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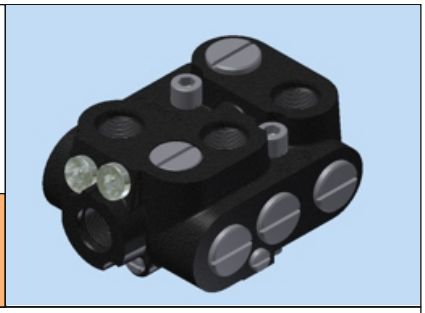
SERVICE BLOCK-FLANGED AMPLIFIERS FOR HYDRAULIC STEERING UNITS

SAD. ..-.



The SAD type service block works as a flow amplifier with a ratio of 1:8. The SAD block is integrated with hydraulic steering units with working volume of up to 250 cm^3 and is used to increase the flow supplied to the steering cylinder up to 180 l/min.

The steering set formed of the SAD block and the hydraulic steering unit is intended for application in self-propelled vehicles with hydraulic steering systems, with a driving speed of no more than 50 km/h.

The SAD block has a priority valve, providing the integrated operation of the abovementioned steering set and the other working equipment of the vehicle. They are supplied from one pump, giving priority to the steering set.

The SAD service block has an option of direct mounting to the steering unit with two bolts. This option requires more free space around the assembly area. The hoses to the pump and the cylinders are coupled directly to the SAD block.

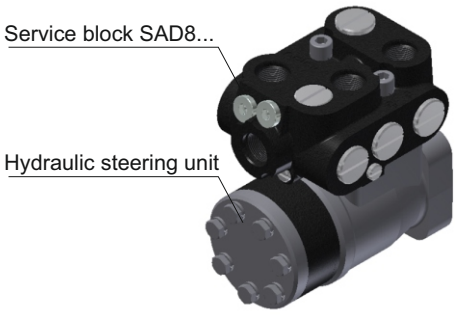
The SAD block is also offered in another option – in-line mounting, in which the connection between the block and the steering unit is realized by small size hoses. In this case the SAD block with a coupled plate to it is assembled in a suitable place in the engine compartment. This allows to eliminate the troublesome mounting of the thick hoses near the vehicle cabin and to reduce the noise inside that cabin.

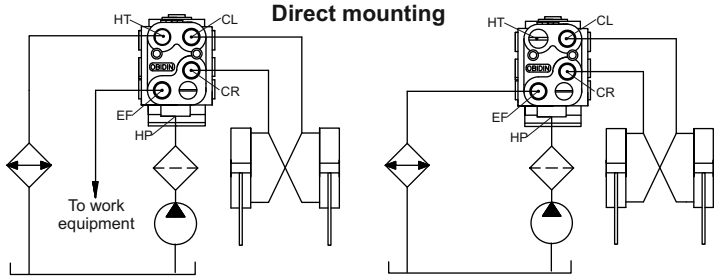
For systems with automatic control or for machines that need a second “electronic wheel”, a proportional directional valve with electromagnetic control is developed, which is connected to the hydraulic chain. The control can be accomplished by the change in the control current of the two solenoids.

The advantages of the SAD service block:

- Compact steering set - substantial reduction of the size and weight compared to the known analogues;
- Available emergency control function – the vehicle can be steered even if its motor does not function, with the help only of the physical efforts of the driver;
- Lower requirements to the purity of the working oil;
- Reduced number of needed fittings for the assembly, low cost repair activities

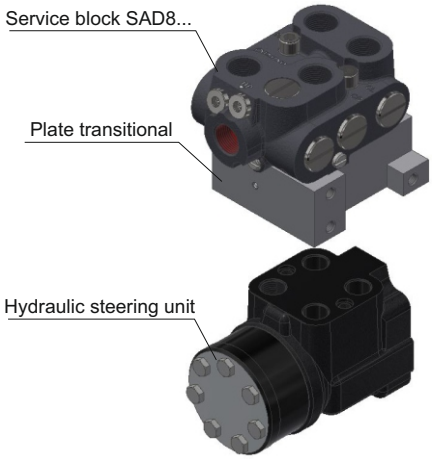
The SAD service block in a set with the steering unit HKUS.../5T (of M+S Hydraulic) is a full equivalent of the flow amplifier made by DANFOSS, type OSQA(B) in a set with the steering unit OSPB(L)X LS. It is needed only to modify the mounting of the SAD service block to the vehicle frame and to the hose nozzles. Depending on the availability of free space around the steering column of the vehicle, one of the two options can be applied – direct or in-line mounting.



