

# T-DRILL

PRODUCTIVITY AS A PRODUCT.

**NEW!** Industry 4.0 ready



## COLLARING MACHINE

for producing T-outlets on both straight and bent tubes

# S-56

## S-56 COLLARING MACHINE

**T-DRILL S-56** is a highly effective collaring machine for producing T-outlets for brazed and welded joints. The machine is designed for both straight and bent tubes. The **S-56** produces quality collars up to 54 mm (O.D. 2 1/8") with round pilot hole, and 60,3 mm (O.D. 2 1/4") with an elliptical pilot hole. It is ideal for producing collars in steel tubes, but also suitable for all malleable materials (steel, stainless steel, aluminum, copper & copper-nickel).

Being an Industry 4.0 ready machine utilizing the latest technology, the **S-56** is very versatile and easily customized to fit specific customer needs. The machine is easy to program and use, featuring user-friendly GUI Interface with color touch panel, adjustable machining parameters, and fine-tuning of motion profiles. A wide range of feeding tables and automated systems are available for improved manifold production efficiency. (\*)



## S-56 APPLICATIONS

### STAINLESS PROCESS PIPES

Process piping in stainless steel frequently results in a need for multiple outlets in a manifold. There is no better way to manufacture such a manifold than the **T-DRILL** process. By eliminating two welded joints, the system minimizes costs and increases profit while offering improved quality.

The **S-56** offers great advantages in the following industries:

- Food & Dairy industry
- Pharmaceutical industry
- Chemical industry
- Brewery industry
- Fire protection (sprinkler systems)

### HVAC INDUSTRY

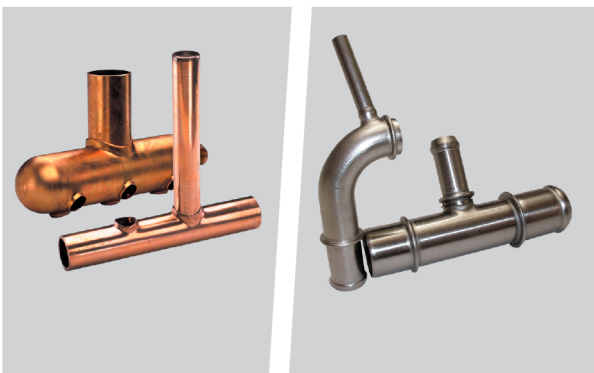
In the HVAC industry, **T-DRILL** machines are typically used in the manufacture of tubular components found in air conditioning/ refrigeration, heat pumps, heat recovery and heat exchanger manufacturing. The **S-56** is well suited for these applications and many more – offering the most reliable tube joints of top quality.

### AUTOMOTIVE INDUSTRY

**T-DRILL**'s reliable T-joining has a vital importance for automotive tube applications, because every vehicle is subject to severe vibrations. As **T-DRILL**'s extruded outlets are formed outside of the main run tube, it also minimizes the flow restrictions.

The **S-56** is ideal for efficient fabrication of the following:

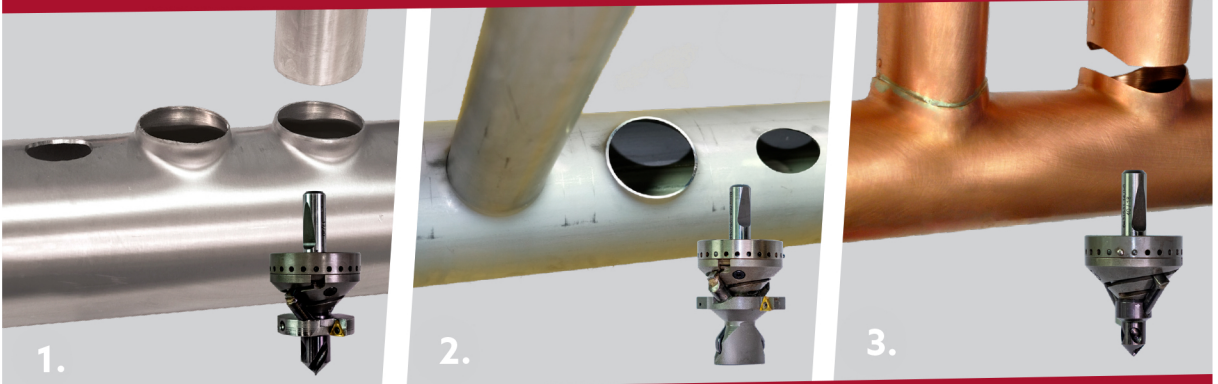
- Fuel rail and high pressure diesel components
- Engine a/c systems
- Exhaust cross-over applications
- Vapor recovery systems



