

BEYOND CUSTOMER SATISFACTION  
QUALITY RESPONSIBILITY  
**HIVAL**



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**INNOBIZ**  
기업혁신형중소기업







# With Strict Quality Control, HIVAL Raise Customer's Satisfaction.

## INTRODUCTION

With many years of experience with wide range of products used in the Valve Hydraulic Control(Operation) field, HIVAL has achieved successful reputation and technical improvement to take another step forward once again. "HIVAL Co., Ltd.," are pleased to introduce our wide range products for Hydraulic Remote Control System. We are now able to provide our customers with the complete actuators solution. Meeting with our customer's needs and requirements is our top priority. Rest assured that our After Sales service is second to none. We are 100% sure of our products quality.

## OUTLINE

Recently, new manufactured plant is composed in the condition with the machinery and tools. It is required high technology. Therefore control method is developed very much in the whole industry. The operation method is with computer, so applied equipment is almost not required manpower. The local valve among the machinery and tools connected with piping system is operated by manpower in the past. But it is changed to electric or hydraulic, pneumatic. This Manual Hydraulic Remote Control System is for the local valve which is so far from the deck and the installed place is difficult to operate by man. We recommend our manual hydraulic remote control operator for your system.



MANUAL HYD.  
REMOTE CONTROL SYSTEM



SPECIAL VALVE



OFFSHORE PART  
(Drill Ship Project)

## HISTORY

- 2007. 08 Established A-Shin Hi-Val
- 2008. 06 Moved to Hanha-Ri, Hallim-Myeon, Gimhae-City
- 2008. 08 Obtained Quality System ISO 9001
- 2009. 07 Achieved W.P.S Type of Approval (ABS,RINA)
- 2009. 08 Approved HanjinHeavy IndCo., Ltd.
- 2009. 09 Approved Samsung Heavy IndCo., Ltd.
- 2009. 10 Approved Hyundai Mipo Dockyard
- 2010. 05 Approved SPP ShipbuildingCo., Ltd.
- 2012. 04 Achieved W.P.S Type of Approval (DNV)
- 2014. 01 Approved Daewoo Shipbuilding & Marine Engineering Co., Ltd.
- 2014. 11 Moved to Yongdek-Ri, Hallim-Myeon, Gimhae-City
- 2014. 11 Change Company Name to HIVAL
- 2014. 11 Established R&D Center
- 2016. 04 Approved Hyundai Heavy IndCo., Ltd.
- 2017. 03 UpTake Damper Valve Development
- 2018. 04 UpTake Damper Valve Delivery to Kanglim Heavy Industry
- 2020. 02 Hybrid Valve Development
- 2020. 06 Certificate of Gimhae Small Giants
- 2020. 07 Certificate of Excellent employment enterprise
- 2020. 07 Certificate of Promising export enterprise







# EQUIPMENT

No	NAME	OVERHEAD CRANE (10 TON)	REMARK
1	OVERHEAD CRANE	OVERHEAD CRANE (5 TON)	1 SET
		OVERHEAD CRANE (2.8 TON)	1 SET
		4000 X 5000 X 1800	1 SET
2	TEST ZIG (BOOM)	1500 X 3700 X 4000	1 SET
3	TEST ZIG (SWING)	2800 X 3500 X 6300	1 SET
4	TEST ZIG (FIXED)	400bar, 60ℓ/min	1 SET
5	POWER PACK	400bar, 20ℓ/min	1 SET
6	POWER PACK	200bar, 10ℓ/min	1 SET
7	POWER PACK	30ℓ/min	4 SET
8	FLUSHING UNIT	ICONUTOS OIL SAMPLER	1 SET
9	PARTICLE COUNTER	50 TON	1 SET
10	LOAD CELL	2000 X 700 X 700	1 SET
11	LATHE	FCAW 500A	1 SET
12	WELDING M/C	2000 X 1000 X 2000 (MAX DIA. 500A)	2 SET
13	HYDRAULIC PRESS	4000 X 3000 X 2500	2 SET
14	PAINT BOOTH	SOLLEDS 5050 LED / WHITE	1 SET

OVERHEAD CRANE (10 TON)	OVERHEAD CRANE (10 TON)	OVERHEAD CRANE (5 TON)	FORKLIFT	WELDING M/C (FCAW)
				
HYDRAULIC PRESS	LOAD CELL	HYD. POWER UNIT	PARTICLE COUNTER	FLUSHING UNIT
				
TEST ZIG (BOOM)	TEST ZIG (STUMP - FIXED)	TEST ZIG (STUMP - SWING)	LATHE	PAINT BOOTH
				

# CERTIFICATE AND REGISTRATION

Quality of Management System Certificate	W.P.S Type of Approval (ABS CERT)	W.P.S Type of Approval (DNV CERT)	W.P.S Type of Approval (RINA CERT)	Retractable Test Stump (ABS CERT)
				
Retractable Test Stump (DNV CERT)	Telescopic Boom (ABS CERT)	Telescopic Boom (DNV CERT)	기업 부설연구소	기술혁신형 중소기업_Inno-Biz
				
김해형 강소기업 인증서	수출유망중소기업 지정증	Telescopic Boom (PATENT)	Rack & Pinion Actuator (DESIGN)	Manual Hyd. System (PATENT)
				
Blind Flange Valve (DESIGN)	Slotting Actuator (KOREA - PATENT)	Slotting Actuator (CHINA - PATENT)	Slotting Actuator (JAPAN - PATENT)	Slotting Actuator (SINGAPORE - PATENT)
				

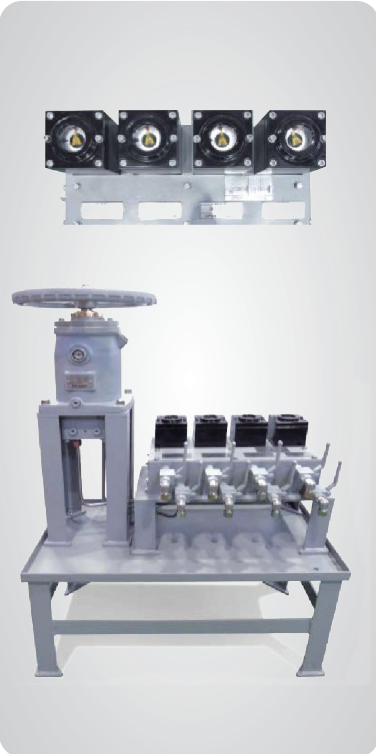




# MANUAL HYD. REMOTE CONTROL SYSTEM



Standard Type



Multi Type (Flowmeter)



Multi Type (Electric)



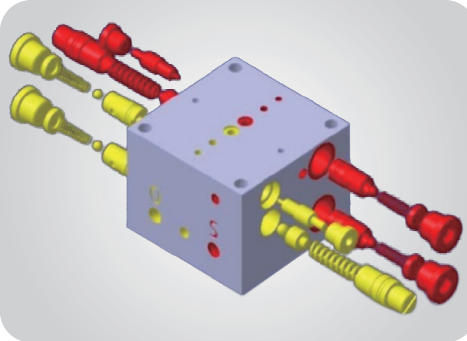
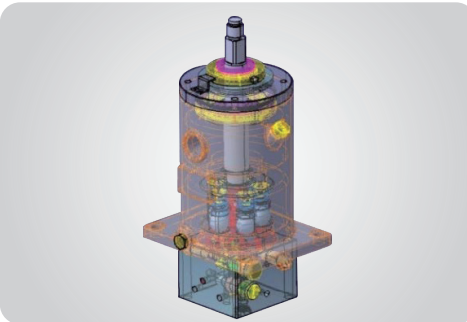
Hand Pump (Mechanical)

## FEATURES

- 1. Due to not required electricity and manual operating, it can be installed anywhere and easily.
- 2. It has an indicator that helps to know degree of Open/Close easily.
- 3. The usability is very excellent and able to generating high pressure by easy operation.
- 4. It is able to select best product in accordance with actuator size by diversification of model according to volume.
- 5. It has built-in check valve and relief valve therefore easy to pressure control and no leakage.

