

# HYDROSTATIC STEERING UNITS TYPE HKU(S).../5(T)(E)(TE)



The HKU(S).../5(T)(E)(TE) range expands the steering units family of M+S Hydraulic with the "Closed Center - Non Reaction and Load Sensing Outlet" version (static hydraulic connection to the priority valve).

This range is manufactured in two versions; for modularly and pipe mounting and therefore were developed the two versions of priority (tracing) valves: PRD... and PRT...

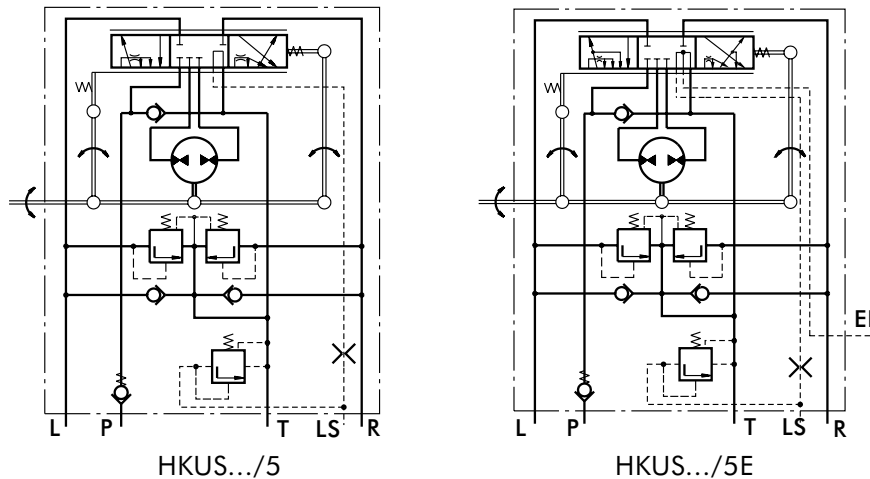
HKU.../5 is designed to be connected with priority valves with built-in relief valves for rated flow up to 160 l/min.

The control hydraulic circuits of the HKU(S).../5(T)(E)(TE) steering units were designed to ensure minimal energy consumption (energy losses) in various hydraulic systems such as those of: fork-lift trucks, agricultural and construction machines and others.

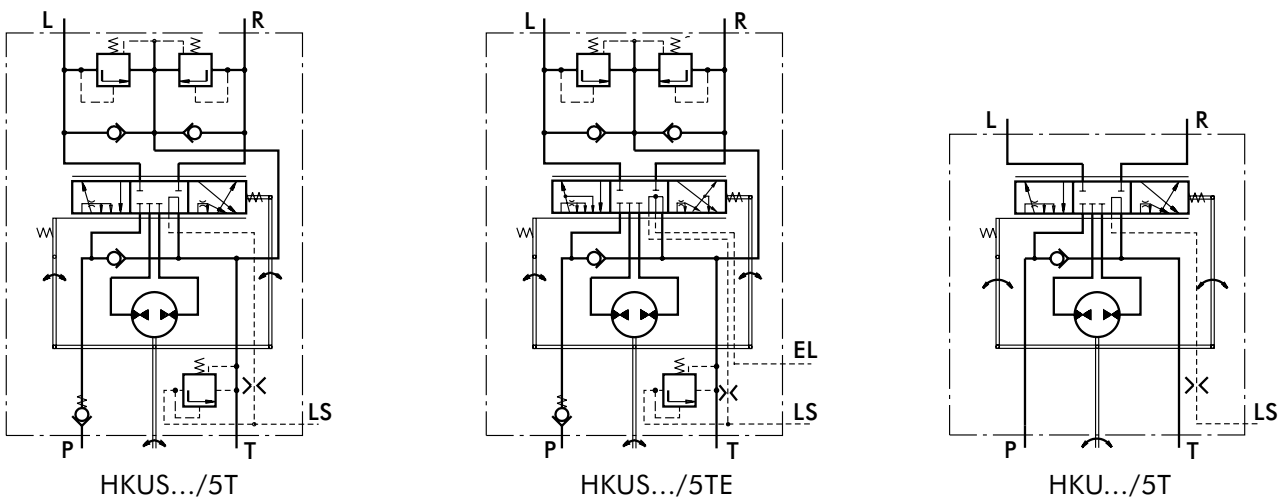
The HKUS.../5E and HKUS.../5TE are equipped with an electrohydraulic relay, mounted in the EL port, which supplies signal to the electric - control system. The relay can be pre-set to normally - open (N.O) or normally - closed (N.C) contacts, with control range from 0,1 to 50 bars. Upon customer's request the relay could be supplied with another type of fixing thread.

