

Double acting clamp is controlled and operated with control unit model HCD□H-W and coupling valve model VCB.



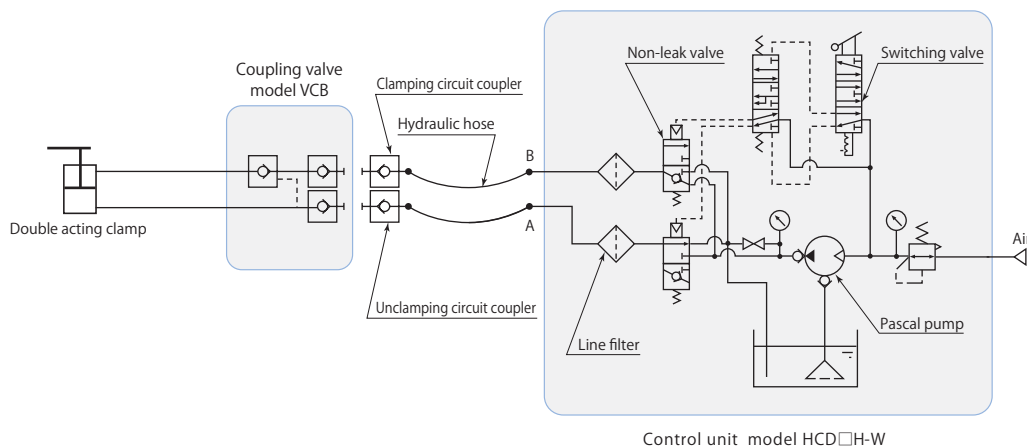
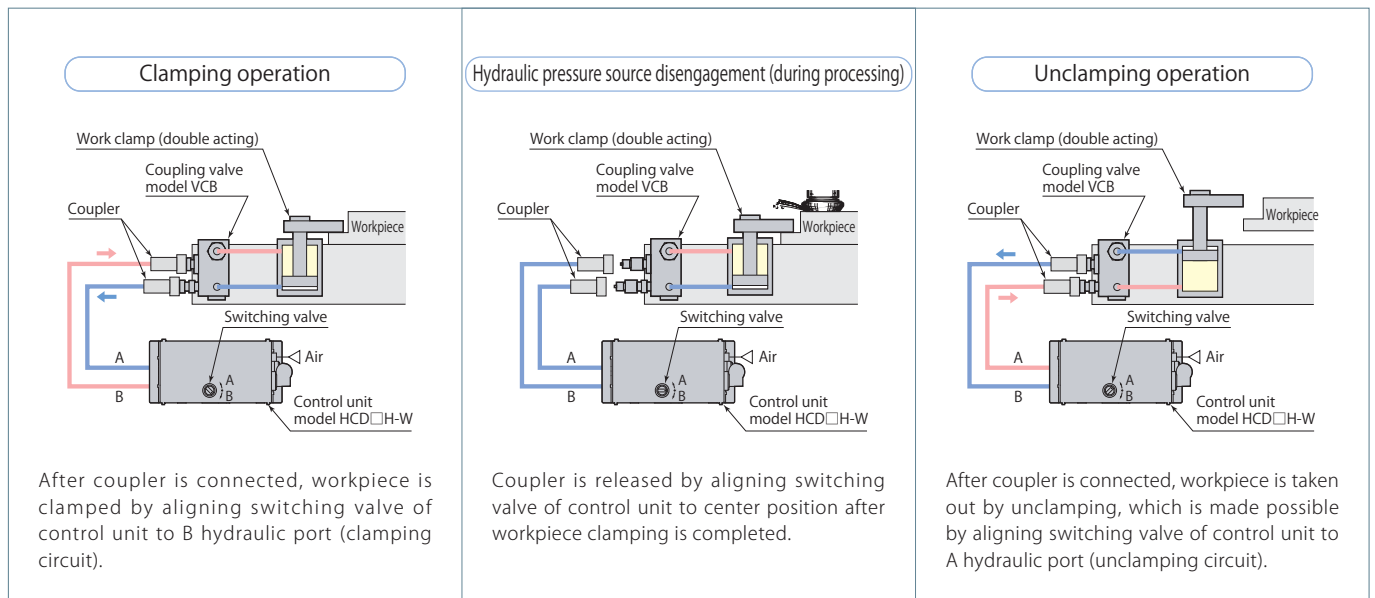
Control unit model **HCD□H-W**
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Coupling valve model **VCB**
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Control unit (HCD□H-W) converts air pressure to hydraulic pressure by actuation of air driven Pascal pump. Once circuit pressure is attained to the set pressure, it stops pumping then keeps the hydraulic pressure.

