

Steering Control Units—Series 25

Product Description

The Series 25 SCU includes two designs (Balanced Architecture and Wide Angle) that make it even more responsive, reliable and cost effective.

Features

- Open Center
- Closed Center
- Load Sensing
- Integral Valves
- Q-Amp
- Wide Angle
- Pilot Pressure Port
This is an added feature that can be used for:
 - Pilot pressure to priority valve
 - Diagnostics
- Cylinder Damping

Applications

Articulated Vehicles

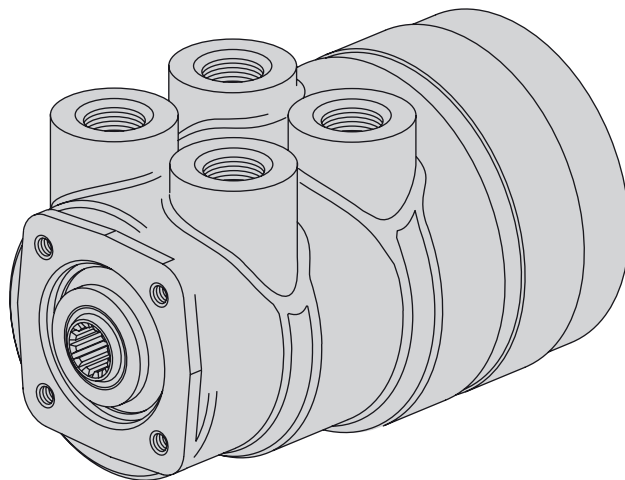
- Loaders
- Scrapers
- Skidders
- AG Tractors

Rigid Frame Vehicles

- Large Front End Loaders
- Graders
- Mining Trucks
- Articulated Dump Haulers
- Transporters

Benefits

- **Balanced architecture** provides passageways that are equal in both directions and pressure areas that are staged for minimum leakage. This gives balance, precise servo response and uniform steering action in both directions while reducing drift.
- **Progressive valving** makes it possible to produce the spool/sleeve valve in a way that assures reliability and reduces costs.
- Eaton's **high capacity gerotor** assembly provides a lot of capacity in a small package.
- **Heavier valve components-** housing, spool and sleeve-provides stability, especially during pressure and thermal transient conditions.
- The seal and centering spring designs provides positive, **low-effort steering feel** assuring excellent vehicle control, an important feature on large vehicles.



SPECIFICATIONS

Max. System Pressure	241 bar [3500 PSI]
Max. Back Pressure	21 bar [300 PSI]
Rated Flow	95 l/min [25 GPM]
Max. Flow	189 l/min [50 GPM]
Max. Differential Between Steering Unit and System Temperature	28° C 50° F
Max. System Operating Temperature	93°C [200° F]
Input Torque Powered	2,8-3,4 Nm @ 6,9 bar back pressure [25-30 lb-in @ 100 PSI back pressure]
Non Powered	†††
Fluid	ATF Type A and most petroleum based fluids
Recommended Filtration	ISO 18/13 cleanliness level

††† Manual steering is not possible without hydraulic power.

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Model Code – Ordering Information

The following 29-digit coding system has been developed to identify all of the configuration options for the Series 25 steering control units. Use this model code to specify a unit with the desired features. All 29 digits of the code must be present when ordering. You may want to photocopy the matrix below to ensure that each number is entered in the correct box.

