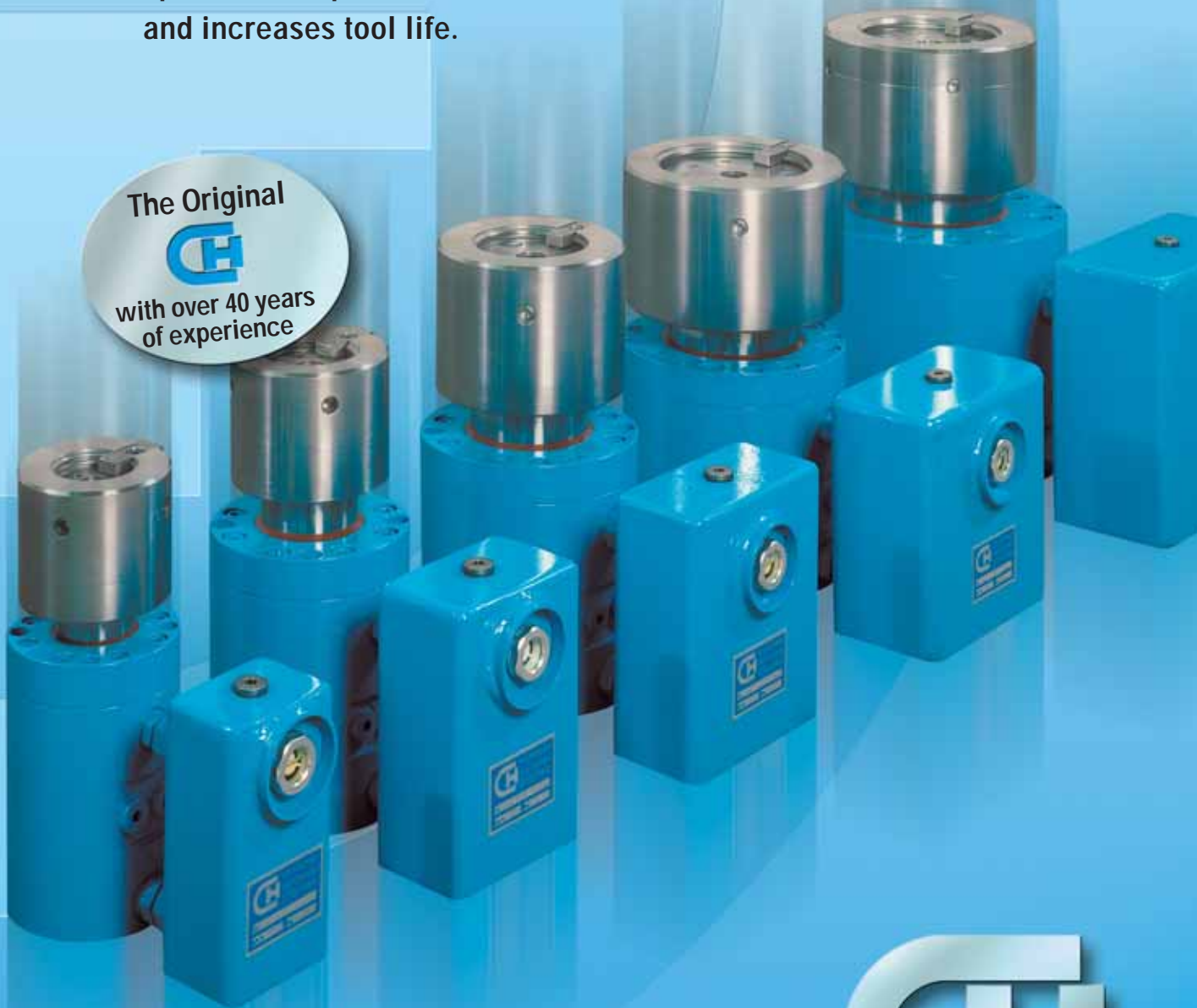


BLANKING STROKE DAMPER FOR PRESSES

Dampens noise, reduces vibrations,
protects the press
and increases tool life.



