

Flow drill process:

The flow drill comes into contact with the material using relatively high axial pressure and rotational speed. The generated heat makes the material soft and malleable enough to be formed or perforated. As the flow drills push into the material, some of the displaced material forms a collar around the upper surface of the workpiece. The rest of the material forms a bushing in the lower surface of the workpiece. All this happens in a matter of seconds. The resulting collar and bushing can be up to 3 times the original material thickness. The diameter of the bush is accurately determined by the cylindrical part of the flow drill tool. The process does not disturb the material's internal structure. As a result, the formed bush is remarkably strong and can be used for bearing sleeves or, when threaded in a separate process, can provide high torque threaded surfaces with very high pull out strength specifications.

Applications:

The flow drill process can be used in any application where the material thickness does not provide support for a threaded surface or a sleeve bearing application. When you need a welded or riveted nut or a special insert,---think flow drill. You will improve quality and save a lot of money. Flow drill tools can be used on standard drilling machines, NC or CNC systems with motor capacities from 1.5 to 3.5 kw. Revolution speeds(RPM) required range from 1000 to 3500 RPM.



size(mm)	SHORT		SHORT/FLAT	
	mm.	inch	mm.	inch
2.0 -- 2.9	1.5	0.06	2.0	0.08
3.0 -- 3.9	1.5	0.06	2.0	0.08
4.0 -- 4.9	2.0	0.08	2.5	0.10
5.0 -- 5.9	2.0	0.08	2.5	0.10
6.0 -- 6.9	2.5	0.10	3.0	0.12
7.0 -- 7.9	2.5	0.10	3.0	0.12
8.0 -- 8.9	3.0	0.12	4.0	0.16
9.0 -- 9.9	3.0	0.12	4.0	0.16
10.0 -- 10.9	3.0	0.12	4.0	0.16
11.0 -- 11.9	3.0	0.12	4.0	0.16
12.0 -- 12.9	3.0	0.12	4.0	0.16
13.0 -- 13.9	3.5	0.14	4.5	0.18
14.0 -- 14.9	3.5	0.14	4.5	0.18
15.0 -- 15.9	3.5	0.14	4.5	0.18
16.0 -- 16.9	3.5	0.14	4.5	0.18
17.0 -- 17.9	4.0	0.16	5.0	0.20

18.0 -- 18.9	4.0	0.16	5.0	0.20
19.0 -- 19.9	4.0	0.16	5.0	0.20
20.0 -- 20.9	4.0	0.16	5.0	0.20
21.0 -- 21.9	4.0	0.16	5.0	0.20
22.0 -- 22.9	4.0	0.16	5.0	0.20
23.0 -- 23.9	4.0	0.16	5.0	0.20
24.0 -- 24.9	4.0	0.16	5.0	0.20
25.0 -- 25.9	4.0	0.16	5.0	0.20
size(mm)	LONG		LONG/FLAT	
	mm.	inch	mm.	inch
2.0 -- 2.9	2.5	0.10	3.0	0.12
3.0 -- 3.9	2.5	0.10	4.0	0.16
4.0 -- 4.9	2.5	0.10	4.0	0.16
5.0 -- 5.9	3.0	0.12	4.0	0.16
6.0 -- 6.9	3.5	0.14	5.0	0.20
7.0 -- 7.9	4.0	0.16	6.0	0.24
8.0 -- 8.9	4.5	0.18	6.0	0.24
9.0 -- 9.9	5.0	0.20	6.0	0.24
10.0 -- 10.9	6.0	0.24	7.0	0.28
11.0 -- 11.9	6.0	0.24	7.0	0.28
12.0 -- 12.9	6.0	0.24	7.0	0.28
13.0 -- 13.9	6.0	0.24	7.0	0.28
14.0 -- 14.9	6.0	0.24	7.0	0.28
15.0 -- 15.9	7.0	0.28	8.5	0.34
16.0 -- 16.9	7.0	0.28	8.5	0.34
17.0 -- 17.9	8.0	0.32	10.0	0.40
18.0 -- 18.9	8.0	0.32	10.0	0.40
19.0 -- 19.9	10.0	0.40	12.0	0.47
20.0 -- 20.9	10.0	0.40	12.0	0.48
21.0 -- 21.9	10.0	0.40	12.0	0.48
22.0 -- 22.9	10.0	0.40	12.0	0.48
23.0 -- 23.9	10.0	0.40	12.0	0.48
24.0 -- 24.9	10.0	0.40	12.0	0.48
25.0 -- 25.9	10.0	0.40	12.0	0.48





N1009
HSS form taps DIN371/DIN376 **New!**

Forming taps however provide multiple advantages. For ductile work materials, thread forming can provide better size control and stronger threads while improving tool life and productivity.

Unlike thread cutting, no material is removed during thread forming. Rather, the process displaces the material to generate the thread form.

Since the metal's structure is cold worked along the thread profile, the threads produced are generally stronger and have a smooth, burnished surface finish. Cold forming taps can be operated at higher speeds and feeds than conventional taps.

Cold forming technology has been used to produce threads for more than 100 years. Tap designs have changed considerably in that time. This combined with the newest coatings guarantees a very long tool life in most applications.

Forming taps must be applied in materials that cold form well. This includes steels, stainless steels, light metals, light metal alloys and other materials with tensile strength to 1200N/mm². Generally, materials that produce a continuous chip when drilling are good candidates for thread forming.

In combination with Formdrill, thread forming will boost quality and throughput.

Size(MM)	DIN371		L1	L2	D2	◇
3	x	0.5	56	11	3.5	2.7
4	x	0.7	63	13	4.5	3.4
5	x	0.8	70	16	6.0	4.9
6	x	1.0	80	19	6.0	4.9
8	x	1.25	90	22	8.0	6.2
10	x	1.5	100	24	10.0	8.0
Size(MM)	DIN376					
12	x	1.75	110	29	9.0	7.0
14	x	2.0	110	30	11.0	9.0
16	x	2.0	110	32	12.0	9.0
18	x	2.5	125	34	14.0	11.0

