soft shift feature can reduce shock due to valve actuation but should not be counted upon in applications where timing is critical. If you need accurate ramping or timing control, consider Sun's electro-proportional valves.
- The soft shift feature results in an increase in response time over Sun's standard solenoid. Response time is dependent on flow, pressure, coil voltage, oil viscosity and ambient temperature.
- For consistent soft shift performance, port 1 should be at a positive pressure.
- Cartridge can be installed directly into a cavity in some Sun pilot operated and ventable cartridges to provide electrically operated pilot control functions. Separate pilot lines are eliminated and only one cavity needs to be machined to accommodate both the control and primary function.
- Suitable for load-holding applications when configured as Normally Closed. In the event of power failure, the valve will close.
- Designed and tested to 10-million operational cycles at full-rated pressure.
- Exceeds new NFPA test standard T2.6.1 R2014 for fatigue and burst pressure ratings.
- Higher flow rates than competing valves of similar size.
- Designed using CFD simulation for optimized geometries.
- All configurations of this valve include zinc-nickel plating as standard for 1000-hour salt fog protection.
- Normally Closed configuration can be used with any of the 740 Series coils, which include low-power, high-power, and 747 Series explosion-proof coils. Normally Open configuration can be used with the high-power and explosion proof coils only.
- Coil connector options offer ratings up to IP69K. See individual coil product pages for details.
- This valve is available with a manual push-type override option.
- This valve exhibits extremely low leakage - 0.004 in³ (0,07 cc)/min (1 drop/min).
- A FULL DATA SHEET is available for this model using the link at the top of the page.
- A wide variety of coil termination and voltage options are available, with and without surge protection. See the CONFIGURATION section.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

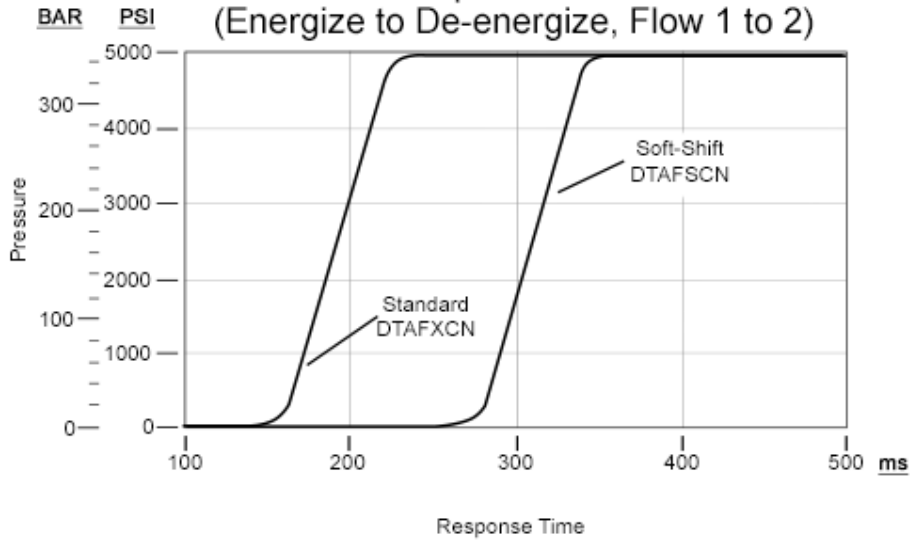
PERFORMANCE CURVES



DTAFS-C*

Response Time

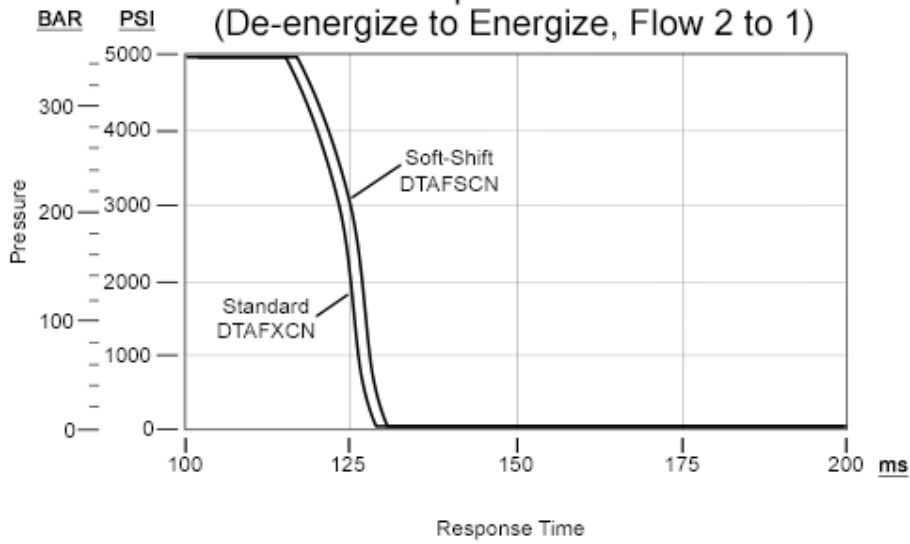
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DTAFS-C*

