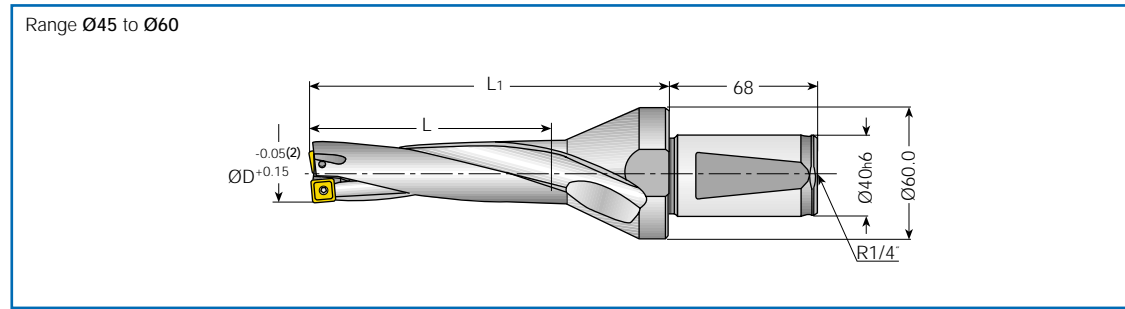


DR indexable Square Insert Drills

Drilling Depth $2 \times D$



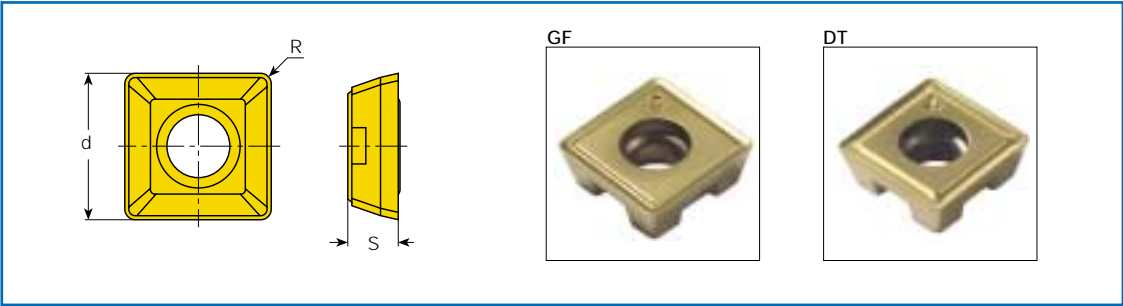
DR-16

$\varnothing D$	L	Designation	L1	$\varnothing D1$ Max	Torx Screw	Key	Inserts
1.812	3.624	DR1812-3624-150-5	4.96	2.028			
1.875	3.750	DR1875-3750-150-5	5.09	2.047			
1.937	3.874	DR1937-3874-150-5	5.21	2.087			
2.000	4.000	DR2000-4000-150-5	5.34	2.145			
2.125	4.250	DR2125-4250-150-5	5.59	2.205			
2.187	4.374	DR2187-4374-150-5	5.72	2.224	SR 76-961	SW6-T	SOMT 160512-GF
2.219	4.438	DR2219-4438-150-5	5.78	2.244		T15/m7	SOMT 160512-DT
2.250	4.500	DR2250-4500-150-5	5.84	2.264			
2.281	4.562	DR2281-4562-150-5	5.90	2.283			
2.312	4.625	DR2312-4625-150-5	5.96	2.323			
2.344	4.687	DR2344-4687-150-5	6.03	2.344			

(1) Changing hole diameter by shifting drill center along lathe x-axis (see on page 7).

(2) Hole tolerance in average conditions, however, it can be higher or lower according to machine and tooling conditions.

Inserts for DR 16 Drills



SOMT 16

Designation	d	s	R	IC908
SOMT 160512-DT	.63	.218	.047	●
SOMT 160512-GF	.63	.218	.047	●

Two types of chipformers are available:

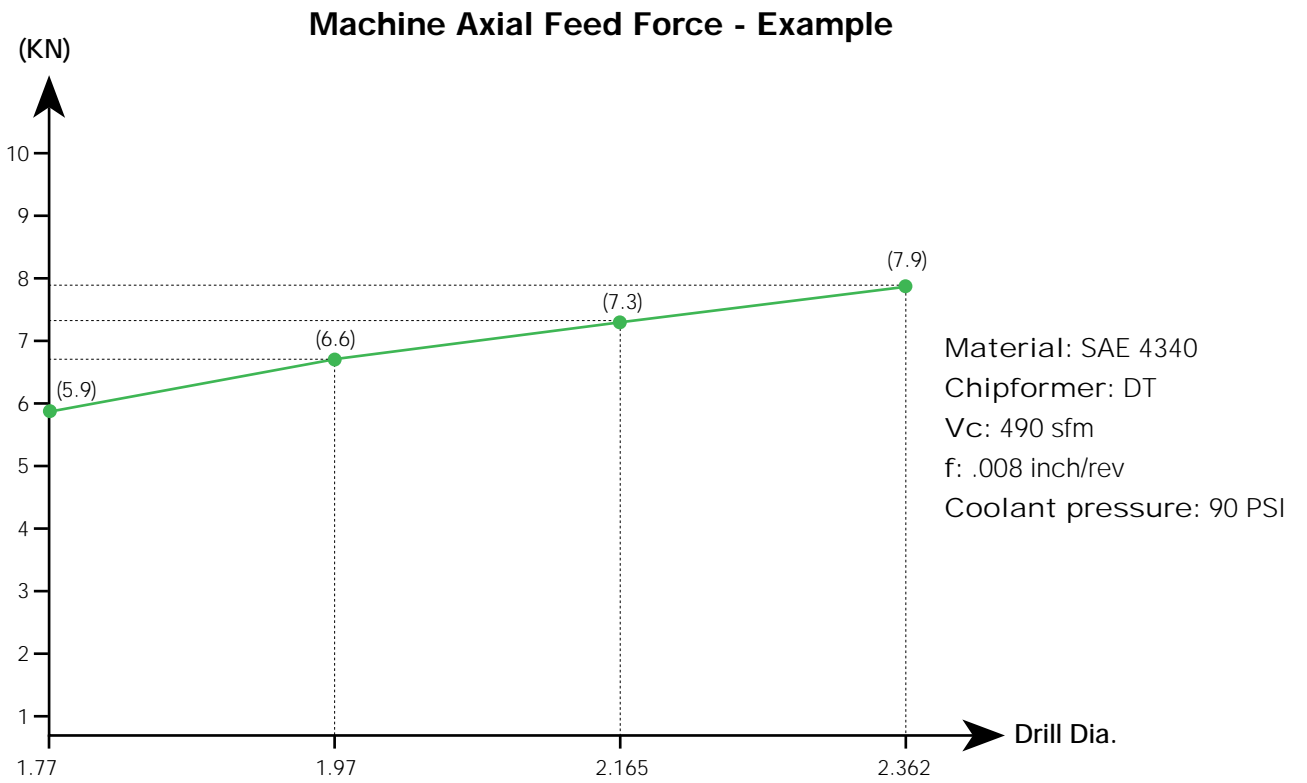
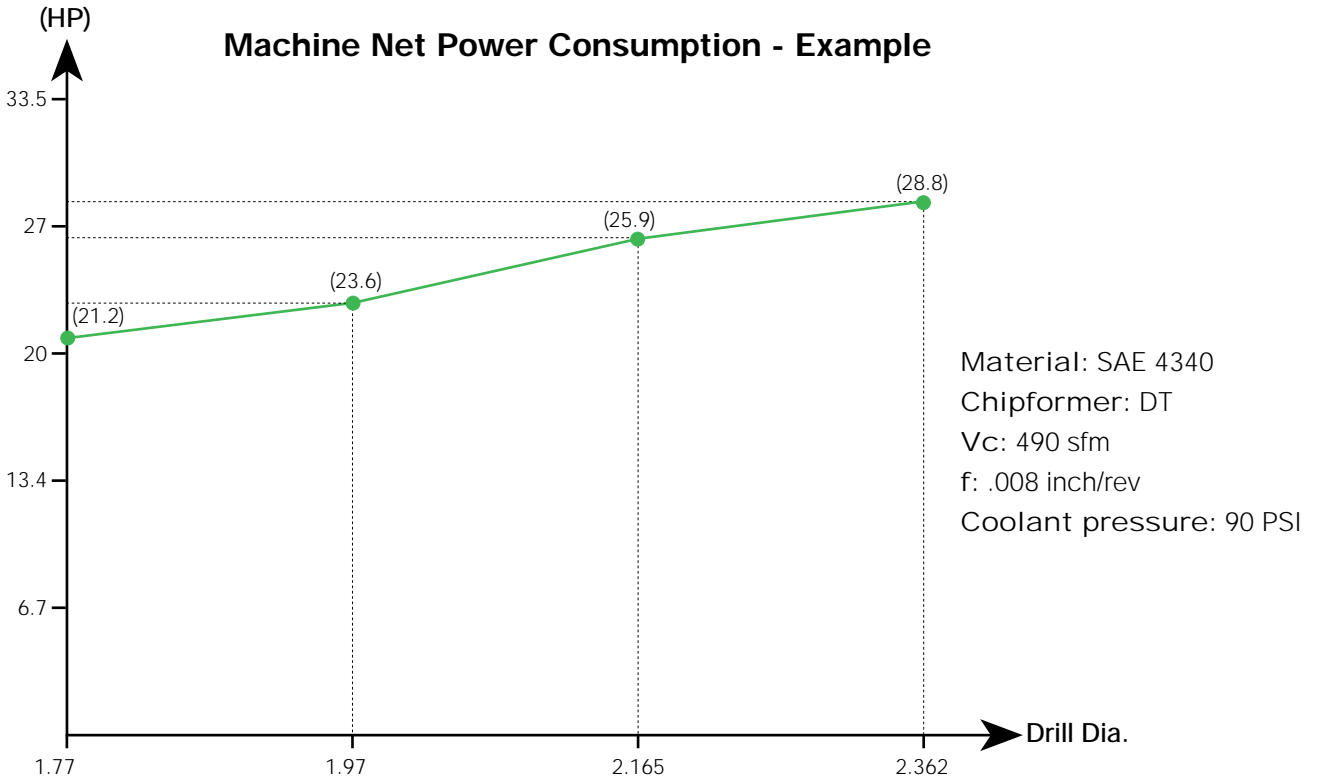


"DT"- A general-use chipformer, for medium to high feed rates.