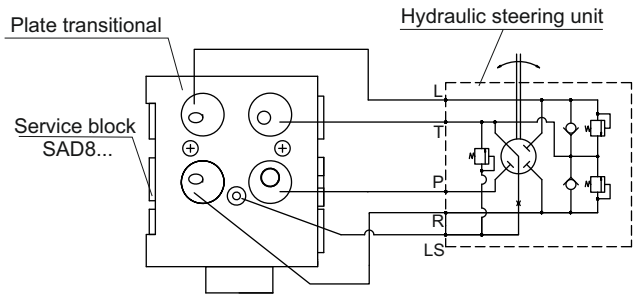


Separate T and EF ports

Integrated T and EF ports



IN-LINE mounting



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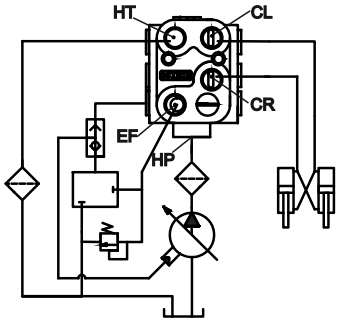
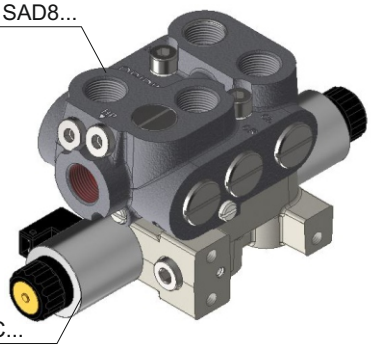
SERVICE BLOCK-FLANGED AMPLIFIERS FOR HYDRAULIC STEERING UNITS

SAD. ..-.

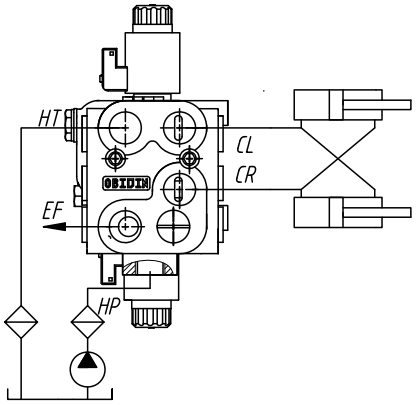
Connection LS Hydraulic systems



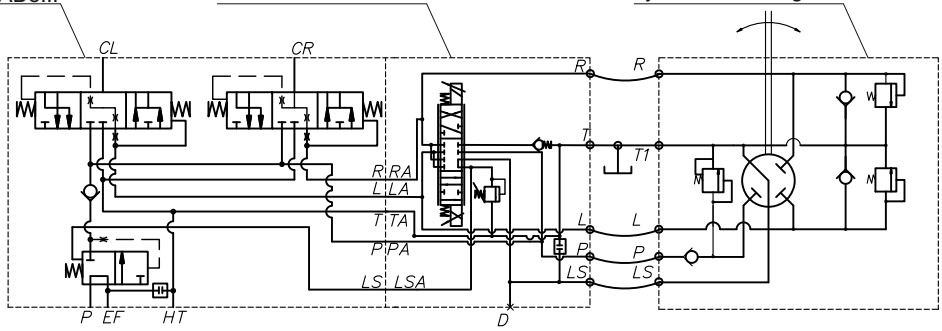
Service block SAD8...