Response Time

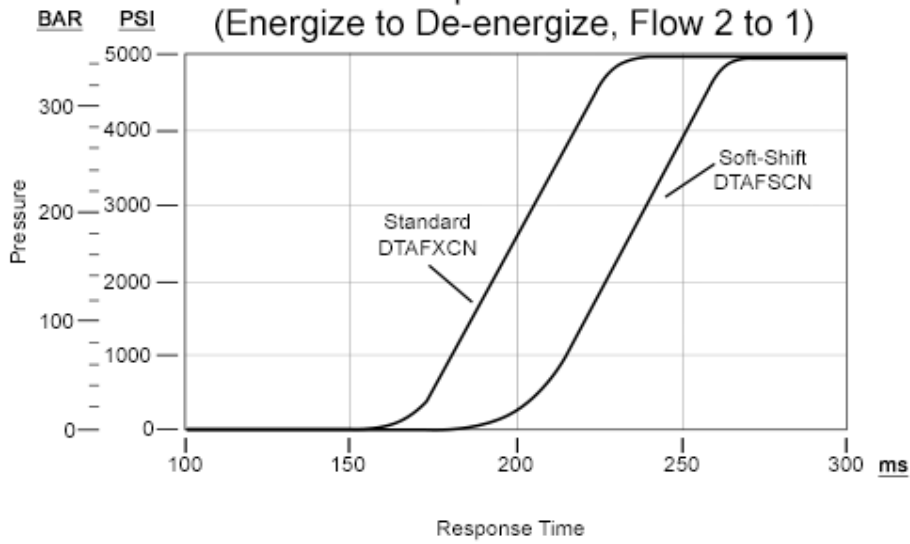
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DTAFS-C*

Response Time

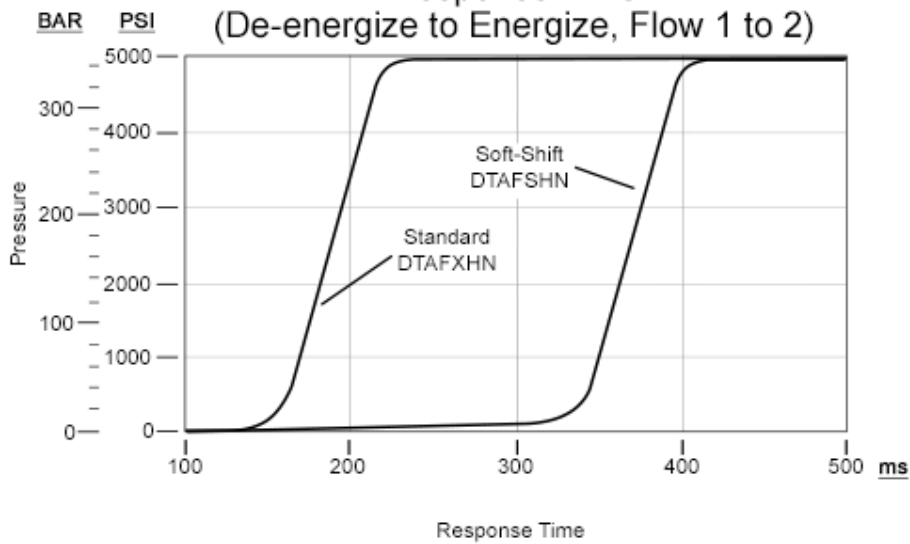
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DTAFS-H*

