

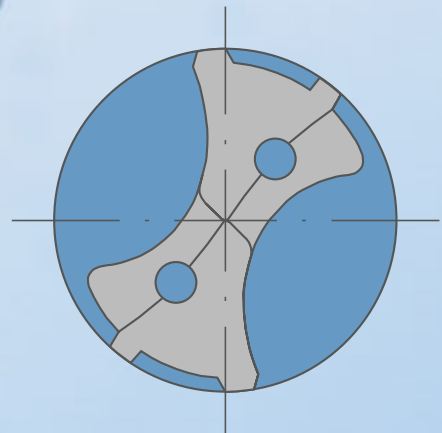
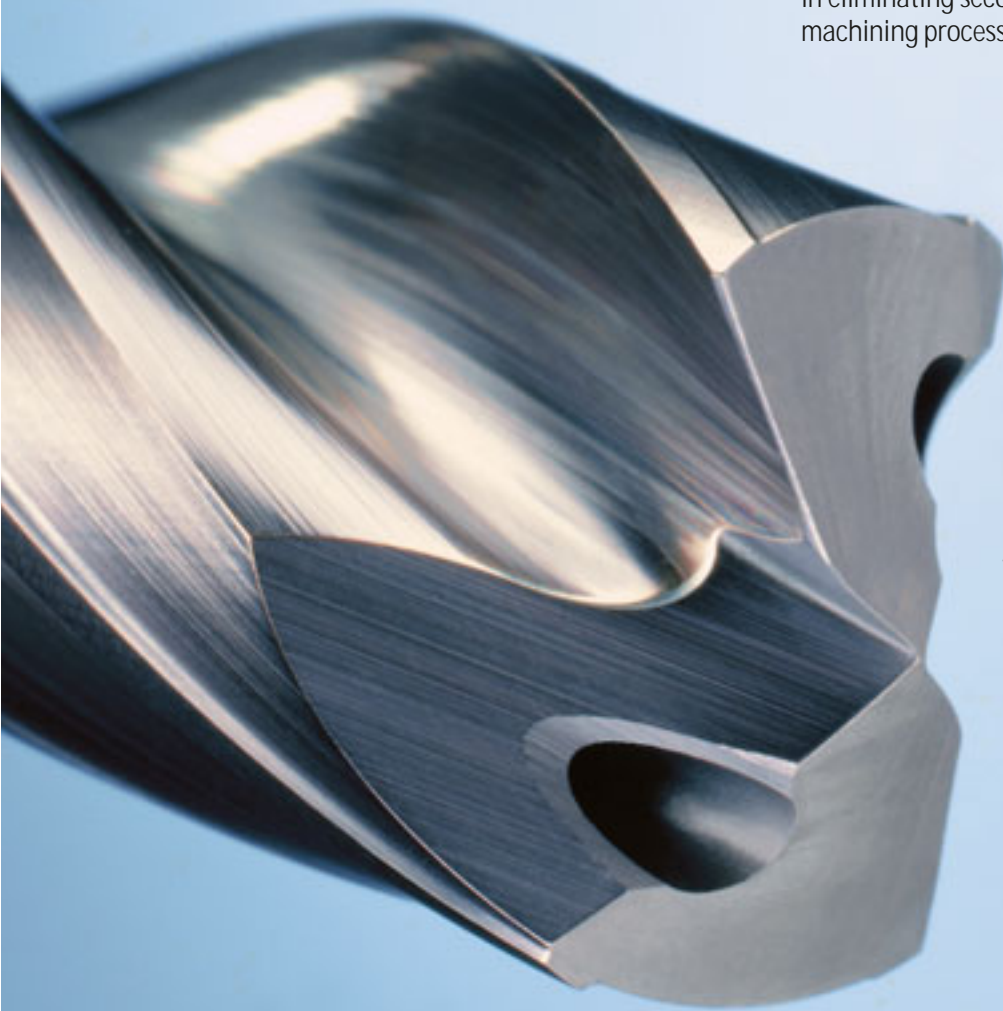
MEGA-Quadro-Drill –

greater accuracy and maximum performance with four margins

A high performance drill geometry complimented by a double margin design, allows the MEGA-Quadro-Drill to accomplish production hole making with absolute precision. The margins have constant contact with the wall of the hole created while drilling. This means that the margin has a tremendous impact on the hole size, quality and finish that is produced at the end of the drilling cycle.

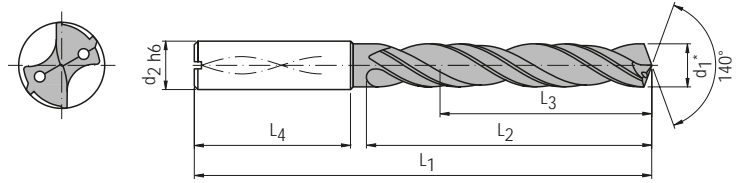
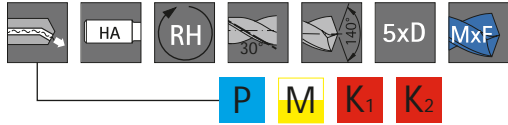
The MEGA-Quadro-Drill is built with two standard margins and two additional guiding margins that are strategically ground for optimum support and performance. The results of this MAPAL innovation is minimal deviation of the drill from the centerline and improved tool strength creating better alignment accuracy, concentricity and positional accuracy, together with the best possible roundness and diameter tolerance.

The double margin design helps to improve the rigidity and stability of the tools. The benefits of this allow for improved tool life, the ability to drill very deep depth to diameter ratios with excellent results and the ability to effectively handle cross holes or interruptions. Not to mention a significant improvement in the surface finish of the hole produced. This may often help in eliminating secondary operations in your machining process.