\*For operation in condition of Thermal Shock see the notes on page 6.

## Modularly Mounting



## Pipe Mounting



**SPECIFICATION DATA**

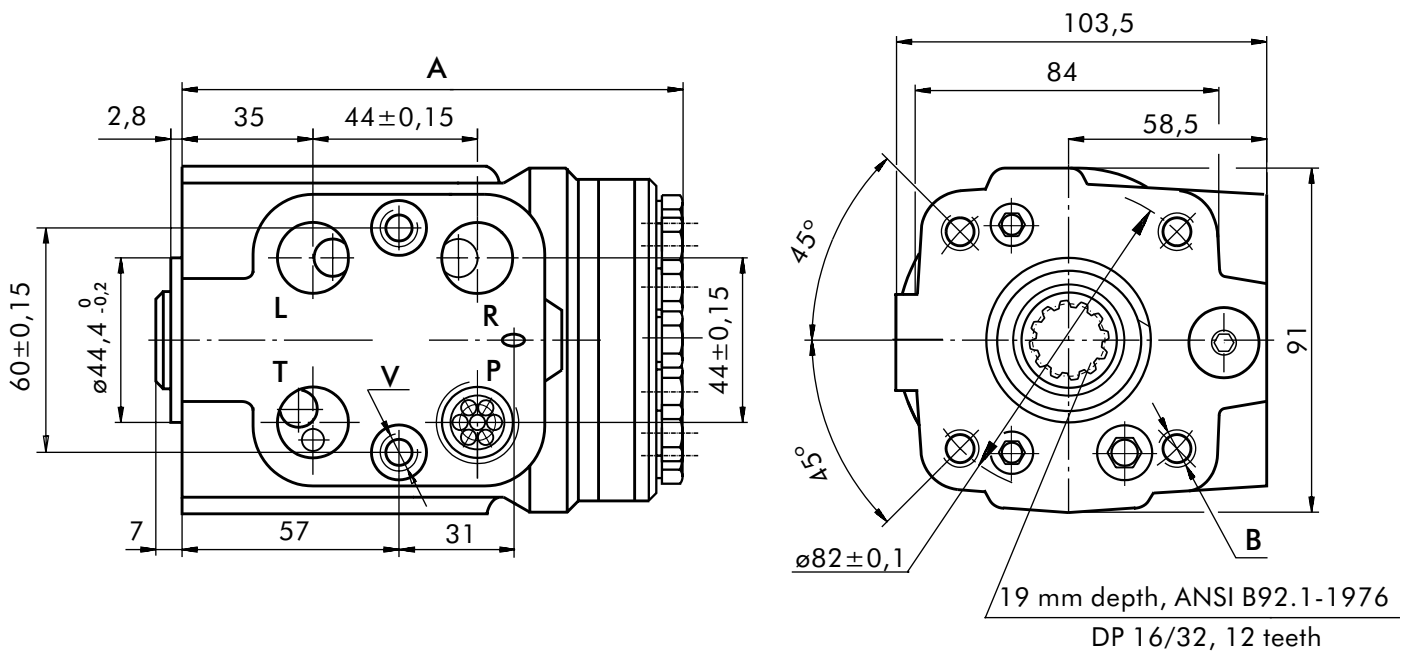
Parameters	Type													
	HKU 40/5T	HKU 50/5T	HKU 63/5T	HKU 80/5T	HKU 100/5T	HKU 125/5T	HKU 160/5T	HKU 200/5T	HKU 250/5T	HKU 320/5T	HKU 400/5T	HKU 500/5T	HKU 630/5T	
	HKUS 40/5...	HKUS 50/5...	HKUS 63/5...	HKUS 80/5...	HKUS 100/5...	HKUS 125/5...	HKUS 160/5...	HKUS 200/5...	HKUS 250/5...	HKUS 320/5...	HKUS 400/5...			
Displacement [cm <sup>3</sup> /rev]	39,6	49,5	65,6	79,2	99,0	123,8	158,4	198	247,5	316,8	396	495	618,7	
Rated Flow* [l/min]	4	5	6	8	10	13	16	20	25	32	40	50	63	
Rated Pressure [bar]	125	150	175											
LS - Valve Pressure Settings** [bar]					80	100	125	150	175					
Shock Valves Pressure Settings*** [bar]					140	160	180	200	240					
Max.Cont. Pressure in Line T - P <sub>T</sub> [bar]	20													
Max.Torque at Servoamplifying [Nm]	6 ( by P <sub>T max</sub> )													
Max.Torque w/o Servoamplifying [Nm]	120													
Weight, avg. [kg]	5,4	5,5	5,6	5,7	5,8	5,9	6,2	6,5	6,6	7,2	7,8	8	8,7	
Dimension A [mm]	130,8	132,2	133,9	136,2	138,8	142,2	146,8	152,2	158,8	168,2	178,8	192	209,3	

