



GUN DRILLS

CATALOG



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GUN DRILLS

GUN DRILLS



SINGLE AND TWIN FLUTED GUN DRILLS

RANGE MAX. Ø4,00 TO 32mm
 MAX. TOTAL LENGTH 3000mm

GUN DRILLS



PALBIT

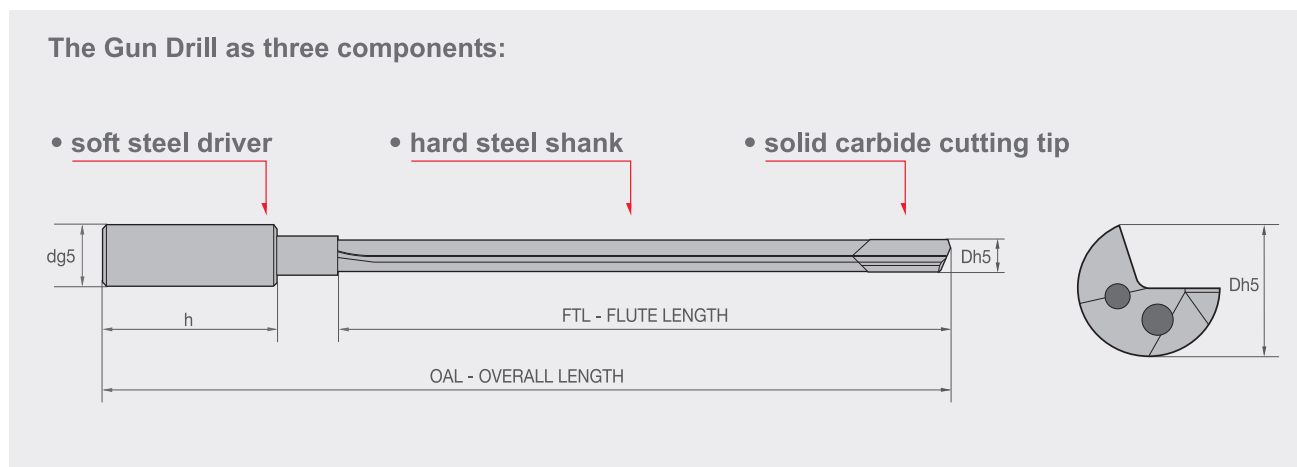
Palbit is reference brand since 1952 as a hardmetal producer.
 We produce and repair the gun drills in a reliable process to fulfill the most demanding needs.
 As a certificated company according to the ISO9001:2008 we are able to guarantee the efficiency during the production chain.

APPLICATION PROCESS

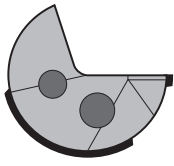
The Gun Drills are applied in the execution of deep horizontal and vertical holes. Its V channel configuration, allows two cutting edges that facilitates the chip removal during the drilling process.
 Due to the characteristic design of its guides, this drill is capable to do deep holes with good linear and with nice finish.

SINGLE FLUTED GUN DRILLS

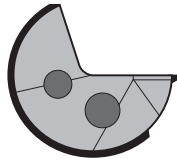
* For drivers design - see page 11



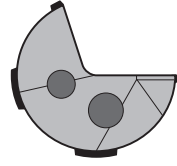
COUNTOUR TYPES - Cutting edge configuration



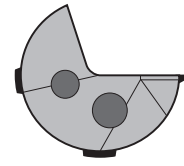
ST - STANDARD



CI - CAST IRON

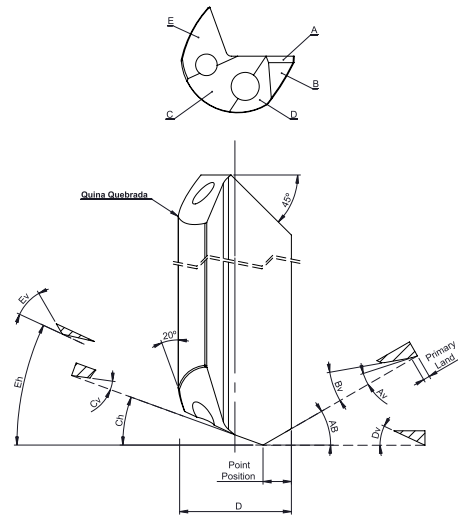
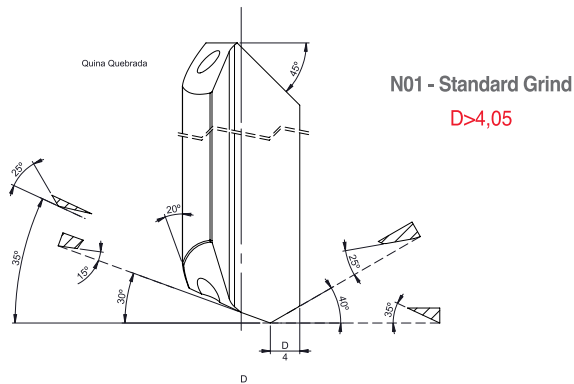
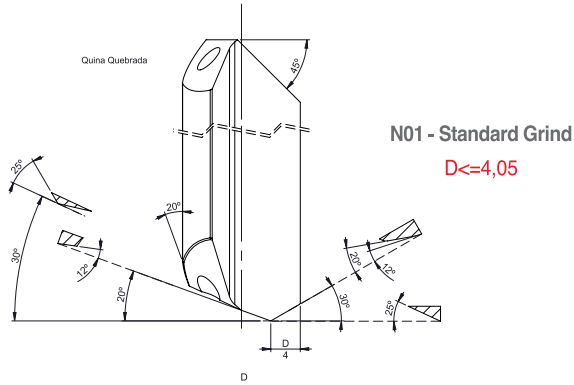


GB - GUN BORING



CS - CRANKSHAFT
ANGULAR HOLES
ALUMINIUM

NOSE GRINDS TYPES - Point configuration



DRILL DIA.	PRIMARY LAND	CHAMFER AT 20°
Ø 3,0 to 12,0	0,4 – 0,6	0,4 – 0,6
Ø 12,0 to 25,0	0,6 – 0,8	0,6 – 0,8
Ø 25,0 to 32,0	0,8 – 1,2	0,8 – 1,2

