

CSU/CSUS 5(T)

Unitati de directie hidrostatice

In sistemele cu reactie la sarcina uleiul pentru sistemul de directie si circuitul de lucru poate fi furnizat de catre o pompa printr-o supapa de prioritate care poate admite o cantitate suplimentara de ulei in sistemul de operare. In plus cand o pompa cu reactie la sarcina este conectata, energia sistemului va fi economisita. Admisia LS a unitatii de directie cu reactie la sarcina este conectata la o supapa de prioritate sau la o admisie LS a unei pompe cu reactie la sarcina. Prin furtunul hidraulic, presiunea se transmite de la unitatea de directie catre supapa de prioritate sau catre pompa cu reactia la sarcina, pentru a controla volumul de ulei alocat unitatii de directie. In pozitia neutra exista un flux de scurgere de doar 2l inapoi catre rezervor. La portul "EL" se poate conecta un releu electric care trimite un semnal catre contactele de deschidere reglabila si inchidere (0.1 - 50 bar). Marimea filetelor de conectare poate fi aleasa de catre client.



CSU/CSUS 5(T)

hydrostatic steering unit

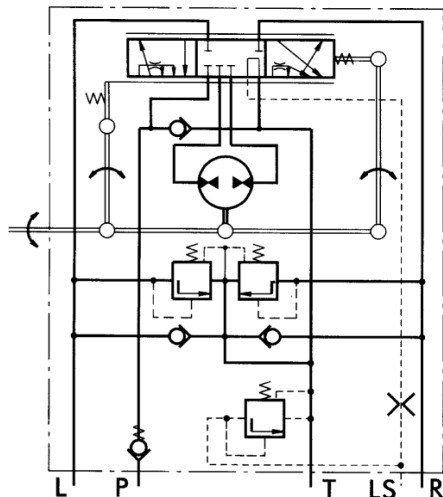
In load sensing steering systems, the oil for steering system and working circuit may be supplied by pump via a priority valve which can support an extra amount of steering system oil into the operating system. In addition, when a pump with load reaction is connected, energy of the system will be saved.

A LS inlet of load sensing steering unit is connected with a priority valve or with an LS inlet of a pump with load reaction. Via the oil hose the pressure of the steering load transfers from the steering unit to the priority valve or the pump with load reaction, so as to control the oil volume which is supplied to steering unit. In the neutral position of the load sensing steering unit there is a drain flow of only 2l back to the tank. To port „EL“ can be connected an electrical relais that sends out a signal for adjustable opening and closing contacts (0,1 to 50bar).

Connection size of threads can be chosen by customer!

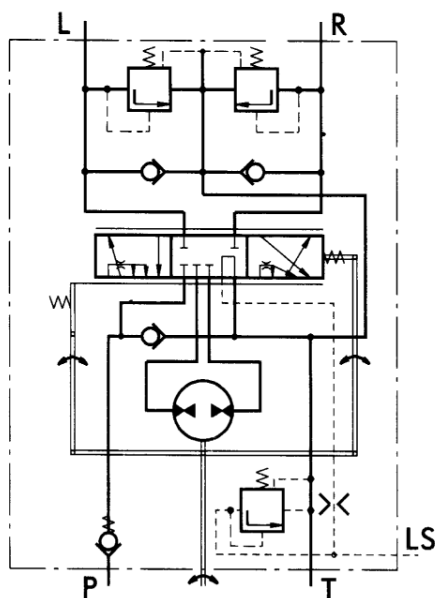
Specificatii / Specifications	CSU/CSUS	CSU/CSUS	CSU/CSUS	CSU/CSUS	CSU/CSUS	CSU/CSUS	CSU/CSUS	CSU/CSUS	CSU/CSUS	CSU/CSUS
	50/5(T)	63/5(T)	80/5(T)	100/5(T)	125/5(T)	160/5(T)	200/5(T)	250/5(T)	315/5(T)	400/5(T)
Volum [cm³/U] Displacement [cu.in]	50.8 (3.1)	62.9 (3.8)	79.8 (4.9)	99.6 (6.1)	124.5 (7.6)	159.6 (9.8)	199.4 (12.2)	249.2 (15.2)	316.5 (19.4)	399.7 (24.4)
Debit nominal [l/min] Rated Flow [gpm]	5 (1.3)	6 (1.6)	8 (2.1)	9 (2.4)	11 (2.9)	15 (4)	17 (4.5)	24 (6.3)	30 (7.9)	40 (10.6)
Presiunea nominala [bar] Rated Pressure [PSI]	160 (2320)									
Setarea valvei de eliberare a presiunii DBV [bar] Relief Valve Pressure Setting [PSI]	80 (1160)		100 (1450)		120 (1740)		140 (2030)		160 (2320)	
Setarea valvei de suprapresiune [bar] Shock Valve Pressure Setting [PSI]	140 (2030)		160(320)		180(2610)		200(2900)		220 (3090)	
Presiunea maxima in linia T [bar] Max. Cont. Pressure in Line T [PSI]	20 (290)									
Cuplu maxim [Nm] Max. Torque-Powered [lb.-in.]]	5 (44)									
Dimesiunile tipului E [mm] / E Type Dimension L [in.]	140 (5.51)	142 (5.59)	144 (5.67)	146 (5.75)	149 (5.87)	154 (6.06)	159 (6.26)	165 (6.5)	175 (6.89)	185 (7.28)
Dimensiunile tipului D [mm] / D Type Dimension L [in.]	130 (5.12)	132 (5.2)	134 (5.28)	137 (5.39)	140 (5.51)	145 (5.71)	150 (5.91)	156 (6.41)	166 (6.54)	176 (6.93)
Masa tipului E [kg] / E Type Weight [lb]	5.94 (13.31)	6.00 (13.47)	6.08 (13.62)	6.14 (13.82)	6.3 (14.11)	6.5 (14.55)	6.7 (14.97)	6.9 (15.48)	7.29 (16.29)	7.79 (17.17)
Masa tipului D [kg] / D Type Weight [lb]	5.75 (12.68)	5.82 (12.83)	5.89 (12.99)	5.96 (13.14)	6.1 (13.45)	6.3 (13.89)	6.5 (14.33)	6.73 (14.98)	7.1 (15.65)	7.5 (16.53)

