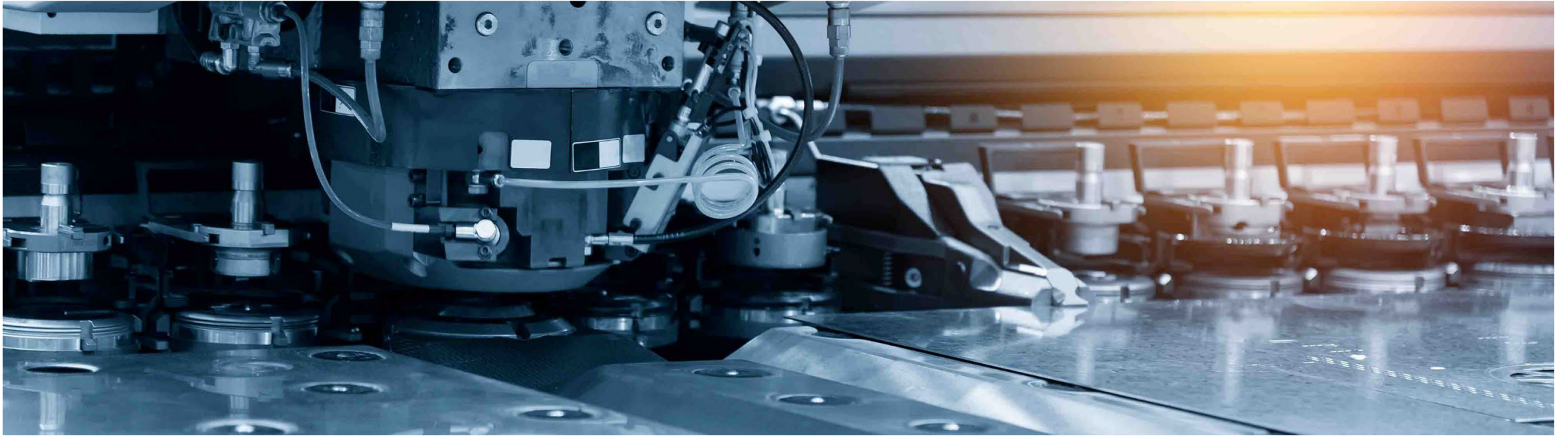




**MOOG**

DIRECT-OPERATED PROPORTIONAL VALVES  
MOOG D927 SERIES VALVE



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## EXTERNAL

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PRODUCT OVERVIEW  
TECHNICAL OVERVIEW  
TECHNICAL FEATURES  
HOW TO LEARN MORE  
CONTACT US