MEGA-Quadro-Drill

M2175



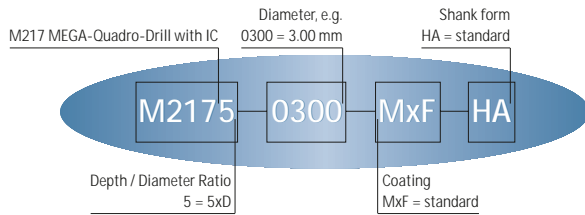
Design:

Drill diameter: 3.00 – 20.00 mm
0.1181 – 0.7874 Inch

Bore tolerance: IT 8 (achievable)

No. of margins: 2

To order, use the code given in the table and supplement it with the required coating and shank form.
Complete order code:



Drill diameter d_1^*		Shank diameter $d_2 h_6$		Total length L_1		Margin length L_2		Maximum drilling depth L_3		Shank length L_4		M2175 Order code Form / Diameter
mm	Inch / Wire / Letter	Dec. equivalent Inch	mm	mm	mm	mm	mm	mm	mm	mm		
3.00		0.1181	6	66	28	23	36	M2175-0300	●			
3.10		0.1220	6	66	28	23	36	M2175-0310	●			
3.18	1/8	0.1250	6	66	28	23	36	M2175-0318	●			
3.20		0.1260	6	66	28	23	36	M2175-0320	●			
3.30		0.1299	6	66	28	23	36	M2175-0330	●			
3.40		0.1339	6	66	28	23	36	M2175-0340	○			
3.45	#29	0.1358	6	66	28	23	36	M2175-0345	●			
3.50		0.1378	6	66	28	23	36	M2175-0350	●			
3.57	9/64	0.1406	6	66	28	23	36	M2175-0357	●			
3.60		0.1417	6	66	28	23	36	M2175-0360	●			
3.70		0.1457	6	66	28	23	36	M2175-0370	●			
3.80	#25	0.1496	6	74	36	29	36	M2175-0380	●			
3.86	#24	0.1520	6	74	36	29	36	M2175-0386	●			
3.90		0.1535	6	74	36	29	36	M2175-0390	○			
3.97	5/32	0.1562	6	74	36	29	36	M2175-0397	●			
4.00		0.1575	6	74	36	29	36	M2175-0400	●			
4.04	#21	0.1591	6	74	36	29	36	M2175-0404	●			
4.10		0.1614	6	74	36	29	36	M2175-0410	●			
4.20		0.1654	6	74	36	29	36	M2175-0420	●			
4.30	#18	0.1693	6	74	36	29	36	M2175-0430	●			
4.37	11/64	0.1719	6	74	36	29	36	M2175-0437	●			
4.40		0.1732	6	74	36	29	36	M2175-0440	●			
4.50	#16	0.1772	6	74	36	29	36	M2175-0450	●			
4.60		0.1811	6	74	36	29	36	M2175-0460	●			
4.62	#14	0.1819	6	74	36	29	36	M2175-0462	●			


For machining values see Page 68.

* The bore diameter tolerance d_1 is within the bore tolerance field H7.

MEGA-Quadro-Drill

M2175

5xD

Drill diameter d ₁ *		Dimensions						 M2175	Order code Form / Diameter	
mm	Inch / Wire / Letter	Dec. equivalent Inch	Shank diameter d ₂ h ₆ mm	Total length L ₁ mm	Margin length L ₂ mm	Maximum drilling depth L ₃ mm	Shank length L ₄ mm			
4.70	#13	0.1850	6	74	36	29	36	M2175-0470	●	
4.76	3/16	0.1875	6	82	44	35	36	M2175-0476	●	
4.80	#12	0.1890	6	82	44	35	36	M2175-0480	●	
4.90		0.1929	6	82	44	35	36	M2175-0490	○	
5.00		0.1969	6	82	44	35	36	M2175-0500	●	
5.10		0.2008	6	82	44	35	36	M2175-0510	●	
5.16	13/64	0.2031	6	82	44	35	36	M2175-0516	●	
5.20		0.2047	6	82	44	35	36	M2175-0520	●	
5.30		0.2087	6	82	44	35	36	M2175-0530	○	
5.40		0.2126	6	82	44	35	36	M2175-0540	○	
5.50		0.2165	6	82	44	35	36	M2175-0550	●	
5.56	7/32	0.2188	6	82	44	35	36	M2175-0556	●	
5.60		0.2205	6	82	44	35	36	M2175-0560	●	
5.70		0.2244	6	82	44	35	36	M2175-0570	●	
5.80		0.2283	6	82	44	35	36	M2175-0580	○	
5.90		0.2323	6	82	44	35	36	M2175-0590	●	
5.95	15/64	0.2344	6	82	44	35	36	M2175-0595	●	
6.00		0.2362	6	82	44	35	36	M2175-0600	●	
6.10		0.2402	8	91	53	43	36	M2175-0610	○	
6.15	C	0.2421	8	91	53	43	36	M2175-0615	●	
6.20		0.2441	8	91	53	43	36	M2175-0620	○	
6.30		0.2480	8	91	53	43	36	M2175-0630	○	
6.35	1/4	0.2500	8	91	53	43	36	M2175-0635	●	
6.40		0.2520	8	91	53	43	36	M2175-0640	○	
6.50		0.2559	8	91	53	43	36	M2175-0650	●	
6.53	F	0.2571	8	91	53	43	36	M2175-0653	●	
6.60		0.2598	8	91	53	43	36	M2175-0660	●	
6.63	G	0.2610	8	91	53	43	36	M2175-0663	●	
6.70		0.2638	8	91	53	43	36	M2175-0670	○	
6.75	17/64	0.2656	8	91	53	43	36	M2175-0675	●	
6.80		0.2677	8	91	53	43	36	M2175-0680	●	
6.90	I	0.2717	8	91	53	43	36	M2175-0690	●	
7.00		0.2756	8	91	53	43	36	M2175-0700	●	
7.10		0.2795	8	91	53	43	36	M2175-0710	○	
7.14	9/32	0.2812	8	91	53	43	36	M2175-0714	●	
7.20		0.2835	8	91	53	43	36	M2175-0720	●	
7.30		0.2874	8	91	53	43	36	M2175-0730	●	
7.40		0.2913	8	91	53	43	36	M2175-0740	●	
7.50		0.2953	8	91	53	43	36	M2175-0750	●	
7.54	19/64	0.2969	8	91	53	43	36	M2175-0754	●	
7.60		0.2992	8	91	53	43	36	M2175-0760	●	
7.70		0.3031	8	91	53	43	36	M2175-0770	●	
7.80		0.3071	8	91	53	43	36	M2175-0780	●	
7.90		0.3110	8	91	53	43	36	M2175-0790	○	
7.94	5/16	0.3125	8	91	53	43	36	M2175-0794	●	


* The bore diameter tolerance d₁ is within the bore tolerance field H7.

