

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

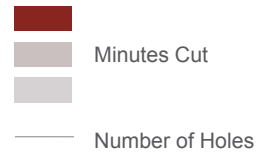
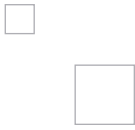
Available with internal coolant holes to improve cutting efficiency and chip evacuation, resulting in higher productivity.

SHANK

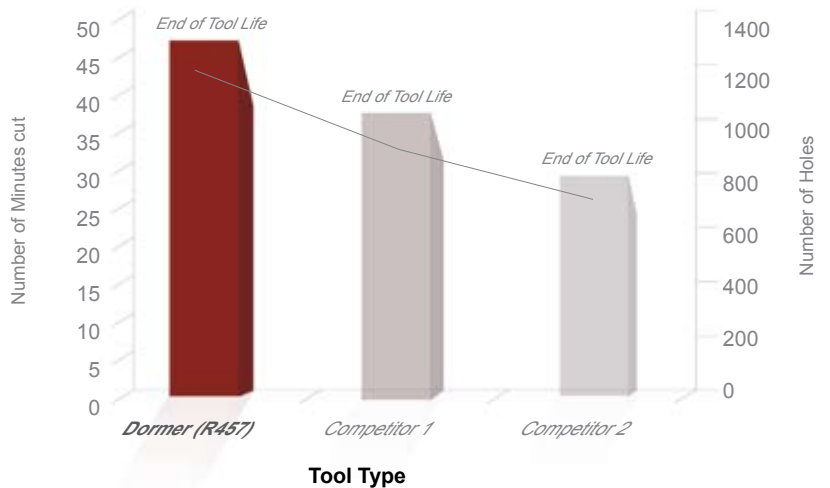
To DIN 6535 HA.



TestResults

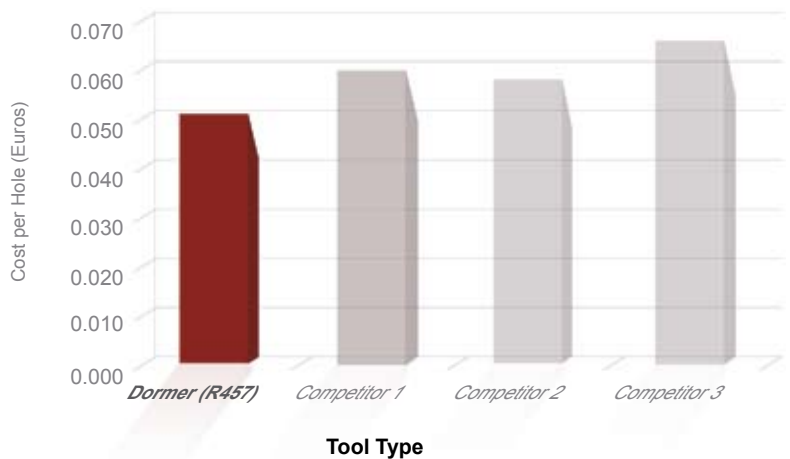


Tool Life Comparison in Alloy Steel (P20), AMG 1.5
 Ø 8.0mm, Cutting Depth 3 x Ø



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.

R453

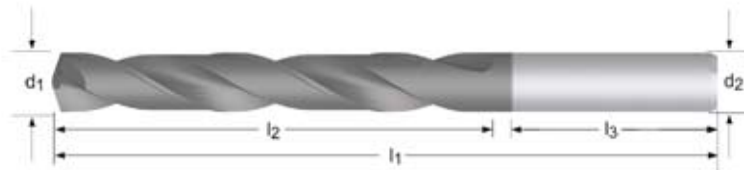


- MP-X Drill Long
- MP-X Spiralbohrer, lang
- MP-X Spiraalboren, lang
- Foret MP-X série longue
- Broca MP-X, serie larga
- Broca MP-X Longa

