

FM3405EB

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INSTRUCTION MANUAL
OF

DISTRIBUTING VALVE

GW-5*H-30

INSTRUCTION MANUAL FOR
GW-5*H-30 TYPE DISTRIBUTING VALVE

GW type distributing valve is designed as a small-scale low cost centralized lubrication system. If the oil feed pump (grease gun, hand-pump, small-size air driven pump, etc.) is connected to grease nipple (R1/8 button head type), accurate amount of lubricant is fed to the lubricating points by this valve. Fit a distributing valve suitable for the number of oil feed ports of machine to be lubricated and feed oil periodically. Then proper quantity of lubricant will be fed rapidly and centralized lubrication free from careless omission can be accomplished at low cost without using grand-scale centralized pump system.

1. Specification and Explanation on Type

Type		GW-54H-30	GW-58H-30
Max. working pressure		21MPa	
Pressure proof		31.5MPa	
Discharge volume	Max.	5.0cm ³ /stroke	
	Min.	1.1cm ³ /stroke	
Min. working pressure		1.2MPa	
Adjustable rate of oil per rotation of adjusting screw		0.15cm ³	
Number of discharge ports		4 (1 to 4) ports	8 (5 to 8) ports
Applicable grease		NLGI for centralized lubrication consistency #0 to #2	
Attachment		Mounting screws, nut set	
Weight		2.7 kg	4.7kg

2. Structure and Operation

2-1. Operation (Refer to Fig. 1)

Operation 1

Connect an oil feed pump such as grease gun to ① Grease nipple. Next, turn ② Handle to the operator side to change over ③ Rotor (Changing valve). Operated grease pump makes grease from passage a, go through rotor to passage b2.

Operation 2

Grease pushes ④ Measuring piston down, grease in lower chamber c1 goes through passage b1, ③ Rotor and passage d1, is forced out to discharge port e1.

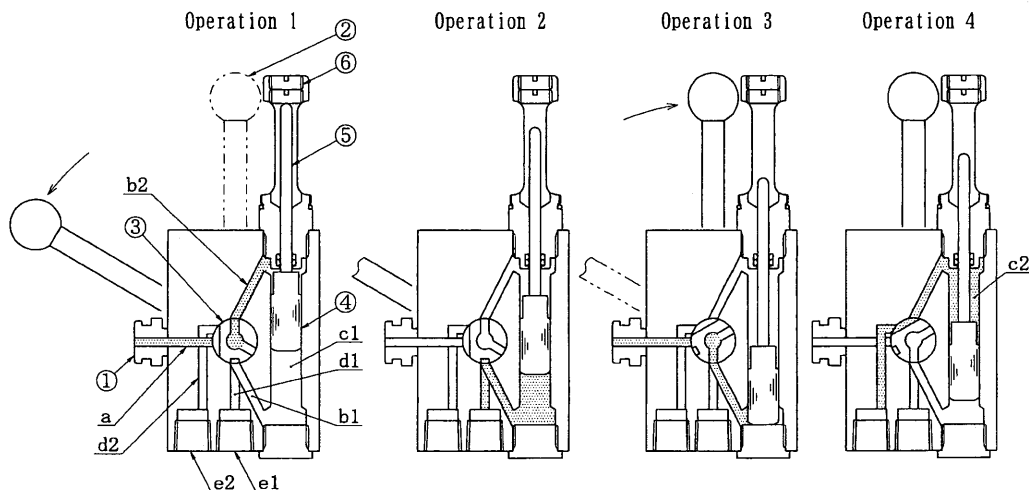
Operation 3

When the ④ Measuring comes to the lowest position, make certain with ⑤ Indicating rod that the entire lubrication has been completed. Then pull up the ② Handle to change over ③ Rotor.

Operated grease pump makes grease from passage a, go through rotor to passage b1.

Operation 4

Grease pushes ④ Measuring piston up, grease in upper chamber c2 goes through passage b2, ③ Rotor and passage d2, is forced out to discharge port e2.