FACET DESCRIPTION		N02 ALUMINIUM		N03 CAST IRON		N05 FLAT BOTTOM	
		HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
A	OUTER PRIMARY	+15°	+15°	+40°	+12°	+1°	+12°
B	OUTER SECONDARY	+14,5°	+20°	+39,5°	+25°	+1°	+20°
C	INNER RELIEF	-20°	+15°	-20°	+12°	-	-
D	FRONT CLEARANCE	0°	+25°	0°	+35°	-	-
E	OIL DUB-OFF	-25°	-15°	-25°	-12°	25°	-12°
POINT POSITION		D/4		D/4		D/2	

FACET DESCRIPTION		N06 SUPER ALLOYS		N08 WOOD GRIND		NG90 MALLEABLE MATL	
		HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
A	OUTER PRIMARY	+42°	+14°	+30°	+20°	+20°	+20°
B	OUTER SECONDARY	+41,5°	+25°	-	-	-	-
C	INNER RELIEF	-17°	+14°	-20°	+20°	-20°	+20°
D	FRONT CLEARANCE	0°	+30°	0°	+30°	0°	+25°
E	OIL DUB-OFF	-22°	-15°	-25°	-15°	-25°	-15°
POINT POSITION		D/5		D/3,5		D/3,5	

SINGLE FLUTED GUN DRILLS - Ø 25 DRIVER

GUN DRILLS

ORDER CODE	REF.	STOCK	ORDER CODE	REF.	STOCK
214016300	GDM-E1-D06.00-L0400-ST-P1-N01-PH0705	⊗	214008600	GDM-E1-D15.00-L0400-ST-P1-N01-PH0705	⊗
214016400	GDM-E1-D06.00-L0600-ST-P1-N01-PH0705	⊗	214005900	GDM-E1-D15.00-L0600-ST-P1-N01-PH0705	⊗
214016500	GDM-E1-D06.00-L0800-ST-P1-N01-PH0705	⊗	214003600	GDM-E1-D15.00-L0800-ST-P1-N01-PH0705	⊗
214016600	GDM-E1-D06.00-L1000-ST-P1-N01-PH0705	⊗	214006000	GDM-E1-D15.00-L1000-ST-P1-N01-PH0705	⊗
214016700	GDM-E1-D06.00-L1200-ST-P1-N01-PH0705	⊗	214003700	GDM-E1-D15.00-L1200-ST-P1-N01-PH0705	⊗
214076200	GDM-E1-D06.00-L1500-ST-P1-N01-PH0705	○	214008700	GDM-E1-D15.00-L1500-ST-P1-N01-PH0705	⊗
214000200	GDM-E1-D07.00-L0400-ST-P1-N01-PH0705	⊗	214003800	GDM-E1-D16.00-L0400-ST-P1-N01-PH0705	⊗
214000300	GDM-E1-D07.00-L0600-ST-P1-N01-PH0705	⊗	214006100	GDM-E1-D16.00-L0600-ST-P1-N01-PH0705	⊗
214000400	GDM-E1-D07.00-L0800-ST-P1-N01-PH0705	⊗	214003900	GDM-E1-D16.00-L0800-ST-P1-N01-PH0705	⊗
214006700	GDM-E1-D07.00-L1000-ST-P1-N01-PH0705	⊗	214006200	GDM-E1-D16.00-L1000-ST-P1-N01-PH0705	⊗
214006800	GDM-E1-D07.00-L1200-ST-P1-N01-PH0705	○	214004000	GDM-E1-D16.00-L1200-ST-P1-N01-PH0705	⊗
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214000600	GDM-E1-D08.00-L0400-ST-P1-N01-PH0705	⊗	214009000	GDM-E1-D17.00-L0400-ST-P1-N01-PH0705	⊗
214000700	GDM-E1-D08.00-L0600-ST-P1-N01-PH0705	⊗	214004200	GDM-E1-D17.00-L0600-ST-P1-N01-PH0705	⊗
214000800	GDM-E1-D08.00-L0800-ST-P1-N01-PH0705	⊗	214009100	GDM-E1-D17.00-L0800-ST-P1-N01-PH0705	⊗
214007000	GDM-E1-D08.00-L1000-ST-P1-N01-PH0705	⊗	214004300	GDM-E1-D17.00-L1000-ST-P1-N01-PH0705	⊗
214007100	GDM-E1-D08.00-L1200-ST-P1-N01-PH0705	⊗	214009200	GDM-E1-D17.00-L1200-ST-P1-N01-PH0705	⊗
214007200	GDM-E1-D08.00-L1500-ST-P1-N01-PH0705	⊗	214009300	GDM-E1-D17.00-L1500-ST-P1-N01-PH0705	○
214000900	GDM-E1-D09.00-L0400-ST-P1-N01-PH0705	⊗	214006500	GDM-E1-D18.00-L0400-ST-P1-N01-PH0705	⊗
214001000	GDM-E1-D09.00-L0600-ST-P1-N01-PH0705	⊗	214009400	GDM-E1-D18.00-L0600-ST-P1-N01-PH0705	⊗
214001100	GDM-E1-D09.00-L0800-ST-P1-N01-PH0705	⊗	214009500	GDM-E1-D18.00-L0800-ST-P1-N01-PH0705	⊗
