

Hydraulic Equipment



YUKEN KOGYO CO., LTD.

YUKEN PRODUCTS FOR EVERY NEED

As a specialized manufacturer of hydraulic equipment, we Yuken are trying hard to meet our customers' various requirements with a continuous effort to develop new products and improve the existing products.

This catalogue is compiled just to introduce the line up of our products. Therefore, the guide does not present the detailed technical information such as dimensions, specifications and characteristics of each and every product. If you require such information, please request us or our sales representatives for the Engineering Information Catalogue or Product Catalogue prepared separately.



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Fukuroda Factory



Sagami Factory

INDEX

- 3 PISTON PUMPS**
- 5 VANE PUMPS**
- 6 PRESSURE CONTROLS**
- 7 FLOW CONTROLS**
- 8 DIRECTIONAL CONTROLS**
- 11 MODULARS**
- 15 PROPORTIONAL ELECTRO—
HYDRAULIC CONTROLS**
- 18 ASSOCIATED PRODUCTS**

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Friendly, Intelligent, Powerful

Variable Displacement Piston Pumps

AR Series Variable Displacement Piston Pumps

These AR series pumps have been developed on the basis of the same design concept as A series pumps which are renowned for high efficiency and low noise level. Using an aluminum body, the size of the pump is more compact and the mass is considerably reduced. The noise level has also been reduced.



AR16

A Series Variable Displacement Piston Pumps

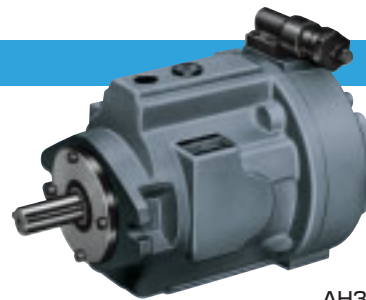
With the well-known low noise level and a new addition of A70, A90 and A145 pump versions having the maximum pressure upto 28MPa, A series pumps have much more extensive coverage in their line up and specifications. Ten control types are available ranging from pressure compensator control to proportional electro-hydraulic pressure/flow control.



A16

AH Series Variable Displacement Piston Pumps

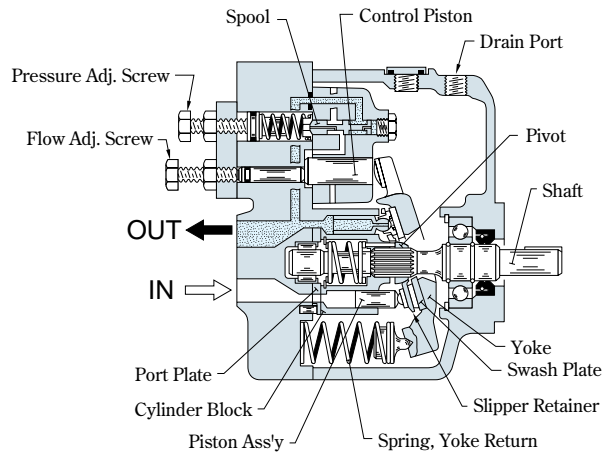
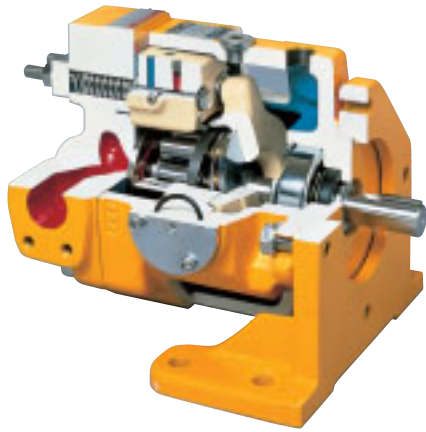
AH series are variable displacement piston pumps of high pressure, high efficiency, high speed and low noise developed by Yuken's unique design concept and cumulative technologies. They are suitable for use with construction machinery and various industrial machinery ranging from presses to injection moulding machines.



AH37

Pump Type		Maximum Operating Pressure MPa	Geometric Displacement cm ³ /rev												
			1	2	5	10	20	50	100	200	300				
"AR" Series Variable Displacement Piston Pumps		16				AR16									
							AR22								
"A" Series Variable Displacement Piston Pumps	Single Pumps	21		A10											
		16			A16										
		16				A22									
		21					A37								
		21						A56							
	28							A70							
									A90						
										A145					
	Double Pumps	28	Outboard Pump		A16	A22	A37	A56							Inboard Pump (Driven End)
						A16	A22	A37	A56	A70	A90	A145			
Variable / Fixed Double Pumps	28	Outboard Pump			RV2R1			RV2R2						Inboard Pump (Driven End)	
					A16	A22	A37	A56	A70	A90	A145				
"AH" Series Variable Displacement Piston Pumps		31				AH16									
							AH37								
											AH56				

"A" Series Variable Displacement Piston Pumps



Features

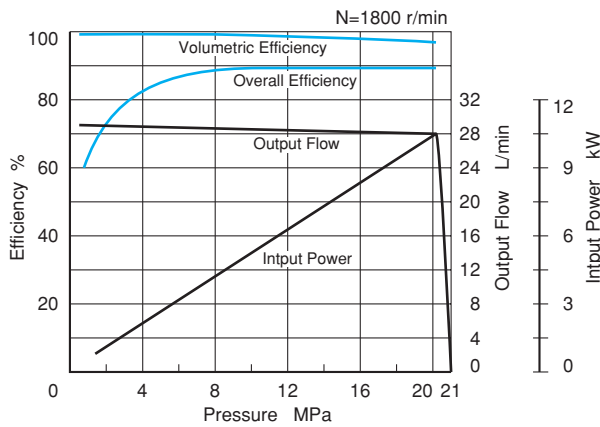
● High efficiency

At 16MPa loaded pressure and 1800 r/min rotating speed, volumetric efficiency is over 98% and overall efficiency is more than 90%.

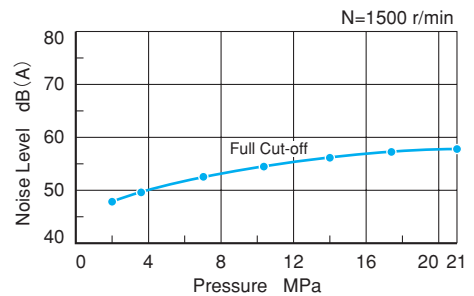
● Low noise level

In A16 pump, the noise level is as low as 57.3dB(A) [at 21MPa full cut-off pressure and 1500r/min] measured one metre horizontally away from the pump head cover.