For machining values see Page 68

MEGA-Quadro-Drill

M2175

5xD

Drill diameter d ₁ *		Dimensions						 M2175 Order code Form / Diameter	
		Inch / Wire / Letter	Dec. equivalent Inch	Shank diameter d ₂ h ₆ mm	Total length L ₁ mm	Margin length L ₂ mm	Maximum drilling depth L ₃ mm		Shank length L ₄ mm
mm									
8.00		0.3150	8	91	53	43	36	M2175-0800	●
8.10		0.3189	10	103	61	49	40	M2175-0810	○
8.20	P	0.3228	10	103	61	49	40	M2175-0820	○
8.30		0.3268	10	103	61	49	40	M2175-0830	○
8.33	21/64	0.3281	10	103	61	49	40	M2175-0833	●
8.40		0.3307	10	103	61	49	40	M2175-0840	○
8.43	Q	0.3319	10	103	61	49	40	M2175-0843	●
8.50		0.3346	10	103	61	49	40	M2175-0850	●
8.60		0.3386	10	103	61	49	40	M2175-0860	○
8.70		0.3425	10	103	61	49	40	M2175-0870	○
8.73	11/32	0.3438	10	103	61	49	40	M2175-0873	●
8.80		0.3465	10	103	61	49	40	M2175-0880	●
8.90		0.3504	10	103	61	49	40	M2175-0890	○
9.00		0.3543	10	103	61	49	40	M2175-0900	●
9.10		0.3583	10	103	61	49	40	M2175-0910	○
9.13	23/64	0.3594	10	103	61	49	40	M2175-0913	●
9.20		0.3622	10	103	61	49	40	M2175-0920	○
9.30		0.3661	10	103	61	49	40	M2175-0930	●
9.35	U	0.3681	10	103	61	49	40	M2175-0935	●
9.40		0.3701	10	103	61	49	40	M2175-0940	●
9.50		0.3740	10	103	61	49	40	M2175-0950	●
9.53	3/8	0.3750	10	103	61	49	40	M2175-0953	●
9.60		0.3780	10	103	61	49	40	M2175-0960	●
9.70		0.3819	10	103	61	49	40	M2175-0970	○
9.80	W	0.3858	10	103	61	49	40	M2175-0980	○
9.90		0.3898	10	103	61	49	40	M2175-0990	●
9.92	25/64	0.3906	10	103	61	49	40	M2175-0992	●
10.00		0.3937	10	103	61	49	40	M2175-1000	●
10.10		0.3976	12	118	71	56	45	M2175-1010	○
10.20		0.4016	12	118	71	56	45	M2175-1020	●
10.26	Y	0.4039	12	118	71	56	45	M2175-1026	●
10.30		0.4055	12	118	71	56	45	M2175-1030	●
10.32	13/32	0.4062	12	118	71	56	45	M2175-1032	●
10.40		0.4094	12	118	71	56	45	M2175-1040	○
10.50		0.4134	12	118	71	56	45	M2175-1050	●
10.60		0.4173	12	118	71	56	45	M2175-1060	○
10.70		0.4213	12	118	71	56	45	M2175-1070	●
10.72	27/64	0.4219	12	118	71	56	45	M2175-1072	●
10.80		0.4252	12	118	71	56	45	M2175-1080	○
10.90		0.4291	12	118	71	56	45	M2175-1090	○
11.00		0.4331	12	118	71	56	45	M2175-1100	●
11.10		0.4370	12	118	71	56	45	M2175-1110	○
11.11	7/16	0.4375	12	118	71	56	45	M2175-1111	●
11.20		0.4409	12	118	71	56	45	M2175-1120	●
11.30		0.4449	12	118	71	56	45	M2175-1130	●


For machining values see Page 68.

* The bore diameter tolerance d₁ is within the bore tolerance field H7.

MEGA-Quadro-Drill

M2175

5xD

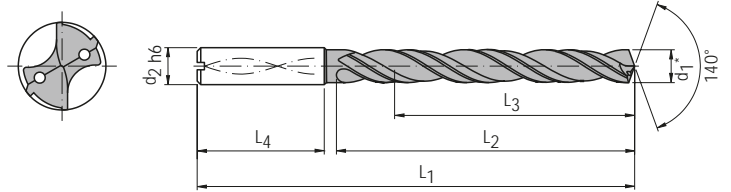
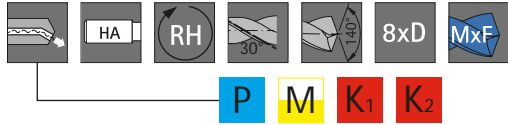
Drill diameter d ₁ *		Dimensions						 M2175	Order code Form / Diameter	
mm	Inch / Wire / Letter	Dec. equivalent Inch	Shank diameter d ₂ h ₆ mm	Total length L ₁ mm	Margin length L ₂ mm	Maximum drilling depth L ₃ mm	Shank length L ₄ mm			
11.40		0.4488	12	118	71	56	45	M2175-1140	●	
11.50	29/64	0.4528	12	118	71	56	45	M2175-1150	●	
11.60		0.4567	12	118	71	56	45	M2175-1160	○	
11.70		0.4606	12	118	71	56	45	M2175-1170	○	
11.80		0.4646	12	118	71	56	45	M2175-1180	●	
11.90	15/32	0.4685	12	118	71	56	45	M2175-1190	●	
12.00		0.4724	12	118	71	56	45	M2175-1200	●	
12.30	31/64	0.4843	14	124	77	60	45	M2175-1230	●	
12.50		0.4921	14	124	77	60	45	M2175-1250	●	
12.70	1/2	0.5000	14	124	77	60	45	M2175-1270	●	
12.80		0.5039	14	124	77	60	45	M2175-1280	●	
13.00		0.5118	14	124	77	60	45	M2175-1300	●	
13.10	33/64	0.5157	14	124	77	60	45	M2175-1310	●	
13.30		0.5236	14	124	77	60	45	M2175-1330	●	
13.50		0.5315	14	124	77	60	45	M2175-1350	●	
13.80		0.5433	14	124	77	60	45	M2175-1380	○	
14.00		0.5512	14	124	77	60	45	M2175-1400	●	
14.29		0.5626	16	133	83	63	48	M2175-1429	●	
14.50		0.5709	16	133	83	63	48	M2175-1450	●	
14.68	37/64	0.5780	16	133	83	63	48	M2175-1468	●	
14.80		0.5827	16	133	83	63	48	M2175-1480	●	
15.00		0.5906	16	133	83	63	48	M2175-1500	●	
15.08	19/32	0.5937	16	133	83	63	48	M2175-1508	●	
15.50		0.6102	16	133	83	63	48	M2175-1550	●	
15.80		0.6220	16	133	83	63	48	M2175-1580	○	
15.88	5/8	0.6250	16	133	83	63	48	M2175-1588	●	
16.00		0.6299	16	133	83	63	48	M2175-1600	●	
16.50		0.6496	18	143	93	71	48	M2175-1650	●	
16.67	21/32	0.6563	18	143	93	71	48	M2175-1667	●	
16.80		0.6614	18	143	93	71	48	M2175-1680	●	
17.00		0.6693	18	143	93	71	48	M2175-1700	●	
17.46	11/16	0.6874	18	143	93	71	48	M2175-1746	●	
17.50		0.6890	18	143	93	71	48	M2175-1750	●	
17.80		0.7008	18	143	93	71	48	M2175-1780	○	
17.86	45/64	0.7031	18	143	93	71	48	M2175-1786	●	
18.00		0.7087	18	143	93	71	48	M2175-1800	●	
18.26	23/32	0.7189	20	153	101	77	50	M2175-1826	●	
18.50		0.7283	20	153	101	77	50	M2175-1850	●	
18.80		0.7402	20	153	101	77	50	M2175-1880	○	
19.00		0.7480	20	153	101	77	50	M2175-1900	●	
19.05	3/4	0.7500	20	153	101	77	50	M2175-1905	●	
19.50		0.7677	20	153	101	77	50	M2175-1950	●	
19.80		0.7795	20	153	101	77	50	M2175-1980	○	
20.00		0.7874	20	153	101	77	50	M2175-2000	●	