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214007400	GDM-E1-D09.00-L1200-ST-P1-N01-PH0705	⊗	214009700	GDM-E1-D18.00-L1200-ST-P1-N01-PH0705	○
214007500	GDM-E1-D09.00-L1500-ST-P1-N01-PH0705	○	214009800	GDM-E1-D18.00-L1500-ST-P1-N01-PH0705	○
214001400	GDM-E1-D10.00-L0400-ST-P1-N01-PH0705	⊗	214010000	GDM-E1-D19.00-L0400-ST-P1-N01-PH0705	⊗
214001500	GDM-E1-D10.00-L0600-ST-P1-N01-PH0705	⊗	214004400	GDM-E1-D19.00-L0600-ST-P1-N01-PH0705	⊗
214001600	GDM-E1-D10.00-L0800-ST-P1-N01-PH0705	⊗	214010100	GDM-E1-D19.00-L0800-ST-P1-N01-PH0705	⊗
214001700	GDM-E1-D10.00-L1000-ST-P1-N01-PH0705	⊗	214004500	GDM-E1-D19.00-L1000-ST-P1-N01-PH0705	⊗
214001800	GDM-E1-D10.00-L1200-ST-P1-N01-PH0705	⊗	214010200	GDM-E1-D19.00-L1200-ST-P1-N01-PH0705	⊗
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214001900	GDM-E1-D11.00-L0400-ST-P1-N01-PH0705	⊗	214010500	GDM-E1-D20.00-L0400-ST-P1-N01-PH0705	⊗
214002000	GDM-E1-D11.00-L0600-ST-P1-N01-PH0705	⊗	214004600	GDM-E1-D20.00-L0600-ST-P1-N01-PH0705	⊗
214002100	GDM-E1-D11.00-L0800-ST-P1-N01-PH0705	⊗	214010600	GDM-E1-D20.00-L0800-ST-P1-N01-PH0705	⊗
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214002300	GDM-E1-D12.00-L0400-ST-P1-N01-PH0705	⊗	214017700	GDM-E1-D21.00-L0400-ST-P1-N01-PH0705	⊗
214002400	GDM-E1-D12.00-L0600-ST-P1-N01-PH0705	⊗	214004800	GDM-E1-D21.00-L0600-ST-P1-N01-PH0705	⊗
214002500	GDM-E1-D12.00-L0800-ST-P1-N01-PH0705	⊗	214010800	GDM-E1-D21.00-L0800-ST-P1-N01-PH0705	⊗
214002600	GDM-E1-D12.00-L1000-ST-P1-N01-PH0705	⊗	214004900	GDM-E1-D21.00-L1000-ST-P1-N01-PH0705	⊗
214002700	GDM-E1-D12.00-L1200-ST-P1-N01-PH0705	⊗	214010900	GDM-E1-D21.00-L1200-ST-P1-N01-PH0705	⊗
214002800	GDM-E1-D12.00-L1500-ST-P1-N01-PH0705	⊗	214011000	GDM-E1-D21.00-L1500-ST-P1-N01-PH0705	○
214002900	GDM-E1-D13.00-L0400-ST-P1-N01-PH0705	⊗	214017800	GDM-E1-D22.00-L0400-ST-P1-N01-PH0705	⊗
214008000	GDM-E1-D13.00-L0600-ST-P1-N01-PH0705	⊗	214011100	GDM-E1-D22.00-L0600-ST-P1-N01-PH0705	⊗
214003000	GDM-E1-D13.00-L0800-ST-P1-N01-PH0705	⊗	214005000	GDM-E1-D22.00-L0800-ST-P1-N01-PH0705	⊗
214008100	GDM-E1-D13.00-L1000-ST-P1-N01-PH0705	⊗	214011200	GDM-E1-D22.00-L1000-ST-P1-N01-PH0705	⊗
214003100	GDM-E1-D13.00-L1200-ST-P1-N01-PH0705	⊗	214011300	GDM-E1-D22.00-L1200-ST-P1-N01-PH0705	⊗
214008200	GDM-E1-D13.00-L1500-ST-P1-N01-PH0705	○	214011400	GDM-E1-D22.00-L1500-ST-P1-N01-PH0705	○
214003200	GDM-E1-D14.00-L0400-ST-P1-N01-PH0705	⊗	214017900	GDM-E1-D23.00-L0400-ST-P1-N01-PH0705	⊗
214005800	GDM-E1-D14.00-L0600-ST-P1-N01-PH0705	⊗	214011500	GDM-E1-D23.00-L0600-ST-P1-N01-PH0705	⊗
214003300	GDM-E1-D14.00-L0800-ST-P1-N01-PH0705	⊗	214005100	GDM-E1-D23.00-L0800-ST-P1-N01-PH0705	⊗
214008400	GDM-E1-D14.00-L1000-ST-P1-N01-PH0705	⊗	214011600	GDM-E1-D23.00-L1000-ST-P1-N01-PH0705	⊗
214003400	GDM-E1-D14.00-L1200-ST-P1-N01-PH0705	⊗	214011700	GDM-E1-D23.00-L1200-ST-P1-N01-PH0705	⊗
214008500	GDM-E1-D14.00-L1500-ST-P1-N01-PH0705	○	214011800	GDM-E1-D23.00-L1500-ST-P1-N01-PH0705	○

