

4. Installation and Tightening Torques of Worm Drive Clamps

The Figures and tables show the proper installation and the tightening torques of worm drive clamps.

A. General.

Worm drive clamps are for single use only. Replace clamp with a new clamp every time the clamp is loosened or removed. Secure each worm drive clamp with safety wire once they are installed and tightened to the appropriate torque (see Paragraph D. Tightening Torques for Worm Drive Clamps).

CAUTION: CAUTION: REUSE OF WORM DRIVE CLAMPS CAN LEAD TO A FAILURE OF THE CLAMPS AND MAY CAUSE LOSS OF ENGINE POWER.

B. Single Worm-Drive Clamp.

CAUTION: DO NOT PLACE A WORM DRIVE CLAMP ON A TUBE BEAD. THIS CAN DAMAGE THE HOSE AND MAY (IN CASE OF ENGINE CHARGE AIR INSTALLATION) CAUSE LOSS OF ENGINE POWER.

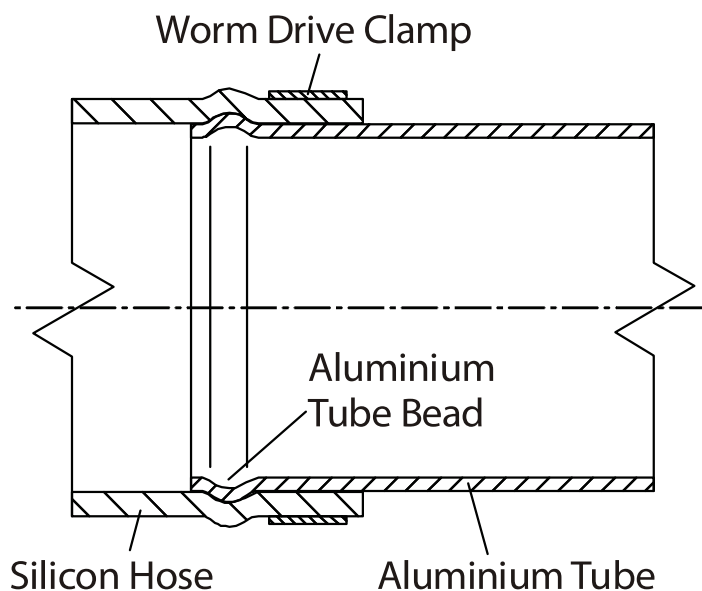


Figure 1 : Installation with a Single Worm-Drive Clamp

C. Two Worm-Drive Clamps.

(1) Axial Placement

CAUTION: DO NOT PLACE A WORM DRIVE CLAMP ON A TUBE BEAD. THIS CAN DAMAGE THE HOSE AND MAY (IN CASE OF ENGINE CHARGE AIR INSTALLATION) CAUSE LOSS OF ENGINE POWER.

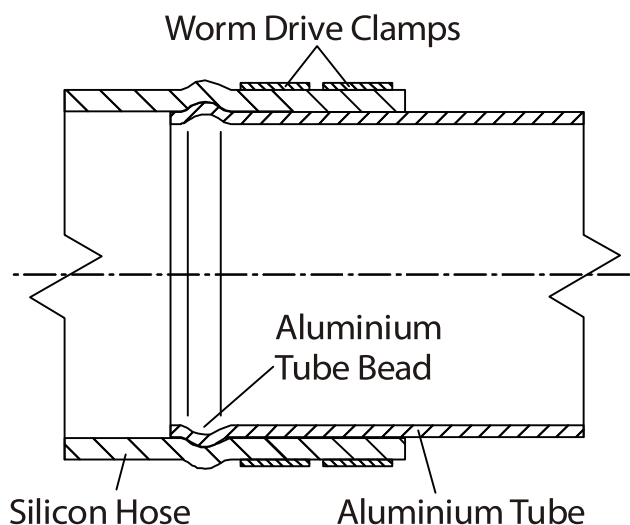


Figure 2 : Installation with Two Worm-Drive Clamps and Single Bead (Axial Placement)

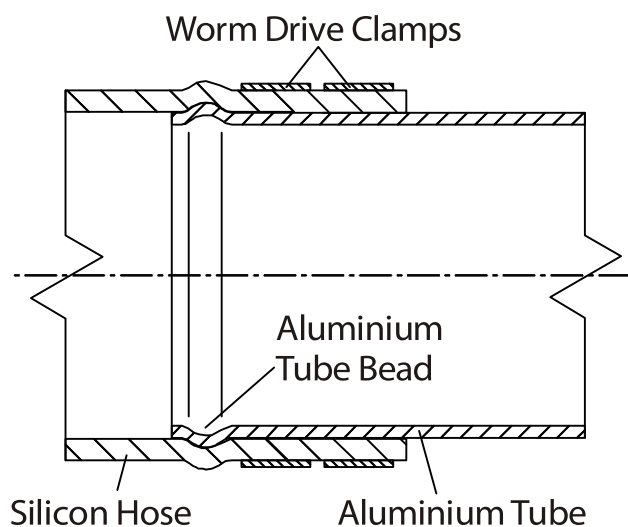


Figure 3 : Installation with Two Worm-Drive Clamps and Two Beads (Axial Placement)