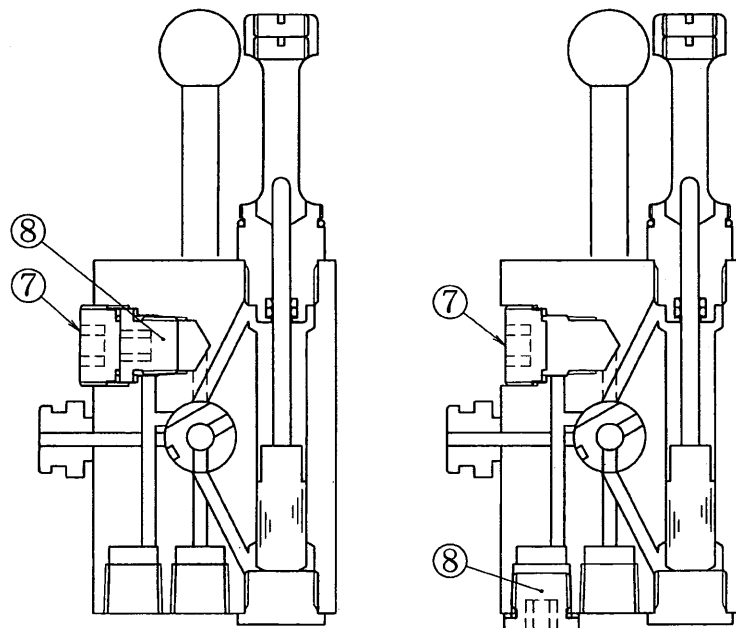
[Fig. 1]

2-2. Adjustment of Discharge Volume

Discharge volume of 1 stroke means amount of c1 or c2, depends on stroke amount of Measuring piston. By turning ⑥ Adjusting screw, strokes of Adjusting screw is limited, and is voluntarily adjusted between maximum volume to minimum volume. Adjusting screw is two-steps type. After remove upper screw, turn lower screw. After adjusting, tighten upper screw and lock it up.

2-3. Replacing to Odd number of Port (Refer to Fig. II)

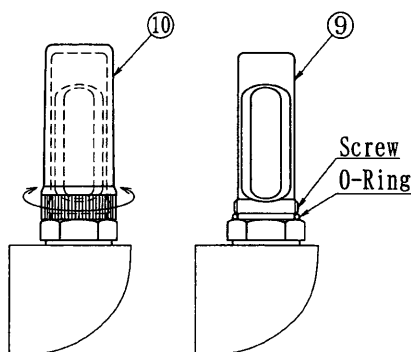
In case of using this Distributing valve with odd number of port, it could be able to replace to single discharging type, by gathering grease that is discharged from upper and lower discharge ports into one discharge port. Remove ⑦ Cross port plug, remove ⑧ Hexagon socket flat plug from inside, put plug in another unused discharge port. Tighten Cross port plug in initial position again, seal it with copper packing. In ordinary double discharging type, Cross port plug is 2 or 3 mm out from surface, but if it will be replaced to single discharging type, Cross port plug is a little sunk. So they are recognized in appearance. When replacing to single discharging type, grease of 2 strokes is discharged from one port, then reducing to 50% of discharge amount by Adjusting screw in order to discharge equal amount as the other port.



【Fig. II】

2-4. Frame and Frame Cover (Refer to Fig. III)

⑩ Frame cover of this Distributing valve is fixed to ⑨ Frame with screw. When removing, turn knurling part at the bottom of Frame cover. And, O-Ring is mount on the bottom of Frame cover, seals between Frame and Frame cover. Therefore, water or dust are hard to get into.



【Fig. III】

3. Handling Precautions

- 1) Handle should be switched after moving of ⑤ Indicating rod is finished. Otherwise, quantitative discharging could not be done.
- 2) Use clean grease. And before using, confirm alien materials are not stuck to Grease nipple. If alien materials are mixed into inside of Distributing valve, malfunction may be caused.
- 3) Installation must be made so that Frame of distributing valve may be vertical as much as possible.
- 4) Be careful that too much tightening of fitting bolts will cause deformation inside of Distributing valve.
- 5) In case of using with odd number of port, be sure to replace to single discharging type. If put plug in one discharge port only, Distributing valve does not work. (Refer to 2-3)
- 6) If both of 2 port of 1 element would be plugged, using port would be able to reduce 2 ports.
- 7) In case of removing Frame cover, be careful to avoid mixture of water or alien materials into inside of frame cover. It may cause inner rust or damage of seal.
- 8) Be careful on painting, because the frame cover is made of polycarbonate, there is a possibility that it will be dissolved into organic solvent.
- 9) Depending on operating environment, there are cases when early deterioration of O-Ring of frame may be caused. To prevent water intrusion, internal condensation or rust, inspect and replace at regular intervals.

