

GENERAL VALVE (HYDRAULIC ACTUATOR)



BO SEONG CORPORATION

680-1, Geumgang-Ro, Geumjeong-Gu, Busan, 46220, Korea

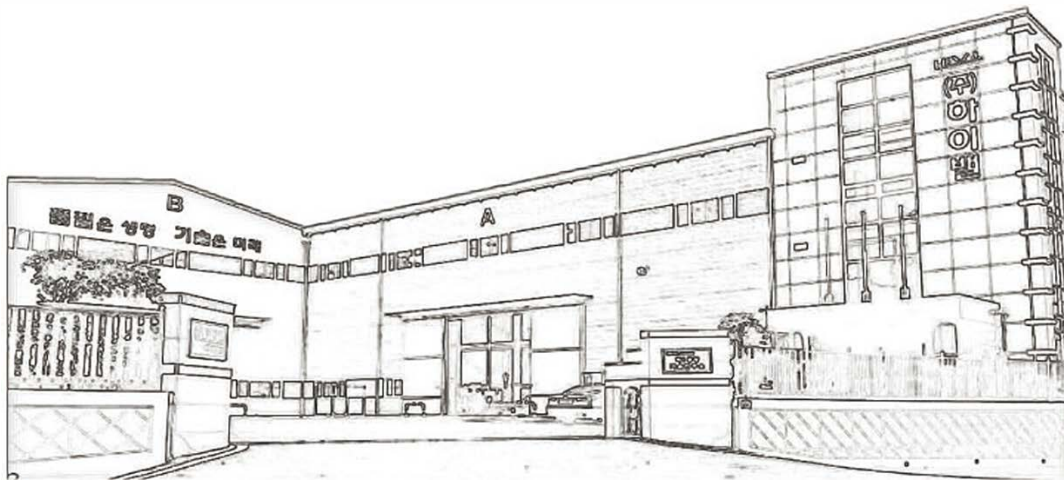
Tel ; 82 51 582 9593

Fax ; 82 51 582 9594

E-mail ; bostcom@naver.com

MANUAL HYDRAULIC REMOTE CONTROL OPERATOR FOR VALVE





▶ 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, hydraulic and pneumatic.

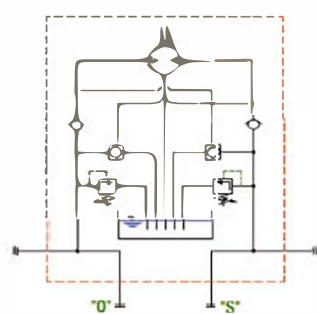
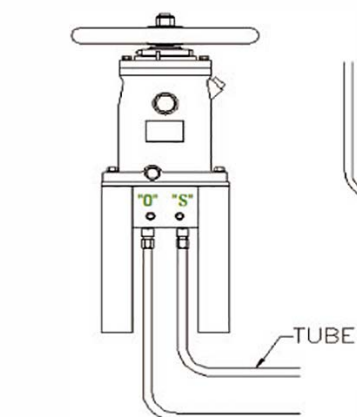
This Manual Hydraulic Remote Control System is for the local valve which is so far from the deck and the installed place is difficult to operate by man.

We recommend our manual hydraulic remote control operator for your system.

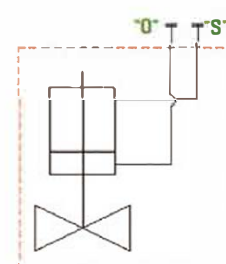
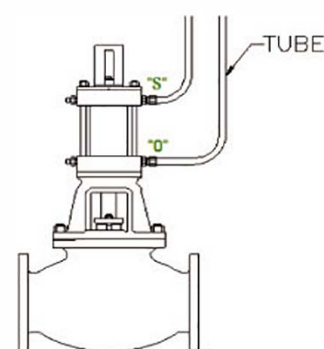
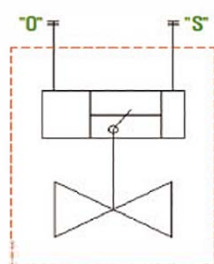
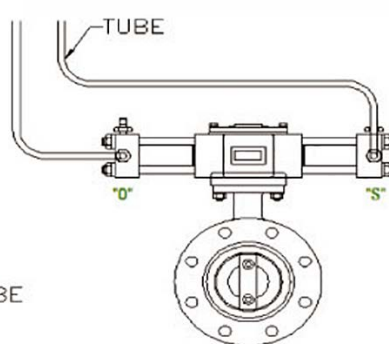
Construction