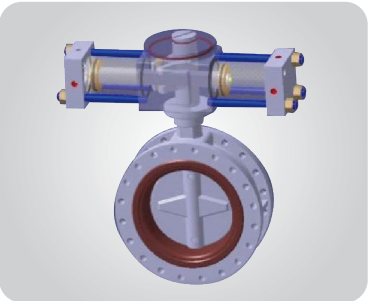
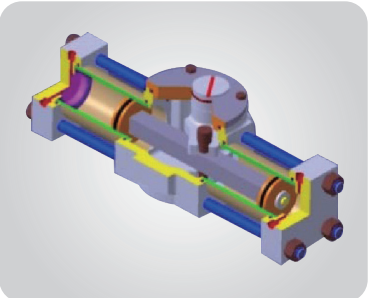
## SPECIFICATIONS

Max. Working Pressure	135 kg/cm <sup>2</sup>
Setting Pressure (Standard)	Open : 80 kg/cm <sup>2</sup>
	Close : 90 kg/cm <sup>2</sup>
Operating Fluid	Hydraulic Oil
Temp. Range	-20~80°C



# MANUAL HYD. REMOTE CONTROL SYSTEM

## ROTARY ACTUATOR-SCOTCH YOKE TYPE

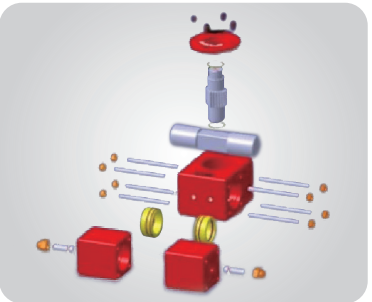
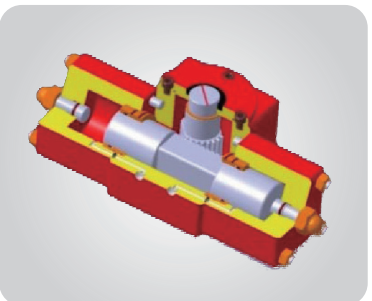
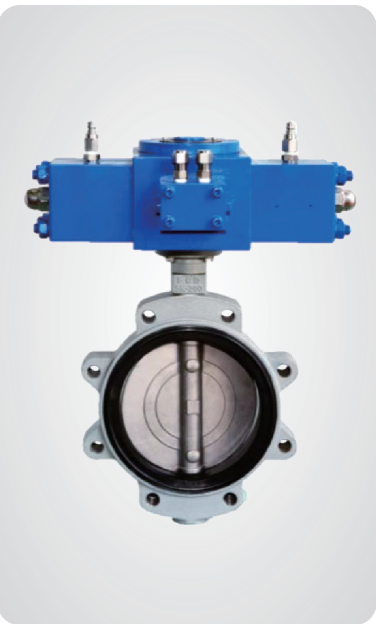


Scotch Yoke type Actuator is designed structure that change pushing motion of Pin on Rod to 90 degree rotational motion of Arm by hydraulic pressure supplied from outside.

## SPECIFICATIONS

Max. Working Pressure	135 kg/cm <sup>2</sup>
Operating Fluid	Hydraulic Oil
Temp. Range	-20~80°C
Actuator Type	Double Acting
Standard Rotation	90° (Open↔Close)
Rotational Tolerances	±5° (Open↔Close)

## ROTARY ACTUATOR-RACK & PINION TYPE



Rack & Pinion Gear type Actuator is designed structure that change pushing motion of Rack gear to 90 degree rotational motion of Pinion gear by hydraulic pressure supplied from outside.

## SPECIFICATIONS

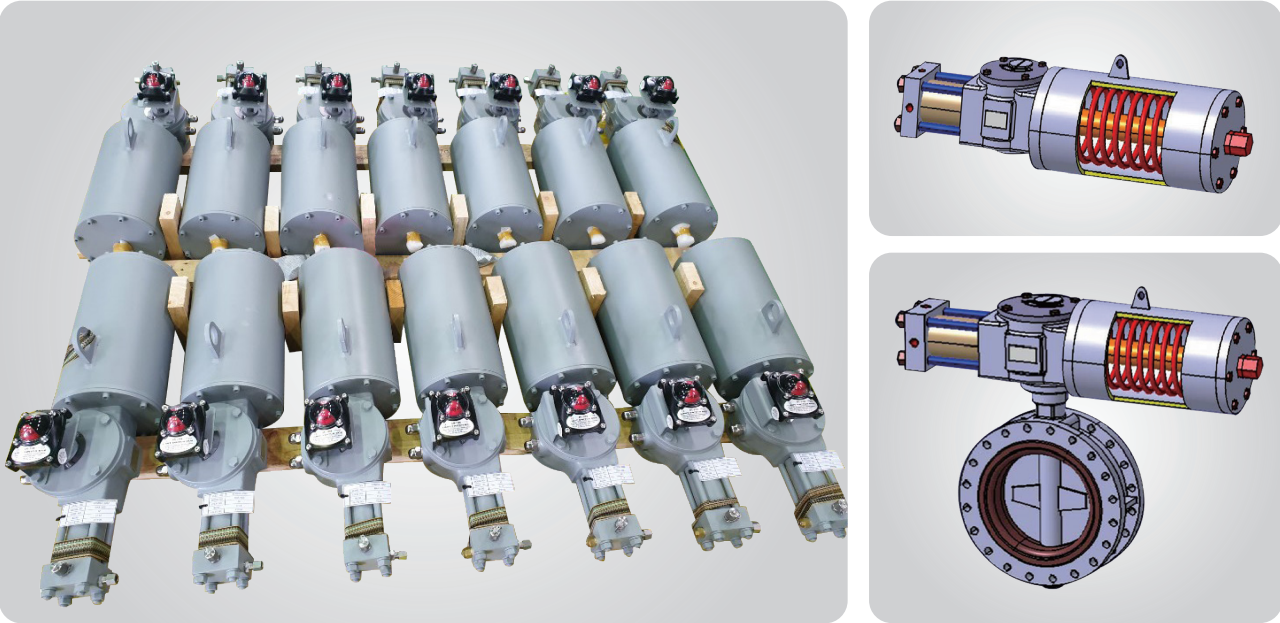
Max. Working Pressure	135 kg/cm <sup>2</sup>
Operating Fluid	Hydraulic Oil
Temp. Range	-20~80°C
Actuator Type	Double Acting
Standard Rotation	90° (Open↔Close)
Rotational Tolerances	±5° (Open↔Close)





MANUAL HYD. REMOTE CONTROL SYSTEM

SINGLE ACTING ROTARY ACTUATOR-SCOCH YOKE SPRING RETURN TYPE



SPECIFICATIONS

Max. Working Pressure	135 kg/cm <sup>2</sup>
Operating Fluid	Hydraulic Oil
Temp. Range	-20~80°C
Actuator Type	Single Acting (Spring return)
Standard Rotation	90° (Open↔Close)
Rotational Tolerances	±5° (Open↔Close)