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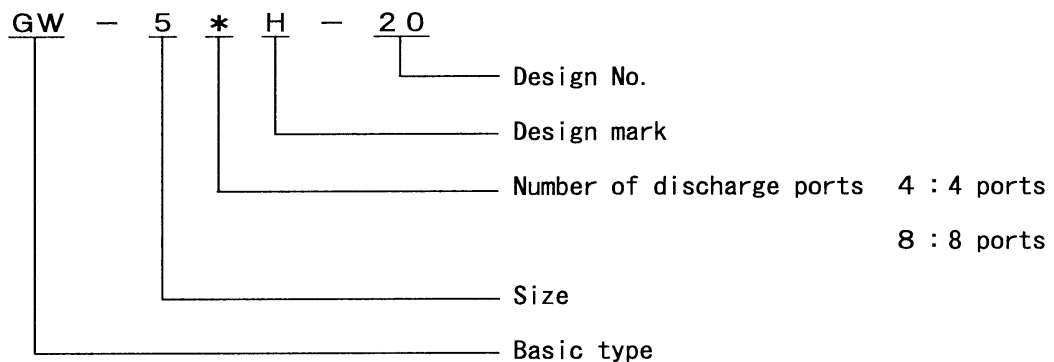
GW-**H-20

INSTRUCTION MANUAL FOR
GW-**H-20 TYPE DISTRIBUTING VALVE

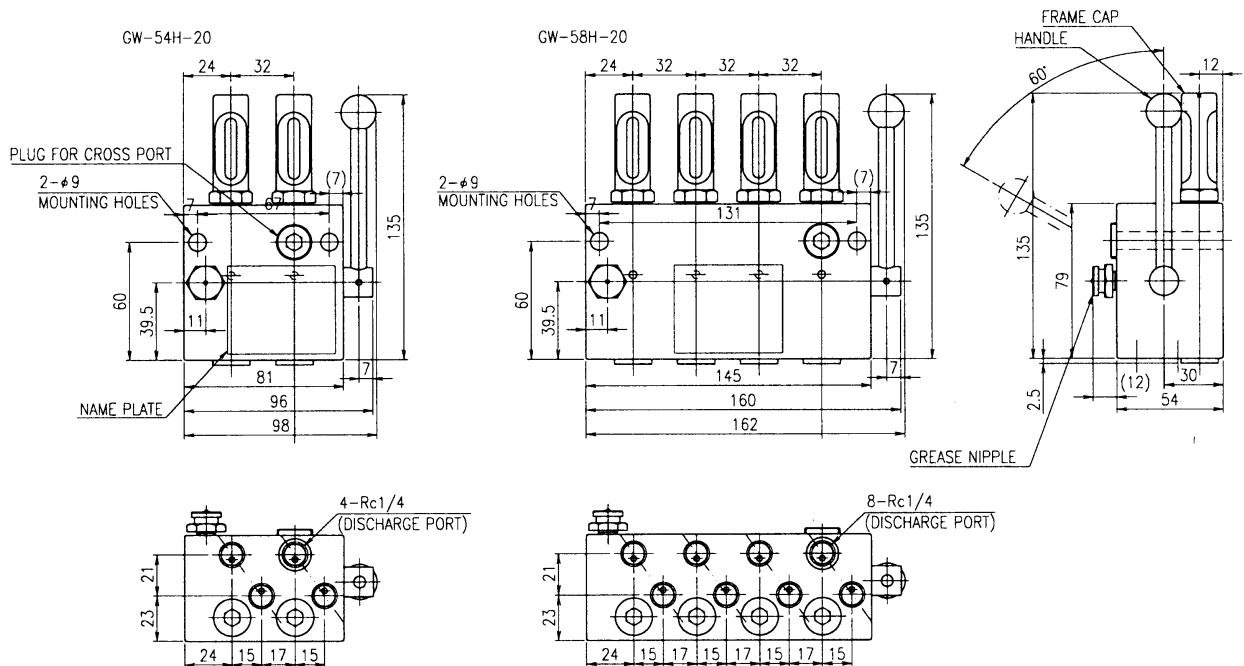
GW type distributing valve is designed as a small-scale low cost centralized lubrication system. If the oil feed pump (grease gun, hand-pump, small-size air driven pump, etc.) is connected to grease nipple (R1/8 button head type), accurate amount of lubricant is fed to the lubricating points by this valve. Fit a distributing valve suitable for the number of oil feed ports of machine to be lubricated and feed oil periodically. Then proper quantity of lubricant will be fed rapidly and centralized lubrication free from careless omission can be accomplished at low cost without using grand-scale centralized pump system.

1. Specification and Explanation on Type

Type		GW-54H-20	GW-58H-20
Max. working pressure		21MPa	
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Discharge volume	Max.	5.0cm ³ /stroke	
	Min.	1.2cm ³ /stroke	
Min. working pressure		1.2MPa	
Adjustable rate of oil per rotation of adjusting screw		0.15cm ³	
Number of discharge ports		4 (1 to 4) ports	8 (5 to 8) ports
Applicable grease		NLGI for centralized lubrication consistency #0 to #2	
Attachment (for mounting)		M8×75 cross recessed pan head screws, spring washers and hex. nuts, two each	
Weight		2.7 kg	4.7kg



2. External dimensions



Note : The cross ports and discharge ports connected by alternate long and two short dashes line constitute one pair.

