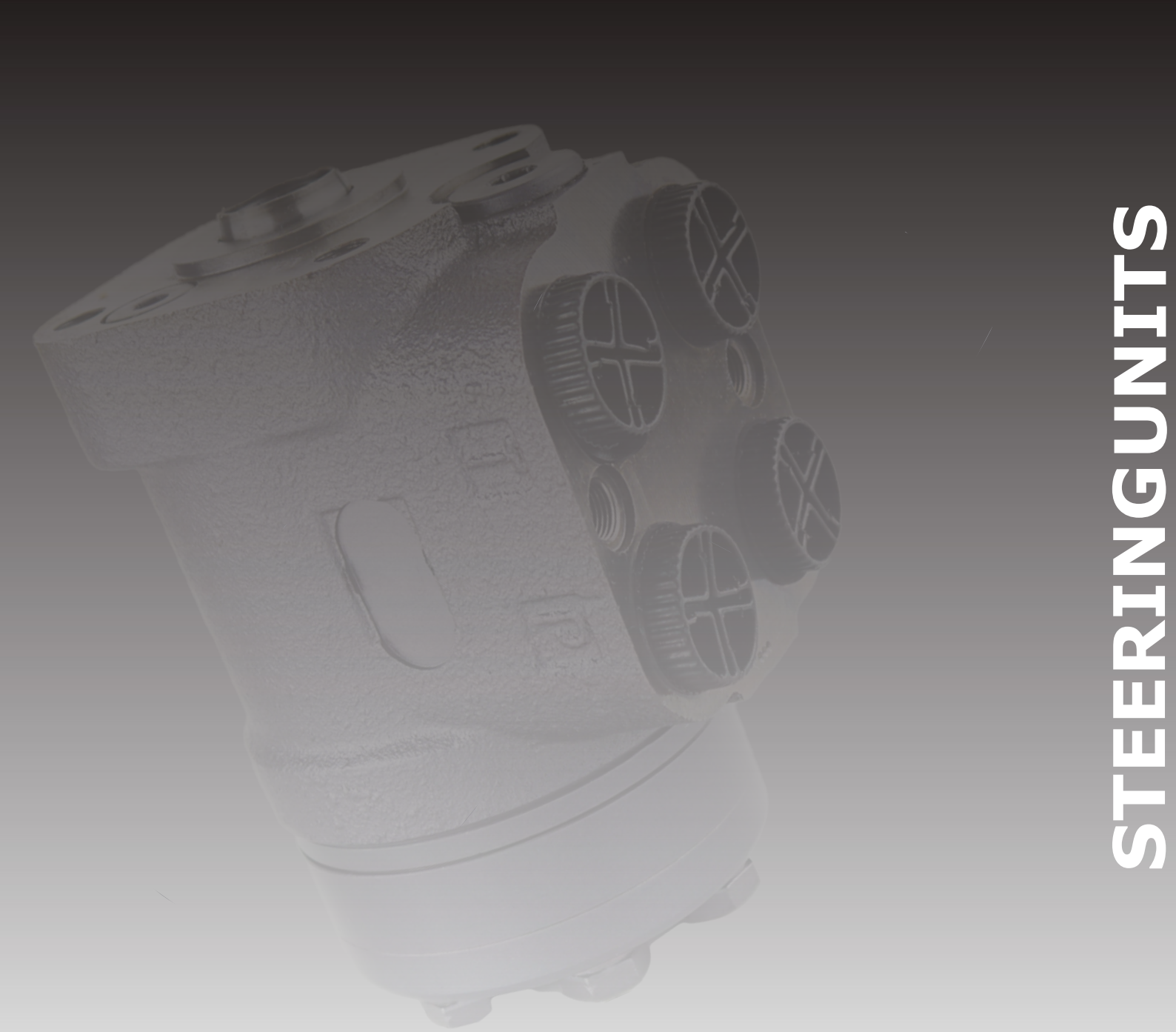

STEERINGUNITS

LENKUNGEN

HYDROMOT®
Hydraulic solutions.

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HMPV

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Lenkung CSU / CSUS 5(T)

Diese Lenkeinheit erweitert die Reihe der hydrostatischen Servolenkungen in die Ausführungen:
„Closed Center-Non Reaction and Load Sensing Outlet" mit Steueranschluss. Die Lenkungen sind für Modul- oder Rohreinbau lieferbar und für den Einsatz in Verbindung mit einem Prioritätsventil vorgesehen. Da die Lenkeinheiten CSUS für die gemeinsame Verwendung von Prioritätsventilen mit eingebautem Druckbegrenzungsventil vorgesehen sind, wurde die Baureihe nur für große Schluckvolumina entwickelt. Am Anschluss „EL" wird ein elektrohydraulisches Relais eingebaut, das dem elektrischen Steuersystem ein Signal sendet. Das Relais wird mit Öffnungs- und Schließkontakten ausgeführt (0,1 bis 50bar).
Das Anschlussmaß des Gewindes kann nach Kundenwunsch angefertigt werden!

Steering Unit CSU / CSUS 5(T)

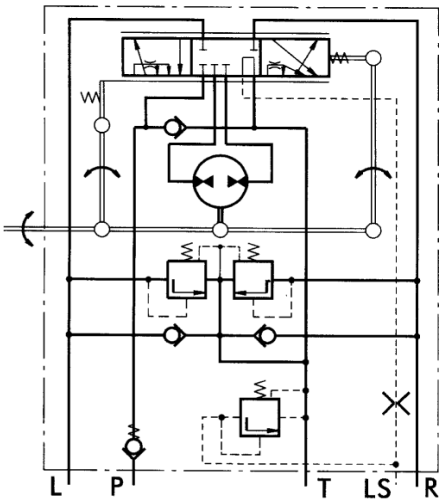
In load sensing sensing steering systems, the oil for steering system and working circuit may be supplied by pump via a priority valve of which can support extra amount of steering system oil into operating system. In addition, when a pump with load reaction is connected, energy of the system will be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

Technische Daten | Technical Data

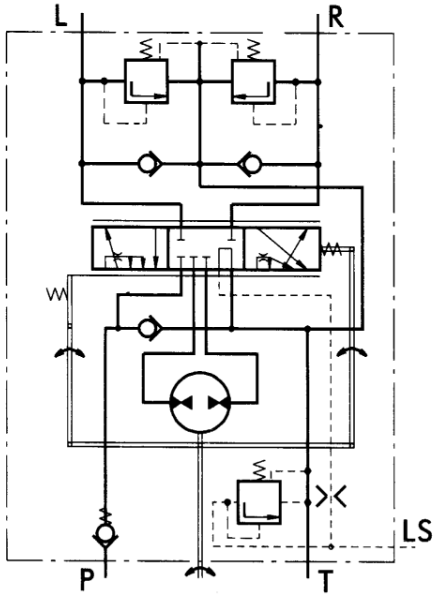
Technische Daten Specifications	CSU/CSUS 50/5(T)	CSU/CSUS 63/5(T)	CSU/CSUS 80/5(T)	CSU/CSUS 100/5(T)	CSU/CSUS 125/5(T)	CSU/CSUS 160/5(T)	CSU/CSUS 200/5(T)	CSU/CSUS 250/5(T)	CSU/CSUS 315/5(T)	CSU/CSUS 400/5(T)
Schluckvolumen [cm³/U] Displacement	50.8	62.9	79.8	99.6	124.5	159.6	199.4	249.2	316.5	399.7
Förderstrom [l/min] Rated Flow	5	6	8	9	11	15	17	24	30	40
Längenmaß Typ E [mm] E Type Dimension L	140	142	144	146	149	154	159	165	175	185
Maß Typ D [mm] D Type Dimension L	130	132	134	137	140	145	150	156	166	176
Gewicht Typ E [kg] E Type Weight	5.94	6.00	6.08	6.14	6.3	6.5	6.7	6.9	7.29	7.79
Gewicht Typ D [kg] D Type Weight	5.75	5.82	5.89	5.96	6.1	6.3	6.5	6.73	7.1	7.5

Nenndruck [bar] Rated Pressure	175
Einstelldruck DBV [bar] Relief Valve Pressure Setting	60 | 70 | 80 | 100 | 120 | 140 | 150 | 160 | 175
Einstelldruck Doppelschockventil [bar] Shock Valve Pressure Setting	120 | 130 | 140 | 160 | 180 | 200 | 210 | 220 | 235
Max. Ausgangsdruck in T [bar] Max. Cont. Pressure in Line T	25
Max. Moment bei Servoverstärkung [Nm] Max. Torque-Powered	5