\* Rated Flow at 100 RPM.

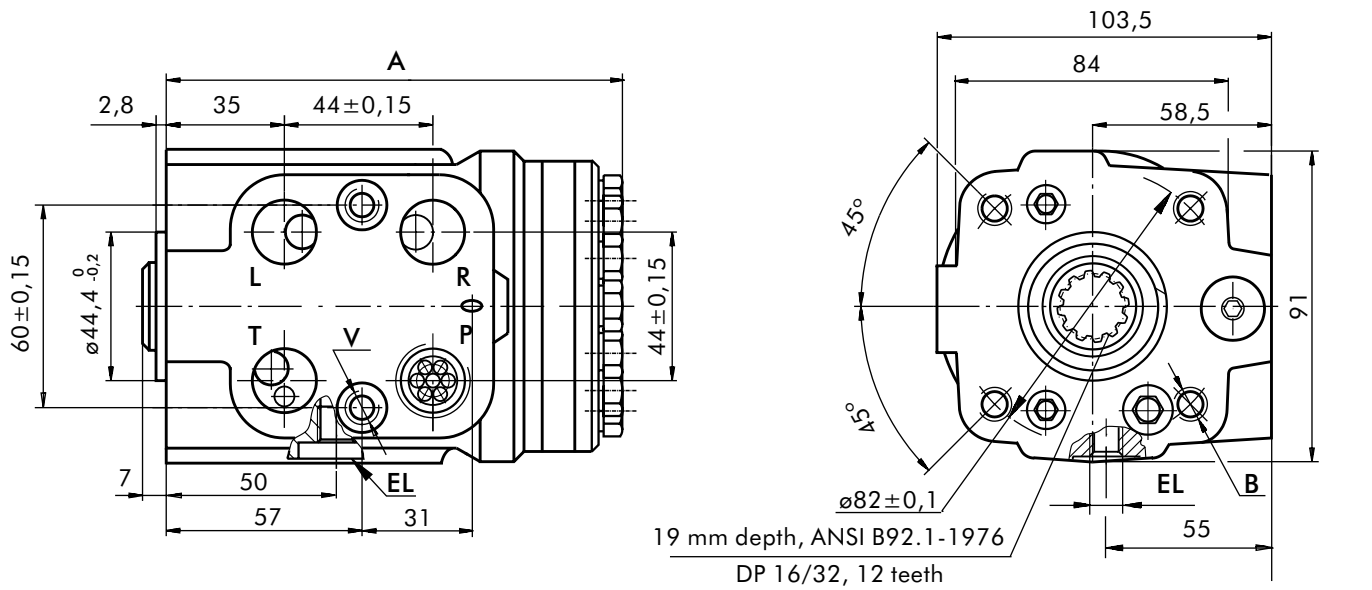
\*\* Pressure Settings are at flow rate of 6 l/min and viscosity 21 mm<sup>2</sup>/s (50° C).

\*\*\*Pressure Settings are at flow rate of 2 l/min and viscosity 21 mm<sup>2</sup>/s (50° C).