⊗ Stock itens / Itens de stock ○ Available under request / Disponibilidade sob consulta / Disponible bajo consulta

SINGLE FLUTED GUN DRILLS - Ø 25 DRIVER

ORDER CODE	REF.	STOCK
214018000	GDM-E1-D24.00-L0400-ST-P1-N01-PH0705	⊗
214011900	GDM-E1-D24.00-L0600-ST-P1-N01-PH0705	⊗
214012000	GDM-E1-D24.00-L0800-ST-P1-N01-PH0705	⊗
214012100	GDM-E1-D24.00-L1000-ST-P1-N01-PH0705	⊗
214012200	GDM-E1-D24.00-L1200-ST-P1-N01-PH0705	⊗
214012300	GDM-E1-D24.00-L1500-ST-P1-N01-PH0705	○
214018800	GDM-E1-D25.00-L0400-ST-P1-N01-PH0705	⊗
214012400	GDM-E1-D25.00-L0600-ST-P1-N01-PH0705	⊗
214005200	GDM-E1-D25.00-L0800-ST-P1-N01-PH0705	⊗
214012500	GDM-E1-D25.00-L1000-ST-P1-N01-PH0705	⊗
214012600	GDM-E1-D25.00-L1200-ST-P1-N01-PH0705	⊗
214012700	GDM-E1-D25.00-L1500-ST-P1-N01-PH0705	○
214018100	GDM-E1-D26.00-L0400-ST-P1-N01-PH0705	⊗
214012800	GDM-E1-D26.00-L0600-ST-P1-N01-PH0705	⊗
214005300	GDM-E1-D26.00-L0800-ST-P1-N01-PH0705	⊗
214012900	GDM-E1-D26.00-L1000-ST-P1-N01-PH0705	⊗
214013000	GDM-E1-D26.00-L1200-ST-P1-N01-PH0705	○
214013100	GDM-E1-D26.00-L1500-ST-P1-N01-PH0705	○
214018200	GDM-E1-D27.00-L0400-ST-P1-N01-PH0705	⊗
214013200	GDM-E1-D27.00-L0600-ST-P1-N01-PH0705	⊗
214013300	GDM-E1-D27.00-L0800-ST-P1-N01-PH0705	⊗
214013400	GDM-E1-D27.00-L1000-ST-P1-N01-PH0705	⊗
214013500	GDM-E1-D27.00-L1200-ST-P1-N01-PH0705	⊗
214013600	GDM-E1-D27.00-L1500-ST-P1-N01-PH0705	○
214018300	GDM-E1-D28.00-L0400-ST-P1-N01-PH0705	⊗
214005400	GDM-E1-D28.00-L0600-ST-P1-N01-PH0705	⊗
214013700	GDM-E1-D28.00-L0800-ST-P1-N01-PH0705	⊗
214013800	GDM-E1-D28.00-L1000-ST-P1-N01-PH0705	⊗
214013900	GDM-E1-D28.00-L1200-ST-P1-N01-PH0705	⊗
214014000	GDM-E1-D28.00-L1500-ST-P1-N01-PH0705	○
214018400	GDM-E1-D29.00-L0400-ST-P1-N01-PH0705	⊗
214014100	GDM-E1-D29.00-L0600-ST-P1-N01-PH0705	⊗
214014200	GDM-E1-D29.00-L0800-ST-P1-N01-PH0705	⊗
214014300	GDM-E1-D29.00-L1000-ST-P1-N01-PH0705	⊗
214014400	GDM-E1-D29.00-L1200-ST-P1-N01-PH0705	⊗
214014500	GDM-E1-D29.00-L1500-ST-P1-N01-PH0705	○
214018500	GDM-E1-D30.00-L0400-ST-P1-N01-PH0705	⊗
214014600	GDM-E1-D30.00-L0600-ST-P1-N01-PH0705	⊗
214014700	GDM-E1-D30.00-L0800-ST-P1-N01-PH0705	⊗
214014800	GDM-E1-D30.00-L1000-ST-P1-N01-PH0705	⊗
214014900	GDM-E1-D30.00-L1200-ST-P1-N01-PH0705	⊗
214015000	GDM-E1-D30.00-L1500-ST-P1-N01-PH0705	○
214018600	GDM-E1-D31.00-L0400-ST-P1-N01-PH0705	⊗
214015100	GDM-E1-D31.00-L0600-ST-P1-N01-PH0705	⊗
214015200	GDM-E1-D31.00-L0800-ST-P1-N01-PH0705	⊗
214015300	GDM-E1-D31.00-L1000-ST-P1-N01-PH0705	⊗
214015400	GDM-E1-D31.00-L1200-ST-P1-N01-PH0705	⊗
214015500	GDM-E1-D31.00-L1500-ST-P1-N01-PH0705	○
214018700	GDM-E1-D32.00-L0400-ST-P1-N01-PH0705	⊗
214015600	GDM-E1-D32.00-L0600-ST-P1-N01-PH0705	⊗
214015700	GDM-E1-D32.00-L0800-ST-P1-N01-PH0705	⊗
214016100	GDM-E1-D32.00-L1000-ST-P1-N01-PH0705	⊗
214015800	GDM-E1-D32.00-L1200-ST-P1-N01-PH0705	⊗
214015900	GDM-E1-D32.00-L1500-ST-P1-N01-PH0705	○

⊗ Stock items / Itens de stock ○ Available under request / Disponibilidade sob consulta / Disponible bajo consulta

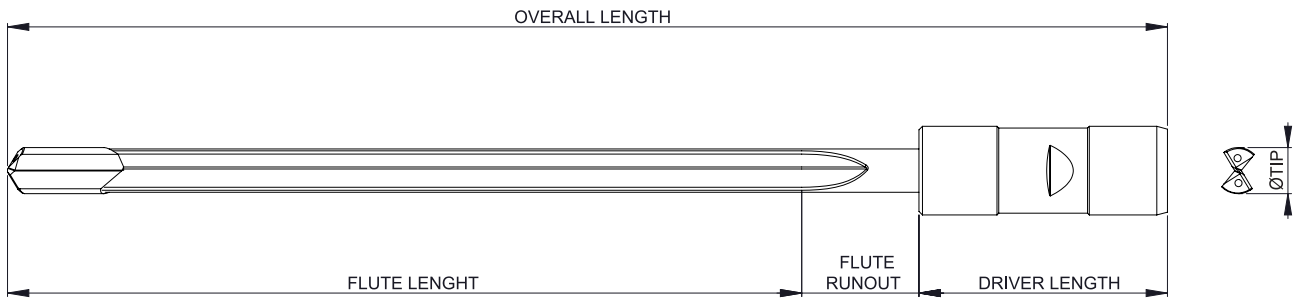
SINGLE FLUTED GUN DRILLS - Ø 19,05 DRIVER