## THE T-DRILL PROCESS

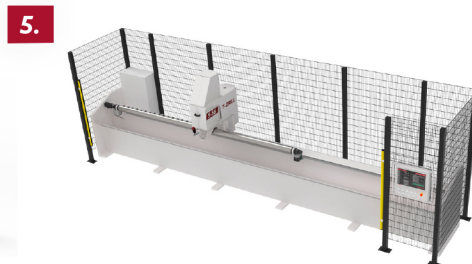
The T-DRILL S-56 collaring process is fully automated and drilling & trimming process optimized. The specially designed S-56 collaring heads enables three types of process:

1. Drilling/Collaring/Trimming - Used for butt weld method where branch tube is put on top of collar.
2. Elliptical pilot hole - Used for butt weld method. Elliptical pilot hole is done beforehand with laser, plasma, milling or with punching machine. Enables 1:1 collaring.
3. Drilling/Collaring - Used for lap joint method where branch tube is put inside of collar.



## (\* ACCESSORIES & OPTIONS

1. S-56 AFT - Automatic Feed Table for max. tube length 6 m / 20 ft
2. S-56 AFT with loading & unloading
3. S-56 RBT - machine can be attached to robot due to stronger bearings and construction
4. S-56 MFT - Manual Feed Table for max. tube length 8 m / 26.25 ft
5. S-56 TBC - Tube Branching Center for max. tube length 6 m / 20 ft



## Specifications

# S-56

### Technical data

Collaring range (Drilling/collaring/trimming)	Collaring range (Elliptical pilot hole)	Collaring range (Drilling/collaring)	Materials for work piece	Diameter of run tube	Compressed air supply
Ø12-58 mm (O.D. ½"-2 ¼")	Ø17,2-60,3 mm (O.D. ¾"-2 ¼")	Ø6-54 mm (O.D. ¼"-2 ⅛")	Fe, Stainless Steel, Al, Cu, CuNi	Ø8-114,3 mm (O.D. 5/16"-4 ½")	6 bar 87 psi
Air consumption (basic machine only)	Rated power	Fuses	Supply voltage	Machine dimension H x W x D	Machine weight w/o electric cabinet
55 l/min 14.5 GPM	4 kW	16 A	400 V / 50 Hz, 3-phase Optionally also other voltages	1991 x 800 x 1187 mm 78" x 31" x 47"	536 kg 1179 lbs

