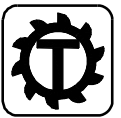


Swivel Clamp SCB ..., SCT ...

Operating Instructions



1. Description

The swivel clamp is designed for use in the appliance construction industry to keep pieces to be machined inside the appliance. The aluminium casing houses a double-acting pneumatic lifting and swivelling unit offering numerous fixing possibilities.

By using the clamp arm and pressure screw the clamping force is transmitted from the piston rod to the work piece. In the course of the clamping procedure the piston rod first of all performs a downward swivel and lifting stroke at an angle of 90°. This is followed by a linear downward clamping stroke for clamping the work piece. For releasing the work piece the piston rod first of all performs an upward linear lifting stroke which is followed by an upward 90° swivelling and lifting stroke.

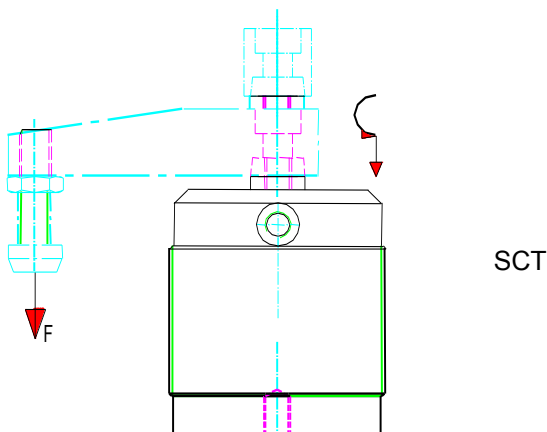
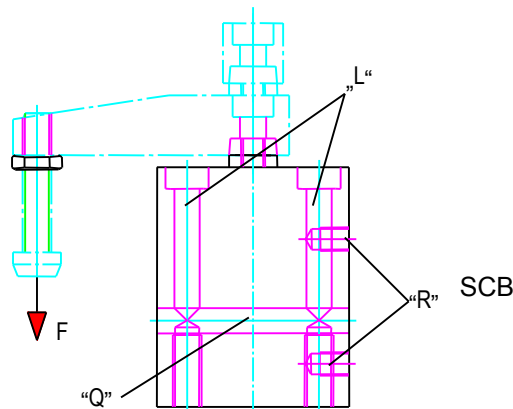
The piston of the swivel clamp "SCB" has a magnetic ring and is therefore prepared for an end position scan.

2. Safety

The swivel clamp was not conceived to be a complete tool, ready for independent applications and has therefore not been fitted with safety equipment. Only when it is correctly installed in a production system and a corresponding safety control system is added, will all safety requirements be met.

Should any faults occur that place personnel at risk, the swivel clamp is to be switched off immediately. Maintenance measures are only to be undertaken when the machine is at a complete standstill and by suitably qualified specialists.

After maintenance work has been carried out, the protection devices are to be refitted in the correct way.



3. Assembly of the swivel clamp

- Fit the clamp by introducing the fillister head screws through the longitudinal bores „L“ or through the cross bores „Q“.
- Establish the compressed-air supply between the pneumatic control system and clamp (connections „R“).

Nozzles are provided to cushion the forward and backward strokes.

Caution: When strokes are performed too quickly using heavy clamp arms/contour adaptors you may destroy the mechanical elements of the clamp's swivelling system. Do not fall short of the minimum cycle time (1 sec. to open / 1 sec. to close).

Use PSZS clamp arms.

Inductive scan

On the back of the spanner sensors can be fitted in grooves „N“.

Use type SME-8-S-LED-24 sensors of Festo.

Caution: Operation with incorrect or too high voltage can lead to short circuiting and danger to personnel.

4. Set up for the swivel clamp

Caution: Danger of crushing!

When the clamp arm is being set, fingers could be severed or crushed. Do not reach into the swivel and linear stroke areas of the clamp arm when operating the swivel clamp. Cut off the supply of compressed air before work is carried out in the tool area.