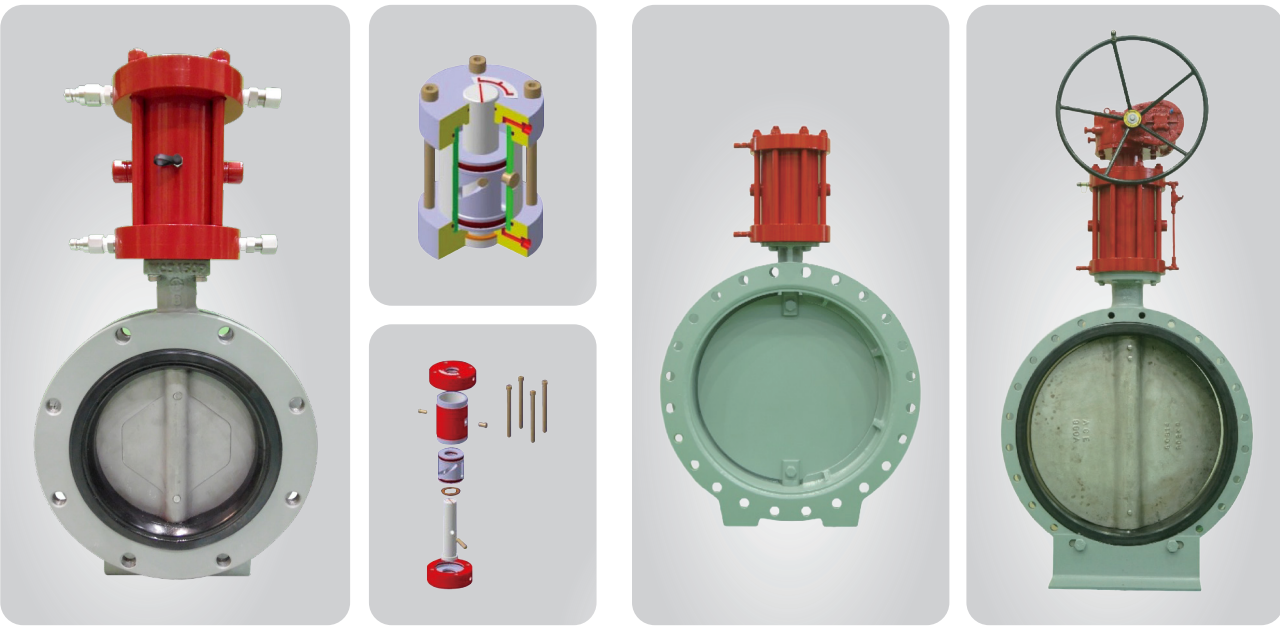
Scotch Yoke type Actuator is designed structure that change pushing motion of Pin on Rod to 90 degree rotational motion of Arm by hydraulic pressure supplied from outside.

OPTIONS

Function	Spring Closed / Opened
Installation	Indoor / Outdoor / Submerged
Mounting Direction	Cross / Parallel to pipeline
Mounting Flange Dimension	ISO5211 (F03~F60) / Other Size
Paint	Maker standard / Other Paint
Position indication	Local indicator / Limit switch

MANUAL HYD. REMOTE CONTROL SYSTEM

ROTARY ACTUATOR-SLOTING PISTON TYPE



FEATURES

- 1. As Vertical structure, it is not affected by interference of surrounding structure during piping.
- 2. It does not have casting material therefore Watertight function is perfect.
- 3. It is miniaturized and light weight structure compare with existing product.
- 4. It is available for both Double and Single Acting type.
- 5. In emergency, manual operation is possible by gear box.

Slotting Piston Type Actuator is designed a structure that change up & down motion to 90 degree rotational motion according to guiding Guide Slot of Piston by hydraulic pressure supplied from outside.

SPECIFICATIONS

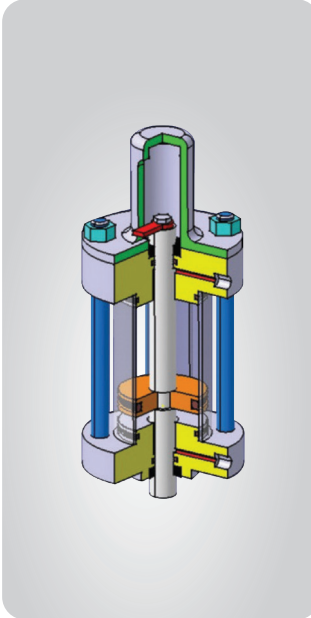
Max. Working Pressure	135 kg/cm <sup>2</sup>
Operating Fluid	Hydraulic Oil
Temp. Range	-20~80°C
Actuator Type	Single Acting (Spring return)
Standard Rotation	90° (Open↔Close)
Rotational Tolerances	±5° (Open↔Close)





# MANUAL HYD. REMOTE CONTROL SYSTEM

## LINEAR ACTUATOR



Linear actuator is designed structure that makes Rod move up and down by pushing Piston due hydraulic pressure supplied from outside.It can be applied Globe valve, Angle valve, Gate valve, Surface valve and Storm valve.

### SPECIFICATIONS

Max. Working Pressure	135 kg/cm <sup>2</sup>
Operating Fluid	Hydraulic Oil
Temp. Range	-20~80°C
Actuator Type	Double Acting



# MANUAL HYD. REMOTE CONTROL SYSTEM

## HYD. PORTABLE HAND PUMP

Portable hydraulic supply equipment that is used to drive hydraulic actuators or equipment. Composed of single or double acting to fit hydraulic supply type of connecting product and it can be used by adding various accessories (relief valve, bypass valve, pressure gauge, etc.)

### STANDARD TYPE



### SPECIFICATIONS

Model	HHP-S-2B
Max. Pressure	700 kg/cm <sup>2</sup>
Min. Pressure	20 kg/cm <sup>2</sup>
Operating Fluid	Hydraulic Oil
Operating Type	Single / Double Acting
Volume per Stroke	31 cc
Oil Tank Capacity	2300 cc
Dimension (W x L x H)	660 x 150 x 160
Weight	13 kg

### CART TYPE



### SPECIFICATIONS

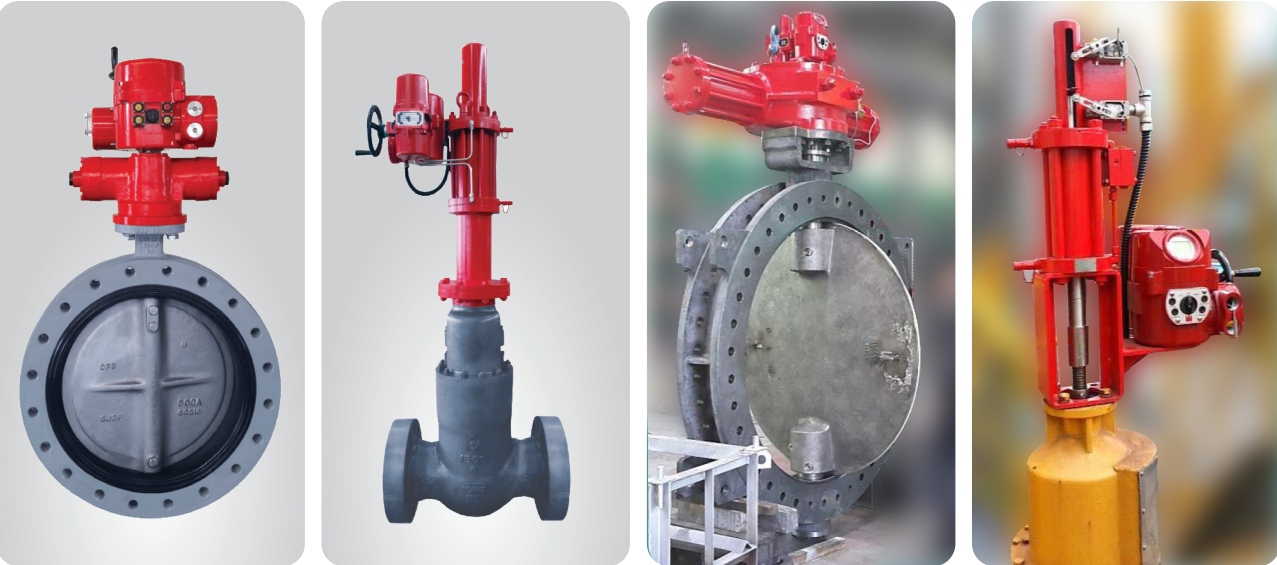
Model	HHP-C-45B
Max. Pressure	280 kg/cm <sup>2</sup>
Min. Pressure	20 kg/cm <sup>2</sup>
Operating Fluid	Hydraulic Oil
Operating Type	Single / Double Acting
Volume per Stroke	45 cc
Oil Tank Capacity	5000 cc
Dimension (W x L x H)	330 x 330 x 650
Weight	25 kg





