

BENCH DRILLING

Rock Tools

*TOP HAMMER GT60
MD HAMMER & DTH BITS*

DIA  EDGE



 **MITSUBISHI MATERIALS U.S.A.**

GT60 SERIES



Compared with T51 rods, GT60 rods have

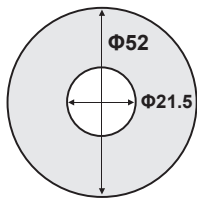
- 38% larger rod cross-section, providing higher rates of penetration.
- 10% bigger flushing area, providing more efficient flushing.
- 55% higher bending stiffness, providing straighter holes.

	T51	GT60
Rod Cross Section	100%	138%
Flushing Area	100%	110%
Bending Stiffness	100%	155%

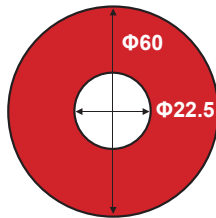


- The GT60 system provides double the penetration rate at half the energy consumed compared with DTH drilling.
- Our top quality Carbide buttons, formulated and sintered in house.
- Compared with other drilling tool systems, the GT60 system permits a wider hole range using the same rock drill.

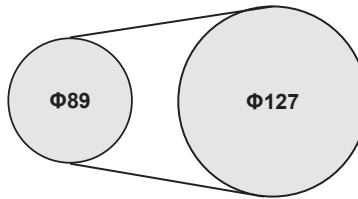
T51 Cross section



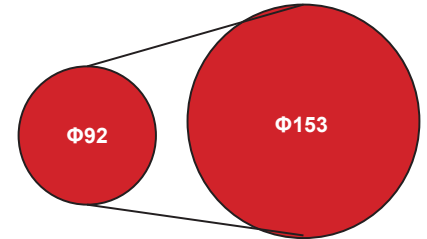
GT60 Cross section



T51 Hole Range



GT60 Hole Range



GT60 Button Bits & Rods

BUTTON BIT									
NORMAL SKIRT									
PART NUMBER	FLUSHING HOLE, MM		BUTTON, MM		GAUGE ANGLE	GAUGE DIAMETER		FACE DESIGN	WEIGHT KG
	FRONT		FRONT	GAUGE		MM	INCH		
	NO X SIZE		NO X SIZE	NO X SIZE					
60GMPVS92BB55M	4X11		6X12	8X12	35	92	3 5/8"	55	5.6
60GMPVS102R55M	4X11		6X14	8X14	35	102	4"	55	6.9
60GMPVS102BB55M	4X11		6X14	8X14	35	102	4"	55	6.9
60GMPVS115R55M	4X11		8X14	8X14	35	115	4 1/2"	55	8.4
60GMPVS127R55M	4X12		4X14 4X16	8X16	35	127	5"	55	9.5
60GMPVS140R55M	4X12		8X16	8X16	35	140	5 1/2"	55	11.9
60GMPVS140R53M	3X14		9X16	9X16	35	140	5 1/2"	53	11.9
60GMPVS153BB5XM	4X13		3X14 6X16	10X16	35	153	6"	5X	15.4
RETRAC SKIRT									
60GMPVR92BB55M	4X11		6X12	8X12	35	92	3 5/8"	55	6.2
60GMPVR102R55M	4X11		6X14	8X14	35	102	4"	55	7.6
60GMPVR112R55M	4X11		8X14	8X14	35	112	4 3/8"	55	9.1
60GMPVR115R55M	4X11		6X14	8X14	35	115	4 1/2"	55	9.6
60GMPVR115BB55M	4X11		6X14	8X14	35	115	4 1/2"	55	9.6
60GMPVR115R23MB	3X15		7X14	9X16	35	115	4 1/2"	23	10.1
60GMPVR121BB55M	4X12		8X14	8X16	35	121	4 3/4"	55	12.1
60GMPVR127R55M	4X12		4X14 4X16	8X16	35	127	5"	55	13.1
60GMPVR127BB55M	4X12		4X14 4X16	8X16	35	127	5"	55	13.1
60GMPVR127R23M1	3X15		9X14	9X16	35	127	5"	23	13.8
60GMPVR140R53M	3X14		9X16	9X16	35	140	5 1/2"	53	15.2
60GMPVR153R5XM	4X13		3X14 6X16	10X16	35	153	6"	5X	18.8
MALE/FEMALE ROD									
PART NUMBER	OUTSIDE DIAMETER		LENGTH		WEIGHT KG				
	MM	INCH	MM	FEET/ INCH					
ER60GM60MF-3660	60	2 1/4"	3660	12'	82.5				
ER60GM60MF-4270	60	2 1/4"	4270	14'	94.2				

MD HAMMER

DTH Hammer & Bits

- ◆ **Greater depth**
- ◆ **Better penetration rate, hole straightness in greater depth**
- ◆ **Larger diameter holes**

- Drill holes to greater depth than GT60 with DTH drilling.
- Better penetration rate in holes greater than 60 feet deep than with GT60.
- Better hole straightness with DTH drilling.
- Larger diameter holes with DTH drilling than with GT60.

