

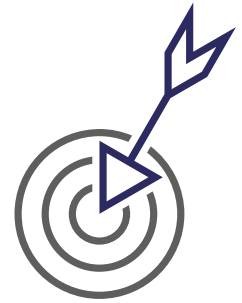


**TOOLS AND INSERTS
FOR DRILLING**

Catalogue

METRIC

Spade drill in 3xD and 5xD



Presentation:

- ▲ Ø14.0 mm to Ø30.0 mm



Your benefits:

- ▲ Easy handling
- ▲ Increase your productivity thanks to interchangeable insert
- ▲ Precise and stable insert seat, clamping via Torx Plus screw

Costs savings:

- ▲ Sustainable and economical
- ▲ Increase your productivity thanks to reducing your tool change time up to 20%
- ▲ High feed possibility up to 0.5 mm/rev in steel

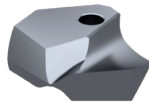


Range 3xD:

Ø 14.0 mm – Ø 30.0 mm

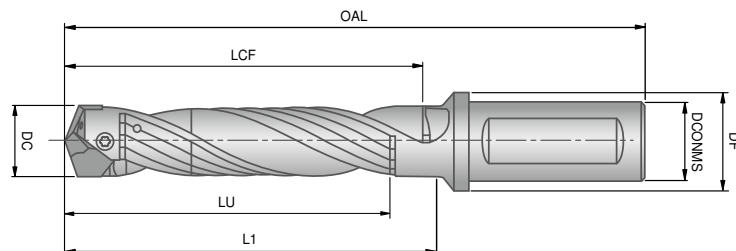


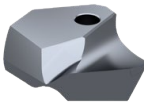
Tools	Ø [mm]	Designation	Material number
	14.0	DSCD.3D.1400.R.16.00	GD14738935
	14.5	DSCD.3D.1450.R.16.00	GD14738936
	15.0	DSCD.3D.1500.R.20.00	GD14738937
	15.5	DSCD.3D.1550.R.20.00	GD14738938
	16.0	DSCD.3D.1600.R.20.00	GD14738939
	16.5	DSCD.3D.1650.R.20.00	GD14738940
	17.0	DSCD.3D.1700.R.20.00	GD14738941
	17.5	DSCD.3D.1750.R.20.00	GD14738942
	18.0	DSCD.3D.1800.R.20.00	GD14738943
	18.5	DSCD.3D.1850.R.20.00	GD14738944
	19.0	DSCD.3D.1900.R.25.00	GD14738945
	19.5	DSCD.3D.1950.R.25.00	GD14738946
	20.0	DSCD.3D.2000.R.25.00	GD14738947
	20.5	DSCD.3D.2050.R.25.00	GD14738948
	21.0	DSCD.3D.2100.R.25.00	GD14738949
	21.5	DSCD.3D.2150.R.25.00	GD14738950

Inserts	Designation	Material number
	Spade.14,00.GTPP450	GD14968329
	Spade.14,50.GTPP450	GD14968333
	Spade.15,00.GTPP450	GD14968334
	Spade.15,50.GTPP450	GD14968336
	Spade.16,00.GTPP450	GD14968338
	Spade.16,50.GTPP450	GD14968340
	Spade.17,00.GTPP450	GD14968342
	Spade.17,50.GTPP450	GD14968343
	Spade.18,00.GTPP450	GD14968346
	Spade.18,50.GTPP450	GD14968348
	Spade.19,00.GTPP450	GD14968349
	Spade.19,50.GTPP450	GD14968351
	Spade.20,00.GTPP450	GD14968352
	Spade.20,50.GTPP450	GD14968353
	Spade.21,00.GTPP450	GD14968354
	Spade.21,50.GTPP450	GD14968355

Spare parts screws:

Spade Size Ø [mm]	Clamping screw description	Material	Key size	Recommended Torque
14,00–15,99	M2,2x13-8IP	GD13057585	T08IP	0.9 Nm
16,00–17,99	M2,5x15-8IP	GD13057586	T08-IP	1.2 Nm
18,00–21,99	M3,0x17-10IP	GD13057587	T10-IP	2.2 Nm