# ELECTRO HYD. REMOTE CONTROL SYSTEM

## ELECTRO HYDRAULIC ACTUATOR



By grafting Electro-Hydraulic valve controller that hydraulic power unit, manual handle, control switch, controller and communication module are built in hydraulic Actuator, it is able to easy operate and control directly or indirectly. It can be applied Globe valve, Angle valve, Gate valve, Surface valve and Storm valve

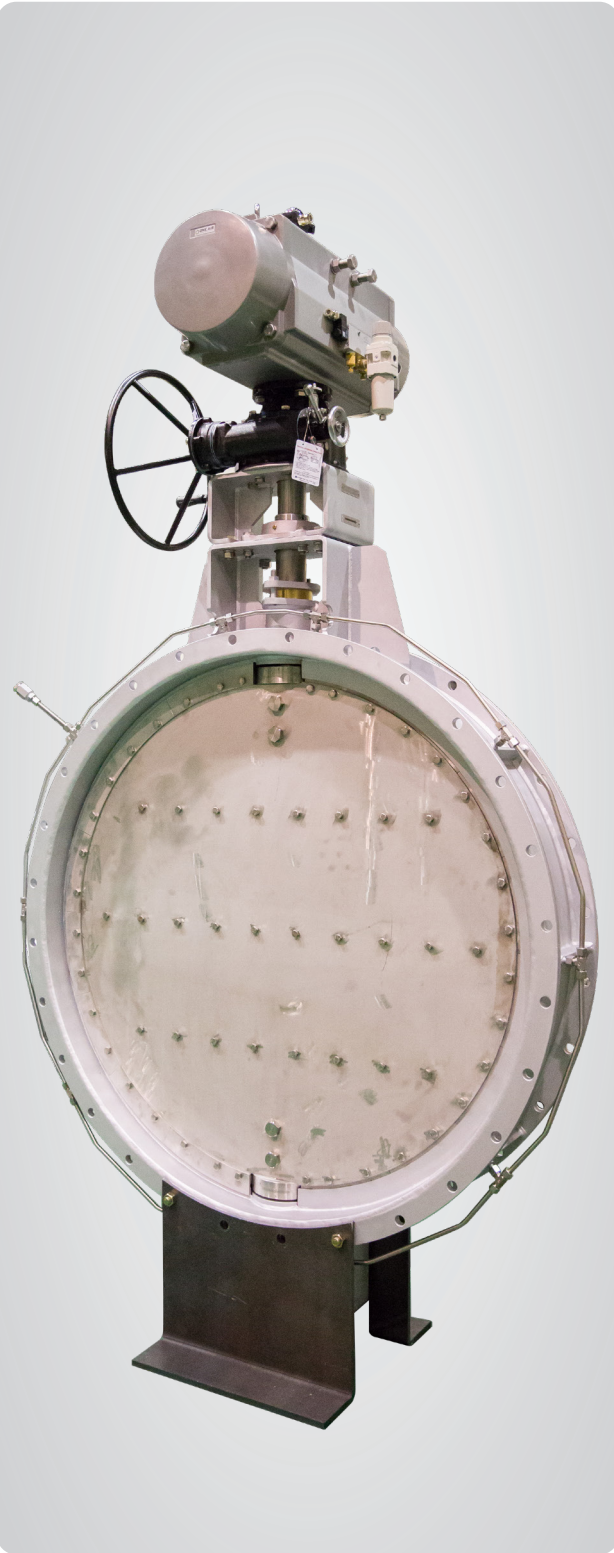
### FEATURES

- 1. Operation torque is high, it can be attached on valve directly without reduction gear.
- 2. Power usage is low, it is an eco-friendly product that can save energy resources.
- 3. Depending on the purpose of use such as On/Off control, Proportional control (modulation) and Intelligent type (modulation & speed control), it can be selected 5 types according to operation type and input/output signal
- 4. It can be installed by unify or separate for a manipulator and actuator.
- 5. Using only manipulator, easy operation setting change and password setting are possible, so that it is possible of safe use by limiting arbitrary use.

### SPECIFICATIONS

Max. Working Pressure	135kg/cm <sup>2</sup>
Operating Fluid	Hydraulic Oil
Temp. Range	-20~80°C
Motor	BLDC Motor 200W / 400W
Power	AC220V 1Ph / AC 440V 3Ph
Pump Spec	0.5~2.0cc (cc/rpm)
IN, OUT Signal	4mA~20mA
Protection Class	Exd IICT6 / IP68

# UP TAKE DAMPER VALVE



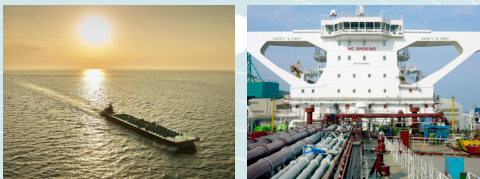
### DEFINITION

Flange or wafer butterfly damper valve. Cast or welded body and disc depending the diameter of the valve. Manufactured with different kinds of tightness depending the customer requirements. Damper valves type Sealing air Damper as Tandem execution are of welded construction and are designed as above 98% tight valves to shut-off media such as air, process gas, etc.

### Specification

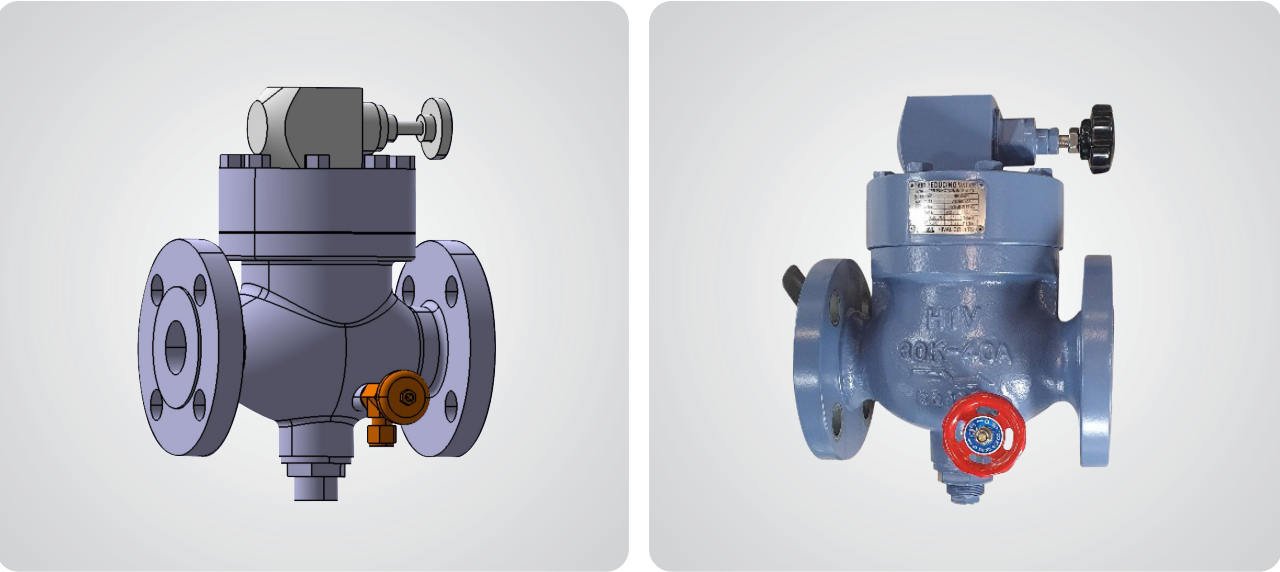
Range	Application
Size	From DN350 up to DN2000
Fluid	Air, Steam, Exhaust gas
End Connection	JIS F7805
Temp. Range	Up to 450°C