SIMBOLURI GRAFICE /GRAPHIC SYMBOL



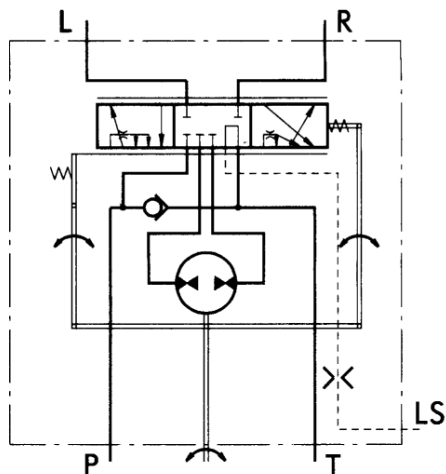
CSUS.../5. „Close Center“
Non-Load Reaction - Load Sensing
Manifold Mount

CSUS.../5. „Centru inchis“
Fara sesizare sarcinii
Montare pe admisie



CSUS.../5T. „Close Center“
Non-Load Reaction - Load Sensing
Threaded Ports

CSUS.../5. „Centru inchis“
Fara sesizarea sarcinii
Porturi filetate

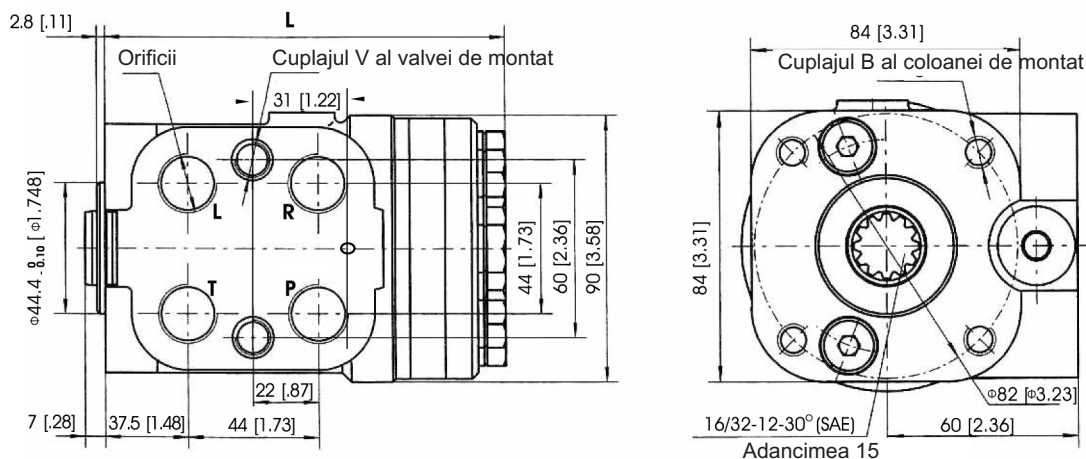


CSU.../5T. „Close Center“
Non-Load Reaction - Load Sensing
Threaded Ports

CSUS.../5. „Centru inchis“
Fara sesizare sarcinia
Porturi filetate

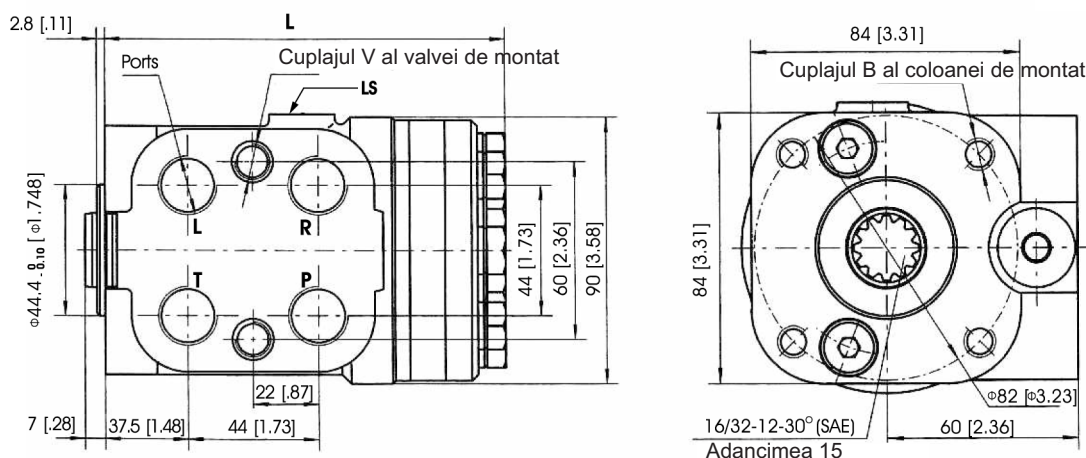
CSUS Tipul D/ CSUS TYPE E

Cuplaje si orificii CSUS.../5 / Ports and Threads CSUS.../5



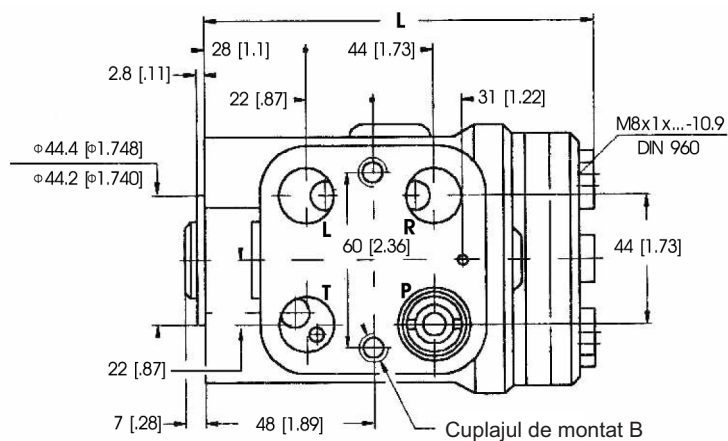
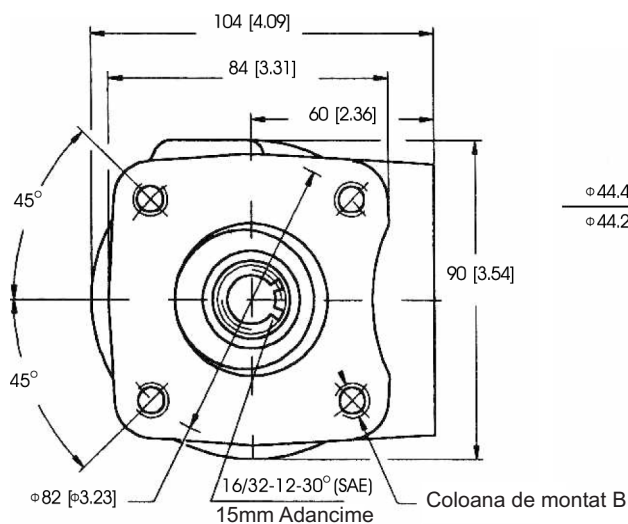