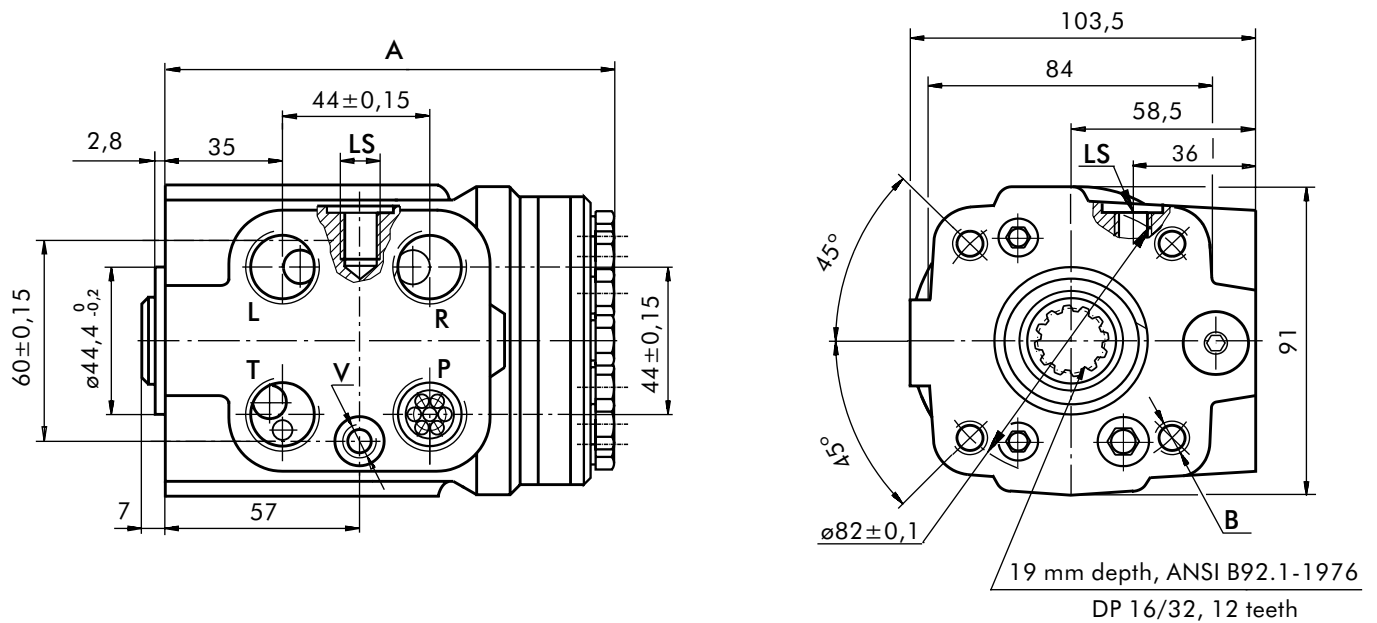
**DIMENSIONS AND MOUNTING DATA - HKUS.../5**



