



## Variable displacement axial piston pumps, for open circuit.



### DISPLACEMENTS

From	29 cm <sup>3</sup> /rev
To	73 cm <sup>3</sup> /rev

### MAX. SPEED

3000 min<sup>-1</sup>

### PRESSURE

Max. continuous	280 bar
Max. intermittent	315 bar
Max. peak	350 bar

### APPLICATION

Medium, high pressure

### SECTOR

Mobil / Industrial

- Energy savings.
- Low noise emission.
- Operational flexibility.
- Short response time.
- Drive shaft bearing suitable for radial and axial loads.

PLATA pumps meet these requirements in every way. The variable displacement axial piston pump is the optimal solution for open circuit applications. PLATA pumps are available with a wide range of control options. The pump is designed for both radial and axial loads, and supports full torque transmission in multiple body configurations.



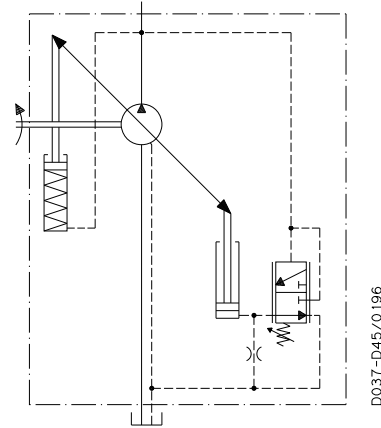
**PRESSURE COMPENSATOR**

**RP**

Regulates the pump displacement automatically to equal the flow requirement of the system while maintaining the pre-adjusted pressure.

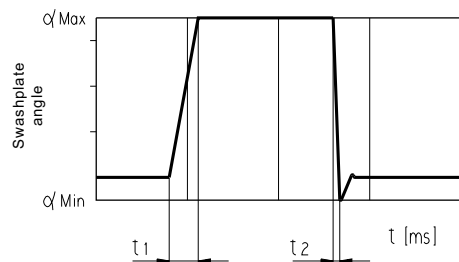
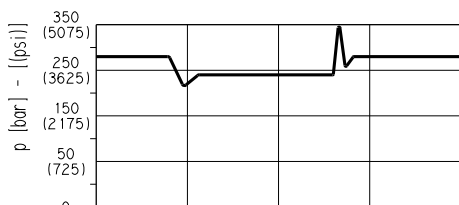
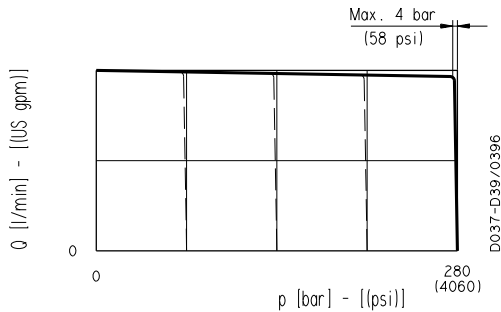
Compensator type	Pressure setting range	Standard setting
	bar	bar
<b>RP0</b>	20 ÷ 350	280

For remote control please consult our sales department.



**OPERATING CURVES**

Curves have been obtained at the speed of 1500 min<sup>-1</sup> and oil temperature 50 °C.



**RESPONSE TIME**

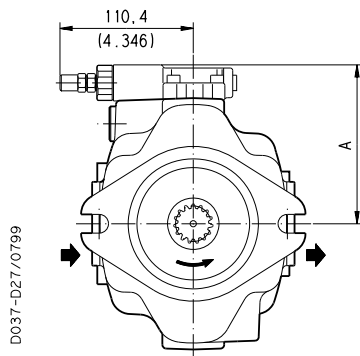
Pump type	t <sub>1</sub>	t <sub>2</sub>
	ms	ms
<b>LVP 30</b>	31	19
<b>LVP 48</b>	44	20
<b>LVP 75</b>	50	25

**MOUNTING POSITIONS AND DIMENSIONS (pressure compensator)**

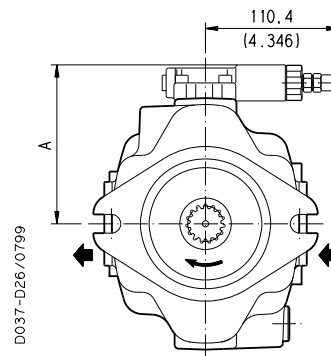
**RP**

**Side ports**

**Anti-clockwise rotation**

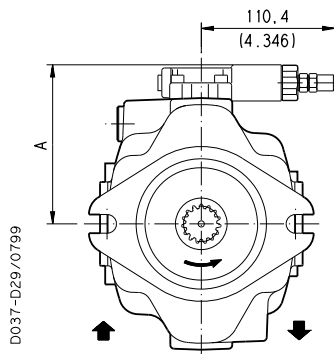


**Clockwise rotation**

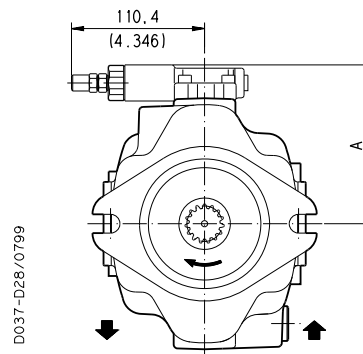


**Rear ports**

**Anti-clockwise rotation**



**Clockwise rotation**



Pump type	<b>A</b>
	mm (in)
<b>LVP 30</b>	114 (4.488)
<b>LVP 48</b>	123 (4.843)
<b>LVP 75</b>	136 (5.354)

