

# HYDROSTATIC STEERING UNIT TYPE HKUQ.../4



HKUQ.../4 is a new series of hydrostatic steering units with an additionally increased flow. The hydrostatic steering unit type HKUQ.../4 is available for steering medium and large sized vehicles, allowing easy control either in servo-amplified mode or in emergency operation.

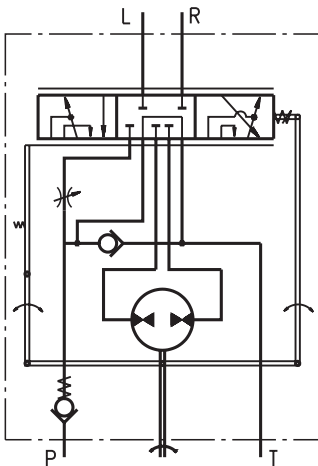
HKUQ.../4 is an "Open Center-Non Load Reaction" hydrostatic steering in which restrictor for amplifying factor from 1,3 to 2,5 is built-in.

In accordance with the size of the gear wheel set and amplifying factor, HKUQ.../4 has the following working volume:

- from 80 cm<sup>3</sup> to 200 cm<sup>3</sup> for emergency operation mode (manual steering without servo-amplifying);

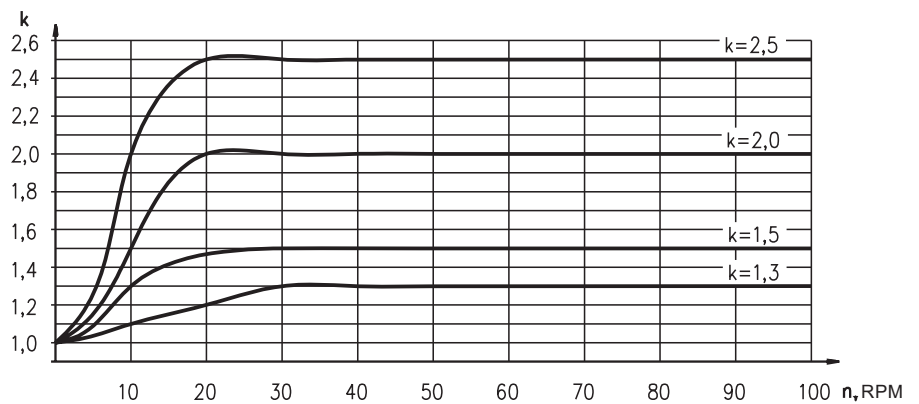
- from 100 cm<sup>3</sup> to 500 cm<sup>3</sup> for normal operation mode (with total flow amplifying).

There is no servo-amplifying of flow if low steering speed till 10 RPM is applied. In steering speed increase over 20 RPM there is total servo-amplifying of flow. In this mode gear wheel set flow and restrictor flow are added.



"Open Center - Non Load Reaction"  
HKUQ.../4

## VARIABLE AMPLIFYING FACTOR

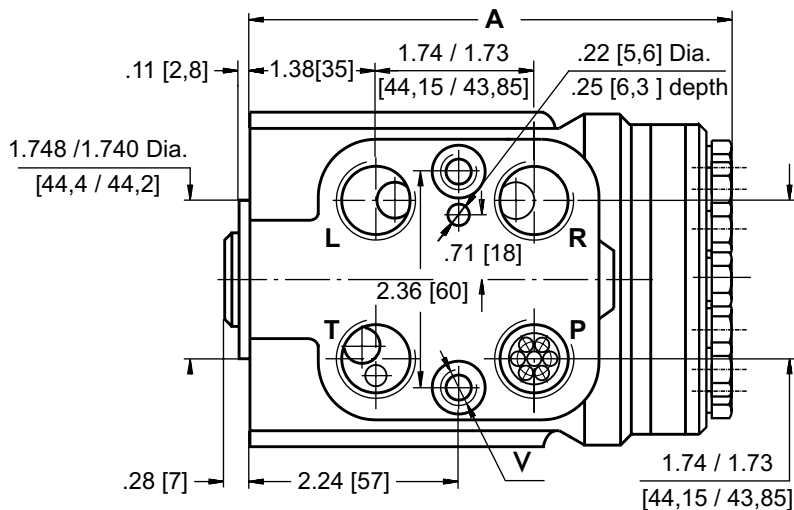
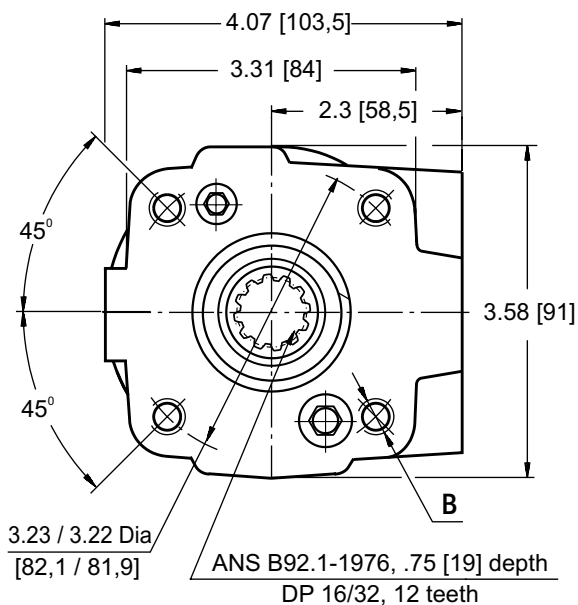