**DIMENSIONS AND MOUNTING DATA - HKUS.../5E**

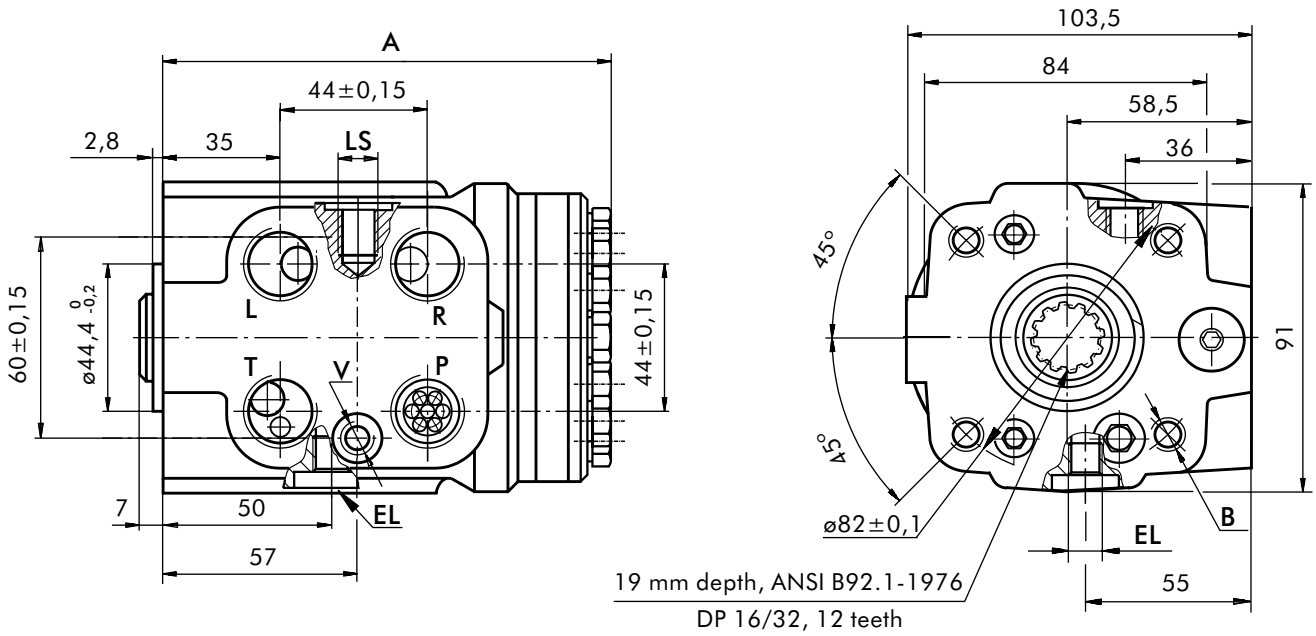


**DIMENSIONS AND MOUNTING DATA - HKUS.../5T**

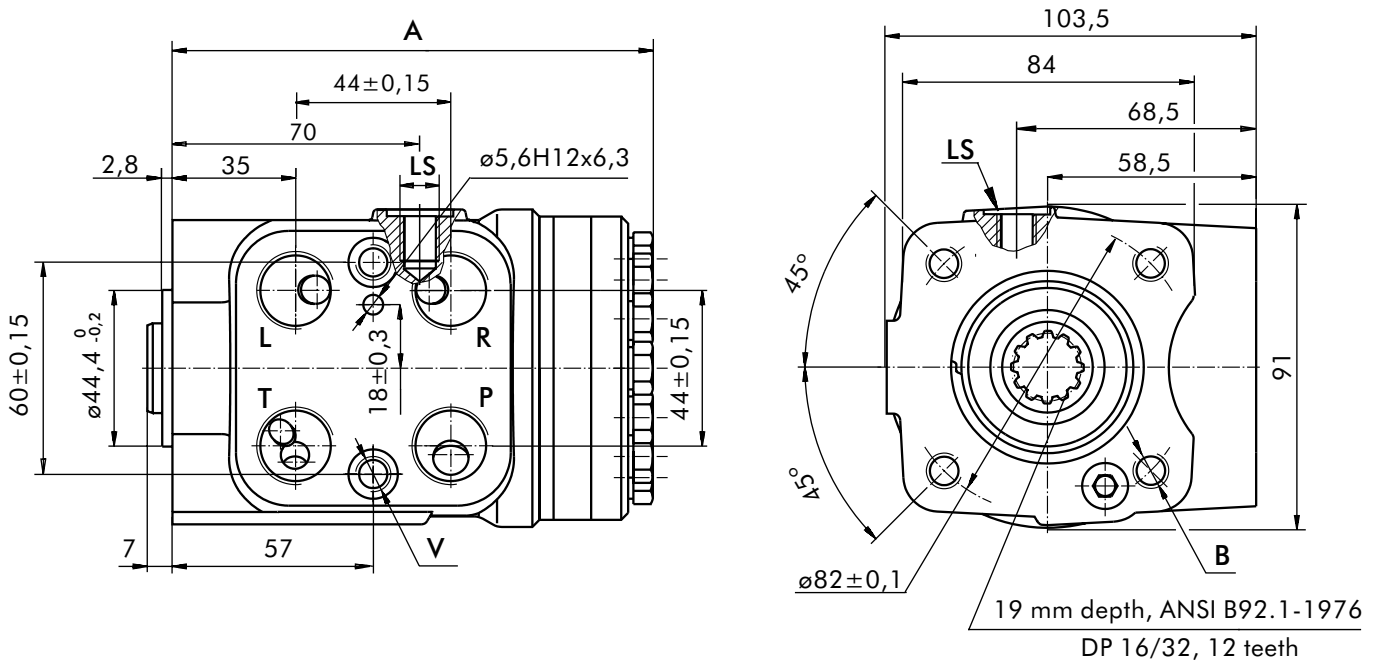


\* The ports are shown in the Table of page 18.

**DIMENSIONS AND MOUNTING DATA - HKUS.../5TE**



**DIMENSIONS AND MOUNTING DATA - HKU.../5T**



**THREADED PORTS**

code	Ports - *P, T, R, L Thread	Column Mounting Thread - B	Valve Mounting Thread- V	LS - Port	EL - Port
-	G1/2 17 mm depth	4 x M10 18 mm depth	2 x M10x1 16 mm depth	G1/4 14 mm depth	M10x1 10 mm depth
A	3/4 - 16 UNF O-ring 17 mm depth	4 x 3/8 - 16 UNC 15,7 mm depth	2 x 3/8 - 24 UNF 14,2 mm depth	7/16 - 20 UNF O-ring 12,7 mm depth	7/16 - 20 UNF O-ring 12,7 mm depth
M	M22x1,5 17 mm depth	4 x M10 18 mm depth	2 x M10x1 16 mm depth	G1/4 14 mm depth	M10x1 10 mm depth

\*Threaded Port P min 16 mm.

