

# DHP 14-3/ HPC-3

## Direct Mounted Hydraulic Hand Pump Unit including Control Block

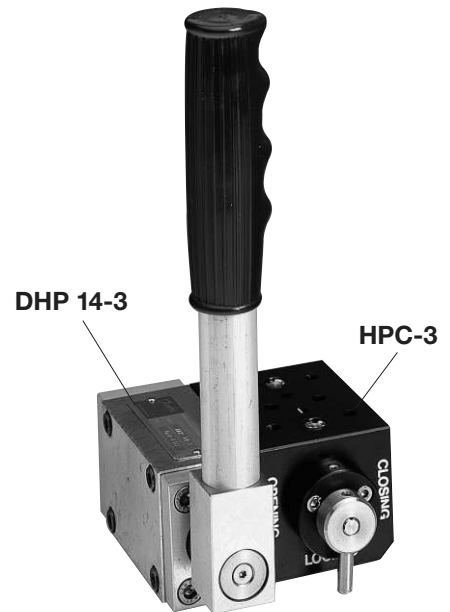
# A1

### Application:

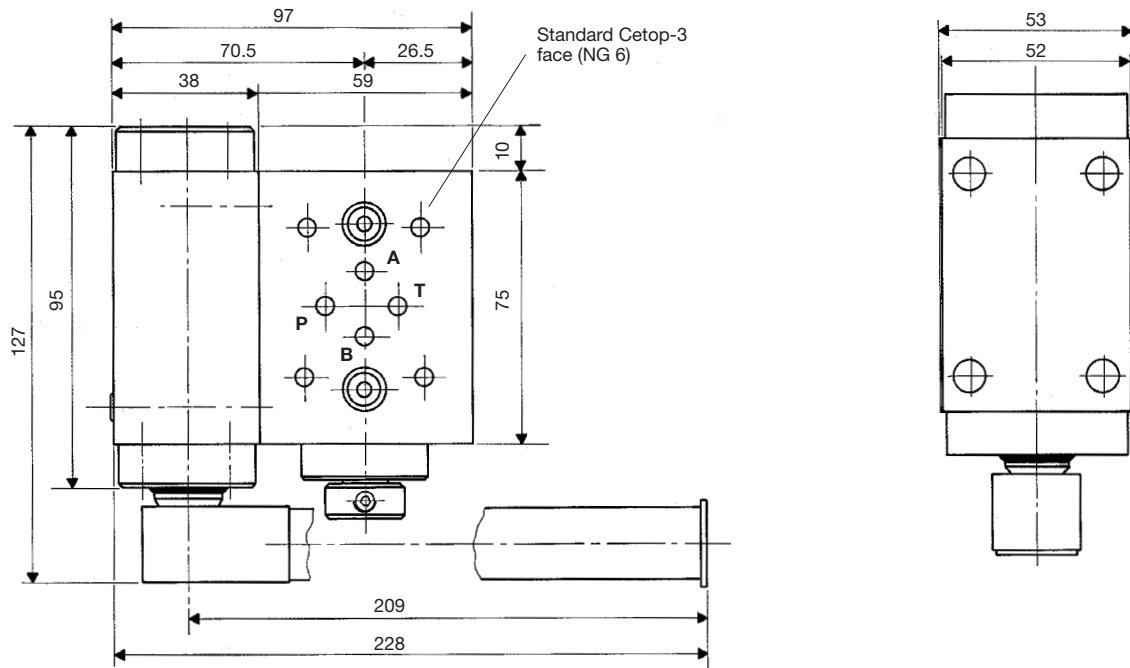
The DHP hand pump unit can be permanently mounted on DSH quarterturn valve actuators type BRC and DSH linear actuators type KC. Since these actuators have equal displacement in the opening and closing stroke there is no need for a reservoir in connection with the hand pump. The DHP pump simply moves oil from one side of the actuator piston to the other.