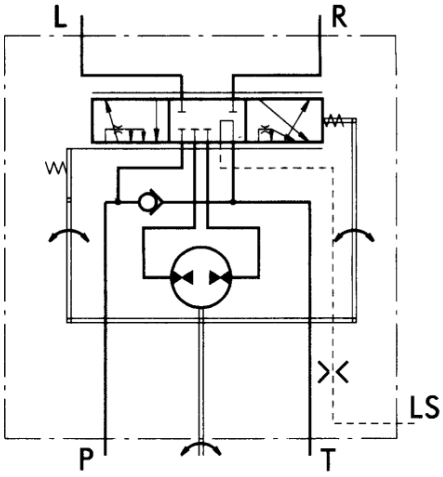
Schaltzeichen I Graphic Symbol



CSUS.../5. „Closed Center"
Non-Load Reaction - Load Sensing
Manifold Mount



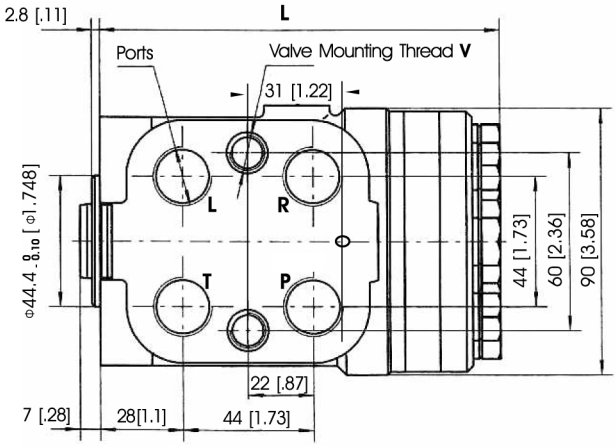
CSUS.../5T. „Closed Center"
Non-Load Reaction - Load Sensing
Threaded Ports

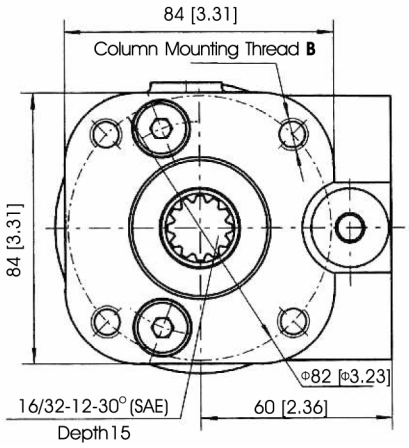


CSU.../5T. „Closed Center"
Non-Load Reaction - Load Sensing
Threaded Ports

Einbaumaße CSUS.../5 TYP D I Dimensions CSUS.../5 TYPE D

Anschlüsse und Verschraubungen CSUS.../5 I Ports and Threads CSUS.../5

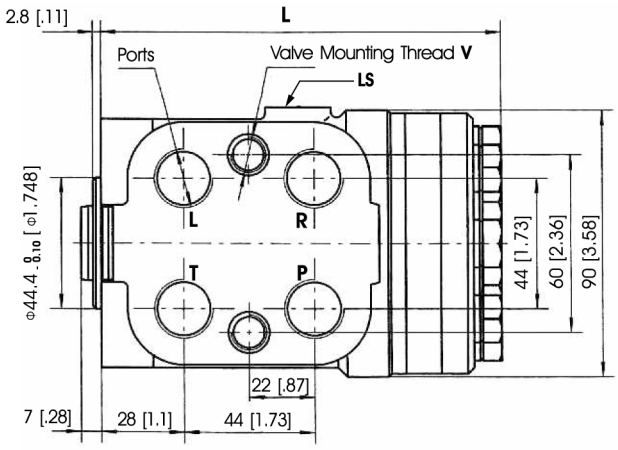


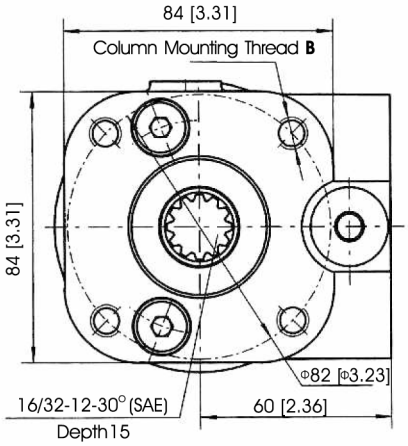


Anschluss Port	P, T, R, L Gewindebohrungen P, T, R, L Threads	Lenksäulenmontage Gewindebohrung B Column Mounting Thread B	Montage Gewindebohrung V Valve Mounting Thread V	LS-Anschluss LS-Port
Leer **Omit**	**G 1/2** 17mm tief 17mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M12x1.75** 16mm tief 16mm deep	**G1/4** 14mm tief 14mm deep
U	**3/4-16UNF** O-Ring 14mm tief O-Ring 14mm deep	**4x 3/8-16UNC** 0.63[16] tief 0.63[16] deep	**2x 3/8-24UNF** 0.63[16] tief 0.63[16] deep	**7/16-20UNF** 12[0.55] tief 12[0.55] deep
M	**M20 x1.5** 14mm tief 14mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M10x1** 16mm tief 16mm deep	**G1/4** 12mm tief 12mm deep

Einbaumaße CSUS.../5(T) TYP D I Dimension CSUS.../5(T) TYPE D

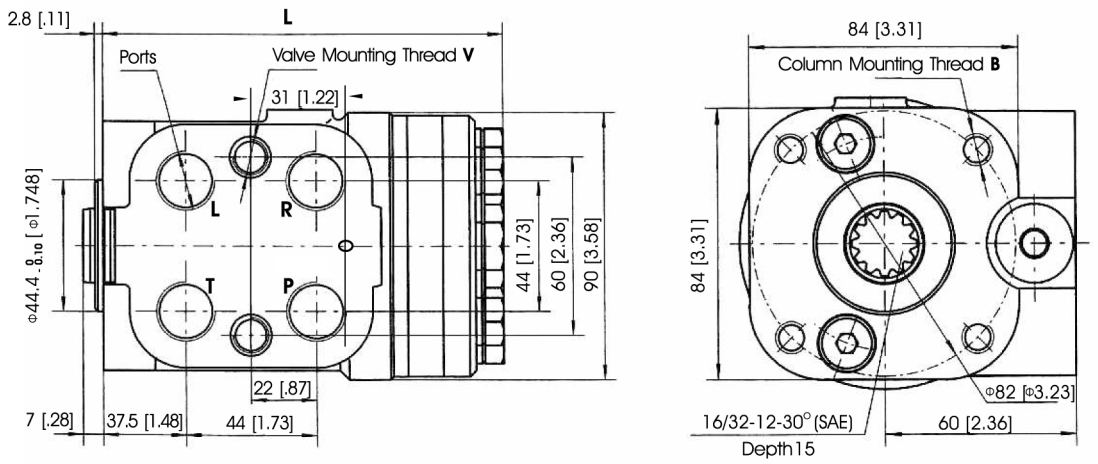
Anschlüsse und Verschraubungen CSUS.../5(T) I Ports and Threads CSUS.../5(T)





Einbaumaße CSUS.../5 TYP E I Dimensions CSUS.../5 TYPE E

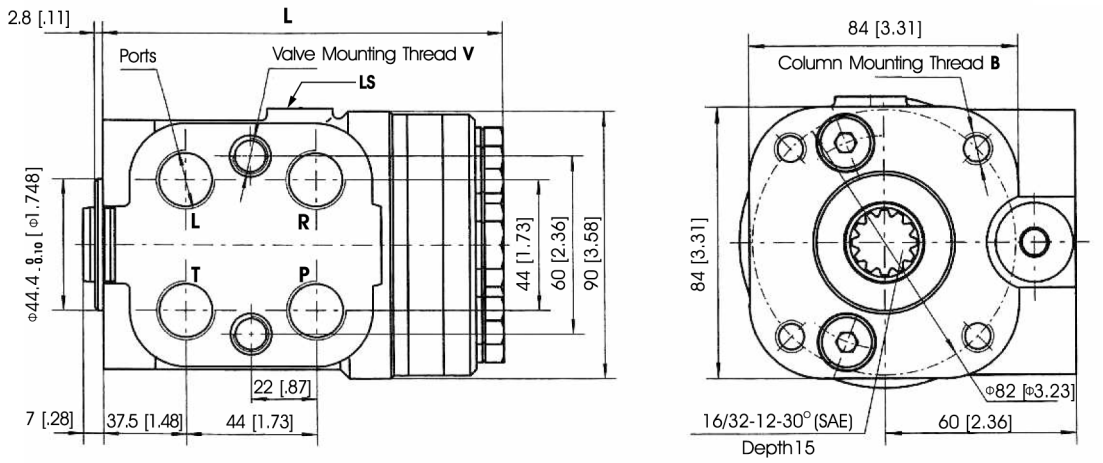
Anschlüsse und Verschraubungen CSUS.../5 I Ports and Threads CSUS.../5