Code	P, T, R, L Orificiul Cuplajul/ Threads	Coloana de montat B / Column Mounting Thread B	Montarea V pe supapa/ Valve Mounting Thread V	Portul LS/LS-Port
-	G1/2 17mm adanc/deep	4xM10x1,5 16mm adanc/deep	2xM12x1,75 16mm adanc/ deep	G1/4 14mm adanc/ deep
GA*	G3/8 14mm adanc/deep	4xM10x1,5 16mm adanc/ deep	2xM10x1 16mm adanc/ deep	G1/4 12mm adanc/ deep
U	3/4-16UNF O-Ring 14mm adancdp	4x3/8-16UNC 0.63[16] adanc/ deep	2x3/8-24UNF 0.63[16] adanc/ deep	7/16-20UNF 12[0.55] adanc/ deep
UA*	9/16-18UNF O-Ring 14mm adanc/dp	4x3/8-16UNC 0.63[16] adanc/ deep	2x3/8-24UNF 0.63[16] adanc/ deep	7/16-20UNF 12[0.55] adanc/deep
M	M22 x1,5 14mm adanc/ deep	4xM10x1,5 16mm adanc/ deep	2xM10x1 16mm adanc/ deep	G1/4 12mm adanc/ deep

Cuplaje si orificii CSUS.../5(T) / Ports and Threads CSUS.../5(T)



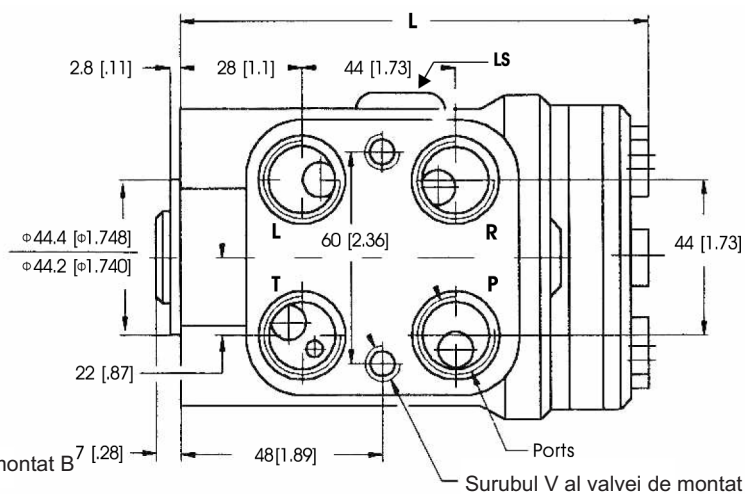
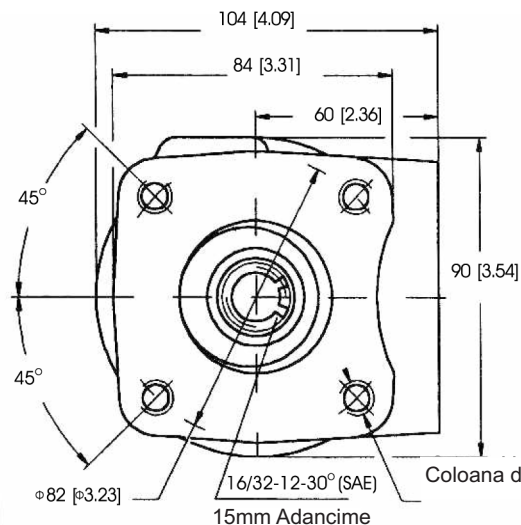
CSU Tipul D/ CSUS TYPE D

