

DTH Hammers and Bits



DTH Hammer Lineup



MD HAMMER Specification Charts

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 mm	inch mm	inch mm	inch mm	inch mm	lbs kg	lbs kg	inch mm		cfm cmm	psi bar
3.5	HMDHD3.5	DHD3.5 / MDD3.5	3 1/2 to 4 1/4	3.1	2.5	40	39.6	11.7	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
4	HMDHD340	DHD340 / MDD340	4 to 5	3.63	2.95	43.6	43.7	19	86	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	HMDHQ45	QLX40 / MDQ45	4 1/2 to 5 1/8	4.1	3.28	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	51	76		4.5	34
5	HMDHQ50	QL50 / MDQ50	5 to 6	4.53	3.71	47.2	47.1	30	143	3.5	3 1/2" API Pin Up	250	500
			127 to 152	115	94.2	1199	1196	13.6	63	88.9		7	34
	HMDHD350	DHD350 / MDD350	5 to 6	4.53	3.71	48.2	48.1	31	143	3.5	3 1/2" API Pin Up	250	500
			127 to 152	115	94.2	1222	1222	14	63	88.9		7	34
6	HMDHQ60	QL60 / 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
	HMDHD360	DHD360 / 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
	HMDHSD6	SD6 / MDSD6	6 to 8.5	5.46	4.44	53	53	45	215	4	3 1/2" API Pin Up	450	350
			152 to 215.6	139	113	1346	1346	20.4	97.5	102		13	23.8
8	HMDHQ80	QL80 / 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	DHD380 / 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
	HMDHSD8	SD8 / MDSD8	7 7/8 to 10	7.1	5.87	55.8	56.6	78	414	5.9	4 1/2" API Pin Up	900	500
			200 to 254	180	149	1416	1437	35.5	188	150		26	34

* Select standard items in the table, and please inquire about special items.

DTH Hammers 3.5" - DHD3.5

Hammer Specification

	English	Metric
Outside Dia Regular Mode	3.1 in	78.7 mm
Overall Length Without Bit	40.0 in	1016 mm
Operating Length API shoulder to Bit Face	39.6 in	1006 mm
Total Weight	56 lbs	25.4 kg
Bore Size	2.5 in	63.5 mm
Piston Weight	11.7 lbs	5.31 kg
Drillpipe Connect	2-3/8 Reg API Pin Up others available upon request	
Wrench Flats	2.5 in	63.5 mm
Hole Size Range	3.5 in to 4.25 in	89 mm to 108 mm
Bit Shank Required	DHD3.5	
Minimum Air Volume Required	150 cfm	4.5 cmm
Operating Pressure	500 psi	34 bar



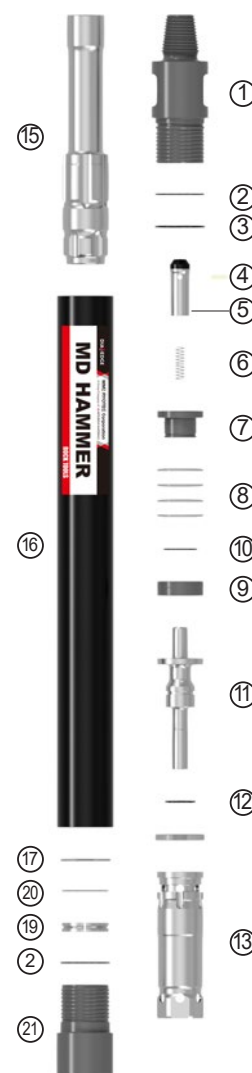
Parts List

Shown at the right side of the chart is the quantity of spare parts that should be kept on hand. Level 1 is for water well drilling, Level 3 is for high production drilling.

ITEM No	PART No	QTY REQD	PART NAME	WEIGHT		SPARE PARTS ON HAND		
				LBS	KGS	LEVEL 1	LEVEL 2	LEVEL 3
1	HP-BKH-MD359-0010	1	Backhead, 2 3/8" API Reg. Pin Up	11.1	5	—	—	1
2	HP-BOW-0045	2	Breakout Washer	0.03	0	—	2	4
3	HP-ORG/BKH-0098	1	O-Ring, Back Head	0.01		1	2	4
4	HP-CST-0053	1	Set of (2) Chokes	0.01		—	—	—
5	HP-CKV-RH4-0046	1	Check Valve Assembly	0.17	0.08	—	—	1
6	HP-CVS-0052	1	Spring, Check Valve	0.03	0.01	—	1	2
7	HP-GUR-0088	1	Guide Ring, Disc Spring	0.42	0.19	—	—	—
8	HP-DSC-0082	4	Disc Spring	0.09	0.04	—	—	4
9	HP-SPT-0150	1	Spacer Ring, Disc Spring	0.01		—	1	2
10	HP-ORG/GUR-0113	1	O-Ring, Disc Spring Pack	0.5	0.23	—	—	—
11	HP-ADB-MD35-0001	1	Air Distributor	2.16	0.98	—	—	1
12	HP-ORG/ADB-0091	1	O-Ring, Air Distributor	0.01		2	4	6
13	HP-CLD-MD35-0069	1	Cylinder Assembly	3.7	1.7	—	1	2
14	HP-RRG/CLD-0134	1	Retaining Ring, Cylinder	0.11	0.1	—	—	—
15	HP-PST-MD35-0119	1	Piston	11.7	5.3	—	1	1
16	HP-WSV-MD35-0156	1	Wear Sleeve	21.9	10	1	2	3
17	HP-RRG/PST-0143	1	Retaining Ring, Piston	0.02	0.009	—	—	—
18	part not used in this hammer							
19	HP-BRR-0136	1	Retaining Ring, Bit	0.24	0.109	—	1	1
20	HP-ORG/BRR-0104	1	O-Ring, Bit Retaining Ring	0.01		1	2	4
21	HP-CHK-MD35R-0055	1	Chuck	3.9	1.8	2	4	6

THE FOLLOWING PARTS ARE SOLD SEPARATE

—	HP-MUW-0176		Make Up Washer					1
—	HP-RBDKIT-MD35-0183		Rebuild Kit					1
—	HP-RBDKIT-MD35H-0222		Heavy Duty Rebuild Kit					1



