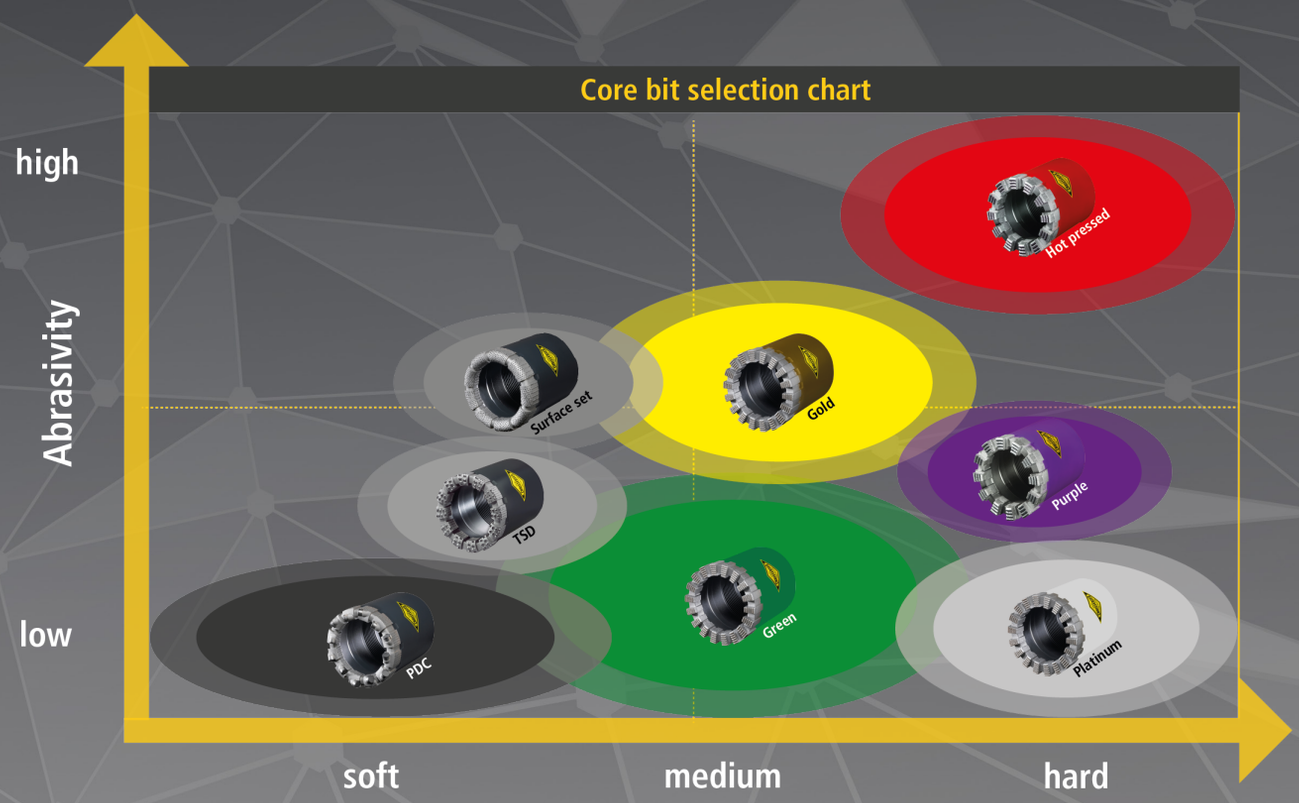
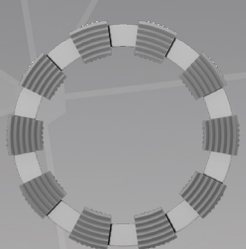
Heavy duty core bits

SK 4 ¼"B, SK 5 ½"B, CSK 146, CSK176, 250P

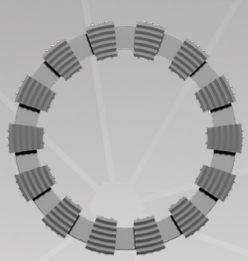


Waterway configurations



Reduced contact area profile III

Turbo profile



Reduced contact area profile I

Reduced contact area profile I with ports

Our coring bits have a proven track record on thousands of meters under the roughest conditions.

For special needs, we manufacture customized bits according to customer's specifications.