3. Operation and Function

3-1. Ordinary discharge type (Refer to Fig. I)

Operation 1

Connect an oil feed pump such as grease gun to ① Grease nipple and turn ⑧ Handle to the operator side to change over ④ Changing valve.

Operation 2

When the oil feed pump is started, lubricant is passed through passages ①, ② and ③ to push down ⑫ Measuring piston, as a result of with lubricant filled in lower chamber ④ is forced out to discharge port ⑤ through passages ⑥ and ⑦.

Operation 3

When the ⑫ Measuring comes to the lowest position, make certain with ⑪ Indicating rods that the entire lubrication has been completed. Then pull up the ⑧ Handle to change over the ④ Changing valve.

Operation 4

The lubricant is passed through the passages ①, ② and ③ to push up the ⑫ Measuring piston, due to which the lubricant contained in upper chamber ④ is delivered to discharge port ⑤ through the passages ⑥ and ⑦.

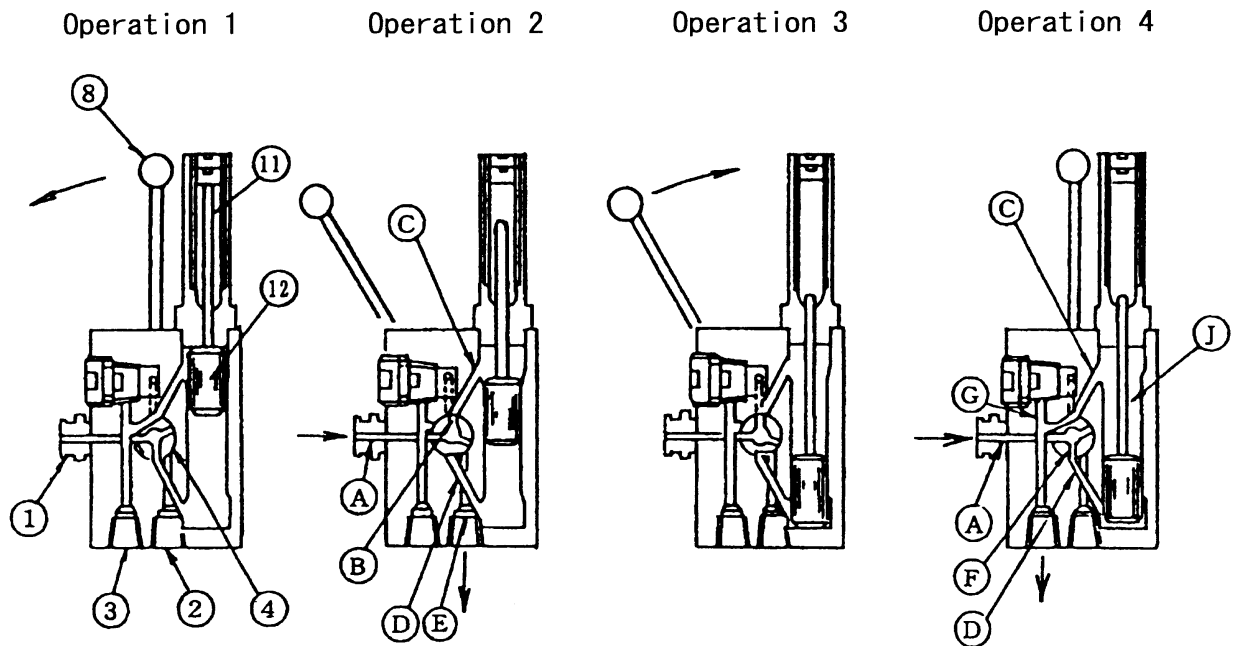


Fig. I

3-2. Collected discharge type (Refer to Fig. II.)

If a plug in cross port is changed, the distributing valve is modified to a collected discharge type lubricator.

(Detailed explanation is given in Item 4. below.) With the collected discharge type valve, lubricant forced through ① Grease nipple is collected at the cross port K to be discharged from either of the discharge ports when ⑧ Handle is set.

(Fig. II illustrates the valve discharging from the discharge port ③. The discharge port ② is stopped by plug.)