"GF"- A narrow chipformer, for use on soft materials, at low to medium feed rates.

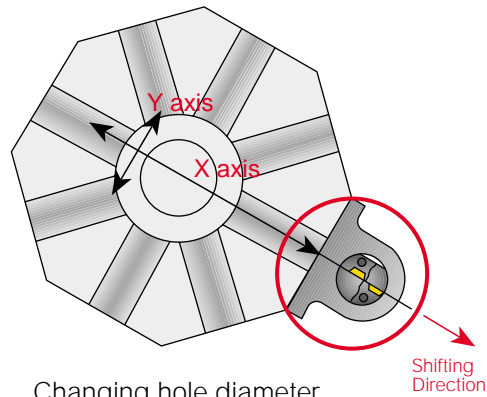
Both types are available in grade IC908, our latest submicron substrate with a PVD coating.



DR Drills - Hole Diameter Range for Each Drill

(By center shift in stationary applications)

D Nominal	D (max) On Lathe
1.812	2.028
1.875	2.047
1.937	2.087
2.000	2.145
2.125	2.205
2.187	2.224
2.219	2.244
2.250	2.264
2.281	2.283
2.312	2.323
2.344	2.344



Changing hole diameter
by shifting drill's center
along lathe x-axis

Applicable only when used with **SOMT** inserts.

Machining Data

Following is machining data for the full range of DR drills.

ISO	Material	Condition	Tensile Strength (N/mm ²)	Hardness HB	Material No.	Cutting Speed Vc sfm	Feed vs. Drill Diameter inch/rev			
							DR-2 .625-.875	DR-3 .937-1.375	DR-4 1.375-1.750	DR-5 1.812-2.344
P	Non-alloy steel and cast steel, free cutting steel	<0.25%	Annealed	420	125	1	.003-.007	.004-.009	.005-.010	.006-.010
		>=0.25%	Annealed	650	190	2				
		< 0.55%	Quenched and tempered	850	250	3				
		>=0.55%	Annealed	750	220	4				
			Quenched and tempered	1000	300	5				
	Low alloy steel and cast steel (less than 5% alloying elements)	Annealed		600	200	6	.003-.006	.004-.008	.005-.009	.006-.009
				930	275	7				
		Quenched and tempered		1000	300	8				
				1200	350	9				
	High alloyed steel, cast steel, and tool steel	Annealed		680	200	10	.002-.006	.003-.007	.004-.008	.006-.009
		Quenched and tempered		1100	325	11				
M	Stainless steel and cast steel	Ferritic/martensitic		680	200	12	.002-.005	.003-.005	.004-.006	.005-.008
		Martensitic		820	240	13				
		Austenitic		600	180	14				
K	Cast iron nodular (GGG)	Ferritic/pearlitic			180	15	.004-.009	.006-.010	.007-.012	.008-.013
		Pearlitic			260	16				
	Grey cast iron (GG)	Ferritic			160	17				
		Pearlitic			250	18				
	Malleable cast iron	Ferritic			130	19				
		Pearlitic			230	20				
N	Aluminum-wrought alloy <=12% Si	Not cureable			60	21	.005-.010	.008-.012	.010-.014	.011-.018
		Cured			100	22				
		Not cureable			75	23				
	Aluminum-cast, alloyed >12% Si	Cured			90	24				
		High temperature			130	25				
	Copper alloys >1% Pb	Free cutting			110	26				
		Brass			90	27				
		Electrolytic copper			100	28				
	Non metallic	Duroplastics, fiber plastics				29				
		Hard rubber				30				
S	High temp. alloys Fe based	Annealed			200	31	.002-.003	.003-.004	.003-.005	.004-.006
		Cured			280	32				
		Annealed			250	33				
	Super alloys Ni or Co based	Cured			350	34				
		Cast			320	35				
	Titanium Ti alloys		Rm 400			36				
Alpha+beta alloys cured		Rm 1050			37					
H	Hardened steel	Hardened			55 HRC	38	.002-.003	.003-.004	.003-.005	.004-.006
		Hardened			60 HRC	39				
	Chilled cast iron	Cast			400	40				
	Cast iron	Hardened			55 HRC	41				

* Grades: first choice IC908.

* For material group number please refer to our general catalog instructions.

* This table refers to 2/3xD drills ratio usage, for 4xD ratio decrease cutting data by 15%.

* Chipformer should be selected based on our geometry range recommendations.

* When using external coolant supply only, reduce cutting speed by 10%.

* Use internal coolant supply when machining austenitic stainless steel.