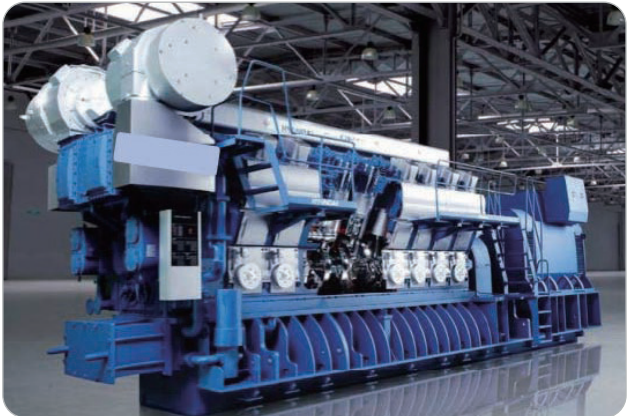


SPECIAL VALVE

HYBRID VALVE



Hybrid valve is the plate method of steel material, the upper opening method of the disc, and the improved location of the relief valve to improve the operation of the pressure relief valve by facilitating the operation of the piston, and the pressure relief valve for easy maintenance of the relief valve.

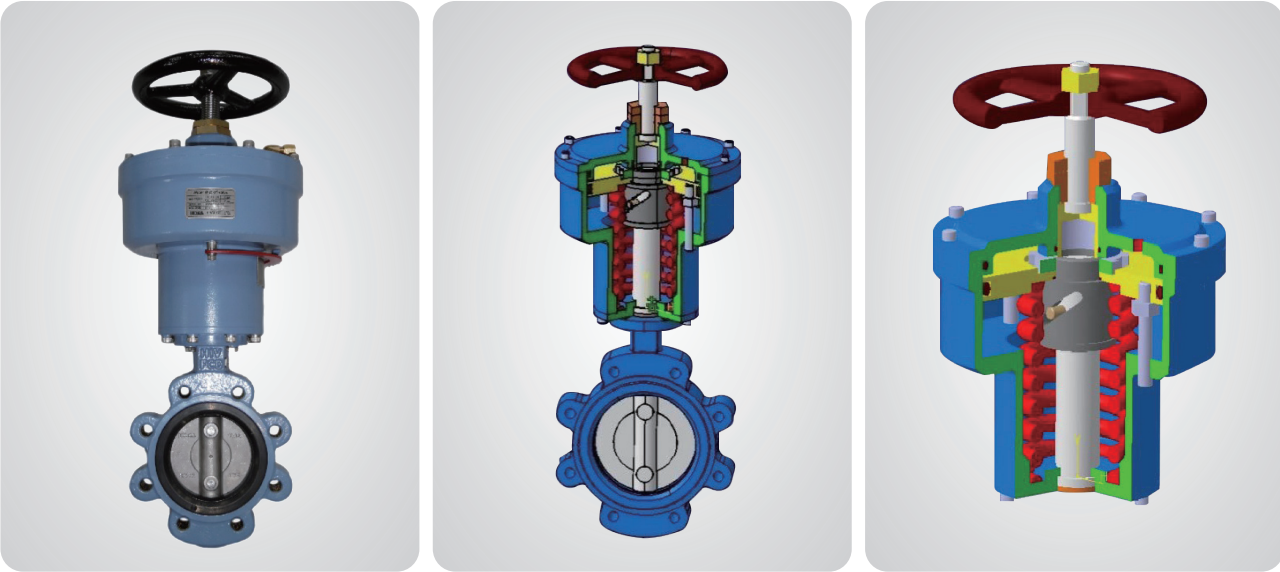


SPECIFICATIONS

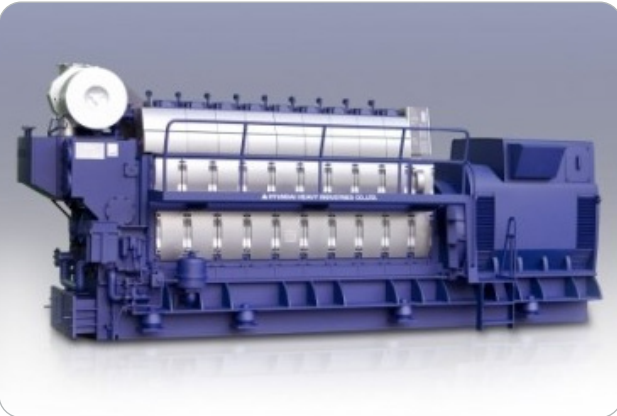
Application fluid	Compressor air
Max. working pressure	30bar (kg/cm <sup>2</sup> )
Ambient temperature	- 6 ~ 80°C
Range of adjustment	2~10 kgf/vm <sup>2</sup>
Air flow capacity	Min 0.6 Nm <sup>3</sup> /sec
Safe valve	Self-adjustable valve (Set pressure +10%)

SPECIAL VALVE

WATER SHUT-OFF VALVE



Water shut-off valve is product that automatically opens or closes cooling water supply line when engine operation started and stopped.  
Combined product by single acting actuator of spring return type and butterfly valve or ball valve. Automatically opens or closes valve when the required pressure is formed at the actuator, also has a manual handle that can be manually opened or closed in an emergency.



SPECIFICATIONS

Working Pressure	5 bar
Service Medium	Sea water / Fresh water
Operating Type	Single Acting (Spring Return)
Flange Size	JIS 5K, 10K, PN6, PN10
Actuator Operating Pressure	Opening Start : 2.7 bar / Full Open : 4 bar / Full Close : 2 bar
Size	25A (Ball Valve) / 65A~150A (Butterfly Valve)





SPECIAL VALVE

BELLOWS VALVE



SPECIFICATIONS

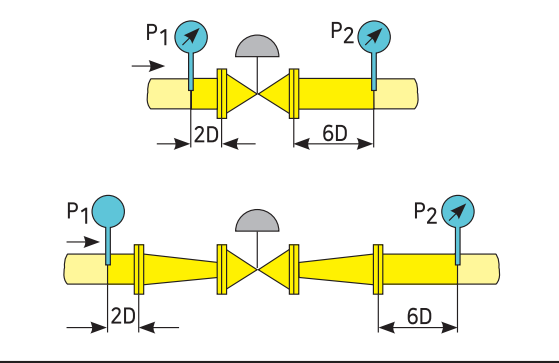
Max. Working Pressure	20 kg/cm <sup>2</sup>
Fluid	Thermal oil / Water / Steam / Gases / Oil ect.
Temp. Range	0~280°C
Face to Face	Maker Standard
Materials	Body (SC480) / Bonnet (SC480) / Disc (SUS304) / Seat (SUS304) / Bellows (AISI 316Ti)
Rating	JIS 10, kg/cm <sup>2</sup> , 16 kg/cm <sup>2</sup> , 20 kg/cm <sup>2</sup>
Size	15A~300A

BALANCING VALVE



Kv & Cv

- Kv caculation is defined in DIN EN 60534.
- Kv Value is measured with water at 20°C and 1bar differential pressure.
- You have to calculate with Q flow rate in m3/h converting from Kv to Cv Kv x 1,17 = Cv



SPECIAL VALVE

CYLINDER VALVE



Basically attached to the high pressure cylinder and controls the gas flow. It is designed to meet high pressure and high temperature environment. Easily applied to complex and narrow spaces.