"A16" type performance characteristics



"A16" type noise level characteristics



Control Type

Control Type	Graphic Symbols	Performance Characteristics	Control Type	Graphic Symbols	Performance Characteristics
"01" Pressure Compensator Type			"05" Two-Pressure Two-Flow Control Type by System Pres.		
"02" Solenoid-two Pressure Control Type			"06" Two-Pressure Two-Flow Control Type with Solenoid Valve		
"03" Pressure Compensator with Unloading Type			"07" Pilot Pressure Control Type Pressure Compensator		
"04" Proportional Electro-Hydraulic Load Sensing Type			"09" Constant Power Control Type		
"04E" Proportional Electro-Hydraulic Pressure & Flow Control Type			Simple Two-Pressure Two-Flow Control Type		

Friendly, Intelligent, Powerful

Vane Pumps

Various models, ranging from low-noise low-pulsation small capacity models to low-noise high pressure models, are available in Yuken vane pumps for customers' best selection.



PV2R Series Vane Pumps

These pumps have been developed especially for low noise operation. To comply with a wide range of applications including the injection moulding machines, PV2R series pumps provide the output flow of such a wide range as from 5.8 to 237cm³/rev.

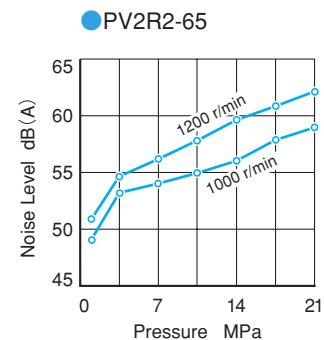
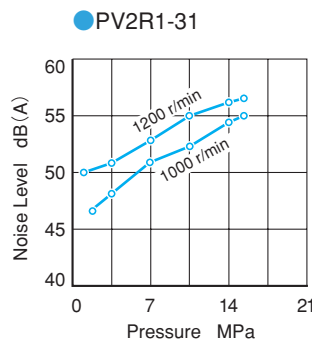
- ModelPV2R1, PV2R2, PV2R3, PV2R4 and Double Pumps.
- Max.Operating Pressure21MPa
- Geometric DisplacementPV2R1 : 5.8~31/PV2R2 : 41.3~64.7
PV2R3 : 76.4~115.6/PV2R4 : 136~237cm³/rev



Noise Level

● Measuring condition

- Fluid viscosity : 20mm²/s
- Measurement position : One metre horizontally away from pump head cover
- Background noise : 40dB(A)



PV11R Series Vane Pumps

These pumps are durable against such a high pressure as 40MPa. The excessive wear to the vanes and camring which usually occurs in such high pressure vane pumps has been solved by means of adopting the special methods in both mechanical construction aspects and lubrication systems.

- ModelPV11R10, PV11R20
- Max.Operating Pressure40MPa (Anti-Wear Type Oils)
25MPa (R&O Type Oils)
- Geometric DisplacementPV11R10 : 2.2~12.1cm³/rev
PV11R20 : 15.2~22.1cm³/rev



Pump Type	Maximum Operating Pressure MPa	Output Flow L/min at 1200 r/min at No-Load												
		1	2	5	10	20	50	100	200	500	800			
"PVL" Series Single Pumps	5			PVL1										
Single Pumps	7					50T	150T	250F	500F					
Double Pumps	7					Small Volume (50)	(150)	(250)						
						Large Volume (50)	(150)	(250)						
Combination Pumps	7					Small Volume (50)								
						Large Volume (50)	(150)							
"PV2R" Series Single Pumps	21					PV2R1	PV2R2	PV2R3	PV2R4					
"PV2R" Series Double Pumps	21					Small Volume (PV2R1)	(PV2R2)	(PV2R3)						
						Large Volume (PV2R2)	(PV2R3)	(PV2R4)						
"PV11R" Series Single Pumps	40					PV11R10	PV11R20							

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Pressure Control Valves

Various type of pressure control valves are available, from relief valves to pressure switches, to control the pressure at suitable level in the hydraulic system.



Low Noise Type Pilot Operated Relief Valves

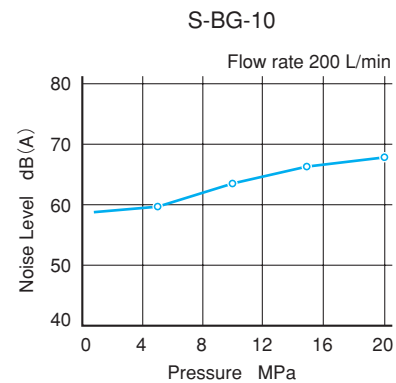
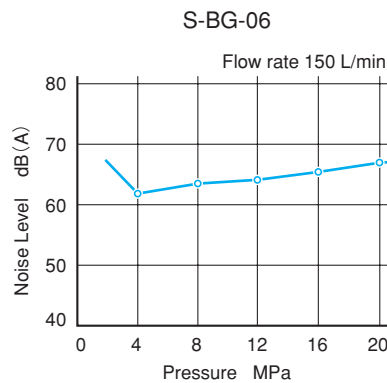
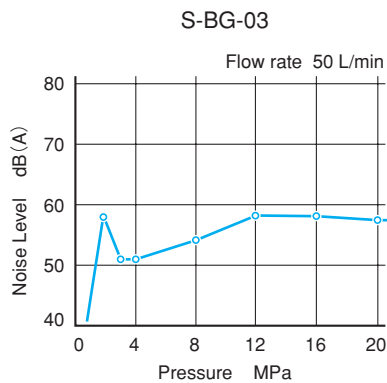
Pilot operated relief valves here have been particularly developed as low noise type. To protect the pumps and control valves from an excessive pressure, the valves are used to control the pressure in the hydraulic system to constant level. The remote control and unloading can be done by using the vent circuit.