Anschluss **Port**	P, T, R, L Gewindebohrungen P, T, R, L Threads	Lenksäulenmontage Gewindebohrung B Column Mounting Thread B	Montage Gewindebohrung V Valve Mounting Thread V	LS-Anschluss LS-Port
Leer **Omit**	**G 1/2** 17mm tief 17mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M12x1.75** 16mm tief 16mm deep	**G1/4** 14mm tief 14mm deep
U	**3/4-16UNF** O-Ring 14mm tief O-Ring 14mm deep	**4x 3/8-16UNC** 0.63[16] tief 0.63[16] deep	**2x 3/8-24UNF** 0.63[16] tief 0.63[16] deep	**7/16-20UNF** 12[0.55] tief 12[0.55] deep
M	**M20 x1.5** 14mm tief 14mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M10x1** 16mm tief 16mm deep	**G1/4** 12mm tief 12mm deep

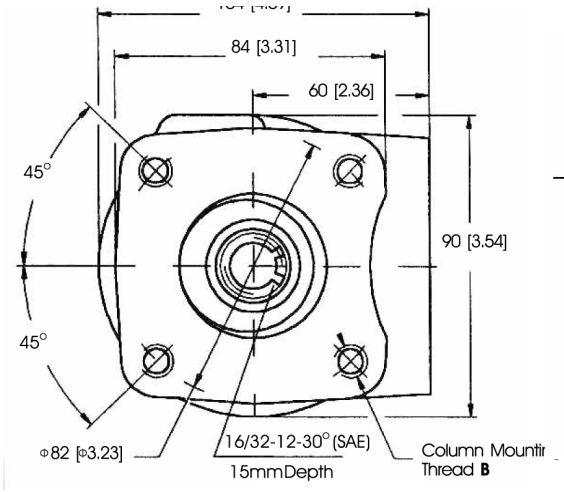
Einbaumaße CSUS.../5(T) TYP E I Dimension CSUS.../5(T) TYPE E

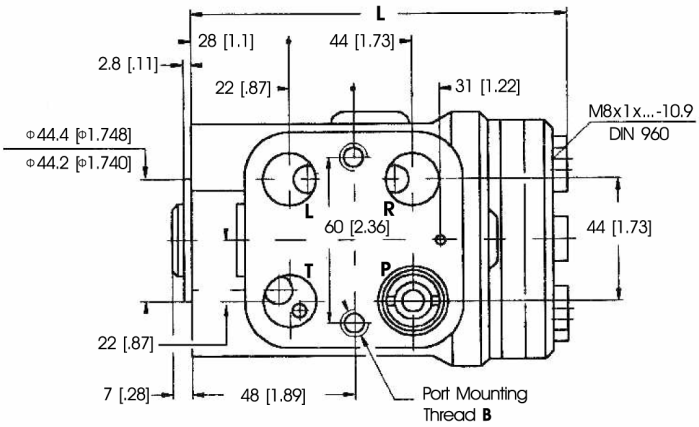
Anschlüsse und Verschraubungen CSUS.../5(T) I Ports and Threads CSUS.../5(T)



Einbaumaße CSU.../5 TYP D I Dimensions CSU.../5 TYPE D

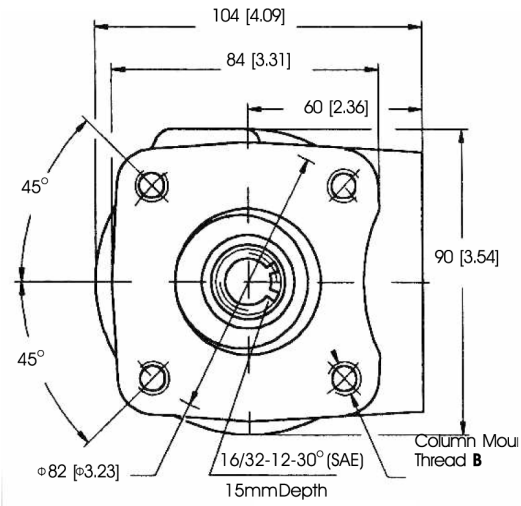
Anschlüsse und Verschraubungen CSU.../5 I Ports and Threads CSU.../5

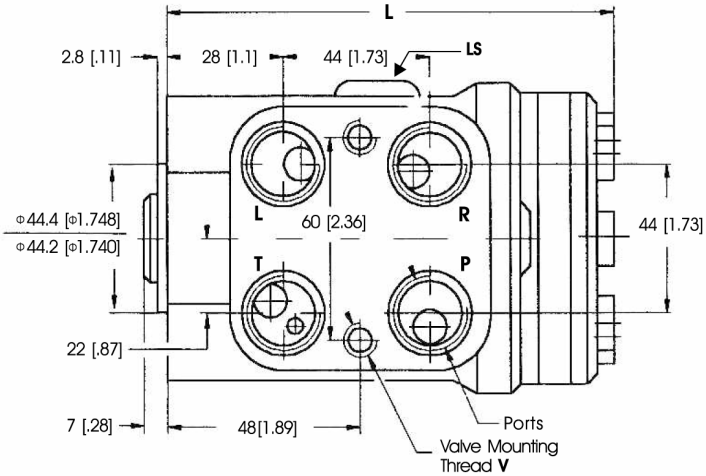




Anschluss **Port**	P, T, R, L Gewindebohrungen P, T, R, L Threads	Lenksäulenmontage Gewindebohrung B Column Mounting Thread B	Montage Gewindebohrung V Valve Mounting Thread V	LS-Anschluss LS-Port
Leer **Omit**	**G 1/2** 17mm tief 17mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M12x1.75** 16mm tief 16mm deep	**G1/4** 14mm tief 14mm deep
U	**3/4-16UNF** O-Ring 14mm tief O-Ring 14mm deep	**4x 3/8-16UNC** 0.63[16] tief 0.63[16] deep	**2x 3/8-24UNF** 0.63[16] tief 0.63[16] deep	**7/16-20UNF** 12[0.55] tief 12[0.55] deep
M	**M20 x1.5** 14mm tief 14mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M10x1** 16mm tief 16mm deep	**G1/4** 12mm tief 12mm deep

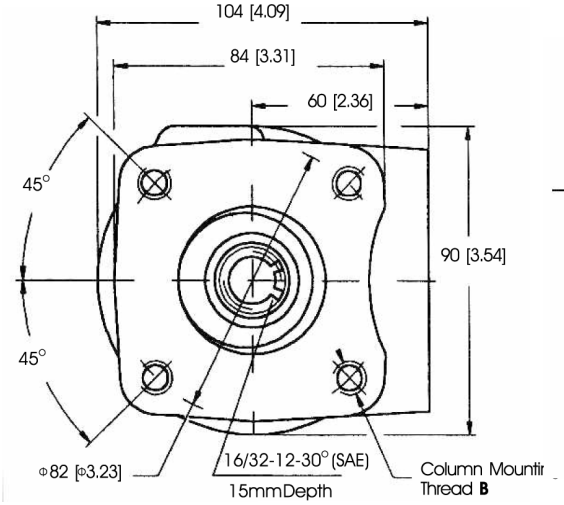
Anschlüsse und Verschraubungen CSU.../5(T) I Ports and Threads CSU.../5(T)