### Main Data:

Max. system operating pressure:	210 bar ~ 3000 lbf/in <sup>2</sup>
Max. system test pressure:	315 bar ~ 4500 lbf/in <sup>2</sup>
Max. hand pump pressure:	120 bar ~ 1740 lbf/in <sup>2</sup>
Total dry weight:	1.7 kg ~ 3.75 lb
Oil displacement per double handle stroke:	14 cm <sup>3</sup> ~ 0.85 in <sup>3</sup>
Oil viscosity range:	15 - 200 cSt
Temperature range:	-20°C to 80°C ~ 4°F to 176°F
Recommended oil filtration:	Should meet or be better than NAS 1630/10, or ISO Solid Contaminant Code 18/15



### Main Dimensions:



### Materials:

#### Hand pump DHP 14-3

Housing:	MS 58
Piston:	GGG 40
Spindle:	AISI 329
Cover:	ALMgSi 0.5, anodized
Screws, sign plates and rivets:	AISI 304
Seals:	NBR ~ Acrylonitrile Butadiene

#### Control block HPC-3

Housing:	ALMgSi 0.5, anodized
Change-over valve shaft:	Sandviken 2002
Cover:	ALMgSi 0.5, anodized
Valve lever:	AISI 303
Screws, sign plates and rivets:	AISI 304
Seals:	NBR ~ Acrylonitrile Butadiene

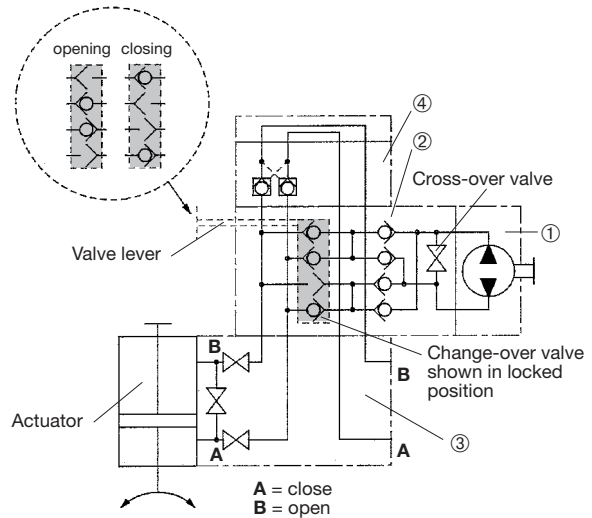
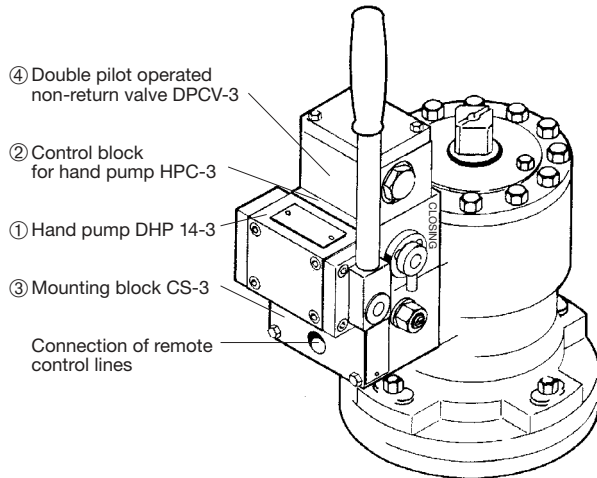
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### Example of operation of BRC actuator



- ① **Hand Pump DHP 14-3**  
Double-acting hand pump – i.e. hydraulic pressure is generated in both directions of pump handle movement.
- ② **Control Block HPC-3**  
Change-over valve with three positions: “Opening”, “Closing”, and “Locked” position.  
The valve lever must be left in “Locked” position to enable remote control of the actuator.
- ③ **Mounting Block CS-3**  
Base block for mounting of control components contains stop valves for ports A and B and a cross-over valve between the two ports.
- ④ **Double pilot operated non-return valve DPCV-3**  
Functions as a hydraulic lock as long as there is no pressure in the remote control lines. The locking function ensures that the pressure generated in the hand pump is used to move the actuator and does not “disappear” into the remote control system.

### Operation:

#### Opening of valve

- Turn the lever of the control block ② to “Opening” position.
- Operate the pump handle.
- Stop pumping when the visual indicator on the actuator shows fully “Open” and the pump handle seems locked.
- Upon completion of the operation the valve lever must be set in “Locked” position.

#### Closing of valve

- Turn the valve lever of the control block ② to “Closing” position.
- Operate the pump handle.
- Stop pumping when the visual indicator on the actuator shows fully “Shut” and the pump handle seems locked.
- Upon completion of the operation the valve lever must be turned to “Locked” position.

#### Operation features

- Upon completion of the operation and with the actuated valve in the required position, the pump handle can be set in a convenient position by opening the cross-over valve in the control block ② (to be turned counter-clockwise).  
The cross-over valve is the notched screw situated opposite the valve lever.

**Note:** Emergency operation by means of hand pump unit is solely allowed at 0 bar hydraulic pressure in port A and B.