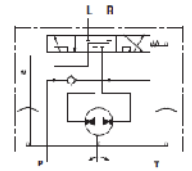
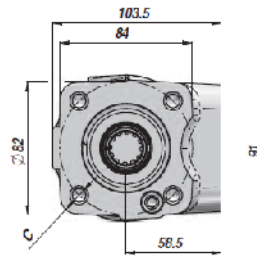
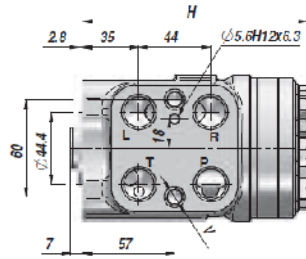
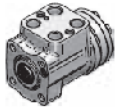


**HKU.../4** ORBITROLS "M+S HYDRAULIC" "M+S HYDRAULIC" STEERING UNIT "M+S HYDRAULIC" STEERING UNIT CENTRE OUVERT OPEN CENTER NON REACTIF NON LOAD REACTION NO REACTIVA SANS VALVES WITHOUT VALVES SIN VALVULAS

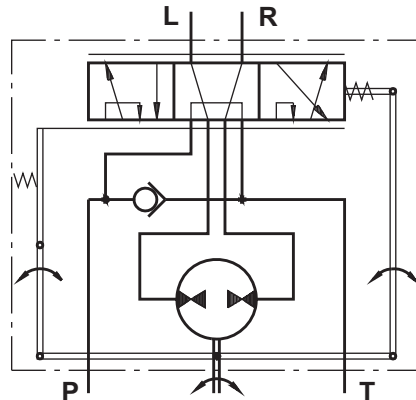


Code Code Código	Type Type Tipo	cm <sup>3</sup> /tr cm <sup>3</sup> /rev cm <sup>3</sup> /giro	LP RF VLP bar	VA SV VA bar	P MAX bar	P-T R-L BSP	V (x 2)	C (x 4)	H	kg
DHKU004410	HKU 40/4	39,6			140				130,8	5,30
DHKU005410	HKU 50/4	49,5			140				132,2	5,40
DHKU006410	HKU 63/4	65,6			170				133,9	5,50
DHKU008410	HKU 80/4	79,2			170				136,2	5,60
DHKU010410	HKU 100/4	99,0			170				138,8	5,70
DHKU012410	HKU 125/4	123,8			170				142,2	5,80
DHKU016410	HKU 160/4	158,4			170				146,8	6,00
DHKU020410	HKU 200/4	198,0	-	-	170	1/2"	M10x1	M10	152,2	6,30
DHKU025410	HKU 250/4	247,5			170				158,8	6,50
DHKU032410	HKU 320/4	316,8			170				168,2	7,00
DHKU040410	HKU 400/4	396,0			170				178,8	7,40
DHKU050410	HKU 500/4	495,0			170				192,0	8,00
DHKU063410	HKU 630/4	623,6			140				209,3	8,70
DHKU080410	HKU 800/4	793,0			140				232,2	9,60
DHKU100410	HKU1000/4	990,0			100				258,6	10,60

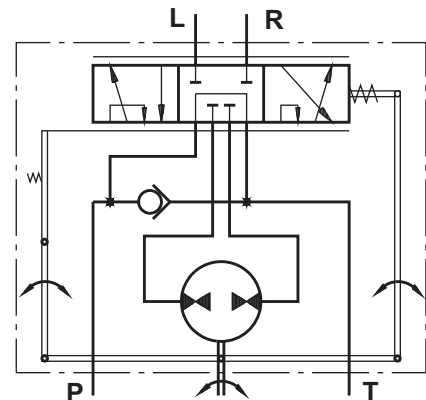
# HYDROSTATIC STEERING UNITS TYPE HKU.../3, 4



The newly designed HKU steering units, with radial distribution, incorporate two rotary tracing valves in the housing, which turn on the metering pump.



