Hydraulic hollow piston cylinder double acting	Clamping force at 100 bar [kN]	Page
7411-2	8,6	33
7412-2	12,9	33
7413-2	18,1	33
7414-2	26,2	33
723D38102-2	8,6	33
723D48152-2	12,9	33
723D57242-2	18,1	33
723D68242-2	26,2	33

Hydraulic swing clamps double acting	Clamping force at 100 bar [kN]	Page
726D25221-2	1,9	35
726D32321-2	3,4	35
726D40341-2	5	35
726D25222-2	1,9	35
726D32322-2	3,4	35
726D40342-2	5	35
726D32243-2	3,2	35
726D32373-2	3,2	35
726D50293-2	6,4	35
726D50393-2	6,4	35
726D32244-2	3,2	35
726D32374-2	3,2	35
726D50294-2	6,4	35
726D50394-2	6,4	35
726D25082-5	1,6	35
726D32122-5	3,2	35
726D50162-5	6,4	35
726D63242-5	9,6	35
726D25083-5	1,6	35
726D32123-5	3,2	35
726D50163-5	6,4	35
726D63243-5	9,6	35
726D25084-5	1,6	35
726D32124-5	3,2	35
726D50164-5	6,4	35
726D63244-5	9,6	35

Hydraulic lever clamp double acting	Clamping force at 100 bar [kN]	Page
732D16HSZY-01	1,5	47
732D25HSZY-01	3,9	47
732D40HSZY-01	9,5	47

Hydraulic retracting clamp double acting	Clamping force at 100 bar [kN]	Page
70622-D1	6,5	49
70622-DA	6,5	49

Hydraulic power clamp single-/double acting	Clamping force at 100 bar [kN]	Page
7011-5	5,0	50
7012-2	5,0	50

Hydraulic edge clamp single acting	Clamping force at 100 bar [kN]	Page
733E03701-1	3,7	51
733E03702-1	3,7	51

Hydraulic work supports	Locking force at 100 bar [kN]	Page
724E160811-1	2,5	52
724E160812-1	2,5	52
724E201232-1	2,8	53
724E301232-1	4,7	53
724E401632-1	7,0	53
724E201242-1	2,8	54
724E301242-1	4,7	54
724E401642-1	7,0	54

Rotary coupling		Page
70-DR20-1		56
70-DR20-2		56
70-DR40-1		56
70-DR40-2		56
70-DR60-1		56
70-DR60-2		56

General information

Clamping of workpieces for machining purposes has a major effect on the product quality, the manufacturing times, the degree of machine utilisation, the operator's safety and on the production plant. The emphasis is on secure clamping and rapid changing of the workpieces.
The clamping forces must be high enough to clamp the workpieces safely even when being exposed to varying loads.

Requirements of modern clamping equipment:
• Simple, rapid and safe handling
• Wide variety of applications, re-usable
• Easily exchangeable
• Low costs per clamping point
• High output per time unit
• High quality of the machined workpieces

The profitability and rationalisation effect essentially depend on the choice of the correct clamping equipment. The electrical and air hydraulic power clamping system of DE-STA-CO meets these requirements and helps to solve the various problems of clamping.

The system

The power sources, clamping elements and accessories shown in this catalogue are products which meet all the demands of modern clamping systems. The clamping system can be connected to any pneumatic, hydraulic and electrical network. If none of the energy sources is available, the required clamping pressure can be produced by a hydraulic hand pump (e.g. in smaller workshops and building sites). The benefits and effects of the system remain the same, regardless of the choice of the energy source. The clamping system operates with high pressure hydraulics; it allows to transfer high clamping forces by the use of relatively small clamping elements. This offers the advantage to use small, mobile devices. A particular advantage of this electrical and air hydraulic power clamping system is its application both in large high capacity production plants and small series production. Furthermore, it is used in fixed cycle operation on machine tools.
The clamping elements simultaneously clamp on various and remote clamping points with only one control valve. The clamping system's flexibility and its wide range of accessories allow to clamp even complex and irregularly shaped parts. The clamping pressures can be repeated as often as necessary. All system elements are supplied ex works along with international standard pipe thread connectors or NPT-thread connectors. Adaptors (supplied free of charge along with the unit) allow to connect the NPT-threads to different types of threads or screw connections.

Assembly and Connection

Alignment, assembly and connection can be carried out easily and quickly without special tools. The power sources, such as pressure convertors, air hydraulic pumps or electrical hydraulic pumps, are first connected to the pneumatic or electrical networks. Thereafter, they are connected to the clamping units. It is also possible to directly connect the clamping units to an already existing hydraulic network. However, the pressure produced by the hydraulic network must never exceed the maximum operating pressure of the clamping units. Before actuating the clamping system, it must be ventilated at its highest point.
This procedure is explained in detail in the assembly instructions delivered along with the power sources.

Information on seals

All seals are made of BUNA N. This material is suitable for gas, air, hydraulic oil and mineral oil based liquids (water-glycol-mixtures). The material BUNA N is not suitable for hardly combustible hydraulic liquids, brake fluids, cetones and acids. Also cooling fluids are not always compatible with standard seals and may affect compatibillity characteristics of sealing material.
BUNA N seals are designed for maximum operating temperatures of 110 °C. For operating temperatures exceeding 110 °C, VITON seals having a maximum operating temperature of 210 °C must be used.
The seals are designded for a maximum stroke speed of V max. = 0,5 m/sec.

Approved oil
Hydraulic oil: HLP according to the DIN 51524 Part 2

Viscosity range:
min. 22 mm2/s, max. 68 mm2/s

Recommended viscosity grade:
ISO VG 32 or VG 46 DIN 51519

Operating temperature:
40 °C–50 °C

Filtering:
use only filtered hydraulic oil of 25 µm absolute.

Information concerning technical units (SI units)

Force
In accordance with the international unit system, force is denoted in Newtons (N).
One Newton is the force which accelerates a mass of 1 kg by 1 m/s2.

$$1 \text{ N} = 1 \text{kg m/s}^2$$

In this catalogue, force is expressed in kN

$$1 \text{ kN} = 1000 \text{ N}$$

Pressure
The unit of pressure in the SI system is the Pascal (Pa).
Pressureis still stated in this catalogue in bar.

$$1 \text{ bar} = 10^5 \text{ Pa}$$
$$1 \text{ bar} = 10 \text{ N/cm}^2 \ (= 1{,}02 \text{ kp/cm}^2)$$

Connection example
Single action hydraulic clamp connected to an air-hydraulic pump

air-hydraulic pump

hydraulic
screw-in cylinder

hold down clamp

hydraulic hollow
ram cylinder