

HAYDEN uses a number reference guide (Hayden 1-16), corresponding to the matrix hardness for ease of selection. (HAYDEN 1 being the hardest matrix and HAYDEN 16 being the softest.) The higher the number, the harder, finer grained, more competent and nonabrasive the rock type the bit is capable of drilling. Conversely, the lower the number selected the more broken, fractured coarser grained and abrasive a formation the bit is capable of drilling.

HAYDEN manufactures slight variances of the standard matrices to fine-tune the bits' performance considering the drill rig capabilities and formations being encountered.

	HIGH SOFTER ROCK ----- MEDIUM ROCK -----											LOW HARD ROCK		
MATRIX	1	2	3	4	5	6	7	8	9	10	11	12-14	15	16
OVERBURDEN														
HOLE OBSTRUCTIONS	GREY													
ABRASIVE SANDSTONE		BLACK												
BROKEN ABRASIVE ROCK TYPE														
SANDY SHALES			LIGHT BLUE											
PYROXENITE				BLUE										
NORITE					YELLOW									
GABBRO						GREEN								
DIABASE							RED							
DOLERITE								ORANGE						
MICA SCHIST														
SISTSTONE														
GRANITE														
HEMATITE														
BASALT														
HARD QUARTZITE														
QUARTZ CONGLOMERITE														
BANDED IRONSTONE									COPPER					
TACONITE										SILVER				
GLASSY QUARTZ											VIOLET			
CHERT												GOLD	WHITE	CREAM

OPERATING RECOMMENDATIONS TABLE

BIT SIZE	ROTATION	RPI RANGE	KERF AREA		BIT WEIGHT RANGE		FLUID VOLUME RANGE / min.	
			INCHES	CM	LBS	KN	US Gal.	Liters
LTK (46 mm)	1500-2500	200-250	1.099	7.09	1000-3000	4.5-13.25	2.5-3.5	9.5-13.5
JTK (48 mm)	1500-2500	200-250	1.289	8.32	1000-3000	4.5-13.25	2.5-3.5	9.5-13.5
AW34	1500-2500	200-250	1.438	9.28	1000-3000	4.5-13.25	2.5-3.5	9.5-13.5
AWL	1000-2000	200-250	1.920	12.39	2000-5000	8.9-22.25	4-5	15-16
BW44	1000-2000	200-250	1.955	12.62	2000-4000	8.9-17.75	3-4	13-17
BWL	800-1600	200-250	2.763	17.86	2000-5000	9.0-22.25	6-8	23-30
NWL	600-1400	200-250	4.214	27.19	3000-6000	13.25-26	8-10	30-38
CHD76	600-1400	200-250	4.670	30.13	3000-6000	13.25-26	8-10	30-38
HWL	400-1200	200-250	6.325	40.81	4000-8000	17.75-35	10-12	38-46
CHD101	400-1200	200-250	7.532	48.60	4000-8000	17.75-35	10-14	38-46
PWL	300-800	200-250	9.512	61.37	5000-10,000	22.45-44	18-23	68-87
CHD134	300-800	200-250	13.074	84.35	5000-10,000	22.45-44	18-23	68-87

STANDARD DIAMOND SET DIMENSIONS

BIT DESCRIPTION	SET BIT DIMENSIONS (+/- .005)				REAMING SHELL DIMENSIONS (+/- .005)	
	OUTSIDE DIAMETER		INSIDE DIAMETER		OUTSIDE DIAMETER	
	INCHES	MM	INCHES	MM	INCHES	MM
RTW, RWG	1.175	29.8	0.735	18.7	11.172	29.800
EWD3	1.485	37.7	0.835	21.2	1.485	37.700
EWG, EW, EWL	1.485	37.7	0.845	21.5	1.485	37.700
EWT, EWK, EXT, EXK	1.485	37.7	0.905	23.0	1.485	37.700
EIW, EIWS, EIX, EIXS	1.485	37.7	0.995	25.3	1.485	37.700
TT46MM / LTK46MM	1.811	46.0	1.389	35.3	1.823	46.300
AWC / S	2.345	59.6	1.900	48.3		
ADBGM, ATW	1.875	47.6	1.193	30.3	1.890	48.000
ATK	1.875	47.6	1.201	30.5	1.890	48.000
AWT, AXT	1.875	47.6	1.281	32.5	1.890	48.000
AW34	1.875	47.6	1.320	33.5	1.890	48.000
LTK / JTK (48MM)	1.875	47.6	1.389	35.3	1.890	48.000
TT56MM / LTK56MM	2.205	56.0	1.783	45.3	2.217	56.300
LTK60	2.345	59.6	1.735	44.1	2.360	59.900
BWL	2.345	59.6	1.433	36.4	2.360	59.900
BTK	2.345	59.6	1.601	40.7	2.360	59.900
BWD4, BWD3	2.360	59.9	1.615	41.0	2.360	59.900
BX, BDBGM, BTW	2.345	59.6	1.654	42.0	2.360	59.900
BWT, BXT	2.360	59.9	1.750	44.5	2.360	59.900
BW44	2.360	59.9	1.755	44.6	2.360	59.900
CHD76	2.980	75.7	1.713	43.5	2.980	75.700
NWL3, NWLTT	2.965	75.3	1.775	45.1	2.980	75.700
NWL	2.965	75.3	1.875	47.6	2.980	75.700
NW2	2.965	75.3	1.995	50.7	2.980	75.700
NWD4, NWC3	2.980	75.7	2.060	52.3	2.980	75.700
NWG, NWM, NWL	2.965	75.3	2.155	54.7	2.980	75.700
NDBGM, NTW	2.965	75.3	2.209	56.1	2.980	75.700
NX	2.965	75.3	2.155	54.7	2.980	75.700
HWD4, HWD3, HXBWL	3.650	92.7	2.400	61.1	3.650	92.700
HWL3, HWLTT	3.762	95.6	2.406	61.2	3.783	96.100
HWL	3.762	95.6	2.500	63.5	3.783	96.100
CHG101	3.980	101.3	2.500	36.5	3.980	101.300
PWL3, PWLTT	4.805	122.1	3.270	83.1	4.828	122.600
PW3	4.827	122.6	3.270	83.1	4.827	122.600
PWL	4.865	122.1	3.345	85.0	4.825	122.600
CHD134	5.276	134.0	3.345	85.0	5.276	134.000

NOTE: O/D bit sizes for CDDA specifications are 0.015 less except HWL & PWL sizes which are 0.020 less