# MOOG D927 DIRECT-OPERATED PROPORTIONAL VALVE

WHAT'S UNIQUE ABOUT IT

**ROBUST**

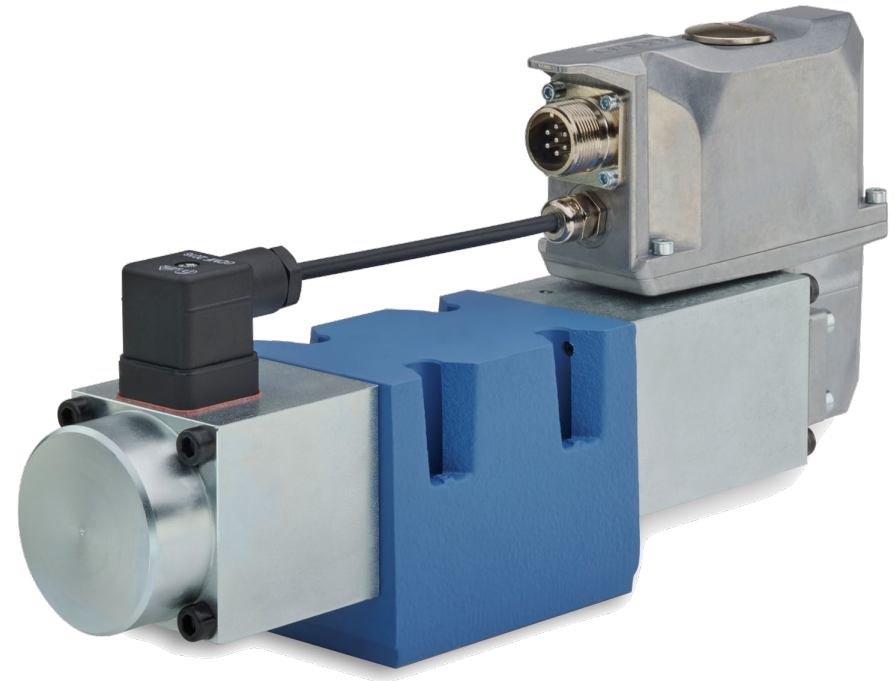
**RELIABLE**

**PERFORMANT**

**COMPACT DESIGN**

**COST OPTIMIZED DESIGN**

**SHORT LEADTIME**



*It's not a valve, it's a MOOG!*

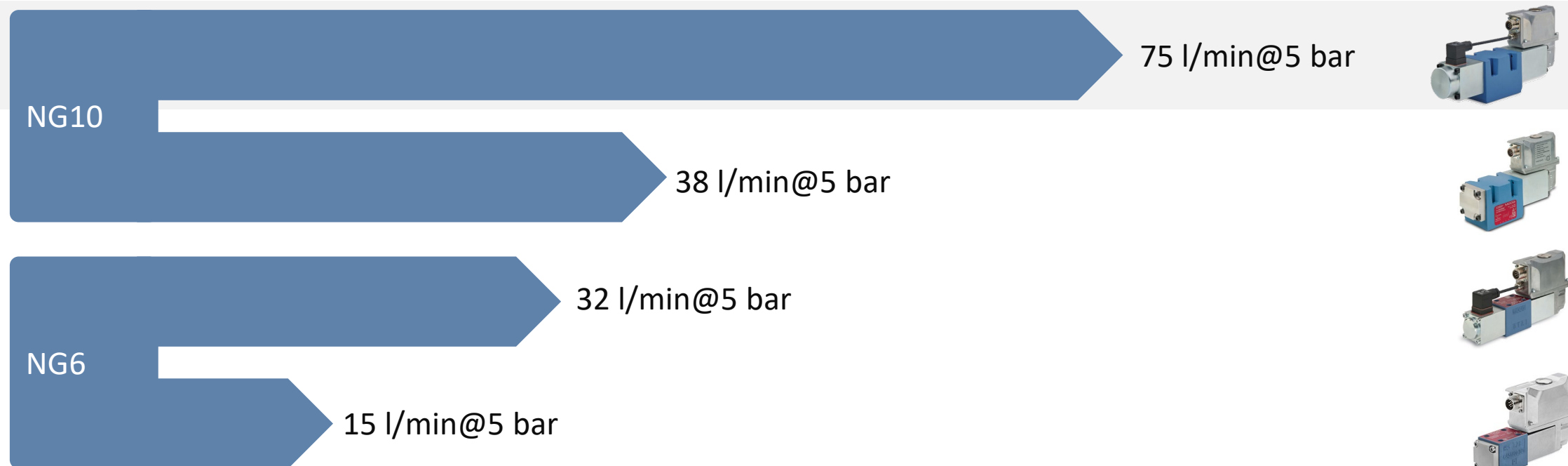
# PRODUCT OVERVIEW

# PRODUCT PORTFOLIO OVERVIEW



More Details

