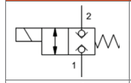
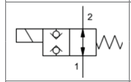
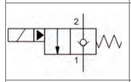
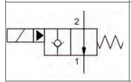
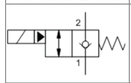
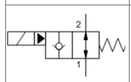
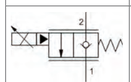
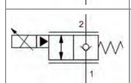
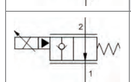
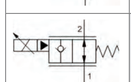
Sun FLeX™ Series Solenoid Valves & Coils

The Sun FLeX Series family of solenoid valves and coils offer high-performance components in flexible configuration options. This compatibility chart outlines the coil options using the 740 Series low- and high-power coils and the 747 Series hazardous environment (explosion-proof) coils.

Symbol	Description	Model	Cavity	Pressure	Capacity (nominal)	Coil Options		
						Low Power	High Power	Exp. Proof
	2-way, direct-acting, solenoid-operated directional blocking poppet valve, normally closed (Max. capacity: 10 gpm/40 L/min)	DTAF-*C*	T-8A	5000 psi (350 bar)	2.2 gpm (8.3 L/min)	YES	YES (High flow)	YES
		DTBF-*C*	T-162A	5000 psi (350 bar)	2.0 gpm (7.6 L/min)	YES	YES (High flow)	YES
	2-way, direct-acting, solenoid-operated directional blocking poppet valve, normally open (Max. capacity: 10 gpm/40 L/min)	DTAF-*H*	T-8A	5000 psi (350 bar)	1.6 gpm (6.1 L/min)		YES	YES
		DTBF-*H*	T-162A	5000 psi (350 bar)	0.9 gpm (3.4 L/min)		YES	YES
	2-way, 2-stage, solenoid-operated directional poppet valve - control flow 2-1, normally closed	DFBD-*C*	T-162A	3000 psi (210 bar)	10 gpm (40 L/min)	YES		YES
		DFBF-*C*	T-162A	5000 psi (350 bar)	10 gpm (40 L/min)		YES	YES
	2-way, 2-stage, solenoid-operated directional poppet valve - control flow 2-1, normally open	DFBD-*H*	T-162A	3000 psi (210 bar)	10 gpm (40 L/min)	YES		YES
		DFBF-*H*	T-162A	5000 psi (350 bar)	10 gpm (40 L/min)		YES	YES
	2-way, 2-stage, solenoid-operated directional poppet valve with reverse flow check- control flow 2-1, normally closed	DFBE-*C*	T-162A	3000 psi (210 bar)	10 gpm (40 L/min)	YES		YES
		DFBG-*C*	T-162A	5000 psi (350 bar)	10 gpm (40 L/min)		YES	YES
	2-way, 2-stage, solenoid-operated directional poppet valve with reverse flow check - control flow 2-1, normally open	DFBE-*H*	T-162A	3000 psi (210 bar)	10 gpm (40 L/min)	YES		YES
		DFBG-*H*	T-162A	5000 psi (350 bar)	10 gpm (40 L/min)		YES	YES
	Pilot-operated, normally closed, electro-proportional throttle - control flow 2-1	FPBF-XD*	T-162A	5000 psi (350 bar)	5 gpm (20 L/min)		YES	YES
	Pilot-operated, normally closed, electro-proportional throttle with reverse flow check - control flow 2-1	FPBG-XD*	T-162A	5000 psi (350 bar)	5 gpm (20 L/min)		YES	YES
	Pilot-operated, normally open, electro-proportional throttle - control flow 2-1	FPBI-XD*	T-162A	5000 psi (350 bar)	5 gpm (20 L/min)		YES	YES
	Pilot-operated, normally open, electro-proportional throttle with reverse flow check - control flow 2-1	FPBJ-XD*	T-162A	5000 psi (350 bar)	5 gpm (20 L/min)		YES	YES

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Performance Driven. Market Priced.

sun FLeX™

New Sun FLeX™ Series Solenoid Valves & Coils

sun hydraulics®

FLeX ADVANTAGE

These newly designed Sun FLeX™ Series Solenoid Valves & Coils are the first in a family of electro-hydraulic products from Sun Hydraulics that give you the flexibility, performance and price to address a wide range of applications in both mobile and industrial markets.

