

Control Unit model **HCD4-W** and Coupling Valve model **VCB** for double action clamp

PASCAL CONTROL UNIT model **HCD4-W**

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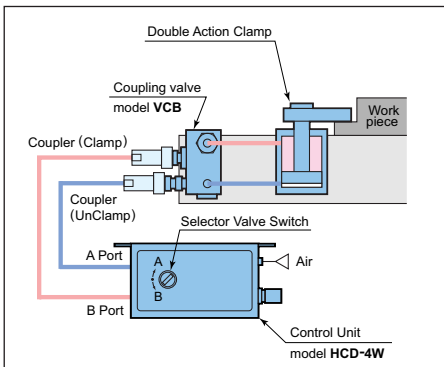
PASCAL COUPLING VALVE model **VCB**

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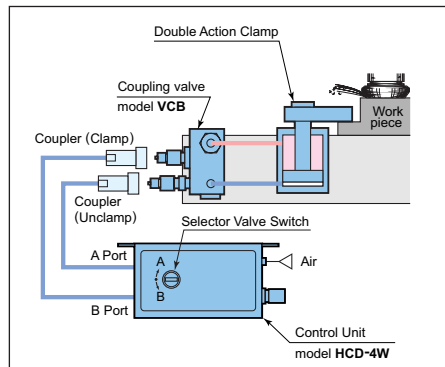
Hydraulic control unit HCD4-W containing PASCAL pump (air-driven hydraulic pump) generates a hydraulic pressure (10.6MPa) by air pressure (about 0.5 MPa). Pump action stops when the hydraulic pressure reaches the designated level, and keeps it. Coupling valve VCB is to be installed between double action clamps and control unit. The control unit and coupling valve can be separated by using a hydraulic coupler. Coupling valve has a non-leak feature which assures a thorough sealing.

OPERATING INSTRUCTIONS



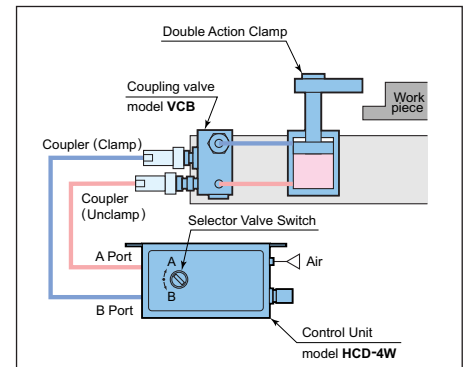
Clamping

Place workpiece and connect coupler. Then turn Selector Valve Switch of control unit to B port (clamp circuit) to clamp the workpiece.



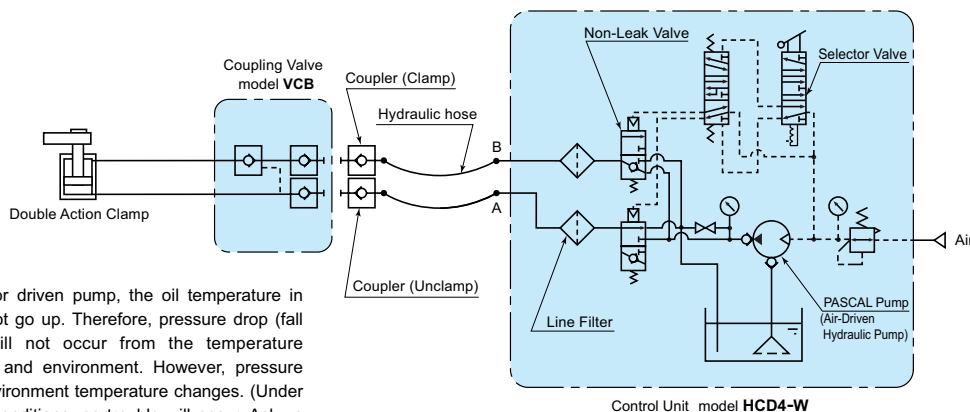
Separating oil supply (during machining)

After clamping, turn Selector Valve Switch to the center position to separate the coupler.



Unclamping

Connect the coupler again, and turn Selector Valve Switch to A port (unclamp circuit) to unclamp and release the workpiece.