## PRODUCT SERIES OF DIRECT OPERATED SERVO-PROPORTIONAL VALVES



# PRODUCT OVERVIEW

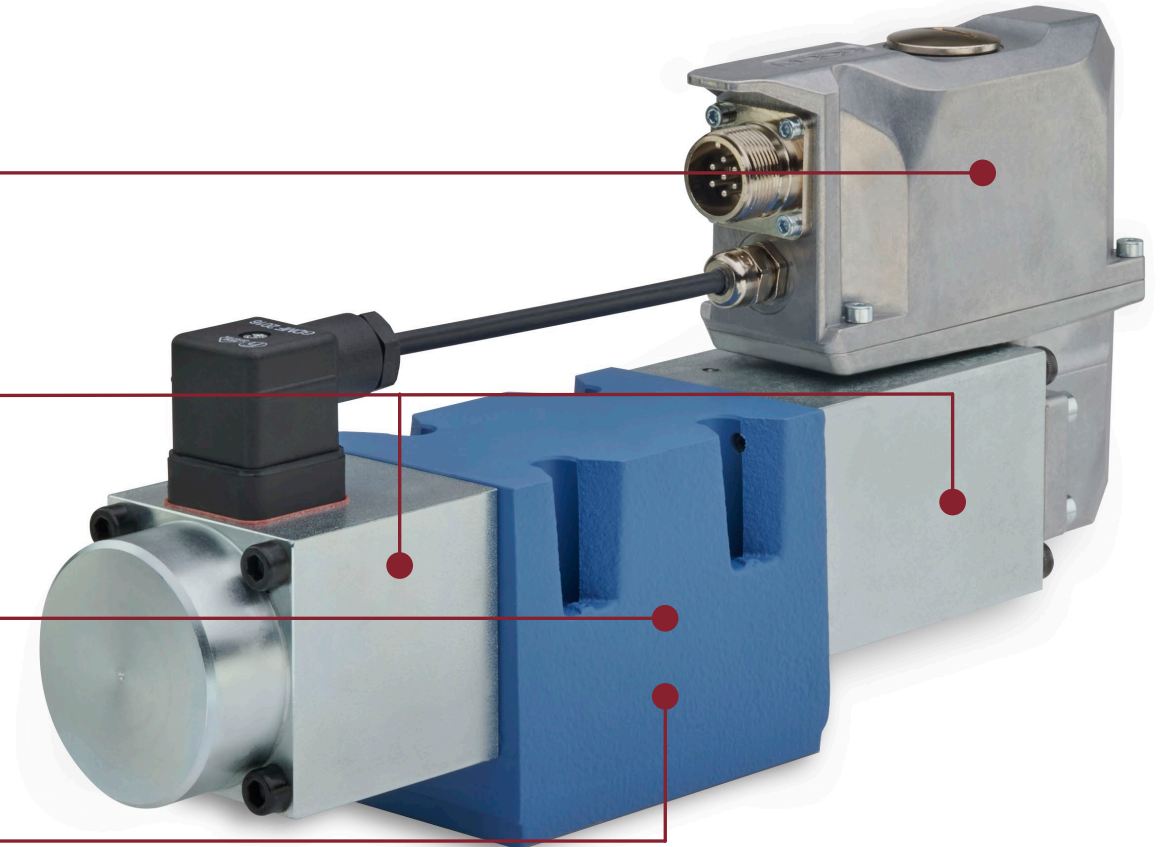
## MOOG D927 DIRECT-OPERATED PROPORTIONAL VALVE

integrated electronics

dual proportional solenoid operated

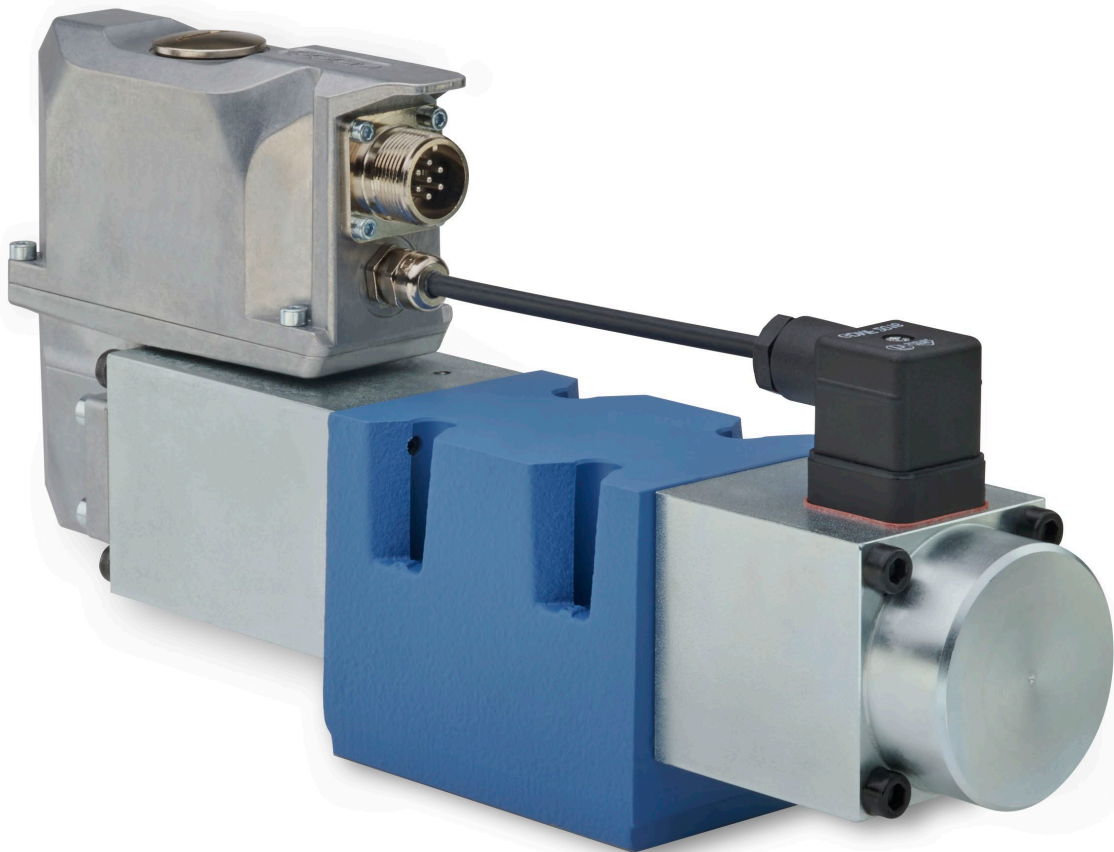
4/3-way spool-in-body design

closed-loop spool position control



# TECHNICAL OVERVIEW

# TECHNICAL DATA



Size NG10

Rated flow up to 75 l/min (@5 bar)

