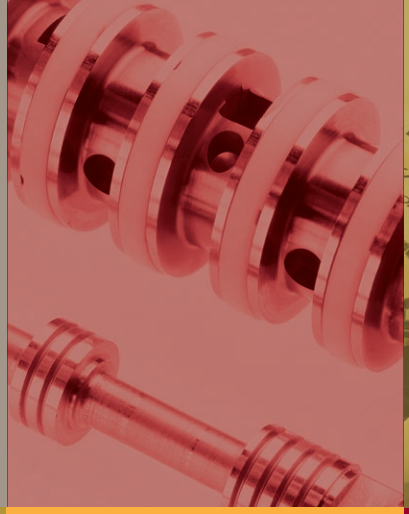
POWER ASSISTED STEERING VALVES (E243 SERIES) STANDARD VERSION

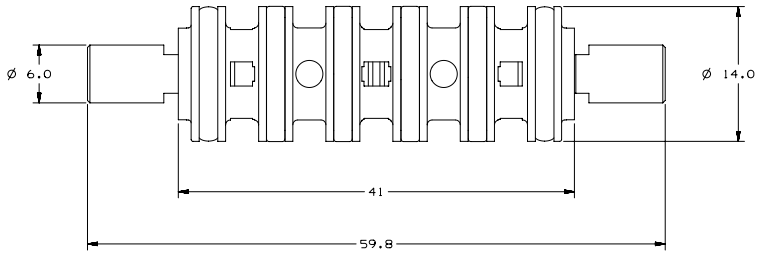
High performance in a miniature size



Moog has developed a new standard version of the well established E243 range of Power Assisted Steering Valves (PAS). Designed to meet the requirements of Formula 1, it occupies the smallest viable space envelope- 41 mm (1.62 in) long and a mass of 27.5 g (0.97 oz). Despite the small package size, it is able to control hydraulic flow rates up to 15 l/min (4 USG) and pressures up to 280 bar (4061 psi).

The new standard version E243 Valve allows the development of new PAS systems with a minimum design overhead and reduced lead time. Steering assistance characteristics can be easily be modified by varying the control port sizes and shapes (see page 2).

SPECIFICATIONS (mm)



ADVANTAGES

- Very small size and low mass
- High power control capability up to a maximum of 7 kW
- Operates directly from the vehicle's constant pressure hydraulic 'ring main'
- Mechanical input stroke, typically +/- 0.75 mm (0.03 in)
- Available with linear or dual gain flow characteristics

PRODUCT HOMOLOGATION

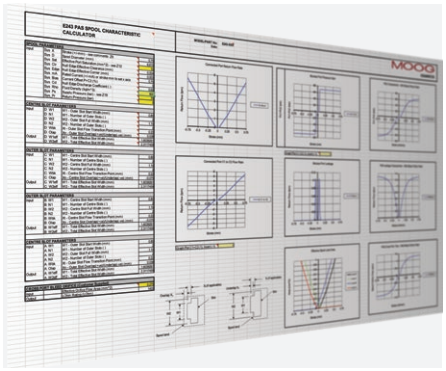
All Moog electro-hydraulic products used in Formula 1 are homologated by the FIA, indicating they are approved for use with the mandated Formula 1 Electronic Control Unit (ECU).

INDUSTRY APPLICATION

Motorsport Formula 1

SIZING TOOL

Contact us for access to a helpful sizing tool



ORDERING INFORMATION

E243 - [ ] [O] [ ] [ ] [ ] [ ] [ ] [ ] / [ ] [ ] [ ] - [C] [ ] [ ] [ ] [ ] [ ] / [ ] [ ]