ORDER CODE	REF.	STOCK
214021000	GDM-E2-D04.00-L0200-ST-P1-N01-PH0705	○
214026200	GDM-E2-D04.00-L0300-ST-P1-N01-PH0705	○
214187200	GDM-E2-D04.00-L0400-ST-P1-N01-PH0705	○
214076400	GDM-E2-D04.50-L0200-ST-P1-N01-PH0705	○
214076500	GDM-E2-D04.50-L0300-ST-P1-N01-PH0705	○
214076600	GDM-E2-D04.50-L0400-ST-P1-N01-PH0705	○
214187700	GDM-E2-D05.00-L0200-ST-P1-N01-PH0705	○
214151400	GDM-E2-D05.00-L0300-ST-P1-N01-PH0705	○
214151500	GDM-E2-D05.00-L0400-ST-P1-N01-PH0705	○
214076700	GDM-E2-D05.50-L0200-ST-P1-N01-PH0705	○
214076800	GDM-E2-D05.50-L0300-ST-P1-N01-PH0705	○
214076900	GDM-E2-D05.50-L0400-ST-P1-N01-PH0705	○
214077000	GDM-E2-D06.00-L0200-ST-P1-N01-PH0705	○
214077100	GDM-E2-D06.00-L0300-ST-P1-N01-PH0705	○
214077200	GDM-E2-D06.00-L0400-ST-P1-N01-PH0705	○
214077300	GDM-E2-D06.50-L0200-ST-P1-N01-PH0705	○
214077400	GDM-E2-D06.50-L0300-ST-P1-N01-PH0705	○
214077500	GDM-E2-D06.50-L0400-ST-P1-N01-PH0705	○
214077600	GDM-E2-D07.00-L0200-ST-P1-N01-PH0705	○
214077700	GDM-E2-D07.00-L0300-ST-P1-N01-PH0705	○
214077800	GDM-E2-D07.00-L0400-ST-P1-N01-PH0705	○
214077900	GDM-E2-D07.50-L0200-ST-P1-N01-PH0705	○
214078000	GDM-E2-D07.50-L0300-ST-P1-N01-PH0705	○
214078100	GDM-E2-D07.50-L0400-ST-P1-N01-PH0705	○
214078200	GDM-E2-D08.00-L0200-ST-P1-N01-PH0705	○
214078300	GDM-E2-D08.00-L0300-ST-P1-N01-PH0705	○
214078400	GDM-E2-D08.00-L0400-ST-P1-N01-PH0705	○
214078500	GDM-E2-D08.50-L0200-ST-P1-N01-PH0705	○
214078600	GDM-E2-D08.50-L0300-ST-P1-N01-PH0705	○
214078700	GDM-E2-D08.50-L0400-ST-P1-N01-PH0705	○
214187800	GDM-E2-D09.00-L0200-ST-P1-N01-PH0705	○
214187900	GDM-E2-D09.00-L0300-ST-P1-N01-PH0705	○
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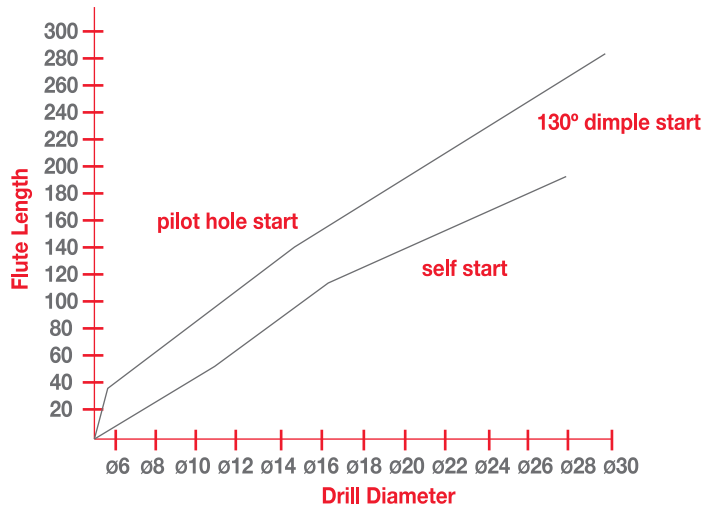
TWIN FLUTED GUN DRILLS

* For drivers design - see page 11

GUN DRILLS

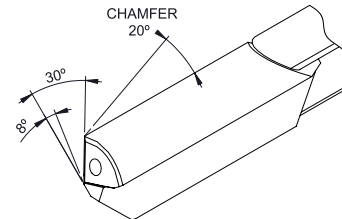
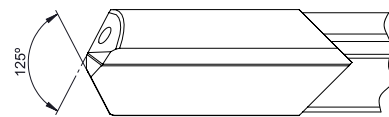


HOLE STARTING INSTRUCTIONS

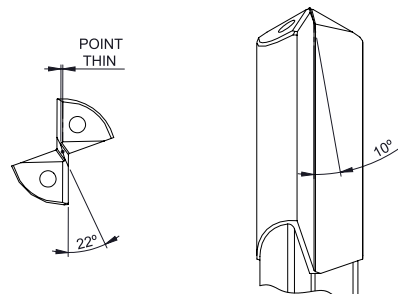


POINT GEOMETRY

POINT THIN		
DRILL DIA.	MIN	MAX
5.00 - 6.20	0.24	0.32
6.20 - 8.20	0.30	0.42
8.20 - 10.2	0.32	0.50
10.2 - 12.2	0.36	0.67
12.2 - 15.2	0.40	0.78
15.2 - 18.2	0.50	0.83
18.2 - 21.2	0.60	0.97
21.2 - 25.2	0.70	1.10
25.2 - 28.2	0.80	1.20
28.2 - 30.2	0.90	1.25