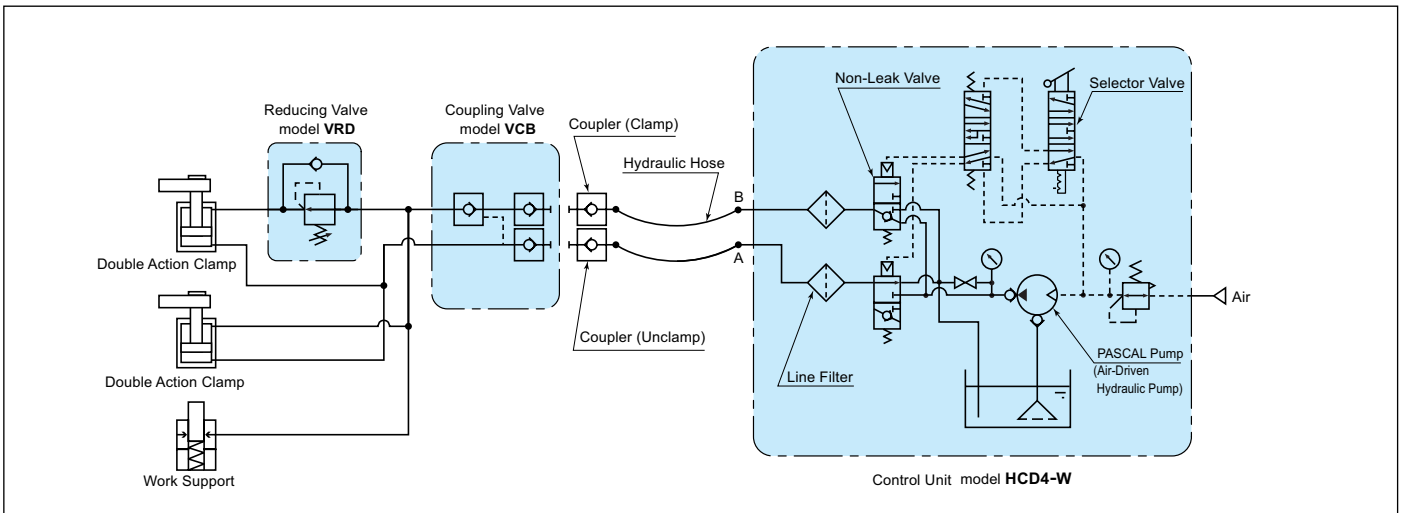
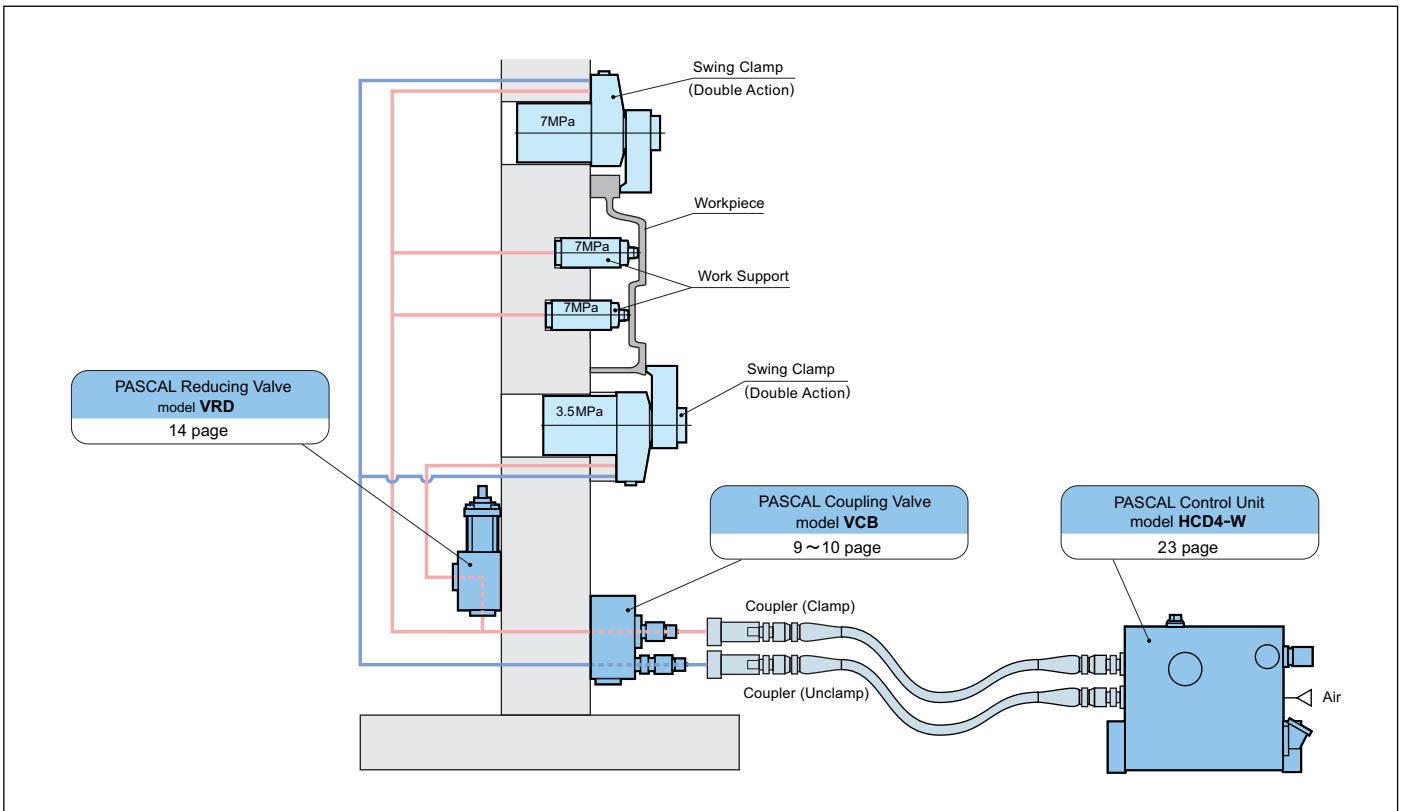