Tools	Ø [mm]	Designation	Material number	Inserts	Designation	Material number
	22.0	DSCD.3D.2200.R.25.00	GD14738951		Spade.22,00.CTPP450	GD14968356
	22.5	DSCD.3D.2250.R.25.00	GD14738952		Spade.22,50.CTPP450	GD14968357
	23.0	DSCD.3D.2300.R.25.00	GD14738953		Spade.23,00.CTPP450	GD14968358
	23.5	DSCD.3D.2350.R.25.00	GD14738954		Spade.23,50.CTPP450	GD14968359
	24.0	DSCD.3D.2400.R.32.00	GD14738955		Spade.24,00.CTPP450	GD14968361
	24.5	DSCD.3D.2450.R.32.00	GD14738956		Spade.24,50.CTPP450	GD14968365
	25.0	DSCD.3D.2500.R.32.00	GD14738957		Spade.25,00.CTPP450	GD14968366
	25.5	DSCD.3D.2550.R.32.00	GD14738958		Spade.25,50.CTPP450	GD14968367
	26.0	DSCD.3D.2600.R.32.00	GD14738959		Spade.26,00.CTPP450	GD14968368
	26.5	DSCD.3D.2650.R.32.00	GD14738960		Spade.26,50.CTPP450	GD14968369
	27.0	DSCD.3D.2700.R.32.00	GD14738961		Spade.27,00.CTPP450	GD14968370
	27.5	DSCD.3D.2750.R.32.00	GD14738962		Spade.27,50.CTPP450	GD14968371
	28.0	DSCD.3D.2800.R.32.00	GD14738963		Spade.28,00.CTPP450	GD14968376
	28.5	DSCD.3D.2850.R.32.00	GD14738964		Spade.28,50.CTPP450	GD14968378
	29.0	DSCD.3D.2900.R.32.00	GD14738965		Spade.29,00.CTPP450	GD14968380
				Spade.29,50.CTPP450	14968382	
				Spade.30,00.CTPP450	14968384	

Spare parts screws:

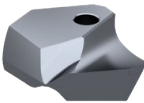
Spade Size Ø [mm]	Clamping screw description	Material	Key size	Recommended Torque
22,00–23,99	M3,5x21-10IP	GD13057588	T10-IP	3.2 Nm
24,00–25,99	M4,0x23-15IP	GD13057589	T15-IP	5.0 Nm
26,00–30,00	M4,5x25-20IP	GD13057590	T20-IP	6.0 Nm

Range 5xD:

Ø 14.0 mm – Ø 30.0 mm

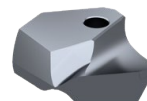
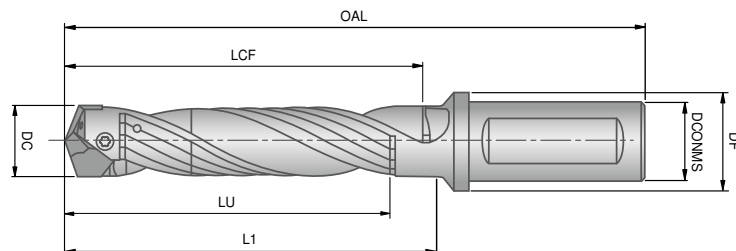


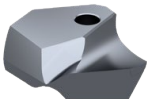
Tools	Ø [mm]	Designation	Material number
	14.0	DSCD.5D.1400.R.16.00	GD14738903
	14.5	DSCD.5D.1450.R.16.00	GD14738904
	15.0	DSCD.5D.1500.R.20.00	GD14738905
	15.5	DSCD.5D.1550.R.20.00	GD14738906
	16.0	DSCD.5D.1600.R.20.00	GD14738907
	16.5	DSCD.5D.1650.R.20.00	GD14738908
	17.0	DSCD.5D.1700.R.20.00	GD14738909
	17.5	DSCD.5D.1750.R.20.00	GD14738910
	18.0	DSCD.5D.1800.R.20.00	GD14738911
	18.5	DSCD.5D.1850.R.20.00	GD14738912
	19.0	DSCD.5D.1900.R.25.00	GD14738913
	19.5	DSCD.5D.1950.R.25.00	GD14738914
	20.0	DSCD.5D.2000.R.25.00	GD14738915
	20.5	DSCD.5D.2050.R.25.00	GD14738916
	21.0	DSCD.5D.2100.R.25.00	GD14738917
	21.5	DSCD.5D.2150.R.25.00	GD14738918