Coupling valve (VCB) is placed between a control unit and double acting clamps, and it allows to disconnect the control unit from the valve by means of hydraulic coupler. Built-in check valve in coupling valve can positively seal the pressure.

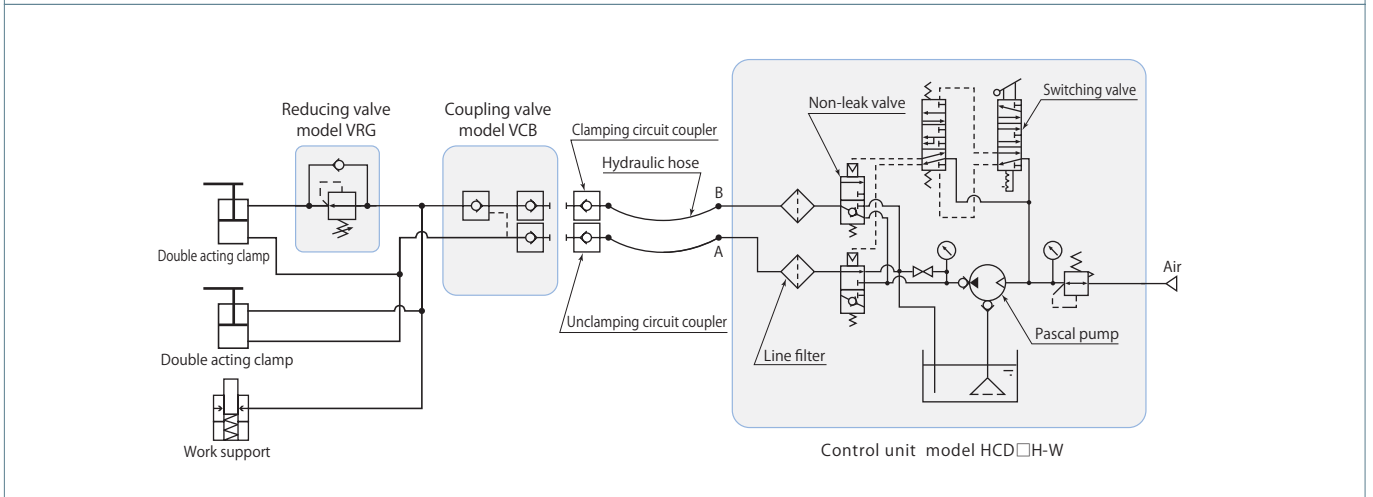
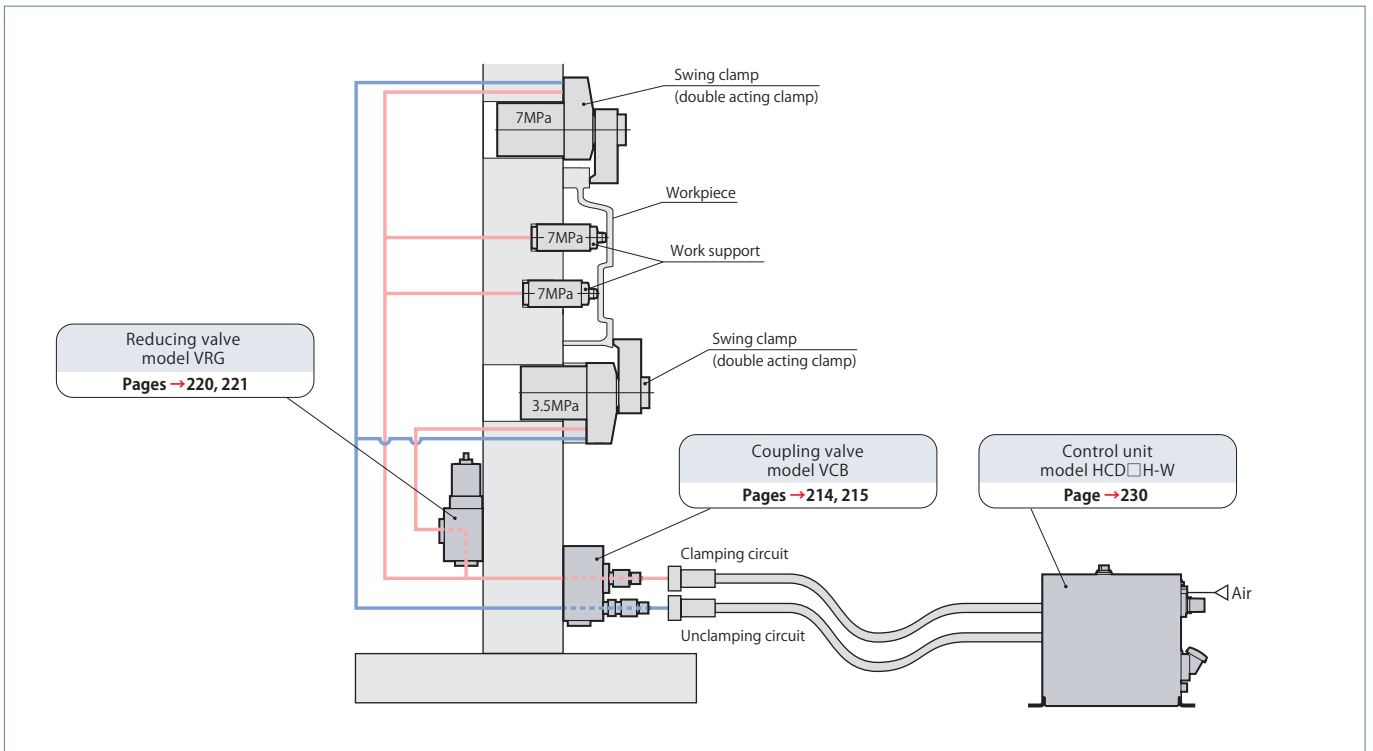


