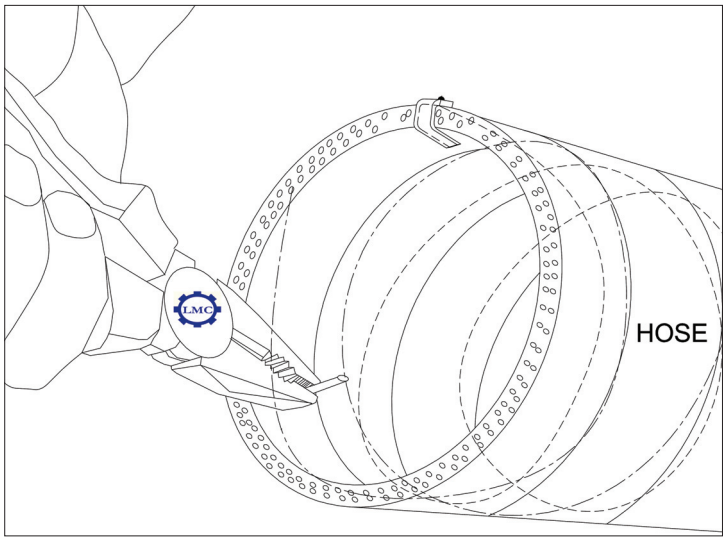
The way how low pressure hoses and couplings are assembled depends on many factors like hose type, hose tail of the coupling, working pressure of the hose and coupling, temperature range, application, etc. For low pressure couplings following hose assemblies are often used.

- Safety clamps
- Worm drive clamps
- Two bolt saddle clamps
- Wire Binding
- Buckling
- Swaging

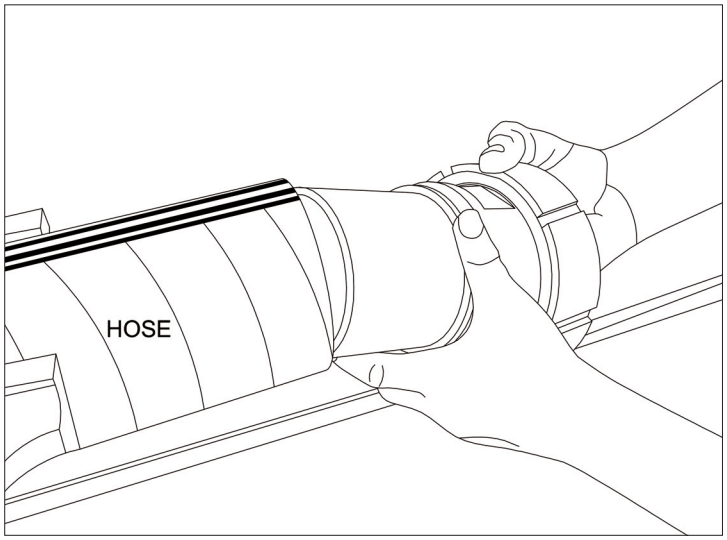
Assembly instructions for coupling hoses using safety clamps



Choose a hose that is designed for assembly using safety clamps.

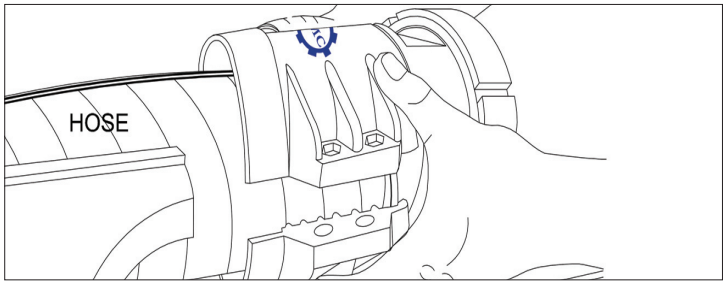
Assembly is easier if you use a work bench for safety and stability.