SPECIFICATIONS

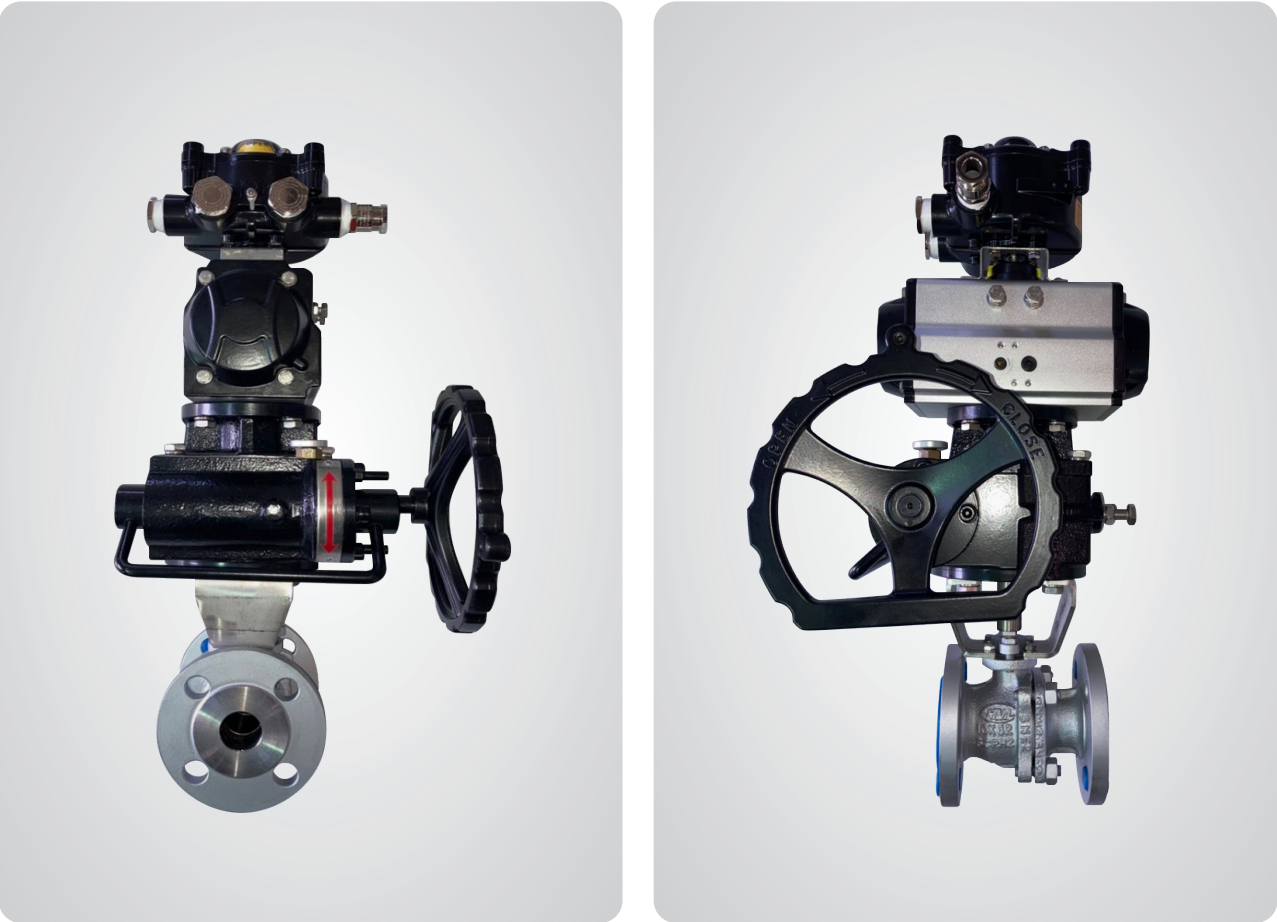
Application fluid	N2 / NG
Operating action	PNEUMATIC
Max. working pressure	2.0Mpa
Max. temperature	-20°C ~ 100°C
Hyd. Test pressure	3.0Mpa
Size	10K 15A ~ 65A





SPECIAL VALVE

BALL VALVE



The ball valve has less pressure loss and is highly maneuverable. Excellent sealing and suitable for narrow valve installation. When the valve is opened and closed, the flow path is the same shape as the pipe, and the pressure loss caused by the valve is the same as the pipe.

SPECIFICATIONS

Application fluid	N2
Operating action	PNEUMATIC / SINGLE ACTING
Max. working pressure	2.0Mpa
Max. temperature	-20 ~ 100°C
Type of body	2-PIECE SIDE ENTRY FLOATING BALL, FULL BORE
Size	10K 15 ~ 125A

SPECIAL VALVE

CONTROL VALVE



Control valve is air-to-close differential pressure valve, it has a structure where the valve opens when the primary pressure goes up. It is installed in between the supply header and return header to control the differential pressure.

SPECIFICATIONS

Application fluid	COLD / HOT WATER / N2
Operating action	PNEUMATIC
Max. working pressure	2.0Mpa
Max. temperature	170°C BELOW
Hyd. Test pressure	3.0Mpa
Nominal Pressure	10K ~ 30K
Size	15A ~ 250A





SPECIAL VALVE

CRYOGENIC CONTROL VALVE



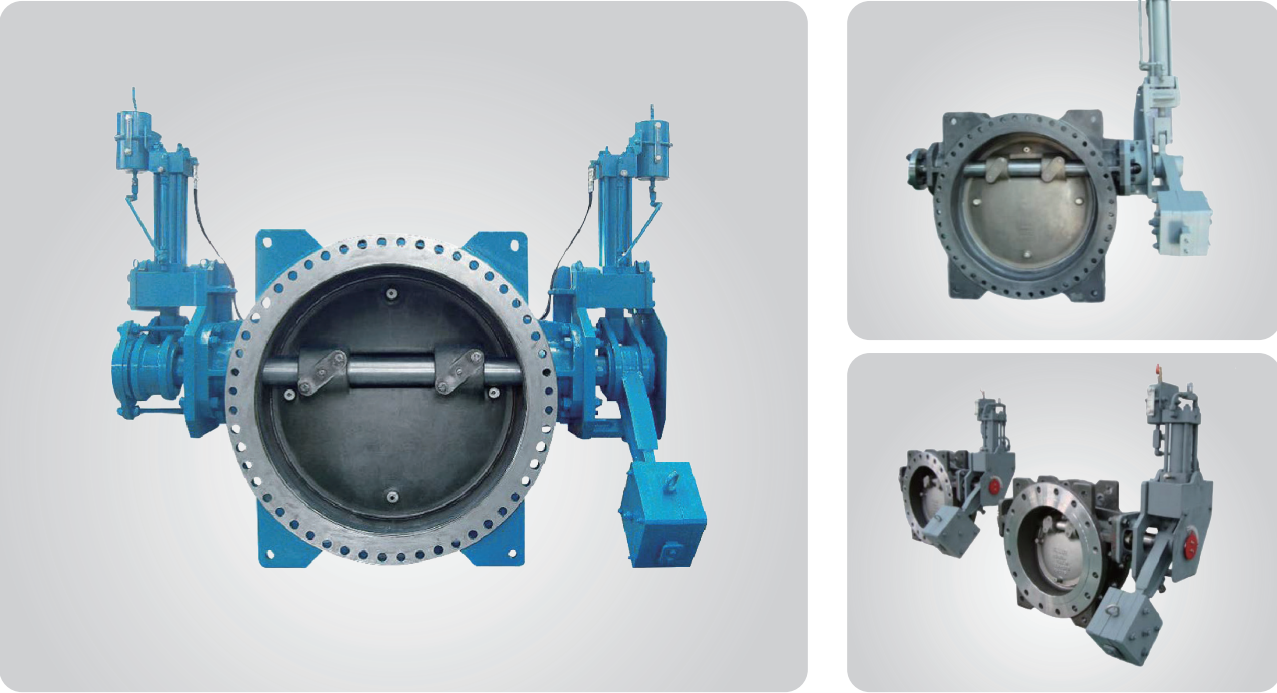
Cryogenic Valve is used for building up cryogenic tank, tank lorry and cryogenic lines by providing smooth control of fluid flow on the basis of user's safety and convenience.