* The bore diameter tolerance d₁ is within the bore tolerance field H7.

For machining values see Page 68.

MEGA-Quadro-Drill

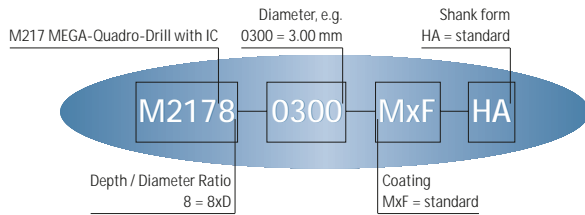
M2178



Design:

Drill diameter: 3.00 – 20.00 mm
0.1181 – 0.7874 Inch
Bore tolerance: IT 8 (achievable)
No. of margins: 2

To order, use the code given in the table and supplement it with the required coating and shank form.
Complete order code:



Drill diameter		Shank diameter		Total length		Margin length		Maximum drilling depth		Shank length		M2178 Order code Form / Diameter
mm	Inch / Wire / Letter	Dec. equivalent Inch	d ₂ h ₆ mm	L ₁ mm	L ₂ mm	L ₃ mm	L ₄ mm	L ₃ mm	L ₄ mm	L ₄ mm		
3.00		0.1181	6	72	34	29	36	M2178-0300	●			
3.10		0.1220	6	72	34	29	36	M2178-0310	●			
3.18	1/8	0.1250	6	72	34	29	36	M2178-0318	●			
3.20		0.1260	6	72	34	29	36	M2178-0320	●			
3.30		0.1299	6	72	34	29	36	M2178-0330	●			
3.40		0.1339	6	72	34	29	36	M2178-0340	○			
3.45	#29	0.1358	6	72	34	29	36	M2178-0345	●			
3.50		0.1378	6	72	34	29	36	M2178-0350	●			
3.57	9/64	0.1406	6	72	34	29	36	M2178-0357	●			
3.60		0.1417	6	72	34	29	36	M2178-0360	●			
3.70		0.1457	6	72	34	29	36	M2178-0370	●			
3.80	#25	0.1496	6	81	43	36	36	M2178-0380	●			
3.86	#24	0.1520	6	81	43	36	36	M2178-0386	●			
3.90		0.1535	6	81	43	36	36	M2178-0390	○			
3.97	5/32	0.1562	6	81	43	36	36	M2178-0397	●			
4.00		0.1575	6	81	43	36	36	M2178-0400	●			
4.04	#21	0.1591	6	81	43	36	36	M2178-0404	●			
4.10		0.1614	6	81	43	36	36	M2178-0410	●			
4.20		0.1654	6	81	43	36	36	M2178-0420	●			
4.30	#18	0.1693	6	81	43	36	36	M2178-0430	●			
4.37	11/64	0.1719	6	81	43	36	36	M2178-0437	●			
4.40		0.1732	6	81	43	36	36	M2178-0440	●			
4.50	#16	0.1772	6	81	43	36	36	M2178-0450	●			
4.60		0.1811	6	81	43	36	36	M2178-0460	●			
4.62	#14	0.1819	6	81	43	36	36	M2178-0462	●			


For machining values see Page 68.

* The bore diameter tolerance d₁ is within the bore tolerance field H7.