Inserts	Designation	Material number
	Spade.14,00.CTPP450	GD14968329
	Spade.14,50.CTPP450	GD14968333
	Spade.15,00.CTPP450	GD14968334
	Spade.15,50.CTPP450	GD14968336
	Spade.16,00.CTPP450	GD14968338
	Spade.16,50.CTPP450	GD14968340
	Spade.17,00.CTPP450	GD14968342
	Spade.17,50.CTPP450	GD14968343
	Spade.18,00.CTPP450	GD14968346
	Spade.18,50.CTPP450	GD14968348
	Spade.19,00.CTPP450	GD14968349
	Spade.19,50.CTPP450	GD14968351
	Spade.20,00.CTPP450	GD14968352
	Spade.20,50.CTPP450	GD14968353
	Spade.21,00.CTPP450	GD14968354
	Spade.21,50.CTPP450	GD14968355

Spare parts screws:

Spade Size Ø [mm]	Clamping screw description	Material	Key size	Recommended Torque
14,00–15,99	M2,2x13-8IP	GD13057585	T08IP	0.9 Nm
16,00–17,99	M2,5x15-8IP	GD13057586	T08-IP	1.2 Nm
18,00–21,99	M3,0x17-10IP	GD13057587	T10-IP	2.2 Nm



Tools	Ø [mm]	Designation	Material number	Inserts	Designation	Material number
	22.0	DSCD.5D.2200.R.25.00	GD14738919		Spade.22,00.GTPP450	GD14968356
	22.5	DSCD.5D.2250.R.25.00	GD14738920		Spade.22,50.GTPP450	GD14968357
	23.0	DSCD.5D.2300.R.25.00	GD14738921		Spade.23,00.GTPP450	GD14968358
	23.5	DSCD.5D.2350.R.25.00	GD14738922		Spade.23,50.GTPP450	GD14968359
	24.0	DSCD.5D.2400.R.32.00	GD14738923		Spade.24,00.GTPP450	GD14968361
	24.5	DSCD.5D.2450.R.32.00	GD14738924		Spade.24,50.GTPP450	GD14968365
	25.0	DSCD.5D.2500.R.32.00	GD14738925		Spade.25,00.GTPP450	GD14968366
	25.5	DSCD.5D.2550.R.32.00	GD14738926		Spade.25,50.GTPP450	GD14968367
	26.0	DSCD.5D.2600.R.32.00	GD14738927		Spade.26,00.GTPP450	GD14968368
	26.5	DSCD.5D.2650.R.32.00	GD14738928		Spade.26,50.GTPP450	GD14968369
	27.0	DSCD.5D.2700.R.32.00	GD14738929		Spade.27,00.GTPP450	GD14968370
	27.5	DSCD.5D.2750.R.32.00	GD14738930		Spade.27,50.GTPP450	GD14968371
	28.0	DSCD.5D.2800.R.32.00	GD14738931		Spade.28,00.GTPP450	GD14968376
	28.5	DSCD.5D.2850.R.32.00	GD14738932		Spade.28,50.GTPP450	GD14968378
	29.0	DSCD.5D.2900.R.32.00	GD14738933		Spade.29,00.GTPP450	GD14968380
	29.5-30.0	DSCD.5D.2950.R.32.00	14738934	Spade.29,50.CTPP450	14968382	
				Spade.30,00.CTPP450	14968384	

Spare parts screws:

Spade Size Ø [mm]	Clamping screw description	Material	Key size	Recommended Torque
22,00–23,99	M3,5x21-10IP	GD13057588	T10-IP	3.2 Nm
24,00–25,99	M4,0x23-15IP	GD13057589	T15-IP	5.0 Nm
26,00–30,00	M4,5x25-20IP	GD13057590	T20-IP	6.0 Nm