Hydraulic transmitter is manual pump and the hydraulic actuator is combined with valve. For operation, two tubes are connected between transmitter and actuator. One tube is for open the valve and the other is for close.

MANUAL HYD. TRANSMITTER



MANUAL HYD. ACTUATOR



1 Manual hydraulic transmitter

This, hydraulic pressure generating system, is established usually at the best place for the worker to operate it.

2 Valve

Butterfly valve, Globe valve, Angle valve, Gate valve & other special valves are embodied into a valve with several type of actuator.

3 Hydraulic actuator

The actuator generates an activating force on valve body from the generated hydraulic power. The optimum selecting from several actuators is made to meet the requirements of process and valve body. Actuator is divided into Hyd. Rotary Act. (HAA-D, HAG-D, HAV-D series) and Hyd. Linear Act. (HAC-D series)

4 Accessories

Necessary accessories are such as Pilot check valve, Bypass valve, Connector, Self seal coupling and Emergency local manual handle.

And supplied Pilot check valve, Bypass valve and Emergency local manual handle are available as options.

Hydraulic Transmitter (HTM-C)

The hydraulic oil is being pumped by rotating the hand-wheel of transmitter, clockwise is for close the valve and counter clockwise is for open.

Transmitter(Standard)



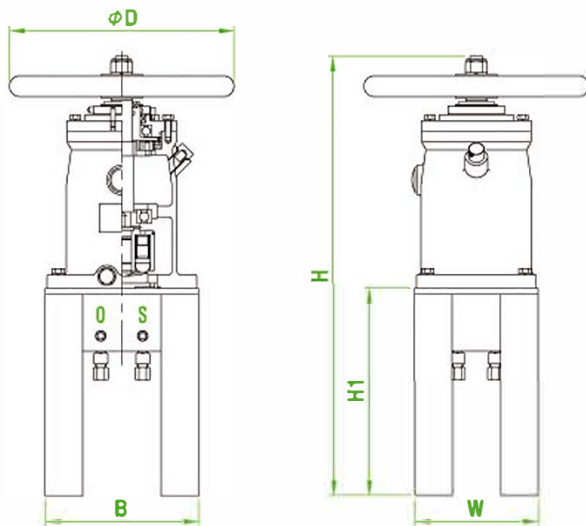
Multi Handpump
(Mechanical Type)



Multi Transmitter
(Electric Type)



Dimension Table



Specifications

1. Max. Working pressure : 135 kg/cm²
2. Operating fluid : Hydraulic Oil
3. Temp. range : -20°C ~ 80°C
4. Setting Pressure(Standard) :
 OPEN : 90 kg/cm²
 CLOSE : 80 kg/cm²

MODEL	D	H	H1	B	W	WEIGHT(Kg)	DISCHARGE(cc/rev)
HTM-CA	280	710	400	205	165	31	12
HTM-CB	315	710	400	205	165	33	25
HTM-CC	400	710	400	205	165	42	48
HTM-CD	500	710	400	205	165	48	68

• Note •

1. The model selection of transmitter is decided as per applied actuator's model and size.

Hydraulic Rotary Actuator

Is designed to carry out rotational movements of all.

The actuator combines valve. Due to the special assembly technique numerous models can be made up.