MEGA-Quadro-Drill

M2178

8xD

Drill diameter d ₁ *		Dimensions						 M2178 Order code Form / Diameter	
mm	Inch / Wire / Letter	Dec. equivalent Inch	Shank diameter d ₂ h ₆ mm	Total length L ₁ mm	Margin length L ₂ mm	Maximum drilling depth L ₃ mm	Shank length L ₄ mm		
4.70	#13	0.1850	6	81	43	36	36	M2178-0470	●
4.76	3/16	0.1875	6	95	57	48	36	M2178-0476	●
4.80	#12	0.1890	6	95	57	48	36	M2178-0480	●
4.90		0.1929	6	95	57	48	36	M2178-0490	○
5.00		0.1969	6	95	57	48	36	M2178-0500	●
5.10		0.2008	6	95	57	48	36	M2178-0510	●
5.16	13/64	0.2031	6	95	57	48	36	M2178-0516	●
5.20		0.2047	6	95	57	48	36	M2178-0520	●
5.30		0.2087	6	95	57	48	36	M2178-0530	○
5.40		0.2126	6	95	57	48	36	M2178-0540	○
5.50		0.2165	6	95	57	48	36	M2178-0550	●
5.56	7/32	0.2188	6	95	57	48	36	M2178-0556	●
5.60		0.2205	6	95	57	48	36	M2178-0560	●
5.70		0.2244	6	95	57	48	36	M2178-0570	●
5.80		0.2283	6	95	57	48	36	M2178-0580	○
5.90		0.2323	6	95	57	48	36	M2178-0590	●
5.95	15/64	0.2344	6	95	57	48	36	M2178-0595	●
6.00		0.2362	6	95	57	48	36	M2178-0600	●
6.10		0.2402	8	114	76	64	36	M2178-0610	○
6.15	C	0.2421	8	114	76	64	36	M2178-0615	●
6.20		0.2441	8	114	76	64	36	M2178-0620	○
6.30		0.2480	8	114	76	64	36	M2178-0630	○
6.35	1/4	0.2500	8	114	76	64	36	M2178-0635	●
6.40		0.2520	8	114	76	64	36	M2178-0640	○
6.50		0.2559	8	114	76	64	36	M2178-0650	●
6.53	F	0.2571	8	114	76	64	36	M2178-0653	●
6.60		0.2598	8	114	76	64	36	M2178-0660	●
6.63	G	0.2610	8	114	76	64	36	M2178-0663	●
6.70		0.2638	8	114	76	64	36	M2178-0670	○
6.75	17/64	0.2656	8	114	76	64	36	M2178-0675	●
6.80		0.2677	8	114	76	64	36	M2178-0680	●
6.90	I	0.2717	8	114	76	64	36	M2178-0690	●
7.00		0.2756	8	114	76	64	36	M2178-0700	●
7.10		0.2795	8	114	76	64	36	M2178-0710	○
7.14	9/32	0.2812	8	114	76	64	36	M2178-0714	●
7.20		0.2835	8	114	76	64	36	M2178-0720	●
7.30		0.2874	8	114	76	64	36	M2178-0730	●
7.40		0.2913	8	114	76	64	36	M2178-0740	●
7.50		0.2953	8	114	76	64	36	M2178-0750	●
7.54	19/64	0.2969	8	114	76	64	36	M2178-0754	●
7.60		0.2992	8	114	76	64	36	M2178-0760	●
7.70		0.3031	8	114	76	64	36	M2178-0770	●
7.80		0.3071	8	114	76	64	36	M2178-0780	●
7.90		0.3110	8	114	76	64	36	M2178-0790	○
7.94	5/16	0.3125	8	114	76	64	36	M2178-0794	●


* The bore diameter tolerance d₁ is within the bore tolerance field H7.

For machining values see Page 68.

MEGA-Quadro-Drill

M2178

8xD


Drill diameter d ₁ *		Dimensions						 M2178 Order code Form / Diameter	
		Inch / Wire / Letter	Dec. equivalent Inch	Shank diameter d ₂ h ₆ mm	Total length L ₁ mm	Margin length L ₂ mm	Maximum drilling depth L ₃ mm		Shank length L ₄ mm
mm									
8.00		0.3150	8	114	76	64	36	M2178-0800	●
8.10		0.3189	10	142	95	80	40	M2178-0810	○
8.20	P	0.3228	10	142	95	80	40	M2178-0820	○
8.30		0.3268	10	142	95	80	40	M2178-0830	○
8.33	21/64	0.3281	10	142	95	80	40	M2178-0833	●
8.40		0.3307	10	142	95	80	40	M2178-0840	○
8.43	Q	0.3319	10	142	95	80	40	M2178-0843	●
8.50		0.3346	10	142	95	80	40	M2178-0850	●
8.60		0.3386	10	142	95	80	40	M2178-0860	○
8.70		0.3425	10	142	95	80	40	M2178-0870	○
8.73	11/32	0.3438	10	142	95	80	40	M2178-0873	●
8.80		0.3465	10	142	95	80	40	M2178-0880	●
8.90		0.3504	10	142	95	80	40	M2178-0890	○
9.00		0.3543	10	142	95	80	40	M2178-0900	●
9.10		0.3583	10	142	95	80	40	M2178-0910	○
9.13	23/64	0.3594	10	142	95	80	40	M2178-0913	●
9.20		0.3622	10	142	95	80	40	M2178-0920	○
9.30		0.3661	10	142	95	80	40	M2178-0930	●
9.35	U	0.3681	10	142	95	80	40	M2178-0935	●
9.40		0.3701	10	142	95	80	40	M2178-0940	●
9.50		0.3740	10	142	95	80	40	M2178-0950	●
9.53	3/8	0.3750	10	142	95	80	40	M2178-0953	●
9.60		0.3780	10	142	95	80	40	M2178-0960	●
9.70		0.3819	10	142	95	80	40	M2178-0970	○
9.80	W	0.3858	10	142	95	80	40	M2178-0980	○
9.90		0.3898	10	142	95	80	40	M2178-0990	●
9.92	25/64	0.3906	10	142	95	80	40	M2178-0992	●
10.00		0.3937	10	142	95	80	40	M2178-1000	●
10.10		0.3976	12	162	114	96	45	M2178-1010	○
10.20		0.4016	12	162	114	96	45	M2178-1020	●
10.26	Y	0.4039	12	162	114	96	45	M2178-1026	●
10.30		0.4055	12	162	114	96	45	M2178-1030	●
10.32	13/32	0.4062	12	162	114	96	45	M2178-1032	●
10.40		0.4094	12	162	114	96	45	M2178-1040	○
10.50		0.4134	12	162	114	96	45	M2178-1050	●
10.60		0.4173	12	162	114	96	45	M2178-1060	○
10.70		0.4213	12	162	114	96	45	M2178-1070	●
10.72	27/64	0.4219	12	162	114	96	45	M2178-1072	●
10.80		0.4252	12	162	114	96	45	M2178-1080	○
10.90		0.4291	12	162	114	96	45	M2178-1090	○
11.00		0.4331	12	162	114	96	45	M2178-1100	●
11.10		0.4370	12	162	114	96	45	M2178-1110	○
11.11	7/16	0.4375	12	162	114	96	45	M2178-1111	●
11.20		0.4409	12	162	114	96	45	M2178-1120	●
11.30		0.4449	12	162	114	96	45	M2178-1130	●

For machining values see Page 68.