**ORDER CODE for HKUS.../5...**

	1		2	3	4	5		6		7	8
<b>HKUS</b>		/	<b>5</b>			-		-			

**Pos.1 - Displacement code** (see Specification Data)

<b>40</b>	- 39,6 [cm <sup>3</sup> /rev]
<b>50</b>	- 49,5 [cm <sup>3</sup> /rev]
<b>63</b>	- 65,6 [cm <sup>3</sup> /rev]
<b>80</b>	- 79,2 [cm <sup>3</sup> /rev]
<b>100</b>	- 99,0 [cm <sup>3</sup> /rev]
<b>125</b>	- 123,8 [cm <sup>3</sup> /rev]
<b>160</b>	- 158,4 [cm <sup>3</sup> /rev]
<b>200</b>	- 198,0 [cm <sup>3</sup> /rev]
<b>250</b>	- 247,5 [cm <sup>3</sup> /rev]
<b>320</b>	- 316,8 [cm <sup>3</sup> /rev]
<b>400</b>	- 396,0 [cm <sup>3</sup> /rev]

**Pos.2 - Versions**

<b>5</b>	- Version 5 "Closed Center - Non Reaction and Load Sensing Outlet"
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**Pos.3 - Priority Valve Connection**

omit	- Modular Mounting
<b>T</b>	- Pipe Mounting

**Pos.4 - Electric Signal Connection**

omit	- without electric signal connection
<b>E</b>	- with electric signal connection

**Pos.5 - LS - Valve Pressure Settings, bar**

<b>80</b>	<b>100</b>	<b>125</b>	<b>150</b>	<b>175</b>
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**Pos.6 - Ports**

omit	- BSPP (ISO 228)
<b>A</b>	- SAE (ANSI B 1.1 - 1982)
<b>M</b>	- Metric (ISO 262)

**Pos.7 - Option (Paint)\***

omit	- No Paint
<b>P</b>	- Painted
<b>PC</b>	- Corrosion Protected Paint

**Pos.8 - Design Series**

omit	- Factory specified
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**NOTES:**

\* Colour at customer's request.  
The steering units are mangano-phosphatized as standard.

**ORDER CODE for HKU.../5T...**

	1		2	3	4	5	6
<b>HKU</b>		/	<b>5</b>	<b>T</b>	-		

**Pos.1 - Displacement code** (see Specification Data)

<b>40</b>	- 39,6 [cm <sup>3</sup> /rev]
<b>50</b>	- 49,5 [cm <sup>3</sup> /rev]
<b>63</b>	- 65,6 [cm <sup>3</sup> /rev]
<b>80</b>	- 79,2 [cm <sup>3</sup> /rev]
<b>100</b>	- 99,0 [cm <sup>3</sup> /rev]
<b>125</b>	- 123,8 [cm <sup>3</sup> /rev]
<b>160</b>	- 158,4 [cm <sup>3</sup> /rev]
<b>200</b>	- 198,0 [cm <sup>3</sup> /rev]
<b>250</b>	- 247,5 [cm <sup>3</sup> /rev]
<b>320</b>	- 316,8 [cm <sup>3</sup> /rev]
<b>400</b>	- 396,0 [cm <sup>3</sup> /rev]
<b>500</b>	- 495,0 [cm <sup>3</sup> /rev]
<b>630</b>	- 618,7 [cm <sup>3</sup> /rev]

**Pos.2 - Versions**

<b>5</b>	- Version 5 "Closed Center - Non Reaction and Load Sensing Outlet"
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**Pos.3 - Priority Valve Connection**

<b>T</b>	- Pipe Mounting
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**Pos.4 - Ports**

omit	- BSPP (ISO 228)
<b>A</b>	- SAE (ANSI B 1.1 - 1982)
<b>M</b>	- Metric (ISO 262)

**Pos.5 - Option (Paint)\***

omit	- No Paint
<b>P</b>	- Painted
<b>PC</b>	- Corrosion Protected Paint

**Pos.6 - Design Series**

omit	- Factory specified
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**NOTES:**

\* Colour at customer's request.  
The steering units are mangano-phosphatized as standard.