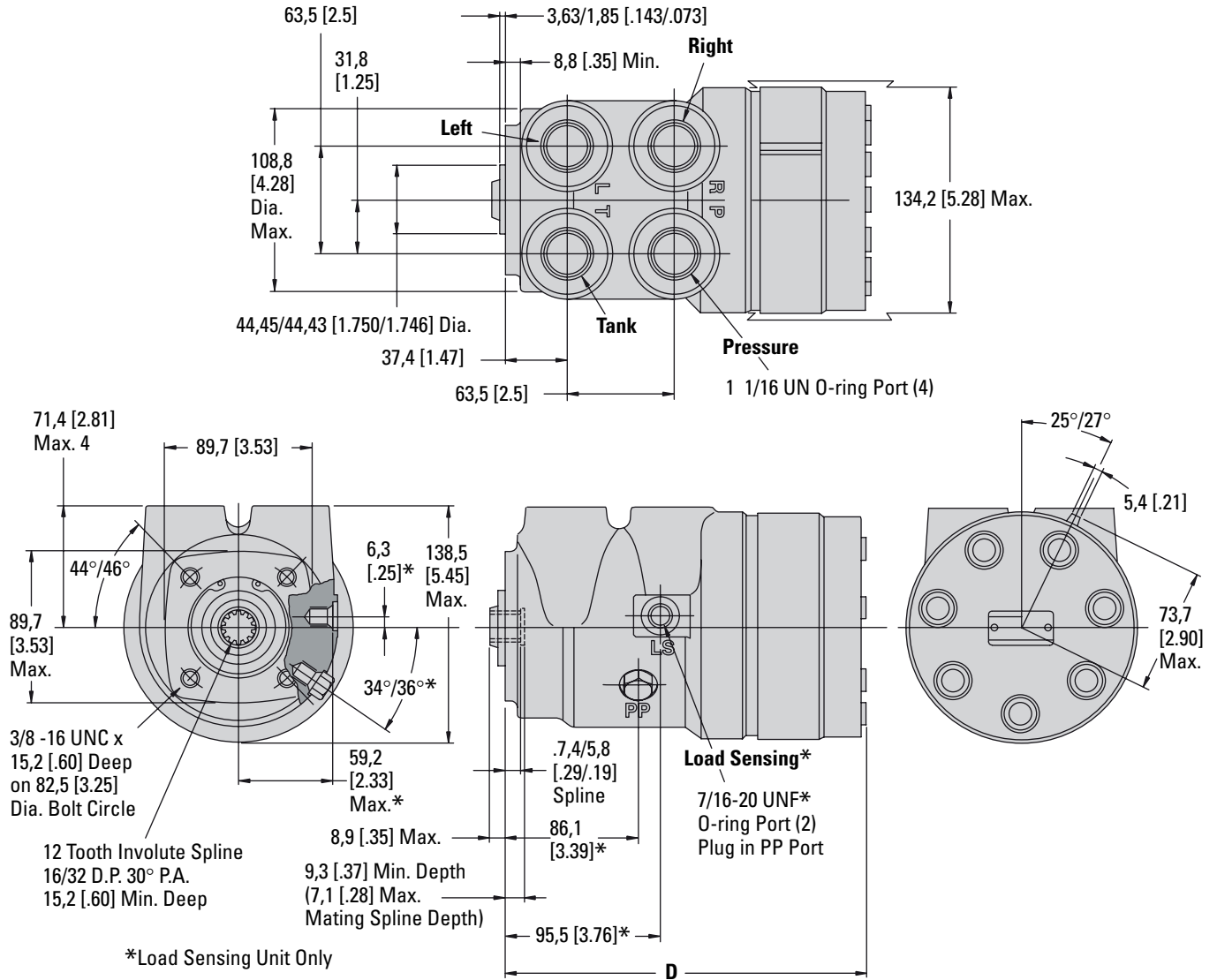
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
A	B	W		6	A								0	0							3	A		A	A	1	0	D

Nos	Feature	Code	Description
1,2,3	Product Series	ABW	Series 25 Steering Control Unit
4	Nominal Flow Rating	7	95 l/min [25 GPM]
		8	151 l/min [40 GPM] (Q-amp only)
		E	189 l/min [50 GPM] (Q-amp only)
5	Inlet Pressure Rating	6	241 bar [3500 PSI]
6	Return Pressure Rating	A	10 bar [150 PSI]
7-8	Displacement cm ³ /r [in ³ /r]	62	490 [30]
		65	625 [38]
		67	795 [48]
		69	985 [60]
9	Flow Amplification	0	None
		1	1.6 : 1.0 Ratio
10	Neutral Circuit	A	Open Center
		C	Closed Center
		D	Closed Center with Neutral Bleed
		F	Load Sensing, Dynamic Signal
11	Load Circuit	A	Non-Load Reaction
		D	Non-Load-Reaction, Cylinder Damping (Use with Flow Amp and Wide Angle Only)
12,13	Valve Options	00	None
		02	Anti-Cavitation Valve
		21	Anti-Cavitation Valve, Cylinder Relief Valves
14, 15	Load Sense Relief Valve Setting	00	None
16,17	Cylinder Relief Valve Setting	00	None
		6F	207 bar [3000 PSI]
**Cylinder Relief Setting recommendation is 870 PSI (60 bar) above steering inlet/load sense pressure.		70	224 bar [3250 PSI]
		7H	241 bar [3500 PSI]
		83	259 bar [3760 PSI]
		8L	276 bar [4000 PSI]
		95	293 bar [4250 PSI]

Nos	Feature	Code	Description
18,19, 20, 21	Ports and Mounting Threads	EAAA	4 x 1—1/6 Ports with 3/8-16 UNC Column Mounting
		EAGA	4 x 1—1/6 Ports with 7/16 Load Sensing Port and 7/16 SAE Pilot Pressure Port (Capped) with 3/8-16 UNC Column Mounting (Use with Load Sensing Units Only)
		NBDN	4 x M27 with M12—LS and M12 PP (Capped) M10 Mounting Threads (Use with Load Sensing Units Only)
		NAAN	4 x M27 with M10 Mounting Threads
22	Input Torque	3	Standard
23	Fluid Type	A	See Eaton Technical Bulletin 3-401
24	Special Applications	0	None
		1	Wide Angle (Use with Load Sensing Units Only)
25, 26	Special Features AA		None
27	Paint	1	Black Paint
28	Identification	0	Eaton Product Number on Nameplate
29	Eaton Assigned	D	Assigned Design Code Design Code