NEW

2006.11

MP-X



R453



HM

TiAlN

DIN 6537 L



<5XD



DIN 6535 HA



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

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	
	3.00	0.1181	28	66	36	6	R4533.0
	3.10	0.1220	28	66	36	6	R4533.1
1/8	3.17	0.1250	28	66	36	6	R4531/8
	3.20	0.1260	28	66	36	6	R4533.2
	3.30	0.1299	28	66	36	6	R4533.3
	3.40	0.1339	28	66	36	6	R4533.4
	3.50	0.1378	28	66	36	6	R4533.5
9/64	3.57	0.1406	28	66	36	6	R4539/64
	3.60	0.1417	28	66	36	6	R4533.6
	3.70	0.1457	28	66	36	6	R4533.7
	3.80	0.1496	36	74	36	6	R4533.8
5/32	3.97	0.1562	36	74	36	6	R4535/32
	4.00	0.1575	36	74	36	6	R4534.0
	4.05	0.1594	36	74	36	6	R4534.05
	4.10	0.1614	36	74	36	6	R4534.1
	4.20	0.1654	36	74	36	6	R4534.2
	4.30	0.1693	36	74	36	6	R4534.3
11/64	4.37	0.1718	36	74	36	6	R45311/64
	4.50	0.1772	36	74	36	6	R4534.5
	4.60	0.1811	36	74	36	6	R4534.6
	4.70	0.1850	36	74	36	6	R4534.7
3/16	4.76	0.1874	44	82	36	6	R4533/16
	5.00	0.1969	44	82	36	6	R4535.0
	5.10	0.2008	44	82	36	6	R4535.1
13/64	5.16	0.2031	44	82	36	6	R45313/64
	5.50	0.2165	44	82	36	6	R4535.5
7/32	5.56	0.2187	44	82	36	6	R4537/32
	5.60	0.2204	44	82	36	6	R4535.6
	5.70	0.2244	44	82	36	6	R4535.7
	5.80	0.2283	44	82	36	6	R4535.8
15/64	5.95	0.2343	44	82	36	6	R45315/64
	6.00	0.2362	44	82	36	6	R4536.0
	6.10	0.2402	53	91	36	8	R4536.1
	6.30	0.2480	53	91	36	8	R4536.3
1/4	6.35	0.2500	53	91	36	8	R4531/4
	6.50	0.2559	53	91	36	8	R4536.5
	6.60	0.2598	53	91	36	8	R4536.6
17/64	6.75	0.2656	53	91	36	8	R45317/64
	6.80	0.2677	53	91	36	8	R4536.8
	6.90	0.2717	53	91	36	8	R4536.9
	7.00	0.2756	53	91	36	8	R4537.0
	7.10	0.2795	53	91	36	8	R4537.1
9/32	7.14	0.2812	53	91	36	8	R4539/32
	7.30	0.2874	53	91	36	8	R4537.3

