

Solid Carbide *High Performance*

MP-X Drills for Multi-Application drilling across a wide range of materials

MATERIAL

Micrograin carbide for an excellent combination of hardness and toughness, resulting in high wear resistance and longer tool life.

LENGTH

Available in a choice of short (DIN 6537 K) and long (DIN 6537 L) lengths and in both solid design and with internal coolant holes.

COATING

Multi-layer Titanium Aluminium Nitride (TiAlN) coating gives:

- * Improved stability of cutting edges.
- * Outstanding wear protection.
- * High hardness properties.
- * High toughness and oxidation stability.
- * Resulting longer tool life and higher productivity.

FLUTE GEOMETRY

Strong web design gives excellent cross-sectional strength and facilitates chip evacuation.

RANGE

R453 3.00 - 20.00 mm 1/8 - 3/4"

R454 3.00 - 16.00 mm 1/8 - 3/4"

R457 3.00 - 20.00 mm 1/8 - 3/4"

R458 3.00 - 16.00 mm 1/8 - 3/4"

MP-X



POINT GEOMETRY

140° point angle with good centring capabilities and low thrust force design, suited to multi-application drilling.

COOLANT FEED

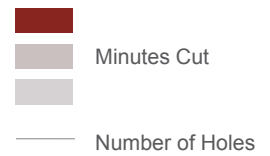
Available with internal coolant holes to improve cutting efficiency and chip evacuation, resulting in higher productivity.

SHANK

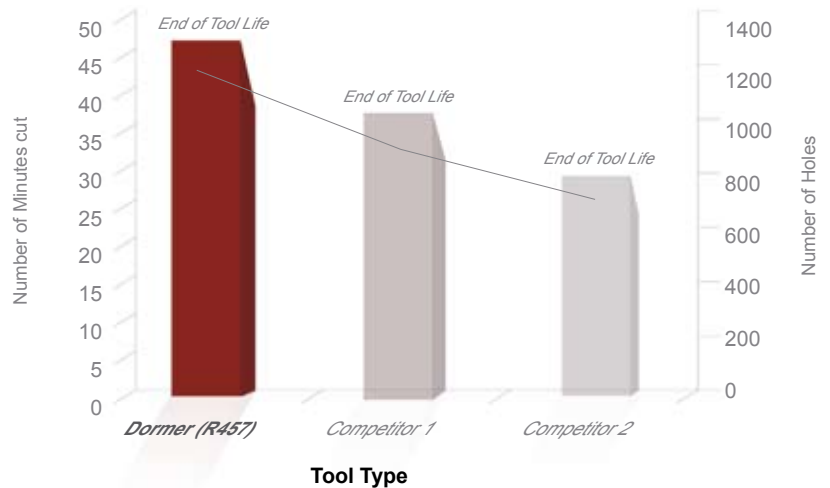
To DIN 6535 HA.



Test Results

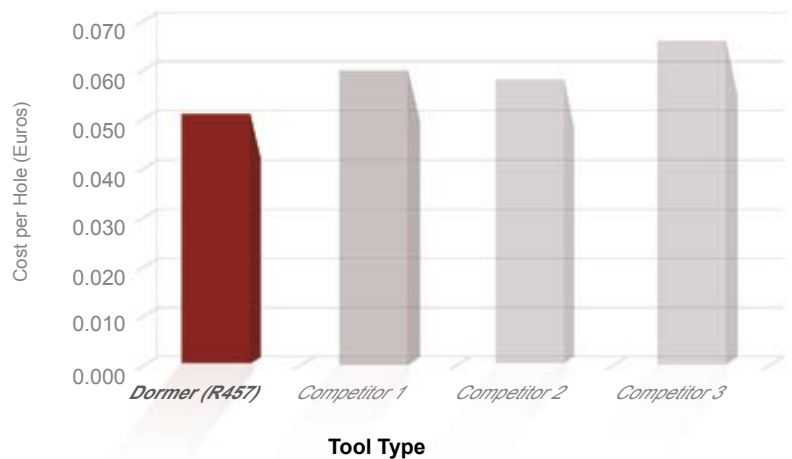


Tool Life Comparison in Alloy Steel (P20), AMG 1.5
Ø 8.0mm, Cutting Depth 3 x Ø



Tested against two competitor equivalent drills, the R457 drilled an average of 30% more holes than the nearest competitor in P20 (AMG 1.5) Alloy Steel material, running at 75m/min / 0.2mm/rev, Dormer's recommended conditions on this application.

