INSTALLATION INSTRUCTION FOR SPRING HANGERS AND SUPPORTS

General
Spring hangers and supports are supplied on palettes. During transportation on site they must be handled with care. Apart from the corrosion protection, the connection threads, type plates and scales are especially vulnerable. The fixtures should be stored in a closed room; if stored in the open the fixtures should be protected from moisture and dirt with suitable covers.

Connections
For mounting the hangers/supports on the carrying construction the required connections must be prepared: welding plates, clamping rings for hanging types FDH, FHG, and FDT; carriers (holed) or receiving plates for upright types FHS, FSS and FSP and stands for the jointed support FSG.

Function
Spring hangers and supports transfer power from the pipe mounting via a defined path range into the carrying construction. The hangers/supports are set to the required nominal load at the works (the fitting of unblocked units is not to be recommended).

Fitting
Hangers must be fitted to the connections form-closed; receiving bolts are to be secured with splints or securing rings, threaded connections with counter nuts.

Load tie-on / load adjustment
Hangers with turnbuckle

The lower load anchor (threaded bar) must be screwed into the turnbuckle of the hanger first and must be connected to the load to be transferred (note system dimension E of the tension lock, both threads of the turnbuckle must be well greased first, and the securing nuts must be unscrewed beforehand). The length of the lower load anchor must be adapted to the actual fitting measurement if necessary. The turnbuckle is turned until the required cold load is achieved on the hanger. (The set cold load can be read off the path scale on the embossed or blue triangle.) This point is reached, when the blocking lever is released on both sides through the existing clearance and can be pulled off manually without problems. (Make sure the transport securing has first been removed.) With greater thread diameters (from about M42) the turnbuckle cannot be adjusted under load. The strain must first be relieved through additional auxiliary means (lifting apparatus, hydraulic jack).

Double hangers with traverses (FDT)
As described above: ensure that the load on both load anchors is even.

Hanger without turnbuckle (FHS).
The adjusting nut is turned until the provided cold load takes effect on the hanger (grease thread beforehand). Carry on as above.

Supports size 01-11 (FSS, FSP):

the load plate with coupling is loosely pushed on. Clamping is carried out through turning the support tube (grease thread beforehand) (adjusting possibility + 30 mm). Supports from size 08 should have the strain relieved from the load plate by use os a suitable aid (lifting apparatus, hydraulic jack).

Supports size 12-16 (FSS, FSP):

the load plate with threaded coupling is loosely pushed on. Clamping is carried out through turning the adjusting nut (grease thread beforehand) (adjusting possibility + 30 mm).
Angulated supports size 01-11 (FSG):
on the side of the moveable support pipe the hinged head is looselypushed on as with other supports. Clamping is carried out through
turning the support tube (grease thread beforehand) (adjusting
possibility + 30 mm). angulated supports from size 08 should have
the strain as for supports.

After unblocking
The blocking levers are now placed with their wire strap underneath
the nose of the spring plate into the housing slots for storage and
secured with wire. From size 12 these should be fastened with
welded-on threaded bolts.
Finally, by hangers, the diagonal pull of the load chain is to be che-
cked. It must not be more than 4° under consideration of the shift
to be expected in operation. All threaded connections in the load
chain (apart from the left hand thread in the turnbuckle) are to be
secured with nuts.

Water pressure test
For the water pressure test of the pipe lines, which are held by han-
gers/supports, the hangers/supports should be blocked, so that the
line does not experience any undue distortion.
The hanger/supports are so designed, are able to bear an overload of
double the nominal load of the hanger/support with a safety margin
of 1.25 in blocked as well as unblocked condition (in unblocked con-
dition the hanger/support moves against the lower end stop).

Operating check
After the commissioning, the warm positions of the hangers/sup-
ports should be checked (red triangle on the path scale). If large
deviations are noted then corrective action must be taken.
If smaller/greater operation loads then calculated are the cause, the
setting load of the hangers and supports must be adjusted, which
can be carried out through further adjustment of the turnbuckle or
the adjusting nut. If this exceeds the path reserves, the unit must be
exchanged for another one.

Maintenance
Spring hangers and supports are absolutely maintenance free and
have no wear and tear parts.

Supplement - Unblocking
The hangers/supports are installed in a blocked condition. All loads
(medium, damping system, other loads) on which the set blocking
load is based, influence the hanger or the support.

After removing the tightening strap (transport securing) placed
around the hanger/support, the blocking levers
(dimensions 0 – 11, 2 pieces;
dimension 12 – 15, 4 pieces)
inserted into the housing slot should be manually removable.
If not, this is due to a difference between the load Fexist effecting
the hanger/support and the blocking load of the hanger/support.
The force effecting the hanger/support can be changed and thus be
adapted to the set blocking load by changing the fitting measure-
ment (for hangers by turning the turnbuckle; for supports by turning
the support tube or adjusting nut).
The position of the blocking bar lamellae indicates whether the exi-
sting load is too high or too low.

Existing load too high:
With hangers: Increase fitting measurement
With supports: Reduce fitting measurement

Existing load too low:
With hangers: Reduce fitting measurement
With supports: Increase fitting measurement

Please note
The adjustment of the fitting measurement will change the existing
loads on the adjacent support points.

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