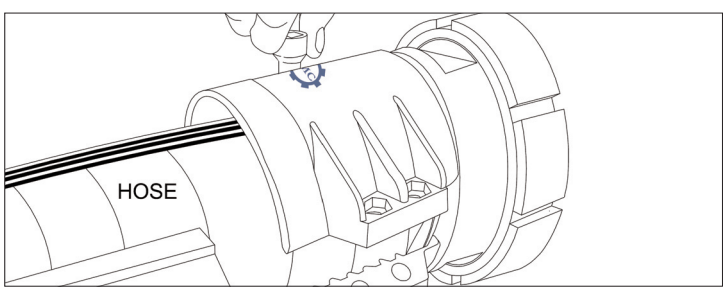
To achieve effective electrical conductivity, hoses incorporating copper strands should be brushed with contact paste.



Insert the hose tail into the hose-end by hand and press it in as far as the safety collar.

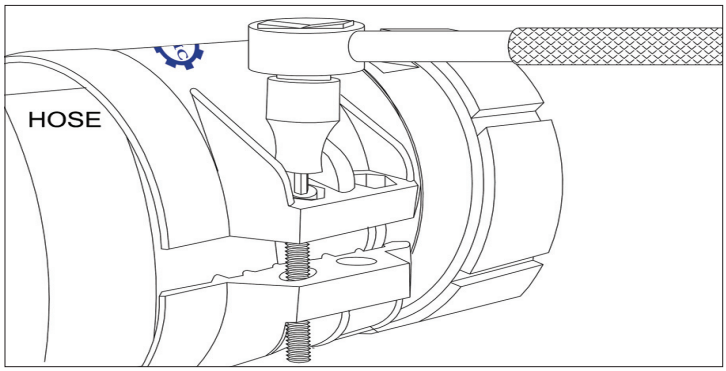
A rubber hammer can be used to tap larger diameter hose tails into place.

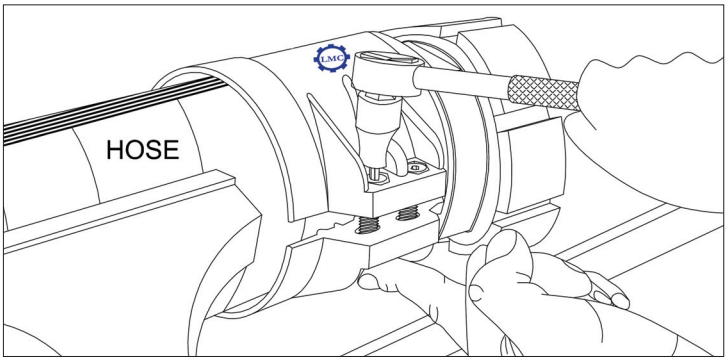




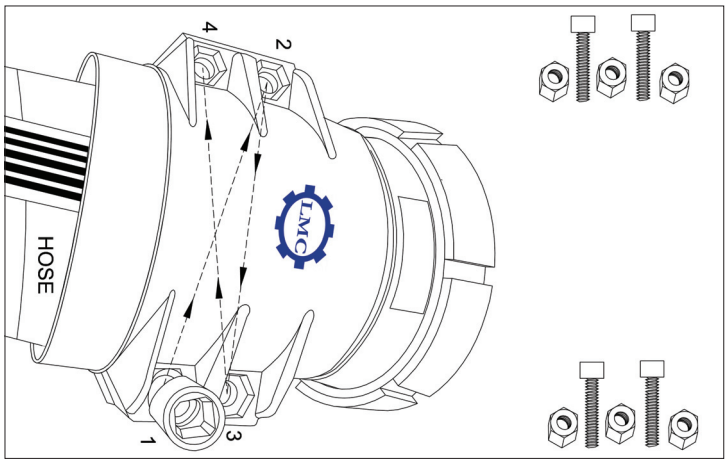
Locate the clamp shells around the collar of the inserted coupling and screw the safety clamps together temporarily using hardened steel bolts.