**NOTES:** For different mounting positions, please consult our sales department.



## FLOW COMPENSATOR (Load-sensing)

LS

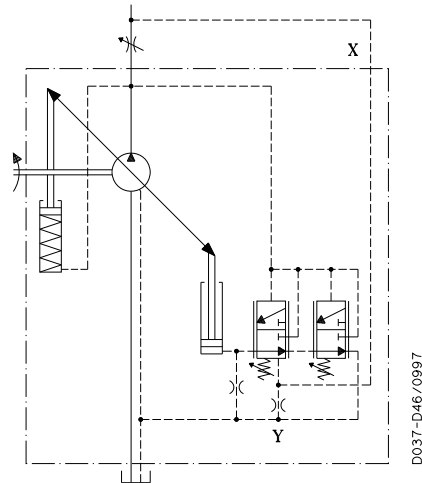
Regulates the pump displacement to maintain a constant (load independent) pressure drop across a flow metering device. In the standard version the flow compensator is combined with pressure compensator.

Flow compensator type	Pressure compensator	Differential pressure setting range	Standard setting
		bar	bar
<b>LS0</b>	RP0	10 ÷ 40	14
<b>LS2 *</b>	RP0	10 ÷ 40	14
<b>LS3 •</b>	RP0	10 ÷ 40	14

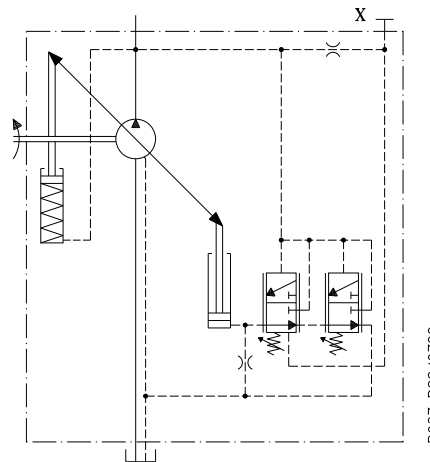
- \* : For remote control Y is plugged.
  - : For internal control and remote pressure control.
- Pilot flow  $\approx 1,3 \div 1,5$  [l/min]

In standard setting conditions (14 bar) the stand-by pressure is  $16^{\pm 2}$  bar.

### LS0 - LS2 Hydraulic circuits

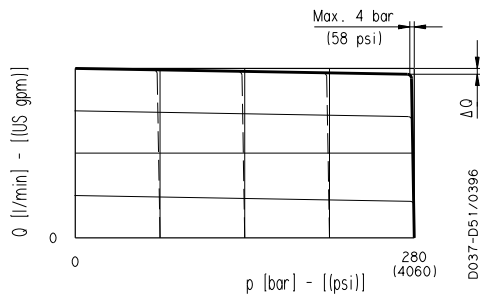


### LS3 Hydraulic circuits

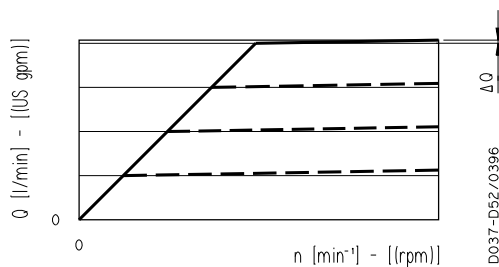


### OPERATING CURVES

This curve has been obtained at the speed of  $1500 \text{ min}^{-1}$  and oil temperature  $50^\circ\text{C}$ .



### Curve at variable speed



### TECHNICAL DATA

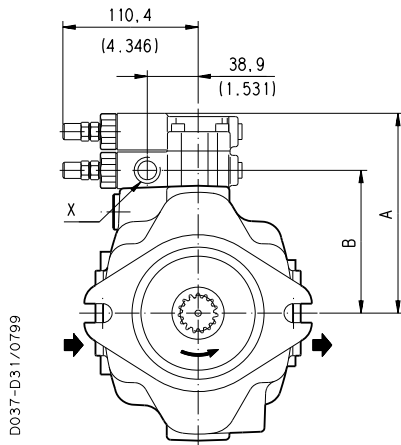
Pump type	$\Delta Q_{\text{max}}$
	l/min
<b>LVP 30</b>	0,9
<b>LVP 48</b>	1,7
<b>LVP 75</b>	2,5