DTH Hammer

- A valveless pneumatic percussion hammer for drilling in all rock formations.
- Designed for water well, blast hole, and construction
- Longevity
- Fast Penetration Rates
- Reversible sleeve
- Designed with a more efficient air cycle for improved performance.
- All critical internal parts are also hardened for maximum service life.
- The simple design also makes the hammer easy to maintain and service.



Size	Hammer	Bit Shank	Hole Size Range	Outside Diameter	Bore size	Overall Length	Operating length API shoulder to bit face	Piston Weight	Total Weight	Wrench Flats	Thread Connection	Minimum Air Volume Required	Maximum Operating Pressure	
			inch	inch	inch	inch	inch	inch	lbs	lbs		inch	cfm	psi
			mm	mm	mm	mm	mm	mm	kg	kg		mm	cmm	bar
3.5	HMDHD3.5	305 / MDD3.5	3 1/2 to 4 1/4	3.1	2.5	40	40	12	56	2.5	2 3/8" API Pin Up	150	500	
			89 to 108	78.7	63.5	1016	1016	5.31	25.4	63.5		4.5	34	
	HMDHD3.5H	305 / MDD3.5H	4 to 4 1/2	3.35	2.5	40	40	12	74	2.5	2 3/8" API Pin Up	150	500	
			102 to 115	85.1	64	1016	1016	5.3	33.6	63.5		4.5	34	
4	HMDHD340	340 / MDD340	4 to 5	3.63	2.95	43.6	43.7	20	83	3	2 3/8" API Pin Up	150	500	
			102 to 127	92.2	75	1107	1110	8.5	38	76		4.5	34	
4.5	HMDHD345	340 / MDD345	4 1/2 to 5 1/8	4.1	3.3	40.7	40.9	22	112	3	2 3/8" API Pin Up	150	500	
			114 to 130	104.14	83.3	1034	1039	10	50	76		4.5	34	
	HMDHQ45	Q40 / MDQ45	4 1/2 to 5 1/8	4.1	3.3	40.54	40.5	22	112	3	2 3/8" API Pin Up	150	500	
			114 to 130	104.14	83.3	1026	1029	10	50	76		4.5	34	
5	HMDHQ50	QL5 / MDQ50	5 to 6	4.53	3.71	47.2	47.1	30	143	3.5	3 1/2" API Pin Up	150	500	
			127 to 152	115	94.2	1199	1196	14	64.8	88.9		4.5	34	
	HMDHD350	350 / MDD350	5 to 6	4.53	3.71	48.2	48.1	30	143	3.5	3 1/2" API Pin Up	150	500	
			127 to 152	115	94.2	1222	1222	14	64.8	88.9		4.5	34	
5.5	HMDHQ55	QL5 / MDQ55	5 1/2 to 6	5.1	4.1	44.7	44.6	30	148	3.5	3 1/2" API Pin Up	250	500	
			139.7 to 152	129.5	104	1135	1143	14	67.1	88.9		7	34	
6	HMDHQ60	QL6 / MDQ60	6 to 7	5.46	4.5	48.1	48.5	43	215	4	3 1/2" API Pin Up	450	500	
			152 to 178	139	102	1222	1232	19.5	97.5	102		13	34	
	HMDHQ60H	QL6 / MDQ60H	6 1/4 to 7	5.75	4.5	48.1	48.5	43	215	4	3 1/2" API Pin Up	450	500	
			152 to 178	146	102	1222	1232	20	97.5	102		13	34	
	HMDHD360	360 / MDD360	6 to 7	5.46	4.5	52.2	52.6	43	215	4	3 1/2" API Pin Up	450	500	
			152 to 178	139	102	1325	1336	20	97.5	102		13	34	
	HMDHD360H	360 / MD-D360H	6 1/4 to 7	5.75	4.5	52.2	52.6	43	250	4	3 1/2" API Pin Up	450	500	
			158.75 to 178	146	102	1325	1336	20	97.5	102		13	34	
6.5	HMDHQ65	QL6 / MDQ65	6 1/4 to 7	5.75	4.75	46.8	47.2	45	251	4	3 1/2" API Pin Up	450	500	
			158.75 to 178	146	121	1189	1198	20.4	113.8	102		13	34	
	HMDHQ65H	QL6 / MDQ65H	6 1/2 to 7	5.9	4.75	46.8	47.2	45	268	4	3 1/2" API Pin Up	450	500	
			165 to 178	150	121	1189	1198	20.4	121.5	102		13	34	
8	HMDHQ80	QL8 / MDQ80	7 7/8 to 10	7.1	5.87	56.2	57	78	414	5.9	4 1/2" API Pin Up	900	500	
			200 to 254	180	149	1427	1524	35	188	150		26	34	
	HMDHD380	380 / MDD380	7 7/8 to 10	7.1	5.87	56.9	57.7	78	414	5.9	4 1/2" API Pin Up	900	500	
			200 to 254	180	149	1445	1542	35	188	150		26	34	

If you have any requests for face designs, shanks, carbide sizes and configuration, please feel free to contact us.