Features

1. The product has special adjusting screw equipment at two directions (0° and 90°).
This character removes the problem of matching valve at the time of open and close.
2. Overhaul and assembly is easy.
Under the condition that valve is installed, overhauling and assembly is easily done.
So, effort and time of maintenance is saved.
3. The structural design is possible for watertight.
Even though valve and actuator are installed inside the tank, watertight is surely maintained.
4. Special bearing is used at the driving part.
Since, the special bearing is used at the driving part of actuator, it makes possible correct guidance and minute motion, and as it does not contact between metal and metal, the coefficient of friction is low.
5. Emergency handle is attached (Option)
As emergency handle is attached to the top position of actuator, it is used in case of emergency.
6. The types of Hydraulic Actuator are Slotting piston, Scotch Yoke and Rack & Pinion Gear.
Each data of Actuator is specified on each table.

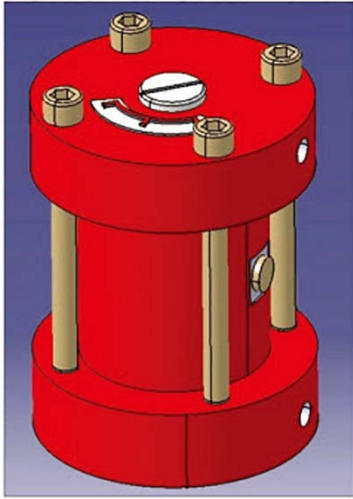
Specifications

1. Operating fluid : Hydraulic Oil
2. Max. Working pressure : 135kg/cm²
3. Temp. range : -20°C ~ 80°C
4. Actuator type : Double acting
5. Travel stop : $\pm 5^\circ$ control possible (Open and Close)
The torque of hyd. actuator can be supplied maximum 300,000 N.m

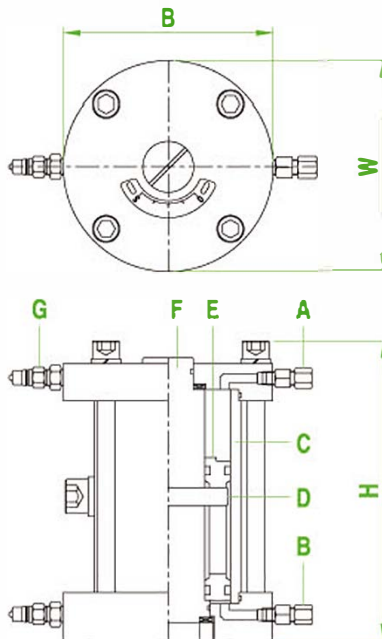
Note

1. The supply of emergency handle stick type is possible.
2. The manufacturing of actuator (single acting type) is possible.
3. Dimensions only valid for the standard versions in case of additional accessories, please ask for drawings.
4. "O" : open port
"S" : close port
5. Applicable valve : Butterfly valve, Ball valve, Plug valve, etc. (rotary operating valve).

▶ Slotting Piston Type (HAV-D)



▶ Dimension Table



- A : Pressure Connection(Open position)
- B : Pressure Connection(Close position)
- C : Cylinder
- D : Pin
- E : Slotting Piston
- F : Arm
- G : Air vent plug

▶ Features

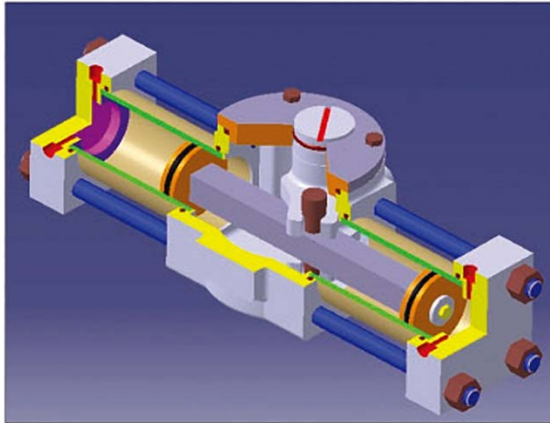
1. Due to vertical structure, it is not affected by interference of surrounding structures during piping.
2. As it is not casted product, watertight function is perfect.
3. It is smaller and lighter product than other type of Actuator.