Assembly instructions for coupling hoses using safety clamps

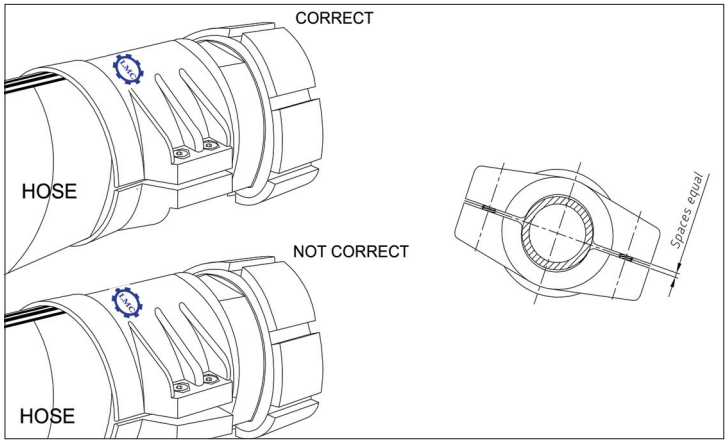




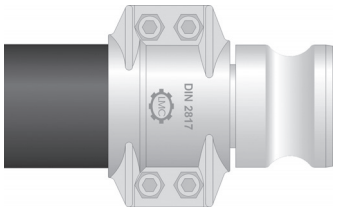
Always tighten the hardened steel bolts diagonally.



Replace them later with stainless steel nuts and bolts. Avoid using silicone sealants, since these are not always permitted for use in industrial plants.



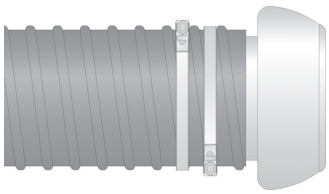
Once the clamps have been fitted, examine the hose assembly closely. Check that the safety clamps are parallel.
In correctly-dimensioned joints, there will always be a space between the clamp shells .



Safety clamps

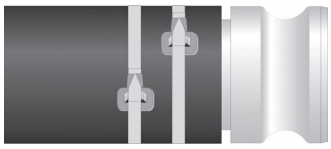
One of the safest ways to assemble hoses is to use safety clamps. Safety clamps consist of two clamp shells, and are clamped around the hose end by means of nuts and bolts. In order to assemble hoses using safety clamps, you must use either a smooth hose shank complying with EN 14420-2 / DIN 2817 or a serrated hose shank with safety collar complying with EN 14423 / DIN 2826. The safety clamp collar is located behind the coupling collar to achieve a safe, secure assembly. Always check the wall thickness of hoses first, and select the recommended safety clamp accordingly. Safety clamps and couplings can be used in all applications.

For not standardized thin wall hoses LMC-Couplings offers not standardized safety clamps. The assembly methods of these safety clamps are similar to the standardized once.



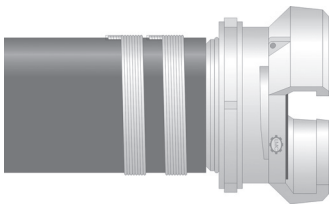
Worm drive clamps

Worm drive clamps are often used with industrial couplings in smalle dimensions. The worm drive clamp is placed over the hose end, and closed simply by turning a screw. This fast, easy assembly method is recommended for aspiration hoses, suction hoses and (small diameter) low pressure hoses. Worm drive clamps are NOT recommended for use in assembling high pressure



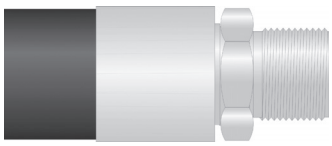
Buckling

Buckling assemblies involve the use of a stainless steel band and stainless steel buckling clip. Using a tensioning tool, the stainless steel band is tightened around the hose and secured by closing the buckling rings. This fast, easy assembly method is recommended for aspiration hoses, suction hoses and (small diameter) low pressure hoses.



Wire binding

Hose binding involves pulling a fine steel wire tightly around the hose using a hose binding machine. This assembly is recommended for use with flexible thin wall hoses, like fire hoses.



Swaging

Swaging is a metal forming technique in which the metal is formed to shape under high pressure. Swaging differs from forging in that the metal is worked cold. To swage rubber hoses HRRK swage ferrules are recommended. The internal surface of HHRK swage ferrules is similar to grooved internal surface of RK-safety clamps. For PTFE hoses HRP swage ferrules are used. The internal surface of HRP swage ferrules is smooth to avoid hose damage when swaging. Composite hoses are swaged using CHR swage ferrules in combination with a CX crimping seal.