**MOUNTING POSITIONS AND DIMENSIONS (flow compensator)**

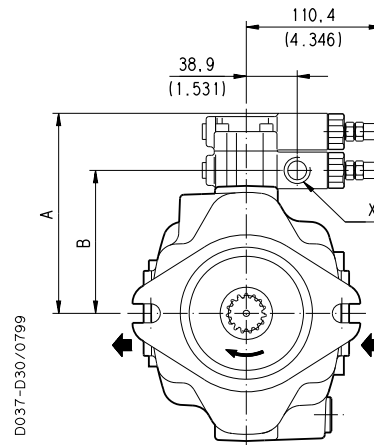
**LS**

**Side ports**

**Anti-clockwise rotation**

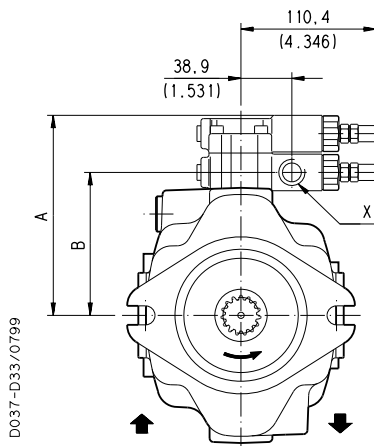


**Clockwise rotation**

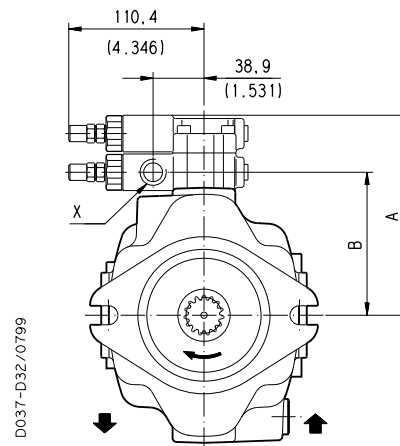


**Rear ports**

**Anti-clockwise rotation**



**Clockwise rotation**



Pump type	A	B
	mm (in)	mm (in)
<b>LVP 30</b>	144 (5.669)	100 (3.937)
<b>LVP 48</b>	153 (6.024)	109 (4.291)
<b>LVP 75</b>	165 (6.496)	122 (4.803)

X: Load sensing port. Dimension on page 12

**NOTES:** For different mounting positions, please consult our sales department.

**TORQUE LIMITER**

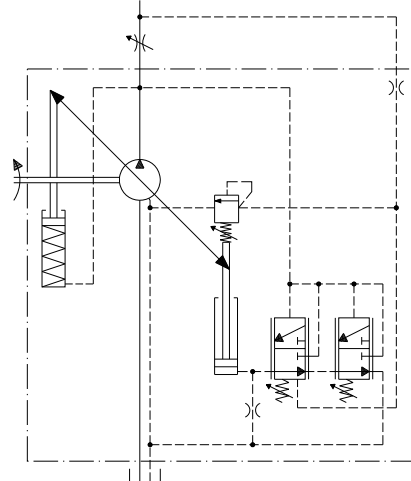
**RN**

Regulates the pump displacement according to the system pressure, to maintain the pre-adjusted torque value and protect the prime mover from overload.

To have the best torque limiter regulation, the minimum working pressure should be at least 80 bar.

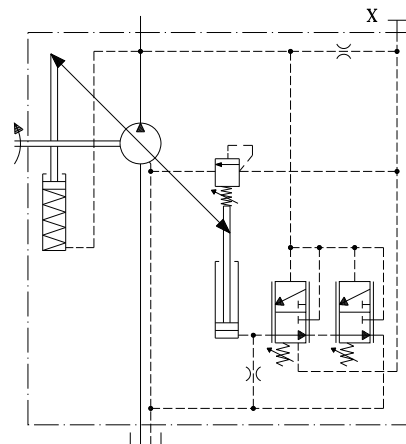
In the order of the torque limiter please specify the requested value of power:  
(eg. 10 kW at 1500 min<sup>-1</sup>)

**RN0 - Standard**



D037-D50/1099

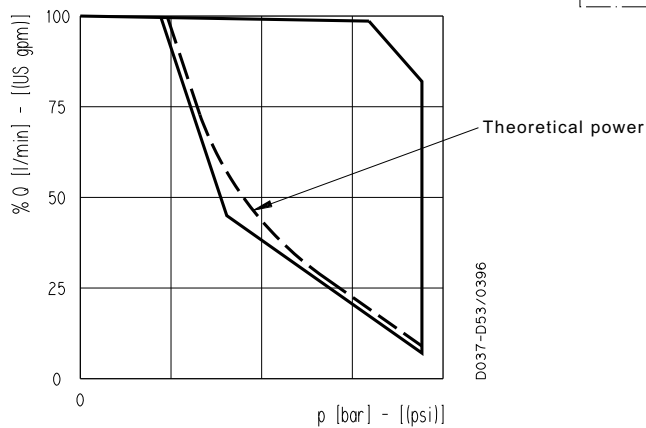
**RN1 - Internal pilot**



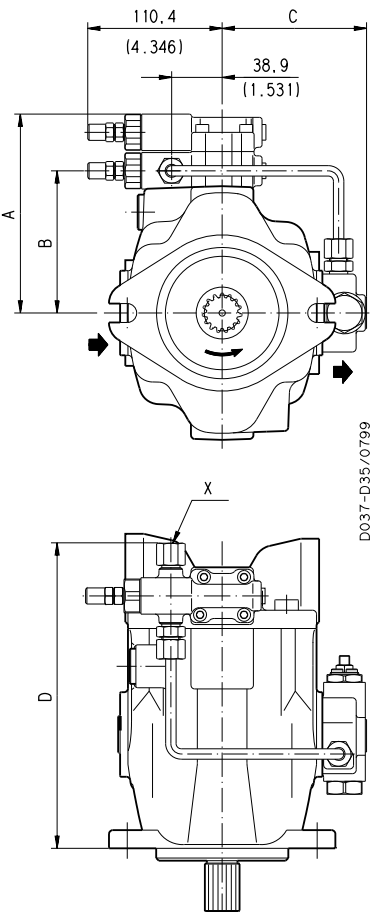
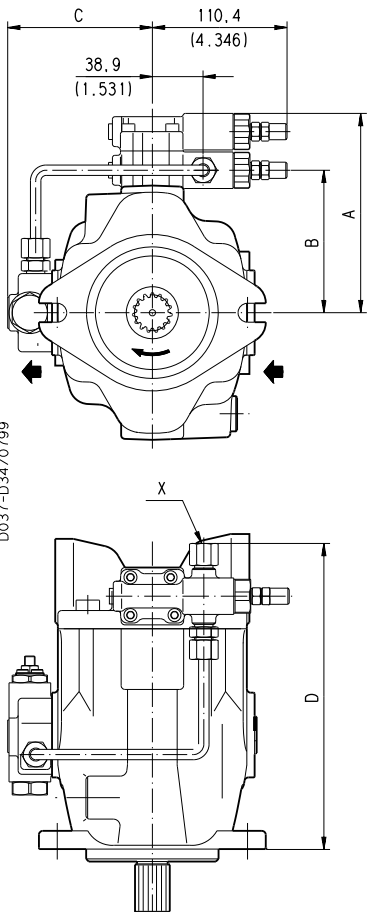
D037-D69/1099