1. Place the PSZS clamp arm onto the piston rod and fix it by fitting the spring washer and screw by hand.
2. Turn the pressure screw into the clamp arm.
3. Close the clamp against the target position on the work piece. The clamping movement consists first of all of a 90° swivel stroke (to the left or to the right) followed by a linear clamping stroke. The clamping force may only be applied in the linear clamping stroke area. Clamping of the work piece must be effected unhindered.
4. Determine the dimensional difference between the clamp arm and the work piece.

Caution: do not subject the piston rod to a torque when the clamp arm is tightened up. Use a spanner to prevent the clamp arm from being turned/distorted before tightening up the crew.

Tightening torque:

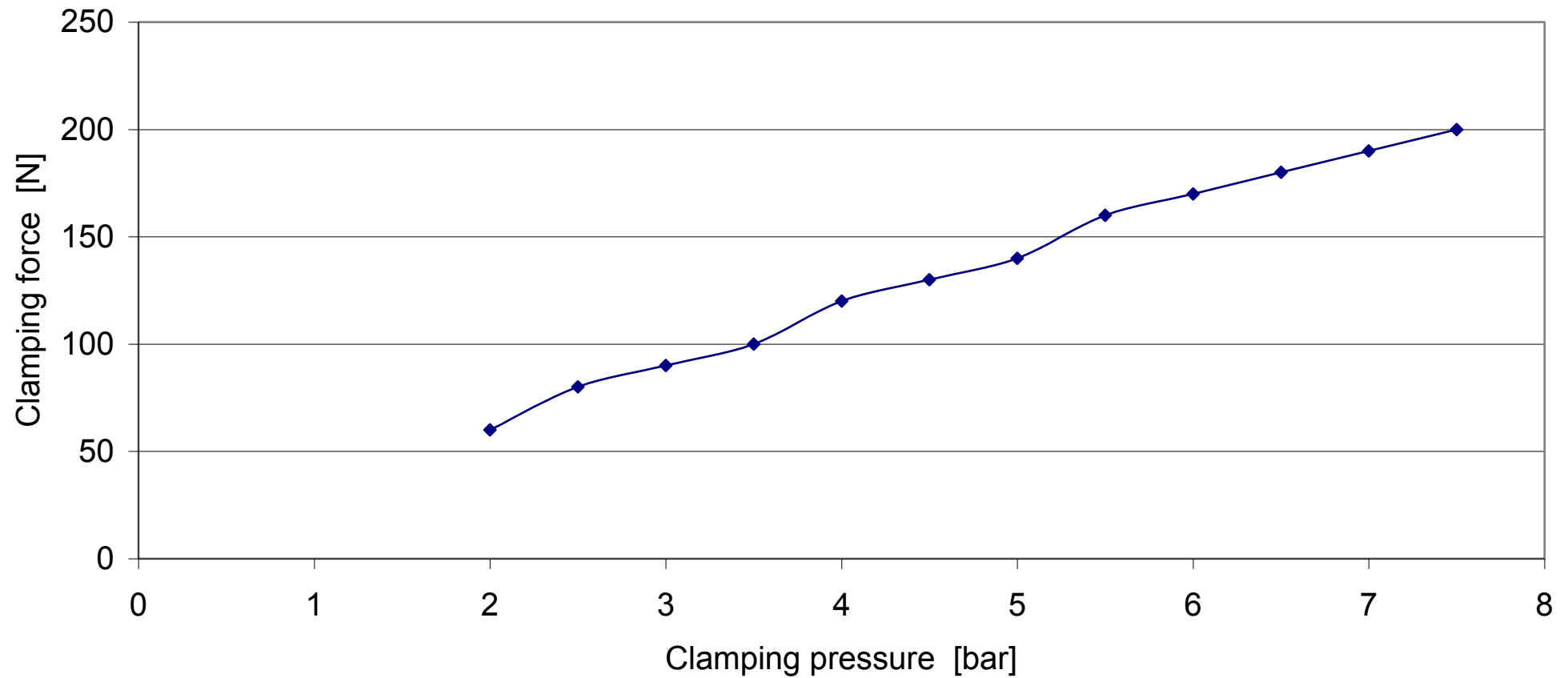
- size 25 = 11,5 Nm
- size 32 = 24,0 Nm
- size 40 = 24,0 Nm
- size 50 = 75,0 Nm
- size 63 = 75,0 Nm