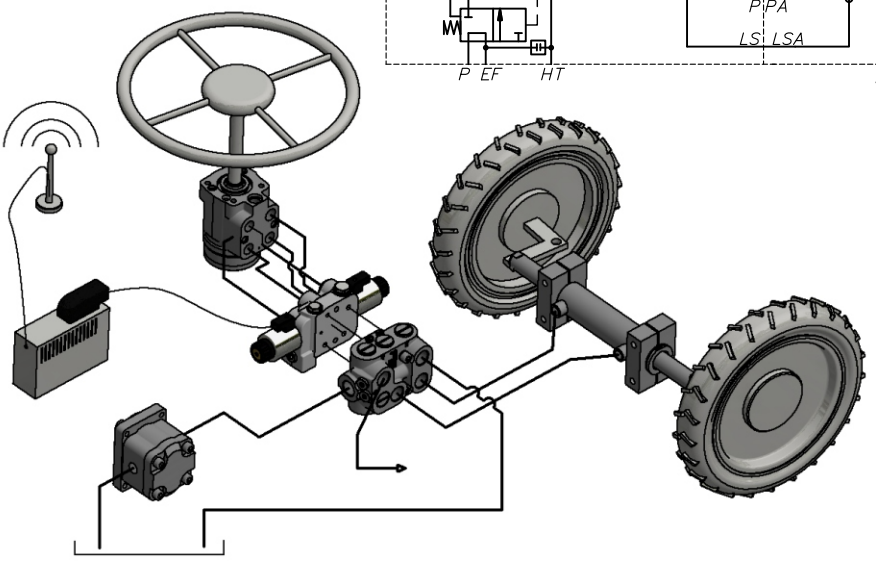


Servo unit SKC...



Service block SAD8...
Servo unit SKC...
Hydraulic steering unit





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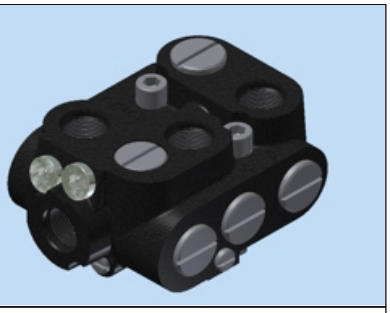
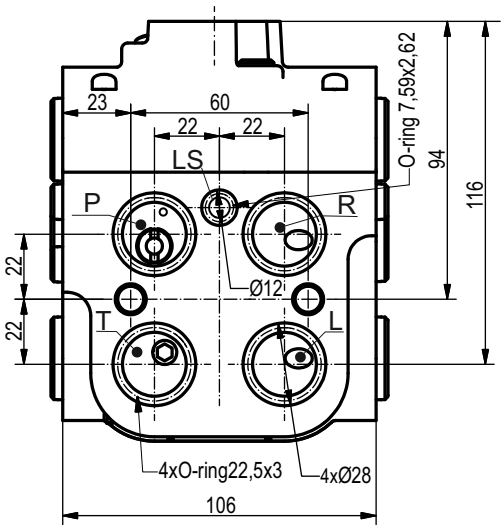
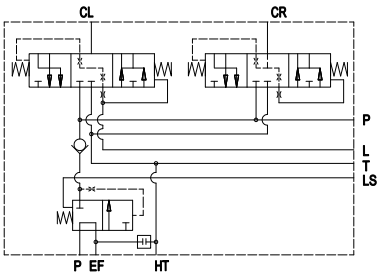
SERVICE BLOCK-FLANGED AMPLIFIERS FOR HYDRAULIC STEERING UNITS

SAD. ..-.