"Open Center - Load Reaction"  
HKU.../3



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

## SPECIFICATION DATA

Parameters	Type																
	HKU 40/3	HKU 50/3	HKU 63/3	HKU 80/3	HKU 100/3	HKU 125/3	HKU 160/3	HKU 200/3	HKU 250/3	HKU 320/3	HKU 400/3						
	HKU 40/4	HKU 50/4	HKU 63/4	HKU 80/4	HKU 100/4	HKU 125/4	HKU 160/4	HKU 200/4	HKU 250/4	HKU 320/4	HKU 400/4	HKU 500/4	HKU 630/4	HKU 800/4	HKU 1000/4		
Displacement	cm <sup>3</sup> /rev	39,6	49,5	65,6	79,2	99,0	7.56	9.67	198	247,5	316,8	396	495	623,6	793	990	
	[in <sup>3</sup> /rev]	[2.42]	[3.0]	[4.0]	[4.83]	[6.04]	[123,8]	[158,4]	[12.1]	[15.1]	[19.3]	[24.2]	[30.2]	[38.05]	[48.4]	[60.4]	
Rated Flow*	lpm	4	5	6	8	10	13	16	20	25	32	40	50	63	70		
	[GPM]	[1.1]	[1.3]	[1.6]	[2.1]	[2.6]	[3.4]	[4.2]	[5.3]	[6.6]	[8.4]	[10.6]	[13.2]	[16.6]	[18.5]		
Rated Pressure	bar	140			170								140		100		
	[PSI]	[2030]			[2465]								[2030]		[1450]		
Max. Cont. Pressure in Line T	bar [PSI]																
- standard		25 [363]															
- high pressure (H option)		40 [580]															
Max. Torque at Servoamplifying	Nm [lb-in]							3,0 [26]						3,0 [26]			
- with standard springs								1,8 [16]						-			
- with soft springs (LT option)																	
Max. Torque w/o Servoamplifying	Nm [lb-in]	120															
		[1065]															
Weight	kg	5,3	5,4	5,5	5,6	5,7	5,8	6,0	6,3	6,5	7,0	7,4	8,0	8,7	9,6	10,6	
	[lb]	[11.7]	[11.9]	[12.2]	[12.4]	[12.6]	[12.8]	[13.2]	[13.9]	[14.3]	[15.4]	[16.3]	[17.6]	[19.2]	[21.2]	[23.4]	
Dimension A	mm	130,85	132,2	133,9	136,2	138,8	142,2	146,8	152,2	158,8	168,2	178,8	192	209,3	232,2	258,6	
	[in]	[5.1]	[5.20]	[5.27]	[5.36]	[5.47]	[5.60]	[5.78]	[5.99]	[6.25]	[6.62]	[7.04]	[7.56]	[8.24]	[9.14]	[10.18]	

\* Inlet flow providing maximum speed of rotation:

- 100 RPM - from HKU40 to HKU630;
- 87 RPM - for HKU800;
- 70 RPM - for HKU1000.

# HYDROSTATIC STEERING UNIT TYPE HKU.../7

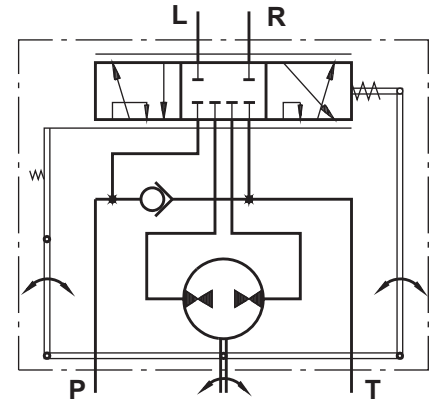


The HKU.../7 is a "ClosedCenter-NonLoadReaction" hydrostatic steering unit, designed for integration into systems with built-in hydroaccumulator, achieving minimal energy losses.

When connecting to a differential cylinder the L and R ports of the steering unit must be connected as follows: L to the greater piston area, and R - to the smaller one.

For the "ClosedCenter-NonLoadReaction" and "ClosedCenter-NonReactionandLoadSensing" steering units is possible to observe Thermal Shock - condition caused when the hydraulic system has operated for some time without turning the steering wheel, causing the fluid in the reservoir and

the system to heat up while the steering unit is relatively cool (i.e. there is more than 500F [100C] difference in the temperature). If, under the condition of Thermal Shock, the steering wheel is turned very quickly, it is possible to experience temporary seizure and have the internal parts of the steering unit damaged. The temporary seizure may be followed by a total free wheeling.



