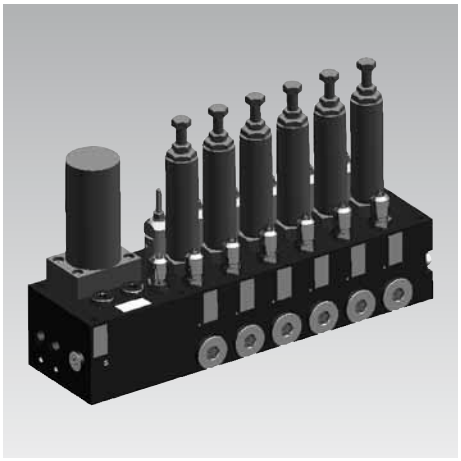
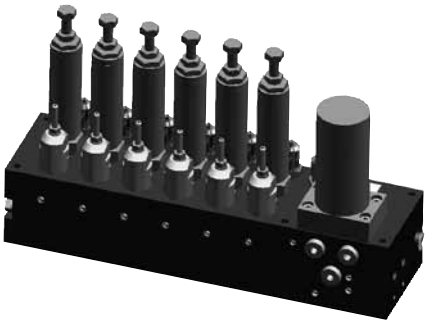
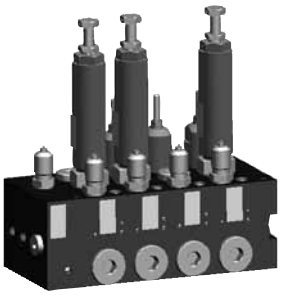
Valve Module Combination
max. operating pressure 400 bar







Description
The valve module combination consists of an input module and up to four series modules (for linkage of further modules please consult us). The series modules can be equipped with different individual function elements
The input modul can be optional equipped with an intensifier to convert a low input pressure of a machine tool hydraulic system into a higher output pressure level.

In the input module without intensifier the following hydraulic function elements are integrated:

- Check valve as a back pressure stop.
- Miniature measuring connection to connect a pressure gauge for pressure adjustment.

In the input module with intensifier the following hydraulic function elements are integrated:

- Two inbuilt filters in the clamping and unclamping line with by-pass check valves.
- Check valve for back pressure stop.
- Miniature measuring connection to connect a pressure gauge for pressure adjustment.

The series modules are directly linked to the input module. Thereby further clamping functions can be realised. The modules are equipped with the following hydraulic function elements (maximum configuration):

- Sequence valve to realise one or several switching sequences (connected in series in the linked arrangement).
- Pressure reducing valve to reduce the pressure in the corresponding switching sequence. The valve contains a override compensation to avoid overpressure by external influences like temperature.
- Pilot-controlled check valve to protect the clamping circuit in the case of pressure drop e.g. due to line break.
- Miniature measuring connection to connect a pressure gauge for pressure adjustment.

Application
The valve module combination is a valve unit composed of individual modules. It is used to control complex hydraulic clamping fixtures. In order to fix safely workpieces in clamping fixtures, functions as positioning, clamping and supporting have to be effected in a determined sequence.
In some applications it is required to realise the individual functions with reduced clamping pressures in order to guarantee optimum workpiece clamping. For this purpose sequence valves and pressure reducing valves are integrated in the hydraulic clamping circuit. Therefore considerably longer lines are required for tubing as well as for drilled channels. Due to the use of valve module combination the required line length is considerably reduced, since all required control and pressure valves are directly arranged at the unit.

Advantages
- Reduced tubing for hydraulic fixtures.
- Simulation of the clamping sequence possible in advance.
- Reduced surface of attack for dirt and swarf at the fixture.
- Less contamination in the fixture due to integrated line filters.
- Required space for hydraulic control can already be considered during fixture design.
- High safety against overpressure by means of a pressure reducing valve with integrated override pressure compensation.

Application example