5. Maintenance

Since the swivel clamp is designed for being used in series production, it is equipped with bearings and guides only requiring little maintenance. The technical concept of the clamps using the PSZS clamp arms allows the equipment to be used during a span of 500000 clamping cycles without any signs of wear worth mentioning. Cleaning with high-pressure steam or dry ice may damage the swivel clamp.



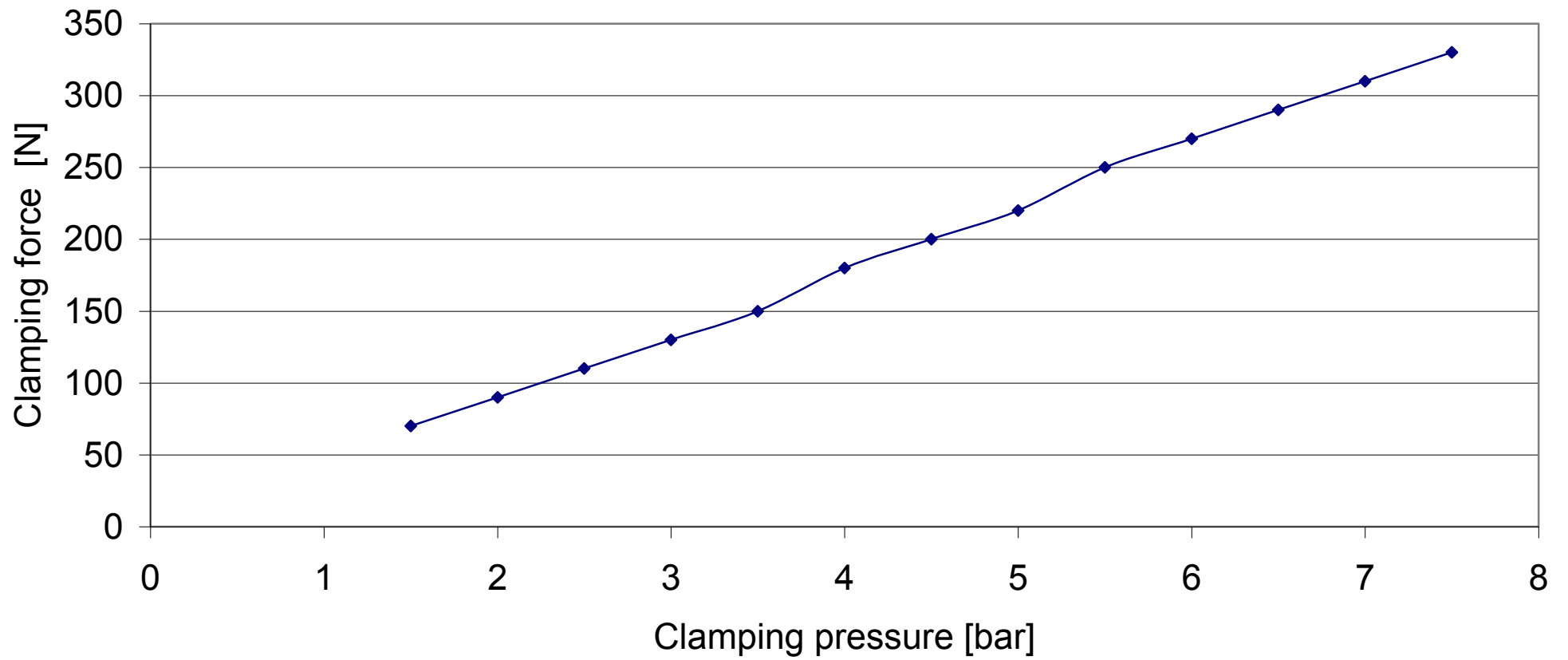
SCB/SCT 25 clamping force as a function of the clamping pressure
using the PSZS 25 clamping arm



Subject to technical modifications.