MODEL	B(mm)	W(mm)	H(mm)	WEIGHT(Kg)	OIL VOL.(cc)	TORQUE(N, m)
HAV-D06	110	110	165	6	56	164
HAV-D08	140	140	200	12	145	378
HAV-D11	185	185	265	28	371	1,000
HAV-D15	240	240	325	65	904	2,492
HAV-D18	290	290	390	105	1,678	4,440
HAV-D22	350	350	475	200	2,960	7,660

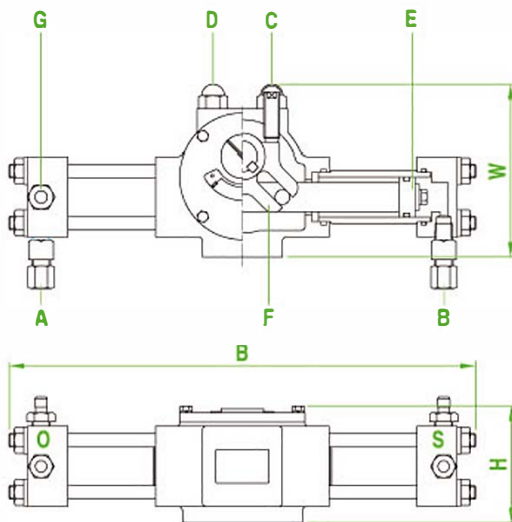
• Note •

1. Torque of HYD. supply pressure : 120kg/cm²
2. Volume of Actuator for one cycle (open-close)

▶ Scotch Yoke Type (HAA-D)



Dimension Table



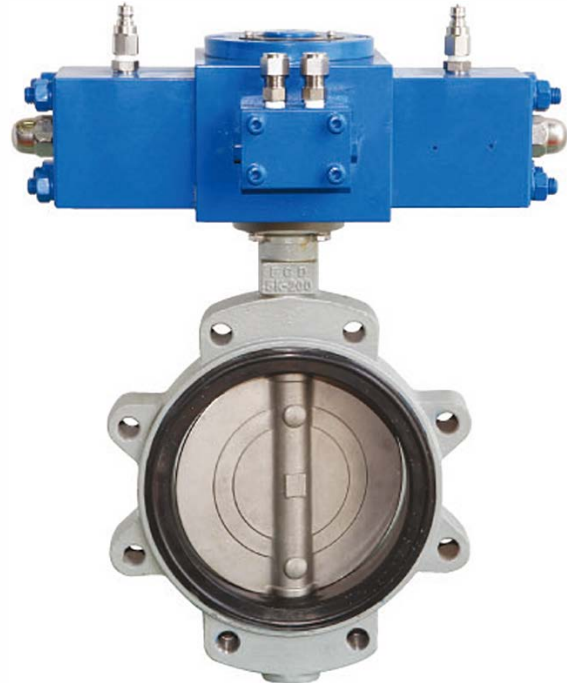
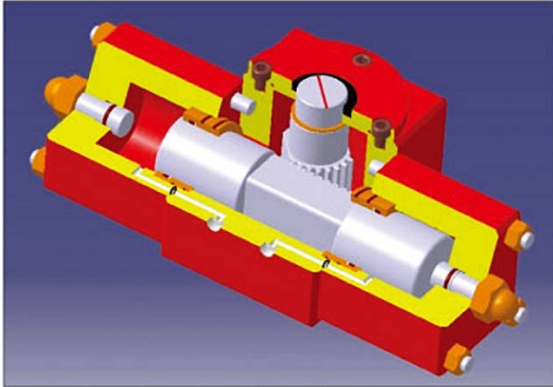
- A : Pressure Connection(Open position)
- B : Pressure Connection(Close position)
- C : Adjusting Screw(Open end position)
- D : Adjusting Screw(Close end position)
- E : Piston
- F : Arm
- G : Air vent plug