Technical information



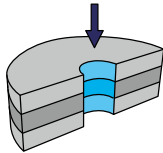
Recommended cutting speed

Material group	Strength Rm (N/mm ²)	Hardness HB	Material	Material example, material code/DIN	Geometry	GTPP450 (M/Min)			GTPK450 (M/Min)			GTPM450 (M/Min)		
						min	opt.	max	min	opt.	max	min	opt.	max
P	1.0	≤ 500	non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	_HCD	80	100	120						
	2.0	500-900	non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	_HCD	80	100	120						
	2.1	< 500	lead alloys	1.0718 (11SMnPb30)	_HCD	90	100	130						
	3.0	> 900	low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	_HCD	70	90	110						
	4.0	> 900	high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	_HCD	40	50	60						
	4.1		HSS		_HCD	40	50	60						
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, etc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	_HCD	—	—	—						
	5.1	400	titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	_HCD	—	—	—						
M	6.0	≤ 600	stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	_SCD	—	—	—				coming soon		
	6.1	< 900	stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMoTi17-12-2)	_SCD	—	—	—						
	7.0	> 900	stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	_SCD	—	—	—						
K	8.0	180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	_CCD	—	—	—						
	8.1	250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	_CCD	—	—	—						
	9.0	≤ 600	130 spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	_CCD	—	—	—						
	9.1	230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	_CCD	—	—	—				coming soon		
	10.0	> 600	250 spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	_CCD	—	—	—						
	10.1	200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	_CCD	—	—	—						
	10.2	300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	_CCD	—	—	—						

Cutting values shown are relating to the basic recommendations for cutting materials given.

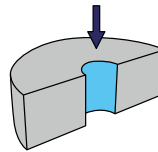
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Applications



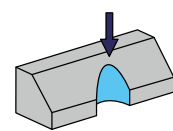
Stack drilling

When stack drilling ensure that there is either no gap or the maximum gap possible. Good work piece clamping is required.



Drilling into
solid material

Possible.



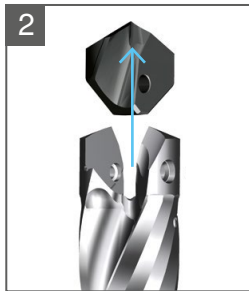
Drilling on inclined surfaces

When drilling into angled surfaces $<3^\circ$, reduce the feed by approx. 50%. For an angled drill entrance $>3^\circ$, prior spot facing is required.

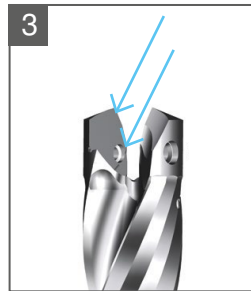
Assembly of the indexable insert



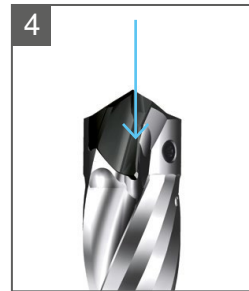
1 Loosen the clamping screw anti-clockwise using a TORX PLUS® screwdriver (screwdriver not included in the scope of supply).



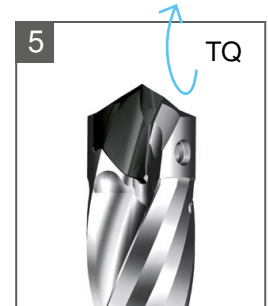
2 Remove the indexable insert from the insert seat.



3 Clean the insert seat and screw thread with compressed air.

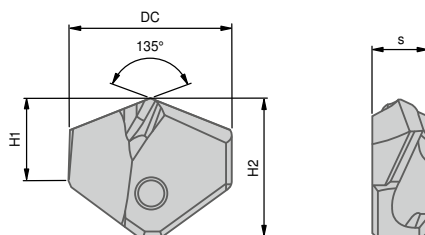


4 Insert the new indexable insert in the insert seat.



5 Insert clamping screw from correct side and tighten clockwise with the specified torque. Observe the change interval of the clamping screw!