NOTE : Unlike in motor driven pump, the oil temperature in PASCAL pump does not go up. Therefore, pressure drop (fall of clamping force) will not occur from the temperature difference between oil and environment. However, pressure may fluctuate when environment temperature changes. (Under the normal machining conditions, no trouble will occur. Ask us for details, if necessary).

PASCAL REDUCING VALVE model **VRD** P.14



Partially reduces in-circuit oil pressure.
 (Example) While Work Support is having 7 MPa of inlet pressure,
 Work Clamp can be depressurized down to 3.5 MPa.



PASCAL SEQUENCE VALVE model VEC P.15~P.17

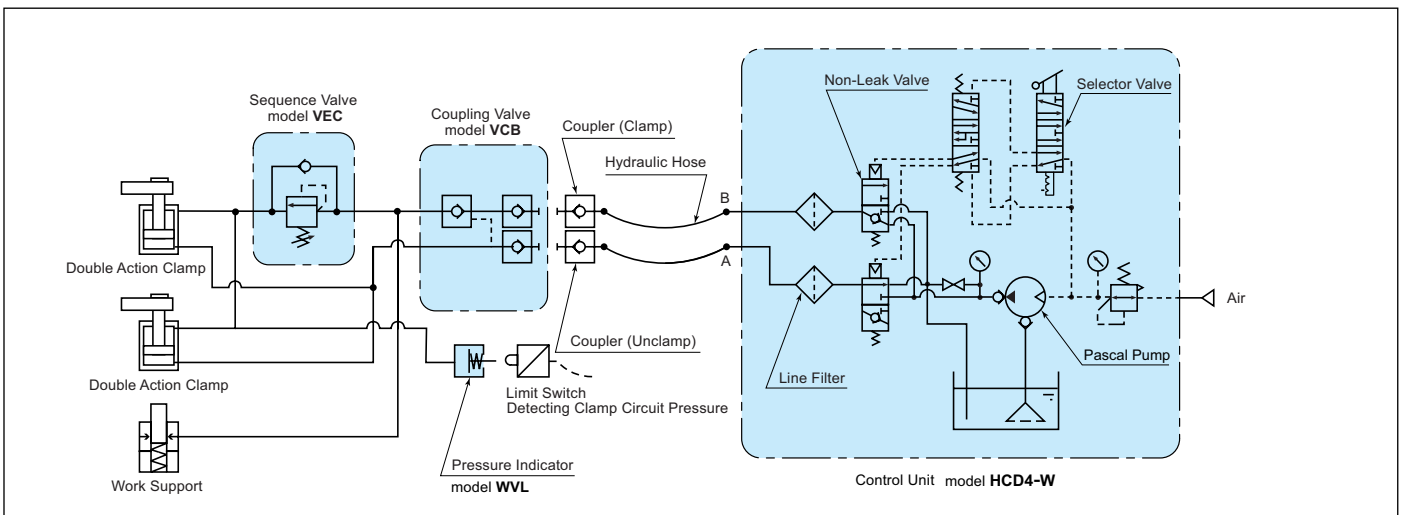
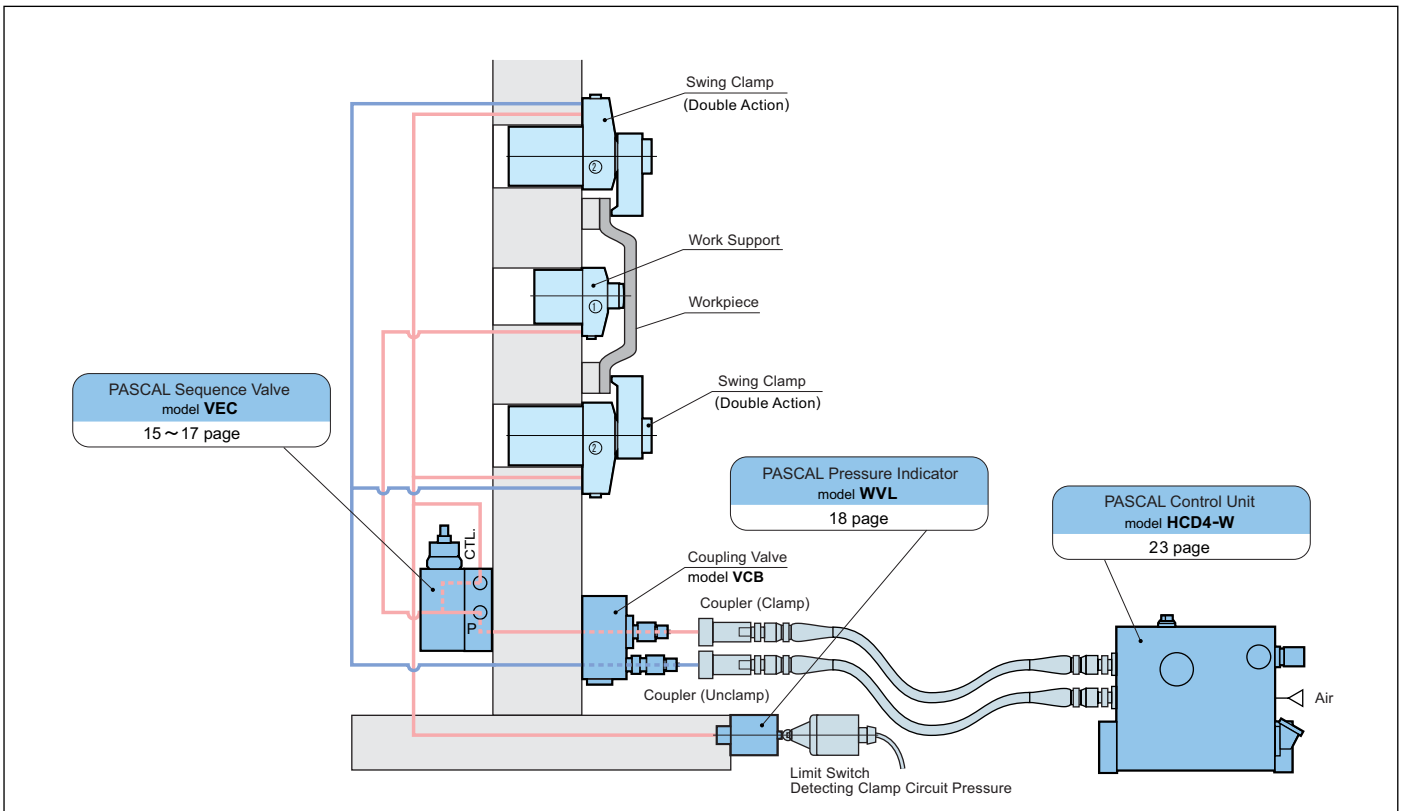


Sequentially activates Work Clamp and Work Support in one circuit.
 (Example) ① Locks the work support
 ② Activates the work clamp

PASCAL PRESSURE INDICATOR model WV L P.18



Detects a condition of hydraulic pressure (ON or OFF) in the clamp circuit. If you install a limit switch, you can have an interlock protection device (such as stopping the machining) against pressure OFF condition.