Noise Level

Measuring condition

- Fluid viscosity : 35mm²/s
- Measuring position : At one metre back from the valve front.
- Tank line back pressure : 0.1MPa



Valve Type	Maximum Operating Pressure MPa	Max. Flow L/min														
		1	2	3	5	10	20	30	50	100	200	300	500	1000	2000	
Remote Control Relief Valves	25	DT/DG-01														
Direct Type Relief Valves	21	DT/DG-02														
Pilot Operated Relief Valves	25						BT/BG	03	06	10	16	24				
Low Noise Type Relief Valves	25						S-BG	03	06	10						
Solenoid Controlled Relief Valves	25						BST/BSG	03	06	10	16					
Low Noise Type Sol. Cont. Relief Valves	25						S-BSG	03	06	10						
Brake Valves	25						UBGR	03	06	10						
H/HC Type Pres. Control Valves	21						HT·HG/HCT·HCG	03	06	10	16					
Pres. Reducing & Check Valves	21						RT·RG/RCT·RCG	03	06	10	16					
Pres. Reducing & Relieving Valves	25						RBG	03	06							
Unloading Relief Valves	21						BUCG	03	06	10						
Pressure Switches	35															

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Flow Control Valves

These valves control the reciprocating and rotating speed of hydraulic actuators, A variety of flow control valves including pressure and/or temperature-compensated flow control valves is available.

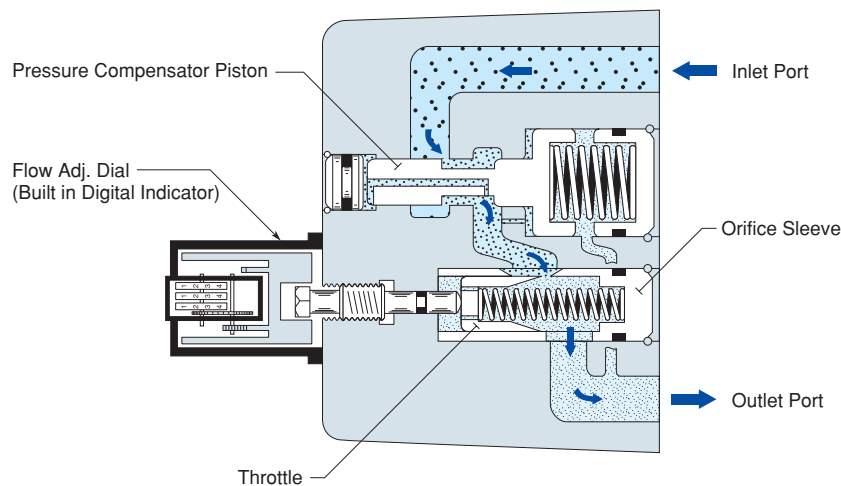


Flow Control Valves/Flow Control and Check Valves

These valves are pressure and temperature compensating type valves and maintain a constant flow rate independent of change in system pressure (load) and temperature (viscosity of the fluid). They control the speed of the actuator precisely. The valves with an integral check valve allow a controlled flow and reverse free flow. Repeated resetting can be made easily with a digital readout.



Flow Control Valves



Valve Type	Maximum Operating Pressure MPa	Max. Flow L/min															
		1	2	3	5	10	20	30	50	100	200	300	500	1000	2000	3000	5000
Flow Control (& Check) Valves	21		FG/FCG		01			02		03	06	10					
Flow Control & Relief Valves	25		FBG							03	06	10					
Pilot Operated Flow Control Valves	21		FHG				02			03	06	10					
Pilot Operated Flow Cont. & Check Valves	21		FHCG				02			03	06	10					
Restrictors	25		SRT/SRG					03		06	10	16					(Rated Flow)
One Way Restrictors	25		SRCT/SRCG					03		06	10	16					(Rated Flow)
Throttle (& Check) Modules	25		TC1G/TC2G					01		03							
Deceleration (& Check) Valves	21		ZT·ZG/ZCT·ZCG						03		06	10					
Feed Control Valves	14		UCF1G/UCF2G				01		03	04							
Needle Valves	35		GCT GCTR		-02												

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Directional Control Valves

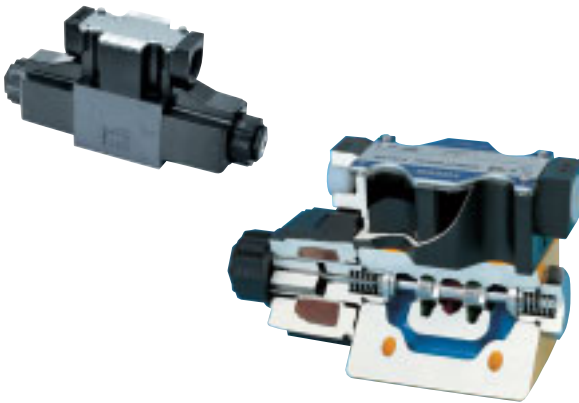
These valves control the flow direction in the hydraulic circuit. The various directional valves ranging from the solenoid operated directional valves to the check valves conforming to JOHS Standard—The Japan Oil Hydraulics Standard—are available to meet the variety in customers' needs.



Valve Type	Maximum Operating Pressure MPa	Max. Flow L/min									
		1	2	5	10	20	50	100	200	500	1000
Solenoid Operated Directional Valves	25	DSG-005									
	31.5	DSG-01									
		DSG-03									
Solenoid Controlled Pilot Operated Directional Valves	21	DSHG-01									
	25	DSHG-03									
	31.5	DSHG 04 06 10									
		21	DSHF 10 16 24 32 (Rated Flow)								
Shockless Type Proportional Directional and Flow Control Valves	25	EDFG-01									
"G" Series Shockless Type Directional Valves	25	G-DSG 01 03									
		G-DSHG 04 06									
Poppet Type Solenoid Operated Directional Valves	31.5	DSLГ-01									
Multi Purpose Control Valves	25	DSLHG 04 06 10									
Solenoid Operated Poppet Type Two-Way Valves	14	CDS※-03									
Shut-off Type Solenoid Operated Directional Valves	25	DSPC/DSPG 01 03									
Pilot Operated Directional Valves	31.5	DHG 04 06 10									
Manually Operated Directional Valves	21	Threaded connection (DMT) 03 06 10									
	31.5	Sub-plate mounting (DMG) 01 03 04 06 10									
Mechanically Operated Directional Valves	7	Rotary type (DR ^T _G -02) 02									
	25	Cam operated (DC ^T _G) 01 03									
Check Valves	25	In-line (CIT) 02 03 06 10 (Rated Flow)									
		Right angle (CRT/CRG) 03 06 10 (Rated Flow)									
		Right angle, Flanged connection (CRF) 10 16 24 (Rated Flow)									
Pilot Operated Check Valves	25	Threaded connection (CP※T) Sub-plate mounting (CP※G) 03 06 10 (Rated Flow)									
		Flanged connection (CP※F) 10 16 (Rated Flow)									

