2-Way High Performance Proportional Throttle Valve

Series TDC

ENGINEERING YOUR SUCCESS.

High Performance and Precise

The new proportional throttle valve series TDC

With the new proportional throttle valve series TDC, Parker completes the slip-in cartridge valve range by a high performance and economical type. The TDC combines high flow capacities with top precision und thus enables faster, more efficient production processes.

Perfected cartridge design

The new series TDC demonstrates Parker's long-term experience in the field of active cartridge valves. The design with minimized control surfaces requires less pilot oil, allows fast response time and above all an outstanding controllability of the leak-free main poppet. The active control positions the poppet independent of the pressure conditions in the system. The poppet is always hydraulically clamped and thus follows the command signal optimally. This results in faster and stable production processes with high output and lower scrap rate at the same time.

Variably applicable as single component or system module

The TDC is also characterized by its high versatility. It can be used for the precise meter-in control as well as for the meter-out control, either with linear or progressive spool design for a particularly sensitive control. Above all, it fits seamlessly with Parker's comprehensive range: as high-grade single component or part of a hydraulic control system including all necessary valves and manifolds. Take advantage of a system solution from a single source!

At a glance

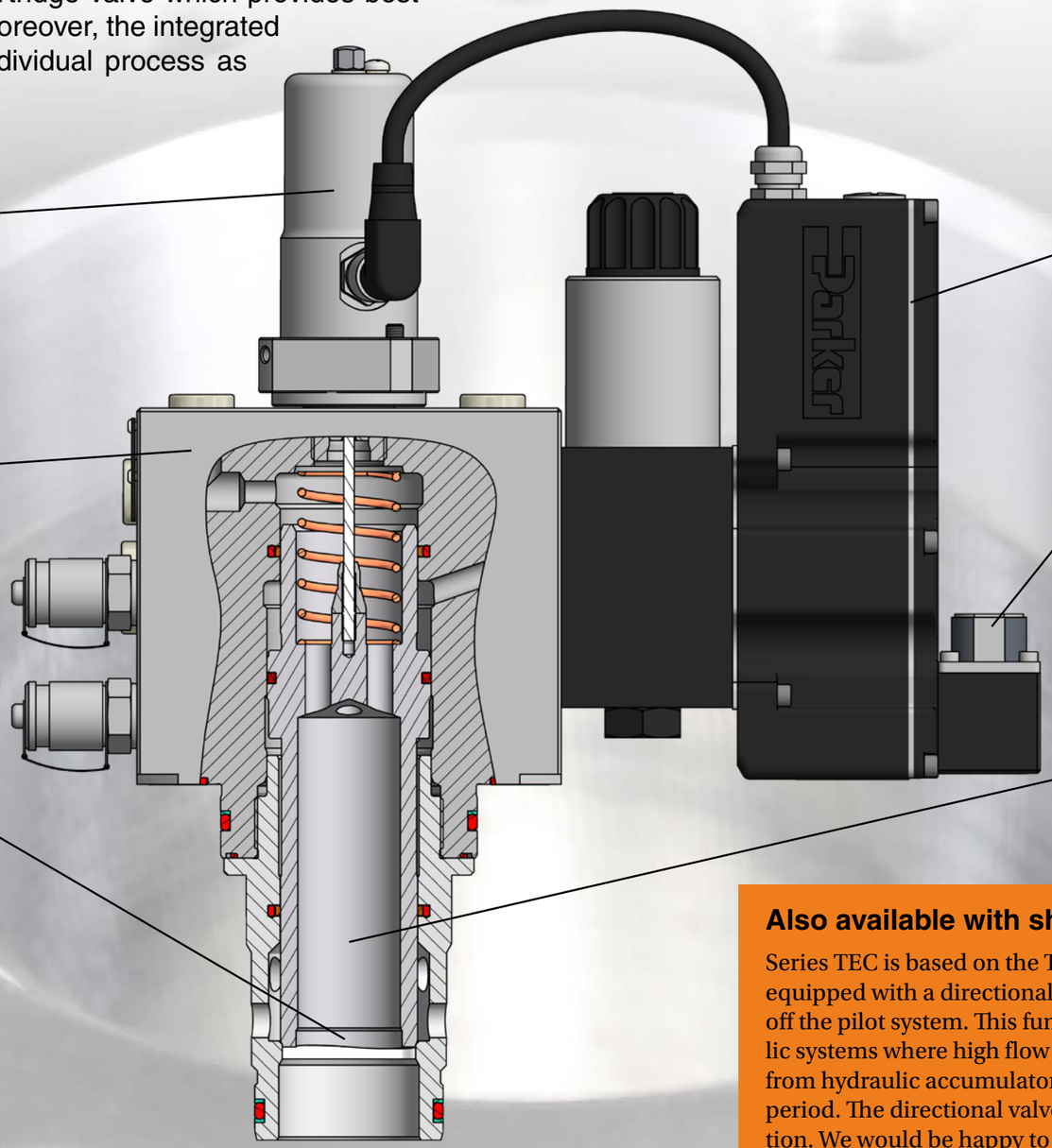
- Active control 2-way high performance proportional throttle valve
- Cavity and mounting pattern according to ISO 7368
- Fast step response
- Completely mounted and adapted unit with integrated electronics
- 4 sizes, NG25 to NG50