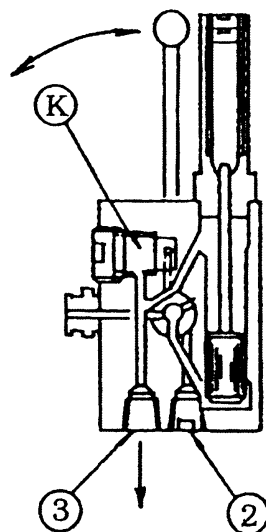


Fig. II

4. Precautions for Handling (Refer to Fig. III)

4-1. Fig. III illustrates ordinary discharge type valve.

As shown in the figure, plug for cross port protrudes about 1 mm from the body surface. In order to collect the discharge port, take out the ⑤ Cross port plug, remove ⑥ Hexagonal holes plug from there and plug in a pair of cross port and discharge port ② or ③ which are not to be used. Then, replace ⑤ Cross port plug and ⑦ Packing to the original position. In this case, the ⑤ Plug is at the same plane with the body face or sinks a little.

If discharge port is collected, lubricant discharge rate is increased twice. So, set ⑩ Adjusting screw to 1/2.

4-2. Discharge rate of the distributing valve can be set by ⑩ Adjusting screw provided at the ⑨ Indicator.

4-3. Be sure to manipulate ⑧ Handle upon making sure completion of one stroke lubrication by means of all the ⑪ Indicating rods.

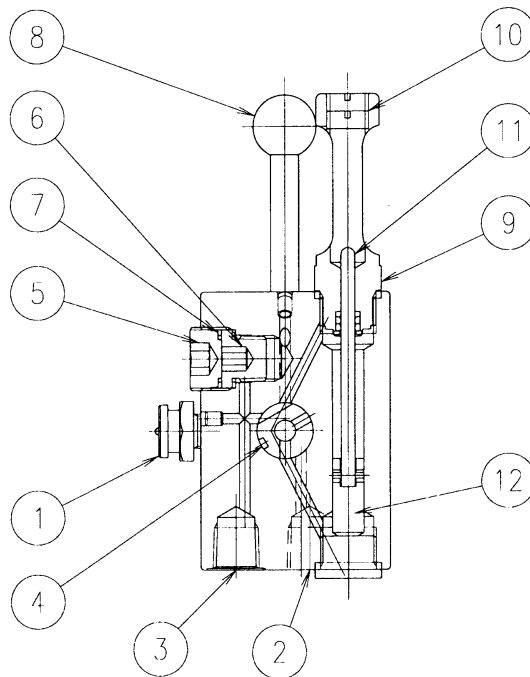


Fig. III

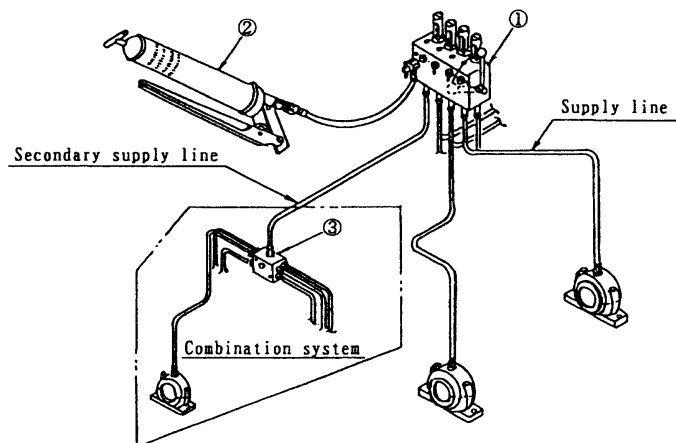
5. Application Example of GW-**H-20 type Distributing valve

Lubricant delivered by ② Grease gun (or other similar oil feed pump) reaches to ① GW type distributing valve where it is distributed to lubricating points properly depending upon change-over handle position.

And if the ① Distributing valve is combined with ③ LV-100 type proceeding operation type distributing valve to form a combination system (shown by alternate long and two short dashes lines), number of lubricating points can be increased by 2 to 8 per discharge port of ① GW type distributing valve.

Composition

- ① Distributing valve (parent) : GW-58H-20 type
- ② Oil feed pump : Grease gun
- ③ Distributing valve : LV-100 type



Note : 1. A Combination system shown by alternate long and two short dashes lines is available.

- 2. For combination system use Grease NLGI for centralized lubrication with consistency of #0 to #1.

Oil feed pump

For Type GW distributing valve, use an oil feed pump for grease with discharge pressure of more than 10MPa.

Choose a proper one, taking into consideration the operation frequency, place of installation, workability, etc.

* Oil feed pumps available on market

- Grease gun • Cartridge type grease gun
- Hand bucket type pump • Air driven lubricator

Note : For connection, use connection hose with R1/8 button head fittings.