

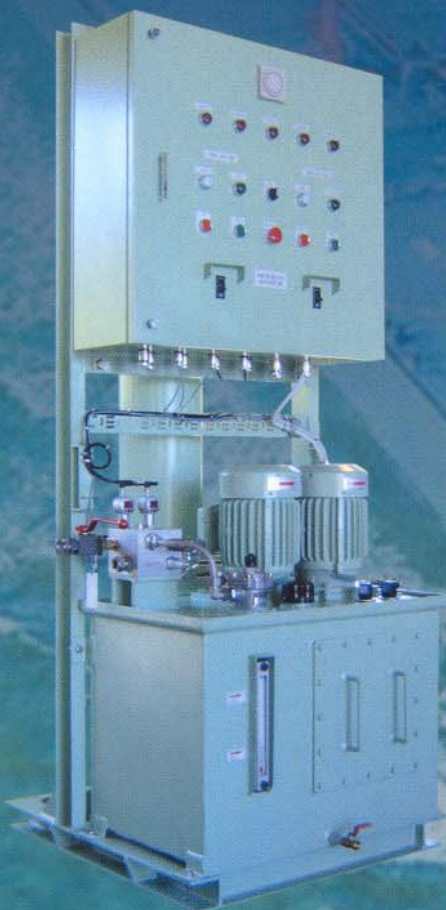
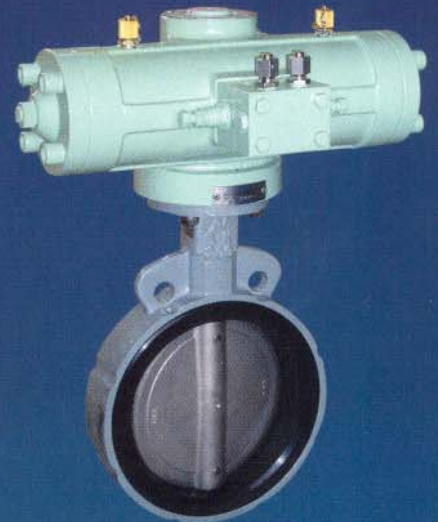
# V.R.C. SYSTEM

## Valve Remote Control System

Valve Remote Control System is applied for remote control of valves and designed primarily for use on board ship.

The remote valves to be provided with hydraulic actuator powered from hydraulic power unit and controlled by solenoid valves.

All remote valve actuators are designed to be capable of local manual operation.



# Valve Remote Control System □ □ □

## V.R.C. SYSTEM

### >> General Information of VRCS

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### >> Introduction of BY Controls, Inc.

**BY Controls, Inc.** established in 1978, we have been supplying marine equipment of vessel over 25 years. We acquired ISO 9001:2000 certificate and certified classification by ABS, LR, DNV, BV, GL and others. We are one of the leading companies in the hydraulic and pneumatic control system field in Korea marine market and having an excellent reputation from customers since we promoted business.

### >> Control Console

**Electric Control Console** for centralization control of all valves included in the system. The Control Consoles are designed and manufactured to include Cargo Handling and Monitoring systems.

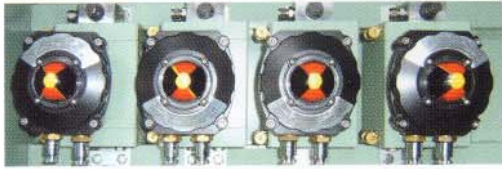


### >> Hydraulic Actuator

**Rack & Pinion Hydraulic Actuators** are designed to the operation of various type of valves including butterfly valve, globe valve, angle valve and other special valves and have been proved high efficiency and reliability of performance.