PASCAL 2 WAY VALVE

model **VHB** P.13



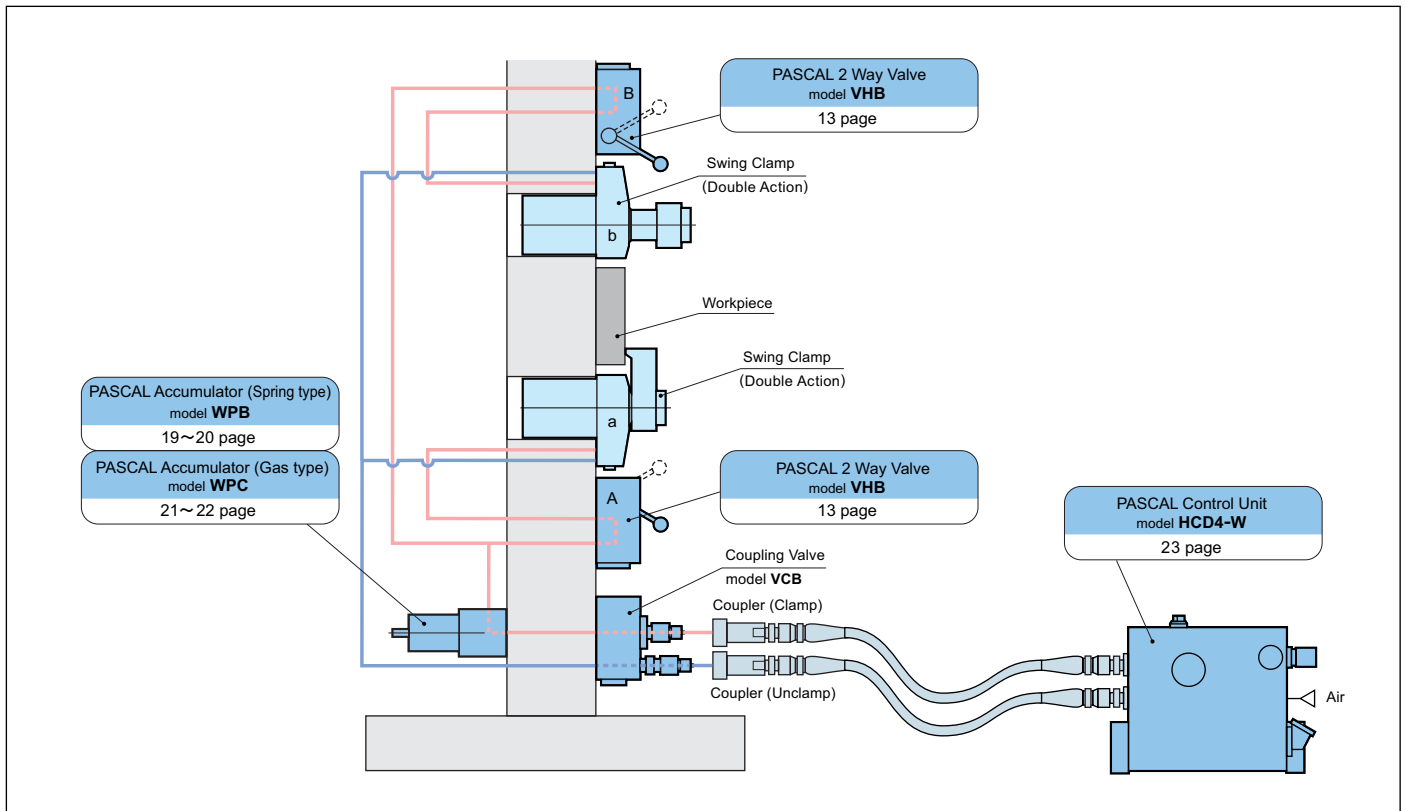
PASCAL ACCUMULATOR model WPB/WPC

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Activates Work Clamps in one circuit individually by manual handling.
 (Example) ① Activate Work Clamp a with 2 Way Valve A.
 ② Activate Work Clamp b with 2 Way Valve B.

After separation from oil supply source, keeps the in-circuit pressure stable against temperature fluctuation.



NOTE:

When using multiple double acting swing clamps in one circuit, the unclamp action should be simultaneously done at all the clamps.
 If hydraulic force is applied to the unclamp side while a part of clamp side circuit is closed with 2 way valve, excessive pressure will arise to cause possible malfunction. The clamp action can be individually done at each clamp.