18.11.2015

SCB/SCT 32 clamping force as a function of the clamping pressure
using the PSZS 32 clamping arm

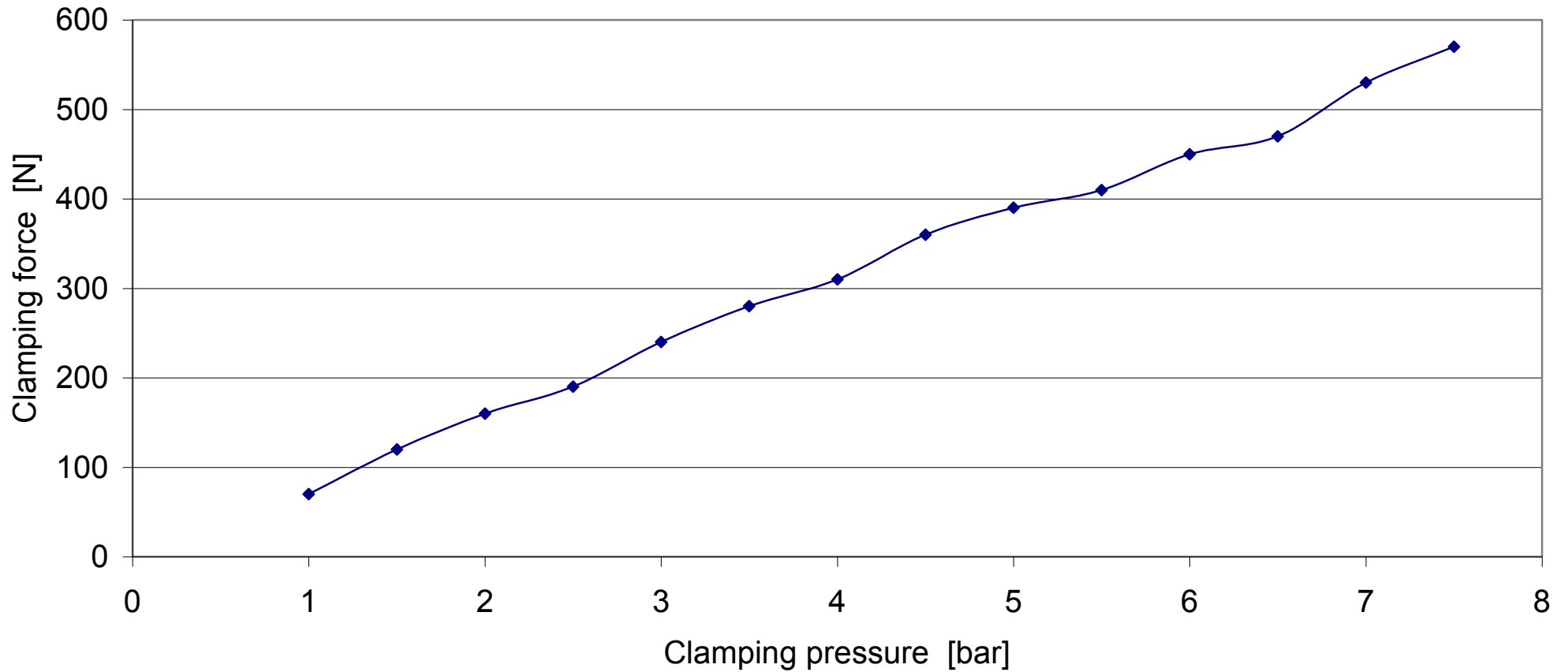


Subject to technical modifications.

