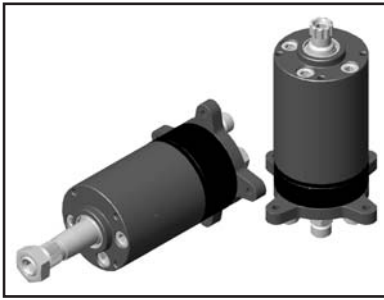


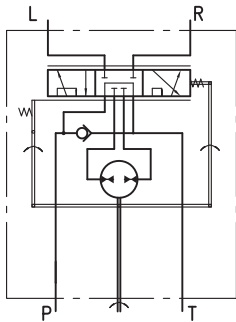
# HYDROSTATIC STEERING UNITS TYPE HKUM.../4(PB)



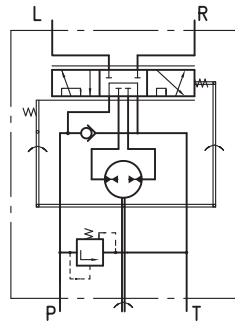
M+S Hydraulic expands its range of hydrostatic steering units with mini steering units, which are used in lawn and garden machines, minitractors and municipal vehicles.

HKUM.../4 is open centre steering units in neutral position have open connection between pump and tank.

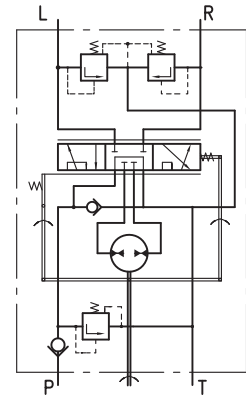
HKUM.../4PB works as standard steering unit with auxiliary port designed for flow providing additional vehicles functions. When the steering wheel is not turned, the flow will be delivered to port PB. After the steering wheel has been turned a part of the flow will be deviated to the steering unit and the flow through port PB will be inconstant.



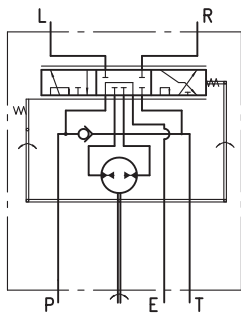
"Open Center - Non Load Reaction"  
HKUM.../4



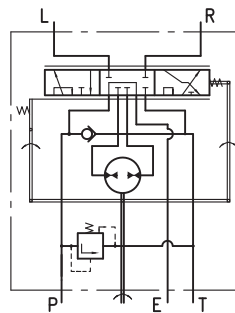
"Open Center - Non Load Reaction"  
HKUMR.../4



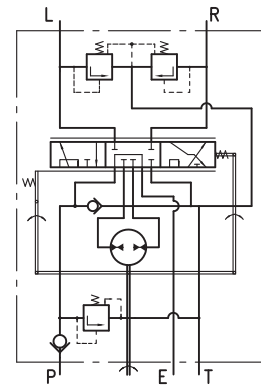
"Open Center - Non Load Reaction"  
HKUMS.../4



"Open Center - Non Load Reaction"  
HKUM.../4PB - Power Beyond



"Open Center - Non Load Reaction"  
HKUMR.../4PB - Power Beyond



"Open Center - Non Load Reaction"  
HKUMS.../4PB - Power Beyond

## SPECIFICATION DATA

Parameters	Type							
	HKUM... 32/4(PB)	HKUM... 40/4(PB)	HKUM... 50/4(PB)	HKUM... 63/4(PB)	HKUM... 70/4(PB)	HKUM... 80/4(PB)	HKUM... 100/4(PB)	
Displacement	cm <sup>3</sup> /rev [in <sup>3</sup> /rev]	31,8 [1.94]	40 [2.44]	50 [3.05]	63 [3.84]	70 [4.27]	80 [4.88]	100 [6.10]
Rated Flow*	lpm [GPM]	3,2 [0.85]	4,0 [1.06]	5,0 [1.32]	6,0 [1.59]	7,0 [1.85]	8,0 [2.11]	10,0 [2.64]
Max. recommended oil flow	lpm [GPM]	20 [5.3]						
Rated Pressure	bar [PSI]	125 [1810]						
Relief Valve Pressure Settings**	bar [PSI]	60 [870]	70 [1015]	80 [1160]	90 [1305]	100 [1450]	110 [1595]	125 [1810]
Shock Valves Pressure Settings***	bar [PSI]	120 [1740]	130 [1885]	140 [2030]	150 [2175]	160 [2320]	170 [2465]	185 [2683]
Max. Cont. Pressure in Line T	bar [PSI]	20 [290]						
Max. Torque at Servoamplifying	Nm [lb-in]	2,0 [17.7]						
Max. Torque w/o Servoamplifying	Nm [lb-in]	80 [708]						
Weight, kg [lb]	for HKUM.../4...	2,3 [5.1]	2,4 [5.3]	2,5 [5.5]	2,6 [5.7]	2,65 [5.84]	2,7 [5.95]	2,9 [6.39]
	for HKUM.../4(PB)...	2,6 [5.7]	2,7 [5.9]	2,8 [6.2]	2,9 [6.4]	2,95 [6.5]	3,0 [6.6]	3,2 [7.1]

\* Rated Flow at 100 RPM.