Spade geometry



Grades and materials:

Material group	Grade
P Steel	GTPP450

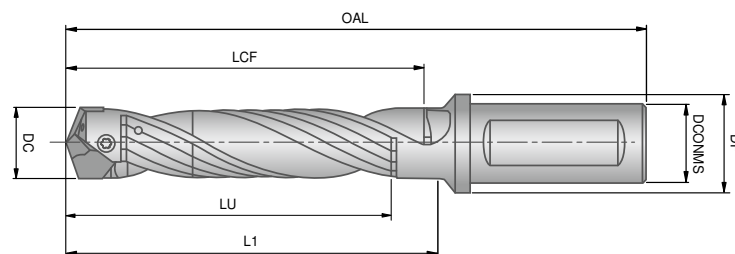
Spare parts screws:

Insert	Material	DC [mm]	H2 [mm]	s [mm]	H1 [mm]
Spade.14,00.GTPP450	GD14968329	14	12.8	5.1	7.73
Spade.14,50.GTPP450	GD14968333	14.5	13.1	5.1	7.84
Spade.15,00.GTPP450	GD14968334	15	13.4	5.1	7.95
Spade.15,50.GTPP450	GD14968336	15.5	13.7	5.1	8.05
Spade.16,00.GTPP450	GD14968338	16	14.4	5.9	9.06
Spade.16,50.GTPP450	GD14968340	16.5	14.7	5.9	9.17
Spade.17,00.GTPP450	GD14968342	17	15	5.9	9.28
Spade.17,50.GTPP450	GD14968343	17.5	15.3	5.9	9.39
Spade.18,00.GTPP450	GD14968346	18	16.3	6.6	10.19
Spade.18,50.GTPP450	GD14968348	18.5	16.6	6.6	10.3

Spare parts screws:

Insert	Material	DC [mm]	H2 [mm]	s [mm]	H1 [mm]
Spade.19,00.GTPP450	GD14968349	19	16.9	6.6	10.41
Spade.19,50.GTPP450	GD14968351	19.5	17.2	6.6	10.52
Spade.20,00.GTPP450	GD14968352	20	18.2	7.3	11.33
Spade.20,50.GTPP450	GD14968353	20.5	18.5	7.3	11.43
Spade.21,00.GTPP450	GD14968354	21	18.8	7.3	11.54
Spade.21,50.GTPP450	GD14968355	21.5	19.1	7.3	11.65
Spade.22,00.GTPP450	GD14968356	22	20.2	8	12.56
Spade.22,50.GTPP450	GD14968357	22.5	20.5	8	12.67
Spade.23,00.GTPP450	GD14968358	23	20.8	8	12.78
Spade.23,50.GTPP450	GD14968359	23.5	21.1	8	12.88
Spade.24,00.GTPP450	GD14968361	24	22.1	8.7	13.69
Spade.24,50.GTPP450	GD14968365	24.5	22.4	8.7	13.8
Spade.25,00.GTPP450	GD14968366	25	22.7	8.7	13.91
Spade.25,50.GTPP450	GD14968367	25.5	23	8.7	14.02
Spade.26,00.GTPP450	GD14968368	26	24.1	9.5	14.92
Spade.26,50.GTPP450	GD14968369	26.5	24.4	9.5	15.03
Spade.27,00.GTPP450	GD14968370	27	24.7	9.5	15.14
Spade.27,50.GTPP450	GD14968371	27.5	25	9.5	15.25
Spade.28,00.GTPP450	GD14968376	28	25.3	9.5	15.36
Spade.28,50.GTPP450	GD14968378	28.5	25.6	9.5	15.47
Spade.29,00.GTPP450	GD14968380	29	25.9	9.5	15.57
Spade.29,50.GTPP450	GD14968382	29.5	26.2	9.5	15.68
Spade.30,00.GTPP450	GD14968384	30	26.2	9.5	15.49