**OPERATING CURVES**

This curve has been obtained at the speed of 1500 min<sup>-1</sup> and oil temperature 50 °C.



D037-D53/0396

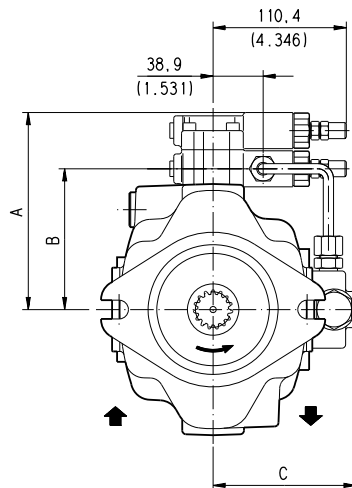
MOUNTING POSITIONS AND DIMENSIONS (torque limiter)		RN																								
<b>Side ports</b>																										
<p><b>Anti-clockwise rotation</b></p>  <p style="text-align: right; font-size: small;">D037-D35/0799</p>	<p><b>Clockwise rotation</b></p>  <p style="text-align: right; font-size: small;">D037-D34/0799</p>																									
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pump type</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> <tr> <th>mm (in)</th> <th>mm (in)</th> <th>mm (in)</th> <th>mm (in)</th> </tr> </thead> <tbody> <tr> <td style="background-color: #e67e22; color: white;">LVP 30</td> <td>144 (5.669)</td> <td>100 (3.937)</td> <td>104 (4.094)</td> <td>211 (8.307)</td> </tr> <tr> <td style="background-color: #e67e22; color: white;">LVP 48</td> <td>153 (6.024)</td> <td>109 (4.291)</td> <td>111 (4.370)</td> <td>235 (9.252)</td> </tr> <tr> <td style="background-color: #e67e22; color: white;">LVP 75</td> <td>165 (6.496)</td> <td>122 (4.803)</td> <td>120 (4.724)</td> <td>258 (10.157)</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">X: Load sensing port. Dimension on page 12</p>			Pump type	A	B	C	D	mm (in)	mm (in)	mm (in)	mm (in)	LVP 30	144 (5.669)	100 (3.937)	104 (4.094)	211 (8.307)	LVP 48	153 (6.024)	109 (4.291)	111 (4.370)	235 (9.252)	LVP 75	165 (6.496)	122 (4.803)	120 (4.724)	258 (10.157)
Pump type	A	B		C	D																					
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<p><b>NOTES:</b> For different mounting positions, please consult our sales department.</p>																										

**MOUNTING POSITIONS AND DIMENSIONS (torque limiter)**

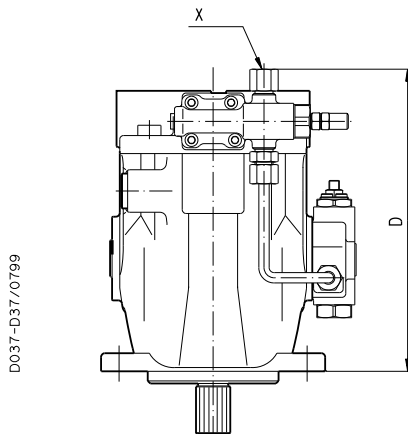
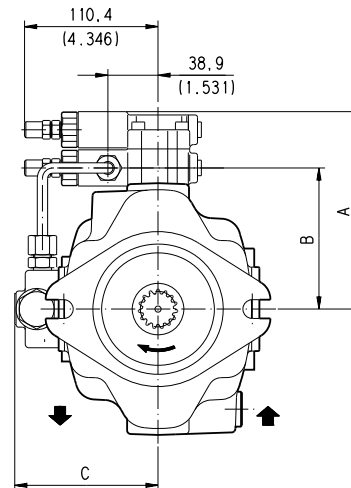
**RN**

**Rear ports**

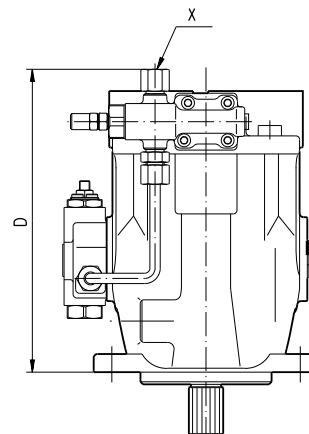
**Anti-clockwise rotation**



**Clockwise rotation**



D037-D37/0799



D037-D36/0799

Pump type	A	B	C	D
	mm (in)	mm (in)	mm (in)	mm (in)
<b>LVP 30</b>	144 (5.669)	100 (3.937)	104 (4.094)	211 (8.307)
<b>LVP 48</b>	153 (6.024)	109 (4.291)	111 (4.370)	235 (9.252)
<b>LVP 75</b>	165 (6.496)	122 (4.803)	120 (4.724)	258 (10.157)