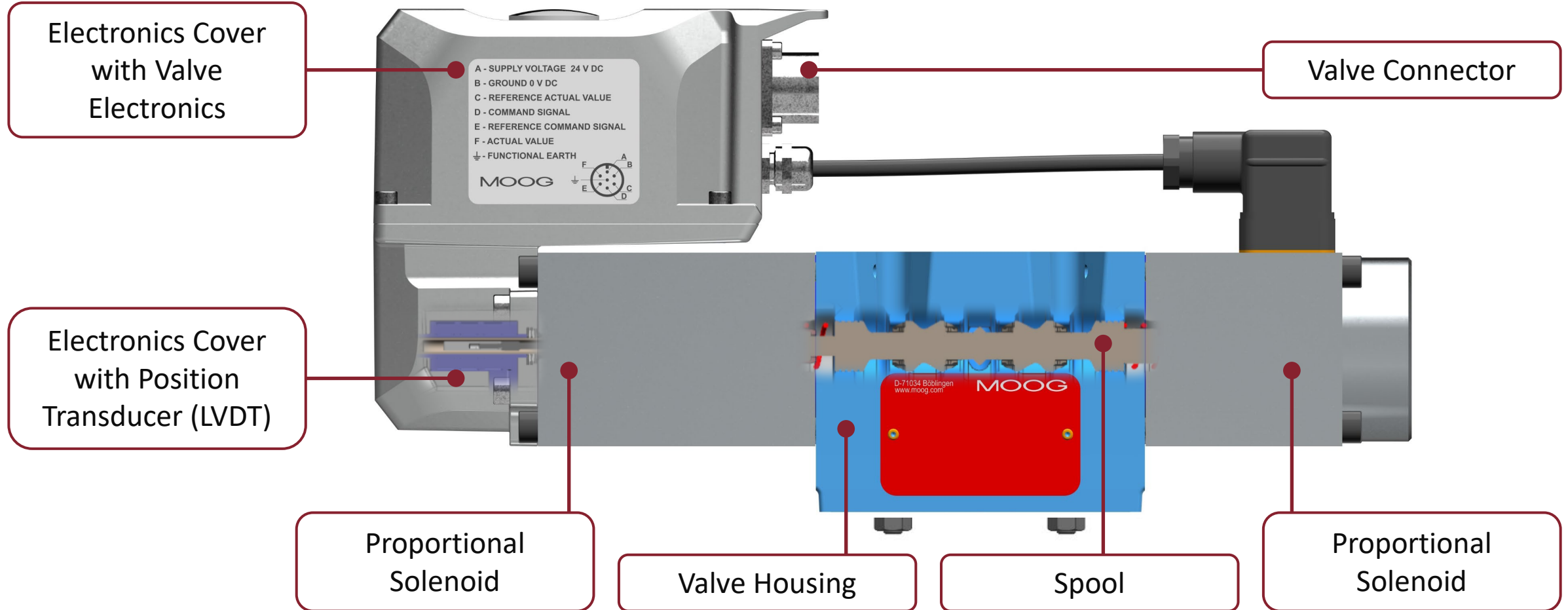
4/3-way and 4/2-way design

Failsafe option: safe midposition

Rated pressure 350 bar

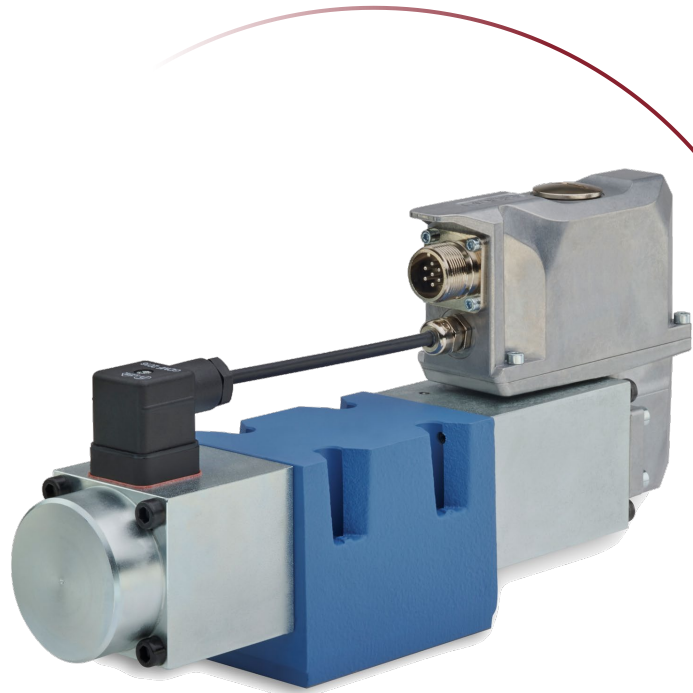
Pressure tank port 250 bar

# VALVE DESIGN



# TECHNICAL FEATURES

# TECHNICAL FEATURES



Available Flow Options

FailSafe Options

Electrical Interface and Signals

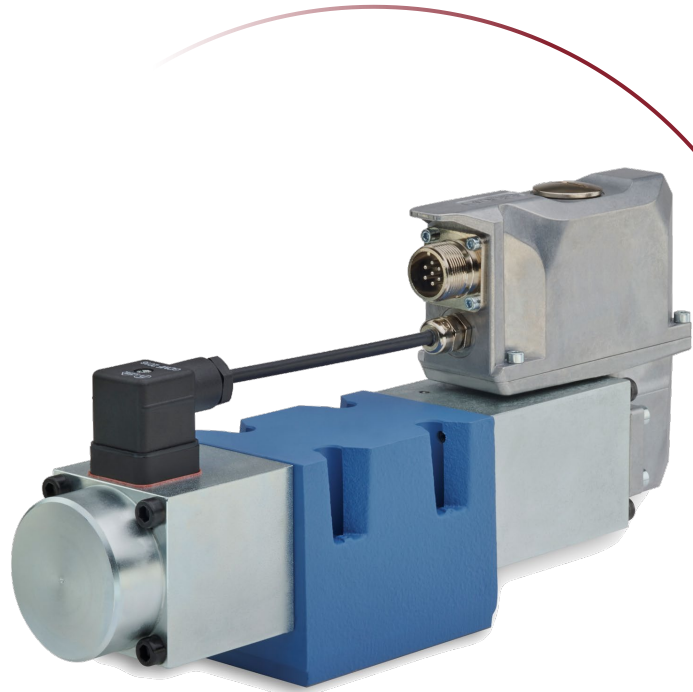
Robustness

# TECHNICAL FEATURES



More Details

## AVAILABLE FLOW OPTIONS



24 spool options

3 rated flows (25, 50 and 75 l/min@5 bar)

area ratio (1:1 and 2:1)