Model Designation and Revision

1	Slot Identifier
O	Outer Slots

2	Number of Outer Slots
2	2 Slots
4	4 Slots

3	Outer Slot Form
R	Rectangular
D	Dual Gain

4	Outer Slot Full Width (mm)
XXX	Outer Slot Full Width (2DP)

5	Outer Slot Start Width (mm)
XXX	Outer Slot Start Width (2DP)
000	Use If Rectangular Slot

6	Outer Slot Flow Transition Point (mm)
XXX	Outer Slot Flow Transition Point (2DP)
000	Use If Rectangular Slot

7	Outer Slot Null Condition Identifier
U	Underlap on Outer Slot
O	Overlap on Outer Slot

8	Outer Slot Null Cut (µm)
XXX	Distance Between Outer Slot Edge and Spool Edge

9	Slot Identifier
C	Centre Slots

10	Number of Centre Slots
2	2 Slots
4	4 Slots

11	Centre Slot Form
R	Rectangular
D	Dual Gain

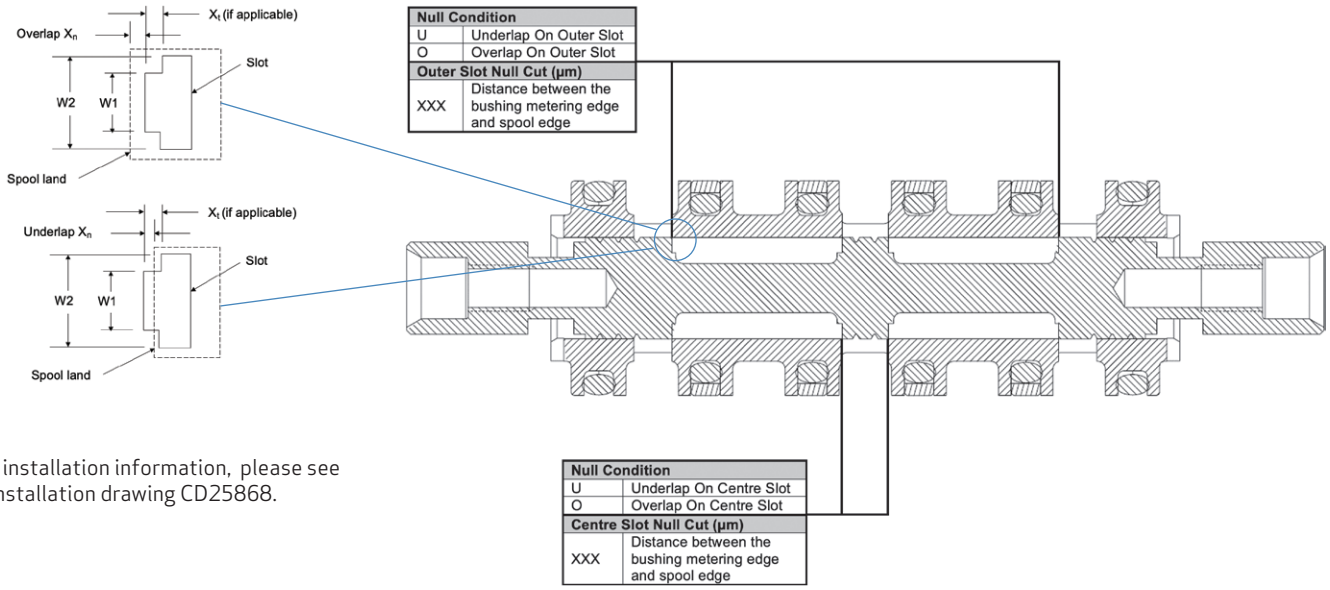
12	Centre Slot Full Width (mm)
XXX	Centre Slot Full Width (2DP)

13	Centre Slot Start Width (mm)
XXX	Centre Slot Start Width (2DP)
000	Use If Rectangular Slot

14	Centre Slot Flow Transition Point (mm)
XXX	Centre Slot Flow Transition Point (2DP)
000	Use If Rectangular Slot

15	Centre Slot Null Condition Identifier
U	Underlap on Centre Slot
O	Overlap on Centre Slot

16	Centre Slot Null Cut (µm)
XXX	Distance Between Centre Slot Edge and Spool Edge



For full installation information, please see Moog installation drawing CD25868.

NOTES

1. Dimensions in mm to two decimal places.
2. For reduced friction levels, Moog recommends connecting the outer ports to return and the center port to the pressure supply.
3. Maximum slot width is 4.5 mm. N.B. Slot widths specified are linear. Effective flow area depends on arc length around circumference of spool.

TECHNICAL DATA	
Maximum Supply Pressure	280 bar (4061 psi)
Return line pressure	0 - 10 bar (0 - 145 psi)
Rated Flow at 70 bar drop	Up to 15 l/min (4 USG)
Maximum input stroke	+/- 0.75 mm (0.03 in)
Environmental limits	0 - +165 °C (329 °F) and 25 G shock (any axis)
Fluid viscosity	› 4 cSt
Filtration	NAS Class 3/ISO 4406 12/8 or better

Moog has offices around the world. For more information or the office nearest you, contact us online.

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www.moog.com/motorsport

This technical data is based on current available information and is subject to change at any time by Moog. Specifications for specific systems or applications may vary.