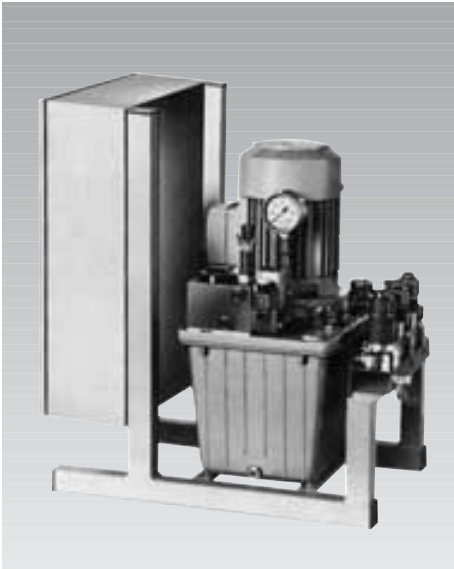




Power Unit with manual or programmable proportional pressure adjustment 400 V 50 Hz



Technical characteristics

- Proportional control
- Operating pressure: 50-500 bar, with 10 adjustable pressure stages
- Contact free of potential for machine tool interlock
- Valve and control voltage 24 V DC
- Oil level and oil temperature control
- Oil filler
- Hydraulic oil HLP 22
- further data (see back of the page)

Application

Hydraulic power units are used for clamping several fixtures with different clamping pressures. When using sensitive components, the clamping pressure or clamping force has to be optimised. For such applications a hydraulic power unit with proportional pressure adjustment is required, particularly if the pressures are frequently to be readjusted.

Positioning, supporting and clamping of workpieces on machine tools are part of the machining cycle. In most cases the sequence of the machining steps is determined by the N/C programme.

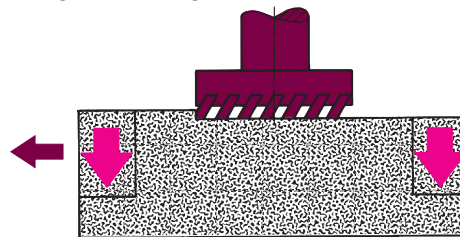
The programmable pressure adjustment allows to adjust the clamping pressure by means of the programme to the corresponding pressure of the machining step; therefore the M-functions of the machines are used.

The power unit is particularly suited for applications where pressure adjustments are quite often adjusted manually.

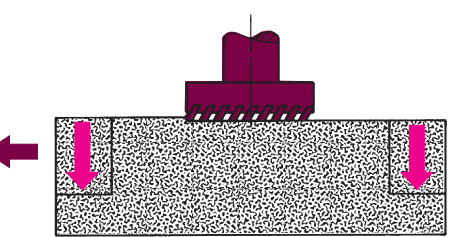
Power units for double-acting cylinders and for shuttle machining are available.

Application example

Rough machining



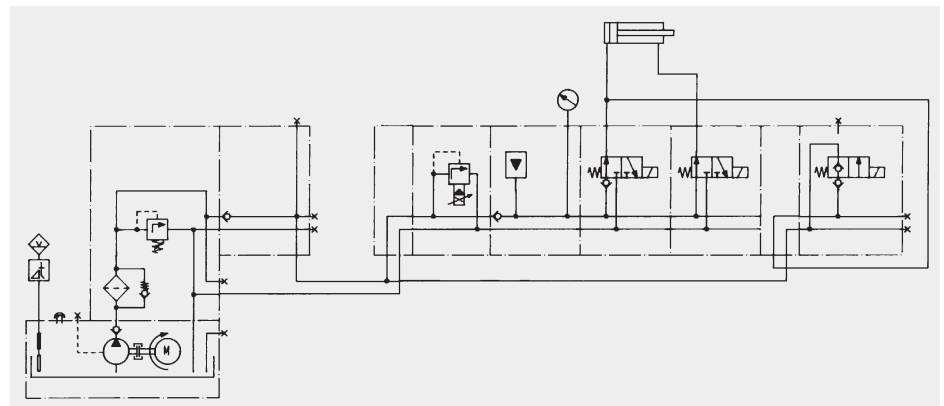
Finish machining



Clamping force

Machining force

Hydraulic circuit diagram of power unit with proportional pressure adjustment and pressure reduction, e.g. for finish machining





