PRIMEHORIZONTAL

Lo Torque Hole Opener

Metric sizes

LT hole opener specifications

Body				Cutters			
Body	Min pilot hole	Connections	No of cutters	Opening range			
LT2	6.4	2" IF P x B	3	15.2			
LT4	11.4	2 7/8" IF P x B	3	20.3	25.4		30.5
LT6	16.5	3 1/2" IF P x B	3	30.5	35.6		40.6
				A	B	C	D
LT8	21.6	4 1/2" IF P x B	3	40.6	45.7	50.8	55.9
LT16	40.6	7 5/8" Reg. P x B	3	61.0	66.0	71.1	76.2
LT24	61.0	7 5/8" Reg. P x B	4	81.3	86.4	91.4	96.5
LT32	81.3	7 5/8" Reg. P x B	4	106.7	111.8	116.8	121.9
LT40	101.6	7 5/8" Reg. P x B	4	121.9	127.0	132.1	137.2
LT48	121.9	7 5/8" Reg. P x B	5	137.2	142.2	147.3	152.4

* 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 gage row MT cutters available on special order.

TYPE 5 (IADC)

Medium rock
41–103 Mpa (6,000 - 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.

TYPE 7 (IADC)

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

Formation Types: Granite, marble, and dolomite.

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

TYPE 8 (IADC)

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

Formation Types: Quartz, basalt, and quartzite.

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

Lo-Torque Hole Opener Cutters to match the formation hardness of your bore.
The Lo-Torque Tungsten Carbide Cutter types now range from medium to extremely hard rock formations. Close attention to insert material composition of gage, inner row and base areas of the cutters optimizes their performance in the wide range of rock conditions encountered in horizontal drilling.

Body and cutter weights – in kg

Body	**LT2** – 15	**LT4** – 51	**LT6** – 121	**LT8** – 218	**LT16** – 539	**LT24** – 885	**LT32**– 1230	**LT40** – 1451	**LT48** – 1545

Body	LT2	LT4				LT6			LT8				LT16				LT24				LT32				LT40				LT48			
	2"	8"	10"	12"	12"	14"	16"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"	50"	52"	54"	56"	58"	60"	62"
MT	1.3	1.8	3.6	5.4	6.8	10.4	14.0	14.5	21.3	29.0	38.2	14.5	21.3	29.0	38.2	14.5	21.3	29.0	38.2	14.5	21.3	29.0	38.2	14.5	21.3	29.0	38.2	14.5	21.3	29.0	38.2
TCI	1.3	2.7	4.5	7.3	9.5	13.6	19.0	18.6	27.6	35.7	45.3	18.6	27.6	35.7	45.3	18.6	27.6	35.7	45.3	18.6	27.6	35.7	45.3	18.6	27.6	35.7	45.3	18.6	27.6	35.7	45.3

* Weight in kg per cutter

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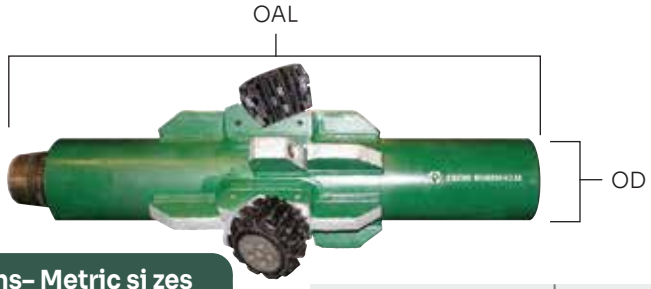

Operating specifications– Metric si zes

						Mill Tooth		TCI			
Body type	Pilot hole	Body thread P x B	No. of cutters	cutter series	Opening size (cm)	WOB (000's kg)	RPM's	WOB (000's kg)	RPM's	Body OD (cm)	OAL*
LT2	6.4	2" IF	3		15.2	1.4 – 3.2	50 – 80	1.4 – 3.2	30 – 60	6.35	60.96
LT4	11.4	2 7/8" IF	3		20.3 – 30.5	3,6 – 4.5	50 – 90	4.5 – 5.4	40 – 80	8.89	95.25
LT6	16.5	3 1/2" IF	3		30.5 – 40.6	4.5 – 6.8	40 – 100	6.8 – 9.1	35 – 90	11.43	111.76
LT8	21.6	4 1/2" IF	3	A	40.5	6.8 – 9.1	40 – 100	9.1 – 18.1	35 – 90	16.51	123.19
				B	45.7	6.8 – 9.1	40 – 90	9.1 – 18.1	35 – 80		
				C	50.8	6.8 – 9.1	40 – 80	9.1 – 18.1	35 – 80		
				D	55.9	6.8 – 9.1	40 – 75	9.1 – 18.1	35 – 70		
LT16	40.6	7 5/8" Reg.	3	A	61.0	6.8 – 11.3	40 – 75	9.1 – 18.1	35 – 70	24.13	135.89
				B	66.0	6.8 – 11.3	40 – 75	9.1 – 18.1	35 – 70		
				C	71.2	6.8 – 11.3	40 – 75	9.1 – 18.1	35 – 70		
				D	76.2	6.8 – 11.3	40 – 65	9.1 – 18.1	35 – 60		
LT24	61.0	7 5/8" Reg.	4	A	81.3	6.8 – 13.6	35 – 60	9.1 – 22.7	35 – 55	24.13	148.59
				B	86.4	6.8 – 13.6	35 – 60	9.1 – 22.7	35 – 55		
				C	91.4	6.8 – 13.6	35 – 60	9.1 – 22.7	35 – 55		
				D	96.5	6.8 – 13.6	35 – 60	9.1 – 22.7	35 – 55		
LT32	81.3	7 5/8" Reg.	4	A	101.6	6.8 – 13.6	35 – 55	9.1 – 22.7	35 – 50	24.13	148.59
				B	106.7	6.8 – 13.6	35 – 55	9.1 – 22.7	35 – 50		
				C	111.8	6.8 – 13.6	35 – 55	9.1 – 22.7	35 – 50		
				D	116.8	6.8 – 13.6	35 – 55	9.1 – 22.7	35 – 50		
LT40	101.6	7 5/8" Reg.	4	A	121.9	6.8 – 13.6	35 – 50	9.1 – 22.7	30 – 45	24.13	148.59
				B	127.0	6.8 – 13.6	35 – 50	9.1 – 22.7	30 – 45		
				C	132.1	6.8 – 13.6	35 – 50	9.1 – 22.7	30 – 45		
				D	137.2	6.8 – 13.6	35 – 50	9.1 – 22.7	30 – 45		
LT48	121.9	7 5/8" Reg.	5	A	142.2	6.8 – 15.9	35 – 45	9.1 – 27.2	25 – 40	24.13	148.59
				B	147.3	6.8 – 15.9	35 – 45	9.1 – 27.2	25 – 40		
				C	152.4	6.8 – 15.9	35 – 45	9.1 – 27.2	25 – 40		
				D	157.5	6.8 – 15.9	35 – 45	9.1 – 27.2	25 – 40		

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.

- 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.
- 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.

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