Cuplaje si orificii CSU.../5 / Ports and Threads CSU.../5



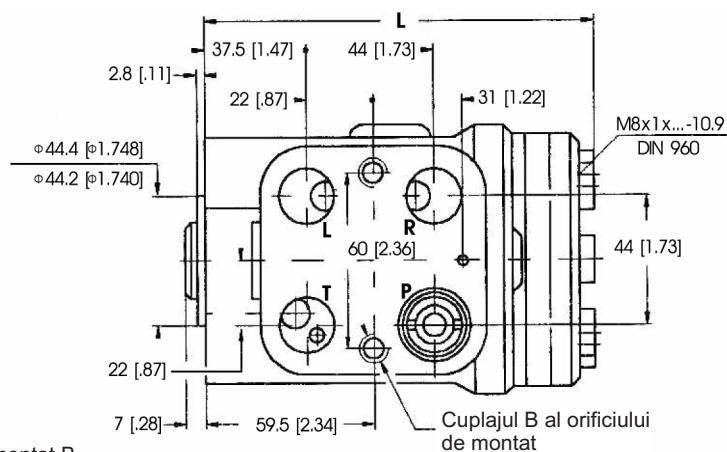
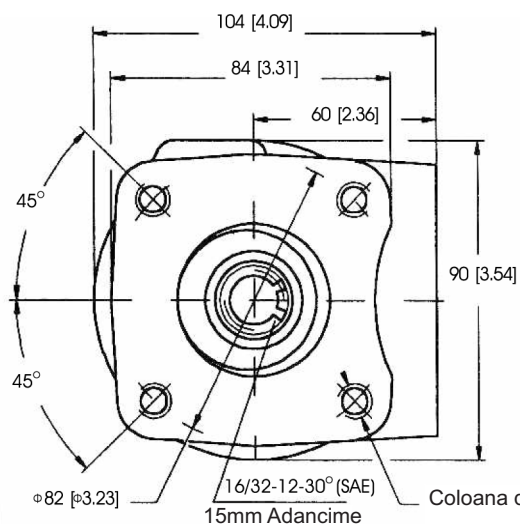
Code	P, T, R, L Orificiul cuplajului/ Threads	Coloana de montat B / Column Mounting Thread B	Montarea V pe supapa/ Valve Mounting Thread V	Portul LS/LS-Port
-	G1/2 17mm adanc/ deep	4xM10x1,5 16mm adanc/ deep	2xM12x1,75 16mm adanc/ deep	G1/4 14mm adanc/ deep
GA*	G3/8 14mm adanc/ deep	4xM10x1,5 16mm adanc/ deep	2xM10x1 16mm adanc/ deep	G1/4 12mm adanc/ deep
U	3/4-16UNF O-Ring 14mm adanc/dp	4x3/8-16UNC 0.63[16] adanc/ deep	2x3/8-24UNF 0.63[16] adanc/ deep	7/16-20UNF 12[0.55] adanc/ deep
UA*	9/16-18UNF O-Ring 14mm adanc/dp	4x3/8-16UNC 0.63[16] adanc/ deep	2x3/8-24UNF 0.63[16] adanc/ deep	7/16-20UNF 12[0.55] adanc/ deep
M	M22 x1,5 14mm adanc/ deep	4xM10x1,5 16mm adanc/ deep	2xM10x1 16mm adanc/ deep	G1/4 12mm adanc/ deep

Cuplaje si orificii CSUS.../5(T) / Ports and Threads CSUS.../5(T)



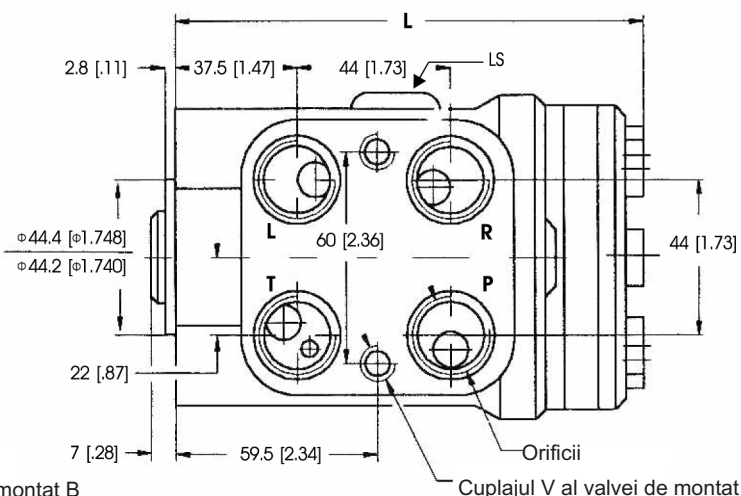
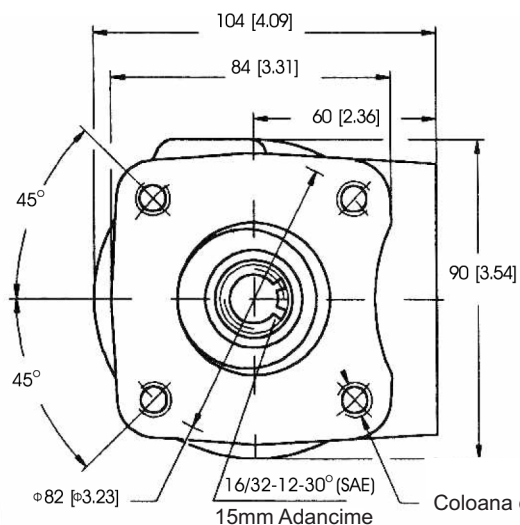
CSU Tipul D/ CSUS TYPE E

Cuplaje si orificii CSU.../5 / Ports and Threads CSU.../5



Code	P, T, R, L Orificiul cuplajului/ Threads	Coloana de montat B / Column Mounting Thread B	Montarea V pe supapa/ Valve Mounting Thread V	Portul LS/LS-Port
-	G1/2 17mm adanc/deep	4xM10x1,5 16mm adanc/deep	2xM12x1,75 16mm adanc/deep	G1/4 14mm adanc/deep
GA*	G3/8 14mm adanc/deep	4xM10x1,5 16mm adanc/deep	2xM10x1 16mm adanc/deep	G1/4 12mm adanc/deep
U	3/4-16UNF O-Ring 14mm adanc/dp	4x3/8-16UNC 0.63[16] adanc/deep	2x3/8-24UNF 0.63[16] adanc/deep	7/16-20UNF 12[0.55] adanc/deep
UA*	9/16-18UNF O-Ring 14mm adanc/dp	4x3/8-16UNC 0.63[16] adanc/deep	2x3/8-24UNF 0.63[16] adanc/deep	7/16-20UNF 12[0.55] adanc/dp
M	M22 x1,5 14mm adanc/deep	4xM10x1,5 16mm adanc/deep	2xM10x1 16mm adanc/deep	G1/4 12mm adanc/deep

Cuplaje si orificii CSUS.../5(T) / Ports and Threads CSUS.../5(T)