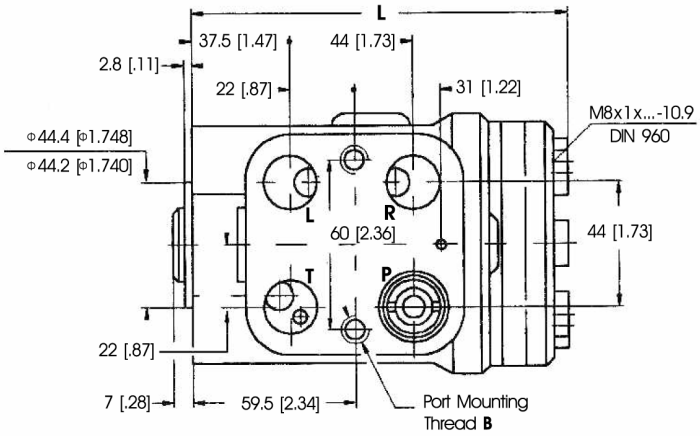




Einbaumaße CSU.../5 TYP E I Dimensions CSU.../5 TYPE E

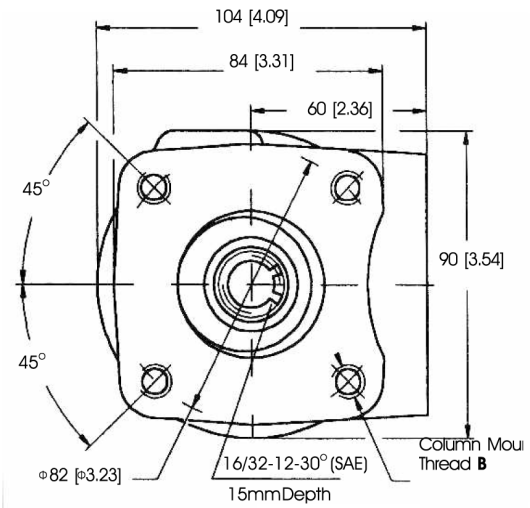
Anschlüsse und Verschraubungen CSU.../5 I Ports and Threads CSU.../5

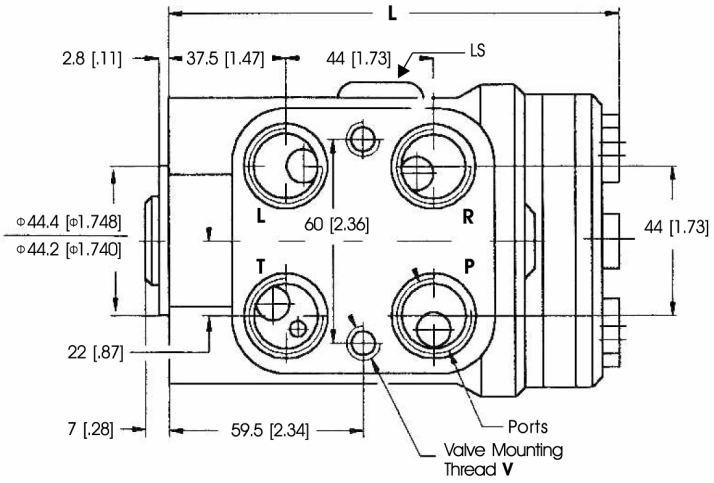




Anschluss **Port**	P, T, R, L Gewindebohrungen P, T, R, L Threads	Lenksäulenmontage Gewindebohrung B Column Mounting Thread B	Montage Gewindebohrung V Valve Mounting Thread V	LS-Anschluss LS-Port
Leer **Omit**	**G 1/2** 17mm tief 17mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M12x1.75** 16mm tief 16mm deep	**G1/4** 14mm tief 14mm deep
U	**3/4-16UNF** O-Ring 14mm tief O-Ring 14mm deep	**4x 3/8-16UNC** 0.63[16] tief 0.63[16] deep	**2x 3/8-24UNF** 0.63[16] tief 0.63[16] deep	**7/16-20UNF** 12[0.55] tief 12[0.55] deep
M	**M20 x1.5** 14mm tief 14mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M10x1** 16mm tief 16mm deep	**G1/4** 12mm tief 12mm deep

Anschlüsse und Verschraubungen CSU.../5(T) I Ports and Threads CSU.../5(T)





Bestellinformation I Order Information

CSUS	1	/	2	3	4	5	6	7	8

Pos. 1	Schluckvolumen I Displacement
50	50.8 cm³/U 50.8 ccm/REV
63	62.9 cm³/U 62.9 ccm/REV
80	79.8 cm³/U 79.8 ccm/REV
100	99.6 cm³/U 99.6 ccm/REV
125	124.5 cm³/U 124.5 ccm/REV
160	159.6 cm³/U 159.6 ccm/REV
200	199.4 cm³/U 199.4 ccm/REV
250	249.2 cm³/U 249.2 ccm/REV
315	316 cm³/U 316 ccm/REV
400	399.7 cm³/U 399.7 ccm/REV
Pos. 2	Versionen I Versions
5	closed center - non reaction and load sensing outlet
Pos. 3	Prioritäsventil-Verbindungen I Priority Valves Connections
Leer Omit	Modulbauweise Modulary Mounting
T	Rohreinbau Pipe Mounting
Pos. 4	Einstelldruck des LS-Ventils I LS - Valve Pressure Settings
80	80 bar
100	100 bar
120	120 bar
140	140 bar
160	160 bar
Pos. 5	Anschlüsse I Ports
Leer Omit	BSP G ½" BSP G ½"
U	¾-16 UNF. O-Ring ¾-16 UNF. O-Ring
M	Metrisch M20x1.5 Metrical M20x1.5
Pos. 6	Typ I Type
D	Typ D Type D
E	Typ E Type E
Pos. 7	Design Serie I Design Series
Leer Omit	Betriebsspezifisch Factory specified
Pos. 8	Farbe I Painting
Leer Omit	Grau Grey
RAL...	+ Ralfarbe (z.B. 7021) + Ral colour (e.g. 7021)

Bestellinformation I Order Information

CSU	1	/	2	3	4	5	6	7

Pos. 1	Schluckvolumen I Displacement
50	50.8 cm³/U 50.8 ccm/REV
63	62.9 cm³/U 62.9 ccm/REV
80	79.8 cm³/U 79.8 ccm/REV
100	99.6 cm³/U 99.6 ccm/REV
125	124.5 cm³/U 124.5 ccm/REV
160	159.6 cm³/U 159.6 ccm/REV
200	199.4 cm³/U 199.4 ccm/REV
250	249.2 cm³/U 249.2 ccm/REV
315	316 cm³/U 316 ccm/REV
400	399.7 cm³/U 399.7 ccm/REV

Pos. 2	Versionen I Versions
5	closed center - non reaction and load sensing outlet

Pos. 3	Prioritäsventil-Verbindungen I Priority Valves Connections
Leer Omit	Modulbauweise Modulary Mounting
T	Rohreinbau Pipe Mounting

Pos. 4	Anschlüsse I Ports
Leer Omit	BSP G $^1/_2$" BSP G $^1/_2$"
U	$^3/_4$-16 UNF. O-Ring $^3/_4$-16 UNF. O-Ring
M	Metrisch M20x1.5 Metrical M20x1.5

Pos. 5	Typ I Type
D	Typ D Type D
E	Typ E Type E

Pos. 6	Design Serie I Design Series
Leer Omit	Betriebsspezifisch Factory specified

Pos. 7	Farbe I Painting
Leer Omit	Grau Grey
RAL...	+ Ralfarbe (z.B. 7021) + Ral colour (e.g. 7021)

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Lenkung CSU 3/4/7

Die hydrostatische Lenkung CSU 4 / 3 / 7 wird in langsam fahrenden Fahrzeugen, wie Gabelstaplern, Traktoren, Schiffsruderanlagen, Baumaschinen, Mähmaschinen usw. verwendet.

Steering Unit CSU 3/4/7

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.

Technische Daten | Technical Data

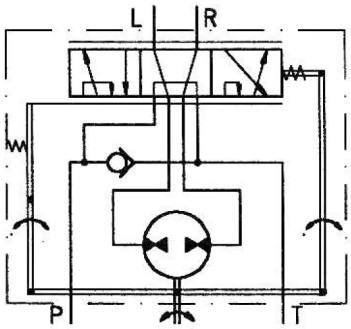
Technische Daten Specifications	CSU 50	CSU 63	CSU 80	CSU 100	CSU 125	CSU 160	CSU 200	CSU 250	CSU 315	CSU 400	CSU 500	CSU 630	CSU 800
Ausführung Version	3/4/7	3/4/7	3/4/7	3/4/7	3/4/7	3/4/7	3/4/7	3/4/7	3/4/7	3/4/7	4/7	4/7	4/7
Schluckvolumen [cm³/U] Displacement	50.8	62.9	79.8	99.6	124.5	159.6	199.4	249.2	316.5	399.7	499.0	629.5	799.2
Förderstrom [l/min] Rated Flow	5	6	8	9	11	12	17	24	30	40	50	63	80
Maß Typ E [mm] E Type Dimension L	140	142	144	146	149	154	159	165	175	185	198	217	237
Maß Typ D [mm] D Type Dimension L	130	132	134	137	140	145	150	156	166	176	189	208	228
Gewicht Typ E [kg] E Type Weight	5.94	6.00	6.08	6.14	6.3	6.5	6.7	6.9	7.29	7.79	8.67	9.72	11.18
Gewicht Typ D [kg] D Type Weight	5.75	5.82	5.89	5.96	6.1	6.3	6.5	6.73	7.1	7.5	8.38	9.43	10.89

