

HIGH PRESSURE - hoses

Superior flexibility

Hydraulic hoses with minimum bend radius smaller than standard are much more flexible.

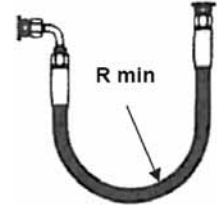
Example:



HW-2SN-10P - min. bend radius $R = 125$ mm
(meets the requirements of EN 853 2SN)



HW-2SC-10P - min. bend radius $R = 65$ mm
(exceeds the requirements of EN 857 2SC)



Superior pressure parameters

The maximum working pressure of some hydraulic hoses exceeds standard requirements. The hoses can be easily used for applications with the same safety factor without need to change the diameter (e.g. for smaller one) or change hose type (from double braid to hose with steel wire spirals).

Example:



HW-2SC-12P - maximum working pressure 275 bar
(COMPACT hose meets the requirements of EN 857 2SC)



HW-2SC/BE/K-12P - maximum working pressure 325 bar
(COMPACT hose exceeds the requirements of EN 857 2SC)

Superior temperature parameters

There is a defined working temperature range for each hydraulic hose type. For hoses with textile braids (2TE, 3TE), steel wire braids (1SC, 2SC, 1SN, 2SN), and for some groups of hoses with steel wire spiral (4SP, 4SH), the working temperature ranges from -40°C up to $+100^{\circ}\text{C}$ (with peaks up to $+125^{\circ}\text{C}$). For hoses with steel wire spirals, constant pressure independent of diameter (R12, R13, R15), the temperature ranges from -40°C up to $+121^{\circ}\text{C}$ (with peaks up to $+125^{\circ}\text{C}$).

The working temperature of a hydraulic system may be higher than the one above. Then the use of standard hoses is not recommended. If the maximum working temperature of the hydraulic rubber hose is exceeded, the rubber hardens so its flexibility is limited. What is more, the assembly is no longer tight and leaks start to occur at the hose ends, where the fittings are. In such cases, the hoses with a superior temperature range should be used.

Example:



HW-.../HT is a group of hoses with a temperature range extended to $+135^{\circ}\text{C}$
(with peaks up to $+150^{\circ}\text{C}$) at maximum ambient temperature around $+100^{\circ}\text{C}$.

Superior abrasion resistance

Hydraulic rubber hoses manufactured according to the regular standards have limited abrasion resistance of the external layer. Abrasion tests are carried out according to EN ISO 6945 standard. It defines the weight loss of a hose sample after a number of cycles of longitudinally applied load (e.g. the maximum weight loss for hoses of 1SN and 2SN type is 0.5 g after 2.000 cycles of longitudinal load of 25 ± 0.5 N).

In order to increase the abrasion resistance of hoses, manufacturers apply an additional layer (e.g. UHMWPE Ultra-High Molecular Weight Polyethylene - cross-linked PE). Then, there is no need for adding any extra protection covers (e.g. spirals).