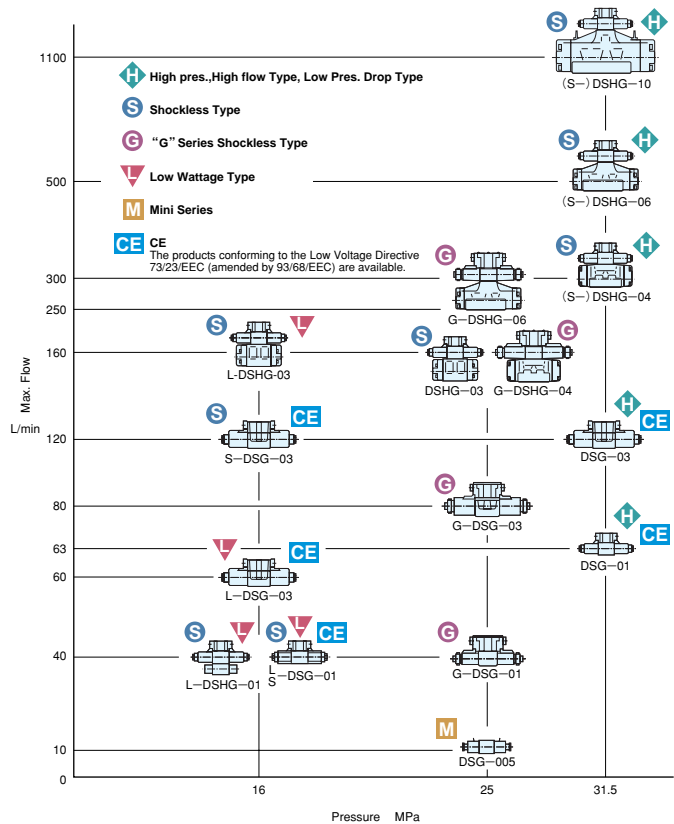
Solenoid Operated Directional Valves / Solenoid Controlled Pilot Operated Directional Valves

The following are our full range of solenoid operated directional valves and solenoid controlled pilot operated directional valves.



WIDE RANGE OF MODELS

Choose the optimum valve from a large selection to meet your needs.



Shockless Type Proportional Directional and Flow Control Valves / Amplifiers

The shockless type proportional and flow control valves have been developed by employing the basic design concept of “G” series solenoid operated directional valves. One of the distinctive features of these valves is that the valves can make the speed setting at any high speed operation.

As the valves have maximum flow rate adjustment functions, which are not available for “G” series solenoid operated directional valves, the top speed (the maximum speed) of actuators can be controlled optionally by adjusting the maximum flow rate.

The power amplifiers for use with the above valves have digital setting systems, therefore, the excellent maneuverability and repeatability in operation can be obtained. They offer two types of slop mode ; “SLOPE CONSTANT” and “TIME CONSTANT” , and 9 different types of shockless curve (one straight line slope and eight waveforms) so that you can select the optimum one from them for any load condition.

Shockless Type Proportional Directional and Flow Control Valves

- ModelEDFG-01
- Rated Flow30L / min
- Max. Operating Pres.25MPa



Amplifier

- ModelAMN-G
- Power SupplyDC 24V (20~30V)
- Max. Input Power35W



"G" Series Shockless Type Solenoid Operated Directional Valves

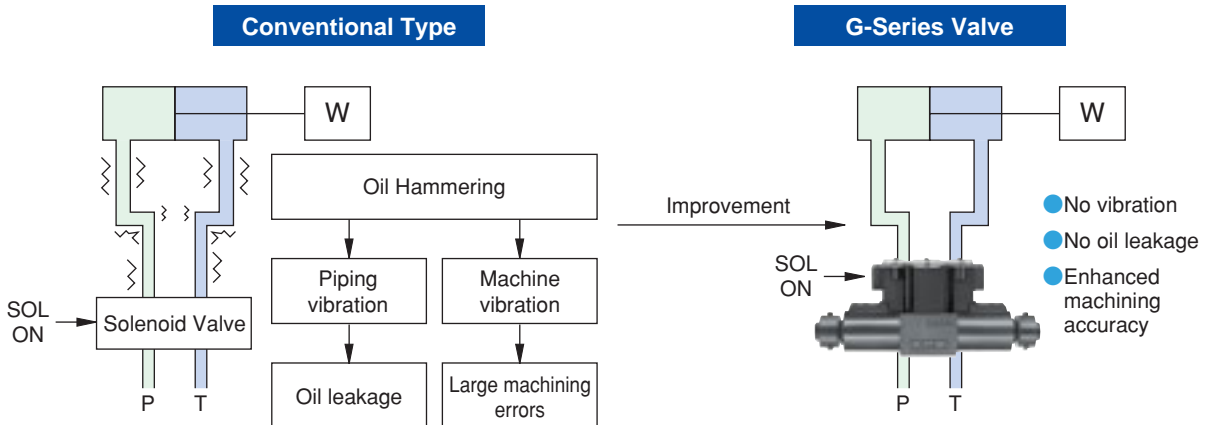
The G series solenoid operated directional valve reduces any shocks that may arise when starting machinery or shifting the spool.

These valves with better accurate control improve the reliability of the machinery and there is less pipe leakage.

