



Rock Reamer

Imperial sizes



Rock reamer specifications

Body				Cutters			
Body	Min pilot hole	Connections	No of cutters	Opening range			
RR4	4 1/2"	2 7/8" IF B x B	3	8 1/2"	10"	12"	-
				AA	BB	CC	DD
RR6	6 1/4"	3 1/2" IF B x B	3	12"	14"	16"	18"

Body				Cutters					
Body	Min pilot hole	Connections	No of cutters	Opening range					
				A	B	C	D	E	F
RR8	8 1/2"	4 1/2" IF B x B	3	16"	18"	20"	22"	24"	26"
RR17	17 1/2"	7 5/8" Reg. B x B	3, 4	24"	26"	28"	30"	32"	34"
RR26	26"	7 5/8" Reg. B x B	3, 5	32"	34"	36"	38"	40"	42"
RR36	36"	7 5/8" Reg. B x B	3, 4, 5	42"	44"	46"	48"	50"	52"
RR42	42"	7 5/8" Reg. B x B	4, 5, 7	48"	50"	52"	54"	56"	58"
RR48	48"	7 5/8" Reg. B x B	4, 5, 7	54"	56"	58"	60"	62"	64"

* Thread connections mentioned are in standard sizes. Other connections are available upon request.

Cutter specifications



Milled Tooth

Alluvial formations, clays, soft rock.
3–21 Mpa (500–3,000 PSI) compressive strength formations.

Formation types: Sandstone, shale, mudstone, clays, gravels and conglomerate.

Teeth are milled directly from the hard cone steel and tungsten hardfacing applied on the trailing edge to maintain sharpness of the blade. TCI gauge row MT cutters available on special order.



TCI Chisel

Medium rock
21–103 Mpa (3,000–15,000 PSI) compressive strength rock.

Formation types: Limestone, sandstone and shale.

TCI teeth are aggressive conical shaped for aggressive penetration rates in medium type rock.



TCI Type 5

Medium – hard rock
83–172 Mpa (12,000–25,000 PSI) compressive strength formations.

Formation types: Granite, marble, and dolomite.

TCI teeth have moderate extensions. Gage area has all dome type cutters to maximize cutter gage life.



TCI Type 7

Hard rock
172–310 Mpa (25,000–45,000 PSI) compressive strength formations.

Formation types: Quartz, Basalt and Quartzite.

TCI teeth are all hemispherical shape, providing a longer cutter life in extremely hard rock.

Body, cutter and arm weights – in lbs

Body	RR4 – 135	RR6 – 346	RR8 – 730	RR17 – 1915	RR26 – 2669	RR36 – 3900	RR42 – 4739	RR48					
Body	R4-8.5	R4-10	R4-12	R6-12	R6-14	R6-16	R6-18	A	B	C	D	E	F
MT	4.0	7.9	11.9	15.0	22.9	30.9	41.0	31.7	46.7	63.5	79.4	101.2	127.0
TCI	6.0	9.9	15.9	20.9	29.8	41.7	55.0	40.8	60.6	78.5	99.2	125.0	153.9
FRA	5.1	7.1	9.0	19.8	23.8	27.8	35.0	50.4	54.7	67.5	73.4	87.3	100.3

* Weight in lbs per cutter

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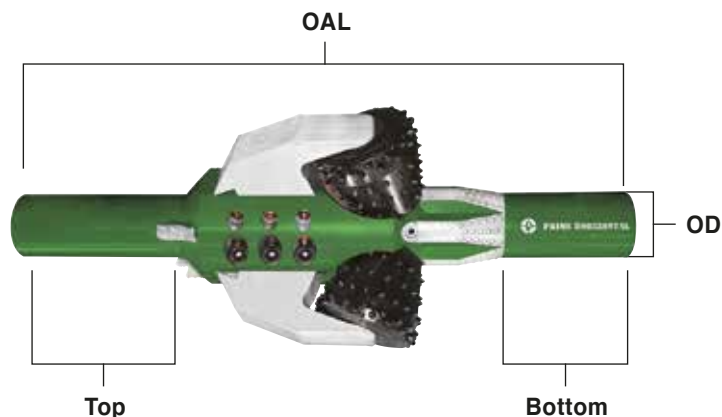
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Rock Reamer

Operating specifications– Imperial sizes



Tool series	Pilot hole	Thread B x B	No. of cutters	Opening size	Mill Tooth		TCI		Body OD (in)	OAL*	Top*	Bottom*
					WOB (000's lbs)	RPM's	WOB (000's lbs)	RPM's				
RR4	4 1/2"	2 7/8" IF	3	8 1/2"–12"	7.7 – 9.9	50 – 80	7.7 – 12.1	40 – 80	3 1/2"	41.5"	15.0"	12"
RR6	6 1/4"	3 1/2" IF	3	12"–18"	9.9 – 15.4	40 – 100	15.4 – 19.8	35 – 80	4 3/4"	52.0"	12.0"	15"
RR8	8 1/2"	4 1/2" IF	3	16"–26"	15.4 – 19.8	40 – 80	19.8 – 39.7	35 – 70	6 1/2"	61.0"	12.5"	16"
RR17	17 1/2"	7 5/8" Reg.	3	24"–24"	15.4 – 25.4	40 – 65	19.8 – 39.7	40 – 65	9 1/2"	64.5"	12.0"	14"
RR26	26"	7 5/8" Reg.	3	32"–42"	15.4 – 29.8	35 – 60	19.8 – 49.6	35 – 55	9 1/2"	64.5"	12.0"	12"
RR36	36"	7 5/8" Reg.	4	42"–52"	15.4 – 29.8	35 – 55	19.8 – 49.6	35 – 50	9 1/2"	64.5"	12.0"	12"
RR42	42"	7 5/8" Reg.	4	48"–58"	15.4 – 29.8	35 – 50	19.8 – 49.6	30 – 45	9 1/2"	64.5"	12.0"	12"
RR48	48"	7 5/8" Reg.	5	54"–64"	15.4 – 35.3	35 – 45	19.8 – 59.5	25 – 40	9 1/2"	64.5"	12.0"	12"

* Lengths apply for new bodies only.

The suggested weights and RPM's are only a recommended guide. Weights and RPM's should be adjusted to maximum penetration rates modified by expected cutter life. They will vary with formation and rig power. Recommended weights assume minimum pilot hole sizes. As the cutting shoulder is reduced, less weight is needed.

Tips:

- Softer formations will normally respond to lighter weights and higher RPM's. Harder formations require more weight and slower RPM's
- Adjust weight and RPM to achieve optimum torque. Avoid uneven rotation of hole opener.
- Use sufficient fluid volume to obtain optimum hole cleaning.
- Proper centralisation will enhance tool performance and increase downhole life.

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