18.11.2015

SCB/SCT 40 clamping force as a function of the clamping pressure

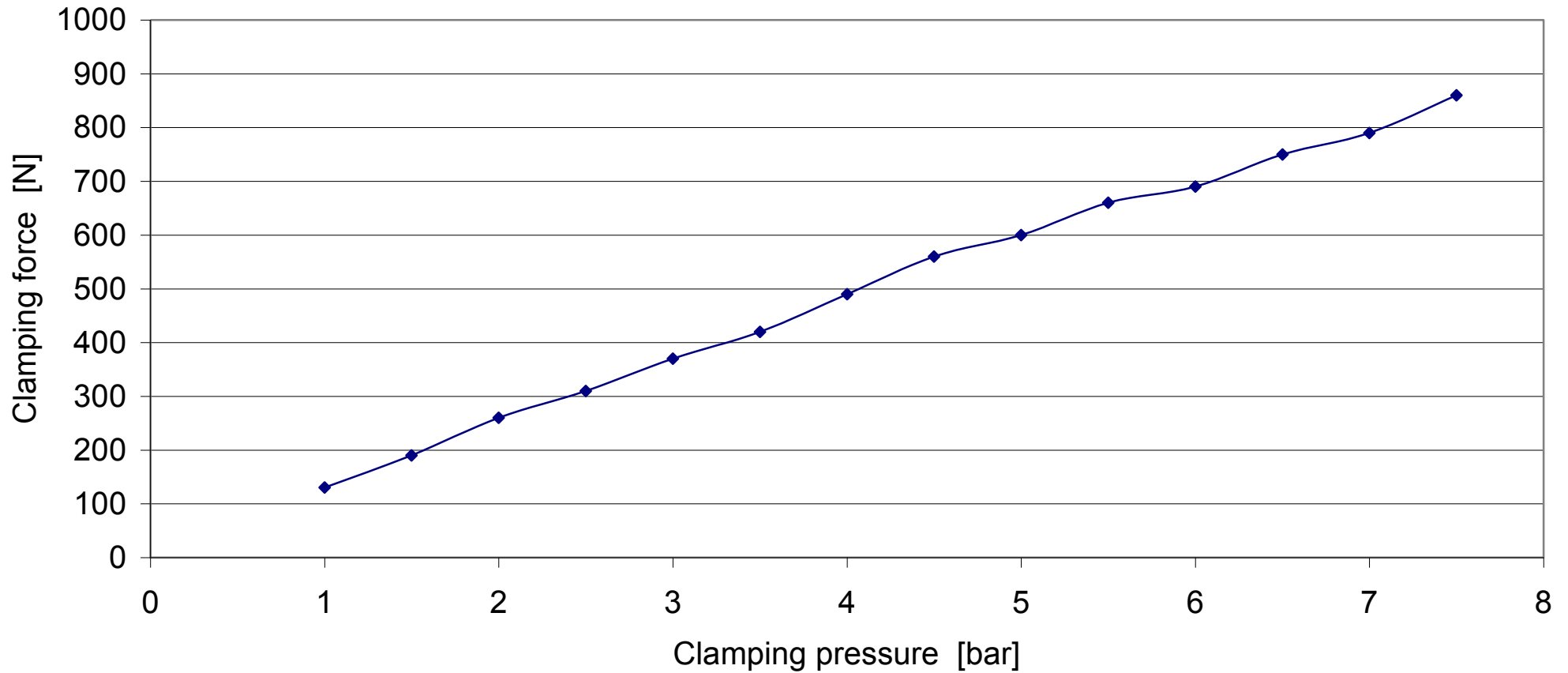
using the PSZS 40 clamping arm



Subject to technical modifications.

18.11.2015

SCB/SCT 50 clamping force as a function of the clamping pressure
using the PSZS 50 clamping arm



Subject to technical modifications.

18.11.2015

SCB/SCT 63 clamping force as a function of the clamping pressure

using the PSZS 63 clamping arm