X: Load sensing port. Dimension on page 12

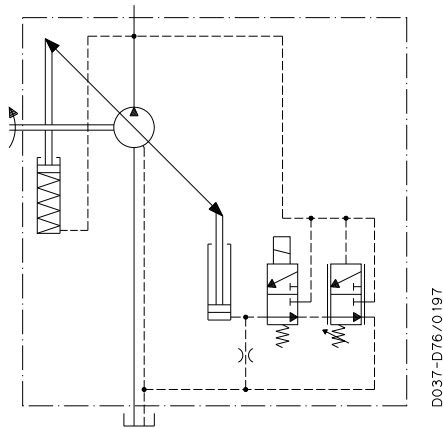
**NOTES:** For different mounting positions, please consult our sales department.



**UNLOADING VALVE**

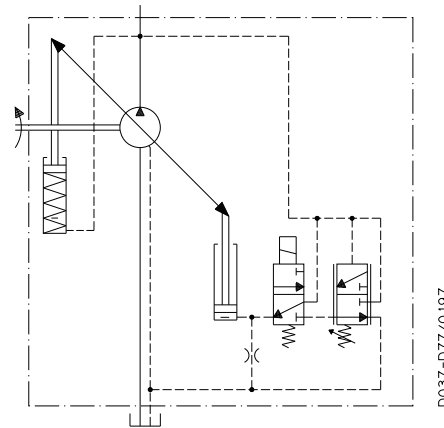
**U ..**

**NC (normally closed)**



With the valve NC type (normally closed), energizing the solenoid valve the displacement is reset and the pump is unloaded.

**NA (normally open)**



With the valve NA type (normally open), energizing the solenoid valve the pump is sent to the maximum displacement.

**Notes**

Unloading valve can be supplied only with pressure compensator RP..

**Voltages value availability**

Regulator type	Arrangement	Volt
U1	NC	12 V D.C.
U2	NC	24 V D.C.
U3	NC	24 V A.C.
U4	NC	110 V A.C.
U5	NC	220 V A.C.
U6	NA	12 V D.C.
U7	NA	24 V D.C.
U8	NA	24 V A.C.
U9	NA	110 V A.C.
U10	NA	220 V A.C.

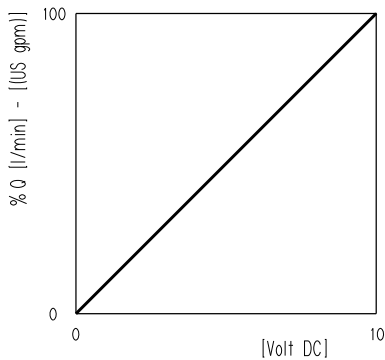
## ELECTROHYDRAULIC SERVOCONTROLS

S...

In this line of servocontrols, the displacement variation is regulated by a proportional system in double closed loop with a feedback transducer on the swash plate and a feedback transducer on the proportional valve: in this way high performances and high dynamics can be reached. The regulated displacement have a linear relation with the electronic control signal 0 ÷ 10 Volt DC (see diagram below). The electronic driver can be separated, Eurocard type or integral on the pump.

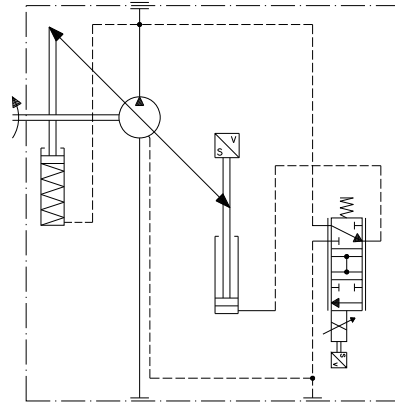
- S** Proportional flow servocontrol.
- SE** Proportional flow servocontrol with integral electronics, single 7-pins connector for electric supply and reference signals.
- SER** As above with sequence module RES to grant a minimum piloting pressure (18 bar) when the actual pressure of the system can fall under that value. This version can be used for the combined control of pressure and flow coupled with an electronic regulator in Eurocard format and with a pressure transducer which can be integral or separated.

**Note:** The minimum pressure to grant a correct functioning of the servocontrol in S and SE versions cannot be under 18 bar. Pumps with servocontrols type S and SE must be protected for safety with an external relief valve against pressure peaks. This is not necessary for version SER because the sequence module RES includes the maximum pressure protection.