DTH Hammers 4" - DHD340

Hammer Specification

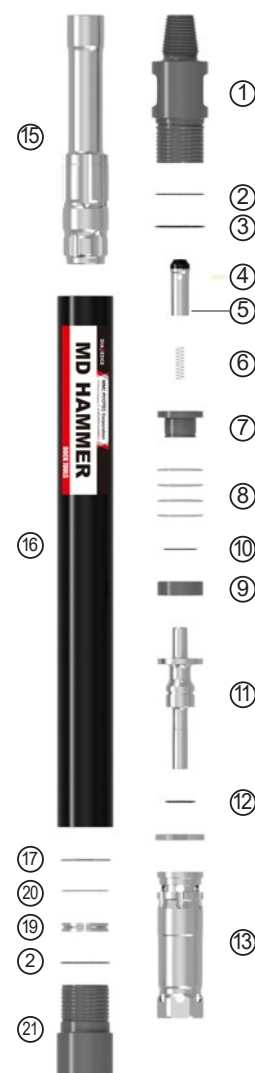
	English	Metric
Outside Dia	3.63 in	92.2 mm
Overall Length Without Bit	43.6 in	1107 mm
Operating Length API shoulder to Bit Face	43.7 in	1110 mm
Total Weight	86 lbs	38 kg
Bore Size	2.95 in	75 mm
Piston Weight	19 lbs	8.5 kg
Drillpipe Connect	2-3/8 Reg API Pin Up others available upon request	
Wrench Flats	3 in	76 mm
Hole Size Range	4 in to 5 in	102 mm to 127 mm
Bit Shank Required	DHD340	
Minimum Air Volume Required	150 cfm	4.5 cmm
Operating Pressure	500 psi	34 bar



Parts List

Shown at the right side of the chart is the quantity of spare parts that should be kept on hand.
Level 1 is for water well drilling, Level 3 is for high production drilling.

ITEM No	PART No	QTY REQD	PART NAME	WEIGHT		SPARE PARTS ON HAND			
				LBS	KGS	LEVEL 1	LEVEL 2	LEVEL 3	
1	HP-BKH-MD409-0011	1	Back Head, 2 3/8" API Reg. Pin Up	16.8	7.6	—	—	1	
2	HP-BOW-0038	2	Breakout Washer	0.03	0	—	2	4	
3	HP-ORG/BKH-0099	1	O-Ring For Back Head	0.01		1	2	4	
4	HP-CST-0053	1	Set of (2) Chokes	0.01		—	—	—	
5	HP-CKV-RH4-0046	1	Check Valve Assembly	0.1	0.05	—	—	1	
6	HP-CVS-0052	1	Check Valve Spring	0.01	0	—	1	2	
7	HP-GUR-0089	1	Guide Ring, Disc Spring	0.9	0.41	—	—	—	
8	HP-DSC-0083	4	Disc Spring	0.13	0.06	—	—	4	
9	HP-SPT-0151	1	Spacer Ring, Disc Spring	0.9	0.41	—	—	—	
10	HP-ORG/GUR-0114	1	O-Ring For Guide Ring	0.01		—	1	2	
11	HP-ADB-MD340-0002	1	Air Distributor	3.3	1.5	—	—	1	
12	HP-ORG/ADB-0092	1	O-Ring For Air Distributor	0.01		2	4	6	
13	HP-CLD-MD40B-0070	1	Cylinder Body	5.1	2.3	—	1	2	
14	HP-RRG/CLD-0137	1	Retaining Ring, Cylinder	0.3	0.1	—	—	—	
15	HP-PST-MD40R-0120	1	Piston	18.7	8.5	—	1	1	
16	HP-WSV-MD40-0157	1	Wear Sleeve	31.8	14.5	1	2	3	
17	HP-RRG/PST-0144	1	Retaining Ring, Piston	0.07	0.032	—	—	—	
18	part not used in this hammer								
19	HP-BRR-0030	1	Retaining Ring, Bit	0.5	0.227	—	1	1	
20	HP-ORG/BRR-0105	1	O-Ring For Bit Retaining Ring	0.01		1	2	4	
21	HP-CHK-MD40R-0056	1	Chuck	6.7	3	2	4	6	
THE FOLLOWING PARTS ARE SOLD SEPARATE									
—	HP-MUW-0177		Make Up Washer					1	
—	HP-RBDKIT-MD40-0184		Rebuild Kit					1	



DTH Hammers 4.5" - QLX40

Hammer Specification

	English	Metric
Outside Dia	4.1 in	104 mm
Overall Length Without Bit HMDHQ45 models	40.4 in	1026 mm
Operating Length API shoulder to Bit Face HMDHQ45 models	40.5 in	1029 mm
Total Weight	112 lbs	51 kg
Bore Size	3.3 in	83.8 mm
Piston Weight	22 lbs	10 kg
Drillpipe Connect	2-3/8 Reg API Pin Up others available upon request	
Wrench Flats	3 in	76 mm
Hole Size Range	4-1/2 in to 5-1/8 in 114 mm to 130 mm	
Bit Shank Required HMDHQ45 models	QLX40	
Minimum Air Volume Required	150 cfm	4.5 cmm
Maximum Operating Pressure	500 psi	34 bar



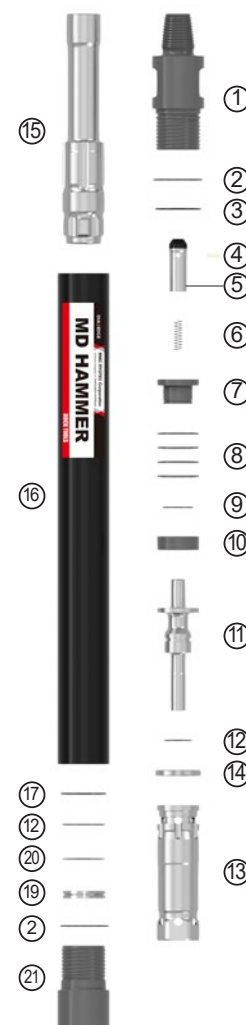
Parts List

Shown at the right side of the chart is the quantity of spare parts that should be kept on hand. Level 1 is for water well drilling, Level 3 is for high production drilling.

ITEM No	PART No	QTY REQD	PART NAME	WEIGHT		SPARE PARTS ON HAND		
				LBS	KGS	LEVEL 1	LEVEL 2	LEVEL 3
1	HP-BKH-MD459-0012	1	Back Head, 2 3/8" API Reg. Pin-Up	21	9.5	—	—	1
2	HP-BOW-0044	2	Washer, Breakout	0.03	0	—	2	4
3	HP-ORG/BKH-0100	1	O-Ring, Backhead	0.01		1	2	4
4	HP-CST-0053	1	Choke Set	0.01		—	—	—
5	HP-CKV-RH45-0047	1	Check Valve Body	0.58	0.26	—	—	1
6	HP-CVS-0052	1	Spring, Check Valve	0.3	0.14	—	1	2
7	HP-GUR-0086	1	Guide Ring	0.9	0.41	—	—	—
8	HP-DSC-0081	4	Disc Spring	0.25	0.11	—	—	4
9	HP-ORG/GUR-0115	1	O-Ring, Guide Ring	0.01		—	1	2
10	HP-SPT-0148	1	Spacer Ring	1.4	0.64	—	—	—
11	HP-ADB-MD45-0003	1	Air Distributor	4.5	2.05	—	—	1
12	HP-ORG/ADB-0093	1	O-Ring, Air Distributor	0.01		2	4	6
13	HP-CLD-MD45-0071	1	Cylinder Assy (including Cyl Ret Ring)	7	3.2	—	1	2
13	HP-CLDB-MD45-0169	1	Cylinder Body	—	—	—	—	—
14	HP-RRG/CLD-0208	1	Retaining Ring, Cylinder	0.45	0.2	—	—	—
15	HP-PST-MD45-0121	1	Piston	30	13.6	—	1	1
16	HP-WSV-MD45-0158	1	Wear Sleeve	39	17.7	1	2	3
17	HP-RRG/PST-0141	1	Retaining Ring, Piston	0.14	0.064	—	—	—
18	part not used in this hammer							
19	HP-BRR-0210	1	Retaining Ring, Bit Q40	0.65	0.295	—	1	1
20	HP-ORG/BRR-0106	1	O-Ring, Bit Retaining Ring	0.01		1	2	4
21	HP-CHK-MD45Q-0057	1	Chuck, Q40	11	5	2	4	6