### Capacity | Max wall thicknesses

Run tube outside diameter	Collar outside diameter										Collar outside diameter										Collar inside diameter												
	Drilling/Collaring/Trimming										Collaring/Trimming Elliptical pilot hole										Drilling/Collaring   Copper & Aluminium												
mm	12	13,7	17,2	19,05	21,3	26,9	33,7	42,4	48,3	54	58	mm	17,2	21,3	26,9	33,7	42,4	48,3	60,3	mm	6	8	10	12	15	18	22	28	35	54			
O.D.	½"	¾"	7/8"	1"	1 ¼"	1 ½"	1 ¾"	2"	2 ¼"			O.D.	¾"	7/8"	1"	1 ¼"	1 ½"	1 ¾"	2 ¼"	O.D.	¼"	5/16"	3/8"	½"	5/8"	¾"	7/8"	1 ⅛"	1 3/8"	2 1/8"			
26,9 1"	1,0 .040	1,0 .040										21,3 7/8"	0,8 .030	0,8 .030						8 5/16"	0,5 .020	0,5 .020											
33,7 1 ¼"	1,0 .040	1,0 .040	1,4 .055	1,4 .055								26,9 1"	1,0 .040	1,0 .040	1,0 .040					10 3/8"	0,8 .030	0,8 .030	1,0 .040										
42,4 1 ½"	1,0 .040	1,0 .040	1,6 .063	1,6 .063	1,6 .063							33,7 1 ¼"	1,0 .040	1,24 .049	1,24 .049	1,24 .049				12 ½"	0,8 .030	1,0 .040	1,0 .040	1,0 .040	1,0 .045								
48,3 1 ¾"	1,0 .040	1,0 .040	1,6 .063	1,6 .063	1,6 .063							42,4 1 ½"	1,0 .040	1,24 .049	1,65 .065	1,65 .065	1,65 .065			15 5/8"	0,8 .030	1,0 .040	1,0 .040	1,0 .040	1,2 .045								
54 2"	1,0 .040	1,0 .040	1,6 .063	1,6 .063	1,6 .063	1,6 .063						48,3 1 ¾"	1,0 .040	1,65 .065	1,65 .065	1,65 .065	1,65 .065			18 ¾"	0,8 .030	1,0 .040	1,0 .040	1,0 .040	1,2 .045	1,2 .045							
58 2 ¼"	1,0 .040	1,0 .040	1,6 .063	1,6 .063	1,6 .063	1,6 .063						60,3 2 ¼"	1,0 .040	1,65 .065	1,65 .065	2,11 .083	2,11 .083	2,11 .083	1,65 .065	22 7/8"	0,8 .030	1,0 .040	1,2 .045	1,2 .045	1,5 .060	1,5 .060	1,5 .060						
60,3 2 ½"	1,0 .040	1,0 .040	2,0 .079	2,0 .079	2,0 .079	2,0 .079	2,0 .079					76,1 3"	1,24 .049	1,65 .065	2,11 .083	2,11 .083	2,11 .083	2,11 .083	2,11 .083	28 1 ⅞"	0,8 .030	1,0 .040	1,2 .045	1,2 .045	1,5 .060	1,5 .060	2,0 .080	2,0 .080	1,5 .060				
73 3"	1,0 .040	1,0 .040	2,0 .079	2,0 .079	2,0 .079	2,0 .079	2,0 .079	2,0 .079				88,9 3 ½"	1,24 .049	1,65 .065	2,11 .083	2,11 .083	2,11 .083	2,11 .083	2,11 .083	35 1 3/8"	0,8 .030	1,0 .040	1,2 .045	1,2 .045	1,5 .060	1,5 .060	2,0 .080	2,0 .080	2,0 .080	1,5 .060			
114,3 4 ½"	1,0 .040	1,0 .040	2,0 .079	2,0 .079	2,0 .079	2,0 .079	2,0 .079	2,0 .079	2,0 .079			101,6 4"	1,24 .049	1,65 .065	2,11 .083	2,11 .083	2,11 .083	2,11 .083	2,11 .083	54 2 1/8"	0,8 .030	1,0 .040	1,2 .045	1,2 .045	1,5 .060	1,5 .060	2,0 .080	2,0 .080	2,0 .080	2,0 .080			
												114,3 4 ½"	1,24 .049	1,65 .065	2,11 .083	2,11 .083	2,11 .083	2,11 .083	2,11 .083	79 3 1/8"	0,8 .030	1,0 .040	1,2 .045	1,2 .045	1,5 .060	1,5 .060	2,0 .080	2,0 .080	2,0 .080	2,5 .100	2,0 .080		
																				114,3 4 1/8"	0,8 .030	1,0 .040	1,2 .045	1,2 .045	1,5 .060	1,5 .060	2,0 .080	2,0 .080	2,5 .100	2,0 .080			

## DO IT WITH T-DRILL

Cut costs – Improve quality – Increase profit

- No T-fittings
- No costly inventories
- Less tube cutting

- Only one welded/brazed joint
- Minimum inspection cost
- Tee ratio variation flexibility

- Easier welding (flat outlet)
- Smaller chance of leakage
- Optimized flow characteristics