HYLATECHNIK



HYLATECHNIK BLANKING STROKE DAMPERS Prevents the Adverse Effects of Reverse Loads

At the instant of breakthrough during blanking, the press and dies are subjected to severe stress. Sooner or later this results in damage to bearings, seals, gibways, etc. and to increased die wear, or even punch breakage.

With the HYLATECHNIK BLANKING STROKE DAMPERS

- the life of the press and dies are substantially increased.
- Noise and vibration are significantly reduced.

Operating Principle

In the starting position the damper piston is fully extracted. The oil compartment of the cylinder is filled with oil. Force is applied to the piston by the press ram, and the oil is expelled through one orifice or more. Before the blanking operation the ram descends at normal speed and the orifice inside the damper causes only a low pressure rise inside the oil compartment. This adds only a relatively small load to the

press. On breakthrough of the blanking punch the ram speed increases to a multiple value. The flow resistance across the orifice rises, causing high pressure inside the cylinder – the damping effect is produced. After the downward force has been removed, the piston of the damper returns to its starting position. The oil compartment is again filled with oil through a non-return valve.

HYLATECHNIK BLANKING STROKE DAMPERS are available in three versions. Where required, space saving or specially shaped non-standard versions (also with longer or shorter stroke) are supplied. Your specific enquiries are welcomed.



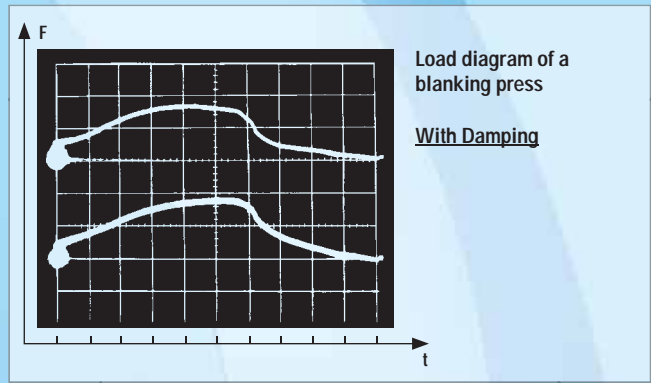
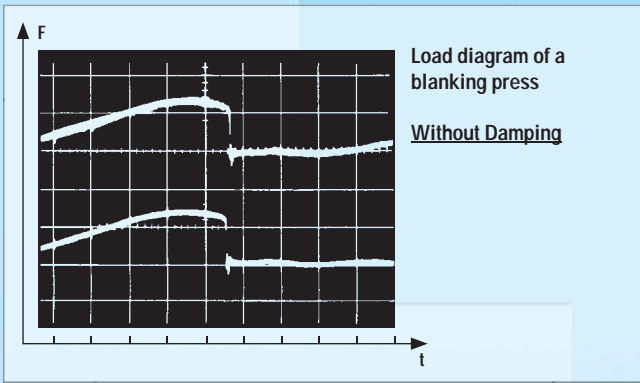
Version SHYC-H
with adjustment nut (optional)