Heavy duty core bits

Data tables

Standard coring / geotechnics		
System*	Core Ø	Hole Ø
NXB I + II	47.6	75.7
HXB I + II	61.2	92.8
CSK 146	102.0	146.0
CSK 176	132.0	176.0

Heavy duty coring / geotechnics				
System*	Core Ø		Hole Ø	
	[mm]	[inch]	[mm]	[inch]
SK 4 1/4" B	69.0	2 3/4	120.6	4 3/4
SK 4 1/2" B	78.0	3	123.8	4 7/8
SK 5 1/2" B	101.4	4	161.9	6 3/8
SK 5 3/4"	88.9	3 1/2	157.0	6 1/8

Conventional coring / Oil & Gas				
System*	Core Ø		Hole Ø	
	[mm]	[inch]	[mm]	[inch]
250 P 4 3/4" x 2 5/8"	66.7	2 5/8	152.4	6
250 P 6 3/4" x 4"	101.6	4	215.9	8 1/2
250 P 8" x 5 1/4"	133.4	5 1/4	311.2	12 1/4
HT 10 4 3/4" x 2 5/8"	66.7	2 5/8	149.2	5 7/8
HT 30 6 3/4" x 4"	101.6	4	215.9	8 1/2
HT 40 8" x 5 1/4"	133.4	5 1/4	311.2	12 1/4

* Customized types are available according to customer's specifications.

Weight on bit					
System	Cutting area [cm²]	PDC (ø 13 mm) Min - Max [t]	TSD Min - Max [t]	Surface set Min - Max [t]	Impregnated** Min - Max [t]
CSK 146	68.6	0.6 - 2.4	0.9 - 2.3	3.6 - 6.0	2.8 - 8.4
CSK 176	85.1	0.7 - 2.8	1.5 - 2.7	4.5 - 7.5	3.4 - 10.2
SK 4 1/4" B	61.4	0.5 - 2.0	0.9 - 2.3	2.7 - 4.5	2.5 - 7.4
SK 5 1/2" B	100.1	0.7 - 2.6	1.5 - 3.8	5.4 - 9.0	4.0 - 12.0
250 P 4 3/4" x 2 5/8"	111.9	2.0 - 7.0	3.0 - 9.0	6.0 - 10.0	4.7 - 14.2
250 P 6 3/4" x 4"	228.0	3.0 - 9.6	4.0 - 10.0	10.5 - 17.5	9.1 - 27.4
		50 - 200 kg/PDC	10 - 25 kg/TSD	3 - 5 kg/Diamond	40 - 120 kg/cm²

** For bits with reduced cutting area, please adjust the values: Red. 1 = 70 %, Red. 2 = 60 %, Red. 3 = 50 %.

*** The values on this table are suggestions. Weight on bit may vary according to actual geological conditions, individual bit design and other drilling parameters.

Rotational speed*					
System	Diameter [mm]	PDC (ø 13 mm) Min - Max [min^{-1}]	TSD Min - Max [min^{-1}]	Surface set Min - Max [min^{-1}]	Impregnated Min - Max [min^{-1}]
SK 5 1/2" B	161.9	80 - 180	80 - 220	100 - 280	220 - 360
CSK 146	146.0	80 - 200	80 - 240	120 - 320	240 - 400
CSK 176	176.0	60 - 160	60 - 200	100 - 260	200 - 320
250 P 4 3/4" x 2 5/8"	152.4	80 - 180	80 - 220	120 - 300	220 - 380
250 P 6 3/4" x 4"	215.9	60 - 140	60 - 160	80 - 220	160 - 260

* Corresponds to tangential velocity of 0.6 - 1.5 m/s for PDC core bits, 0.6 - 1.8 m/s for TSD core bits, 0.9 - 2.4 m/s for surface-set core bits and 1.8 - 3.0 m/s for impregnated matrix compound core bits.

Circulation pump rate**						
System	Borehole diameter [mm]	Drill string OD [mm]	[l/min]		[gal (US)/min]	
			Min.	Max.	Min.	Max.
SK 4 1/4" B	120.6	103.5	180.6	270.9	47.7	71.6
SK 5 1/2" B	161.9	141.0	298.3	447.5	78.8	118.2
CSK 146	146.0	140.0	80.9	121.3	21.4	32.0
CSK 176	176.0	172.0	65.6	98.4	17.3	26.0
250 P 4 3/4" x 2 5/8"	152.4	88.9	722.1	1,083.1	190.8	286.1
250 P 6 3/4" x 4"	215.9	114.3	1,580.9	2,371.4	417.6	626.5

** Recommendations for V_A (annular velocity) range from 200 ft/min to 300 ft/min. Please adjust the values according to fluid composition and drilled formation.