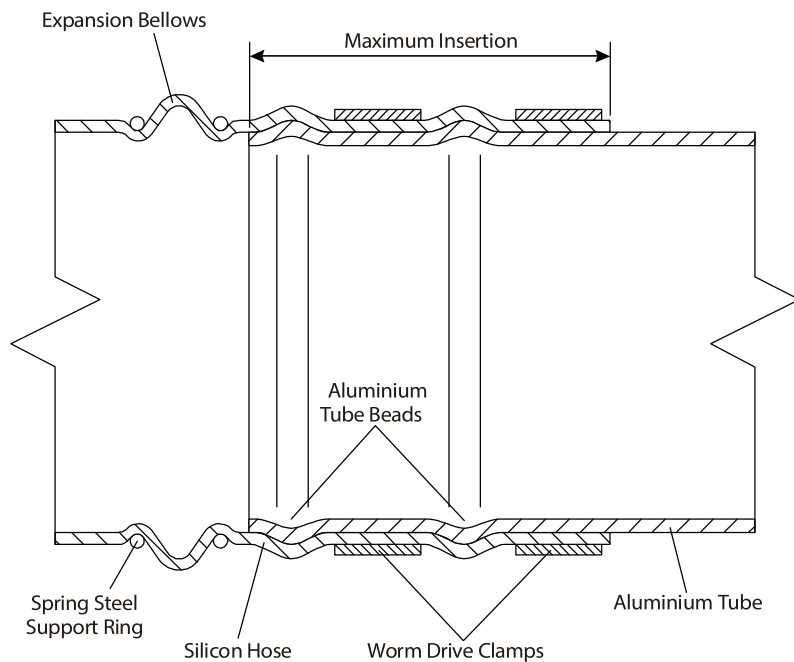


Figure 4 : Installation with Two Worm-Drive Clamps, Two Beads (Axial Placement) and a Hose with Flexible Bellows (if MÄM 40-820 is installed)

(2) Radial Placement

For soft silicon coated hoses with a wall thickness of more than 4 mm (0.16 in):

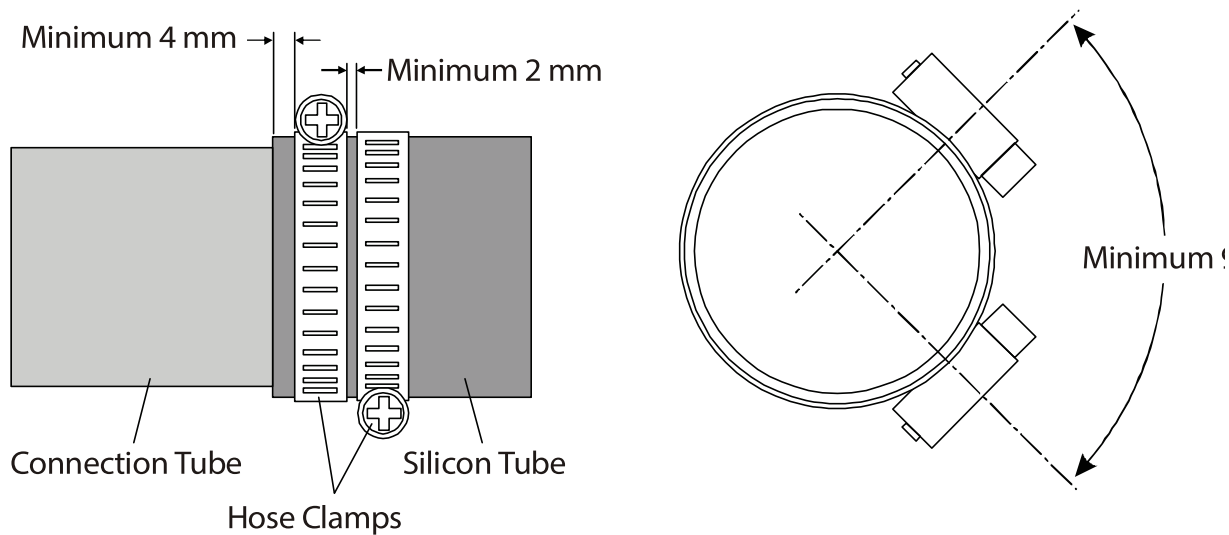


Figure 5 : Installation with Two Worm-Drive Clamps (Radial Placement)

For rigid-coated silicon hoses with a wall thickness less than 4 mm (0.16 in) positive clearance between the hose clamps and visible hose overlapping has to be assured.

D. Tightening Torques for Worm Drive Clamps.

CAUTION: WORM DRIVE CLAMPS MUST BE TIGHTENED ACCORDING TO THE TABLE BELOW. OVER-TIGHTENING A WORM DRIVE CLAMP CAN DAMAGE THE HOSE AND MAY (IN CASE OF ENGINE INSTALLATIONS) CAUSE LOSS OF ENGINE POWER.

CAUTION: FOR WORM DRIVE CLAMP INSTALLATION THE ENGINE MUST BE COLD. INSTALLATION ON A HOT ENGINE CAN CAUSE DAMAGE TO THE HOSE AND MAY (IN CASE OF ENGINE INSTALLATIONS) CAUSE LOSS OF ENGINE POWER.

CAUTION: DO NOT RE-TIGHTEN A WORM DRIVE CLAMP ON A SILICONE HOSE PERFORMING AN AIRPLANE INSPECTION UNLESS IT IS LOOSE. REFER TO THE TABLE BELOW FOR THE CORRECT TIGHTENING TORQUES OF WORM DRIVE CLAMPS.

(1) Tightening Torques for Clamp Widths Below 12 mm (0.47 in).

Clamp Diameter	Torque (Nm)	Torque (lbf.ft.)
8-12	2.5 ± 0.5	1.8 ± 0.4
10-160	3.0 ± 0.5	2.2 ± 0.4

(2) Tightening Torques for Clamp Widths of 12 mm (0.47 in) and Higher.

Clamp Diameter	Torque (Nm)	Torque (lbf.ft.)
8-160	5.0 ± 0.5	3.7 ± 0.4

(3) Tightening Torques for Murray Clamp.

Clamp Diameter (mm)	Torque (Nm)	Torque (lbf.ft.)
50-73	5.6 ± 0.5	4.1 ± 0.4