Nenndruck [bar] Rated Pressure	175	140

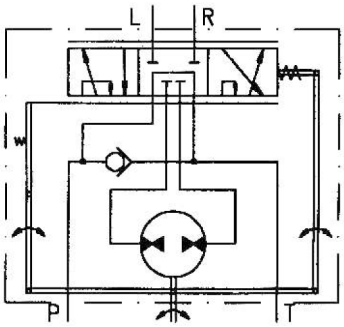
Max. Ausgangsdruck in T [bar] Max. Cont. Pressure in Line T	25

Max. Moment bei Servoverstärkung [Nm] Max. Torque-Powered	5	8

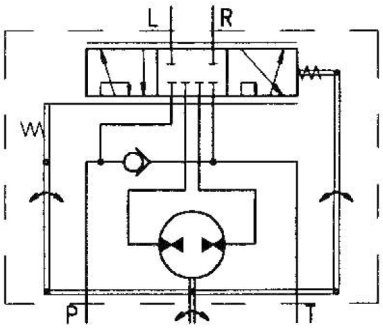
Schaltzeichen | Graphic Symbol



CSU.../3 Load Reaction
„Open Center"



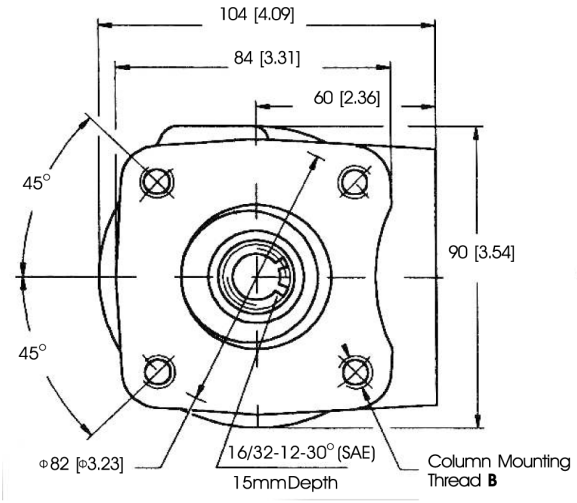
CSU.../4 Non-Load-Reaction
„Open Center"

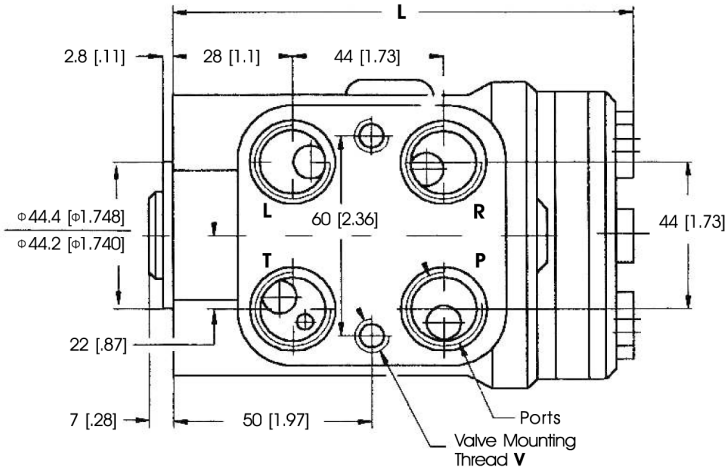


CSU.../7 Non-Load Reaction
„Closed Center"

Einbaumaße CSU TYP D | Dimensions CSU TYPE D

Anschlüsse und Verschraubungen CSU 3/4/7 | Ports and Threads CSU 3/4/7

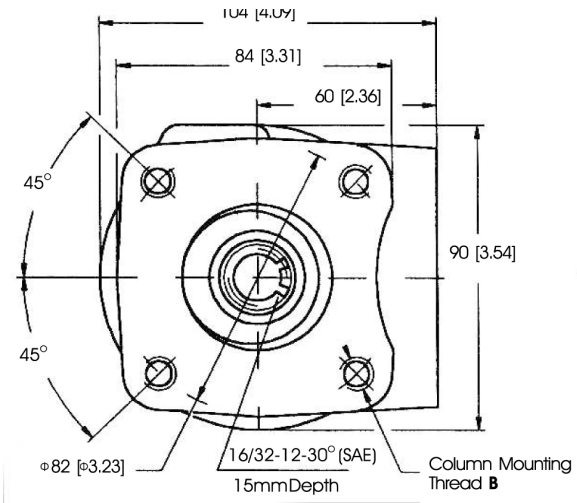


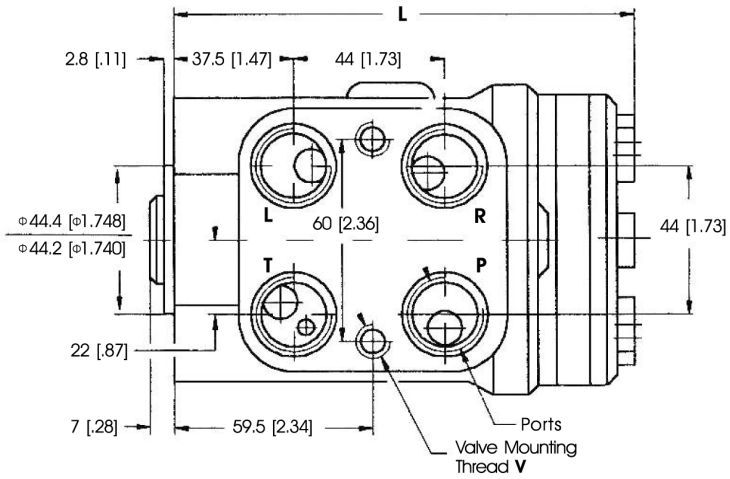


Anschluss **Port**	P, T, R, L Gewindebohrungen P, T, R, L Threads	Lenksäulenmontage Gewindebohrung B Column Mounting Thread B	Ventilmontage Gewindebohrung V Valve Mounting Thread V
Leer **Omit**	**G 1/2** 17mm tief 17mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M10x1** 16mm tief 16mm deep
U	**3/4-16UNF** O-Ring 14mm tief O-Ring 14mm deep	**4x 3/8-16UNC** 0.63[16] tief 0.63[16] deep	**2x 3/8-24UNF** 0.63[16] tief 0.63[16] deep
M	**M20 x1.5** 14mm tief 14mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M10x1** 16mm tief 16mm deep

Einbaumaße CSU TYP E | Dimensions CSU TYPE E

Anschlüsse und Verschraubungen CSU 3/4/7 | Ports and Threads CSU 3/4/7





Bestellinformation | Order Information

CSU3/4/7	1	/	2	3	4	5	6

Pos. 1	Schluckvolumen I Displacement
50	50.8 cm³/U 50.8 ccm/REV
63	62.9 cm³/U 62.9 ccm/REV
80	79.8 cm³/U 79.8 ccm/REV
100	99.6 cm³/U 99.6 ccm/REV
125	124.5 cm³/U 124.5 ccm/REV
160	159.6 cm³/U 159.6 ccm/REV
200	199.4 cm³/U 199.4 ccm/REV
250	249.2 cm³/U 249.2 ccm/REV
315	316 cm³/U 316 ccm/REV
400	399.7 cm³/U 399.7 ccm/REV
***500**	499 cm³/U 499 ccm/REV
***630**	629.5 cm³/U 629.5 ccm/REV
***800**	799.2 cm³/U 799.2 ccm/REV

Pos. 2	Versionen I Versions
3	Open Center - Load Reaction
4	Open Center - Non Load Reaction
7	Closed Center - Non Load Reaction

Pos. 3	Anschlüsse I Ports
Leer Omit	G 1/2" G 1/2"
U	3/4-16 UNF. O-Ring 3/4-16 UNF. O-Ring
M	Metrisch M20 x 1.5 Metrical M20 x 1.5

Pos. 4	Typ I Type
D	Typ D Type D
E	Typ E Type E

Pos. 5	Design Serie I Design Series
Leer Omit	Betriebsspezifisch Factory specified

Pos. 6	Design Serie I Design Series
Leer Omit	Grau Grey
RAL...	+ Ralfarbe (z.B. 7021) + Ral colour (e.g. 7021)

*** Pos. 1 _ 500 I 630 I 800 nur für Typ 4/7**
*** Pos. 1 _ 500 I 630 I 800 only for type 4/7**

Inhaltsverzeichnis CSUS 3/4/8 | Contents CSU 3/4/8

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Lenkung CSUS 3/4/8

Die Lenkeinheitsserie CSUS.../3/4/8 vereint die folgenden Ventilfunktionen in einem einzigen Gehäuse: Druckbegrenzungsventil, Schockventil, Rückschlagventil und Einlassventil, wobei die Einstellungen individuell nach den eigenen Anforderungen angepasst werden können. Durch die Vereinigung all dieser Funktionen in nur einem einzien Gehäuse, wird hiermit eine sehr platzsparende Lösung angeboten.