THE FOLLOWING PARTS ARE SOLD SEPARATE

—	HP-MUW-0205		Washer, Make-up					1
—	HP-RBDKIT-MD45Q-0186		Rebuild Kit Q40					



DTH Hammers 5" - QL50/DHD350

Hammer Specification

	English	Metric
Outside Dia	4.53 in	115 mm
Overall Length Without Bit		
HMDHQ50	47.2 in	1199 mm
HMDHD350	48.2 in	1222 mm
Operating Length API shoulder to Bit Face		
HMDHQ50	47.1 in	1196 mm
HMDHD350	48.1 in	1222 mm
Total Weight	139 lbs	63 kg
Bore Size	3.71 in	94.2 mm
Piston Weight	30 lbs	13.6 kg
Drillpipe Connect	3-1/2 Reg API Pin Up others available upon request	
Wrench Flats	3.5 in	88.9 mm
Hole Size Range	5 in to 6 in	127 mm to 152 mm
Bit Shank Required	QL50 DHD350	
HMDHQ50		
HMDHD350		
Minimum Air Volume Required	250 cfm	7 cmm
Maximum Operating Pressure	500 psi	34 bar



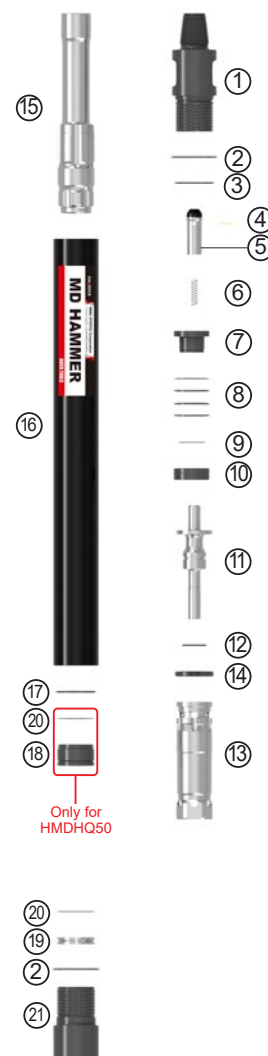
Parts List

Shown at the right side of the chart is the quantity of spare parts that should be kept on hand. Level 1 is for water well drilling, Level 3 is for high production drilling.

ITEM No	PART No	QTY REQD	PART NAME	WEIGHT		SPARE PARTS ON HAND		
				LBS	KGS	LEVEL 1	LEVEL 2	LEVEL 3
1	HP-BKH-MD5Q1-0014	1	Back Head, 3 1/2" API Reg. Pin-Up	30.5	13.9	—	—	1
2	HP-BOW-0039	2	Breakout Washers	0.03	0	—	2	4
3	HP-ORG/BKH-0101	1	O-Ring, Back Head	0.01		1	2	4
4	HP-CST-0054	1	Choke Set	0.01		—	—	—
5	HP-CKV-RH6-0048	1	Check Valve Assy.	0.58	0.26	—	—	1
6	HP-CVS-0050	1	Spring Check Valve	0.3	0.14	—	1	2
7	HP-GUR-0085	1	Guide Ring	0.9	0.41	—	—	—
8	HP-DSC-0080	4	Disc Spring	0.25	0.11	—	—	4
9	HP-ORG/GUR-0116	1	O-Ring, Guide Ring	0.01		—	1	2
10	HP-SPT-0147	1	Spacer Ring	1.4	0.64	—	—	—
11	HP-ADB-MD50-0004	1	Air Distributor	4.5	2.05	—	—	1
12	HP-ORG/ADB-0094	1	O-Ring, Air Distributor & Bearing	0.01		1	2	4
13	HP-CLD-MD50-0072	1	Cylinder Assy. (Includes Cyl Ret Ring)	7	3.2	—	1	2
14		1	RETAINING RING, COMES ON CYLINDER 13	0.45	0.2	—	—	—
15	HP-PST-MD50-0123	1	Piston for HMDHQ50	30	13.6	—	1	1
15	HP-PST-MD50R-0124	1	Piston for HMDHD350	30	13.6	—	1	1
16	HP-WSV-MD50-0159	1	Wear Sleeve	50	22.7	1	2	3
17	HP-RRG/PST-0145	1	Bearing, Piston Retaining Ring	0.14	0.064	—	—	—
18	HP-BRG-MD50-0026	1	Bearing for HMDHQ50	1	0.455	—	1	1
18	part not used in HMDHD350							
19	HP-BRR-0032	1	Bit Retaining Ring	0.65	0.295	—	1	1
20	HP-BRG-0025	1 or 2	"O-Ring, Bit Retaining Ring 2 for HMDHQ50, 1 for HMDH350"	0.01		1 or 2	2 or 4	3 or 6
21	HP-CHK-MD5Q-0060	1	Chuck for HMDHQ50	7.9	3.6	2	4	6
21	HP-CHK-MD50R-0212	1	Chuck for HMDHD350	11	5	2	4	6

THE FOLLOWING PARTS ARE SOLD SEPARATE

—	HP-MUW-0178		Make-Up Washer					1
—	HP-RBDKIT-MD50Q-0187		Rebuild Kit for HMDHQ50					1
—	HP-RBDKIT-MD50-0188		Rebuild Kit for HMDHD350					1



DTH Hammers 6" - QL60

Hammer Specification

	English	Metric
Outside Dia	5.46 in	139 mm
Overall Length Without Bit	48.1 in	1222 mm
Operating Length API shoulder to Bit Face	48.5 in	1232 mm
Total Weight	215 lbs	97.5 kg
Bore Size	4.5 in	114 mm
Piston Weight	43 lbs	19.5 kg
Drillpipe Connect	3-1/2 Reg API Pin Up others available upon request	
Wrench Flats	4 in	101.6 mm
Hole Size Range	6 in to 7 in 152 mm to 178 mm	
Bit Shank Required	QL60	
Minimum Air Volume Required	450 cfm	13 cmm
Operating Pressure	500 psi	34 bar



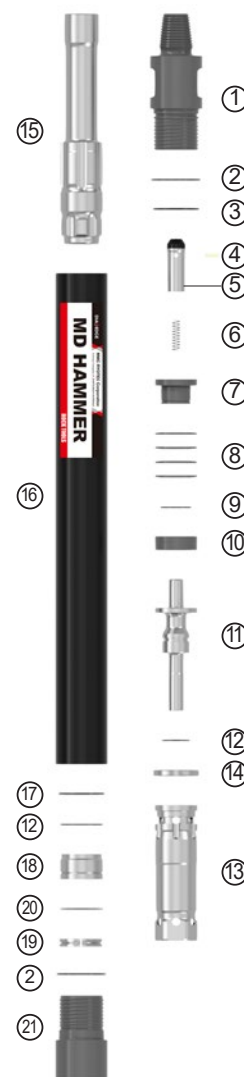
Parts List

Shown at the right side of the chart is the quantity of spare parts that should be kept on hand. Level 1 is for water well drilling, Level 3 is for high production drilling.