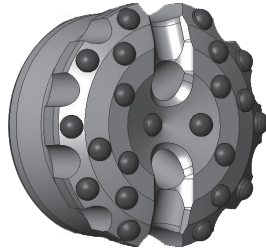
DTH Bits

High quality steel bodies are expertly machined and heated treated to precision standards to eliminate any bit body failures.

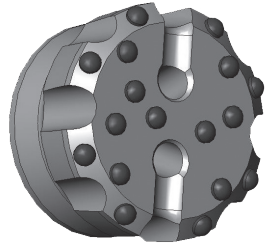
Our top-quality carbide buttons are formulated and sintered in house.

Shank	Head size range	Face Style
		C: Concave, F: Flat, V: Convex, K: Kavex
305/3.5	3 1/2"-4"	C.F.V
305/3.5	4" -4 1/4"	C.F.V
340	4" -4 7/8"	C.F.V
340	5" -5 1/8"	C.F.V
350	5" -5 7/8"	C.F.V
350	6"	C.F.V
350	5 3/4"-5 7/8"	K
350	6"	K
360	5 3/4"-6 3/8"	C.F.V
360	6 1/2"-7"	C.F.V
360	6" -7"	K(5/8" Gage)
360	6" -7"	K(3/4" Gage)
360	7 1/4"-7 3/4"	C.F.V
360	7 7/8"-8 7/8"	C.F.V
360	8 1/2"-8 7/8"	K(5/8" Gage)
380	7 5/8"-8 1/4"	C.F.V
380	8 1/2"-8 7/8"	C.F.V
380	9"	C.F.V
380	9 1/2"-10"	C.F.V
380	10 1/2"-11"	C.F.V
380	11 1/2"-12 1/4"	C.F.V
Q40	4 1/2"-4 7/8"	C.F.V
Q40	5" -5 1/8"	C.F.V
QL5	5" -5 7/8"	C.F.V
QL5	6"	C.F.V
QL5	5 3/4"-5 7/8"	K
QL5	6"	K
QL6	5 3/4"-6 3/8"	C.F.V
QL6	6 1/2"-7"	C.F.V
QL6	6" -7"	K(5/8" Gage)
QL6	6 3/4"	K(5/8" Gage)
QL6	7"	K(5/8" Gage)
QL6	6" -7"	K(3/4" Gage)
QL6	7 1/4"-7 3/4"	C.F.V
QL6	7 7/8"-8 7/8"	C.F.V
QL8	7 5/8"-8 1/4"	C.F.V
QL8	8 1/2"-8 7/8"	C.F.V
QL8	9"	C.F.V
QL8	9 1/2"-10"	C.F.V
QL8	10 1/2"-11"	C.F.V
QL8	11 1/2"-12 1/4"	C.F.V
QL8	11 1/2"-12 1/4"	C.F.V

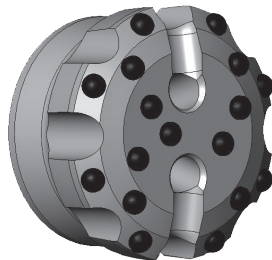
CONCAVE



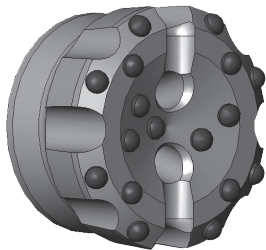
FLAT



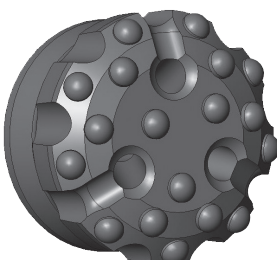
CONVEX



KAVEX



WIDE GAUGE



For Your Safety

- Don't handle inserts and chips without gloves.
- Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage.
- Please use safety covers and wear safety glasses.
- When using compounded cutting oils, please take fire precautions.
- When attaching inserts or spare parts, please use only the correct wrench or driver.
- When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

 **MITSUBISHI MATERIALS U.S.A.**

www.mrt.mitsubishicarbide.com/en

TOOLS SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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