Informatii pentru comanda

	1	2	3	4	5	6	7
CSUS		/					

Pos. 1 Volum /Displacement

50	50.8 cm³/U	3.1 [in³/rev]
63	62.9cm³/U	3.8 [in³/rev]
80	79.8cm³/U	4.9 [in³/rev]
100	99.6cm³/U	6.1 [in³/rev]
125	124.5cm³/U	7.6 [in³/rev]
160	159.6cm³/U	9.8 [in³/rev]
200	199.4cm³/U	12.2 [in³/rev]
250	249.2cm³/U	15.2 [in³/rev]
315	316cm³/U	19.4 [in³/rev]
400	399.7cm³/U	24.4 [in³/rev]

Pos. 2 Versiuni / Versions

- 5 closed center - non reaction and load sensing outlet
centru inchis - fara reactie si sesizarea sarcinii la refulare

Pos. 3 Conexiunile principale ale supapelor / Priority Valves Connections

- Fara Montare modulara / *Modulary Mounting.*
T Montare cu tevi / *Pipe Mounting*

	1	2	3	4	5	6
CSUS		/				

Pos. 1 Volum /Displacement

50	50.8 cm³/U	3.1 [in³/rev]
63	62.9cm³/U	3.8 [in³/rev]
80	79.8cm³/U	4.9 [in³/rev]
100	99.6cm³/U	6.1 [in³/rev]
125	124.5cm³/U	7.6 [in³/rev]
160	159.6cm³/U	9.8 [in³/rev]
200	199.4cm³/U	12.2 [in³/rev]
250	249.2cm³/U	15.2 [in³/rev]
315	316cm³/U	19.4 [in³/rev]
400	399.7cm³/U	24.4 [in³/rev]

Pos. 2 Versiuni /Versions

- 5 closed center - non reaction and load sensing outlet
centru inchis - fara reactie si sesizarea sarcinii la refulare

Order Information

Pos.4 Setarile supapei de presiune LS / LS - Valve Pressure Settings, bar [psi]

80	80 [1160]
100	100 [1450]
120	120 [1740]
140	140 [2030]
160	160 [2320]

Pos. 5 Filete/ Threads

- Gol/Empty BSPP G1/2"
U 3/4" - 16 UNF O-Ring
M Metric/ *metrical* M20x1,5

Pos. 6 Tip / Type

- D Tip D / *Type D*
E Tip E / *Type E*

Pos. 7 Design / Design Series

- Gol/Empty Specificat de producator / *Factory specified*

Pos. 3 Conexiunile principale ale supapelor / Priority Valves Connections

- Gol/Empty Montare modulara / *Modulary Mounting.*
T Montare cu tevi / *Pipe Mounting*

Pos. 4 Cuplaje /Threads

- Gol/Empty BSPP G1/2"
U 3/4" - 16 UNF O-Ring
M Metrisch/ *metrical* M20x1,5

Pos. 5 Tip / Type

- D Typ D / *Type D*
E Typ E / *Type E*

Pos. 6 Design /Design Series

- Gol/Empty Specificat de producator / *Factory specified*

CSU 3/4/7

Unitati de directie hidrostatice

CSUS 4/3/7 este utilizat la vehicule cu viteza mica, ca de exemplu, stivuitoare, tractoare, utilaje de constructii, carme de nave, moto-cositoare si cerinte de pozitionare industrială.



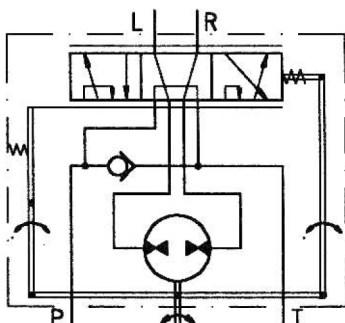
CSU 3/4/7

hydrostatic steering unit

For use on steering of low speed vehicles, extensively used on such as forklifts, tractors, construction equipment, rudder of ships, mowers and industrial positioning requirement.

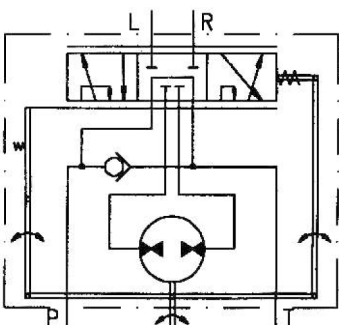
Date tehnice Specifications	CSU	CSU	CSU	CSU	CSU	CSU	CSU	CSU	CSU	CSU	CSU	CSU	CSU
	50	63	80	100	125	160	200	250	315	400	500	630	800
Versiunea Version	4/3/7	4/3/7	4/3/7	4/3/7	4/3/7	4/3/7	4/3/7	4/3/7	4/3/7	4/3/7	4/7	4/7	4/7
Volum [cm³/U] Displacement [cu.in]	50.8 (3.1)	62.9 (3.8)	79.8 (4.9)	99.6 (6.1)	124.5 (7.6)	159.6 (9.8)	199.4 (12.2)	249.2 (15.2)	316.5 (19.4)	399.7 (24.4)	499.0 (30.0)	629.5 (38.5)	799,2 (48.9)
Debitul nominal [l/min] Rated Flow [gpm]	5 (1.3)	6 (1.6)	8 (2.1)	9 (2.4)	11 (2.9)	12 (4)	17 (4.5)	24 (6.3)	30 (7.9)	40 (10.6)	50 (13.3)	63 (16.8)	80 (21.3)
Presiunea nominala [bar] Rated Pressure [PSI]	160(2320)											140(2030)	
Presiunea maxima in linia T [bar] Max. Cont. Pressure in Line T [PSI]	20 (290)												
Cuplul maxim [Nm] Max. Torque-Powered [lb.-in.]	5(44)										8(70)		
Dimensiunile Tipului E [mm] E Type Dimension L [in.]	140 (5.51)	142 (5.59)	144 (5.67)	146 (5.75)	149 (5.87)	154 (6.06)	159 (6.26)	165 (6.5)	175 (6.89)	185 (7.28)	198 (7.80)	217 (8.54)	237 (9.33)
Dimensiunile Tipului D [mm] D Type Dimension L [in.]	130 (5.12)	132 (5.2)	134 (5.28)	137 (5.39)	140 (5.51)	145 (5.71)	150 (5.91)	156 (6.41)	166 (6.54)	176 (6.93)	189 (7.44)	208 (8.19)	228 (8.98)
Masa Tipului E [kg] E Type Weight [lb]	5.94 (13.31)	6.00 (13.47)	6.08 (13.62)	6.14 (13.82)	6.3 (14.11)	6.5 (14.55)	6.7 (14.97)	6.9 (15.48)	7.29 (16.29)	7.79 (17.17)	8.67 (19.11)	9.72 (21.43)	11.18 (24.65)
Masa Tipului D [kg] D Type Weight [lb]	5.75 (12.68)	5.82 (12.83)	5.89 (12.99)	5.96 (13.14)	6.1 (13.45)	6.3 (13.89)	6.5 (14.33)	6.73 (14.98)	7.1 (15.65)	7.5 (16.53)	8.38 (18.47)	9.43 (20.79)	10.89 (24.01)