Cost per Hole Comparison in Alloy Steel (P20), AMG 1.5
Ø 8.0mm, Cutting Depth 3 x Ø



The graph shows that the cost per hole on the three competitor equivalent drills averaged between 14% and 30% higher than for R457 in P20 (AMG 1.5) Alloy Steel material, running at the company recommended conditions over a period of 30 minutes.

CUSTOMER BENEFITS

- * **High productivity** and consistent tool life.
- * **Exceptional value** with no compromise on quality.
- * **Multi-application drilling across a wide range of materials**, including Carbon and Alloy steels, Stainless steels, Cast Iron, non-ferrous metals - Aluminium & Magnesium alloys & Copper.
- * **Excellent hole quality.**
- * **Reduced tooling costs.**
- * **Easy to re-grind.**
- * **Reduced stock-holding** – one drill machines many materials.

R458

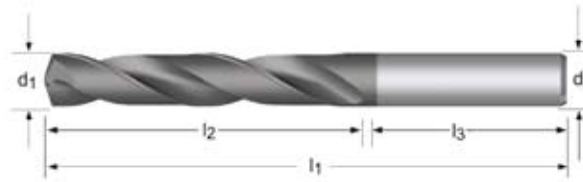


- MP-X Drill Short
- MP-X Spiralbohrer, kurz
- MP-X Spiraalboren
- Foret MP-X
- Broca MP-X, short
- Broca MP-X Curta

NEW

2006.11

MP-X



R458



HM

TiAlN

DIN 6537 K



3xD



- 1.1 1.2 1.3 1.4 1.5 1.6 3.1 3.2 3.3 3.4 6.1 6.2 6.3 7.1 7.2 7.3 7.4
- 2.1 2.2 2.3 4.1 4.2 4.3 6.4

d ₁ Ø	d ₁ Ø	d ₁ decimal	l ₂	l ₁	l ₃	d ₂ Ø	e-Code
Inch	mm	Inch	mm	mm	mm	mm	
1/8	3.00	0.1181	20	62	36	6	R4583.0
	3.10	0.1220	20	62	36	6	R4583.1
	3.17	0.1248	20	62	36	6	R4581/8
	3.20	0.1260	20	62	36	6	R4583.2
	3.30	0.1299	20	62	36	6	R4583.3
9/64	3.40	0.1339	20	62	36	6	R4583.4
	3.50	0.1378	20	62	36	6	R4583.5
	3.57	0.1406	20	62	36	6	R4589/64
	3.60	0.1417	20	62	36	6	R4583.6
	3.70	0.1457	20	62	36	6	R4583.7
5/32	3.73	0.1469	24	66	36	6	R4583.73
	3.80	0.1496	24	66	36	6	R4583.8
	3.90	0.1535	24	66	36	6	R4583.9
	3.97	0.1563	24	66	36	6	R4585/32
	4.00	0.1575	24	66	36	6	R4584.0
11/64	4.10	0.1614	24	66	36	6	R4584.1
	4.20	0.1654	24	66	36	6	R4584.2
	4.30	0.1693	24	66	36	6	R4584.3
	4.37	0.1720	24	66	36	6	R45811/64
	4.50	0.1772	24	66	36	6	R4584.5
3/16	4.60	0.1811	24	66	36	6	R4584.6
	4.76	0.1874	28	66	36	6	R4583/16
	5.00	0.1969	28	66	36	6	R4585.0
	5.10	0.2008	28	66	36	6	R4585.1
	5.16	0.2031	28	66	36	6	R45813/64
7/32	5.50	0.2165	28	66	36	6	R4585.5
	5.56	0.2189	28	66	36	6	R4587/32
	5.60	0.2205	28	66	36	6	R4585.6
	5.70	0.2244	28	66	36	6	R4585.7
	5.80	0.2283	28	66	36	6	R4585.8
15/64	5.95	0.2343	28	66	36	6	R45815/64
	6.00	0.2362	28	66	36	6	R4586.0
	6.10	0.2402	34	79	36	8	R4586.1
	6.30	0.2480	34	79	36	8	R4586.3
	6.35	0.2500	34	79	36	8	R4581/4
17/64	6.50	0.2559	34	79	36	8	R4586.5
	6.60	0.2598	34	79	36	8	R4586.6
	6.75	0.2657	34	79	36	8	R45817/64
	6.80	0.2677	34	79	36	8	R4586.8
	6.90	0.2717	34	79	36	8	R4586.9
9/32	7.00	0.2756	34	79	36	8	R4587.0
	7.10	0.2795	41	79	36	8	R4587.1
	7.14	0.2811	41	79	36	8	R4589/32
	7.30	0.2874	41	79	36	8	R4587.3