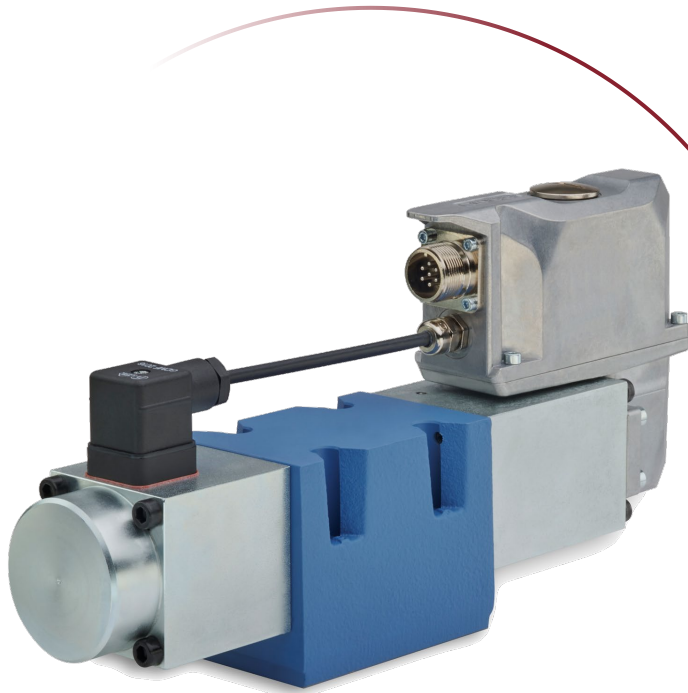
overlap conditions (<3 up to 15%)