Spade drill geometry

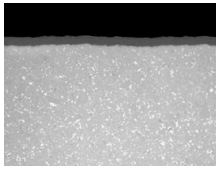


Designation	Material	DC	DCONMS	OAL	LU	LCF	DF	L1
DSCD.5D.1400.R.16.00	GD14738903	14,00-14,49	16	137.9	72.5	79.8	20	81.5
DSCD.5D.1450.R.16.00	GD14738904	14,50-14,99	16	141	75	82.5	20	84.8
DSCD.5D.1500.R.20.00	GD14738905	15,00-15,49	20	146.1	77.5	85.3	25	85.7
DSCD.5D.1550.R.20.00	GD14738906	15,50-15,99	20	149.2	80	88.0	25	89
DSCD.5D.1600.R.20.00	GD14738907	16,00-16,49	20	152.3	82.5	90.8	25	92.4
DSCD.5D.1650.R.20.00	GD14738908	16,50-16,99	20	155.4	85	93.5	25	95.7
DSCD.5D.1700.R.20.00	GD14738909	17,00-17,49	20	158.5	87.5	96.3	25	99.1
DSCD.5D.1750.R.20.00	GD14738910	17,50-17,99	20	161.6	90	99.0	25	102.4
DSCD.5D.1800.R.20.00	GD14738911	18,00-18,49	20	164.7	92.5	101.8	25	105.8
DSCD.5D.1850.R.20.00	GD14738912	18,50-18,99	20	167.8	95	104.5	25	109.1
DSCD.5D.1900.R.25.00	GD14738913	19,00-19,49	25	176.9	97.5	107.3	30	110
DSCD.5D.1950.R.25.00	GD14738914	19,50-19,99	25	180	100	110.0	30	113.3
DSCD.5D.2000.R.25.00	GD14738915	20,00-20,49	25	183.1	102.5	112.8	30	116.7
DSCD.5D.2050.R.25.00	GD14738916	20,50-20,99	25	186.2	105	115.5	30	120
DSCD.5D.2100.R.25.00	GD14738917	21,00-21,49	25	189.3	107.5	118.3	30	123.4
DSCD.5D.2150.R.25.00	GD14738918	21,50-21,99	25	192.4	110	121.0	30	126.7
DSCD.5D.2200.R.25.00	GD14738919	22,00-22,49	25	195.5	112.5	123.8	30	130.1
DSCD.5D.2250.R.25.00	GD14738920	22,50-22,99	25	198.6	115	126.5	30	133.4
DSCD.5D.2300.R.25.00	GD14738921	23,00-23,49	25	201.7	117.5	129.3	30	136.8
DSCD.5D.2350.R.25.00	GD14738922	23,50-23,99	25	204.8	120	132.0	30	140.1
DSCD.5D.2400.R.32.00	GD14738923	24,00-24,49	32	211.9	122.5	134.8	39	139
DSCD.5D.2450.R.32.00	GD14738924	24,50-24,99	32	215	125	137.5	39	142.3
DSCD.5D.2500.R.32.00	GD14738925	25,00-25,49	32	218.1	127.5	140.3	39	145.7
DSCD.5D.2550.R.32.00	GD14738926	25,50-25,99	32	221.2	130	143.0	39	149
DSCD.5D.2600.R.32.00	GD14738927	26,00-26,49	32	224.3	132.5	145.8	39	152.4