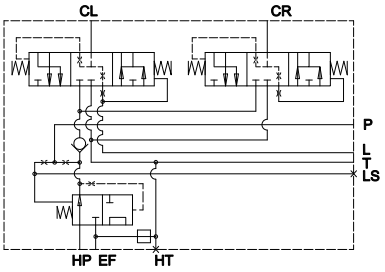


Scheme 1

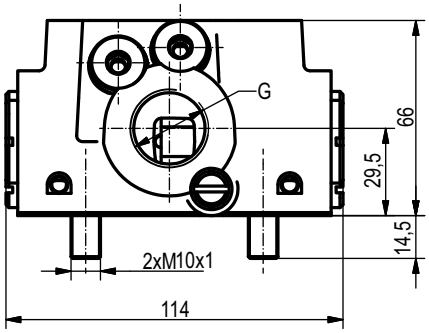


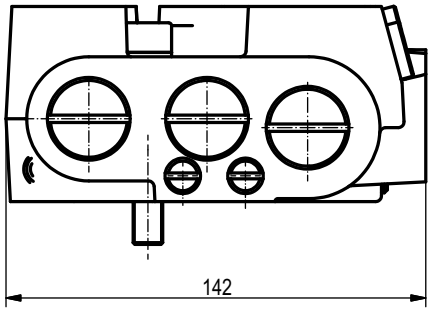
Separate T and EF ports

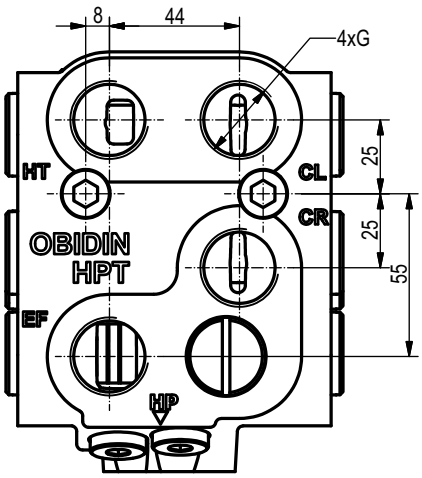
Scheme 2



Integrated T and EF ports







TECHNICAL DATA		
General		
Weight	*kg*	4,7
Hydraulic		
Maximal pressure	*bar*	210
Maximal flow rate	*L/min*	160
Working fluid - mineral oil		
- viscosity	mm^2/s	10...100
- filtration level	*µm*	25 or better
- temperature	^oC	-20...+80

ORDERING CODE

SAD 8 . . LS

Type	Amplification factor K - code: - **8**	Scheme - code: scheme1 -**Omit** scheme 2- **U**	Port threads G - code: G3/4 DIN3852 - **Omit** M24x1,5 - **M*** 1 1/16 -12 UN ISO11926- **A***	Load Sensing LS port-code: With port "LS" - **LS** Without port "LS" -**Omit**

* - under special agreement

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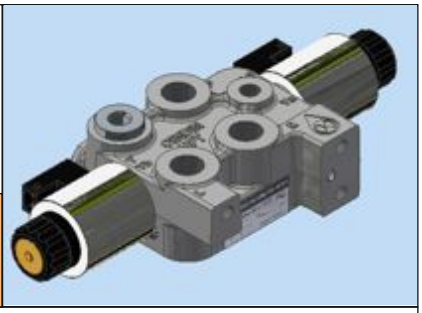
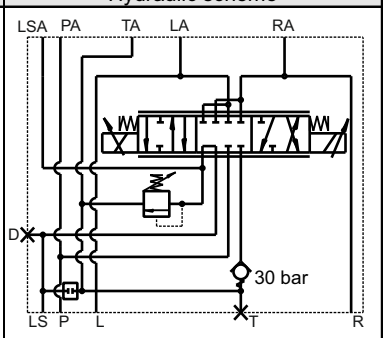
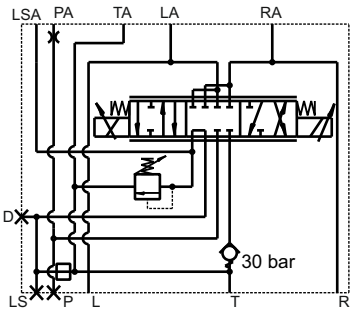
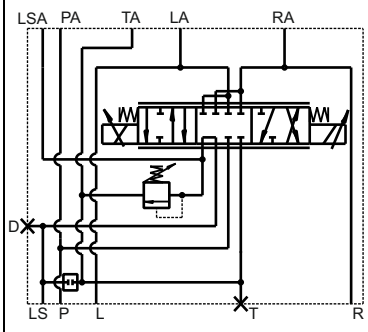
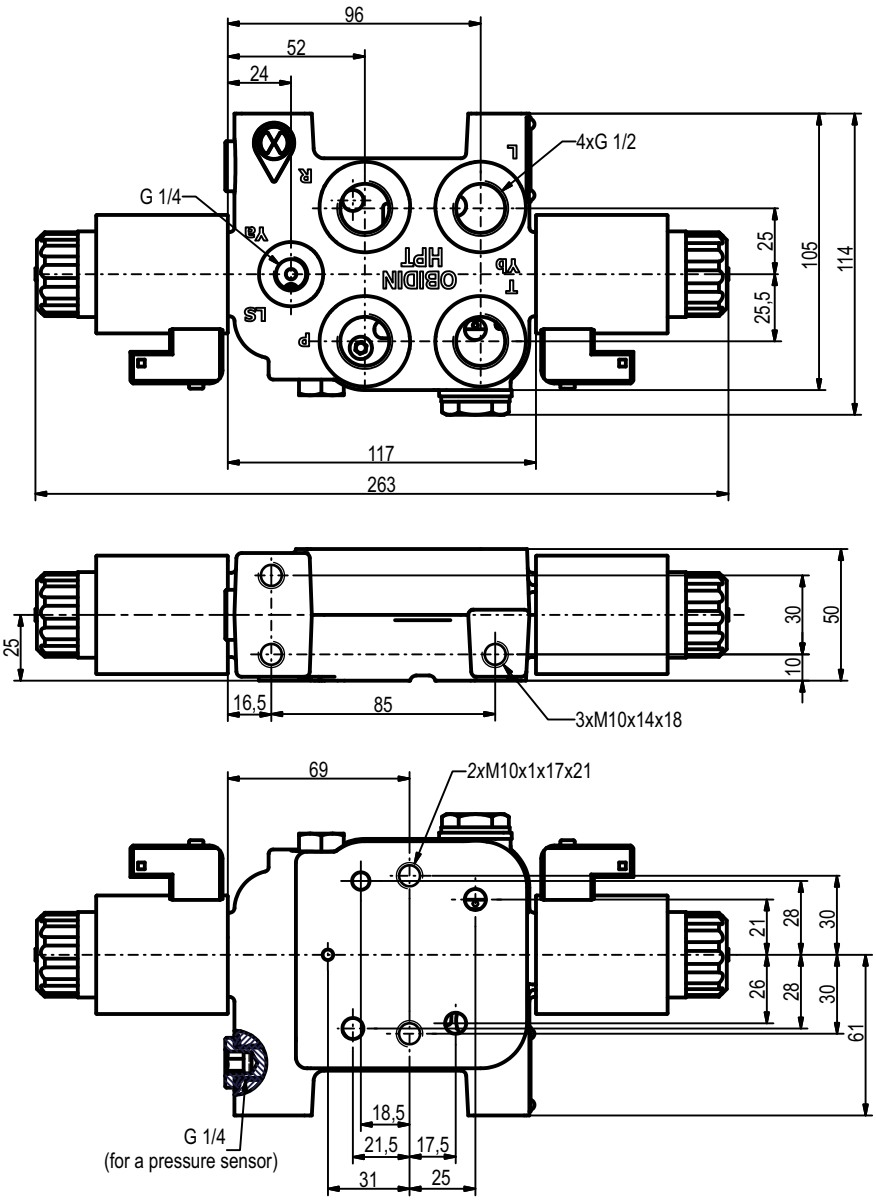
SERVO UNIT WITH ELECTRO HYDRAULIC CONTROL FOR HYDRAULIC STEERING UNITS