DRILL DIA.	CHAMFER AT 20°
5 - 10	0.4 - 0.6
10 - 20	0.6 - 0.8
20 - 30	0.8 - 1.2



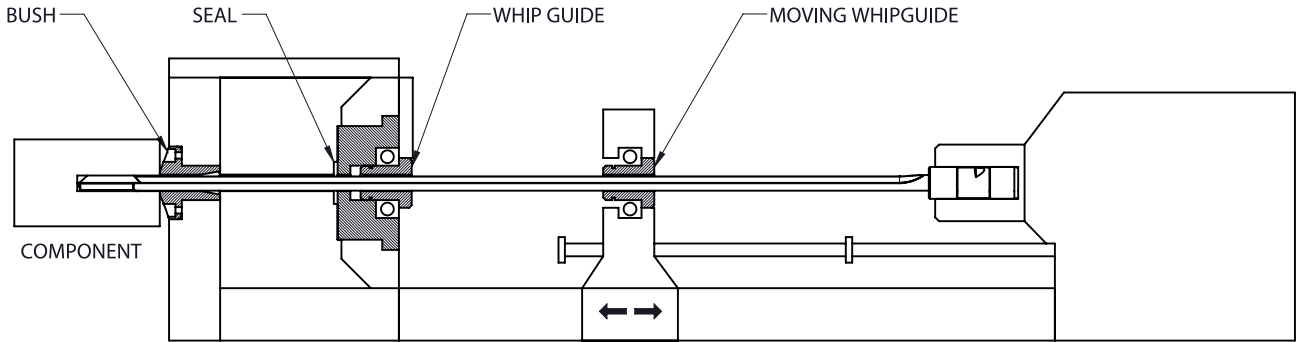
TWIN FLUTED GUN DRILLS - Ø 19,05 DRIVER

ORDER CODE	REF.	STOCK
214017200	SFM-E2-D05.00-L0200-ST-P1-N01-PH0705	○
214028000	SFM-E2-D05.00-L0300-ST-P1-N01-PH0705	○
214017300	SFM-E2-D05.00-L0400-ST-P1-N01-PH0705	○
214074300	SFM-E2-D05.50-L0200-ST-P1-N01-PH0705	○
214074200	SFM-E2-D05.50-L0300-ST-P1-N01-PH0705	○
214074100	SFM-E2-D05.50-L0400-ST-P1-N01-PH0705	○
214076300	SFM-E2-D06.00-L0200-ST-P1-N01-PH0705	○
214073900	SFM-E2-D06.00-L0300-ST-P1-N01-PH0705	○
214074000	SFM-E2-D06.00-L0400-ST-P1-N01-PH0705	○
214020300	SFM-E2-D06.50-L0200-ST-P1-N01-PH0705	○
214073800	SFM-E2-D06.50-L0300-ST-P1-N01-PH0705	○
214073700	SFM-E2-D06.50-L0400-ST-P1-N01-PH0705	○
214076100	SFM-E2-D07.00-L0200-ST-P1-N01-PH0705	○
214076000	SFM-E2-D07.00-L0300-ST-P1-N01-PH0705	○
214017400	SFM-E2-D07.00-L0400-ST-P1-N01-PH0705	○
214020400	SFM-E2-D07.50-L0200-ST-P1-N01-PH0705	○
214073600	SFM-E2-D07.50-L0300-ST-P1-N01-PH0705	○
214073500	SFM-E2-D07.50-L0400-ST-P1-N01-PH0705	○
214073400	SFM-E2-D08.00-L0200-ST-P1-N01-PH0705	○
214073300	SFM-E2-D08.00-L0300-ST-P1-N01-PH0705	○
214032100	SFM-E2-D08.00-L0400-ST-P1-N01-PH0705	○
214073200	SFM-E2-D08.50-L0200-ST-P1-N01-PH0705	○
214073100	SFM-E2-D08.50-L0300-ST-P1-N01-PH0705	○
214073000	SFM-E2-D08.50-L0400-ST-P1-N01-PH0705	○
214072900	SFM-E2-D09.00-L0200-ST-P1-N01-PH0705	○
214072800	SFM-E2-D09.00-L0300-ST-P1-N01-PH0705	○
214072700	SFM-E2-D09.00-L0400-ST-P1-N01-PH0705	○
214072600	SFM-E2-D09.50-L0200-ST-P1-N01-PH0705	○
214072500	SFM-E2-D09.50-L0300-ST-P1-N01-PH0705	○
214072400	SFM-E2-D09.50-L0400-ST-P1-N01-PH0705	○
214075900	SFM-E2-D10.00-L0200-ST-P1-N01-PH0705	○
214075800	SFM-E2-D10.00-L0300-ST-P1-N01-PH0705	○
214075700	SFM-E2-D10.00-L0400-ST-P1-N01-PH0705	○

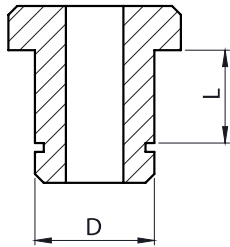
⊗ Stock items / Itens de stock ○ Available under request / Disponibilidade sob consulta / Disponible bajo consulta

GUN DRILLS ACESSORIES

GUN DRILLS



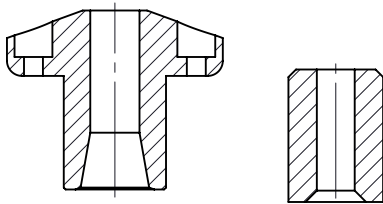
POLYURETHANE WHIPGUIDES



D	L
17.0	10
30.0	13

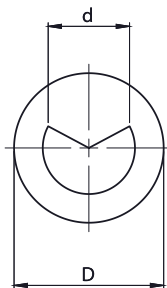
When ordering please specify the tip diameter of the drill.

START BUSHES



Manufactured to order.

CHIP DEFLECTORS



TYPE	D	d RANGE
A	19.12	3,17 to 6,34
B	24.40	6,35 to 9,51
C	31.75	9,52 to 15,86
D	37.72	15,87 to 19,04
E	44.25	19,05 to 25,39
F	50.85	25,40 to 31,74

When ordering please specify the tip diameter of the drill. The d range has a size to suit each diameter of tube.

Palbit also manufacture special gun drilling spindles, tailstocks and rotation work heads.

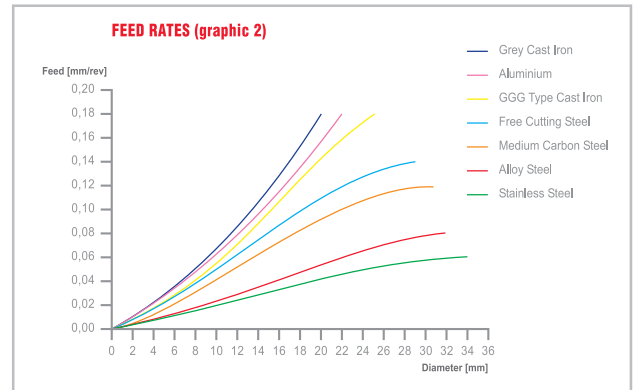
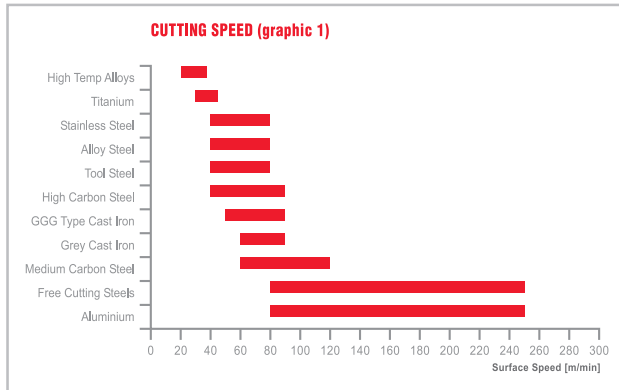
TECHNICAL DATA