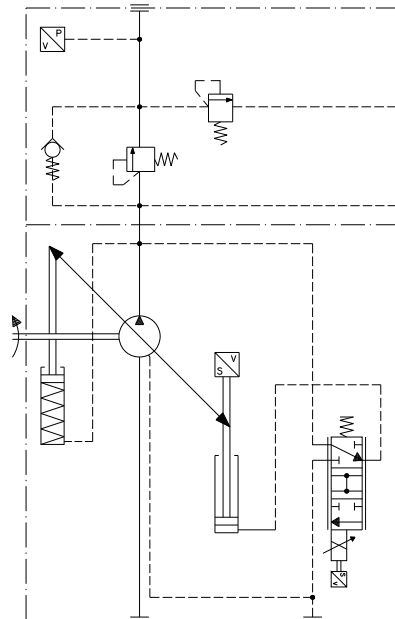
D037-101/1099

### S - SE Hydraulic circuits



D037-D96/1099

### SER Hydraulic circuits



D037-D97/1099

04/10.99

#### Technical data (only for pumps with servocontrols type S and SE)

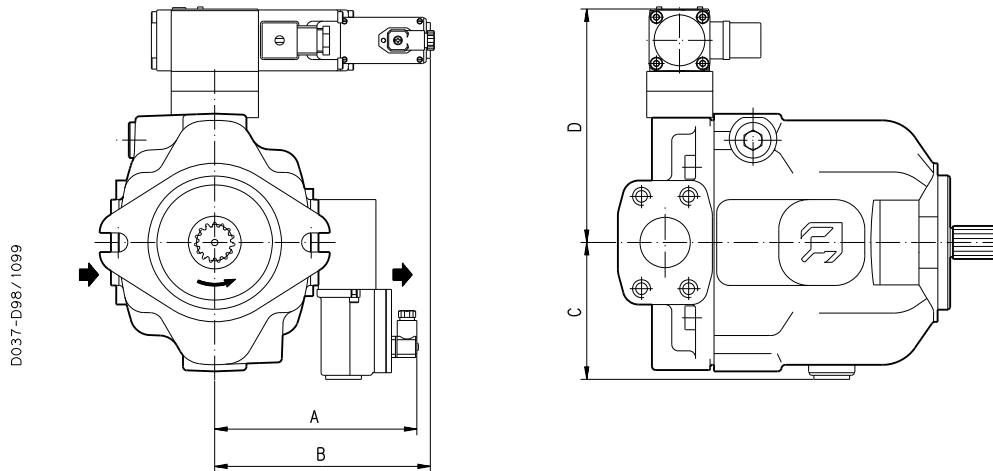
Coil resistance R at 20 °C	3 ÷ 3,3 Ω for standard 12 Volt (DC) coil
Relative duty factor	Countinuous rating (ED= 100 %)
Max. solenoid current	2,6 A for standard 12 Volt (DC) coil
Max. power	35 W

For different mounting positions, please consult our sales department.

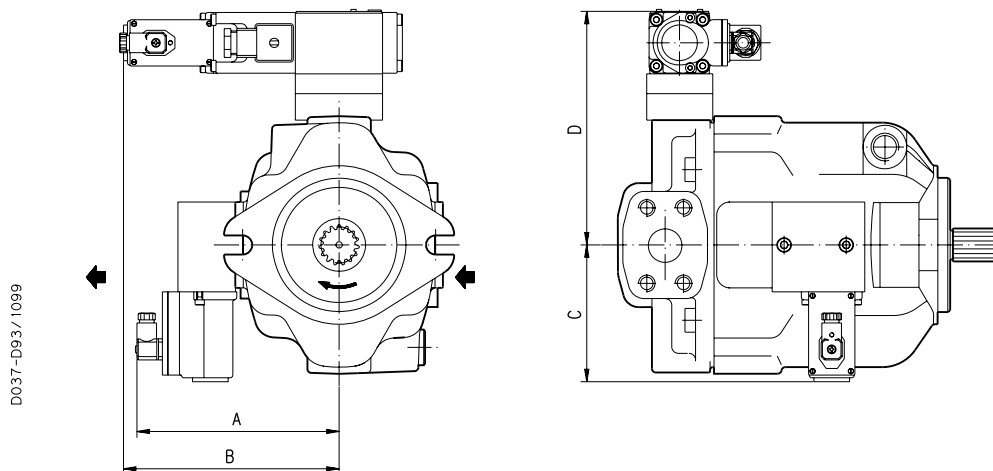
**MOUNTING POSITIONS AND DIMENSIONS (electrohydraulic servocontrols)**

**S**

**Anti-clockwise rotation (side ports)**



**Clockwise rotation (side ports)**



Pump type	A	B	C	D
	mm (in)	mm (in)	mm (in)	mm (in)
<b>LVP 30</b>	146,3 (5.760)	163 (6.417)	103,5 (4.075)	167,8 (6.606)
<b>LVP 48</b>	153 (6.024)			176,8 (6.961)
<b>LVP 75</b>	161,5 (6.358)			189,3 (7.453)

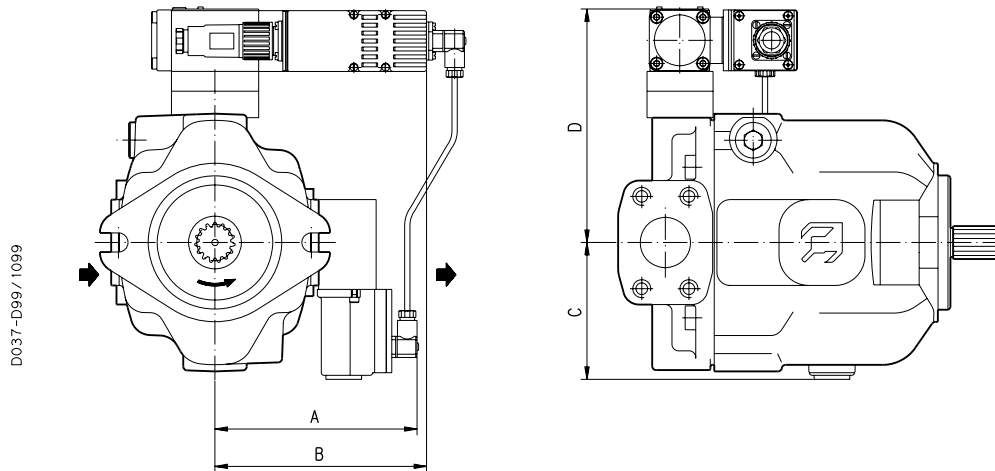
**NOTES:** For different mounting positions, please consult our sales department.

