

# Power Valve LA

**RE 95514/04.10** 1/4  
Replaces: 09.99

## Data sheet

Series 10  
Size 6  
Nominal pressure 350 bar  
Maximum pressure 400 bar  
External power limiting of variable pumps



## Contents

Ordering code for standard program	2
Technical data	2
Dimensions	3
General instructions	4

## Description

The LA power valve is used for the external power limiting of variable pumps with hydraulic proportional control (pilot-pressure related, HD or HP).

It controls variable pump displacement depending on the operating pressure so that a specified drive power is not exceeded at a constant speed. The power characteristic is tangentially approximated to the hyperbolic characteristic by adjusting the pre-tension of 2 springs in the power valve.

Via a piston, the springs act on the valve spring of a pressure reduction valve. Operating pressure is applied at the opposite end of the piston. Below the start of control the variable pump's pilot pressure-actuated control unit is supplied with max. 18 bar pilot pressure via port A of the power valve. If the operating pressure exceeds the start of control specified by the power characteristic, the pilot pressure is reduced on port A and the pump swiveled back. At constant drive speed, this is the equivalent of power controlling.

Optionally, the pilot pressure can be reduced again via a separate pressure reduction valve and the pump swiveled to a lower displacement volume (stroke limiter).

# Ordering code for standard program

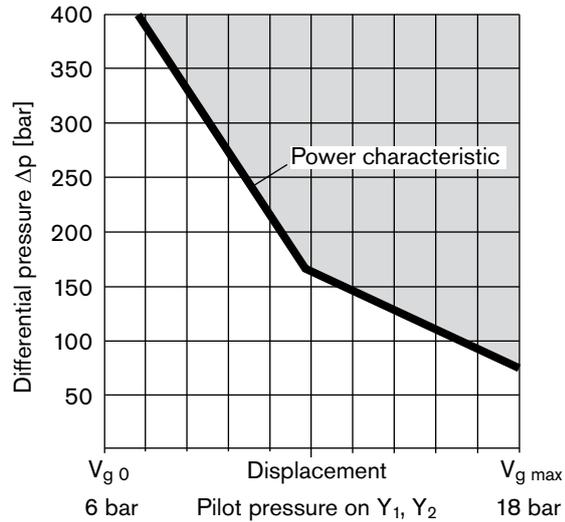
<b>LA</b>	<b>6</b>	<b>/</b>	<b>10</b>	<b>M</b>	<b>P</b>		<b>-</b>	
01	02		03	04	05	06		07

<b>Valve type</b>	
01 Power valve	<b>LA</b>
<b>Control range</b>	
02 Pilot pressure $6 < p_{St} < 18$ bar	<b>6</b>
<b>Series</b>	
03 Series 1, index 0	<b>10</b>
<b>Version of port and fixing threads</b>	
04 Metric	<b>M</b>
<b>Seals</b>	
05 NBR (nitrile-caoutchouc)	<b>P</b>
<b>Port plate</b>	
06 Without	<b>0</b>
with port plate	<b>A</b>
<b>Standard / special version</b>	
07 Standard version	<b>0</b>
Special version	<b>S</b>

When ordering, state in clear text:

- Type name and size of the implemented axial piston variable pump from Rexroth with pilot-pressure related adjustment HD or HP
- Pump operating speed
- Specified drive power

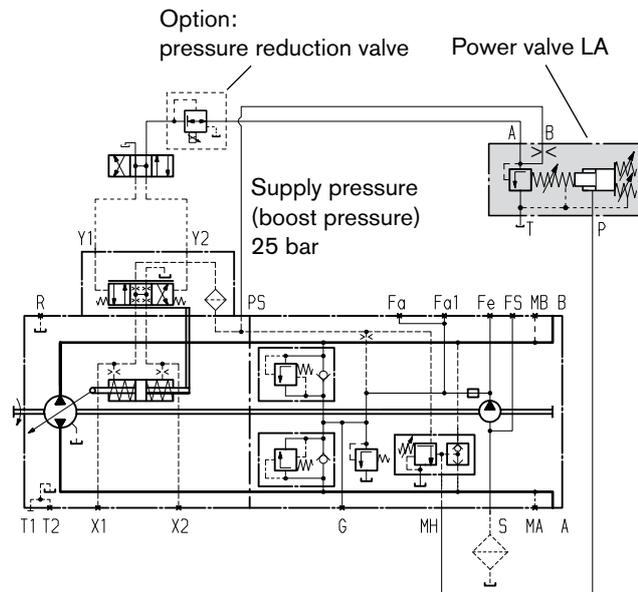
### Characteristic



### Circuit diagram

Example:

LA power valve with axial piston variable pump A4VG...HD (version with pressure reduction valve)



# Technical data

### Table of values

	NG	6
Nominal pressure $p_{nom}$	bar	350
Maximum pressure $p_{max}$	bar	400
Pilot pressure range on port A	bar	$6 < p_{St} < 18$ bar
Supply pressure on port B	bar	25
Minimum start of control high-pressure variable pump	bar	70
Maximum flow on LA with orifice $\varnothing 1.2$ and 18 bar	l/min	4
Hydraulic fluid temperature range	$^{\circ}C$	-20 to +80
Viscosity range	$mm^2/s$	5 to 1600
Installation position		any
Mass	without plate	kg 2.0
	with plate	kg 2.6

### Note

The power valve is always supplied with an orifice ( $\varnothing 1.2$ ) in port B. If the orifice is outside the power valve, port B is plugged.

Full functional capability of the power valve is achieved in the viscosity range from 10 to 30  $mm^2/s$ .



## General instructions

- The LA power valve is designed to be used in open and closed circuits.
- Project planning, assembly and commissioning of the components for the axial piston unit require the involvement of qualified personnel.
- The service line ports and function ports are only designed to accommodate hydraulic lines.
- During and shortly after operation, there is a risk of burns on the power valve. Take appropriate safety measures (e.g. by wearing protective clothing).
- Depending on the operational state of the axial piston unit or power valve (operating pressure, fluid temperature) the characteristic may shift.
- Pressure ports:  
The ports and fixing threads are designed for the specified maximum pressure. The machine or system manufacturer must ensure that the connecting elements and lines correspond to the specified operating conditions (pressure, flow, hydraulic fluid, temperature) with the necessary safety factors.
- The data and notes contained herein must be adhered to.
- The following tightening torques apply:
  - Threaded hole of the power valve:  
The maximum permissible tightening torques  $M_{G \max}$  are maximum values of the threaded holes and must not be exceeded. For values, see the following table.
  - Fittings:  
Observe the manufacturer's instruction regarding the tightening torques of the used fittings.
- The product is not approved as a component for the safety concept of a general machine according to DIN EN ISO 13849.

Ports		Maximum permissible tightening torque of the threaded holes $M_{G \max}$	Required tightening torque of the locking screws $M_V$	WAF hexagon socket of the locking screws
Standard	Threaded size			
DIN ISO 228	G1/4	70 Nm	–	–