Designation	Material	DC	DCONMS	OAL	LU	LCF	DF	L1
DSCD.5D.2650.R.32.00	GD14738928	26,50-26,99	32	227.4	135	148.5	39	155.7
DSCD.5D.2700.R.32.00	GD14738929	27,00-27,49	32	230.5	137.5	151.3	39	159.1
DSCD.5D.2750.R.32.00	GD14738930	27,50-27,99	32	233.6	140	154.0	39	162.4
DSCD.5D.2800.R.32.00	GD14738931	28,00-28,49	32	236.7	142.5	156.8	39	165.8
DSCD.5D.2850.R.32.00	GD14738932	28,50-28,99	32	239.8	145	159.5	39	169.1
DSCD.5D.2900.R.32.00	GD14738933	29,00-29,49	32	242.9	147.5	162.3	39	172.5
DSCD.5D.2950.R.32.00	GD14738934	29,50-30,00	32	246	150	165.0	39	175.8
DSCD.3D.1400.R.16.00	GD14738935	14,00-14,49	16	108.9	43.5	50.8	20	52.5
DSCD.3D.1450.R.16.00	GD14738936	14,50-14,99	16	111	45	52.5	20	54.8
DSCD.3D.1500.R.20.00	GD14738937	15,00-15,49	20	115.1	46.5	54.3	25	54.7
DSCD.3D.1550.R.20.00	GD14738938	15,50-15,99	20	117.2	48	56.0	25	57
DSCD.3D.1600.R.20.00	GD14738939	16,00-16,49	20	119.3	49.5	57.8	25	59.4
DSCD.3D.1650.R.20.00	GD14738940	16,50-16,99	20	121.4	51	59.5	25	61.7
DSCD.3D.1700.R.20.00	GD14738941	17,00-17,49	20	123.5	52.5	61.3	25	64.1
DSCD.3D.1750.R.20.00	GD14738942	17,50-17,99	20	125.6	54	63.0	25	66.4
DSCD.3D.1800.R.20.00	GD14738943	18,00-18,49	20	127.7	55.5	64.8	25	68.8
DSCD.3D.1850.R.20.00	GD14738944	18,50-18,99	20	129.8	57	66.5	25	71.1
DSCD.3D.1900.R.25.00	GD14738945	19,00-19,49	25	137.9	58.5	68.3	30	71
DSCD.3D.1950.R.25.00	GD14738946	19,50-19,99	25	140	60	70.0	30	73.3
DSCD.3D.2000.R.25.00	GD14738947	20,00-20,49	25	142.1	61.5	71.8	30	75.7
DSCD.3D.2050.R.25.00	GD14738948	20,50-20,99	25	144.2	63	73.5	30	78
DSCD.3D.2100.R.25.00	GD14738949	21,00-21,49	25	146.3	64.5	75.3	30	80.4
DSCD.3D.2150.R.25.00	GD14738950	21,50-21,99	25	148.4	66	77.0	30	82.7
DSCD.3D.2200.R.25.00	GD14738951	22,00-22,49	25	150.5	67.5	78.8	30	85.1
DSCD.3D.2250.R.25.00	GD14738952	22,50-22,99	25	152.6	69	80.5	30	87.4
DSCD.3D.2300.R.25.00	GD14738953	23,00-23,49	25	154.7	70.5	82.3	30	89.8
DSCD.3D.2350.R.25.00	GD14738954	23,50-23,99	25	156.8	72	84.0	30	92.1
DSCD.3D.2400.R.32.00	GD14738955	24,00-24,49	32	162.9	73.5	85.8	39	90
DSCD.3D.2450.R.32.00	GD14738956	24,50-24,99	32	165	75	87.5	39	92.3
DSCD.3D.2500.R.32.00	GD14738957	25,00-25,49	32	167.1	76.5	89.3	39	94.7
DSCD.3D.2550.R.32.00	GD14738958	25,50-25,99	32	169.2	78	91.0	39	97
DSCD.3D.2600.R.32.00	GD14738959	26,00-26,49	32	171.3	79.5	92.8	39	99.4
DSCD.3D.2650.R.32.00	GD14738960	26,50-26,99	32	173.4	81	94.5	39	101.7
DSCD.3D.2700.R.32.00	GD14738961	27,00-27,49	32	175.5	82.5	96.3	39	104.1
DSCD.3D.2750.R.32.00	GD14738962	27,50-27,99	32	177.6	84	98.0	39	106.4
DSCD.3D.2800.R.32.00	GD14738963	28,00-28,49	32	179.7	85.5	99.8	39	108.8
DSCD.3D.2850.R.32.00	GD14738964	28,50-28,99	32	181.8	87	101.5	39	111.1
DSCD.3D.2900.R.32.00	GD14738965	29,00-29,49	32	183.9	88.5	103.3	39	113.5
DSCD.3D.2950.R.32.00	GD14738966	29,50-30,00	32	186	90	105.0	39	115.8

Grade overview

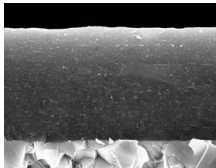


GTPP425**HC-P25 I HC-M25****Specification:**

Composition: Co 9.0%; mixed carbides 4.0%; WC balance | Grain size: fine/medium | Hardness: HV₃₀ 1510 | Coating specification: PVD TiAlN/TiN

Recommended application:

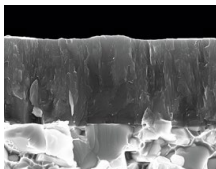
Particularly suitable for the machining of steels.

GTPP440**HC-M40 I HC-P40****Specification:**

Composition: Co 9.0%; mixed carbides 0.7%; others 0.7%; WC balance | Grain size: submicron | Hardness: HV₃₀ 1590 | Coating specification: PVD TiAlN

Recommended application:

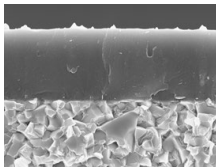
The first choice for the machining of austenitic steels as well as heat-resistant alloys.