# TECHNICAL FEATURES



More Details

## FAILSAFE OPTIONS



Spring centered in mid position

Without spring retainer for improved axis controllability

For spools with < 3% overlap

With spring retainer for secured mid position

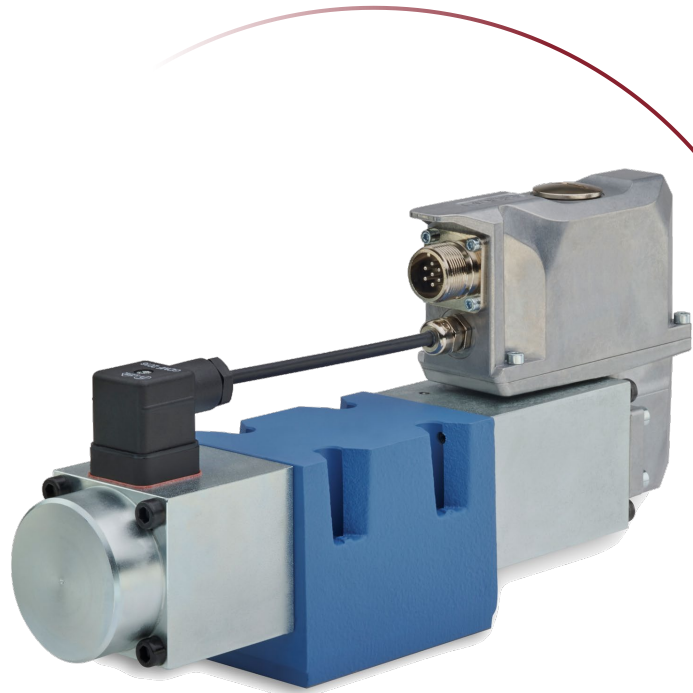
For spools with 15% overlap

# TECHNICAL FEATURES



More Details

## ELECTRICAL INTERFACE AND SIGNALS



6-PE connector

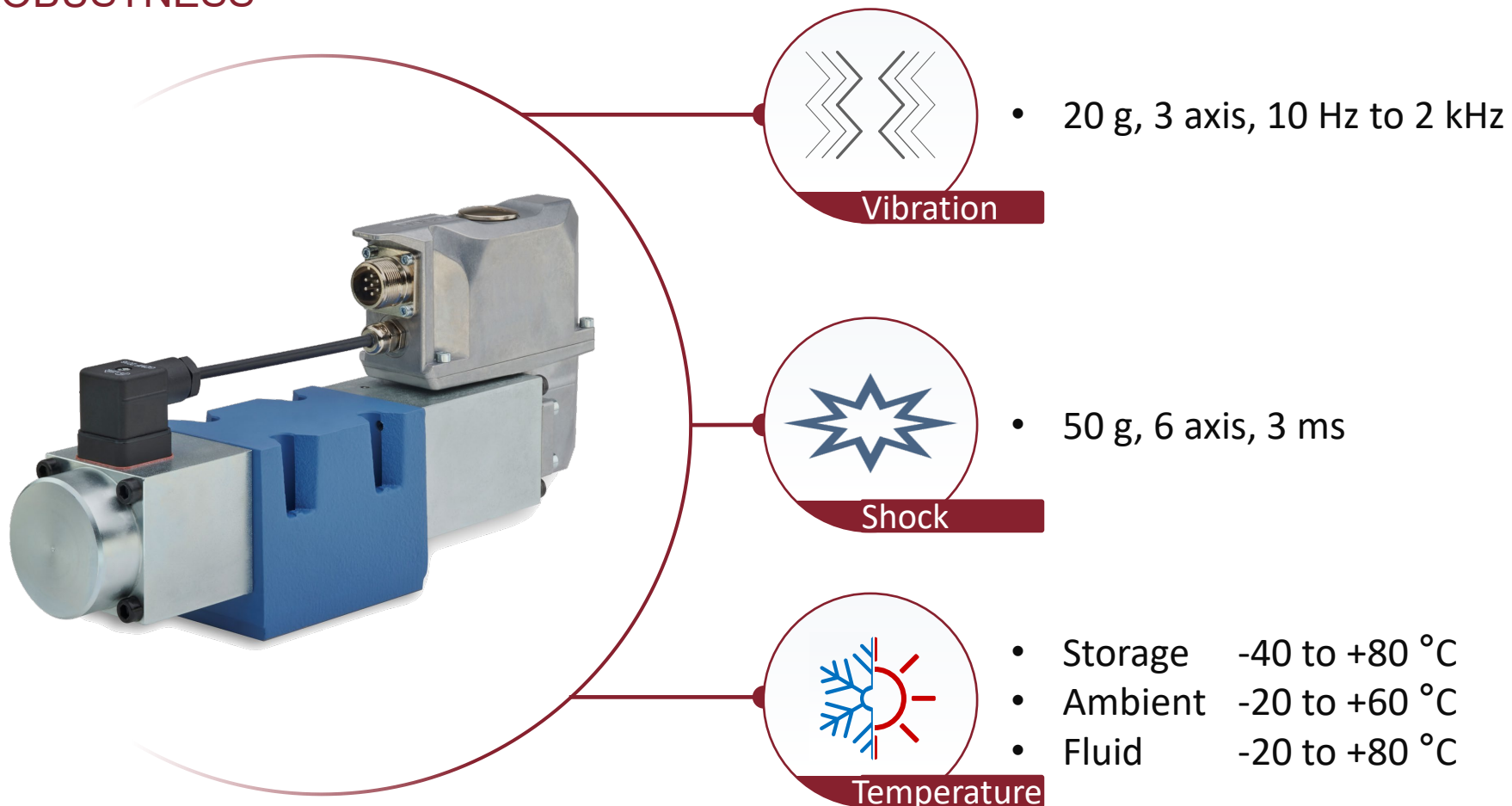
3 signal types for input

2 signal types for output

Deadband compensation available

# TECHNICAL FEATURES

## ROBUSTNESS



# FEATURES AND BENEFITS

Spool-in-body design

Long spool stroke

Uncoupled electronic

Glued components

Energy efficient components

Uncoupled electronics housing

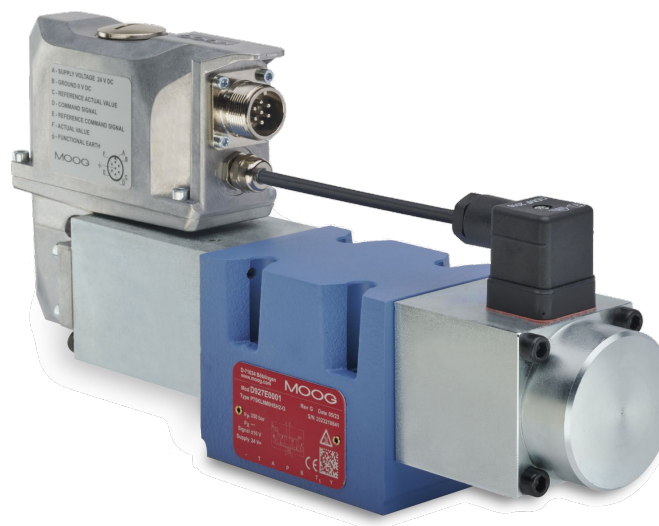
High accuracy and wear resistance

Next-generation electronics with digital core

High rated flows

High vibration  
resistance

Low thermal  
stress



**LONG ELECTRONICS LIFETIME**

**ROBUST**

**RELIABLE**

**PERFORMANT**

**OPTIMIZED SPACE REQUIREMENTS**

# HOW TO LEARN MORE

# D927 CONFIGURATION OPTIONS

Model Number  
(assigned at the factory)