ITEM No	PART No	QTY REQD	PART NAME	WEIGHT		SPARE PARTS ON HAND		
				LBS	KGS	LEVEL 1	LEVEL 2	LEVEL 3
1	HP-BKH-MD6Q1-0018	1	Back Head, 3 1/2" API Reg. Pin Up	46.5	21.14	—	—	1
2	HP-BOW-0040	2	Break Out Washer	0.03	—	—	2	4
3	HP-ORG/BKH-0102	1	O-Ring for Backhead	0.01	—	1	2	4
4	HP-CST-0054	1	Choke Set	0.01	—	—	—	—
5	HP-CKV-RH6-0048	1	RH6 Check Valve Assembly	0.58	0.26	—	—	1
6	HP-CVS-0050	1	Spring for Check Valve	0.3	0.14	—	1	2
7	HP-GUR-0084	1	Disc Spring Guide Ring	1.65	0.75	—	—	—
8	HP-DSC-0078	4	Disc Spring	0.25	0.11	—	—	4
9	HP-ORG/GUR-0117	1	O-Ring for Guide Ring	0.01	—	—	1	2
10	HP-SPT-0153	1	Disc Spring Spacer Tube	1.64	0.75	—	—	—
11	HP-ADB-MD61-0007	1	Air Distributor	10.5	4.77	—	—	1
12	HP-ORG/ADB-0096	2	O-Ring for Air Distributor & Bearing	0.01	—	2	4	6
13	HP-CLD-MD61-0074	1	Cylinder Assembly	6.7	3.05	—	1	2
13	HP-CLDB-MD61-0173	1	Cylinder Body	6.7	3.05	—	1	2
14	HP-RRG/CLD-0203	1	Retaining Ring for Cylinder	0.48	0.22	—	—	—
15	HP-PST-MD6Q2-0127	1	Piston	47.3	21.5	—	1	1
16	HP-WSV-MD61-0161	1	Wear Sleeve	83.4	37.91	1	2	3
17	HP-RRG/BRG-0135	1	Retaining Ring for Bearing	0.16	0.07	—	—	—
18	HP-BRG-MD6QH-0023	1	Bearing	3.7	1.68	—	1	1
19	HP-BRR-0031	1	Bit Retaining Ring	1.49	0.68	—	1	1
20	HP-ORG/BRR-0108	1	O-Ring for Bit Retaining Ring	0.01	—	1	2	4
21	HP-CHK-MD6Q-0064	1	Chuck	14.7	6.68	2	4	6

THE FOLLOWING PARTS ARE SOLD SEPARATE

—	HP-MUW-0181		Make Up Washer	—	—	—	—	1
—	HP-RBDKIT-MD61Q-0194		Rebuild Kit	—	—	—	—	—
—	HP-RBDKIT-MD61QHD-0216		Heavy Duty Rebuild Kit	—	—	—	—	—



DTH Hammers 6" - DHD360

Hammer Specification

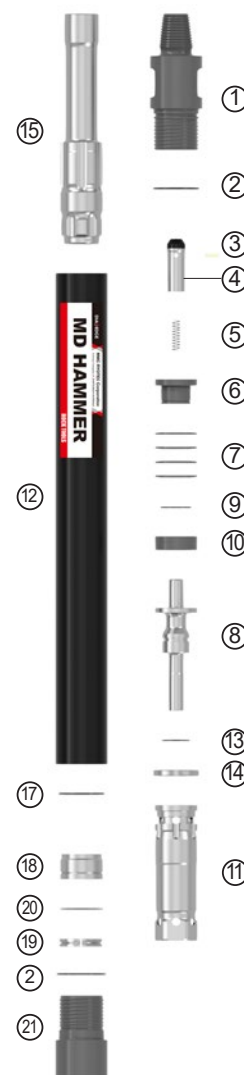
	English	Metric
Outside Dia	5.46 in	139 mm
Overall Length Without Bit	53.0 in	1346 mm
Total Weight	215 lbs	97.5 kg
Bore Size	4.44 in	113 mm
Piston Weight	45 lbs	20.4 kg
Drillpipe Connect	3-1/2 Reg API Pin Up others available upon request	
Wrench Flats	4 in	102 mm
Hole Size Range	6 in to 8-1/2 in	
Bit Shank Required	DHD360	
Minimum Air Volume Required	450 cfm	13 cmm
Maximum Operating Pressure	350 psi	23.8 bar



Parts List

Shown at the right side of the chart is the quantity of spare parts that should be kept on hand. Level 1 is for water well drilling, Level 3 is for high production drilling.

ITEM No	PART No	QTY REQD	PART NAME	WEIGHT		SPARE PARTS ON HAND		
				LBS	KGS	LEVEL 1	LEVEL 2	LEVEL 3
1	HP-BKH-MD61-0223	1	Back Head, 3 1/2" API Reg. Pin Up	41.5	18.8	—	—	1
2	HP-ORG/BKH-0102	1	O-Ring for Backhead			1	2	4
3	HP-CST-0054	1	Choke Set			—	—	1
4	HP-CKV-RH6-0048	1	Check Valve Assembly	0.8	0.36	—	—	1
5	HP-CVS-0050	1	Check Valve Spring	0.05	0.02	—	1	2
6	HP-WSR-0155	1	Washer	0.36		—	—	1
7	HP-DSC-0078	4	Disc Spring	0.68	0.31	—	4	8
8	HP-ADB-MD60-0006	1	Air Distributor	15	6.8	—	—	1
9	HP-ORG/ADB-0090	1	O-Ring for Air Distributor	0.01	0	—	1	2
10	HP-PRR-0133	1	Retaining Ring for Cylinder & Piston	0.56	0.25	—	—	2
11	HP-CLD-MD6S-0076	1	Cylinder	12.3	5.58	—	—	1
12	HP-WSV-MD6S-0225	2	Wear Sleeve	90	40.8	1	2	3
13	HP-ORG/BRR-0108	1	O-Ring for Bit Retaining Ring	0.01		—	1	2
14	HP-BOW-0040	1	Breakout Washer	0.03	0.014	1	2	4
15	HP-PST-MD6S-0128	1	Piston	45	20.4	—	—	1
16	HP-BRG-MD6S-0024	1	Bearing	4.5	2.04	—	—	1
17	HP-DSC-0078	4	Disc Spring	0.68	0.31	—	4	8
18	HP-WSR-0155	1	Washer	0.36		—	—	1
19	HP-SNR-0146	1	Snap Ring	0.32		—	—	1
20	HP-BRR-0029	1	Bit Retaining Ring	1.65	0.75	—	—	1
21	HP-CHK-MD6-0224	1	Chuck	14	6.3	2	4	6
THE FOLLOWING PARTS ARE SOLD SEPARATE								
25	HP-MUW-0181		Make Up Washer					1
—	HP-RBDKIT-MD6S-0226		Rebuild Kit					1
—	HP-RBDKIT-MD6SHD-0193		Heavy Duty Rebuild Kit					1