MODEL	B(mm)	W(mm)	H(mm)	WEIGHT(Kg)	OIL VOL.(cc)	TORQUE(N, m)
HAA-D03	350	130	91	8	71	140
HAA-D05	550	208	131	22	260	590
HAA-D06	575	225	155	34	500	1,240
HAA-D08	728	320	195	75	1,150	2,450
HAA-D10	924	430	208	130	1,650	4,970
HAA-D12	1112	510	235	230	3,200	9,400
HAA-D14	1408	584	314	350	4,500	15,380
HAA-D18	1855	755	395	800	10,200	34,000

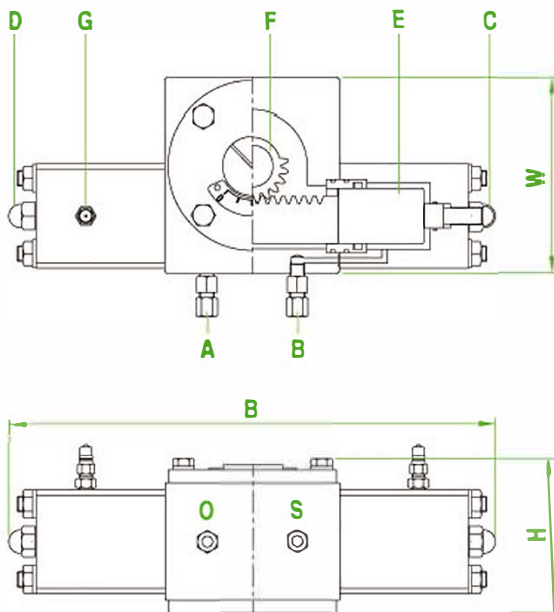
• Note •

1. Torque of HYD. supply pressure : 80kg/cm²
2. Volume of Actuator for one cycle (open-close)

Rack & Pinion Type (HAG-D)



Dimension Table



- A : Pressure Connection(Open position)
- B : Pressure Connection(Close position)
- C : Adjusting Screw(Open end position)
- D : Adjusting Screw(Close end position)
- E : Piston
- F : Arm
- G : Air vent plug

MODEL	B(mm)	W(mm)	H(mm)	WEIGHT(Kg)	OIL VOL.(cc)	TORQUE(N, m)
HAG-D03	270	120	100	11	29	122
HAG-D05	420	175	135	32	92	392
HAG-D07	525	215	180	62	243	1,060
HAG-D10	660	280	220	130	666	2,825

• Note •

1. Torque of HYD. supply pressure : 80kg/cm²
2. Volume of Actuator for one cycle (open-dose)

▶ Hydraulic Linear Actuator (HAC-D)

▢ Features

1. According to various valve strokes, adjust the length of cylinder, so make valve open or close is to be done perfectly possible.
2. Overhaul and assembly is easy.
Under the condition that valve is installed, overhauling and assembly is easily done, and effort and time for maintenance is saved.
3. Watertight structure design even though valve and actuator are installed inside the tank, watertight is maintained surely.
4. Emergency handle is attached (Option)
As emergency handle is attached to the top portion of actuator, it is used in case of emergency.
5. Applying possible valve : Globe valve, Angle valve, Gate valve, Surface valve, Storm valve, etc.

▢ Specifications

1. Operating fluid : Hydraulic Oil
2. Max. Working pressure : 135kg/cm²
3. Temp. range : -20°C ~ 80°C
4. Actuator type : Double acting
The force of hyd. actuator can be supplied maximum 100 ton.