# Valve Remote Control System □ □ □

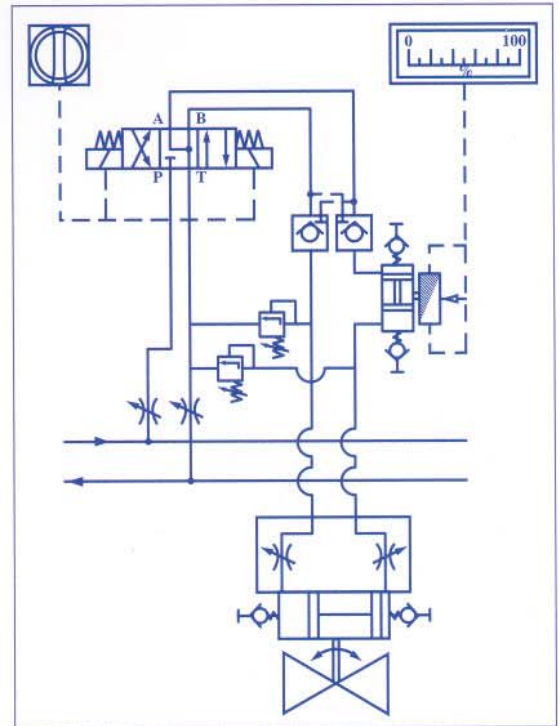
## V.R.C. SYSTEM



### >> VPI

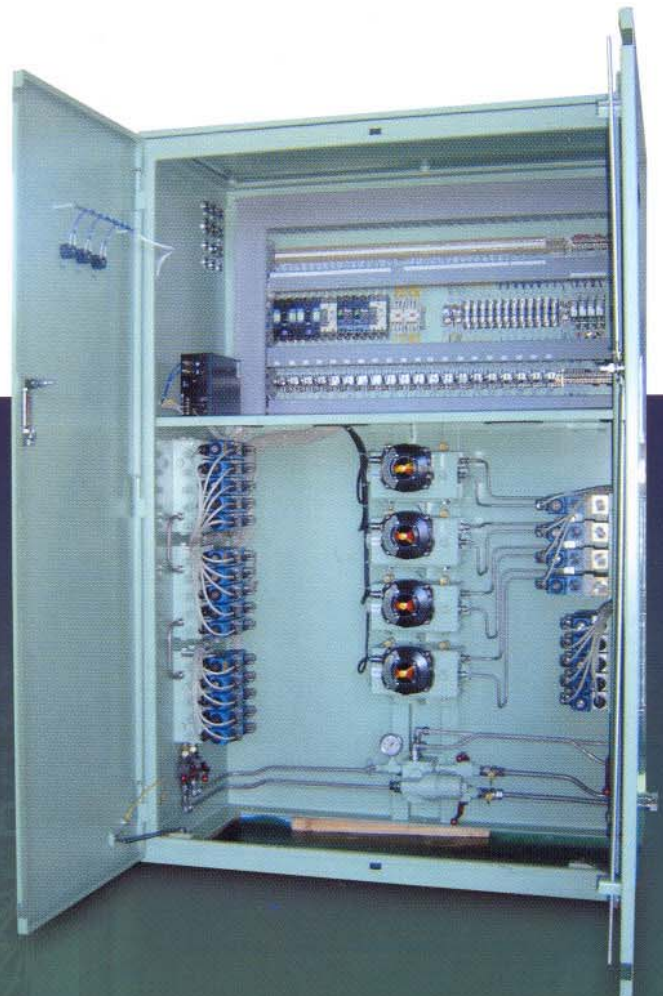
**Position indicator for valve** open/close is designed to indicate the position of hydraulically actuated valves. In general, the valve position indication to be obtained with the limit switch or potentiometer mounted on the valve directly respectively. Both On/Off and Throttle types are available.

### >> Typical Schematic Diagram



### >> Solenoid Valve Cabinet

**Solenoid Valve Cabinet** is designed to install of solenoid valves regulating the oil flow to each actuator according to the requirements and to contain complete manifold systems consisting of manifolds, solenoid valves and electric control components. The solenoid cabinet shall be installed in safety area.