Steering Unit CSUS 3/4/8

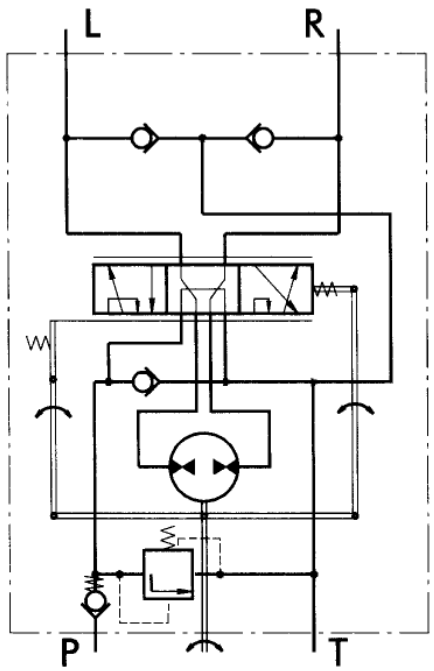
The hydrostatic steering unit series CSUS.../3/4/8 has the following valves functions incorporated inside one housing as follows: the relief valve, the shock valve, the suction valve and the check valve according to the different requirement upon the base of the series CSUS. This kind of structure is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

Technische Daten | Technical Data

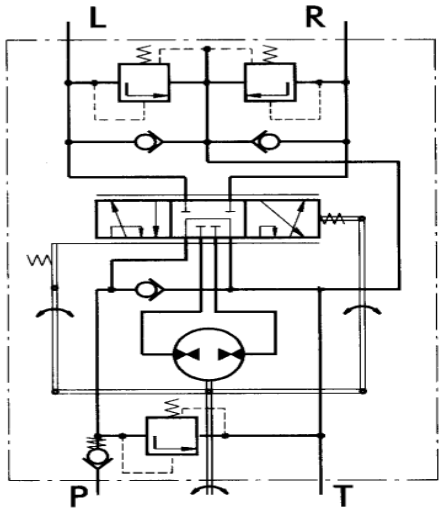
Technische Daten Specifications	CSUS 50	CSUS 63	CSUS 80	CSUS 100	CSUS 125	CSUS 160	CSUS 200	CSUS 250	CSUS 315	CSUS 400
Ausführung Version	3/4/8	3/4/8	3/4/8	3/4/8	3/4/8	3/4/8	3/4/8	3/4/8	3/4/8	3/4/8
Schluckvolumen [cm³/U] Displacement	50.8	62.9	79.8	99.6	124.5	159.6	199.4	249.2	316.5	399.7
Förderstrom [l/min] Rated Flow	5	6	8	10	12.5	16	20	25	32	40
Maß Typ E [mm] E Type Dimension L	140	142	144	146	149	154	159	165	175	185
Maß Typ D [mm] D Type Dimension L	130	132	134	137	140	145	150	156	166	176
Gewicht Typ E [kg] E Type Weight	5.94	6.00	6.08	6.14	6.3	6.5	6.7	6.9	7.29	7.79
Gewicht Typ D [kg] D Type Weight	5.75	5.82	5.89	5.96	6.1	6.3	6.5	6.73	7.1	7.5

Nenndruck [bar] Rated Pressure	175
Einstelldruck DBV [bar] Relief Valve Pressure Setting	60 | 70 | 80 | 100 | 120 | 140 | 150 | 160 | 175
Einstelldruck Doppelschockventil [bar] Shock Valve Pressure Setting	120 | 130 | 140 | 160 | 180 | 200 | 210 | 220 | 235
Max. Ausgangsdruck in T [bar] Max. Cont. Pressure in Line T	20
Max. Moment bei Servoverstärkung [Nm] Max. Torque-Powered	5

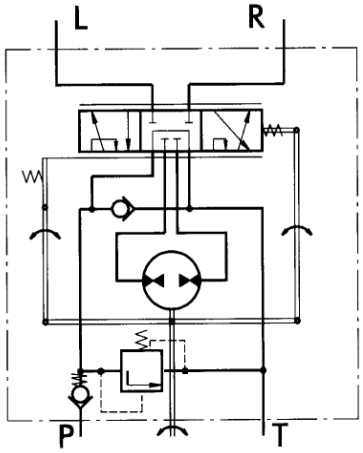
Schaltzeichen | Graphic Symbol



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



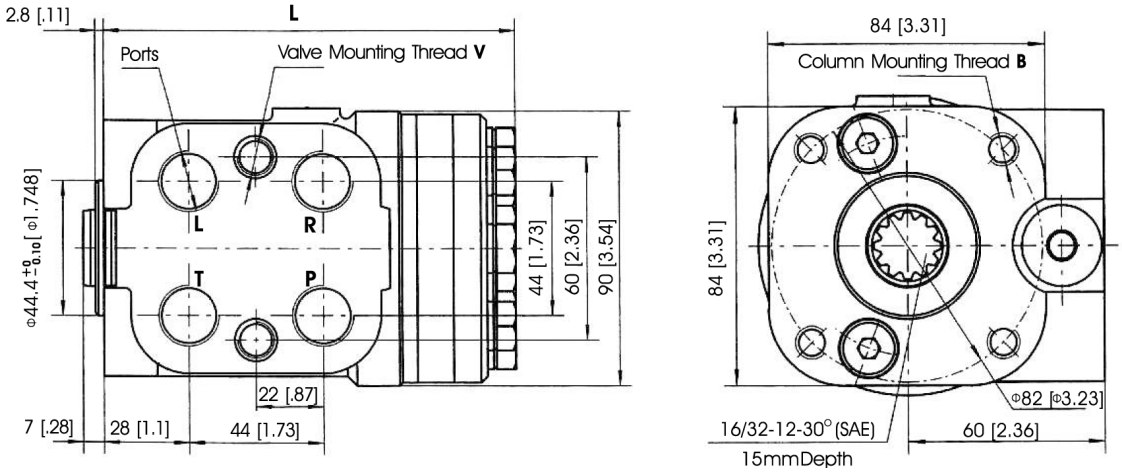
CSUS.../4 - Version 4
„Open Center - Non Load Reaction"
with Built-in valves



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

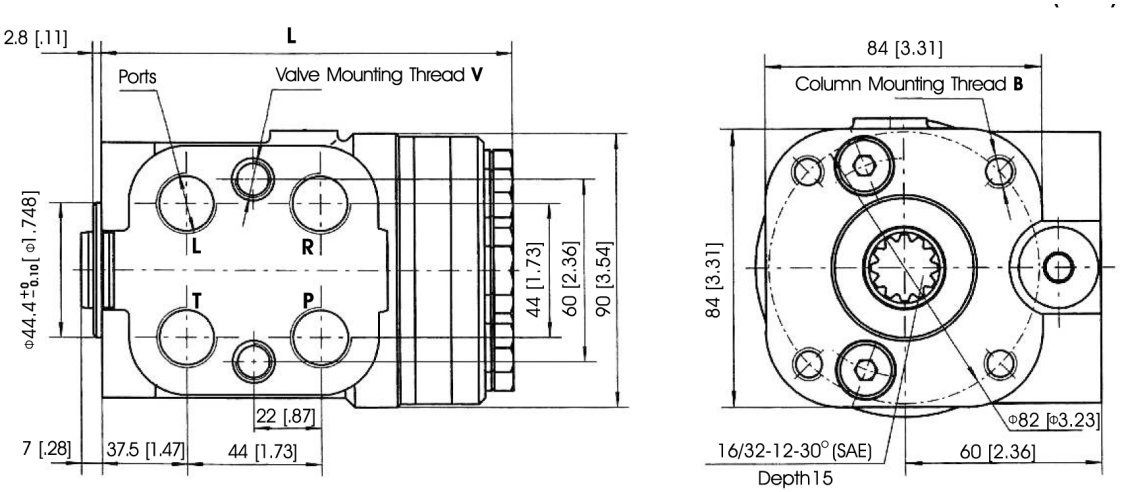
Einbaumaße CSUS TYP D | Dimensions CSUS TYPE D