SIMBOL GRAFIC / GRAPHIC SYMBOL



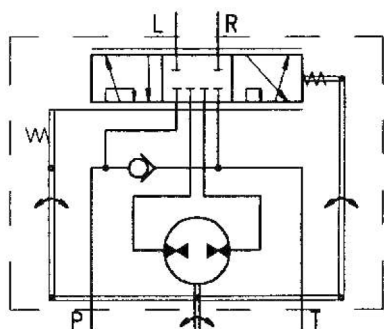
*CSU.../3 Load Reaction
„Open Center“*

CSU.../3 sesizarea sarcinii
„Centru deschis“



*CSU.../4 Non-Load-Reaction
„Open Center“*

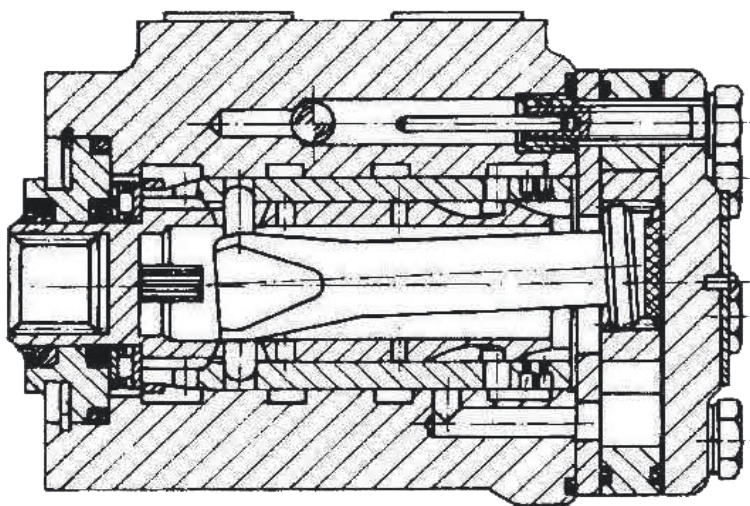
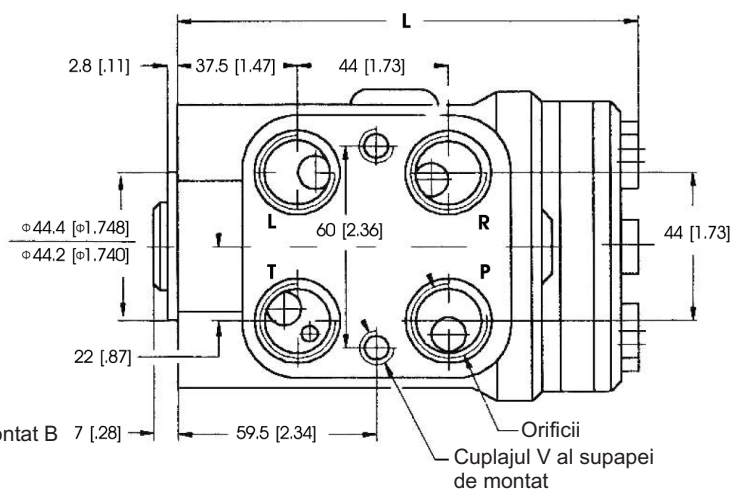
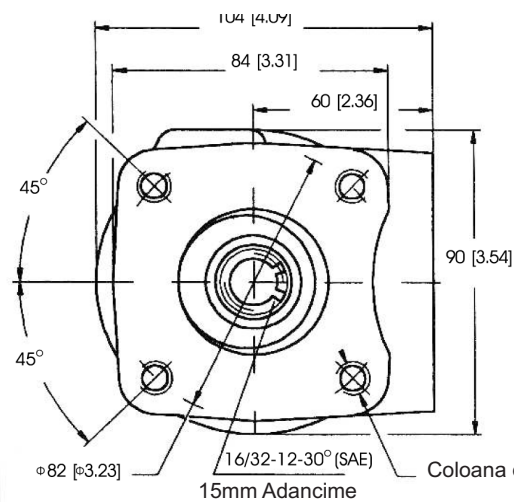
CSU.../4 Fara sesizarea sarcinii
„Centru deschis“



*CSU.../7 Non-Load Reaction
„Closed Center“*

CSU.../7 Fara sesizarea sarcinii
„Centru inchis“

Tip E /Type E



Informatii pentru comanda
Order Information

	1	2	3	4	5
CSU		/			

Pos. 1 Volum/Displacement

50	50.8 cm³/U	3.1 [in³/rev]
63	62.9cm³/U	3.8 [in³/rev]
80	79.8cm³/U	4.9 [in³/rev]
100	99.6cm³/U	6.1 [in³/rev]
125	124.5cm³/U	7.6 [in³/rev]
160	159.6cm³/U	9.8 [in³/rev]
200	199.4cm³/U	12.2 [in³/rev]
250	249.2cm³/U	15.2 [in³/rev]
315	316cm³/U	19.4 [in³/rev]
400	399.7cm³/U	24.4 [in³/rev]
500	499.0cm³/U/	30.6 [in³/rev]
630	629.5cm³/U/	38.5 [in³/rev]
800	799.2cm³/U/	48.9 [in³/rev]