DTH Hammers 6" - SD6

Hammer Specification

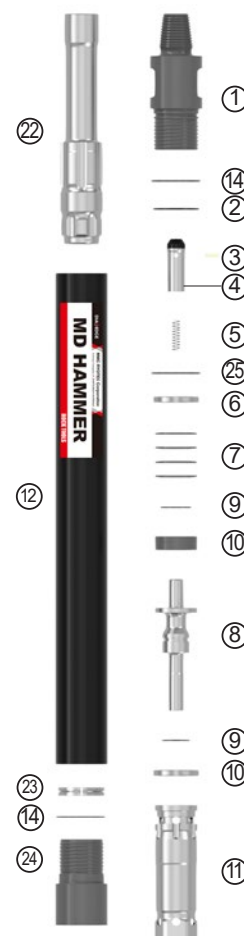
	English	Metric
Outside Dia	5.46 in	139 mm
Overall Length Without Bit	53.6 in	1361 mm
Total Weight	215 lbs	97.5 kg
Bore Size	4.44 in	113 mm
Piston Weight	45 lbs	20.4 kg
Drillpipe Connect	3-1/2 Reg API Pin Up others available upon request	
Wrench Flats	4 in	102 mm
Hole Size Range	6 in to 8-1/2 in	
Bit Shank Required	SD6	
Minimum Air Volume Required	450 cfm	13 cmm
Maximum Operating Pressure	350 psi	23.8 bar



Parts List

Shown at the right side of the chart is the quantity of spare parts that should be kept on hand.
Level 1 is for water well drilling, Level 3 is for high production drilling.

ITEM No	PART No	QTY REQD	PART NAME	WEIGHT		SPARE PARTS ON HAND		
				LBS	KGS	LEVEL 1	LEVEL 2	LEVEL 3
THE FOLLOWING PARTS ARE IN 8 INCH MODEL HAMMERS								
1	HP-BKH-MD61-0366	1	BACKHEAD WITH 3-1/2 REG API PIN UP	41.5	18.8	—	—	1
2	HP-ORG/BKH-0370	1	O-RING, BACKHEAD			1	2	4
3	HP-CST-0371	1	CHOKE SET			—	—	1
4	HP-CKV-MD6-0372	1	CHECK VALVE	0.8	0.36	—	—	1
5	HP-CVS-0373	1	SPRING, CHK VAL	0.05	0.02	—	1	2
6	HP-WSR-0374	1	WASHER	0.36		—	—	1
7	HP-DSC-0375	4	DISK SPRINGS	0.68	0.31	—	4	8
8	HP-ADB-MD6-0376	1	AIR DISTRIBUTOR	15	6.80	—	—	1
9	HP-ORG/ADB-0377	1	O-RING, AIR DISTRIBUTOR	0.01	0.00	—	1	2
10	HP-RRG/CLD-0378	1	RET RING, CYLINDER/PISTON	0.56	0.25	—	—	2
11	HP-CLD-MD6S-0379	1	CYLINDER	12.3	5.58	—	—	1
12	HP-WSV-MD6S-0380	1	WEAR SLEEVE	90	40.8	1	2	3
13	HP-ORG/BRR-0382	1	O-RING, BIT RET. RING	0.01		—	1	2
14	HP-BOW-0383	2	BREAKOUT WASHER	0.03	0.014	1	2	4
HMDHSD6 PARTS ONLY								
22	HP-PST-MD6SM-0384	1	PISTON	45	20.4	—	—	1
23	HP-BRR-0386	1	BIT RETAINING RING	0.9	0.41	—	—	1
24	HP-CHK-MD6M-0387	1	CHUCK	14	6.3	2	4	6
THE FOLLOWING PARTS ARE SOLD SEPARATE								
25	HP-MUW-0389		MAKE-UP WASHER	0.12	0.05	—	1	2
—	HP-CRRIKIT-0390		CYL RET RING INSTALL KIT					
—	HP-CYLIKIT-0391		CYLINDER ISTALL KIT					
—	HP-CYLIKIT-MD6SM-0392		SET OF CYLINDER INSTALL RINGS AVAILABLE AT NO CHARGE					



DTH Hammers 8" - QL80/DHD380

Hammer Specification

	English	Metric
Outside Dia	7.10 in	180 mm
Overall Length Without Bit		
HMDHD380 Models	56.9 in	1445 mm
HMDHQ80 Models	56.2 in	1427 mm
Operating Length API Shoulder to Bit Face		
HMDHD380 Models	57.7 in	1542 mm
HMDHQ80 Models	57.0 in	1524 mm
Total Weight	414 lbs	188 kg
Bore Size	5.87 in	149 mm
Piston Weight	78 lbs	35 kg
Drillpipe Connect	4-1/2 Reg API Pin Up others available upon request	
Wrench Flats	5.9 in	150 mm
Hole Size Range All Models	7-7/8 in to 10 in	200 mm to 254 mm
Bit Shank Required		
HMDHD380 Models	DHD380	
HMDHQ80 Models	QL80	
Minimum Air Volume Required	900 cfm	26 cmm
Maximum Operating Pressure All Models	500 psi	34 bar



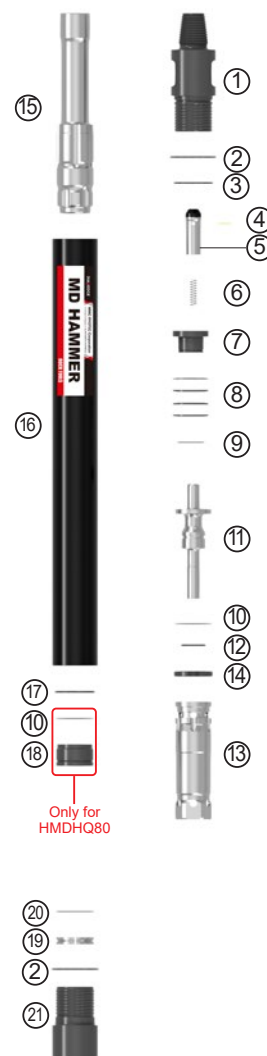
Parts List

Shown at the right side of the chart is the quantity of spare parts that should be kept on hand.
Level 1 is for water well drilling, Level 3 is for high production drilling.