* The bore diameter tolerance d₁ is within the bore tolerance field H7.

MEGA-Quadro-Drill M2178

8xD

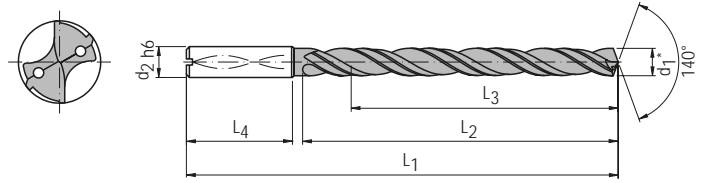
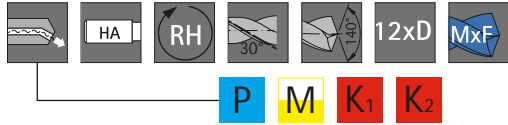
Drill diameter d ₁ *		Dimensions						 M2178	Order code Form / Diameter	
mm	Inch / Wire / Letter	Dec. equivalent Inch	Shank diameter d ₂ h ₆ mm	Total length L ₁ mm	Margin length L ₂ mm	Maximum drilling depth L ₃ mm	Shank length L ₄ mm			
11.40		0.4488	12	162	114	96	45	M2178-1140	●	
11.50	29/64	0.4528	12	162	114	96	45	M2178-1150	●	
11.60		0.4567	12	162	114	96	45	M2178-1160	○	
11.70		0.4606	12	162	114	96	45	M2178-1170	○	
11.80		0.4646	12	162	114	96	45	M2178-1180	●	
11.90	15/32	0.4685	12	162	114	96	45	M2178-1190	●	
12.00		0.4724	12	162	114	96	45	M2178-1200	●	
12.30	31/64	0.4843	14	178	133	112	45	M2178-1230	●	
12.50		0.4921	14	178	133	112	45	M2178-1250	●	
12.70	1/2	0.5000	14	178	133	112	45	M2178-1270	●	
12.80		0.5039	14	178	133	112	45	M2178-1280	●	
13.00		0.5118	14	178	133	112	45	M2178-1300	●	
13.10	33/64	0.5157	14	178	133	112	45	M2178-1310	●	
13.50		0.5315	14	178	133	112	45	M2178-1350	●	
13.80		0.5433	14	178	133	112	45	M2178-1380	○	
14.00		0.5512	14	178	133	112	45	M2178-1400	●	
14.29		0.5626	16	203	152	128	48	M2178-1429	●	
14.50		0.5709	16	203	152	128	48	M2178-1450	●	
14.68	37/64	0.5780	16	203	152	128	48	M2178-1468	●	
14.80		0.5827	16	203	152	128	48	M2178-1480	●	
15.00		0.5906	16	203	152	128	48	M2178-1500	●	
15.08	19/32	0.5937	16	203	152	128	48	M2178-1508	●	
15.50		0.6102	16	203	152	128	48	M2178-1550	●	
15.80		0.6220	16	203	152	128	48	M2178-1580	○	
15.88	5/8	0.6250	16	203	152	128	48	M2178-1588	●	
16.00		0.6299	16	203	152	128	48	M2178-1600	●	
16.50		0.6496	18	222	171	144	48	M2178-1650	●	
16.67	21/32	0.6563	18	222	171	144	48	M2178-1667	●	
16.80		0.6614	18	222	171	144	48	M2178-1680	●	
17.00		0.6693	18	222	171	144	48	M2178-1700	●	
17.46	11/16	0.6874	18	222	171	144	48	M2178-1746	●	
17.50		0.6890	18	222	171	144	48	M2178-1750	●	
17.80		0.7008	18	222	171	144	48	M2178-1780	○	
17.86	45/64	0.7031	18	222	171	144	48	M2178-1786	●	
18.00		0.7087	18	222	171	144	48	M2178-1800	●	
18.26	23/32	0.7189	20	243	190	160	50	M2178-1826	●	
18.50		0.7283	20	243	190	160	50	M2178-1850	○	
18.80		0.7402	20	243	190	160	50	M2178-1880	○	
19.00		0.7480	20	243	190	160	50	M2178-1900	○	
19.05	3/4	0.7500	20	243	190	160	50	M2178-1905	●	
19.50		0.7677	20	243	190	160	50	M2178-1950	○	
19.80		0.7795	20	243	190	160	50	M2178-1980	○	
20.00		0.7874	20	243	190	160	50	M2178-2000	○	

* The bore diameter tolerance d₁ is within the bore tolerance field H7.

For machining values see Page 68.

MEGA-Quadro-Drill

M2182



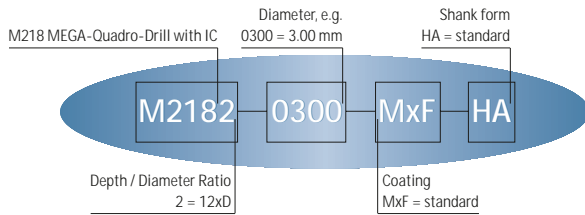
Design:

Drill diameter: 3.00 – 20.00 mm
0.1181 – 0.7874 Inch

Bore tolerance: IT 8 (achievable)

No. of margins: 2

To order, use the code given in the table and supplement it with the required coating and shank form. Complete order code:



Drill diameter d_1^*		Shank diameter d_2 h6		Margin length L_2		Maximum drilling depth L_3		Shank length L_4		M2182 Order code Form / Diameter
mm	Inch / Wire / Letter	Dec. equivalent Inch	mm	mm	mm	mm	mm	mm		
3.00		0.1181	6	92	54	48	36	M2182-0300	●	
3.10		0.1220	6	92	54	48	36	M2182-0310	●	
3.18	1/8	0.1250	6	92	54	48	36	M2182-0318	●	
3.20		0.1260	6	92	54	48	36	M2182-0320	●	
3.30		0.1299	6	92	54	48	36	M2182-0330	●	
3.40		0.1339	6	92	54	48	36	M2182-0340	○	
3.45	#29	0.1358	6	92	54	48	36	M2182-0345	●	
3.50		0.1378	6	92	54	48	36	M2182-0350	●	
3.57	9/64	0.1406	6	92	54	48	36	M2182-0357	●	
3.60		0.1417	6	92	54	48	36	M2182-0360	●	
3.70		0.1457	6	92	54	48	36	M2182-0370	●	
3.80	#25	0.1496	6	102	64	58	36	M2182-0380	●	
3.86	#24	0.1520	6	102	64	58	36	M2182-0386	●	
3.90		0.1535	6	102	64	58	36	M2182-0390	○	
3.97	5/32	0.1562	6	102	64	58	36	M2182-0397	●	
4.00		0.1575	6	102	64	58	36	M2182-0400	●	
4.04	#21	0.1591	6	102	64	58	36	M2182-0404	●	
4.10		0.1614	6	102	64	58	36	M2182-0410	●	
4.20		0.1654	6	102	64	58	36	M2182-0420	●	
4.30	#18	0.1693	6	102	64	58	36	M2182-0430	●	
4.37	11/64	0.1719	6	102	64	58	36	M2182-0437	●	
4.40		0.1732	6	102	64	58	36	M2182-0440	●	
4.50	#16	0.1772	6	102	64	58	36	M2182-0450	●	
4.60		0.1811	6	102	64	58	36	M2182-0460	●	
4.62	#14	0.1819	6	102	64	58	36	M2182-0462	●	


For machining values see Page 68.

* The bore diameter tolerance d_1 is within the bore tolerance field H7.

MEGA-Quadro-Drill

M2182

12xD

Drill diameter d ₁ *		Dimensions						 M2182 Order code Form / Diameter	
mm	Inch / Wire / Letter	Dec. equivalent Inch	Shank diameter d ₂ h ₆ mm	Total length L ₁ mm	Margin length L ₂ mm	Maximum drilling depth L ₃ mm	Shank length L ₄ mm		
4.70	#13	0.1850	6	102	64	58	36	M2182-0470	●
4.76	3/16	0.1875	6	116	78	70	36	M2182-0476	●
4.80	#12	0.1890	6	116	78	70	36	M2182-0480	●
4.90		0.1929	6	116	78	70	36	M2182-0490	○
5.00		0.1969	6	116	78	70	36	M2182-0500	●
5.10		0.2008	6	116	78	70	36	M2182-0510	●
5.16	13/64	0.2031	6	116	78	70	36	M2182-0516	●
5.20		0.2047	6	116	78	70	36	M2182-0520	●
5.30		0.2087	6	116	78	70	36	M2182-0530	○
5.40		0.2126	6	116	78	70	36	M2182-0540	○
5.50		0.2165	6	116	78	70	36	M2182-0550	●
5.56	7/32	0.2188	6	116	78	70	36	M2182-0556	●
5.60		0.2205	6	116	78	70	36	M2182-0560	●
5.70		0.2244	6	116	78	70	36	M2182-0570	●
5.80		0.2283	6	116	78	70	36	M2182-0580	○
5.90		0.2323	6	116	78	70	36	M2182-0590	●
5.95	15/64	0.2344	6	116	78	70	36	M2182-0595	●
6.00		0.2362	6	116	78	70	36	M2182-0600	●
6.10		0.2402	8	146	108	94	36	M2182-0610	○
6.15	C	0.2421	8	146	108	94	36	M2182-0615	●
6.20		0.2441	8	146	108	94	36	M2182-0620	○
6.30		0.2480	8	146	108	94	36	M2182-0630	○
6.35	1/4	0.2500	8	146	108	94	36	M2182-0635	●
6.40		0.2520	8	146	108	94	36	M2182-0640	○
6.50		0.2559	8	146	108	94	36	M2182-0650	●
6.53	F	0.2571	8	146	108	94	36	M2182-0653	●
6.60		0.2598	8	146	108	94	36	M2182-0660	●
6.63	G	0.2610	8	146	108	94	36	M2182-0663	●
6.70		0.2638	8	146	108	94	36	M2182-0670	○
6.75	17/64	0.2656	8	146	108	94	36	M2182-0675	●
6.80		0.2677	8	146	108	94	36	M2182-0680	●
6.90	I	0.2717	8	146	108	94	36	M2182-0690	●
7.00		0.2756	8	146	108	94	36	M2182-0700	●
7.10		0.2795	8	146	108	94	36	M2182-0710	○
7.14	9/32	0.2812	8	146	108	94	36	M2182-0714	●
7.20		0.2835	8	146	108	94	36	M2182-0720	●
7.30		0.2874	8	146	108	94	36	M2182-0730	●
7.40		0.2913	8	146	108	94	36	M2182-0740	●
7.50		0.2953	8	146	108	94	36	M2182-0750	●
7.54	19/64	0.2969	8	146	108	94	36	M2182-0754	●
7.60		0.2992	8	146	108	94	36	M2182-0760	●
7.70		0.3031	8	146	108	94	36	M2182-0770	●
7.80		0.3071	8	146	108	94	36	M2182-0780	●
7.90		0.3110	8	146	108	94	36	M2182-0790	○
7.94	5/16	0.3125	8	146	108	94	36	M2182-0794	●


* The bore diameter tolerance d₁ is within the bore tolerance field H7.

For machining values see Page 76.