Version SHYC-S
without adjusting nut



Version SHYC-M
without adjusting nut



| Damper Type | A | B | C | D | E | F | G | H | J | K | L | M | N | R | PA | T | S | Stroke | Take-up force kN | max. force kN |
|-------------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|-----|------------|-----|----|-------------------------------|--------------------------------|--------------------------------|--------|------------------|---------------|
| SHYC-10-10 | 140 | 75 | 65 | 30 | 14 | 45 | 80 | 30 | 65 | 42 | 190 | M 6 x 120 | 70 | 20 | G ¹ / ₈ | G ¹ / ₄ | G ¹ / ₄ | 10 | 100 | 100 |
| SHYC-20-10 | 175 | 100 | 90 | 45 | 16 | 66 | 111 | 30 | 75 | 60 | 215 | M 6 x 140 | 80 | 24 | G ¹ / ₄ | G ¹ / ₄ | G ³ / ₈ | 10 | 200 | 200 |
| SHYC-35-15 | 195 | 125 | 100 | 60 | 20 | 61 | 117 | 30 | 80 | 76 | 250 | M 8 x 160 | 110 | 26 | G ¹ / ₄ | G ¹ / ₄ | G ³ / ₈ | 15 | 350 | 350 |
| SHYC-50-15 | 195 | 150 | 130 | 80 | 20 | 61 | 117 | 30 | 100 | 92 | 280 | M 8 x 160 | 140 | 28 | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | 15 | 500 | 600 |
| SHYC-70-15 | 195 | 170 | 170 | 100 | 20 | 61 | 117 | 30 | 105 | 108 | 320 | M 8 x 160 | 160 | 28 | G ¹ / ₄ | G ³ / ₈ | G ¹ / ₂ | 15 | 700 | 800 |
| SHYC-100-15 | 230 | 230 | 180 | 125 | 24 | 65 | 142 | 30 | 120 | 148 | 395 | M 10 x 190 | 200 | 30 | G ¹ / ₄ | G ¹ / ₂ | G ³ / ₄ | 15 | 1000 | 1500 |
| SHYC-150-15 | 240 | 260 | 238 | 150 | 24 | 65 | 142 | 30 | 160 | 166 | 445 | M 10 x 190 | 220 | 30 | G ¹ / ₄ | G ¹ / ₂ | G ³ / ₄ | 15 | 1500 | 1800 |
| SHYC-200-15 | 245 | 300 | 238 | 180 | 25 | 70 | 147 | 30 | 160 | 192 | 505 | M 10 x 200 | 260 | 30 | G ¹ / ₄ | G ¹ / ₂ | G ³ / ₄ | 15 | 2000 | 2500 |
| SHYC-300-15 | 275 | 370 | 295 | 220 | 40 | 95 | 172 | 30 | 180 | 240 | 575 | M 12 x 220 | 260 | 30 | G ¹ / ₄ | G ¹ / ₂ | G1 | 15 | 3000 | 3800 |
| SHYC-400-20 | 320 | 450 | - | 250 | 40 | 110 | 200 | - | - | 300 | 715 | M 12 x 250 | 400 | 30 | G ¹ / ₄ | G1 | G1 | 20 | 4000 | 5000 |
| SHYC-500-20 | 340 | 490 | - | 260 | 40 | 120 | 220 | - | - | 320 | 755 | M 16 x 280 | 400 | 30 | G ¹ / ₄ | G1 | G1 | 20 | 5000 | 6000 |
| SHYC-750-20 | 400 | 600 | - | 300 | 40 | 145 | 270 | - | - | 380 | - | M 16 x 340 | - | 30 | G ¹ / ₄ | G1 ¹ / ₄ | G1 ¹ / ₄ | 20 | 7500 | 8000 |

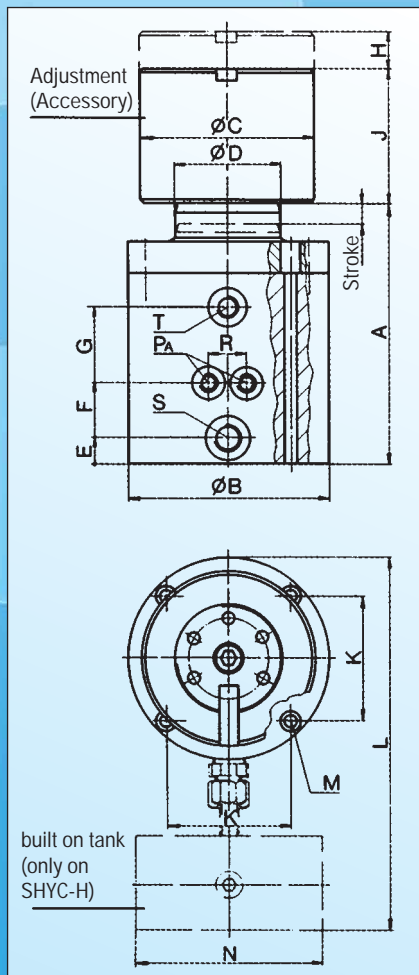
Key to Type Coding

SHYC - X XXX - XX

- Stroke length
- Damping capacity = force taken up in tons force (1 ton force = approx. 10 kN)
- H - Damper for hydr. presses (with built on tank)
- S - Damper for hydr. presses (for feeding with hydr. oil from the press)
- M - Damper for mechanical presses (for feeding with hydraulic oil from external supply tanks)