SK. ...



Code	Hydraulic scheme
LS	
ON	
LS.L	



Elictrical characteristics		
Protection class		IP65
Supply voltage	[V]	24
Current consumption	[A]	1,5
Resistance	[Ohm]	5,4

Type	Nominal flow rate	Pmax.	Opening pressure of relief valve	Opening pressure of check valve
	L/min	*bar*	bar	*bar*
SK.LS	10	180	180+10	30±2
SK.ON	10	180	180+10	30±2
SK.LS.L	10	180	180+10	-

ORDERING CODE

SK **LS**

- **SK** — Type
- **LS** — Scheme code: **LS; ON; LS.L**

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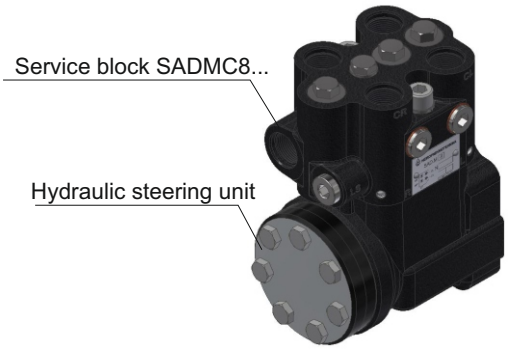
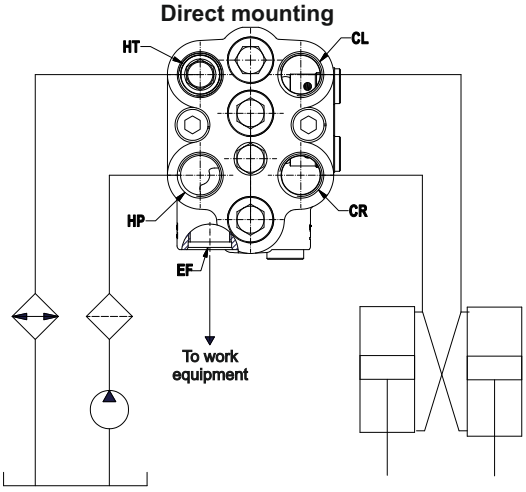
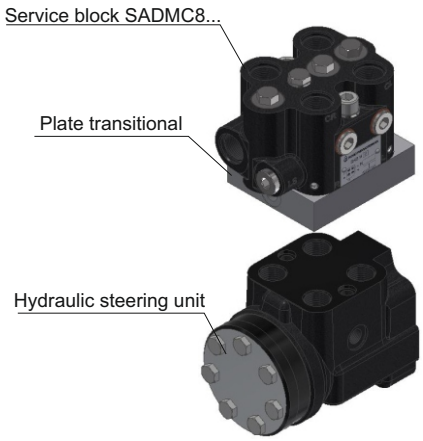
SERVICE BLOCK-FLANGED AMPLIFIERS FOR HYDRAULIC STEERING UNITS