The FLeX Series offers consistently better pressure drop in ***a virtually leak-proof poppet-style valve designed and tested to exceed 10-million-functional-cycle operations.*** And all the valves and coils in the FLeX Series are zinc-nickel coated standard to offer 1,000-hour salt fog protection, so they're suitable for a wide range of demanding applications.

You get the performance and quality you expect from Sun Hydraulics at market prices. The ***FLeX*** Advantage.

16 SOLENOID VALVES
10 FUNCTIONS

Four direct-acting directional valves
Eight pilot-operated directional valves
Four electro-proportional valves

3 SOLENOID COILS

Energy-saving low-power (17 W)
Workhorse high-power (25 W)
Hazardous Environment (30 W)

34 FLeX-IBLE COMBINATIONS

Mix and match to meet a wide range of needs using a small inventory of products.

PERFORMANCE DRIVEN

MEETING MULTIPLE MARKET NEEDS

This is what happens when a quality company known for high-performing, reliable products applies its teams to develop market-priced solutions for the mobile and industrial electro-hydraulic markets.

We started with a clear goal in mind – to produce an electro-hydraulic cartridge valve solution that leveraged proven Sun technologies in smart ways to address a wide range of market needs. And throughout the process, we maintained our highest standards while competitively targeting more price-sensitive applications.

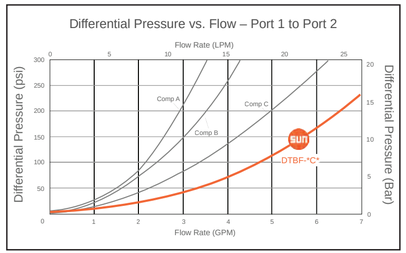
OUTPERFORM THE COMPETITION

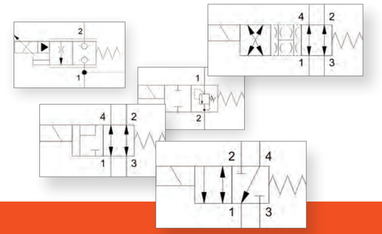
As an example of FLeX performance advantages, the DTBF normally closed, direct-acting blocking poppet valve has been designed and tested to provide superior performance, optimizing flow path geometries for **high-efficiency operation.**

This attention to detail provides two big advantages:

- Lower pressure differential across valve at a given flow
- Increased shift performance at higher pressures & flows

This means that hydraulic systems using the DTBF will see improvements in efficiency and reliability while still allowing for performance at high pressures and flow rates.





FOCUS ON A GROWING FAMILY

The driving concept was to develop a platform that offered flexibility, with an expanding series of valves based on a **common set of coils.** Low-power coils offer energy savings for both 3000- and 5000-psi (210- and 350-bar) applications. High-power coils deliver performance for more demanding systems. And the T4-rated explosion-proof coils safely bring electro-hydraulics to hazardous locations.

COST-EFFECTIVE **SOLUTIONS**

MOBILE FRIENDLY

With the new FLeX Series, you can easily meet your mobile needs with low-power 740 Series coils and smaller, more efficient cartridge valves.

More work, less energy, smaller space.

EXPLOSION PROOF

And when you need to operate safely in hazardous locations, the FLeX 747 Series coils can transform any of the FLeX valves into an explosion-proof electro-hydraulic solution.

More work, better performance, safer operation.

INDUSTRIAL READY

And FLeX is ready to meet your industrial needs as well. High-power 740 Series coils, 5000-psi (350-bar) pressures, and 10-million-cycle reliability give you what you're looking for in rugged industrial applications.

More work, longer life, lower maintenance.

XMD COMPATIBLE

And the FLeX Series are compatible with the new line of Sun Hydraulics XMD Series single- and dual-coil drivers – the smallest, most powerful drivers in the industry. They offer easy-to-use smartphone setup with common predefined profiles, remote diagnostics mode, and rugged construction to handle all kinds of applications.