SPECIFICATIONS

Application fluid	LNG / LPG / LEG
Operating action	PNEUMATIC
Max. temperature	DOWN TO -196°C
Nominal Pressure	10K ~ 30K
Nominal diameter	1/2" ~ 20"

SPECIAL VALVE

NON-SLAM CHECK VALVE



Non-Slam Check Valve is installed in front of pump in Plant, District Heating Corporation and Ship.  
This valve is added hydraulic braking device which helps disc closing 90% fast and 10% slowly to reduce shock and noise transmitted to the pipe by back-flow when the pump stop working.

SPECIFICATIONS

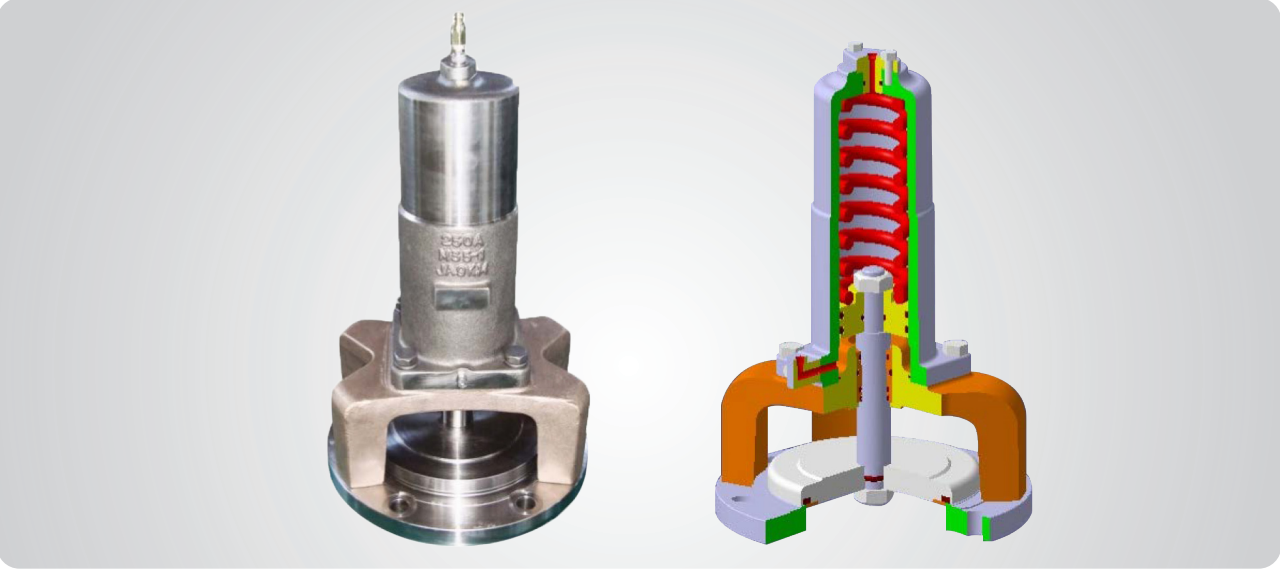
Range		Application
Size		8"(200A) - 72"(1800A)
Fluid		Water, Air, Steam, Gas, Sea Water
Rating		JIS 10K, 20K, ANSI 150#, 300# PN10, 16, 20, AWWA C504, KS B 2333
End Connection		Flanged
Temp. Range		-40°C - 400°C
Materials	Body	A216-WCB, A536 Gr, A351-CF8, A351-CF8M A351-CF3, A351-CF3M B148 C95800 etc
	Disc	A216-WCB, A536 Gr, A351-CF8, A351-CF8M A351-CF3, A351-CF3M B148 C95800 etc
	Seat	Rubber (EPDM, BUNA-N etc) Stellite Welding A240-304, A240-316 etc, Rubber Lining





SPECIAL VALVE

BALLAST CONTROL VALVE



Ballast Control Valve is applied to military landing ship which is required fast starting (Mobility) therefore differs from general large cargo ship. This valve is operated to inflow and outflow seawater directly to Ballast tank. It is operated with submerged state in seawater and required high corrosion resistance and accurate operability as not easily accessible.



LPX-2번함, LST II - 1~4번함

SPECIFICATIONS

Working Pressure	25 kg/cm <sup>2</sup>
Operating Fluid	Hydraulic Fluid
Temp. Range	-20~80°C
Material	A494 M35-1 (Monel)
Size	100A, 150A, 200A, 250A, 350A

SPECIAL VALVE

DAMPER VALVE



As a valve mounted on the damper ventilation line, Damper Valve is watertight type which prevent to inflow seawater inside of ship when vessel is flooded. As using watertight damper valve instead of existing applied butterfly valve for piping, it has advantages of light weight, low price, no need adapter and easy assembly.



SPECIFICATIONS

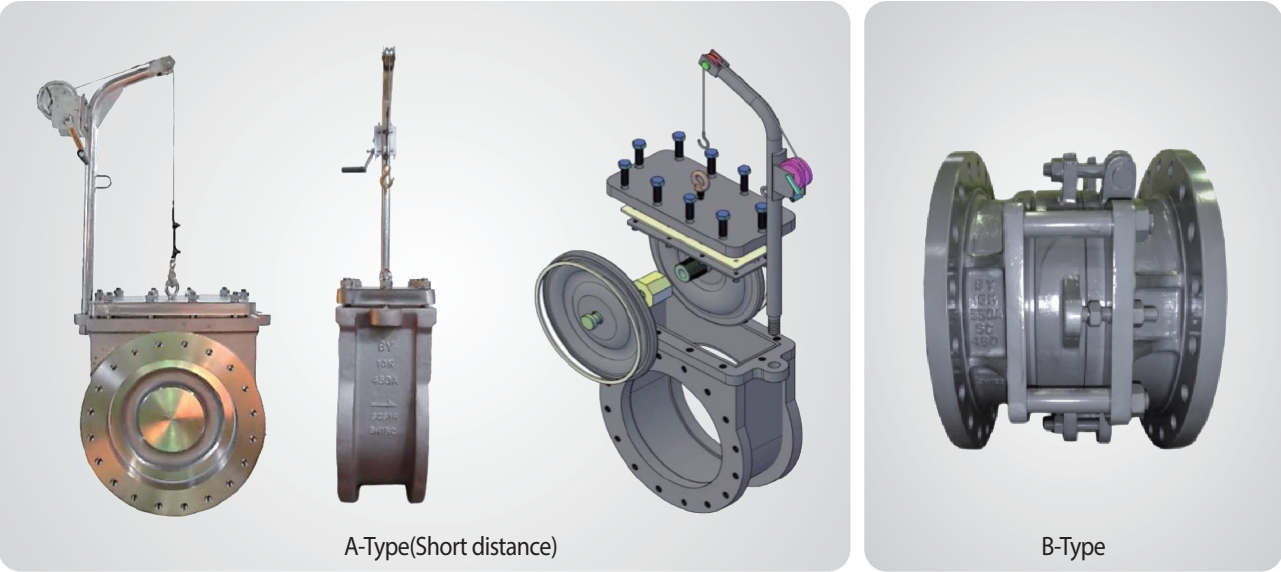
Working Pressure	0.14 kg/cm <sup>2</sup>
Fluid	Air
Operating Type	Gearbox / lever
Materials	Body (SS400) / Disc (SUS304) / Seat (NBR)
Size (H x W)	100x100, 150x100, 200x100 200x150, 250x150, 300x150, 350x150 300x200, 350x200, 400x200 400x250, 450x250, 500x250, 550 x 250 600x300, 600x400, 600x450





SPECIAL VALVE

BLIND FLANGE VALVE



Blind flange valves are used in pipe lines in order to shut off a flow through the pipe line and to perform full segregation between different fluids, and has a typical field of use on board chemical tankers, product tankers and supply vessels. The valves provide security when blinding liquids like oil, gases and various chemicals. The valves are offered with various flanges such as DIN, Ansi and JIS etc., has a very short face to face dimension and can be operated with a minimum of maintenance.