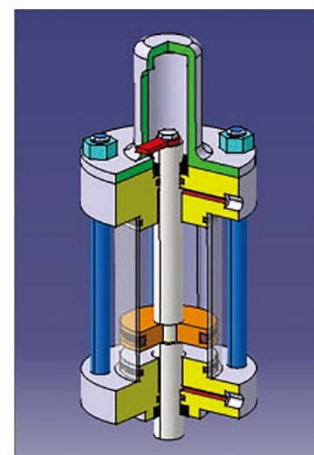
▢ Note

1. The supply of emergency handle stick type is possible.
2. The manufacturing of actuator (single acting type) is possible.
3. Dimensions only valid for the standard versions.
In case of additional accessories, please ask for drawings.
4. "O" : open port
"S" : close port
5. st : Valve stroke(mm)

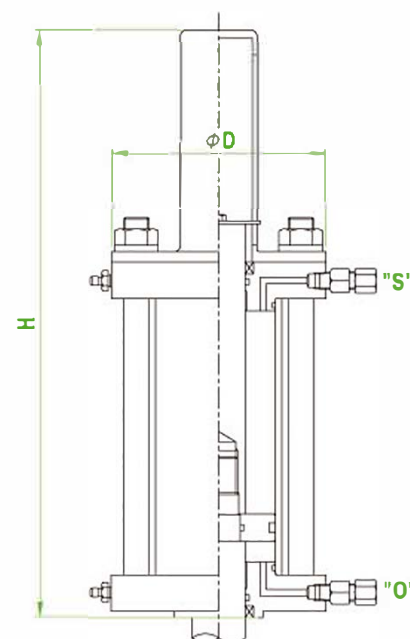
MODEL	D(mm)	H(mm)	WEIGHT(Kg)	OIL VOL.(cc)	FORCE(ton)
HAC-D04	98	172+2×st	10	0.9×st	0.8
HAC-D05	102	172+2×st	12	1.5×st	1.2
HAC-D06	116	172+2×st	14	2.3×st	1.8
HAC-D07	136	182+2×st	18	3.0×st	2.4
HAC-D09	170	182+2×st	24	5.0×st	4.0
HAC-D12	210	235+2×st	33	9.3×st	7.5
HAC-D15	240	235+2×st	48	15.7×st	12.5

• Note •

1. Force of HYD. supply pressure : 80kg/cm²
2. Volume of Actuator for one cycle (open-close)

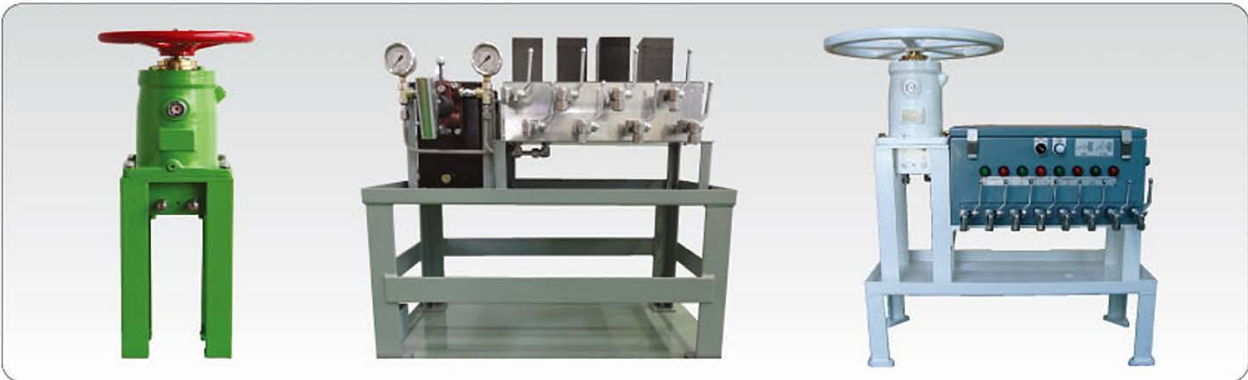


▢ Dimension Table



▶ Photos of Product

Hydraulic Transmitter (HTM-C)



Hydraulic Rotary Actuator (HAV-D, HAA-D, HAG-D)



Hydraulic Linear Actuator (HAC-D)