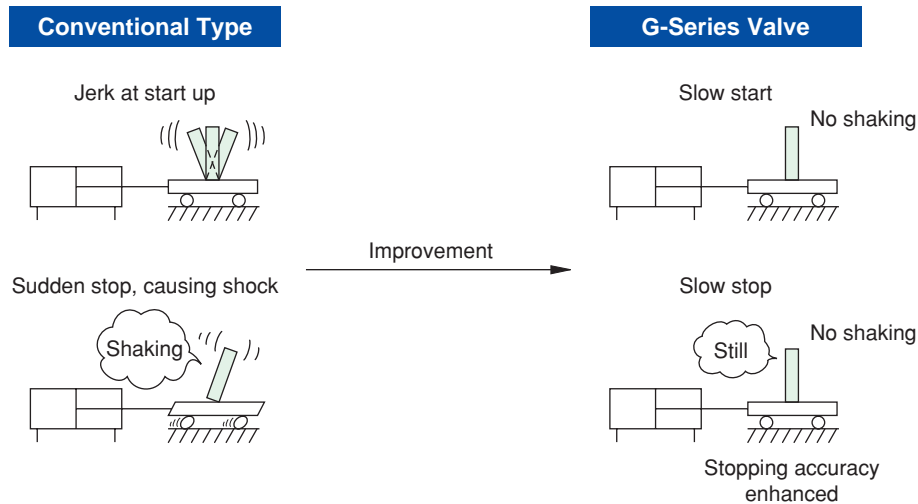


● Your valuable machines are protected from vibration and shocks

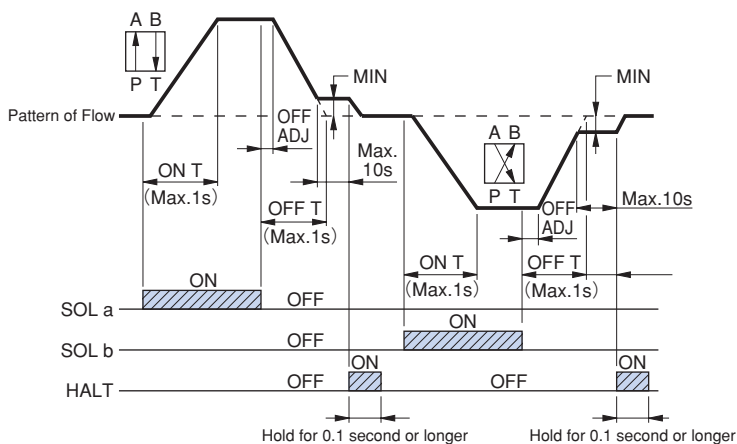
■ Shocks caused by acceleration and deceleration are reduced.



■ Oil hammering during spool shifting is reduced.



■ Relationships between SOL signals and flow patterns

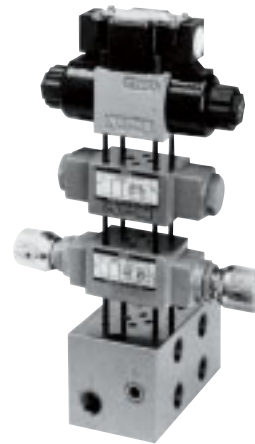


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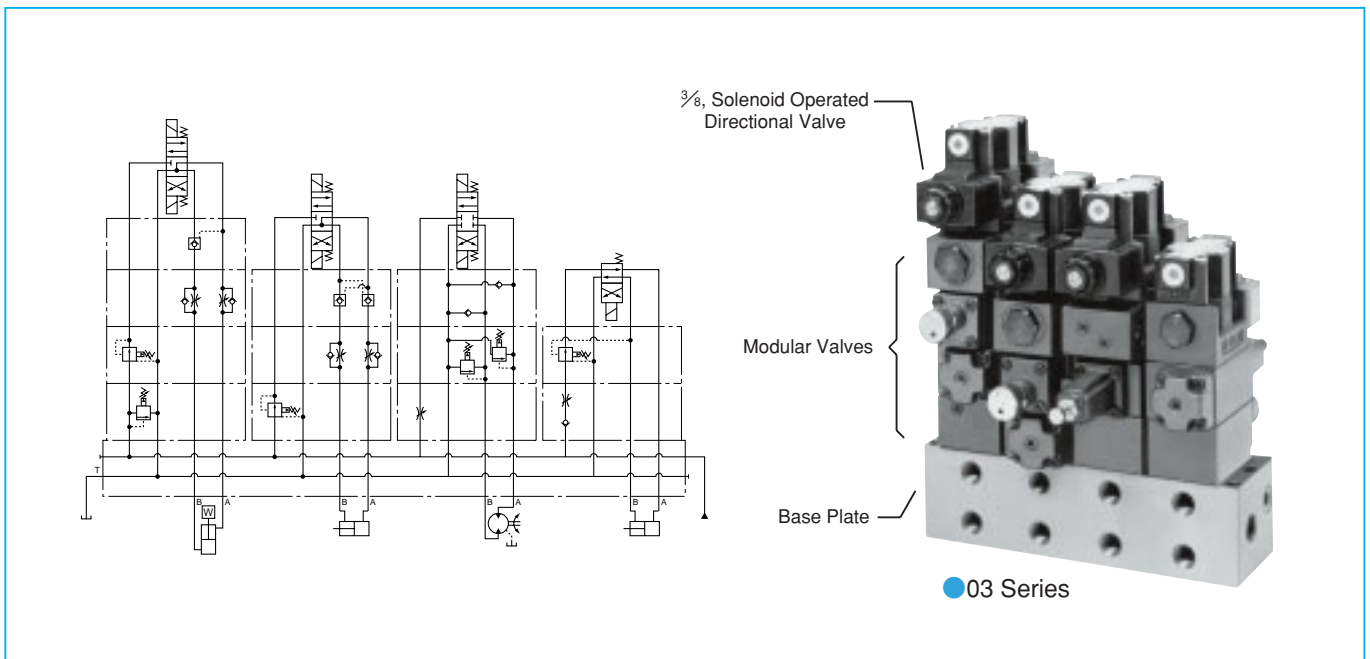
Modular Valves

YUKEN MODULAR VALVES are designed to simplify hydraulic systems, to eliminate the use of pipe connections and thus to save space, time and costs. The modular valves have standardized interfaces (ISO 4401, CETOP, NFPA) and thickness in accordance with each valve size. Any hydraulic circuit can be composed by stacking the modular valves in the correct sequence one upon another and bolting the various stacks to a common manifold base.

- Modular valves remarkably minimize the installing area and space.
- No expert skill is required to assemble, and furthermore, a supplement and a change to the circuit can easily and quickly be carried out.
- Problems such as oil leaks, vibration and noise which may arise from pipes and tubes are minimized because pipes and tubes are not necessary.
- Checks and maintenance of these valves can be performed with ease because of the method of installation.