Response Time

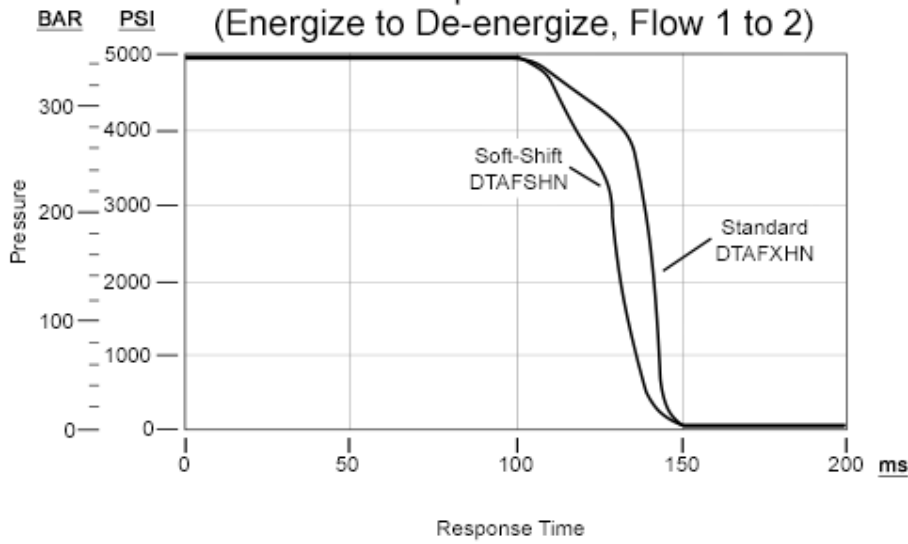
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DTAFS-H*

Response Time

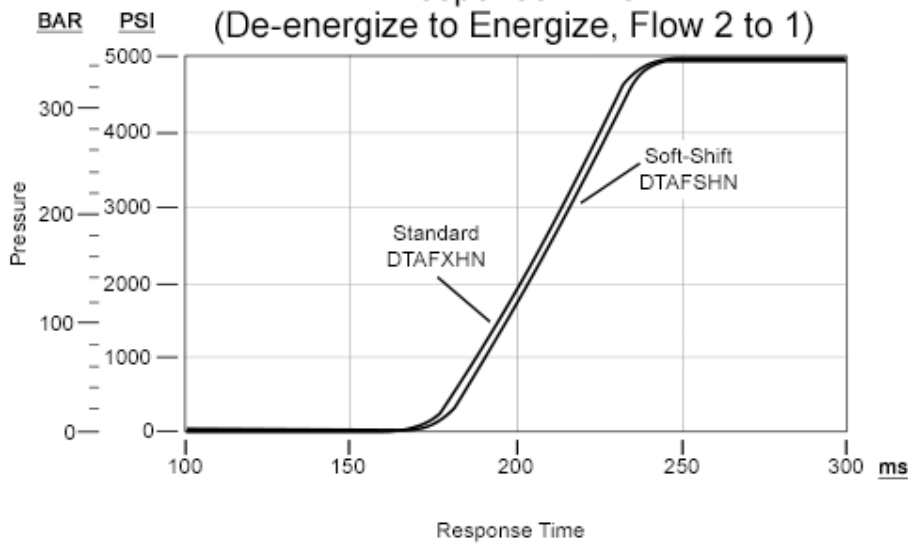
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DTAFS-H*

Response Time

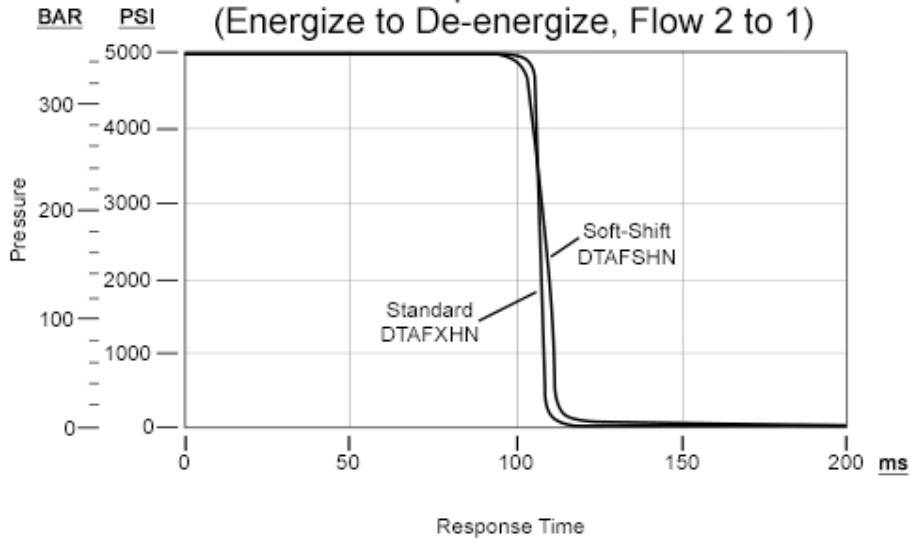
(De-energize to Energize, Flow 2 to 1)



DTAFS-H*

Response Time

(Energize to De-energize, Flow 2 to 1)



RELATED MODELS

- [DTAF](#) FLeX Series 2-way, direct-acting, solenoid-operated directional blocking poppet valve