Since Pascal pump does not raise oil temperature like electrical pumps, it does not trigger pressure drop (reduction in clamping force) after clamping due to difference between ambient temperature and oil temperature. Fluctuation of pressure due to changes in ambient temperature, however, does occur. (This fluctuation presents minimal problems with ordinary cutting processes. Inquire for details.)



Reducing valve model **VRG**
Pages → 220, 221

Internal hydraulic pressure of circuit can be partially reduced.
(Example) For work support 7 MPa (primary pressure)
pressure of work clamp is reduced to 3.5 MPa.

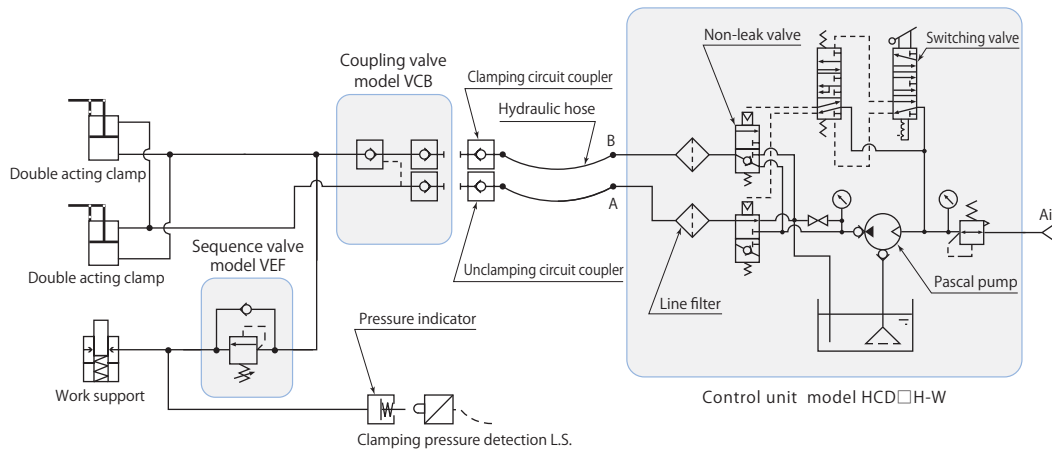
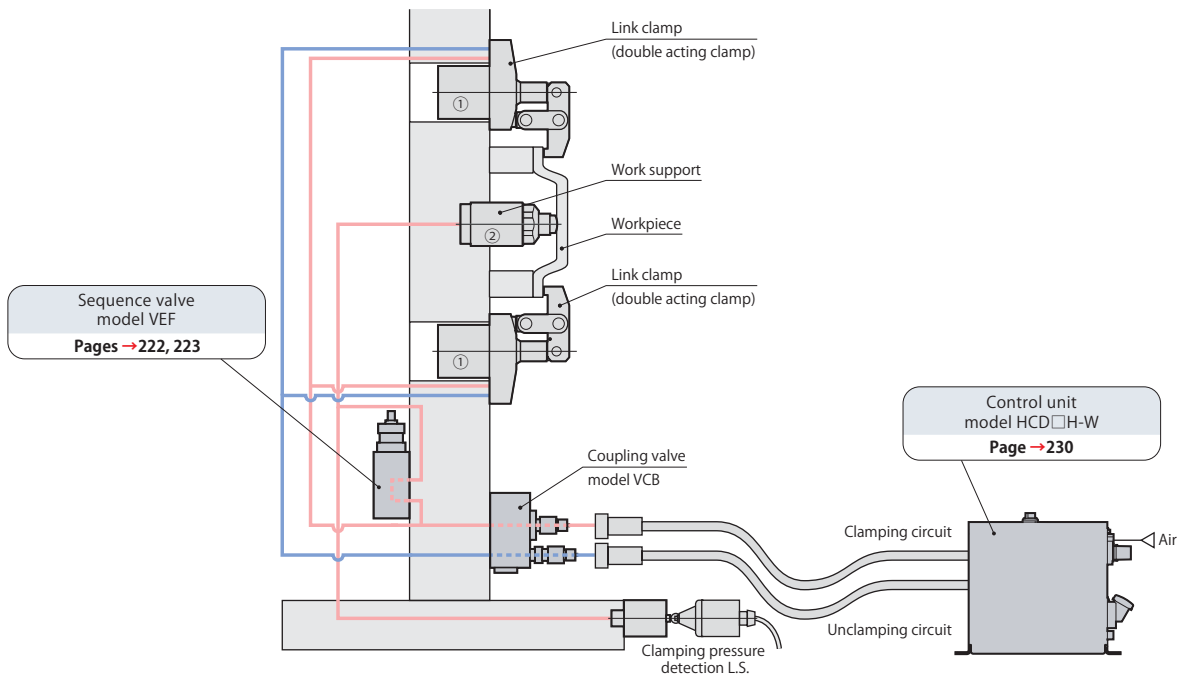


Control system



Sequence valve model **VEF**
Pages →222, 223

Clamps are sequentially operated through same circuit.
(Example) ① After clamping operation of work clamp
② Work support operation locked.





Pilot check valve model **VCP**
Page →216



Accumulator model **WPB, WPC**
Pages →224-229

It ensures the clamp circuit pressure positively retained even when hydraulic unit provides zero pressure or pressure line is cut off, which can prevent the workpiece fall or accident due to the clamp loose.

After hydraulic pressure source has been disengaged, circuit pressure fluctuation due to temperature changes is suppressed.