SADMC8-..

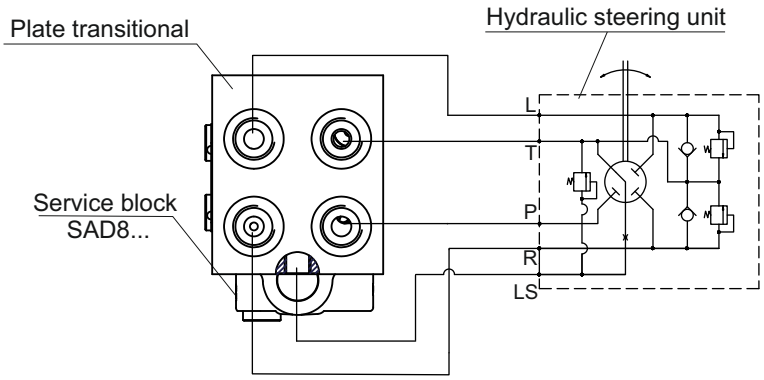


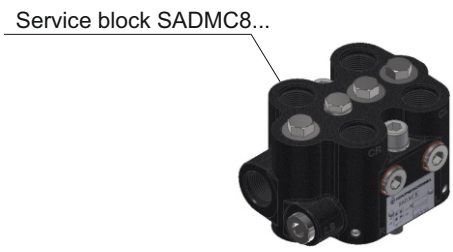
Direct mounting



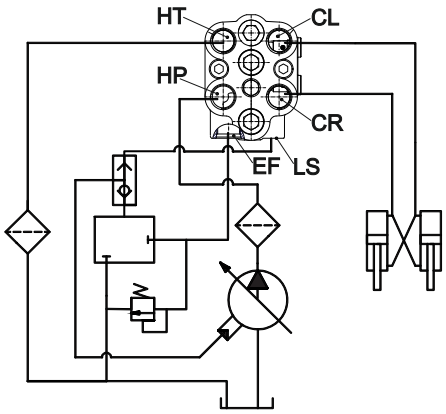


IN-LINE mounting





Connection LS Hydraulic systems



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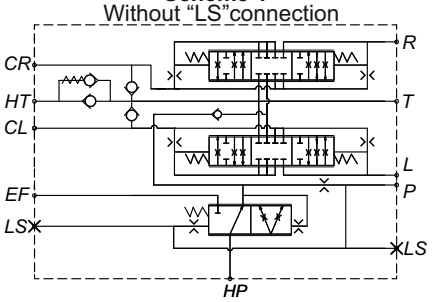
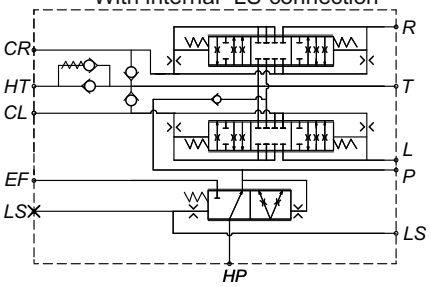
SERVICE BLOCK-FLANGED AMPLIFIERS FOR HYDRAULIC STEERING UNITS

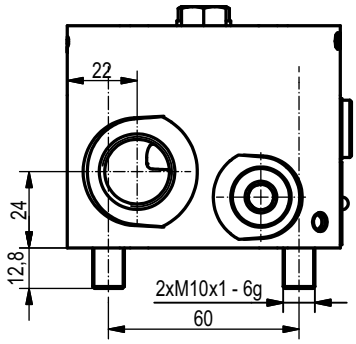
SADMC8-..