04/10.99

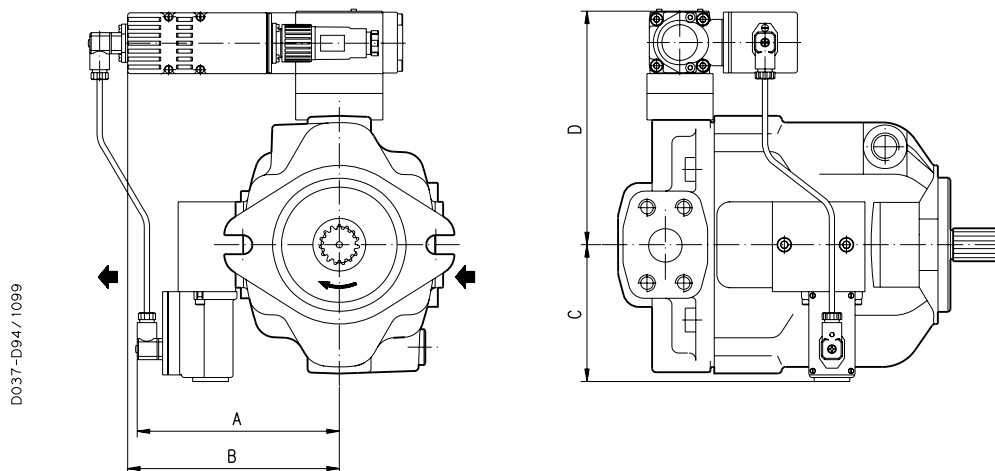
**MOUNTING POSITIONS AND DIMENSIONS (electrohydraulic servocontrols)**

**SE**

**Anti-clockwise rotation (side ports)**



**Clockwise rotation (side ports)**



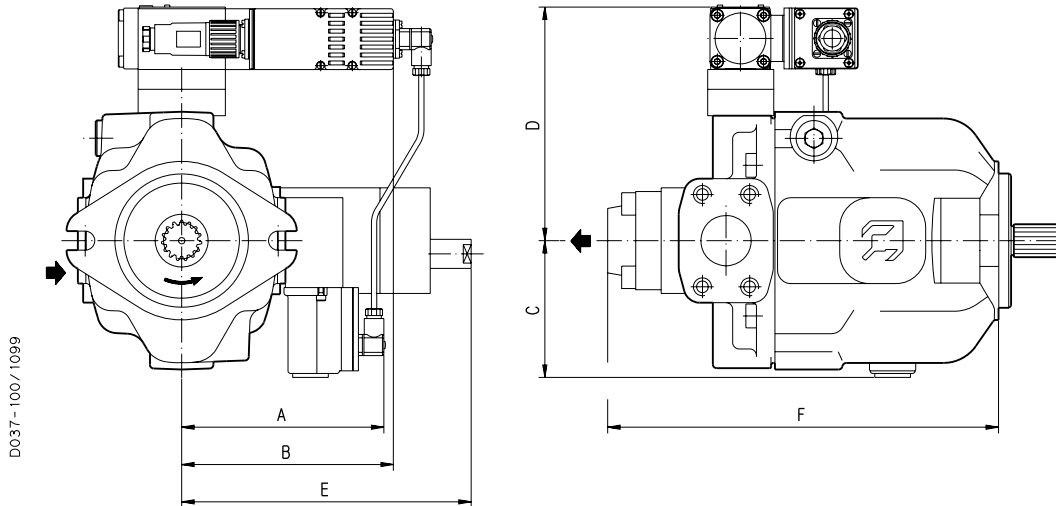
Pump type	A	B	C	D
	mm (in)	mm (in)	mm (in)	mm (in)
<b>LVP 30</b>	146,3 (5.760)	160 (6.299)	103,5 (4.075)	167,8 (6.606)
<b>LVP 48</b>	153 (6.024)			176,8 (6.961)
<b>LVP 75</b>	161,5 (6.358)			189,3 (7.453)

**NOTES:** For different mounting positions, please consult our sales department.

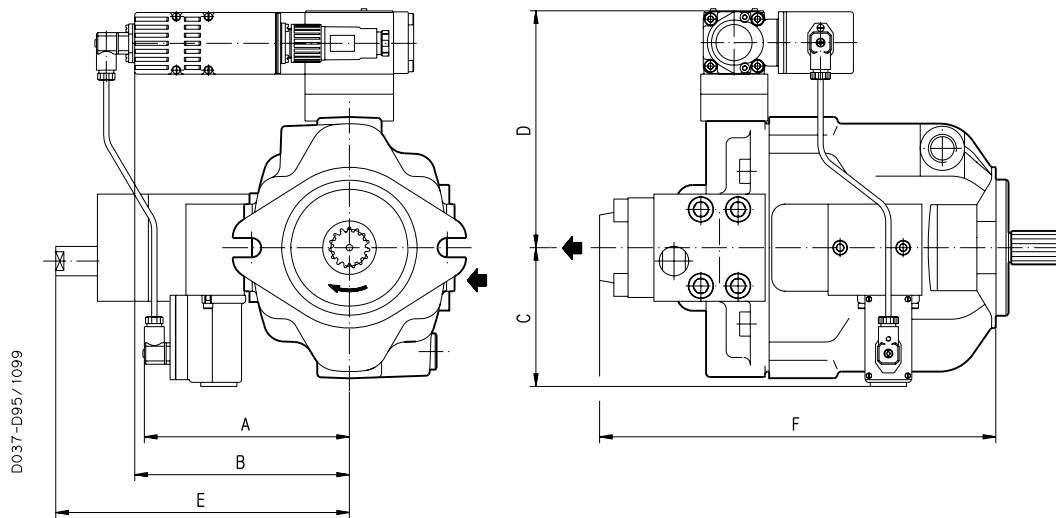
**MOUNTING POSITIONS AND DIMENSIONS (electrohydraulic servocontrols)**