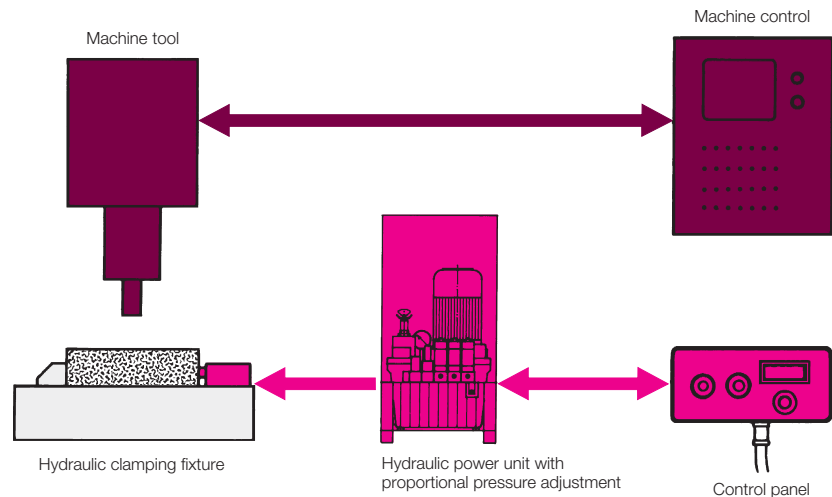
Manual pressure adjustment

The power unit is operated through the control panel which is installed directly beside the clamping point. There are 10 pressure stages adjusted.

The operating pressure can be increased during the machining at any time. Pressure reduction can only be effected after unclamping was made.

Manual pressure adjustment with pressure reduction

To clamp workpieces according to the machining operation with minimum deformation, it is sometimes required to reduce the clamping pressure (e.g. for rough machining and following finish machining). A special hydraulic control is available for such applications.



Hydraulic power unit with proportional pressure adjustment

Cylinder double acting

Voltage		3~Y 400V ±5% 50Hz
Output flow	[l/min]	0.9
Oil volume	[l]	11
Rating	[kW]	0.75

without pressure reduction

– for one fixture **Part-no. 6821-180**

– for shuttle machining **Part-no. 6821-185**

with pressure reduction

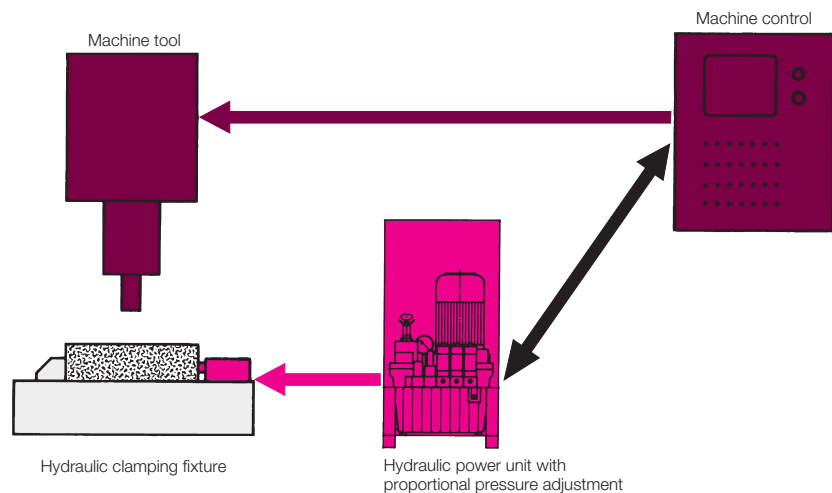
– for one fixture **Part-no. 6821-181**

– for shuttle machining **Part-no. 6821-182**

Programmable pressure adjustment

In modern automatic machining centres, that are required for flexible manufacturing, the clamping pressure must correspond to the cutting force. The manufacturing sequence and the corresponding clamping pressure including the pressure reduction are controlled by the programme of the N/C machine.

The clamping pressure of the power unit with proportional pressure adjustment is adjusted via special commands of the N/C machine control and confirmed by return.



Hydraulic power unit with proportional pressure adjustment

Cylinder double acting

Voltage		3~Y 400V ±5% 50Hz
Output flow	[l/min]	0.9
Oil volume	[l]	11
Rating	[kW]	0.75

with pressure reduction

– N/C coupling **Part-no. 6821-188**