GTPK415**HC-K15****Specification:**

Composition: Co 6.0%; WC balance; mixed carbides 2.0% ; Grain size: fine | Hardness: HV₃₀ 1630

Recommended application:

Suitable for cast iron machining.

GTPP450**HC-P40****Specification:**

Composition: Co 11.0%; others 0.8%; WC balance | Grain size: submicron | Hardness: HV₃₀ 1500 | Coating specification: PVD TiAlXYN

Recommended application:

Drill grade for steel and stainless steel with a tough and wear resistant substrate combined with a heat resistant PVD coating.

GALTONA designation system: Insert

Insert shape

A	85°
B	82°
K	55°
H	120°
L	90°
O	135°
P	108°
C	80°
D	55°
E	75°
M	86°
V	35°
R	
S	90°
T	60°
W	80°
X	Special shapes
Z	Special shapes

Clearance angle

	α
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Special version

Tolerances

	d [± mm]	m [± mm]	s [± mm]		
A	0.025	0.005	0.025	•	•
C	0.025	0.013	0.025	•	•
E	0.025	0.025	0.025	•	•
F	0.013	0.005	0.025	•	•
G	0.025	0.025	0.13	•	•
H	0.013	0.013	0.025	•	•
J	0.05	0.005	0.025	•	
K	0.08	0.005	0.025	•	
L	0.10	0.005	0.025	•	
M	0.05	0.013	0.025	•	
N	0.08	0.013	0.02	•	
O	0.10	0.013	0.02	•	
P	0.05	0.08	0.13	•	
Q	0.08	0.13	0.13	•	
R	0.10	0.15	0.13	•	
S	0.05	0.08	0.025	•	
T	0.08	0.13	0.025	•	
U	0.10	0.15	0.025	•	
V	0.08	0.13	0.13	•	
W	0.13	0.20	0.13	•	
X	0.18	0.27	0.13	•	

Insert thickness

Index	s [mm]
02	2.1
T2	2.5
03	3.0
T3	3.5
04	4.0
05	5.0

S O L T - 05 02 08 - CCD

Form of top surface

A	
F	
G	
M	
N	
Q	
R	
T	
U	
W	
X	Special shapes

Insert size

Type	Index	[mm]
S	05	5.0
	06	5.8
	07	6.9
	08	8.4
	10	10.3
	11.1	11.6
	13	13.3

Corner radius

Index	r [mm]
05	0.4
06	0.6
07	0.8
08	0.8
10	0.8
12	0.8
13	0.8

Chipformer

HCD	Steel machining
SCD	Stainless Steel machining
CCD	Cast Iron machining

Note: Not applicable for spade drill

GALTONA

Manufacturer

1	Turning
2	Milling
3	Parting and grooving
4	Drilling
5	Threading
6	Others
7	Universal grade for a variety of applications

Main application
(machining method)

For example:

05
10
15
25
35 ISO P35
.
.

Application range

-

GC

P

K

4

15

Cutting material

- W Uncoated carbide
- C CVD coated carbide
- P PVD coated carbide
- T Uncoated cermet
- E Coated cermet
- N Uncoated silicon nitride
- M Coated silicon nitride
- S Mixed ceramic
- K Whisker ceramic
- I Sialon
- D PCD
- B CBN
- L CBN coated
- H Sintered HSS

Main application
(material)

- Variant 2: ISO letter
- P Steel
 - M Stainless steel
 - K Cast iron
 - N Light and non ferrous metals, non metals
 - S Heat resistant alloys, titanium
 - H Hard materials
 - X Universal grade for a variety of applications

GALTONA Designation system: Tool holder

C = Cylindrical

Shank Style

3
4
5

L/D

ID	C	D	.	5D	.	2950	.	
----	---	---	---	----	---	------	---	--

Indexable drill

Application

D = Drilling

Diameter



Shank diameter

	R	.	25	.	10
--	---	---	----	---	----

Cutting direction

R = Right

Insert size



Richard Lloyd BHX Limited
Felspar Road
Amington Industrial Estate
Tamworth
B77 4DP

**DESIGN AND
MANUFACTURE OF QUALITY
CUTTING TOOLS**

Galtona[®]

+44 121 769 1787

info@galtona.com
www.galtona.com