Stacking Example

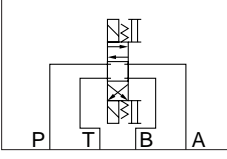
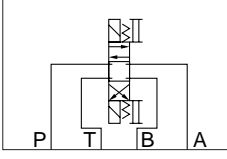
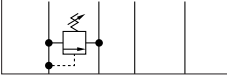
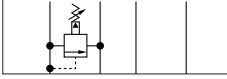
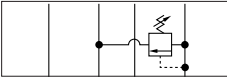
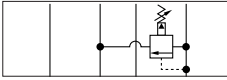
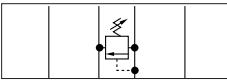
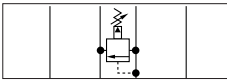
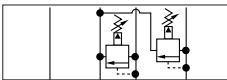
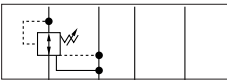

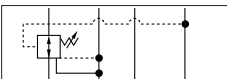
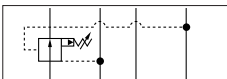
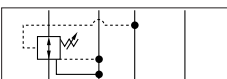
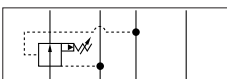
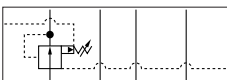


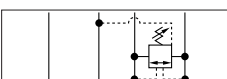
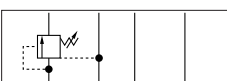

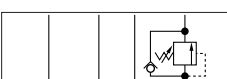
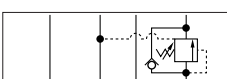
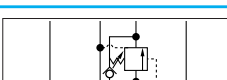
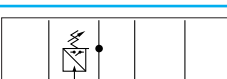

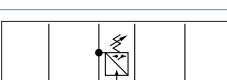


Valve Type	Maximum Operating Pressure MPa	Max. Flow L/min										
		1	2	5	10	20	50	100	200	500	1000	
005 Series Modular Valves	25	[Bar chart showing flow capacity up to ~15 L/min]										
01 Series Modular Valves	31.5	[Bar chart showing flow capacity up to ~50 L/min, with a blue star at 50]										
03 Series Modular Valves	25	[Bar chart showing flow capacity up to ~100 L/min, with a blue star at 100]										
06 Series Modular Valves	25	[Bar chart showing flow capacity up to ~200 L/min]										
10 Series Modular Valves	25	[Bar chart showing flow capacity up to ~500 L/min]										

★Max Flow for Throttle and Check Modular Valves.

List of 005/01/03 Series Modular Valves (Pressure Controls)

● Pressure Controls

Name	Graphic Symbols	Model Numbers	Graphic Symbols	Model Numbers
		"005/01" Series		"03" Series
Solenoid Operated Directional Valves		DSG-005 DSG-01		DSG-03
Relief Modular Valves		MBP-005 MBP-01		MBP-03
		MBA-01		MBA-03
		MBB-01		MBB-03
	—	—		MBW-03
Reducing Modular Valves		MRP-005 MRP-01		MRP-03
		MRA-01		MRA-03
		MRB-01		MRB-03
Reducing Modular Valves for Low Pressure Setting	—	—		MRLP-03
	—	—		MRLA-03
	—	—		MRLB-03
Brake Modular Valves		MBR-01	—	—
Sequence Modular Valves		MHP-01		MHP-03
Counterbalance Modular Valves		MHA-01		MHA-03
	—	—		MHB-03
Pressure Switch Modular Valves		MJP-01-M	—	—
		MJA-01-M		
		MJB-01-M		

List of 005/01/03 Series Modular Valves (Flow Controls, Directional Controls, Others)

● Flow Controls

Name	Graphic Symbols				Model Numbers
	P	T	B	A	
Flow Control Modular Valves					MFP-01 MFP-03
Flow Control and Check Modular Valves					MFA-01-X MFA-03-X
					MFA-01-Y MFA-03-Y
					MFB-01-X MFB-03-X
					MFB-01-Y MFB-03-Y
					MFW-01-X MFW-03-X
					MFW-01-Y MFW-03-Y
	Temperature Compensated Throttle and Check Modular Valves				
					MSTB-01-X MSTB-03-X
					MSTW-01-X MSTW-03-X
Throttle Modular Valves					MSP-01 MSP-03
Throttle and Check Modular Valves					MSCP-01 MSCP-03
					MSA-01-X MSA-03-X
					MSA-01-Y MSA-03-Y
					MSB-01-X MSB-03-X
					MSB-01-Y MSB-03-Y
					MSW-005-X MSW-01-X MSW-03-X
					MSW-005-Y MSW-01-Y MSW-03-Y
					MSW-01-XY
					MSW-01-YX

● Directional Controls

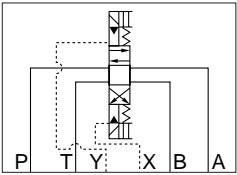
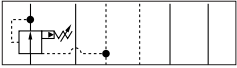
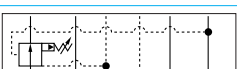
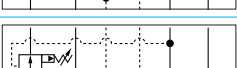
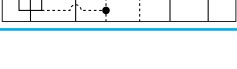
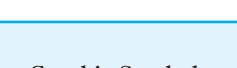
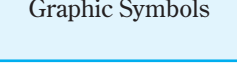
Name	Graphic Symbols				Model Numbers
	P	T	B	A	
Check Modular Valves					MCP-005 MCP-01 MCP-03
					MCA-03
					MCB-03
					MCT-01 MCT-03
					MCPT-03
Anti-Cavitation Modular Valves					MAC-01 MAC-03
Pilot Operated Check Modular Valves					MPA-01 MPA-03
					MPB-005 MPB-01 MPB-03
					MPW-005 MPW-01 MPW-03

● Modular Plates and Mounting Bolts

Name	Graphic Symbols				Model Numbers
	P	T	B	A	
End Plates					MDC-01-A MDC-03-A
					MDC-01-B MDC-03-B
Connecting Plates					MDS-01-PA
					MDS-01-PB
					MDC-01-AT
					MDS-03
Base Plates					MMC-005 MMC-01 MMC-03
Bolt Kits					MBK-005 MBK-01 MBK-03

List of 06/10 Series Modular Valves (Pressure Controls, Flow Controls, Directional Controls)

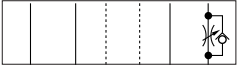
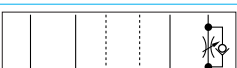

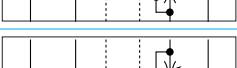
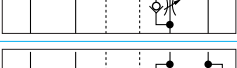
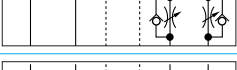


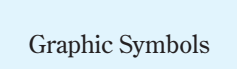

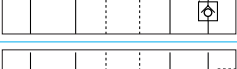
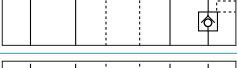
● Pressure Controls