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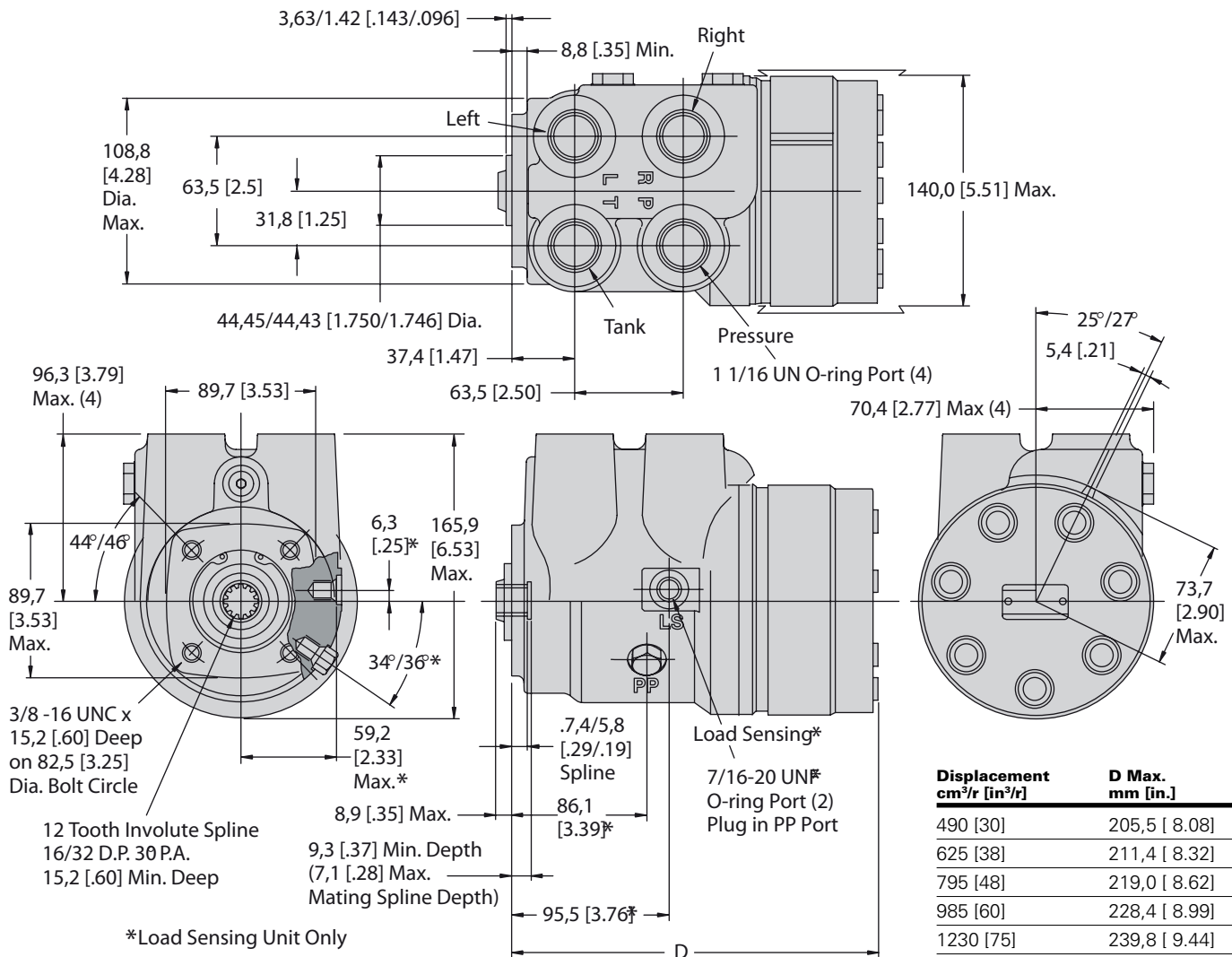
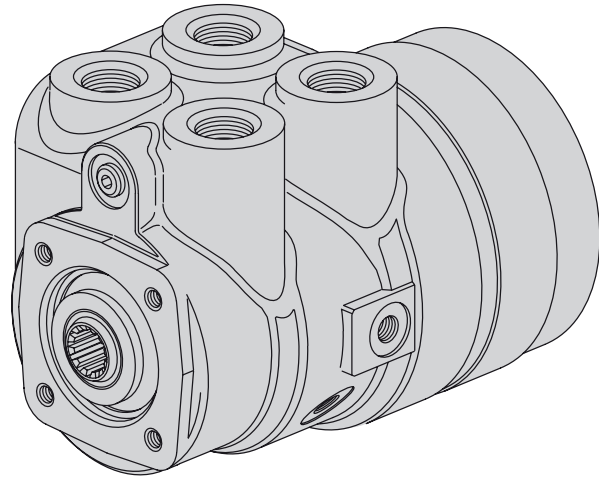
Installation Drawing



