



Electro-hydraulic Proportional Valve Series

2 to 500ℓ/min
21,25,28,35MPa

Overview

Today's hydraulic systems demand high levels of automation, power efficiency, and energy efficiency, which is why the use of electro-hydraulic proportional valves is on the rise. Built-in

electronic components deliver outstanding response and fluid pressure that allows high output, as well as superior operation, and control. The NACHI Electrohydraulic Proportional

Valve Series includes the pressure control valves, flow control valves, and direction control valves that make it easy to meet these needs.

Features

① Pressure Control Valve Series

EPR Series – Small-volume direct driver type pilot relief valve

ER Series – Large-volume balanced piston type relief valve

EGB Series – Large-volume balanced piston type pressure reducing valve with relief function

The pressure control section uses a poppet structure, which is virtually impervious to the effects of dirt in the operating fluid for outstanding pressure stability.

② Flow Control Valve Series

ES Series – This 2-directional valve provides proportional flow control in accordance with input current.

ESR Series – With a built-in rod sensing function, this 3-way valve is for use in low-energy circuits.

A force feedback mechanism is used for main spool positioning, and amplification is performed by the pilot spool. The result is superior response with small hysteresis and outstanding flow rate reproduction.

③ Direction Flow Control Valve Series

ESD Series – This electro-hydraulic proportional valve provides both direction control and flow control functions. Mounting methods are the same as those for standard directional valves, which allows simple structuring and maintenance.

④ Modular Type Control Valve Series

EOG-G01 – This reduction valve with relief function can be used in ganged configurations.

EOF-G01 – This flow control valve combines a restrictor valve with a pressure compensation valve.

This dual configuration provides easy installation along with dramatically reduced space requirements.

⑤ Power Amplifiers

EMA Series – Amplifier type

EMC Series – Controller type

A current-feedback amplifier system is used to virtually eliminate output current fluctuation. The same power supply specifications apply to all types.

⑥ Compact Power Amplifiers

EBA Series – Amplifier type

The highly efficient PWM control system of this new series ensures high reliability in a compact configuration.

⑦ Compact, Multi-function Power Amplifiers

EDA Series – Amplifier type

This compact amplifier can drive two solenoids with a single DC input.

EDC Series – Amplifier controller type
A choice of inputs: 6-contact or DC 2 input/4- contact.

Series List

Name	Maximum Working Pressure MPa (kgf/cm ²)	Rated Flow Rate ℓ/min									
		1	2	10	50	100	200	300	400	500	
Electro-hydraulic Proportional Pilot Relief Valve (EPR)	35 {357}	01 – Size									
Electro-hydraulic Proportional Relief Valve (ER)	35 {357}			03		06					
Electro-hydraulic Proportional Relief and Reducing Valve (EGB)	25 {255}	03		06							
Electro-hydraulic Proportional Flow Control Valve (ES)	21 {214}	02		03		06		10			
Load Sensitive Electro-hydraulic Proportional Relief and Flow Control Valve (ESR)	25 {255}	03		06		10					
Electro-hydraulic Proportional Flow Control Valve (ESD)	25 {255}	01		03		04		06			
Modular Type Electro-hydraulic Proportional Reducing Valve (EOG)	25 {255}	01									
Modular Type Electro-hydraulic Flow Control Valve (EOF)	21 {214}	01									
Power Amplifier (EMA) (EMC)										—	
Compact Power Amplifier (EBA)										—	
Compact, Multi-function Power Amplifier (EDA) (EDC)										—	