TECHNICAL DATA

CUTTING PARAMETERS

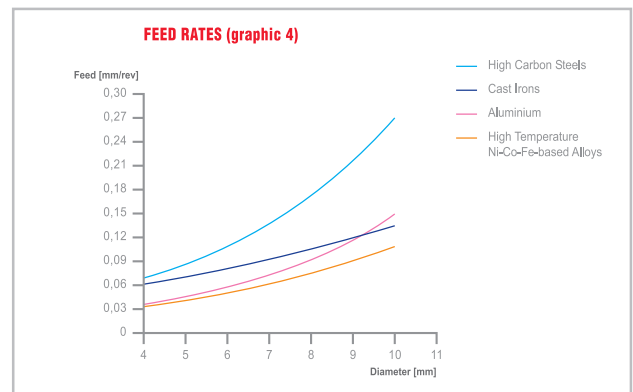
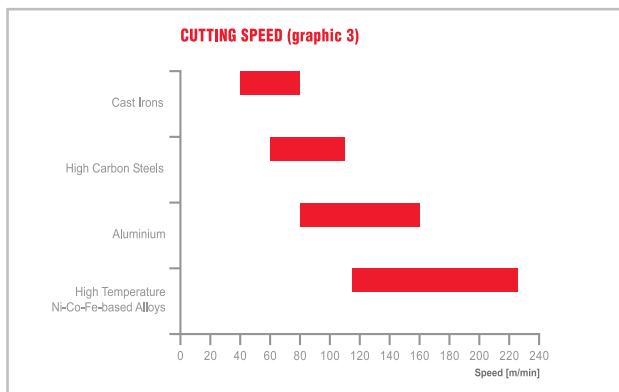
GUN DRILLS

Gun drills operate at relatively high cutting speeds with low feeds per revolution. Approximate starting values are shown on the charts (graphic 1 and 2).



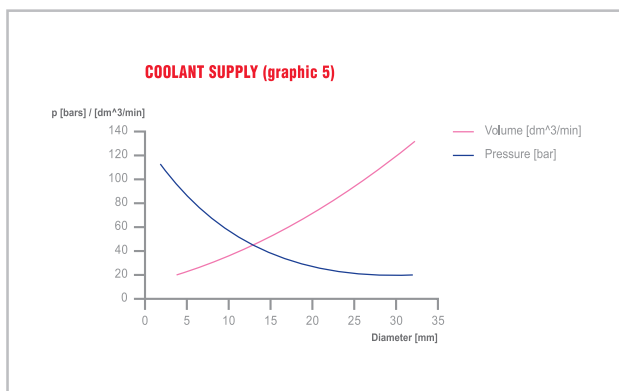
TWIN FLUTED GUN DRILLS

Twin fluted gun drills operate at relatively high cutting speeds. Approximate starting values are shown on the charts (graphic 3 and 4).

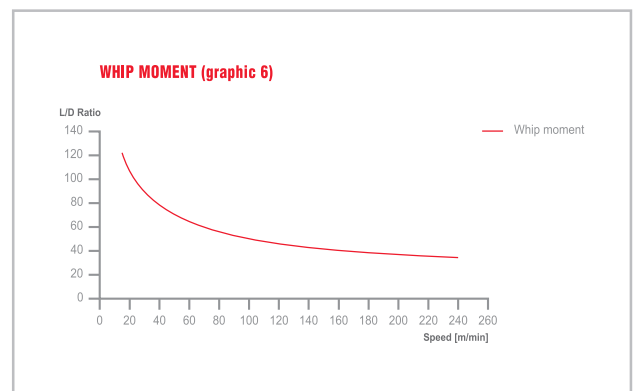


CUTTING CONDITIONS

The execution of deep horizontal and vertical holes is influenced by several factors. The data from the follow graphics should be adapted to each case.

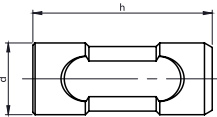
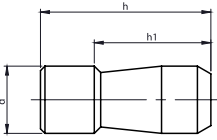
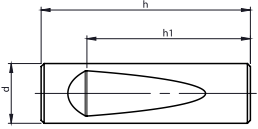
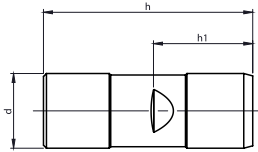
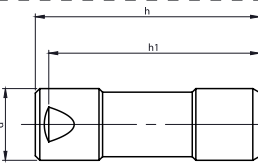
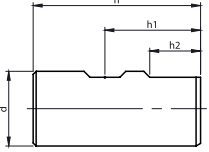
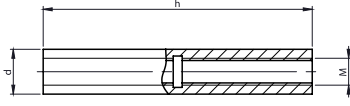
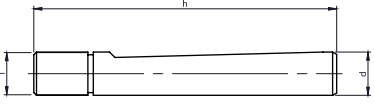


A good chip removed can be provided by the lubrication in the process. The reference values are given in the graphic 5.



To establish the maximum length to diameter ratio of an unsupported drill for any given surface speed, trace the surface to the intersection of the curve and read off the L/D ratio on the vertical scale.

