

**NORTON**

SAINT-GOBAIN

Transforming  
surfaces  
...and beyond

# NEXT GENERATION CORE DRILLS



  
SAINT-GOBAIN

# NEW! HIGH PERFORMANCE CORE DRILLS (ANNULAR CUTTERS)



Norton core drills are best used with either magnetic drills or drill press machines. A core drill works differently than conventional twist drills, as it cuts only a groove at the periphery of the hole, leaving a solid core in the centre that is ejected by the centre pin. This results in faster and easier drilling of larger holes and a much longer tool life.

Norton high performance core drills enable easy drilling of a wide range of materials, and we make it even easier for you to choose the best solution from our range of core drills, whether it be TCT (Tungsten Carbide Tipped), HSS-E (High Speed Steel Cobalt alloy) or HSSM2 (High Speed Steel M2). All our core drills are supplied as standard with a Weldon Shank. Alternative shanks (Universal, Fein, Thread) and other core dimensions are available on request.



## ENERGY SAVING

Since core drills do not have to drill/cut through the entire diameter of the required hole, they require less energy to drill through the material.



HSSM2 and HSS-E can be easily re-sharpened and re-used for drilling.

Core drills can **NOT** drill blind holes. They can only make through holes.



## SAVE MONEY

Core drills stay sharp longer and can produce 5 to 10 times more holes than a twist drill.

Materials like cast iron produce a lot of powder, compressed air is recommended instead of cutting oil or coolant.

**TIP!** To keep your core drill at its optimum efficiency always use it with suitable cutting oil.

## PRODUCT RECOMMENDATION GUIDE

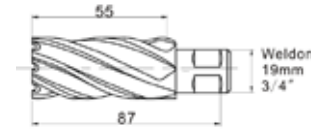
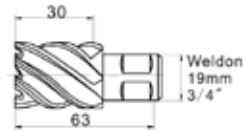
	HSSM2	HSS-E (Co alloy)	TCT
MATERIAL (Tensile strength in N/mm <sup>2</sup> )	+++	++++	+++++
ALU < 10% Si < 600 N/mm <sup>2</sup>	**	***	***
ALU > 10% Si < 600 N/mm <sup>2</sup>	*	**	***
CARBON STEEL < 500 N/mm <sup>2</sup>	***	***	***
CARBON STEEL < 750 N/mm <sup>2</sup>	**	***	***
ALLOY STEEL < 900 N/mm <sup>2</sup>	*	***	***
ALLOY STEEL < 1100 N/mm <sup>2</sup>		***	***
ALLOY STEEL < 1400 N/mm <sup>2</sup>		**	***
Stainless steel < 700 N/mm <sup>2</sup>	*	***	***
Stainless steel < 900 N/mm <sup>2</sup>		**	***
Stainless steel > 900 N/mm <sup>2</sup>		*	***
Brass, Nickel, Titanium		**	**
Nickel based alloy			***
Cast iron		*	***
Plastic	***	***	
Graphite			***
Rail		*	**







Norton offers a complementary line of non-abrasive products to meet every customer requirement. The range is classified into three quality-tiers (good/better/best) to help you choose the right product for your specific application.



# HSSM2 CORE DRILLS WELDON SHANK

- Made of solid high performance HSS
- Can be re-sharpened



CUT DIAM	CUTTING DEPTH 25mm ART NO.	CUTTING DEPTH 50mm ART NO.
12	78072726995	78072726996
13	78072745567	78072745617
14	78072745568	78072745618
15	78072745569	78072745619
16	78072745570	78072745620
17	78072745571	78072745625
18	78072745581	78072745798
19	78072745583	78072745799
20	78072745585	78072745800
21	78072745586	78072745801
22	78072741647	78072741659
CENTER PIN	 6.35 / 5.3 x 77mm	 6.34 / 5.3 x 102mm

CUT DIAM	CUTTING DEPTH 25mm ART NO.	CUTTING DEPTH 50mm ART NO.
23	78072745588	78072745804
24	78072745590	78072745805
25	78072745591	78072745806
26	78072745592	78072745807
27	78072745593	78072745808
28	78072745594	78072745810
29	78072745595	78072745811
30	78072741651	78072741667
31	78072745596	78072745812
32	78072745597	78072745813
33	78072745598	78072745814
CENTER PIN	 6.35 / 5.3 x 77mm	 6.34 / 5.3 x 102mm