ITEM No	PART No	QTY REQD	PART NAME	WEIGHT		SPARE PARTS ON HAND		
				LBS	KGS	LEVEL 1	LEVEL 2	LEVEL 3
1	HP-BKH-MD803-0020	1	Back Head, 4 1/2" API Reg. Pin Up	98	44.5	—	—	1
2	HP-BOW-0041	2	Washer, Breakout	0.03	0	—	2	4
3	HP-ORG/BKH-0103	1	O-Ring for Back Head	0.01		1	2	4
4	HP-CST-0054	1	Choke Set	0.01		—	—	—
5	HP-CKV-RH8-0049	1	Check Valve Body	1.2	0.55	—	—	1
6	HP-CVS-0051	1	Spring, Check Valve	0.3	0.14	—	1	2
7	HP-GUR-0087	1	Disc Spring Guide Ring	4.3	1.95	—	—	—
8	HP-DSC-0079	4	Disc Spring	0.22	0.1	—	—	4
9	HP-SPT-0149	1	Spacer Ring	4.4	2	—	—	—
10	HP-ORG/GUR-0118	3 or 2	O-Ring for Guide Ring, Bearing & Air Dist 3 for HMDHQ80, 2 for HMDHD380	0.01		3 or 2	6 or 4	9 or 6
11	HP-ADB-MD80-0009	1	Air Distributor	4.5	2.05	—	—	1
12	part not used in this hammer							
13	HP-CLD-MD80-0077	1	Cylinder, Assembly	7	3.2	—	1	2
14		1	RETAINING RING, COMES ON CYLINDER 13	0.45	0.2	—	—	—
15	HP-PST/LOW-MD80Q1-0129	1	Piston for HMDHQ80	78	35.5	—	1	1
15	HP-PST/LOW-MD80R1-0130	1	Piston for HMDHD380	78	35.5	—	1	1
16	HP-WSV-MD80-0166	1	Wear Sleeve	139	63.2	1	2	3
17	HP-RRG/PST-0142	1	Retaining Ring, Piston	0.24	0.109	—	—	—
18	HP-BRG-MD80-0028	1	Bearing	6.7	3.045	—	1	1
18	part not used in HMDHD380							
19	HP-BRR-0036	1	Bit Retaining Ring	3.2	1.455	—	1	1
20	HP-ORG/BRR-0111	1	O-Ring for Bit Retaining Ring	0.01		2	4	6
21	HP-CHK-MD80Q-0067	1	Chuck for HMDHQ80	25.8	11.7	2	4	6
21	HP-CHK-MD80R-0068	1	Chuck for HMDHD380	25.8	11.7	2	4	6

THE FOLLOWING PARTS ARE SOLD SEPARATE

—	HP-MUW-0206		Washer, Make-Up					1
—	HP-RBDKIT-MD80QLV-0197		Rebuild Kit for HMDHQ80					1
—	HP-RBDKIT-MD80LV-0199		Rebuild Kit for HMDHD380					1



DTH Hammers 8" - SD8

Hammer Specification

	English	Metric
Outside Dia	7.10 in	180 mm
Overall Length Without Bit	55.8 in	1416 mm
Operating Length API shoulder to Bit Face	56.6 in	1437 mm
Total Weight	414 lbs	188 kg
Bore Size	5.87 in	149 mm
Piston Weight	78 lbs	35 kg
Drillpipe Connect	4-1/2 Reg API Pin Up others available upon request	
Wrench Flats	5.9 in	150 mm
Hole Size Range	7.8 to 10 in 200 mm to 254 mm	
Bit Shank Required	SD8	
Minimum Air Volume Required	900 cfm	26 cmm
Operating Pressure	500 psi	34 bar



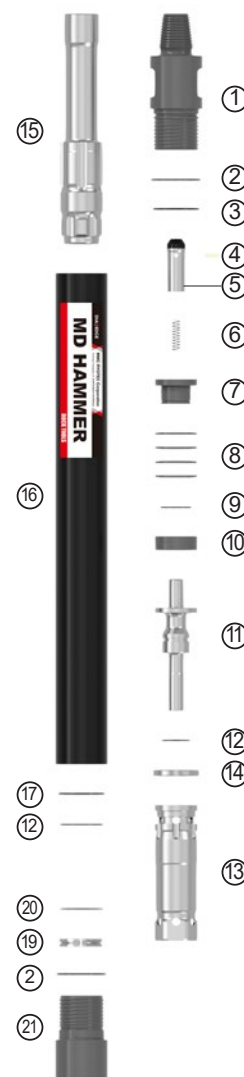
Parts List

Shown at the right side of the chart is the quantity of spare parts that should be kept on hand. Level 1 is for water well drilling, Level 3 is for high production drilling.

ITEM No	PART No	QTY REQD	PART NAME	WEIGHT		SPARE PARTS ON HAND		
				LBS	KGS	LEVEL 1	LEVEL 2	LEVEL 3
1	HP-BKH-MD803-0393	1	BACKHEAD	98	44.5	—	—	1
2	HP-BOW-0394	2	WASHER, BREAKOUT	0.03	0.0	—	2	4
3	HP-ORG/BKH-0395	1	O-RING, BACKHEAD	0.01		1	2	4
4	HP-CST-0396	1	CHOKE SET, SET OF 3	0.01		—	—	—
5	HP-CKV-MD8-0397	1	CHECK VALVE, WITH SEAL CAP	1.2	0.55	—	—	1
6	HP-CVS-0398	1	SPRING, CHK VAL	0.30	0.14	—	1	2
7	HP-GUR-0399	1	GUIDE RING	4.30	1.95	—	—	—
8	HP-DSC-0400	4	DISC SPRING	0.22	0.10	—	—	4
9	HP-ORG/GUR-0401	2	O-RING, GUIDE RING, AIR DIST	0.01		2	4	6
10	HP-SPT-0344	1	SPACER RING	4.40	2.00	—	—	—
11	HP-ADB-MD80-0403	1	AIR DISTRIBUTOR	22	10.00	—	—	1
12			part not used in this hammer					
13	HP-CYL-MD80-0404	1	CYLINDER, COMES WITH RING 14 INSTALLED	7.0	3.2	—	1	2
14		1	RETAINING RING, COMES ON CYLINDER 13	2.7	1.2	—	—	—
15	HP-PST-MD80M2-0405	1	PISTON, FOR 6315/SD8 BIT FOR STANDARD MODEL	78.0	35.5	—	1	1
16	HP-WSV-MD80-0407	1	WEAR SLEEVE	139	63.2	1	2	3
17	HP-RRG/PST-0408	1	RETAINING RING, PISTON	0.24	0.109	—	—	—
18			part not used in this hammer					
19	HP-BRR-0409	1	RETAINING RING, 6315/SD8 BIT	3.2	1.455	—	1	1
20	HP-ORG/BRR-0410	1	O-RING, BIT RETAINING RING	0.01		2	4	6
21	HP-CHK-MD80M-0411	1	CHUCK, 6315/SD8 BIT	25.8	11.7	2	4	6