SPECIFICATIONS

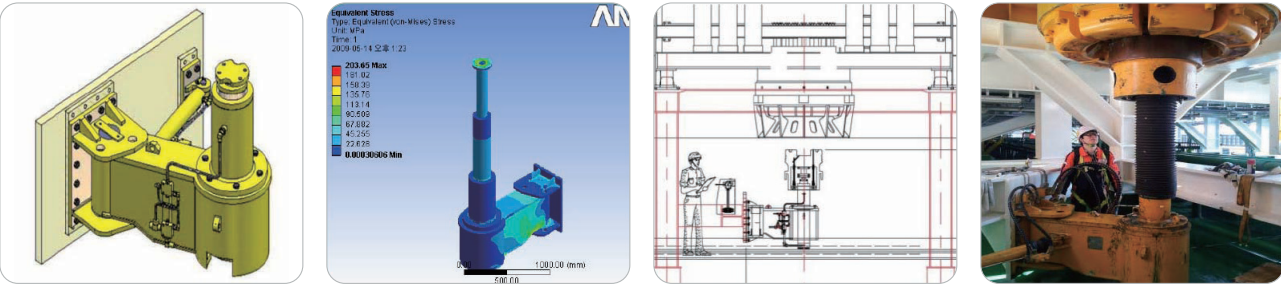
Max. Working Pressure	16 kg/cm <sup>2</sup>
Fluid	Liquids / Oils / Chemicals / Gasses / Steam / Water
Temp. Range	0~250°C
Materials	Body (SCS/SC480) / Disc (SCS/SC480) / Sealing(PTFE,VITON)
Size	50A~600A

OFFSHORE PART (Drillship Project)

RETRACTABLE TEST STUMP HANDLER



The RETRACTABLE TEST STUMP HANDLER is designed to move up the test stump to BOP stack connector for testing and for supporting the connector during removal at the storage position.



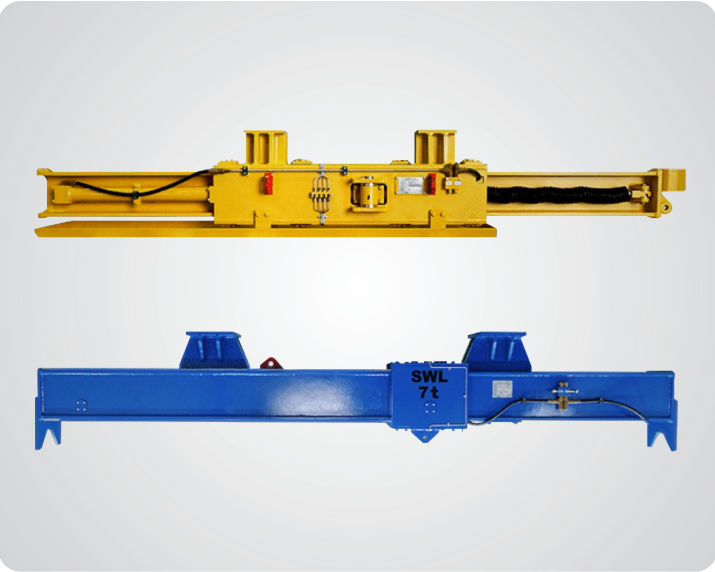
SPECIFICATIONS

Project	Drillship
Project Name	PDC / Pride / Seadrill / QGOG / Ocean Rig / Cobalt / Sonangol / Transocean
Class	ABS / DNV
S.W.L	3 Ton / 20 Ton / 25 Ton / 30 Ton / 35 Ton
Material	DH36
Area Classification	Zone 2
Design Temp.	-20°C to + 45°C
Max. Working Pressure	207 bar
Weight	1700kg (Fixed) / 1200kg (Skid) / 1200kg (Swing)
Size	1200×1200×2900(Fixed) / 2900×700×1500(Skid) / 1300×540×1260(Swing)



OFFSHORE PART (Drillship Project)

TELESCOPIC BOOM

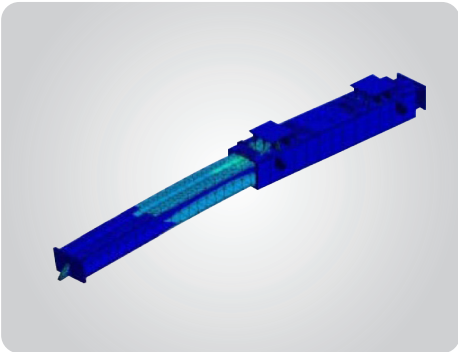
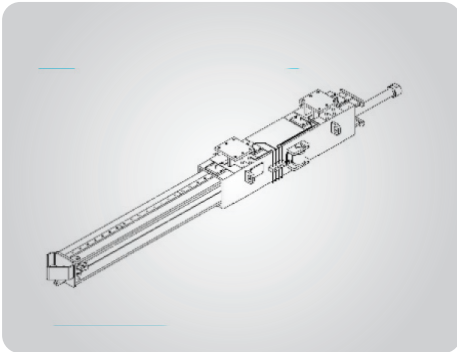
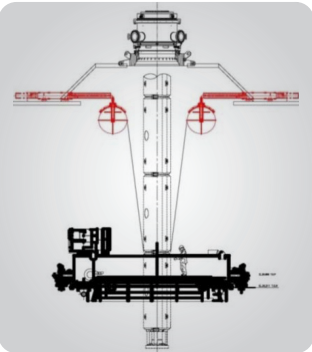


The Telescopic Boom (Arm) is designed improvement to make easy pulling of Mux cables which are connected to Riser System.

During running of Riser, Telescopic Boom (Arm) will be extended to make a steep cable angle for operator to pull with less force.

When clamping of cable is completed, then telescopic boom will be retracted for avoid interference with tension ring wire.

All function is hydraulic operated and controlled from local control panel.



SPECIFICATIONS

Project	Drillship
Project Name	PDC / Pride / Seadrill / QGOG / Ocean Rig / Cobalt / Sonangol / Transocean
Class	ABS / DNV
S.W.L	3 Ton / 5 Ton / 7 Ton
Material	DH36
Area Classification	Zone 2
Design Temp.	-20 °C to + 45 °C
Max. Working Pressure	207 bar
Weight	1350kg (3 Ton) / 2500kg (5 Ton) / 2700kg (7 Ton)
Size	5000 × 650 × 650 (3 Ton) / 5500 × 450 × 950 (5/7 Ton)

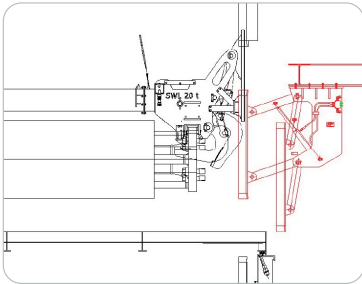
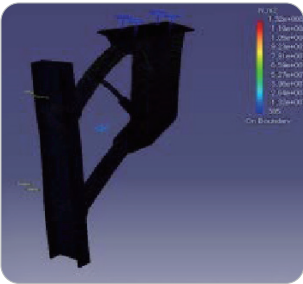
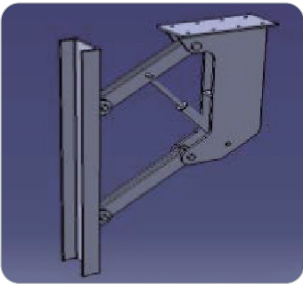
OFFSHORE PART (Drillship Project)

RISER YOKE GUIDE BEAM



The Riser Yoke Guide Beam guides to transport the Riser Pipe form Deck to Riser Catwalk Platform tower safely and steadily.

All function is hydraulic operated and controlled from local control panel.



SPECIFICATIONS

Project	Drillship
Project Name	Ocean Rig
Class	ABS
Material	DH36
Area Classification	Zone 2
Design Temp.	-20 °C to + 45 °C
Max. Working Pressure	207 bar
Weight	1250kg
Size	3000×2000×500