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	
	7.40	0.2913	53	91	36	8	R4537.4
	7.50	0.2953	53	91	36	8	R4537.5
19/64	7.54	0.2968	53	91	36	8	R45319/64
	7.60	0.2992	53	91	36	8	R4537.6
	7.80	0.3071	53	91	36	8	R4537.8
5/16	7.94	0.3125	53	91	36	8	R4535/16
	8.00	0.3150	53	91	36	8	R4538.0
	8.10	0.3189	61	103	40	10	R4538.1
21/64	8.33	0.3281	61	103	40	10	R45321/64
	8.50	0.3346	61	103	40	10	R4538.5
	8.60	0.3386	61	103	40	10	R4538.6
	8.70	0.3425	61	103	40	10	R4538.7
11/32	8.73	0.3437	61	103	40	10	R45311/32
	8.80	0.3465	61	103	40	10	R4538.8
	9.00	0.3543	61	103	40	10	R4539.0
	9.10	0.3583	61	103	40	10	R4539.1
23/64	9.13	0.3593	61	103	40	10	R45323/64
	9.30	0.3661	61	103	40	10	R4539.3
	9.50	0.3740	61	103	40	10	R4539.5
3/8	9.52	0.3750	61	103	40	10	R4533/8
	9.60	0.3780	61	103	40	10	R4539.6
	9.80	0.3858	61	103	40	10	R4539.8
25/64	9.92	0.3906	61	103	40	10	R45325/64
	10.00	0.3937	61	103	40	10	R45310.0
	10.10	0.3976	70	118	45	12	R45310.1
	10.20	0.4016	70	118	45	12	R45310.2
	10.30	0.4055	70	118	45	12	R45310.3
13/32	10.32	0.4062	70	118	45	12	R45313/32
	10.40	0.4094	70	118	45	12	R45310.4
	10.50	0.4134	70	118	45	12	R45310.5
27/64	10.72	0.4218	70	118	45	12	R45327/64
	11.00	0.4331	70	118	45	12	R45311.0
7/16	11.11	0.4374	70	118	45	12	R4537/16
	11.20	0.4409	70	118	45	12	R45311.2
	11.50	0.4528	70	118	45	12	R45311.5
29/64	11.51	0.4531	70	118	45	12	R45329/64
	11.80	0.4646	70	118	45	12	R45311.8
15/32	11.91	0.4687	70	118	45	12	R45315/32
	12.00	0.4724	70	118	45	12	R45312.0
	12.20	0.4803	76	124	45	14	R45312.2
31/64	12.30	0.4843	76	124	45	14	R45331/64
	12.50	0.4921	76	124	45	14	R45312.5
	12.70	0.5000	76	124	45	14	R45312.7
1/2	12.70	0.5000	76	124	45	14	R4531/2

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	
	13.00	0.5118	76	124	45	14	R45313.0		16.50	0.6496	91	143	48	18	R45316.5
33/64	13.10	0.5156	76	124	45	14	R45333/64	21/32	16.67	0.6562	91	143	48	18	R45321/32
17/32	13.49	0.5312	76	124	45	14	R45317/32		17.00	0.6693	91	143	48	18	R45317.0
	13.50	0.5315	76	124	45	14	R45313.5	43/64	17.07	0.6718	91	143	48	18	R45343/64
35/64	13.89	0.5468	76	124	45	14	R45335/64	11/16	17.46	0.6874	91	143	48	18	R45311/16
	14.00	0.5512	76	124	45	16	R45314.0		17.50	0.6890	91	143	48	18	R45317.5
	14.25	0.5610	82	133	48	16	R45314.25	45/64	17.86	0.7031	91	143	48	18	R45345/64
9/16	14.29	0.5625	82	133	48	16	R4539/16		18.00	0.7087	91	143	48	18	R45318.0
	14.50	0.5709	82	133	48	16	R45314.5	23/32	18.26	0.7187	99	143	48	20	R45323/32
37/64	14.68	0.5781	82	133	48	16	R45337/64		18.50	0.7283	99	153	50	20	R45318.5
	15.00	0.5906	82	133	48	16	R45315.0	47/64	18.65	0.7343	99	153	50	20	R45347/64
19/32	15.08	0.5937	82	133	48	16	R45319/32		19.00	0.7480	99	153	50	20	R45319.0
	15.10	0.5945	82	133	48	16	R45315.1	3/4	19.05	0.7500	99	153	50	20	R4533/4
39/64	15.48	0.6094	82	133	48	16	R45339/64		19.50	0.7677	99	153	50	20	R45319.5
	15.50	0.6102	82	133	48	16	R45315.5		20.00	0.7874	99	153	50	20	R45320.0
5/8	15.88	0.6250	82	133	48	16	R4535/8								
	16.00	0.6299	82	133	48	16	R45316.0								
41/64	16.27	0.6406	91	143	48	18	R45341/64								