MiniDrill GFF

MiniDrill GFF is a unique machining platform designed to safely perform the repair or increase the FinFan Cooler plug thread and other operations on heat exchangers, boilers and similar thermal exchange equipment. This system can drill, ream, bore and even re-machine serrations in steam drums. With a 80 mm (3.150") travel, tool is suited for the majority of plant equipment. The system is fully torque reacted with 2 clamping arms that are independent of one another and can accommodate most pitch configurations. Once locked into the tubes, the MiniDrill is extremely stable.

WORKING RANGE	LOCKING RANGE	FREE SPEED	POWER	TORQUE
12,5– 51,0 mm	According to the drawing	100 Rpm	1,3 Hp	140 Nm
0,492 – 2,000"				105 Ft.Lbs

AIR USE		BODY WIDTH		BODY HEIGHT		BODY WEIGHT	
55 cfm	1,3 m3/min	2,32"	59 mm	13,1"	335 mm	17,5 Lbs	8 kg

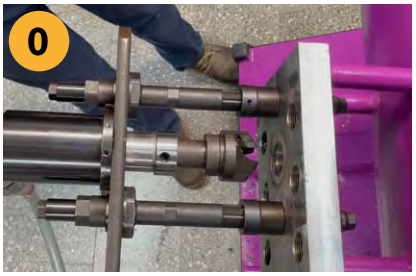
RIGID LOCKING
On standard FinFan gas coolers machine locks onto two shafts on the adjacent holes. The locking plate is manufactured according to the tube hole pitch to ensure precise tool alignment.

UNIVERSAL REACTION PLATE
MiniDrill FinFan is delivered with locking plate and 2 reaction shafts. Construction of the plate allows for locking machine with both shafts on one side to allow to machine the last holes in the row. Plate can be etc.

FINFAN THREAD REPAIR PROCESS

PROPER MACHINE LOCKING FOR ALL STEPS
Choose the correct locking jaws to suit the exisiting plug holes

PLUG SIZE			JAW SET (2 REQUIRED)
1-1/8"	28,58 mm	12 TPI	701MM #36-1-1/8-GFF
1-1/4"	31,75 mm	12 TPI	703MM #36-1-1/4-GFF
1-3/8"	34,93 mm	12 TPI	705MM #36-1-3/8-GFF
1-1/2"	38,10 mm	12 TPI	707MM #36-1-1/2-GFF
1-5/8"	41,28 mm	12 TPI	709MM #36-1-5/8-GFF
1-3/4"	44,45 mm	12 TPI	711MM #36-1-3/4-GFF
1-7/8"	47,63 mm	12 TPI	713MM #36-1-7/8-GFF



STEP 1
Heads for weld removal over the welded plugs (in case are welded)

PLUGS SIZE			HEAD	INSERT	SCREW
1-1/8"	28,58 mm	12 TPI	TFWR-GFF-350	CS-5D	MHS-4
1-1/4"	31,75 mm	12 TPI	TFWR-GFF-380	CS-5D	MHS-4
1-3/8"	34,93 mm	12 TPI	TFWR-GFF-410	CS-5D	MHS-4
1-1/2"	38,10 mm	12 TPI	TFWR-GFF-440	CS-5D	MHS-4
1-5/8"	41,28 mm	12 TPI	TFWR-GFF-470	CS-5D	MHS-4
1-3/4"	44,45 mm	12 TPI	TFWR-GFF-500	CS-5D	MHS-4
1-7/8"	47,63 mm	12 TPI	TFWR-GFF-540	CS-5D	MHS-4

STEP 2
Select the appropriate size drill head to match the desired new thread size

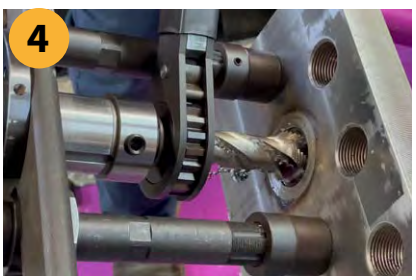
DRILL HEAD SIZE		DRILL HEAD	INSERT	SCREW
1-1/8 to 1-1/4"	28,58 to 31,75 mm	MD-29,6-DRILL-L-130	CS-0.4	MHS-4
1-1/4 to 1-3/8"	31,74 to 34,93 mm	MD-32,9-DRILL-L-130	CS-0.4	MHS-4
1-3/8 to 1-1/2"	34,93 to 38,10 mm	MD-36,1-DRILL-L-130	CS-0.4	MHS-4
1-1/2 to 1-5/8"	38,10 to 41,28 mm	MD-39,3-DRILL-L-130	CS-0.4	MHS-4
1-5/8 to 1-3/4"	41,28 to 44,45 mm	MD-42,5-DRILL-L-130	CS-0.4	MHS-4
1-3/4 to 1-7/8"	44,45 to 47,63 mm	MD-45,5-DRILL-L-130	CS-0.4	MHS-4

STEP 3
Select the chamfering head to chamfer the hole before tapping (heads need a Weldon flange: MD-FLANGE-STWRMH)

RANGE		HEAD	INSERT	SCREW
0,787 to 1,653"	20,00 to 42,00 mm	STWRMH-317	WRI	MHS-4
1,417 to 2,244"	36,00 to 57,00 mm	STWRMH-444	CDI	MHS-4

STEP 4
Select tapping head to suit the required thred size

PLUGS THREAD SIZE			TAP HEAD	RATCHED FEED ARM
1-1/8"	28,58 mm	12 TPI	MDFFPT-1-1/8_12	MD-RS-H28
1-1/4"	31,75 mm	12 TPI	MDFFPT-1-1/4_12	MD-RS-H28
1-3/8"	34,93 mm	12 TPI	MDFFPT-1-3/8_12	MD-RS-H28
1-1/2"	38,10 mm	12 TPI	MDFFPT-1-1/2_12	MD-RS-H28
1-5/8"	41,28 mm	12 TPI	MDFFPT-1-5/8_12	MD-RS-H28
1-3/4"	44,45 mm	12 TPI	MDFFPT-1-3/4_12	MD-RS-H28
1-7/8"	47,63 mm	12 TPI	MDFFPT-1-7/8_12	MD-RS-H28



STEP 5
Produce new gasket seat using MiniMill-300GFF. Chose heads and jaws on page 6.