**SER**

**Anti-clockwise rotation (side ports)**



**Clockwise rotation (side ports)**



Pump type	A	B	C	D	E
	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)
<b>LVP 30</b>	146,3 (5.760)	160 (6.299)	103,5 (4.075)	167,8 (6.606)	199,5 (7.854)
<b>LVP 48</b>	153 (6.024)			176,8 (6.961)	219 (8.622)
<b>LVP 75</b>	161,5 (6.358)			189,3 (7.453)	226 (8.898)

**NOTES:** For different mounting positions, please consult our sales department.

## HOW TO ORDER SINGLE PUMPS

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>					
Pump type	Rotation	–	Drive shaft	Mounting flange	–	Ports position	Ports IN/OUT	–	Seals	–	Regulators	–	Additional options	Fluid
LVP 30	S	–	04	S5	–	L	MD/QB	–	N	–	RP0	–	E	...

1 Pump type (max displacement)		CODE
in <sup>3</sup> /rev	cm <sup>3</sup> /rev	
1.74	29	LVP 30
2.76	46	LVP 48
4.38	73	LVP 75

2 Rotation		CODE
Anti-clockwise		S
Clockwise		D

3 Drive shaft		CODE
SAE "B" spline (13 teeth)		04
SAE "B" straight		32
straight Ø 22		68
SAE "BB" spline (15teeth)		05
SAE "BB" straight		33
Straight Ø 25		69
SAE "C" spline (14 teeth)		06
SAE "C" straight		34
Straight Ø 32		70

4 Mounting flange		CODE
SAE "B" 2 holes		S5
ISO Ø 100		Z1
SAE "C" 2 holes		S7
ISO Ø 125		Z2

5 Ports position		CODE
Side		L
Rear		P

6 Inlet/outlet ports		CODE	
SAE FLANGED PORTS METRIC THREAD (SSM)			
Pump type	Nominal size		
	Inlet IN	Outlet OUT	
	SAE 3000	SAE 6000	
LVP 30	1"1/4	3/4"	MD/QB
LVP 48	1"1/2	1"	ME/QC
LVP 75	2"	1"1/4	MF/QD
SAE FLANGED PORTS UNC THREAD (SSS)			
Pump type	Nominal size		
	Inlet IN	Outlet OUT	
	SAE 3000	SAE 6000	
LVP 30	1"1/4	3/4"	SD/VB
LVP 48	1"1/2	1"	SE/VC
LVP 75	2"	1"1/4	SF/VD

CODE	Seals	7
N	Buna (standard)	
V	Viton	

CODE	Regulators	8
RP0	Pressure compensator setting range 20 - 350 bar (a)	
LS0	Flow compensator (b)	
LS2	Flow compensator for remote control (b)	
LS3	Flow compensator for internal control (b)	
RN0	Torque limiter - standard	
RN1	Torque limiter - internal pilot	
S	Proportional flow servocontrol (c)	
SE	Proportional flow servocontrol with integral electronics (c)	
SER	Proportional flow servocontrol with integral electronics and seq. module RES (c)	

CODE	Additional options (d)	9
U..	Unloading valve (e)	
E	Max. displacement limiter (f)	
F	Min. displacement limiter (f)	
G	Min. and max. displacement limiter (f)	

CODE	Fluid	10
...	Mineral oil (no CODE)	
H	HF fluid (please consult our sales department)	

- a) Standard setting 280 bar.
- b) Differential pressure standard setting 14 bar (setting range 10 - 40 bar).
- c) For more informations, please consult our sales department.
- d) For additional options, please consult our sales department.
- e) For voltages availability please see page 20.
- f) Max. up to 50% of the displacement.

**ORDER EXAMPLE**

**SINGLE PUMPS**

Standard pump **LVP 30 S-04 S5-L MD/QB-N-LS2**

Pump with special features **LVP 30 S-04 S5-L MD/QB-N-LS2-E H**

**ASSEMBLED MULTIPLE PUMPS**

Standard double pump **LVP 30-04 S5-L MD/QB-RP0-AS5 04 / 30-04 S5-L MD/QB-N-LS2 S**

Double pump with special features **LVP 75-06 S7-L MF/QD-RP0-E H-AS5 04 / 30-04 S5-L MD/QB-N-LS2 S**

Double Plata pump with different series pumps **LVP 30-04 S5-L MD/QB-RP0-E-AS1 03 / PLP20.4-03 S1-L EA/EA-N S**

**INDIVIDUAL SECTIONS**

Front section **LVP 30 S-04 S5-L MD/QB-N-RP0-AS5 04**

Rear section **LVP 30 S-04 S5-L MD/QB-N-LS2**