Scheme 1
Without "LS"connection

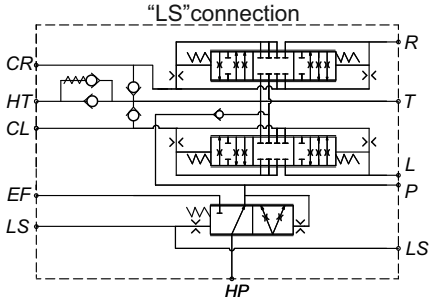


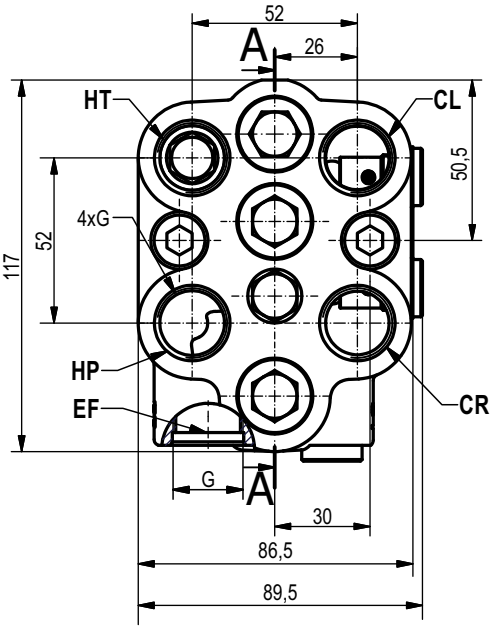
Scheme 2
With internal "LS"connection

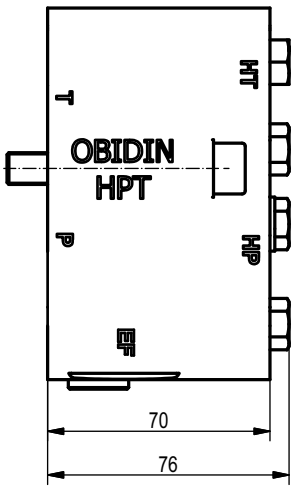


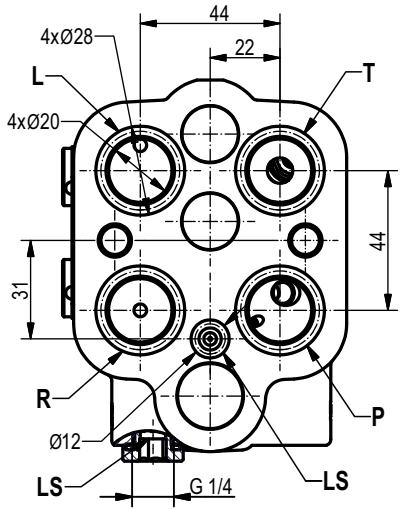


Scheme 2
With internal and additional external "LS"connection









TECHNICAL DATA		
General		
Weight	*kg*	4,7
Hydraulic		
Maximal pressure	*bar*	210
Maximal flow rate	*L/min*	160
Working fluid - mineral oil		
- viscosity	mm^2/s	10...100
- filtration level	*µm*	25 or better
- temperature	^oC	-20...+80

ORDERING CODE

SAD.MC 8 . 5

Type	Amplification factor K - code:	Port threads G - code:	Scheme - code:
	- **8**	M22x1,5 - **Omit** G1/2-DIN 3852 - **T*** 3/4 -16 UNF ISO11926- **A***	scheme 1 -**Omit** scheme 2 - **5** scheme 3 - **51**