Displacement cm ³ /r [in ³ /r]	D Max. mm [in.]
490 [30]	205,5 [8.08]
625 [38]	211,4 [8.32]
795 [48]	219,0 [8.62]
985 [60]	228,4 [8.99]
1230 [75]	239,8 [9.44]

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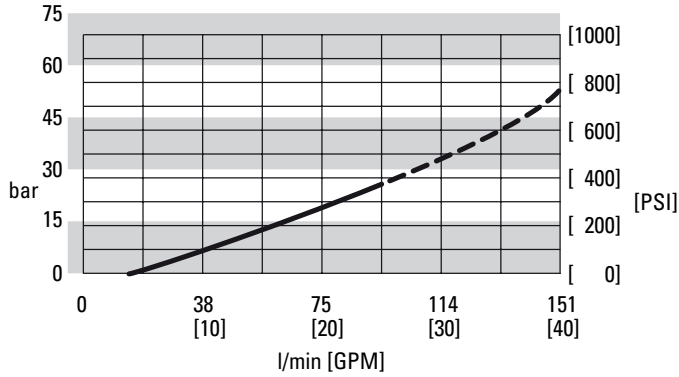
Installation Drawing with Cylinder Relief, Anti-Cavitation



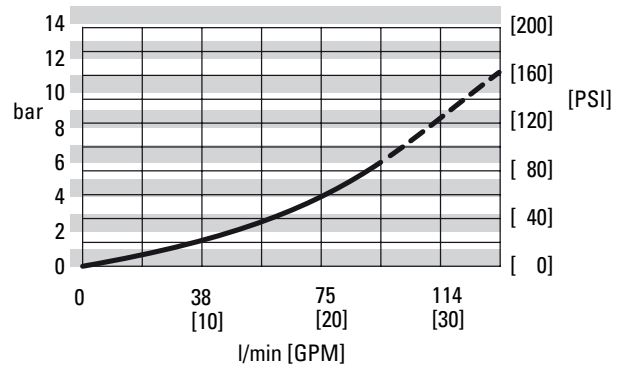
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Performance Data

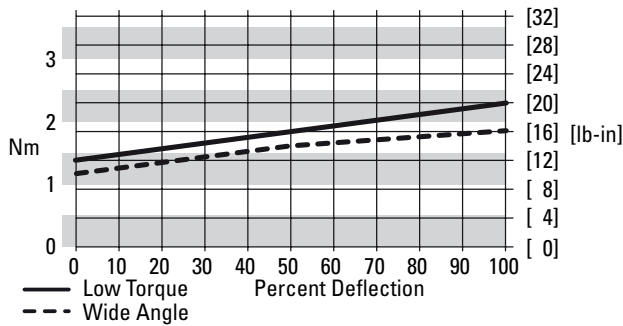
Average Pressure Drop at Full Valve Deflection



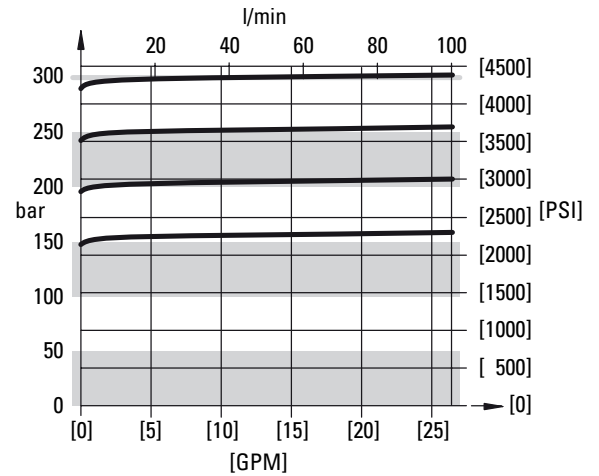
Neutral Pressure Drop - Open Center Fluid Viscosity 25 cSt [120 SUS]



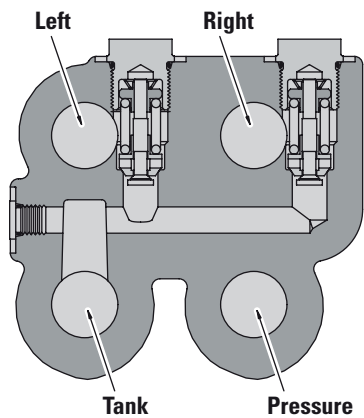
Input Torque



Pressure Relief Characteristics



SCU Valve Section



Check Valve Characteristics