Anschlüsse und Verschraubungen CSUS 3/4/8 | Ports and Threads CSUS 3/4/8



Anschluss **Port**	P, T, R, L Gewindebohrungen P, T, R, L Threads	Lenksäulenmontage Gewindebohrung B Column Mounting Thread B	Ventilmontage Gewindebohrung V Valve Mounting Thread V
Leer **Omit**	**G 1/2** 17mm tief 17mm deep	**4x M10x1,5** 16mm tief 16mm deep	**2x M10x1** 16mm tief 16mm deep
U	**3/4-16UNF** O-Ring 14mm tief O-Ring 14mm deep	**4x 3/8-16UNC** 0.63[16] tief 0.63[16] deep	**2x 3/8-24UNF** 0,63[16] tief 0,63[16] deep
M	**M20 x1.5** 14mm tief 14mm deep	**4x M10x1.5** 16mm tief 16mm deep	**2x M10x1** 16mm tief 16mm deep

Einbaumaße CSUS TYP E | Dimensions CSUS TYPE E



Bestellinformation I Order Information

CSUS3/4/8	1	/	2	3	4	5	6	7

Pos. 1	Schluckvolumen I Displacement
50	50.8 cm³/U 50.8 ccm/REV
63	62.9 cm³/U 62.9 ccm/REV
80	79.8 cm³/U 79.8 ccm/REV
100	99.6 cm³/U 99.6 ccm/REV
125	124.5 cm³/U 124.5 ccm/REV
160	159.6 cm³/U 159.6 ccm/REV
200	199.4 cm³/U 199.4 ccm/REV
250	249.2 cm³/U 249.2 ccm/REV
315	316 cm³/U 316 ccm/REV
400	399.7 cm³/U 399.7 ccm/REV

Pos. 2	Versionen I Versions
3	Open Center - Load Reaction
4	Open Center - Non Load Reaction
8	Closed Center - Non Load Reaction

Pos. 3	Einstelldruck des LS-Ventils I LS - Valve Pressure Settings
80	80 bar
100	100 bar
120	120 bar
140	140 bar
160	160 bar

Pos. 4	Anschlüsse I Ports
Leer Omit	G ½" G ½"
U	¾-16 UNF. O-Ring ¾-16 UNF. O-Ring
M	Metrisch M20x1.5 Metrical M20x1.5

Pos. 5	Typ I Type
D	Typ D Type D
E	Typ E Type E

Pos. 6	Design Serie I Design Series
Leer Omit	Betriebsspezifisch Factory specified

Pos. 7	Farbe I Painting
Leer Omit	Grau Grey
RAL...	+ Ralfarbe (z.B. 7021) + Ral colour (e.g. 7021)

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HMPV für CSUS.../5

Die Prioritätsventile HMPV verteilen den Ölstrom der Förderpumpe des Hydrauliksystemes zu den einzelnen Komponenten, die das Fahrzeug steuern und antreiben. Die Prioritätsventile kommen nur in Verbindung mit CSUS.../5 Lenkungseinheiten zum Einsatz. Das LS- Signal als statisches Signal kommt in Systemen mit stabilen (sehr gut entlüftet) Lenkkreisläufen zum Einsatz. Die Verbindung zwischen einem Prioritätsventil in Rohrleitung und einer Lenkungseinheit muss so kurz wie möglich sein und sollte 1.5 m (Innendurchmesser max. 4mm) nicht überschreiten. Schlauchleitungen sollten kürzer sein undd nicht dicker

HMPV for CSUS.../5

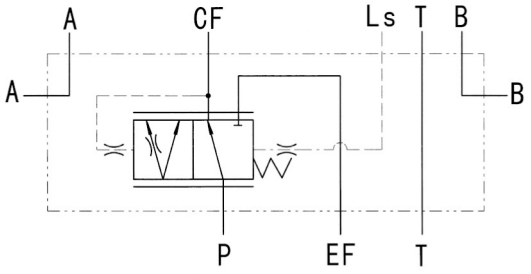
The priority valves HMPV distribute and trace the hydraulic flow from the supply pump of the hydraulic system to the hydraulic components which control and run the vehicle. The priority valves are used only with the CSUS.../5 steering units.
As a static signal, the LS-signal must be used in systems with circuit stability. The connection between pipe mounted priority valve and the steering unit have to be as short as possible, but should not exceed 1.5m (for iron pipe with 4mm internal diameter). When a rubber hose is used this length has to be even shorter and not bigger.

Technische Daten | Technical Data

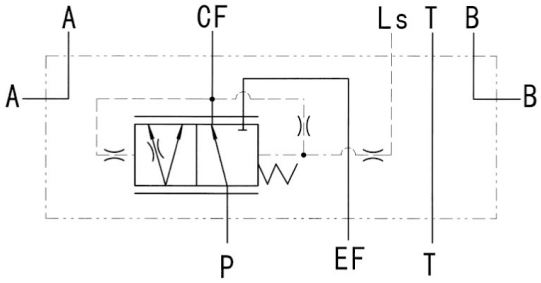
Typ Type	HMPVFS(D)	HMPVLS(D)
Nennförderstrom [l/min] Rated flow [l/min]	40 | 60 | 80	
Federvorspanndruck [bar] Control spring pressure [bar]	4.5 | 7 | 10.5	
Max. Druck in Anschluss [bar]: P, EF Max. Pressure in Oil [bar]: P, EF	200	
Max. Druck in Anschluss [bar]: LS, CF Max. Pressure in Oil [bar]: P, EF	160	