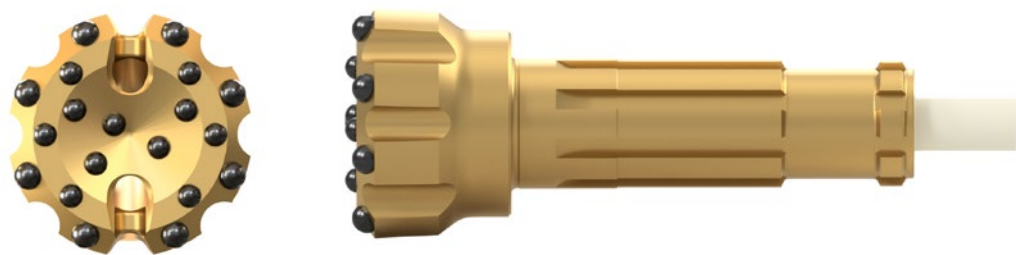
THE FOLLOWING PARTS ARE SOLD SEPARATE

—	HP-MUW-0413		MAKEUP WASHER	—	—	—	—	1
—	HP-CLDIKIT-MD80M-0414		SET OF CYLINDER INSTALL RINGS, AVAILABLE AT NO CHARGE	—	—	—	—	—



DTH Product Lineup

DTH Bits

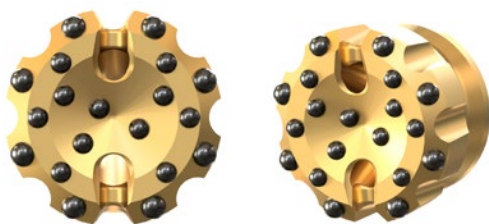


Face Designs of DTH Bits

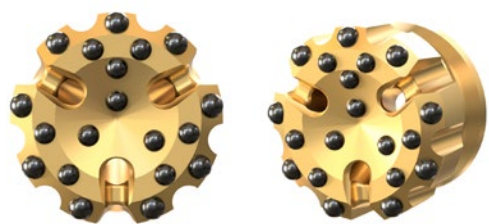
CONCAVE / TYPE 65

CONCAVE is the most common face style. Its dish-shaped face ensures excellent penetration in medium to hard rock while maintaining a straight hole. It also provides superior air flushing, making it ideal for most drilling conditions.

2 flushing holes design



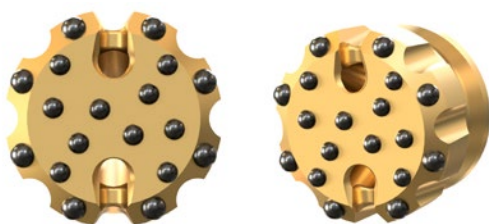
3 flushing holes design



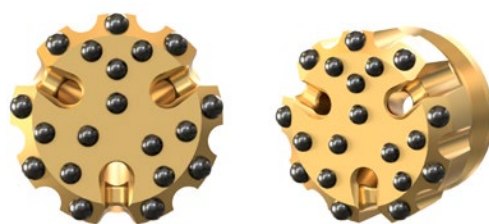
FLAT FACE / TYPE 25

FLAT FACE is ideal for hard rock and broken formations, offering aggressive drilling performance. It is mainly used for blast hole drilling and lead off in deep holes. Standard face slots help keep the cutting face clean.

2 flushing holes design



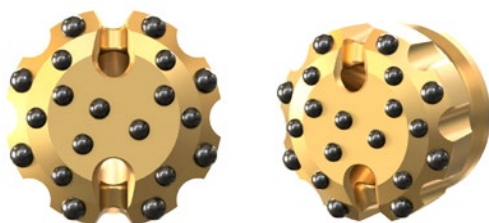
3 flushing holes design



CONVEX / TYPE 85

CONVEX is designed for high-speed drilling, ideal for soft to medium-hard, non-abrasive rock formations.

2 flushing holes design



3 flushing holes design



For 3.5" Hammers

Face design	Shank	Gauge Diameter		Product code	Gauge Button	Face Button	Flushing holes
		mm	Inch		No x Dia(mm)	No x Dia(mm)	
Flat face 	DHD3.5	90	3 1/2	DH3.5P90R25VM	8 x φ12	6 x φ12	2
		95	3 3/4	DH3.5P95R25VM	8 x φ12	6 x φ12	2
		100	3 15/16	DH3.5P100R25VM	8 x φ13	6 x φ13	2
		105	4 1/8	DH3.5P105R25VM	8 x φ14	6 x φ14	2
		Foot Valve		FV-DH3.5			
Flat face 	MIS30	90	3 1/2	MIS30P90R25VM	8 x φ12	6 x φ12	2
		95	3 3/4	MIS30P95R25VM	8 x φ12	6 x φ12	2
		100	3 15/16	MIS30P100R25VM	8 x φ13	6 x φ13	2
		105	4 1/8	MIS30P105R25VM	8 x φ14	6 x φ14	2
		Foot Valve		FV-MIS30			
Flat face 	COP32	90	3 1/2	COP32P90R25VM	8 x φ12	6 x φ12	2
		95	3 3/4	COP32P95R25VM	8 x φ12	6 x φ12	2
		100	3 15/16	COP32P100R25VM	8 x φ13	6 x φ13	2
		105	4 1/8	COP32P105R25VM	8 x φ14	6 x φ14	2
		Foot Valve		FV-COP32			

For 4" Hammers

Face design	Shank	Gauge Diameter		Product code	Gauge Button	Face Button	Flushing holes
		mm	Inch		No x Dia(mm)	No x Dia(mm)	
Flat face 	DHD340	110	4 3/8	DH340P110R25VM	8 x φ14	7 x φ14	2
		115	4 1/2	DH340P115R25VM	8 x φ14	7 x φ14	2
		120	4 5/7	DH340P120R25VM	8 x φ14	7 x φ14	2
		127	5	DH340P127R25VM	8 x φ16	8 x φ14	2
		Foot Valve		FV-DH340			
Concave 	DHD340	110	4 3/8	DH340P110R65VM	8 x φ14	6 x φ14	2
		115	4 1/2	DH340P115R65VM	8 x φ14	7 x φ14	2
		120	4 5/7	DH340P120R65VM	8 x φ14	7 x φ14	2
		127	5	DH340P127R65VM	8 x φ16	8 x φ14	2
		Foot Valve		FV-DH340			
Flat face 	QLX40 (TD40, COP44G)	110	4 3/8	QLX40P110R25VM	8 x φ14	7 x φ14	2
		115	4 1/2	QLX40P115R25VM	8 x φ14	7 x φ14	2
		120	4 5/7	QLX40P120R25VM	8 x φ14	7 x φ14	2
		127	5	QLX40P127R25VM	8 x φ16	8 x φ14	2
		Foot Valve		FV-TD40			
Concave 	QLX40 (TD40, COP44G)	110	4 3/8	QLX40P110R65VM	8 x φ14	6 x φ14	2
		115	4 1/2	QLX40P115R65VM	8 x φ14	7 x φ14	2
		120	4 5/7	QLX40P120R65VM	8 x φ14	7 x φ14	2
		127	5	QLX40P127R65VM	8 x φ16	8 x φ14	2
		Foot Valve		FV-TD40			