\*\* Pressure Settings are at flow rate of 12 l/min [3.17 GPM] and viscosity 21 mm<sup>2</sup>/s [105 SUS] at 50°C [120°F].

\*\*\* Pressure Settings are at flow rate of 1 l/min [0.26 GPM] and viscosity 21 mm<sup>2</sup>/s [105 SUS] at 50°C [120°F].

**ORDER CODE for HKUM.../4(PB)...**

1	2	3	4	5	6	7	8
HKUM		/	-	-	-		

**Pos.1 - Option**

	Relief Valve	Check Valve in P-port	Shock Valve
omit	no build-in valves		
<b>R</b>	•		
<b>S</b>	•	•	•

**Pos.2 - Displacement code**

<b>32</b>	- 31,8 cm <sup>3</sup> /rev [1.94 in <sup>3</sup> /rev]
<b>40</b>	- 40,0 cm <sup>3</sup> /rev [2.44 in <sup>3</sup> /rev]
<b>50</b>	- 50,0 cm <sup>3</sup> /rev [3.05 in <sup>3</sup> /rev]
<b>63</b>	- 63,0 cm <sup>3</sup> /rev [3.84 in <sup>3</sup> /rev]
<b>70</b>	- 70,0 cm <sup>3</sup> /rev [4.27 in <sup>3</sup> /rev]
<b>80</b>	- 80,0 cm <sup>3</sup> /rev [4.88 in <sup>3</sup> /rev]
<b>100</b>	- 100,0 cm <sup>3</sup> /rev [6.10 in <sup>3</sup> /rev]

**Pos.3 - Versions**

<b>4</b>	- "Open Center - Non Load Reaction"
<b>4PB</b>	- "Open Center - Non Load Reaction" with 5 ports (Power Beyond)

**Pos.4 - Relief Valve Pressure Settings\* [bar]**

<b>60</b>	<b>70</b>	<b>80</b>	<b>90</b>	<b>100</b>	<b>110</b>	<b>125</b>
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**Pos.5 - Shaft Versions**

omit	- Splined B17x14 DIN 5482
<b>K1</b>	- Tapered 1:20, key 5x6,5 DIN 6888
<b>K2</b>	- Tapered 1:12, with 11/16 in-40 serrations

**Pos.6 - Ports**

<b>A</b>	- ORFS main ports - ISO 8434-3
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**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:** \* For HKUMR... and HKUMS... only.  
\*\* Colour at customer's request.  
The steering units are mangano-phosphatized as standard.

**ORDER CODE for HKUM.../5DT**

1	2	3	4	5	6	7	8	9
HKUM		/	5D	T	-	-	-	

**Pos.1 - Option**

	Relief Valve	Check Valve in P-port	Shock Valve
<b>R</b>	•	•	
<b>S</b>	•	•	•

**Pos.2 - Displacement code**

<b>32</b>	- 31,8 cm <sup>3</sup> /rev [1.94 in <sup>3</sup> /rev]
<b>40</b>	- 40,0 cm <sup>3</sup> /rev [2.44 in <sup>3</sup> /rev]
<b>50</b>	- 50,0 cm <sup>3</sup> /rev [3.05 in <sup>3</sup> /rev]
<b>63</b>	- 63,0 cm <sup>3</sup> /rev [3.84 in <sup>3</sup> /rev]
<b>70</b>	- 70,0 cm <sup>3</sup> /rev [4.27 in <sup>3</sup> /rev]
<b>80</b>	- 80,0 cm <sup>3</sup> /rev [4.88 in <sup>3</sup> /rev]
<b>100</b>	- 100,0 cm <sup>3</sup> /rev [6.10 in <sup>3</sup> /rev]

**Pos.3 - Versions**

<b>5D</b>	- Version 5 "Close Center - Non Load Reaction and Dynamic Load Signal"
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**Pos.4 - Priority Valve Connection**

<b>T</b>	- Pipe Mounting
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**Pos.5 - Relief Valve Pressure Settings [bar]**

<b>60</b>	<b>70</b>	<b>80</b>	<b>90</b>	<b>100</b>	<b>110</b>	<b>125</b>
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**Pos.6 - Shaft Versions**

omit	- Splined B17x14 DIN 5482
<b>K1</b>	- Tapered 1:20, key 5x6,5 DIN 6888
<b>K2</b>	- Tapered 1:12, with 11/16 in-40 serrations

**Pos.7 - Ports**

<b>A</b>	- ORFS main ports - ISO 8434-3
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**Pos.8 - Option (Paint)\***

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

**Pos.9 - Design Series**

omit	- Factory specified
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**Notes:** \* Colour at customer's request.  
The steering units are mangano-phosphatized as standard.