Pos. 2 Versiuni / Versions

- 3 Centrul deschis - Reactie la sarcina
- 4 Centru deschis - Fara reactie la sarcina
- 7 Centrul inchis - Fara reactie la sarcina

Pos. 3 Versiuni / Versions

Gol/Empty	G1/2"
GA	G3/8"
U	3/4 - UNF „O-Ring“
UA	9/16" - 16 UNF „O-Ring“
M	Metric / <i>Metrical</i>

Pos. 4 Tip / Type

D	Tip D / <i>Type D</i>
E	Tip E / <i>Type E</i>

Pos. 5 Design / Design Series

Gol/Empty Specificat de producator / *Factory specified*

CSUS 3/4/8

Unitati de directie hidrostatice

Unitatea CSUS 4/3/8 are urmatoarele functii incorporate intruna singura: supapa de refulare, supapa de suprapresiune, supapa de aspirare si supapa de control pentru diferite cerinte ale seriei CSUS. Acest tip de structura este mai compacta si mai convenabila in operatie.



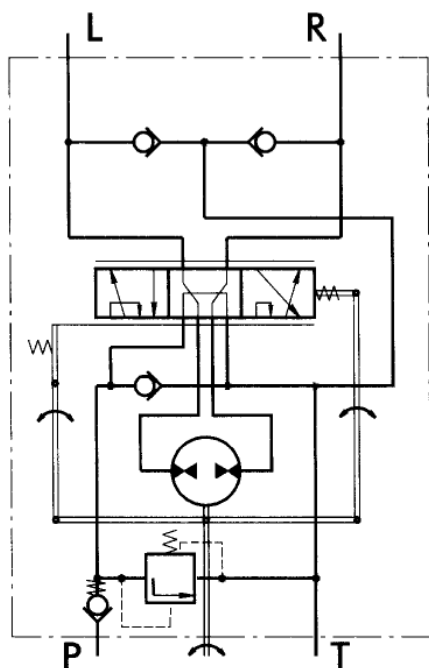
CSUS 3/4/8

Hydrostatic steering units

The hydrostatic steering unit series CSUS.../3/4/8 has the following valves functions incorporated inside one housing as follows: the pressure relief valve, the shock valve, the suction valve and the check valve according to the different requirements upon the base of the series CSUS. This kind of structure is more compact, and it's more convenient in operation.

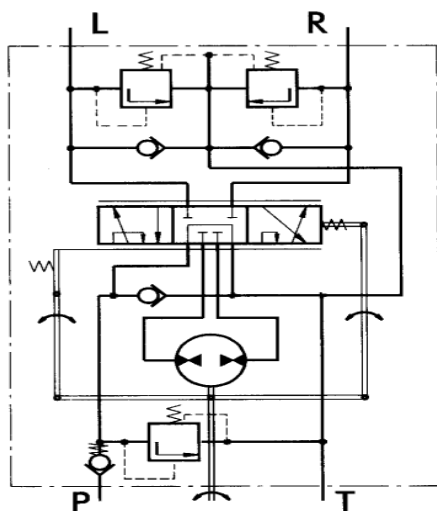
Filete / Threads			
CODE	Orificiul P,T,R,L / Thread	Adaptor montaj / Column Mounting Thread	Montarea supapei / Mounting valve Thread
-	G1/2 14mm adanc/deep	4xM10x1.5 16mm adanc/deep	2xM10x1 16mm adanc/deep
GA*	G3/8 14mm adanc/deep	4xM10x15 16mm adanc/deep	2xM10x1 16mm adanc/deep
U	3/4 - 16UNF O-ring 14mm adanc/deep	4x 3/8 - 16UNC 0.63 [16] adanc/deep	2x 3/8 - 24UNF 0.63 [16] adanc/deep
UA*	9/16 - 18UNF O-ring 14mm adanc/deep	4x 3/8 - 16UNC 0.63 [16] adanc/deep	2x 3/8 - 24UNF 0.63 [16] adanc/deep
M	M22x1.5 14mm adanc/depth	4xM10x1.5 16mm adanc/depth	2xM10x1 16mm adanc/depth

SIMBOLURI GRAFICE / GRAPHIC SYMBOL



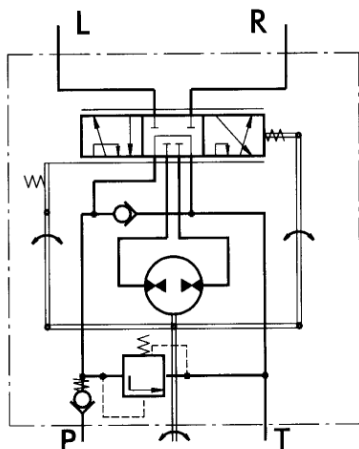
CSUS.../3 - Version 3
„Open Center - Load Reaction“ with
Built-in valves

CSUS.../3 Versiunea 3
 „Centru deschis- sesizarea sarcinii” cu
 Supape incorporate



CSUS.../4 - Version 4
„Open Center - Non Load Reaction“
with Built-in valves

CSUS.../4 Versiunea 4
 „Centru deschis-Fara sesizarea sarcinii” cu
 Supape incorporate