DRIVERS DESIGN

STYLE	PALBIT REF.	d	h	h1	h2
	P1 P2 P3	16 25 35	40 50 60		
	A1 A2	13 19	38 70	26 46	
 AMERICAN STANDARD	A3 A4 A5	25 32 38	70 70 70	55 55 55	
 EUROPEAN STANDARD	E1 E2 E3 E4 E5 E6	25 19 10 16 20 32	70 70 40 45 70 70	34 46 24 31 34 34	
	B1	16	50	47	
 WELDON	W1 W2 W3 W4 W5	16 20 25 32 40	48 50 56 60 70	24 25 32 36 40	17 19 19
	C1 C2 C3 C4	10 16 25 36	60 80 100 120	M6.0 x 0.5 M10 x 1.0 M16 x 1.5 M25 x 1.5	
	D1 D2 D3 D4	16 20 28 36	112 126 126 162	Tr16-1.5 Tr20-2.0 Tr28-2.0 Tr36-2.0	
Without Driver Re-tip Reduction Re-grind Modification	ND RT RD RG MO				

CODE SYSTEM OF GUNDRILLING

1. TYPE	Gun drill Gun reamer Twinfluted Gun drill Speedbit Ventec Proten Special	GD GR SF SB VT PT XS
2. SYSTEM	Metric system Imperial system	M I
3. DRIVER DESIGN	See "Drivers Design"	
4. DIAMETER	DXX.XX (D10.00 or D0.625)	D10.00
5. LENGTH	Gun drills - OAL Gun reamer - OAL Twinfluted Gun drill - FTL Speedbit - FTL Ventec - FTL	L0400 L0400 L0270 L0270 L0270
6. CONTOUR	ST Standard CI Cast Iron GB Gun boring CS Crankshafts, Aluminium > dia Ø 4.0 XS Special	ST CI GB CS XS
7. WORKPIECE MATERIAL	Steel/Non ferrous Cast Iron Cast Iron (High Phosphorous content) Stainless steel, High Si content aluminium	P1 K1 K2 M1
8. NOSE GRINDS	PALBIT Standard up to 4,05 / PALBIT Standard above to 4,05 Aluminium Cast Iron Stack Flat bottom Inconel Crankshaft Wood Special	N01 N02 N03 N04 N05 N06 N07 N08 NXX
9. CARBIDE GRADE	Carbide grade PHXXXX	PH0705

TECHNICAL DATA

1	2	3	4	5	6	7	8	9
GD	M	E1	D10.00	L0400	ST	P1	N01	PH0705

Example: GDM-E1-D10.00-L0400-ST-P1-N01-PH0705

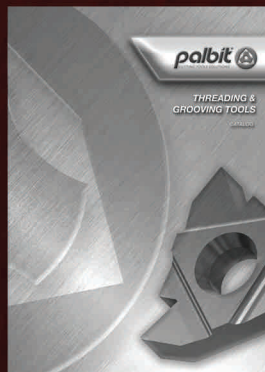
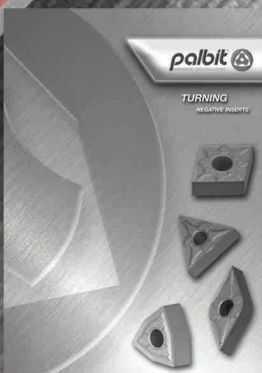
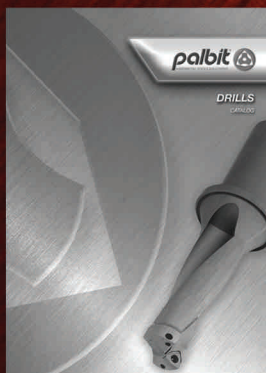
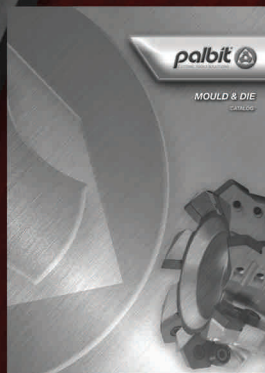
TROUBLESHOOTING

	TOOL PROBLEMS													HOLE PROBLEMS									
	Instability	External point dissipation	Excessive dissipation of the supports	Cutting detachable edge	Cratering	Flank dissipation	Torsion of the stem	Reduced life time	Outburst of the tip	Chip compactation	Broken edge	Tool break	Poor superficial finish	Underline of the hole	Cone exit	Cone entrance	Parabolic hole	Ovalization of the hole	Demarcations yearn along the hole	Hole below the nominal diameter	Hole above the nominal diameter		
Excessive entrance angle							⚠	⚠								⚠					⚠		
Excessive way out angle								⚠							⚠						⚠		
Twisted gun drill	⚠						⚠		⚠							⚠							
Bad chip formation			⚠	⚠	⚠				⚠			⚠	⚠	⚠									
Bad periphery grinding		⚠	⚠					⚠				⚠	⚠								⚠		
Tip way out angle insufficient	⚠		⚠			⚠		⚠	⚠		⚠			⚠			⚠						
Point way out angle insufficient											⚠									⚠			
Excessive insert way out																							
Incorrect welding process								⚠	⚠			⚠											
Incorrect hardmetal grade								⚠			⚠												
Need for sharpening				⚠	⚠		⚠	⚠												⚠			
Deficient sharp tip											⚠	⚠											
Hardness of the piece	⚠			⚠				⚠	⚠		⚠	⚠							⚠				
Piece with thin walls														⚠			⚠	⚠					
Excessive feed speed	⚠		⚠	⚠	⚠	⚠	⚠	⚠	⚠		⚠	⚠	⚠	⚠		⚠	⚠				⚠		
Insufficient feed speed											⚠												
Cutting speed to high		⚠						⚠	⚠		⚠		⚠										
Cutting speed to low				⚠	⚠			⚠	⚠					⚠									
Heating of the fluid		⚠						⚠															
Excessive pressure of the fluid				⚠	⚠																		
Inadequate lubrication	⚠		⚠		⚠			⚠	⚠		⚠		⚠										
Pressure / flow of the fluid insufficient for cutting						⚠		⚠	⚠	⚠		⚠	⚠		⚠					⚠	⚠		
Fixation of the inadequate tool	⚠							⚠			⚠	⚠	⚠		⚠			⚠	⚠		⚠		
Pre hole or guide with diameter	⚠							⚠	⚠		⚠	⚠	⚠		⚠		⚠	⚠					
Rotation sense in retreat																							
Excessive free length								⚠	⚠		⚠	⚠	⚠	⚠		⚠	⚠	⚠					
Underlined	⚠		⚠	⚠				⚠	⚠		⚠	⚠	⚠	⚠		⚠							
Guide is moved away from the piece								⚠			⚠					⚠							
Excessive heating of the piece and consequent grip												⚠							⚠		⚠		

TECHNICAL DATA



SEE ALSO:



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