Ports on type S and M

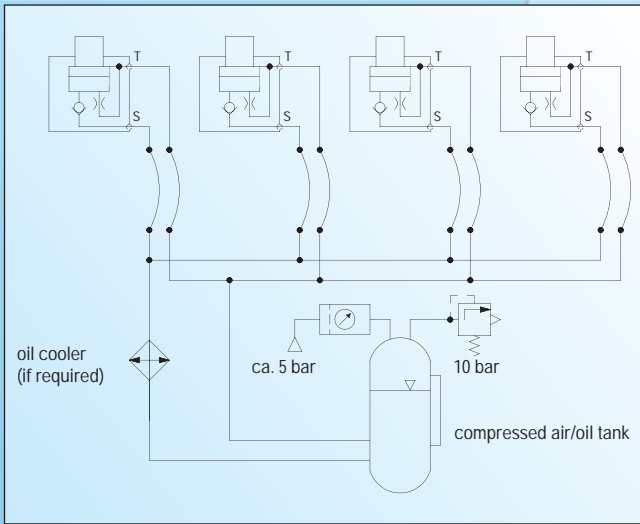
- S = supply line
- T = return line to tank
- PA = pressure compensation (connect only when necessary)



Installation, set-up

The Blanking Stroke Dampers are installed symmetrically around the centre of force and are prevented from moving out of position (the cylinder housing has through-holes for mounting screws). The overall height of the damper has to be set in such a way that it comes into contact with the slide just before the breakthrough occurs. To compensate

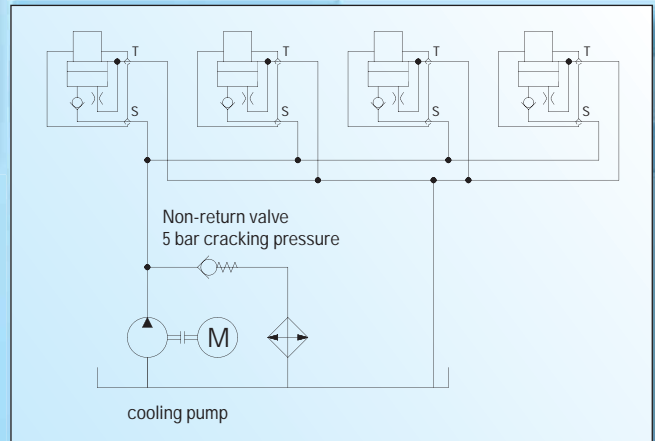
for large differences in height, solid, machined spacing blocks are placed under the damping cylinders. The optional adjusting nut allows a fine adjustment within 30 mm. Each set of Blanking Stroke Dampers are equipped with the orifice combination specially selected for the application. If it becomes necessary to alter the damping effect, the orifice can easily be changed.



Recommendation for connecting SHYC-M to an external supply tank

Use low-pressure (30 bar) hydraulic tubing or flexible hose. The connection should be kept as short as possible.

Never use quick acting couplings!



Recommendation for connecting SHYC-S to a press hydraulic system (supply pressure min. 5 bar, max. 50 bar)

HYLATECHNIK – product range



Parallel Lifting Device



Hydraulic Cushion Systems



Hydraulic Presses



Hydraulic Shears

Other Products / Services

- die splitting and turnover device
- hydraulic parallelism control for presses
- safety-upgrades and -inspection of presses
- modernization of all makes of hydraulic presses
- machining: turning up to Ø 800 x 2000 mm
drilling/milling up to 4000 x 2000 mm

Our experts are always available for advice or for demonstrating our equipment.