Optimized in Every Detail

Best conditions for efficient operation

The development of the new series TDC was driven by the latest requirements of modern hydraulics. The result is a slip-in cartridge valve which provides best prerequisites for an economical operation. Moreover, the integrated valve electronics can be adjusted to the individual process as required.

Integrated LVDT
For exact closed-loop position control of the main poppet. Ensures high precision for optimum process accuracy.



Latest generation of digital onboard electronics
Via the freely downloadable, user-friendly ProPxD software, the parameters of the valve electronics can be accessed where required. The integrated diagnostics function makes optimal configuration easier.

Robust mechanical design
Proven one-magnet proportional DC valve with precise spool-sleeve design and integrated electronics as pilot valve. Solid main stage with pressure-compensated valve poppet.

Optional: EtherCAT bus interface
Even demanding control tasks can be carried out within the fieldbus system as a result of the high data-transmission rate and the short cycle times (not shown).

Low flow resistance
The fluidical optimized design of the main stage increases energy efficiency.

Linear or progressive flow characteristics
For high flows or alternatively particularly sensitive control within the lower pressure range.

Also available with shut-off valve as series TEC

Series TEC is based on the TDC range but is additionally equipped with a directional control valve for shutting off the pilot system. This function is used in hydraulic systems where high flow rates are discharged from hydraulic accumulators over a short operating period. The directional valve provides a safety function. We would be happy to provide you with more detailed information.

One for All

Parker‘s Proportional Throttle Valve range

The new series TDC completes Parker’s proportional throttle valve range. When it comes to control high flows precisely and dynamically, we offer the right slip-in cartridge valve for every task – in various sizes, for open-loop and closed-loop axes, for meter-in and meter-out functions as well as for safety-relevant applications.

Series		Technical data	Advantages	Applications
TDA		**Sizes:** 8 sizes, NG16 – NG100 **Max. operating pressure:** Ports A, B and X to 350, Y max. 10 **Nominal flow at Δp = 10 bar:** 220 – 9.500 l/min **Step response at pilot pressure > 50 bar:** 20 – 80 ms	• Proven and very robust design • High resolution and repeatability • Leakage-free from port B to A • Pressure differential up to 350 bar possible • Fail-safe function at power failure • Short delivery time	• Features a precise control of large oil flows for an efficient, reliable operation • Presses • Die cast • General machine building and plant engineering
TDC		**Sizes:** NG25, NG32, NG40, NG50 **Max. operating pressure:** Ports A, B, X, SP max. 350; port Y max. 210 **Nominal flow at Δp = 5 bar (linear):** 420 – 1.900 l/min **Nominal flow at Δp = 5 bar (progressive:)** 380 – 1.700 l/min **Step response at pilot pressure < 140 bar:** 20 – 31 ms	• Completely mounted and adapted unit with integrated electronics • Robust valve design – ensures high reliability • High precision and repeatability • Fast step response • Flow direction B to A and A to B • Short delivery time	• Particularly suitable for demanding controlled applications where high flow must be precisely controlled at high dynamics • Presses, shears, bending machines • Injection molding • General machine building and plant engineering • Marine applications
TDP		**Sizes:** 7 sizes, NG25 – NG100 **Max. operating pressure:** Ports A, B, X, SP max. 350; port Y max. 35 **Nominal flow at Δp = 5 bar (linear):** 420 – 8.000 l/min **Nominal flow at Δp = 5 bar (progressive:)** 380 – 6.800 l/min **Step response at pilot pressure < 140 bar:** 10.5 – 28 ms	• Completely mounted and adapted unit with integrated electronics • High precision and repeatability • Extremely fast step response • Flow direction B to A and A to B • Fail-safe function at power and/or hydraulic failure • Short delivery time	• Predestined for demanding controlled applications where high flow must be precisely controlled at maximum dynamics • Composite and ceramic presses • Die cast • Injection molding • Test benches • Bending machines • Marine applications

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