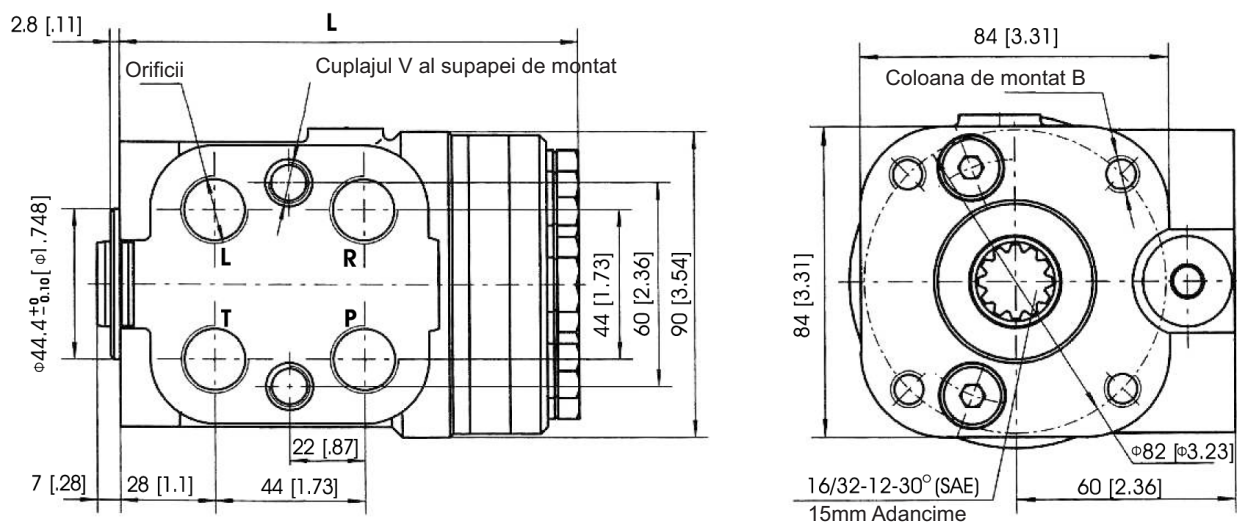


CSUS.../8 - Version 8
„Open Center - Non Load Reaction“
with Built-in valves

CSUS.../8 Versiunea 8
 „Centru deschis-Fara sesizarea sarcinii” cu
 Supape incorporate

Cuplaje si orificii CSU. 3/4/8 / Ports and Threads CSU. 3/4/8

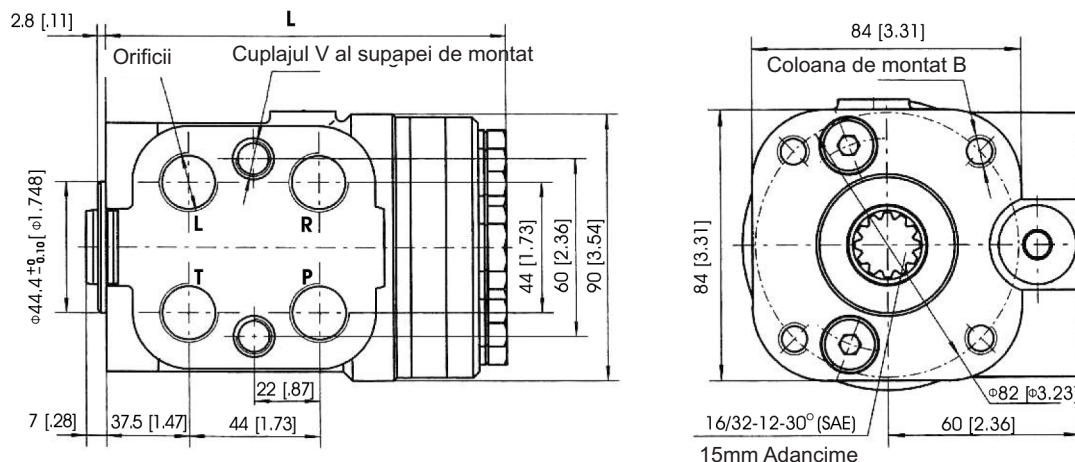
Tip D / Type D



Filet suruburi / Threads

CODE	Orificiul P,T,R,L / Thread	Adaptor montaj/ Column Mounting Thread B	Montarea supapei/ Mounting valve Thread -V
-	G1/2 14mm adanc/depth	4xM10x1.5 16mm adanc/depth	2xM10x1 16mm adanc/depth
GA*	G3/8 14mm adanc/depth	4xM10x15 16mm adanc/depth	2xM10x1 16mm adanc/depth
U	3/4 - 16UNF O-ring 14mm adanc/deep	4x 3/8 - 16UNC 0.63 [16] adanc/depth	2x 3/8 - 24UNF 0.63 [16] adanc/depth
UA*	9/16 - 18UNF O-ring 14mm adanc/deep	4x 3/8 - 16UNC 0.63 [16] adanc/depth	2x 3/8 - 24UNF 0.63 [16] adanc/depth
M	M22x1.5 14mm adanc/depth	4xM10x1.5 16mm adanc/depth	2xM10x1 16mm adanc/depth

Tip D / Type D



Informatii pentru comanda

	1	2	3	4	5	6
CSUS		/				

Pos. 1 Volum / Displacement

50	50.8 cm³/U	3.1 [in³/rev]
63	62.9cm³/U	3.8 [in³/rev]
80	79.8cm³/U	4.9 [in³/rev]
100	99.6cm³/U	6.1 [in³/rev]
125	124.5cm³/U	7.6 [in³/rev]
160	159.6cm³/U	9.8 [in³/rev]
200	199.4cm³/U	12.2 [in³/rev]
250	249.2cm³/U	15.2 [in³/rev]
315	316cm³/U	19.4 [in³/rev]
400	399.7cm³/U	24.4 [in³/rev]

Pos. 2 Versiuni / Versions

3	Centrul deschis - Reactie la sarcina
4	Centru deschis - Fara reactie la sarcina
7	Centrul inchis - Fara reactie la sarcina

Order Information
Pos. 3 Setarea supapei de presiune (bar) / Relief Valve Pressure Settings (PSI)

80	80 (1160)
100	100 (1450)
120	120 (1740)
140	140 (2030)
160	160 (2320)

Pos. 4 Versionen / Versions

Fara/Empty	G1/2"
GA	G3/8"
U	3/4 - UNF „O-Ring“
UA	9/16" - 16 UNF „O-Ring“
M	Metrisch/ Metrical

Pos. 5 Tip / Type

D	Tip D / Type D
E	Tip E / Type E

Pos. 6 Design / Design Series

Specificat de producator / Factory specified