Funktionsdiagramm | Function Code

Modulareinbau | Modulary Mounting

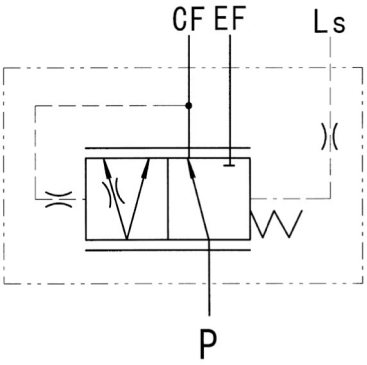


Statisches Signal
Static signal

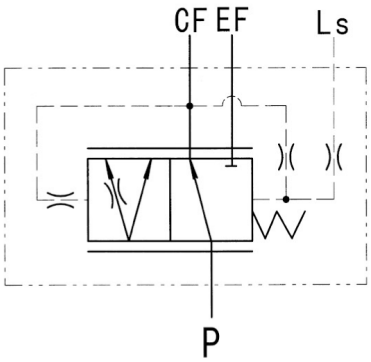


Dynamisches Signal
Dynamic signal

Rohrleitungsbauweise | Pipe Mounting



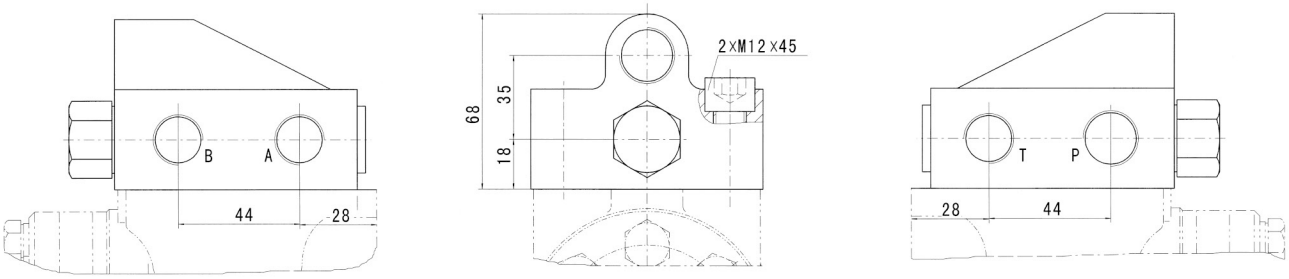
Statisches Signal
Static signal

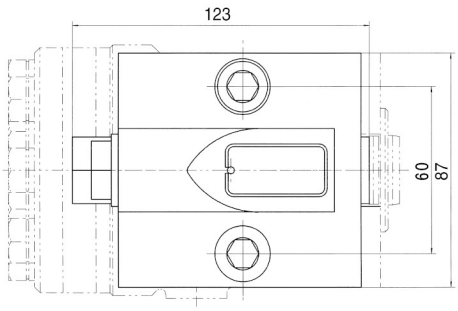


Dynamisches Signal
Dynamic signal

Einbaumaße | Mounting Data

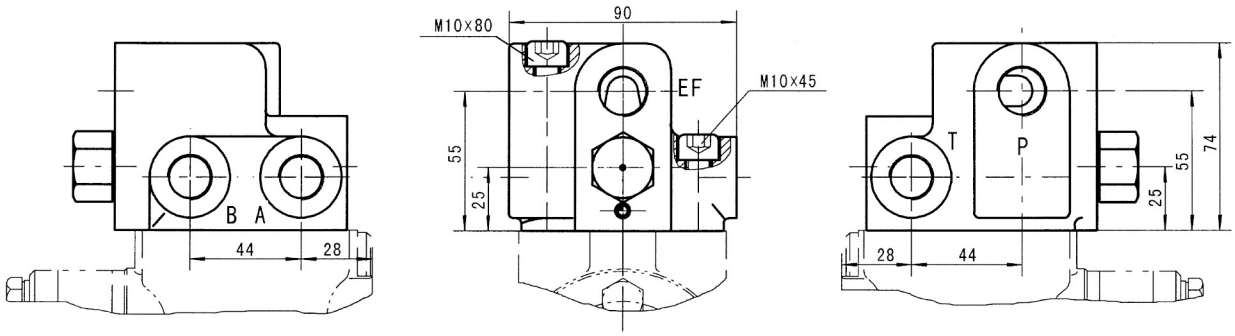
Prioritätsventil HMPVFS(D)-40, 60 | Priority Valves HMPVFS(D)-40, 60

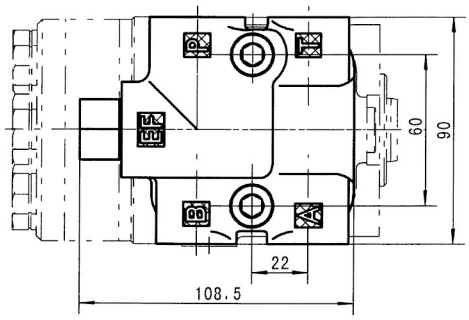




Anschluss Port	P, EF Gewindebohrungen Threads	T, A, B Gewindebohrungen Threads	P, EF, T, A, B Tiefe (mm) Depth (mm)
A	M20 x 1.5	M18 x 1.5	14
B	G 1/2	G 3/8	
C	7/8-14UNF O-ring	3/4-16UNF O-ring	
D	M20 x 1.5 O-ring	M18 x 1.5 O-ring	

Prioritätsventil HMPVFaS(D)-60 | Priority Valves HMPVFa(D)-40, 60

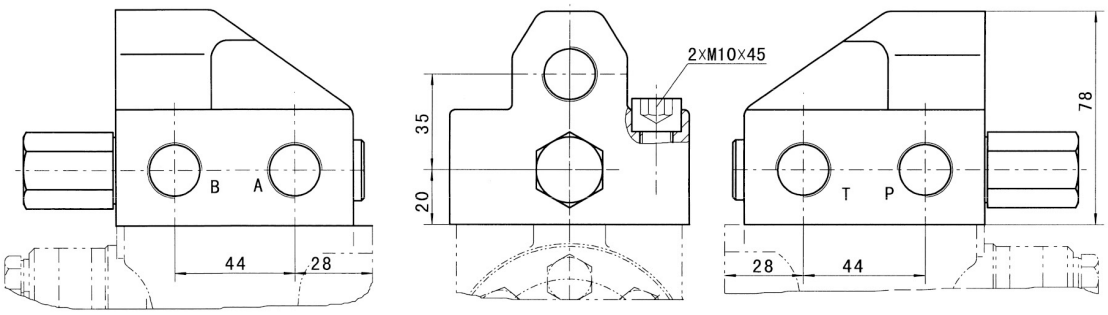


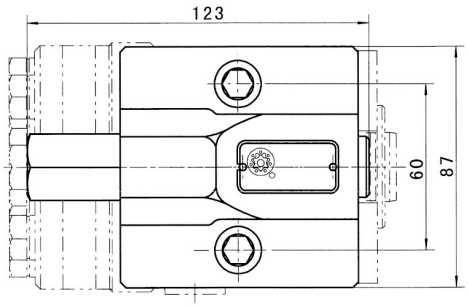


Anschluss Port	P, EF Gewindebohrungen Threads	T, A, B Gewindebohrungen Threads	P, EF, T, A, B Tiefe (mm) Depth (mm)
A	M20 x 1.5	M18 x 1.5	14
B	G 1/2	G 3/8	
C	7/8-14UNF O-ring	3/4-16UNF O-ring	
D	M20 x 1.5 O-ring	M18 x 1.5 O-ring	

Einbaumaße | Mounting Data

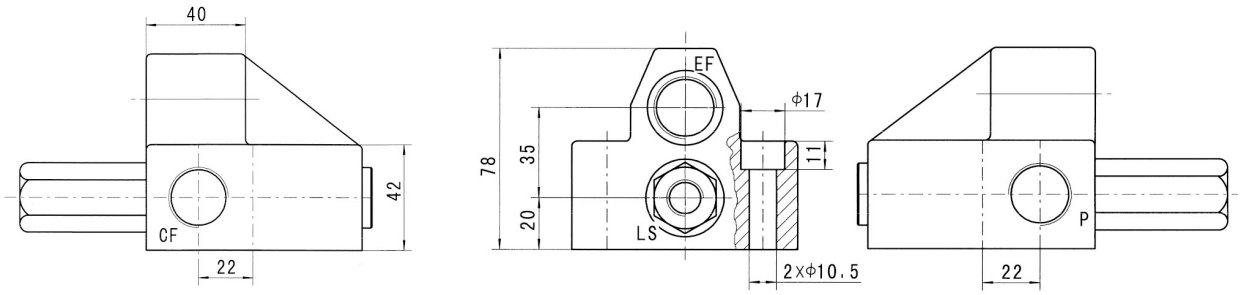
Prioritätsventil HMPVFS(D)-80 | Priority Valves HMPVFS(D)-80

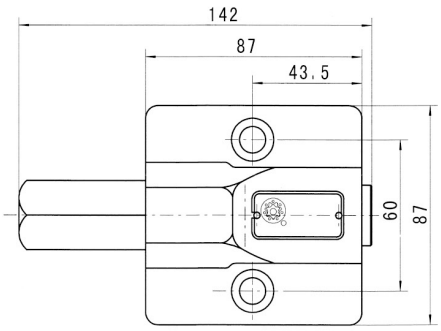




Anschluss Port	P, EF Gewindebohrungen Threads	T, A, B Gewindebohrungen Threads	P, EF, T, A, B Tiefe (mm) Depth (mm)
A	M22 x 1.5	M18 x 1.5	14
B	G 1/2	G 3/8	
C	7/8-14UNF O-ring	3/4-16UNF O-ring	
D	M22 x 1.5 O-ring	M18 x 1.5 O-ring	

Prioritätsventil HMPVLS(D)-80 | Priority Valves HMPVFa(D)-80





Anschluss Port	P, EF Gewindebohrungen Threads	CF Gewindebohrungen Threads	LS Gewindebohrungen Threads
A	M22 x 1.5	M18 x 1.5	M12 x 1.5
B	G 1/2	G 3/8	G 1/4
C	7/8-14UNF O-ring	3/4-16UNF O-ring	7/16-20UNF O-ring
D	M22 x 1.5 O-ring	M18 x 1.5 O-ring	M18 x 1.5 O-ring
P, EF, CF ,LS Tiefe (mm) Depth (mm)	14		

Bestellinformation | Order Information

HMPV	1	2	3	4	5	6	7

Pos. 1	Montage I Mounting
F	Modulareinbau Modulary mounting
L	Rohrleitungseinbau Pipe mounting

Pos. 2	Signal Typ I Signal type
S	Statisches Signal Static signal
D	Dynamisches Signal Dynamic signal

Pos. 3	Nennförderstrom I Rated flow [l/min]
80	40 I 60 I 80

Pos. 4	Federvorspanndruck I Control spring pressure [bar]
Leer Omit	4.5 I 7 I 10.5

Pos. 5	Anschlüsse I Ports
A	Details auf Seiten 7/8 Details on pages 7/8
B	
C	
D	

Pos. 6	Farbe I Painting
Leer Omit	Grau Grey
...RAL	+ Ralfarbe (z.B. 7021) + Ral colour (e.g. 7021)

Pos. 7	Design Serie I Design series
Leer Omit	Betriebsspezifisch Factory specified