MEGA-Quadro-Drill

M2182

12xD


Drill diameter d ₁ *		Dimensions						 M2182 Order code Form / Diameter	
		Inch / Wire / Letter	Dec. equivalent Inch	Shank diameter d ₂ h ₆ mm	Total length L ₁ mm	Margin length L ₂ mm	Maximum drilling depth L ₃ mm		Shank length L ₄ mm
mm									
8.00		0.3150	8	146	108	94	36	M2182-0800	●
8.10		0.3189	10	162	120	110	40	M2182-0810	○
8.20	P	0.3228	10	162	120	110	40	M2182-0820	○
8.30		0.3268	10	162	120	110	40	M2182-0830	○
8.33	21/64	0.3281	10	162	120	110	40	M2182-0833	●
8.40		0.3307	10	162	120	110	40	M2182-0840	○
8.43	Q	0.3319	10	162	120	110	40	M2182-0843	●
8.50		0.3346	10	162	120	110	40	M2182-0850	●
8.60		0.3386	10	162	120	110	40	M2182-0860	○
8.70		0.3425	10	162	120	110	40	M2182-0870	○
8.73	11/32	0.3438	10	162	120	110	40	M2182-0873	●
8.80		0.3465	10	162	120	110	40	M2182-0880	●
8.90		0.3504	10	162	120	110	40	M2182-0890	○
9.00		0.3543	10	162	120	110	40	M2182-0900	●
9.10		0.3583	10	162	120	110	40	M2182-0910	○
9.13	23/64	0.3594	10	162	120	110	40	M2182-0913	●
9.20		0.3622	10	162	120	110	40	M2182-0920	○
9.30		0.3661	10	162	120	110	40	M2182-0930	●
9.35	U	0.3681	10	162	120	110	40	M2182-0935	●
9.40		0.3701	10	162	120	110	40	M2182-0940	●
9.50		0.3740	10	162	120	110	40	M2182-0950	●
9.53	3/8	0.3750	10	162	120	110	40	M2182-0953	●
9.60		0.3780	10	162	120	110	40	M2182-0960	●
9.70		0.3819	10	162	120	110	40	M2182-0970	○
9.80	W	0.3858	10	162	120	110	40	M2182-0980	○
9.90		0.3898	10	162	120	110	40	M2182-0990	●
9.92	25/64	0.3906	10	162	120	110	40	M2182-0992	●
10.00		0.3937	10	162	120	110	40	M2182-1000	●
10.10		0.3976	12	204	156	142	45	M2182-1010	○
10.20		0.4016	12	204	156	142	45	M2182-1020	●
10.26	Y	0.4039	12	204	156	142	45	M2182-1026	●
10.30		0.4055	12	204	156	142	45	M2182-1030	●
10.32	13/32	0.4062	12	204	156	142	45	M2182-1032	●
10.40		0.4094	12	204	156	142	45	M2182-1040	○
10.50		0.4134	12	204	156	142	45	M2182-1050	●
10.60		0.4173	12	204	156	142	45	M2182-1060	○
10.70		0.4213	12	204	156	142	45	M2182-1070	●
10.72	27/64	0.4219	12	204	156	142	45	M2182-1072	●
10.80		0.4252	12	204	156	142	45	M2182-1080	○
10.90		0.4291	12	204	156	142	45	M2182-1090	○
11.00		0.4331	12	204	156	142	45	M2182-1100	●
11.10		0.4370	12	204	156	142	45	M2182-1110	○
11.11	7/16	0.4375	12	204	156	142	45	M2182-1111	●
11.20		0.4409	12	204	156	142	45	M2182-1120	●
11.30		0.4449	12	204	156	142	45	M2182-1130	●

For machining values see Page 76.

* The bore diameter tolerance d₁ is within the bore tolerance field H7.

MEGA-Quadro-Drill M2182

12xD

Drill diameter d ₁ *		Dimensions						 M2182 Order code Form / Diameter	
mm	Inch / Wire / Letter	Dec. equivalent Inch	Shank diameter d ₂ h ₆ mm	Total length L ₁ mm	Margin length L ₂ mm	Maximum drilling depth L ₃ mm	Shank length L ₄ mm		
11.40		0.4488	12	204	156	142	45	M2182-1140	●
11.50	29/64	0.4528	12	204	156	142	45	M2182-1150	●
11.60		0.4567	12	204	156	142	45	M2182-1160	○
11.70		0.4606	12	204	156	142	45	M2182-1170	○
11.80		0.4646	12	204	156	142	45	M2182-1180	●
11.90	15/32	0.4685	12	204	156	142	45	M2182-1190	●
12.00		0.4724	12	204	156	142	45	M2182-1200	●
12.30	31/64	0.4843	14	230	182	166	45	M2182-1230	●
12.50		0.4921	14	230	182	166	45	M2182-1250	●
12.70	1/2	0.5000	14	230	182	166	45	M2182-1270	●
12.80		0.5039	14	230	182	166	45	M2182-1280	●
13.00		0.5118	14	230	182	166	45	M2182-1300	●
13.10	33/64	0.5157	14	230	182	166	45	M2182-1310	●
13.50		0.5315	14	230	182	166	45	M2182-1350	●
13.80		0.5433	14	230	182	166	45	M2182-1380	○
14.00		0.5512	14	230	182	166	45	M2182-1400	●
14.29		0.5626	16	260	208	192	48	M2182-1429	●
14.50		0.5709	16	260	208	192	48	M2182-1450	●
14.68	37/64	0.5780	16	260	208	192	48	M2182-1468	●
14.80		0.5827	16	260	208	192	48	M2182-1480	●
15.00		0.5906	16	260	208	192	48	M2182-1500	●
15.08	19/32	0.5937	16	260	208	192	48	M2182-1508	●
15.50		0.6102	16	260	208	192	48	M2182-1550	●
15.80		0.6220	16	260	208	192	48	M2182-1580	○
15.88	5/8	0.6250	16	260	208	192	48	M2182-1588	●
16.00		0.6299	16	260	208	192	48	M2182-1600	●
16.50		0.6496	18	285	234	216	48	M2182-1650	○
16.67	21/32	0.6563	18	285	234	216	48	M2182-1667	●
16.80		0.6614	18	285	234	216	48	M2182-1680	●
17.00		0.6693	18	285	234	216	48	M2182-1700	○
17.46	11/16	0.6874	18	285	234	216	48	M2182-1746	●
17.50		0.6890	18	285	234	216	48	M2182-1750	○
17.80		0.7008	18	285	234	216	48	M2182-1780	○
17.86	45/64	0.7031	18	285	234	216	48	M2182-1786	●
18.00		0.7087	18	285	234	216	48	M2182-1800	○
18.26	23/32	0.7189	20	310	258	240	50	M2182-1826	●
18.50		0.7283	20	310	258	240	50	M2182-1850	○
18.80		0.7402	20	310	258	240	50	M2182-1880	○
19.00		0.7480	20	310	258	240	50	M2182-1900	○
19.05	3/4	0.7500	20	310	258	240	50	M2182-1905	●
19.50		0.7677	20	310	258	240	50	M2182-1950	○
19.80		0.7795	20	310	258	240	50	M2182-1980	○
20.00		0.7874	20	310	258	240	50	M2182-2000	○

* The bore diameter tolerance d₁ is within the bore tolerance field H7.

For machining values see Page 76.