CUT DIAM	CUTTING DEPTH 25mm ART NO.	CUTTING DEPTH 50mm ART NO.
34	78072745600	78072745815
35	78072745601	78072745816
36	78072745602	78072745817
37	78072745607	78072745818
38	78072745608	78072745819
39	78072745609	78072745820
40	78072745610	78072745821
41	78072745611	78072745822
42	78072745612	78072745823
CENTER PIN	 6.35 / 5.3 x 77mm	 6.34 / 5.3 x 102mm

\*6.35/5,3 x 77mm pin not included  
\*\*6.35/5,3 x 102mm pin not included

## STEEL CENTRE PIN (EJECT PIN)

CENTRE PIN/EJECTOR PIN HAS THREE FUNCTIONS:

- Centring - enables more accurate core positioning.
- Oiling - directs automatic lubrication straight into the cutting area.
- Ejecting - assists in ejecting the waste core from the core drill after each cut.

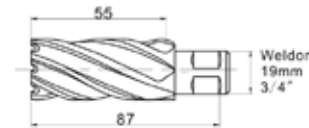
DESCRIPTION	ART NO.
STEEL PIN 6.35 / 5.3 x 102mm	78072741722 MTS
STEEL PIN 6.35 / 5.3 x 77mm	78072741675 MTS
STEEL PIN 6.35 / 5.3 x 90mm	78072741719 MTO
STEEL PIN 7,98 x 90mm	78072748026 MTO
STEEL PIN 7,98 x 105mm	78072753413 MTO



MTS : made to stock  
MTO : made to order







# HSS-E CORE DRILLS WELDON SHANK\*\*\*

- HSS-E – High Speed Steel alloyed with Cobalt providing greater hardness
- Enables drilling of harder materials
- Longer operational life



CUT DIAM	CUTTING DEPTH 25mm ART NO.	CUTTING DEPTH 50mm ART NO.
12	78072753507	78072754673
13	78072753508	78072754674
14	78072752702	78072752709
15	78072753509	78072754821
16	78072752703	78072752710
17	78072753511	78072754822
18	78072752704	78072752711
19	78072753517	78072754825
20	78072753531	78072752712
21	78072753532	78072754826
22	78072752705	78072754866
23	78072753534	78072754868
24	78072753535	78072754870
25	78072753536	78072754871
26	78072753537	78072754873
CENTER PIN	 6.35 / 5.3 x 77mm	 6.34 / 5.3 x 102mm

CUT DIAM	CUTTING DEPTH 25mm ART NO.	CUTTING DEPTH 50mm ART NO.
27	78072753538	78072754877
28	78072753539	78072754878
29	78072753540	78072754879
30	78072752708	78072752713
31	78072754094	78072754881
32	78072754095	78072755044
33	78072754098	78072755046
34	78072754099	78072755049
35	78072754100	78072755052
36	78072754287	78072755066
37	78072754289	78072755067
38	78072754290	78072755070
39	78072754291	78072755071
40	78072754293	78072755073
41	78072754340	78072755075
CENTER PIN	 6.35 / 5.3 x 77mm	 6.34 / 5.3 x 102mm

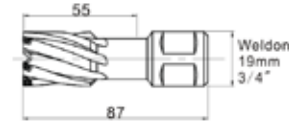
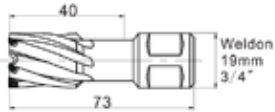
CUT DIAM	CUTTING DEPTH 25mm ART NO.	CUTTING DEPTH 50mm ART NO.
42	78072754341	78072755076
43	78072754374	78072755078
44	78072754389	78072755081
45	78072754390	78072755074
46	78072754391	78072755083
47	78072754392	78072755085
48	78072754652	78072755086
49	78072754653	78072755091
50	78072754654	78072755092
51	78072754655	78072755093
52	78072754664	78072755094
CENTER PIN	 6.35 / 5.3 x 77mm	 6.34 / 5.3 x 102mm





\*6,35/5,3 x 77mm pin not included  
\*\*6,35/5,3 x 102mm pin not included



\*\*\* made to order



# TCT CORE DRILLS WELDON SHANK\*\*\*

- Tungsten Carbide Tipped cutting edges welded to a tough alloy steel body
- Ultimate wear resistance and longer tool life
- Can run faster than HSS drills for more productivity



CUT DIAM	CUTTING DEPTH 35mm ART NO.	CUTTING DEPTH 50mm ART NO.
12	78072751462	78072752649
13	78072751891	78072752653
14	78072751899	78072752655
15	78072751904	78072752656
16	78072751906	78072752657
17	78072751905	78072752661
CENTER PIN	 6,35 x 77 mm	 6,35 x 102 mm
18	78072751909	78072752662
19	78072751911	78072752665
20	78072751912	78072752897
21	78072751913	78072752901
22	78072751914	78072752906
23	78072751915	78072752913
24	78072751944	78072752916
25	78072751945	78072752918
26	78072751999	78072753107
CENTER PIN	 7,98 x 90 mm	 7,98 x 105 mm