* - under special agreement

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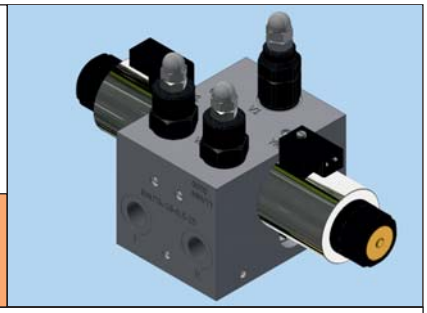
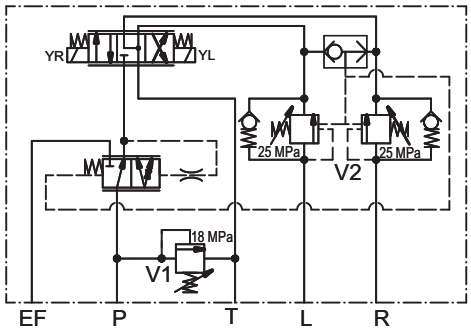
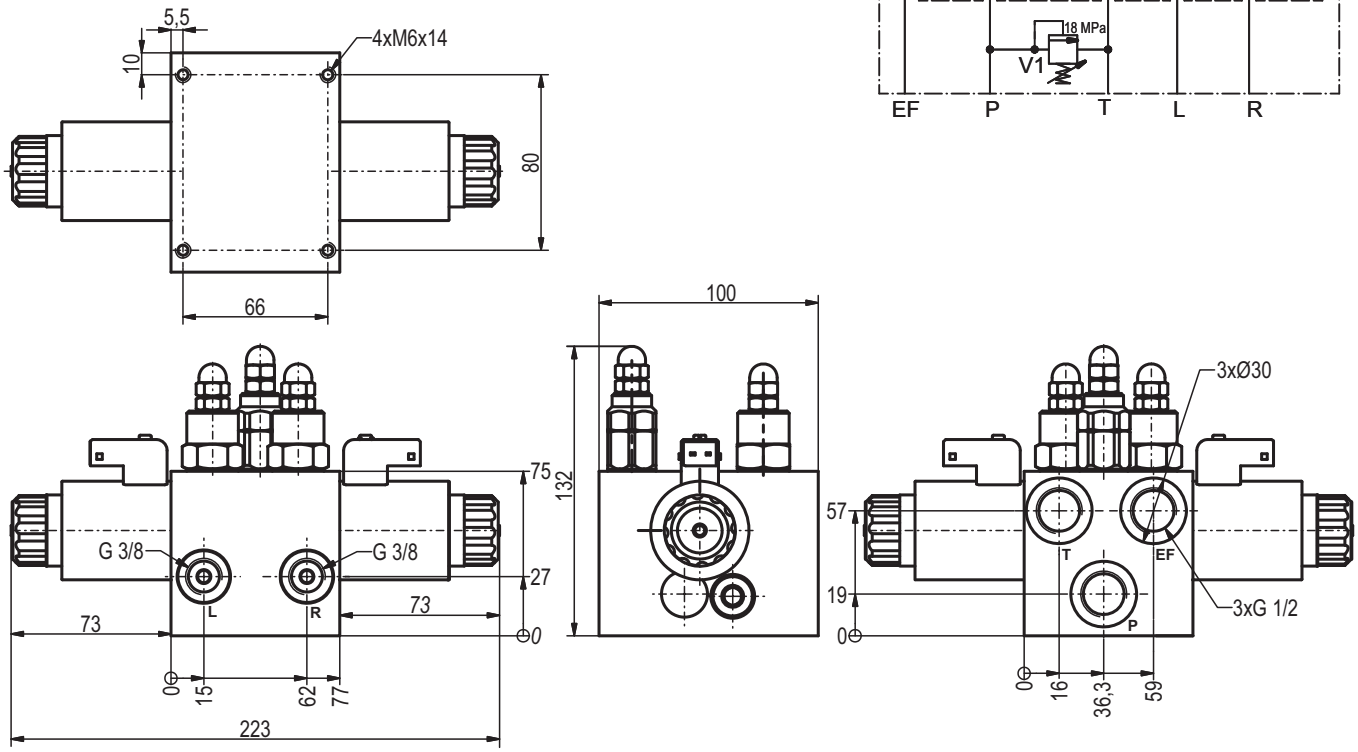
UNIT FOR PROPORTIONAL CONTROL OF THE STEERING CYLINDER

BAUTK-18-0.5-25



The hydraulic block is designed for direct control of the steering cylinder of vehicles which use hydrostatic steering unit. The control is realized by electric signal with frequency modulation.





Electrical characteristics		
Protection class		IP65
Supply voltage	[V]	24
Current consumption	[A]	1.5
Resistance	[Ohm]	5.4

Type	Nominal flow rate	**Pmax.**	Set pressure of relief valve	Pressure drop of priority valve	Set pressure of V2 valve
	L/min	*bar*	*bar*	*bar*	*bar*
BAUTK-18-0.5-25	for ports R and L-10 for ports P and EF-30	250	180+10	5	250

ORDERING CODE

BAUTK-18- 0.5 - 25

Type	Set pressure of relief valve - code: 180 bar - **18**	Pressure drop of priority valve - code: 5 bar - **0.5**	Set pressure of V2 valve - code: 250 bar - **25**