d ₁ Ø	d ₁ Ø	d ₁ decimal	l ₂	l ₁	l ₃	d ₂ Ø	e-Code
Inch	mm	Inch	mm	mm	mm	mm	
19/64	7.40	0.2913	41	79	36	8	R4587.4
	7.50	0.2953	41	79	36	8	R4587.5
	7.54	0.2969	41	79	36	8	R45819/64
	7.60	0.2992	41	79	36	8	R4587.6
	7.80	0.3071	41	79	36	8	R4587.8
5/16	7.94	0.3126	41	79	36	8	R4585/16
	8.00	0.3150	41	79	36	8	R4588.0
	8.10	0.3189	47	89	40	10	R4588.1
	8.33	0.3280	47	89	40	10	R45821/64
	8.50	0.3346	47	89	40	10	R4588.5
11/32	8.60	0.3386	47	89	40	10	R4588.6
	8.70	0.3425	47	89	40	10	R4588.7
	8.73	0.3437	47	89	40	10	R45811/32
	8.80	0.3465	47	89	40	10	R4588.8
	9.00	0.3543	47	89	40	10	R4589.0
23/64	9.10	0.3583	47	89	40	10	R4589.1
	9.13	0.3594	47	89	40	10	R45823/64
	9.30	0.3661	47	89	40	10	R4589.3
	9.50	0.3740	47	89	40	10	R4589.5
	9.52	0.3748	47	89	40	10	R4583/8
3/8	9.60	0.3780	47	89	40	10	R4589.6
	9.80	0.3858	47	89	40	10	R4589.8
	9.92	0.3906	47	89	40	10	R45825/64
	10.00	0.3937	47	89	40	10	R45810.0
	10.10	0.3976	55	102	45	12	R45810.1
13/32	10.20	0.4016	55	102	45	12	R45810.2
	10.30	0.4055	55	102	45	12	R45810.3
	10.32	0.4063	55	102	45	12	R45813/32
	10.40	0.4094	55	102	45	12	R45810.4
	10.50	0.4134	55	102	45	12	R45810.5
27/64	10.72	0.4220	55	102	45	12	R45827/64
	10.60	0.4173	55	102	45	12	R45810.6
	11.00	0.4331	55	102	45	12	R45811.0
	11.11	0.4374	55	102	45	12	R4587/16
	11.20	0.4409	55	102	45	12	R45811.2
29/64	11.50	0.4528	55	102	45	12	R45811.5
	11.51	0.4531	55	102	45	12	R45829/64
	0.4646	55	102	45	12	R45811.8	
	11.91	0.4689	55	102	45	12	R45815/32
	12.00	0.4724	55	102	45	12	R45812.0
15/32	12.10	0.4764	60	107	45	14	R45812.1
	12.20	0.4803	60	107	45	14	R45812.2
	12.30	0.4843	60	107	45	14	R45831/64
	12.50	0.4921	60	107	45	14	R45812.5

d_1 Ø	d_1 Ø	d_1 decimal	l_2	l_1	l_3	d_2 Ø	e-Code	d_1 Ø	d_1 Ø	d_1 decimal	l_2	l_1	l_3	d_2 Ø	e-Code
Inch	mm	Inch	mm	mm	mm	mm		Inch	mm	Inch	mm	mm	mm	mm	
	12.70	0.5000	60	107	45	14	R45812.7		14.50	0.5709	65	115	48	16	R45814.5
1/2	12.70	0.5000	60	107	45	14	R4581/2	37/64	14.68	0.5780	65	115	48	16	R45837/64
	13.00	0.5118	60	107	45	14	R45813.0		15.00	0.5906	65	115	48	16	R45815.0
33/64	13.10	0.5157	60	107	45	14	R45833/64	19/32	15.08	0.5937	65	115	48	16	R45819/32
17/32	13.49	0.5311	60	107	45	14	R45817/32		15.10	0.5945	65	115	48	16	R45815.1
	13.50	0.5315	60	107	45	14	R45813.5	39/64	15.48	0.6094	65	115	48	16	R45839/64
35/64	13.89	0.5469	60	107	45	14	R45835/64		15.50	0.6102	65	115	48	16	R45815.5
	14.00	0.5512	60	107	45	14	R45814.0	5/8	15.88	0.6252	65	115	48	16	R4585/8
	14.25	0.5610	65	115	48	16	R45814.25		16.00	0.6299	65	115	48	16	R45816.0
9/16	14.29	0.5626	65	115	48	16	R4589/16								