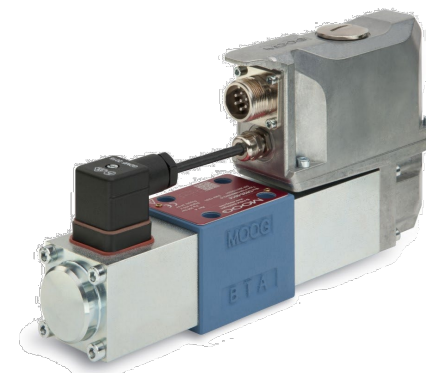
Type Designation

D92\_ - .... - P - - - - - - - - - - - - - - - -

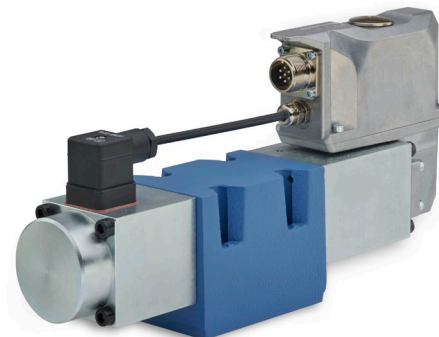
|                                                                                 |                                                                                              |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>Size</b>                                                                     |                                                                                              |
| 6                                                                               | Size 03                                                                                      |
| 7                                                                               | Size 05                                                                                      |
| <b>Model Designation</b>                                                        |                                                                                              |
| <b>1 Valve Type</b>                                                             |                                                                                              |
| P                                                                               | Proportional valve with integrated digital electronics                                       |
| <b>2 Rated Flow per Spool Land for <math>\Delta p_N = 5</math> bar (75 psi)</b> |                                                                                              |
|                                                                                 | D926      D927                                                                               |
| 04                                                                              | ●      –      4 l/min (1.06 gpm)                                                             |
| 08                                                                              | ●      –      8 l/min (2.1 gpm)                                                              |
| 16                                                                              | ●      –      16 l/min (4.2 gpm)                                                             |
| 25                                                                              | –      ●      25 l/min (6.6 gpm)                                                             |
| 32                                                                              | ●      –      32 l/min (8.5 gpm)                                                             |
| 50                                                                              | –      ●      50 l/min (13.2 gpm)                                                            |
| 75                                                                              | –      ●      75 l/min (19.8 gpm)                                                            |
| <b>3 Maximum Operating Pressure</b>                                             |                                                                                              |
| K                                                                               | 350 bar (5,000 psi)                                                                          |
| <b>4 Spool Design</b>                                                           |                                                                                              |
|                                                                                 | D926      D927                                                                               |
| L                                                                               | 1.5 to 3 % positive overlap, progressive flow characteristic                                 |
| 1                                                                               | 15 % positive overlap, progressive flow characteristic                                       |
|                                                                                 | 10 % positive overlap, progressive flow characteristic                                       |
|                                                                                 | 10 % positive overlap, progressive flow characteristic                                       |
| 2                                                                               | P→A, P→B: 15 % overlap; A→T, B→T: 12 % underlap, progressive flow characteristic             |
|                                                                                 | P→A, P→B: 10 % overlap, A→T, B→T: 7 % underlap, progressive flow characteristic              |
|                                                                                 | P→A, P→B: 10 % overlap, A→T, B→T: 7 % underlap, progressive flow characteristic              |
| 3                                                                               | 1.5 to 3 % positive overlap, progressive flow characteristic, A:B = 2:1                      |
| 4                                                                               | 15 % positive overlap, progressive flow, A:B = 2:1                                           |
| 5                                                                               | P→A, P→B: 15 % overlap, A→T, B→T = 12 % underlap, progressive flow characteristic, A:B = 2:1 |
| 6                                                                               | 15 % positive overlap, progressive flow characteristic                                       |
| 7                                                                               | P→A, P→B: 15 % overlap; A→T, B→T: 12 % underlap, progressive flow characteristic             |

|                                                   |                                                                                         |
|---------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>12 Enable Function</b>                         |                                                                                         |
| 0                                                 | No enable signal                                                                        |
| <b>11 Supply Voltage</b>                          |                                                                                         |
| 2                                                 | 24 V <sub>DC</sub> , for more information, see section "Electronics"                    |
| <b>10 Command Signals</b>                         |                                                                                         |
| Command signal                                    | Actual value                                                                            |
| H                                                 | ±10 V      ±10 V                                                                        |
| E                                                 | 4 to 20 mA      4 to 20 mA                                                              |
| X                                                 | ±10 mA      4 to 20 mA                                                                  |
| J                                                 | ±10 V      ±10 V with deadband compensation                                             |
| W                                                 | 4 to 20 mA      4 to 20 mA with deadband compensation                                   |
| U                                                 | ±10 mA      4 to 20 mA with deadband compensation                                       |
| <b>9 Valve Connector X1</b>                       |                                                                                         |
| S                                                 | 6-pole + PE EN 175201-804                                                               |
| <b>8 Seal Material</b>                            |                                                                                         |
| H                                                 | HNBR                                                                                    |
| V                                                 | FKM                                                                                     |
| <b>7 Y Port</b>                                   |                                                                                         |
| 0                                                 | No Y port, $p_{Tmax}$ D926 = 280 bar (4,000 psi); $p_{Tmax}$ D927 = 250 bar (3,600 psi) |
| 3                                                 | With Y port, $p_{Tmax}$ = 350 bar (5,000 psi) (only D926)                               |
| <b>6 Spool Position Without Electrical Supply</b> |                                                                                         |
| M                                                 | Center position <sup>1)</sup>                                                           |
| <b>5 Proportional Solenoid</b>                    |                                                                                         |
| 8                                                 | 2 proportional solenoids, LVDT on A side                                                |
| 0                                                 | 4/2-way: Single proportional solenoid and LVDT on A side                                |

D926



D927



Note: Preferred options marked in **bold**.

<sup>1)</sup> For spools with 1.5 to 3 % overlap, the spring centered position may not correspond with the hydraulic zero position.

# PRODUCT PAGE

## MOOG D926 AND D927 PRODUCT PAGE

- Product Catalog
- Datasheet
- Introduction Video
- Installation Drawing
- 3D Model Files
- Installation and commissioning instructions
- And more!

 PRODUCTS ▾ INDUSTRIES ▾ NEWS & EVENTS INVESTORS CAREERS ▾ SUPPLIERS SUSTAINABILITY ▾ CONTACT US 

Products / Servo Valves and Proportional Valves / Industrial / Flow Control Valves / Analog With Integrated Electronics / Direct-Operated Proportional Valves for Analog Signals D926 Series

Fieldbus  
Analog With Integrated Electronics

Direct-Operated Servo Valves for Analog Signals D633 and D634 Series

Direct-Operated Servo Valves for Analog Signals D636 and D637 Series

Pilot-Operated Servovalves for Analog Signals D670 Series

Pilot-Operated Servovalves for Analog Signals D661 Series

Pilot-Operated Proportional Valves for Analog Signals D660 Series

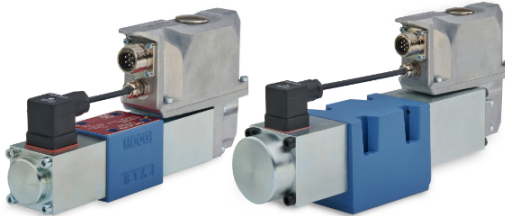
Pilot-Operated Proportional Valves for Analog Signals D670 Series