Name	Graphic Symbols	Model Numbers
Solenoid Controlled Pilot Operated Directional Valves		DSHG-06 DSHG-10
Reducing Modular Valves		MRP-06
		MRP-10
		MRA-06
		MRA-10
		MRB-06
		MRB-10



005 Series

● Flow Controls

Name	Graphic Symbols	Model Numbers
Throttle and Check Modular Valves		MSA-06-X
		MSA-10-X
		MSA-06-Y
		MSA-10-Y
		MSB-06-X
		MSB-10-X
		MSB-06-Y
		MSB-10-Y
		MSW-06-X
		MSW-10-X
		MSW-06-Y
		MSW-10-Y

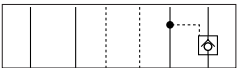

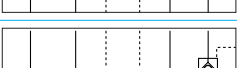
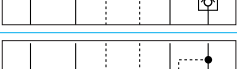

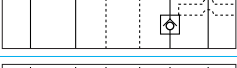
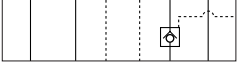
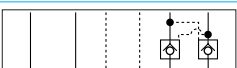
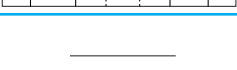




01 Series
MSW-01



03 Series
MPW-03

● Directional Controls

Name	Graphic Symbols	Model Numbers
Pilot Operated Check Modular Valves		MPA-06
		MPA-10
		MPA-06※-※-X
		MPA-10※-※-X
		MPA-06※-※-Y
		MPA-10※-※-Y
		MPB-06
		MPB-10
		MPB-06※-※-X
		MPB-10※-※-X
		MPB-06※-※-Y
		MPB-10※-※-Y
		MPW-06
		MPW-10
Mounting Bolt Kits	—	MBK-06 MBK-10



06 Series
MPW-06



10 Series
MSW-10

Friendly, Intelligent, Powerful

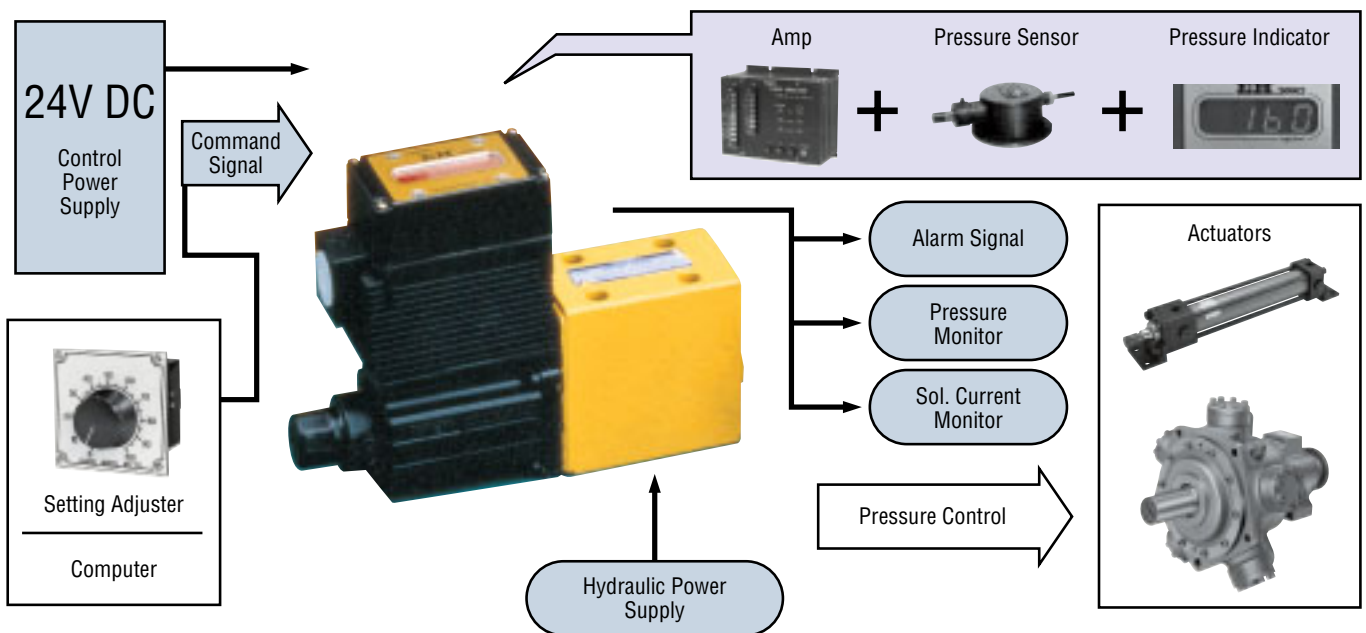
Proportional Electro — Hydraulic Controls

EH Series Proportional Electro-Hydraulic Control Valves

These EH Series are compound products of hydraulic equipment using the latest electronic and sensor technology based on the reputable E Series proportional electro hydraulic controls. We have realized epochmaking easily usable hydraulic equipment with high precision and reliability by unifying amplifier, sensor, digital data indicator which are required for proportional or servo control system into valves, and making them compact.



- Just preparing the power source (DC) for controls and command signals in addition to hydraulic source, you can easily structure proportional control system or servo system.
Amplifiers exclusively used for the system or electric control panels separately installed are unnecessary.
- By using built-in sensors;
 - (1) Pressure, orifice openness which can be converted to flow rate can be detected and controlled remotely.
 - (2) As well as a compound amplifier, closed loop system can be structured.
 - (3) Sensor output signals or deviation signals at structuring closed loop system can be monitored.
- Such disadvantages as seen in ordinary hydraulic systems in which hydraulic components, sensors and amplifiers are interconnected with each other but installed separately are eliminated.



Valve Type	Maximum Operating Pressure MPa	Max. Flow L/min											
		1	2	3	5	10	20	30	50	100	200	300	500
Pilot Relief Valves	24.5	EHDG-01											
Relief Valves	24.5	EHBG 03 06 10											
Reducing & Relieving Valves	24.5	EHRBG 06 10											
Flow Control (& Check) Valves	24.5	EHFG/EHFCG 03 06											
Flow Control & Relief Valves	24.5	EHFBG 03 06 10											
Directional & Flow Cont. Valves	24.5	EHDFG 01 03											
High Response Type Directional & Flow Cont.Valves	15.7	EHDFG 04 06											

Note) Setting adjusters are also available.