CUT DIAM	CUTTING DEPTH 35mm ART NO.	CUTTING DEPTH 50mm ART NO.
27	78072752007	78072753108
28	78072752043	78072753109
29	78072752195	78072753110
30	78072752196	78072753111
31	78072752197	78072753146
32	78072752203	78072753147
33	78072748025	78072753148
34	78072752214	78072753150
35	78072752218	78072753153
36	78072752221	78072753215
37	78072752217	78072753216
38	78072752229	78072753218
39	78072752366	78072753219
40	78072752371	78072753220
41	78072752373	78072753253
42	78072752374	78072753345
43	78072752376	78072753347
CENTER PIN	 7,98 x 90 mm	 7,98 x 105 mm

CUT DIAM	CUTTING DEPTH 35mm ART NO.	CUTTING DEPTH 50mm ART NO.
44	78072752377	78072753349
45	78072752379	78072753350
46	78072752381	78072753353
47	78072752594	78072753355
48	78072752596	78072753390
49	78072752599	78072753391
50	78072752600	78072753399
51	78072752601	78072753410
52	78072752648	78072753412
CENTER PIN	 7,98 x 90 mm	 7,98 x 105 mm

\* 6,35 x 77 mm and 6,35 x 102 mm not included  
 \*\* 7,98 x 90 mm and 7,98 x 105 mm not included

# KEY MARKETS AND APPLICATIONS

## MARKETS

- General engineering
- Heavy engineering
- Manufacturing of:
  - boilers
  - tubes and pipes
  - metal transformers
- Railway track drilling (TCT core drills)
- Automotive industry
- Metal construction industry
- Maintenance operations

## MACHINES

- Lightweight magnetic drilling machines; easy to transport, but require an electrical connection.
- Automatic and semi-automatic magnetic drilling machines.
- Fixed high production machines.
- Battery magnetic drilling machines; portable, they can work in any place.
- Rail drilling machines; equipped with a special clamping device instead of a magnet.
- Portable non magnetic drilling machine; handheld drilling machines that can work magnetic and non magnetic materials.



# RECOMMENDED CUTTING SPEEDS

## FOR HSSM2 and HSS-E

Material	High Carbon steel up to <750 N	Alloyed steel up to <1200 N	Stainless Steel	Aluminium	Grey Cast iron	Brass	Copper
Vc=m/min	20	10	12	37	18	25	40
Ø mm	R.P.M						
12-18	530-350	265-175	320-210	980-655	480-320	660-440	1060-700
19-25	340-250	165-130	200-150	620-470	300-230	420-320	670-510
26-32	245-200	125-100	145-120	455-370	200-180	305-250	490-400
33-39	195-165	95-80	115-95	360-305	175-147	240-200	390-330
40-46	160-140	79-70	90-85	295-255	143-125	195-170	320-280
47-53	135-120	67-60	80-72	250-225	122-108	165-150	270-240
54-60	115-105	58-53	70-63	220-195	106-95	145-130	235-210



It is recommended to use HSSM2 and HSS-E tools with cutting oil, except for grey cast iron, where compressed air should be used to keep it clean and cool.

## FOR T.C.T. CORE DRILL

Material	High Carbon steel up to <750 N	Alloyed steel up to <1200 N	Stainless Steel	Aluminium	Grey Cast iron	Brass	Copper
Vc=m/min	45	30	20	90	35	50	35
Ø mm	R.P.M						
12-18	1327-796	795-530	530-350	2390-1590	930-620	1325-885	930-620
19-25	754-537	500-380	340-250	1510-1150	590-450	840-635	590-450
26-32	550-448	370-300	245-200	1100-895	430-340	615-500	430-340
33-39	434-367	290-245	195-165	870-735	335-285	490-410	335-285
40-46	358-311	240-265	160-140	715-625	280-240	400-345	280-240
47-53	304-270	200-180	135-120	610-540	239-210	340-300	239-210



It is recommended to use T.C.T tools with coolant, except for grey cast iron, where compressed air should be used to keep it clean and cool.



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[www.nortonabrasives.com](http://www.nortonabrasives.com)  
[www.youtube.com/NortonAbrasiveEMEA](http://www.youtube.com/NortonAbrasiveEMEA)

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