# Valve Remote Control System □ □ □

## V.R.C. SYSTEM



### >> Emergency Hand Pump Unit

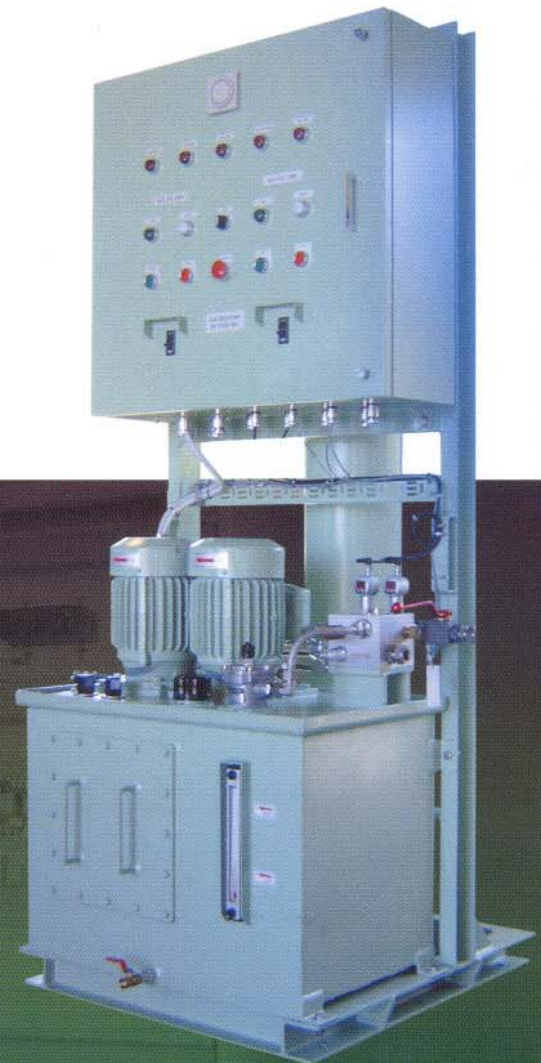
Portable hand pump, when open / close operation of hydraulic remote valve cannot be done due to damage of hydraulic piping, electric power failure or malfunction of hydraulic pump, etc., the operation can be done manually by the hand pump.

### >> Hydraulic Power Unit

**HPU** is designed to operate hydraulic pressure to open/close operation of the hydraulically operated valve. HPU consists of main electric motor & hydraulic pump and assistant electric motor & hydraulic pump. All components are selected to ensure high reliability and low noise. Accumulator will be provided.

### STANDARD SPECIFICATION

Oil Tank Volume	100 ~ 1000 Liters	
Electric Motor	Voltage - 3 $\phi$ 440V 60Hz	
	Enclosure - IP44	
Pump Capacity	2.6 ~ 12.1 Liters	
Accumulator	32 Liters	
Max. Working Pressure	105 bar	
Pressure Switch Setting	Pump	Start at 90bar
		Stop at 105bar
Relief Valve Setting	120 bar	
Alarm	Level, Temperature, Low Pressure & High Pressure	



# Manual Hydraulic Remote Control System □ □ □

## HYDECK

### >> Hydeck

**Hydeck** is named for Manual Hydraulic Remote Valve Operating System. This system was developed to replace the reach rod system which is used to transmit the force needed to operate the valve in remote place mechanically. The Hydeck system is primarily composed of two parts, the transmitter which generates the power by pumping the hydraulic oil and the actuator which is fitted onto the valve body and receives the hydraulic oil from the transmitter to actuate the valve.



>> Hyd. Actuator



>> TRANSMITTER

### >> FEATURES

- Easy and cost-effective installation
- Easier operation with higher efficiency and reliability of the performance.
- The transmitter can be installed in any position.
- High reliability without the necessity of special maintenance.
- Emergency local manual handle can be mounted on the receiver valve.

STANDARD SPECIFICATION ( TRANSMITTER )	
OPERATING FLUID	OIL
DISCHARGE CAPACITY	12 cc/rev, 24 cc/rev 48 cc/rev, 67 cc/rev
RELIEF PRESSURE	OPEN : 90 kg/cm <sup>2</sup> CLOSE : 80 kg/cm <sup>2</sup>
TEST PRESSURE	150 kg/cm <sup>2</sup>
TANK VOLUME	1.6 l

STANDARD SPECIFICATION ( SCOTCH & YOKE ACTUATOR )	
OPERATING FLUID	OIL
CYLINDER MATERIAL	STEM 13C
TEST PRESSURE	135 kg/cm <sup>2</sup>
TEMPERATURE RANGE	-29~70°C(-20~128°F)
ACTUATOR TYPE	DOUBLE ACTING

\* PATENT NO. : 0382037



>> GLOBE VALVE



>> ANGLE VALVE



>> GATE VALVE



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