"Closed Center - Non Load Reaction"  
Version 7 - HKU.../7

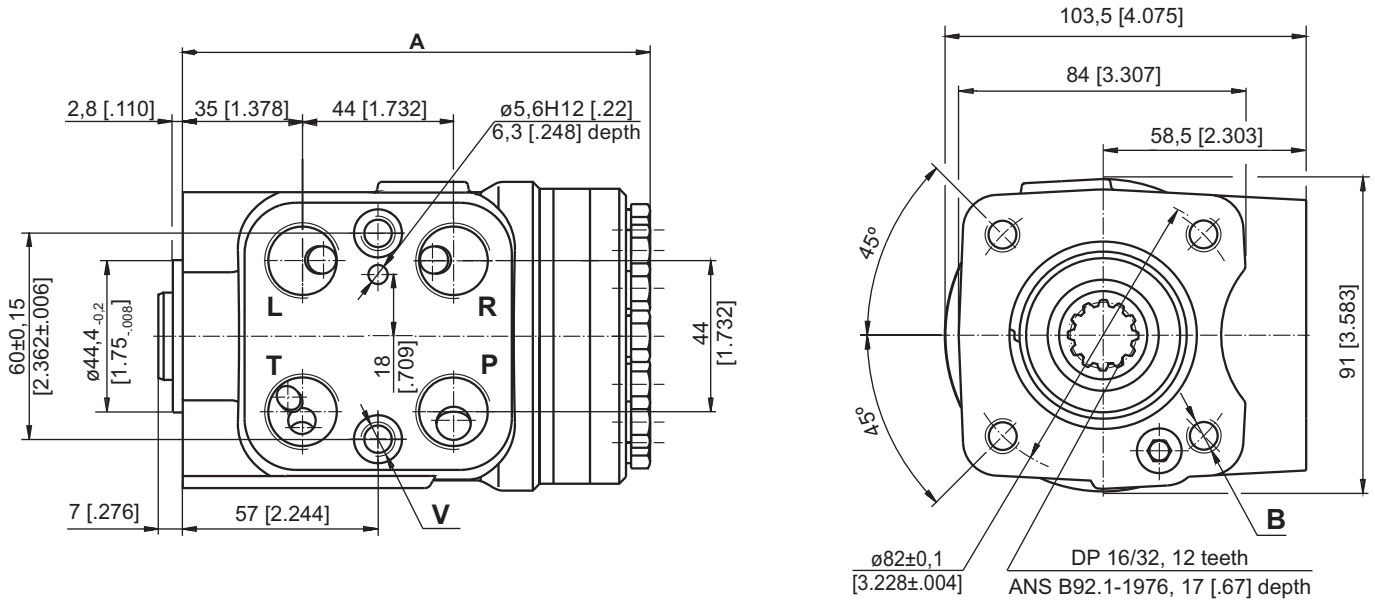
## SPECIFICATION DATA

Parameters	Type															
	HKU 40/7	HKU 50/7	HKU 63/7	HKU 80/7	HKU 100/7	HKU 125/7	HKU 160/7	HKU 200/7	HKU 250/7	HKU 320/7	HKU 400/7	HKU 500/7	HKU 630/7	HKU 800/7		
Displacement	cm <sup>3</sup> /rev [in <sup>3</sup> /rev]	39,6 [2.42]	49,5 [3.0]	65,6 [4.0]	79,2 [4.83]	99,0 [6.04]	123,8 [7.56]	158,4 [9.67]	198 [12.1]	247,5 [15.1]	316,8 [19.3]	396 [24.2]	495 [30.2]	623,6 [38.05]	793 [48.4]	
Rated Flow*	lpm [GPM]	4 [1.1]	5 [1.3]	6 [1.6]	8 [2.1]	10 [2.6]	13 [3.4]	16 [4.2]	20 [5.3]	25 [6.6]	32 [8.4]	40 [10.6]	50 [13.2]	63 [16.6]	80 [21.1]	
Rated Pressure	bar [PSI]	125 [1810]	140 [2030]	175 [2540]												
Max. Cont. Pressure in Line T	bar [PSI]															
- standard		25 [363]														
- high pressure (H option)		40 [580]														
Max. Torque at Servoamplifying	Nm [lb-in]								3,0 [26]							
- with standard springs									3,0 [26]							
- with soft springs (LT option)									-							
Max. Torque w/o Servoamplifying	Nm [lb-in]	120 [1065]														
Weight	kg [lb]	5,3 [11.7]	5,4 [11.9]	5,5 [12.2]	5,6 [12.4]	5,7 [12.6]	5,8 [12.8]	6,0 [13.2]	6,3 [13.9]	6,5 [14.3]	7,0 [15.4]	7,4 [16.3]	8,0 [17.6]	8,7 [19.2]	9,6 [21.2]	
Dimension A	mm [in]	130,8 [5.15]	132,2 [5.20]	133,9 [5.27]	136,2 [5.36]	138,8 [5.47]	142,2 [5.60]	146,8 [5.78]	152,2 [5.99]	158,8 [6.25]	168,2 [6.62]	178,8 [7.04]	192 [7.56]	209,3 [8.24]	232,2 [9.14]	

\* Inlet flow providing maximum speed of rotation:

- 100 RPM - from HKU40 to HKU630;
- 87 RPM - for HKU800.

**DIMENSIONS AND MOUNTING DATA - HKU.../3, 4, 7**



Code	Ports - P, T, R, L Thread	Column Mounting Thread - B	Valve Mounting Thread - V
-	G1/2 17 [.67] depth	4 x M10 18 [.71] depth	2 x M10x1 16 [.63] depth
M	M22x1,5 17 [.67] depth	4 x M10 18 [.71] depth	2 x M10x1 16 [.63] depth
A	3/4 - 16 UNF O-ring 17 [.67] depth	4 x 3/8 - 16 UNC 15,7 [.62] depth	2 x 3/8 - 24 UNF 14,2 [.56] depth
BA*	9/16 - 18 UNF O-ring 17 [.67] depth	4 x 3/8 - 16 UNC 15,7 [.62] depth	2 x 3/8 - 24 UNF 14,2 [.56] depth

\* These threads are for displacements from HKU40 to HKU200 only.