## SPECIFICATION DATA

Parameters	Type																			
	HKUQ 80/.../4				HKUQ 100/.../4				HKUQ 125/.../4				HKUQ 160/.../4				HKUQ 200/.../4			
Displacement - without servo-amplifying (in emergency mode) in <sup>3</sup>	4.83 [79,2]				6.04 [99,0]				7.56 [123,8]				9.67 [158,4]				12.08 [198]			
- with servo-amplifying [cm <sup>3</sup> /rev]	6.10 [100]	7.62 [125]	9.76 [160]	12.20 [200]	7.62 [125]	9.76 [160]	12.20 [200]	15.25 [250]	9.76 [160]	12.20 [200]	15.25 [250]	19.52 [320]	12.20 [200]	15.25 [250]	19.52 [320]	24.4 [400]	15.25 [250]	19.52 [320]	24.4 [400]	30.5 [500]
Rated Flow* GPM	2.64 [10]	3.30 [12,5]	4.22 [16]	5.28 [20]	3.30 [12,5]	4.22 [16]	5.28 [20]	6.60 [25]	4.22 [16]	5.28 [20]	6.60 [25]	8.45 [32]	5.28 [20]	6.60 [25]	8.45 [32]	10.57 [40]	6.60 [25]	8.45 [32]	10.57 [40]	13.21 [50]
Amplifying Factor (at shaft revolution over 20 min <sup>-1</sup> )	1,3	1,5	2,0	2,5	1,3	1,5	2,0	2,5	1,3	1,5	2,0	2,5	1,3	1,5	2,0	2,5	1,3	1,5	2,0	2,5
Rated Pressure PSI [bar]	2465 [170]																			
Max. Cont. Pressure in Line T PSI [bar]	363 [25]																			
Max. Torque at Servoamplifying in-lb [Nm]	26 [3]																			
Max. Torque w/o Servoamplifying in-lb [Nm]	1065 [120]																			
Weight, avg. lb [kg]	12.4 [5,6]				12.6 [5,7]				12.8 [5,8]				13.2 [6,0]				13.9 [6,3]			
Dimension A in. [mm]	5.36 [136,2]				5.47 [138,8]				5.60 [142,2]				5.78 [146,8]				5.99 [152,2]			

\* Rated Flow at 100 RPM.

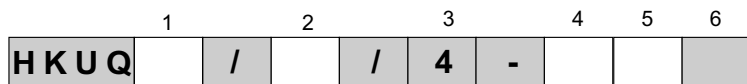
**DIMENSIONS AND MOUNTING DATA**



code	Ports - P*, T, R, L Thread	Column Mounting Thread - B	Valve Mounting Thread - V
A	3/4 - 16 UNF O-ring .67 [17] depth	4x 3/8 - 16 UNC .62 [15,7] depth	2 x 3/8 - 24 UNF .56 [14,2] depth
-	G1/2 .67 [17] depth	4 x M10 .71 [18] depth	2 x M10x1 .63 [16] depth
M	M22x1,5 .67 [17] depth	4 x M10 .71 [18] depth	2 x M10x1 .63 [16] depth

\*Threaded Port **P** min .63 [16] depth.

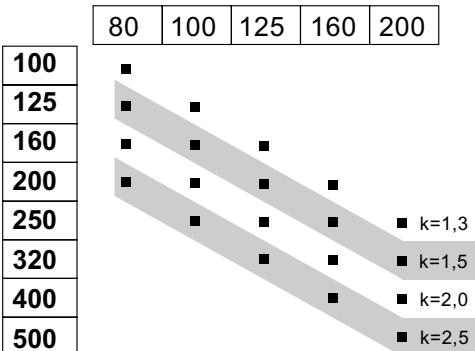
**ORDER CODE for HKUQ...**



**Pos.1 - Displacement code**

- 80** - 4.83 [79,2] in.<sup>3</sup>/rev. [cm<sup>3</sup>/rev]
- 100** - 6.04 [99,0] in.<sup>3</sup>/rev. [cm<sup>3</sup>/rev]
- 125** - 7.56 [123,8] in.<sup>3</sup>/rev. [cm<sup>3</sup>/rev]
- 160** - 9.67 [158,4] in.<sup>3</sup>/rev. [cm<sup>3</sup>/rev]
- 200** - 12.08 [198,0] in.<sup>3</sup>/rev. [cm<sup>3</sup>/rev]

**Pos.2 - Displacement with amplifying factor 1,3; 1,5; 2,0 or 2,5**



**Pos.3 - Versions**

- 4** - Version 4 "Open Center - Non Load Reaction"

**Pos.4 - Ports**

- omit - BSPP (ISO 228)
- A** - SAE (ANSI B 1.1 - 1982)
- M** - Metric (ISO 262)

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

- omit - No Paint
- P** - Painted Low Gloss Color
- PC** - Corrosion Protected Paint

**Pos.6 - Design Series**

- omit - Factory specified

**NOTES:**

- \* Exemplary designation of steering unit with displacement 200 cm<sup>3</sup> and amplifying factor 2,5: HKUQ 200/500/4
- \*\* Colour at customer's request.

The steering units are mangano-phosphatized as standard.