For 5" Hammers

Face design	Shank	Gauge Diameter		Product code	Gauge Button	Face Button	Flushing holes
		mm	Inch		No x Dia(mm)	No x Dia(mm)	
Flat face 	QL50	130	5 1/8	QL50P130R25VM	8 x φ16	8 x φ14	2
		134	5 1/4	QL50P134R25VM	8 x φ16	9 x φ14	2
		140	5 1/2	QL50P140R25VM	8 x φ16	10 x φ14	2
		146	5 3/4	QL50P146R25VM	8 x φ16	10 x φ14	2
		152	6	QL50P152R25VM	8 x φ17	9 x φ16	2
Concave 	QL50	Foot Valve		FV-QL50			
		130	5 1/8	QL50P130R65VM	8 x φ16	8 x φ14	2
		134	5 1/4	QL50P134R65VM	8 x φ16	8 x φ14	2
		140	5 1/2	QL50P140R65VM	8 x φ16	8 x φ14	2
		146	5 3/4	QL50P146R65VM	8 x φ16	9 x φ14	2
Flat face 	DHD350	152	6	QL50P152R65VM	8 x φ17	10 x φ16	2
		Foot Valve		FV-QL50			
		130	5 1/8	DH350P130R25VM	8 x φ16	8 x φ14	2
		134	5 1/4	DH350P134R25VM	8 x φ16	9 x φ14	2
		140	5 1/2	DH350P140R25VM	8 x φ16	10 x φ14	2
Concave 	DHD350	146	5 3/4	DH350P146R25VM	8 x φ16	10 x φ14	2
		152	6	DH350P152R25VM	8 x φ17	9 x φ16	2
		Foot Valve		FV-DH350			
		130	5 1/8	DH350P130R65VM	8 x φ16	8 x φ14	2
		134	5 1/4	DH350P134R65VM	8 x φ16	8 x φ14	2
Flat face 	DHD350	140	5 1/2	DH350P140R65VM	8 x φ16	8 x φ14	2
		146	5 3/4	DH350P146R65VM	8 x φ16	9 x φ14	2
		152	6	DH350P152R65VM	8 x φ17	10 x φ16	2
		Foot Valve		FV-DH350			

DTH Bits

For 6" Hammers

Face design	Shank	Gauge Diameter		Product code	Gauge Button	Face Button	Flushing holes
		mm	Inch		No x Dia(mm)	No x Dia(mm)	
Concave 	QL60	152	6	QL60P152R65VM	8 x ϕ 17	10 x ϕ 16	2
		156	6 1/8	QL60P156R65VM	8 x ϕ 19	10 x ϕ 16	2
		159	6 1/4	QL60P159R65VM	8 x ϕ 19	10 x ϕ 16	2
		165	6 1/2	QL60P165R65YM	9 x ϕ 19	10 x ϕ 17	3
		171	6 3/4	QL60P171R65YM	9 x ϕ 19	10 x ϕ 17	3
		178	7	QL60P178R65YM	9 x ϕ 19	11 x ϕ 17	3
		Foot Valve		FV-QL60			
Concave 	DHD360	152	6	DH360P152R65VM	8 x ϕ 17	10 x ϕ 16	2
		156	6 1/8	DH360P156R65VM	8 x ϕ 19	10 x ϕ 16	2
		159	6 1/4	DH360P159R65VM	8 x ϕ 19	10 x ϕ 16	2
		165	6 1/2	DH360P165R65YM	9 x ϕ 19	10 x ϕ 17	3
		171	6 3/4	DH360P171R65YM	9 x ϕ 19	10 x ϕ 17	3
		178	7	DH360P178R65YM	9 x ϕ 19	11 x ϕ 17	3
		Foot Valve		FV-DH360			
Concave 	SD6	152	6	SD6P152R65VM	8 x ϕ 17	10 x ϕ 16	2
		156	6 1/8	SD6P156R65VM	8 x ϕ 19	10 x ϕ 16	2
		159	6 1/4	SD6P159R65VM	8 x ϕ 19	10 x ϕ 16	2
		165	6 1/2	SD6P165R65YM	9 x ϕ 19	10 x ϕ 17	3
		171	6 3/4	SD6P171R65YM	9 x ϕ 19	10 x ϕ 17	3
		178	7	SD6P178R65YM	9 x ϕ 19	11 x ϕ 17	3
		Foot Valve		FV-SD6			

For 8" Hammers

Face design	Shank	Gauge Diameter		Product code	Gauge Button	Face Button	Flushing holes
		mm	Inch		No x Dia(mm)	No x Dia(mm)	
Concave 	QL80	203	8	QL80P203R65YM	9 x ϕ 19	12 x ϕ 19	3
		216	8 1/2	QL80P216R65YM	9 x ϕ 19	13 x ϕ 19	3
		229	9	QL80P229R65YM	12 x ϕ 19	17 x ϕ 19	3
		241	9 1/2	QL80P241R65YM	12 x ϕ 19	19 x ϕ 19	3
		254	10	QL80P254R65YM	12 x ϕ 19	21 x ϕ 19	3
		Foot Valve		FV-QL80			
Concave 	DHD380	203	8	DH380P203R65YM	9 x ϕ 19	12 x ϕ 19	3
		216	8 1/2	DH380P216R65YM	9 x ϕ 19	13 x ϕ 19	3
		229	9	DH380P229R65YM	12 x ϕ 19	17 x ϕ 19	3
		241	9 1/2	DH380P241R65YM	12 x ϕ 19	19 x ϕ 19	3
		254	10	DH380P254R65YM	12 x ϕ 19	21 x ϕ 19	3
		Foot Valve		FV-DH380			
Concave 	SD8	203	8	SD8P203R65YM	9 x ϕ 19	12 x ϕ 19	3
		216	8 1/2	SD8P216R65YM	9 x ϕ 19	13 x ϕ 19	3
		229	9	SD8P229R65YM	12 x ϕ 19	17 x ϕ 19	3
		241	9 1/2	SD8P241R65YM	12 x ϕ 19	19 x ϕ 19	3
		254	10	SD8P254R65YM	12 x ϕ 19	21 x ϕ 19	3
		Foot Valve		FV-SD8			