The proportional valves are able to control the system pressure or flow proportionally through a controlled input current from the amplifier.



Valve Type	Maximum Operating Pressure MPa	Max. Flow L/min															
		1	2	3	5	10	20	30	50	100	200	300	500	1000			
Pilot Relief Valves	24.5	EDG-01															
Relief Valves	24.5			EBG						03	06	10					
Reducing & Relieving Valves	24.5	ERBG								06	10						
Flow Control (& Check) Valves	20.6	EFG/EF CG (40 Ω Series)					02			03	06	10					
	24.5	EFG/EF CG (10 Ω Series)								03	06						
Flow Control & Relief Valves	24.5	EFBG (40 Ω - 10 Ω Series)								03	06	10					
		EFBG (10 Ω - 10 Ω Series)								03	06	10					
		EFBG (High Flow Series)									03	06					
Directional & Flow Cont. Valves	24.5	EDFHG								03	04	06					
High Response Type Proportional Directional and Flow Control Valves	31.5	ELDFG-01															

Note) Power amplifiers and setting adjusters are also available.

High Response Type Proportional Directional and Flow Control Valves / Amplifiers

These valves have high response characteristics equivalent to servo valves by employing a closed loop system for feed back control. Especially, the valves of zero-lap type (spool type : 3C2P) are suitable for position control or pressure control.

- High response, high accuracy, high reliability by closed loop systems
In combination with a small type intensified solenoid and a differential transducer for detecting spool position, high response, high accuracy and high reliability are realized.
- Response characteristics of 52Hz /-3dB (±25% amplitude) equivalent to those for servo valves
The valves can be used in place of servo valves of 50Hz response class for position control or pressure control.
- Excellent anti-contamination
Troubles caused by contamination can be reduced as the valves are superior in anti-contamination to servo valves.

High Response Type Proportional Directional and Flow Control Valves

- ModelELDFG-01
- Rated Flow10, 20, 30 L / min
- Max. Operating Pres.31.5MPa

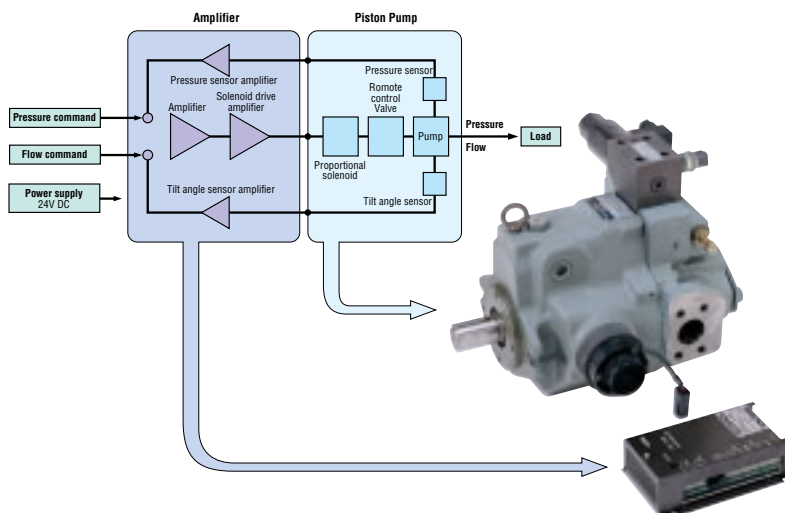
Amplifier

- ModelAMN-L-01
- Power SupplyDC 24V (20~30V)
- Max. Output Current2.5A



"A" Series Variable Displacement Piston Pumps Electro-Hydraulic Proportional Pressure & Flow Control Type (04E Type)

The pumps with 04E control type have been enjoying a high reputation in the industrial machinery and equipment sectors including the injection moulding machines. They are direct control type piston pumps developed on the same basic concept as that of EH series variable displacement pumps and to meet the customers requirements for digital control. They provide such a wide range of displacement capacities as from 15.8 to 145 cm³/rev.



Specifications

Model Numbers	Geometric Displacement cm ³ /rev	Operating Pres. MPa		Max. Shaft Speed r/min	Max. Flow at 1800r/min L/min	Hysteresis	Repeatability	Input Signal	Supply Electric Power
		Rated	Intermittent						
A16 — ※R04E	15.8	16	21	600~1800	28.4	Less than 1%	Less than 1%	Max. Flow/ 5V DC Specified Control Pressure/ 5V DC	24V DC (21~28V Included Ripple)
A22 — ※R04E	22.2	16	16		40.0				
A37 — ※R04E	36.9	16	21		66.4				
A56 — ※R04E	56.2	16	21		101				
A70 — ※R04E	70.0	25	28		126				
A90 — ※R04E	91.0	25	28		163				
A145 — ※R04E	145	25	28		261				

YF Pack – Compact & Low Noise – Hydraulic Power Unit

- Power consumption is reduced by 10 % (compared to YP pack of our manufacture), moreover, the oil temperature rise is retained at a low level.

In comparison with conventional hydraulic power units, the power consumption is reduced by 10 % (in our own comparison). Furthermore, with an increase of cooling capacity, the power unit affects less heat distortion to machines and restrains their surface temperature at a low level, resulting in the overall temperature rise less than the ambient temperature plus 12 degrees centigrade.

- Installation space is reduced to 1/2 (compared to YP pack)

Volumetric ratio : 50% reduction

Mass : 30% reduction

- Low Noise & Low Vibration

The hydraulic power units of cubic design, which have been developed to restrain the vibration, can offer the operation in low noise and low vibration.

- ModelYF10, YF16
- Max. Operating Pres.16MPa
- Geometric DisplacementYF10 : 10.0 cm³ / rev
YF16 : 15.8 cm³ / rev



Associated Products

Training System for Oil Hydraulics

- Functions and performance

You will learn the functions and performance of basic hydraulic systems and / or components such as hydraulic pumps and control valves.

- Electro-hydraulic equipment

You will learn how hydraulic equipment are controlled by computers, sequence controllers, etc.

- You can experience the dynamic power and control of hydraulics.

Most of the training kits on the market use low pressure and low pressure scale models for trainees to learn the characteristics and / or control of hydraulic equipment. However, you will note with these training kits you can not feel or obtain any reality of hydraulic power and control.

Only with our HTU-300 series training kits, you can learn and feel the real hydraulic power and control by using weights of 150 kg, to create a load.



HTU-300 series

Hydraulic Equipment

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