Pilot-Operated Servovalves for Analog Signals D791 and D792 Series

Pilot-Operated Proportional Valves for Analog Signals D680 Series

Direct-Operated

## Direct-Operated Proportional Valves for Analog Signals D926 and D927 Series



ISO 4401 SIZE 03 AND SIZE 05

- Directly driven by two proportional solenoids
- 4/3-way design including failsafe position reduces need for additional safety components
- Spool-in-body design built for high accuracy and wear resistance
- Electronics mechanically uncoupled from housing allows for high

Contact Moog Industrial



Product Service & Repairs



Learn more about services

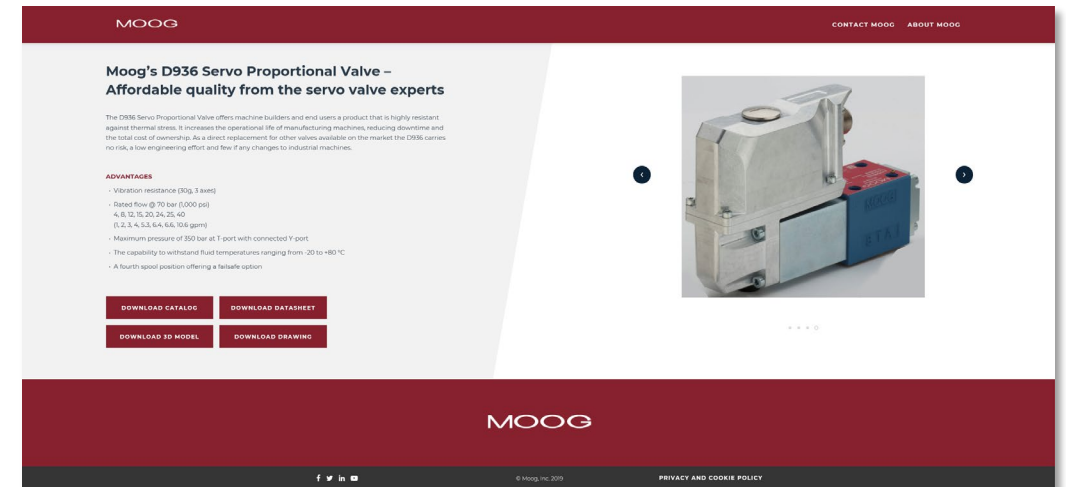
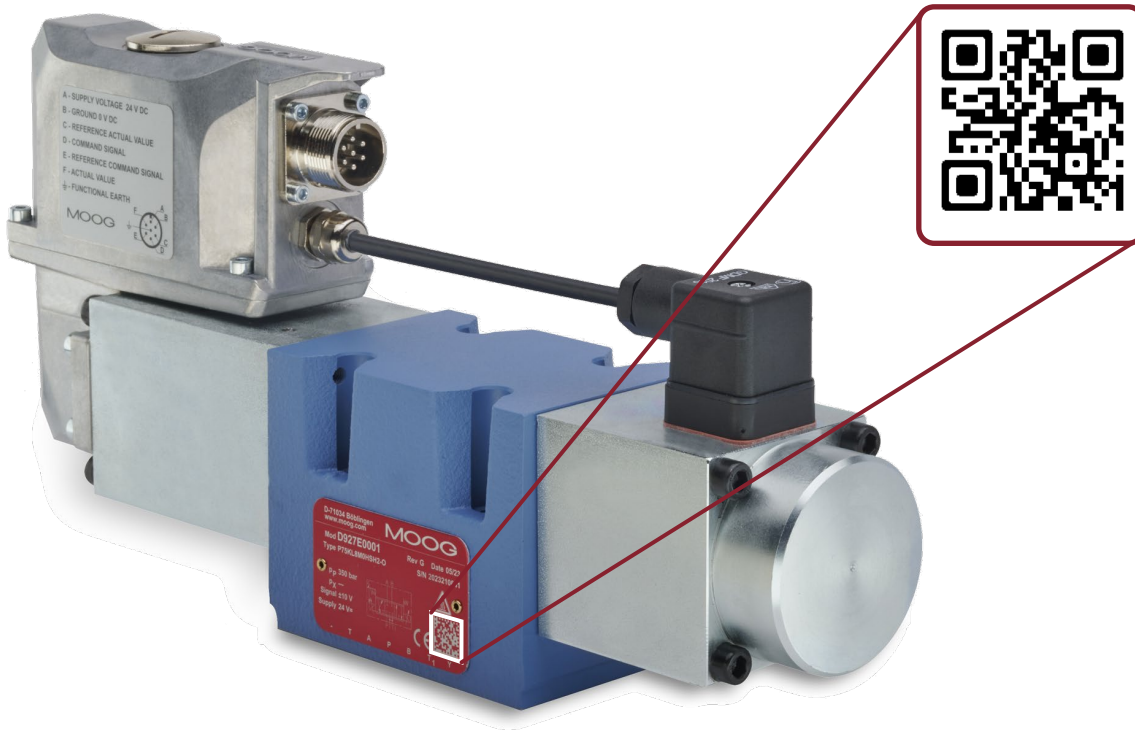
Literature

Catalog - D926 Proportional Valve

Datasheet - D926 Proportional Valve

# PRODUCT PAGE

## QR CODE



- 3D model
- drawing
- datasheet
- catalog

# MOOG

/ THANK YOU /

LETS MAKE THE IMPOSSIBLE POSSIBLE  
TOGETHER

Name

/ click to connect /

Email

