



SAI DEEPA
ROCK DRILLING TOOLS
— JUST DRILL! —

DOWN THE HOLE

ROCK DRILLING TOOLS

PRODUCT CATALOGUE



www.saideepa.com



SAI DEEPA
ROCK DRILLING TOOLS
— JUST DRILL! —

Copyright © 2018 by SAI DEEPA ROCK DRILLS PVT. LTD.

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of Sai Deepa Rock Drills Pvt. Ltd. For permission requests, write to Saideepa Rock Drills Pvt Ltd. Attention: Permissions Coordinator," at the address mentioned on the back page.

TABLE OF CONTENT

INTRODUCTION	
ISO STANDARDS	5
BIT FACE STYLES	6
BUTTON SHAPES	6
FEATURES & BENEFITS	7
BIT SHANK IDENTIFICATION CHART	8
DTH SHANKS 10	
SD SHANKS	10
PANTHER SHANKS	14
BR SHANKS	16
MACH SHANKS	19
DHD SHANKS	22
QL SHANKS	27
RK SHANKS	30
OTHER SHANKS SERIES	31
DTH SHANKS OPERATION & MAINTENANCE	33
DTH HAMMER SERIES 36	
STUNNER SERIES	37
WINNER SERIES	40
JDM SERIES	43
JDC SERIES	51
FD SERIES	58
D SERIES	62
DRT SERIES	67
UDC SERIES	70
RC SERIES	74
DTH HAMMERS MAINTENANCE	79
OTHER DTH PRODUCTS 82	
SHOCK ABSORBER	83
ODEX	86
ADAPTERS	89
DRILL PIPES	90
DTH SYMMETRIC SYSTEM	90
SPECIFICATION CHARTS 91	



GLOBAL CLIENTELE



ABOUT SAIDEEPA

Sai Deepa Rock Drills Pvt.Ltd. is one of the leading manufacturers of rock drilling tools and Mining Equipment in India. The product range includes DTH Hammers, DTH Button Bits, Drifter Bits and related products used in water well drilling, Mining, Tunneling, Quarrying and Construction Industries.

The company products are acceptable globally in more than 50 countries. The company has set up a state of the art production facilities for manufacturing of Rock Drilling Tools and Mining equipment's which includes excellent CNC equipped Machine shop, Heat Treatment with Seal Quenching Furnaces, Metallurgical laboratory, Quality Control Department and Surface Treatment plant.

Stringent Quality Systems are adopted to produce world class products at most competitive prices. The company has a dedicated Research and Development unit where the skilled engineers are continuously involved in upbrining durable product designs to give products a total reliability, high productivity and complete customer satisfaction.

STANDARDS

Saideepa has established and applied Quality management system ISO 9001:2015, Environment management system ISO 14001:2015, Occupational health and Safety management system ISO 45001:2018 and Information security management system ISO 27001:2013 for design, manufacturing and supplying of DTH hammers and button bits. Our Integrated management system are inspected by DNV.GL from Norway and United Kingdom Accreditation Service (UKAS) from UK awarded us above all certificates.

CORE VALUES

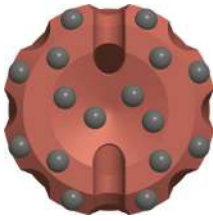
• Safety • Customer Success • Team Play • Environmental Protection • Information Security

RAW MATERIAL

SDRD recognizes that it is possible to produce quality products only from the best raw materials. All the SDRD products are made from the alloy steels having very high quality levels. The steels are procured from the best alloy steel manufactures available both in India and abroad. The composition of the steel is selected very precisely to give the best final properties to the product.



BIT FACE STYLES



Concave

This is the common face style used in market. Cone shaped depression in the face has centering effect for straighter holes. It gives excellent penetration in soft to medium hard rock formation.



Convex

This face has been utilized in medium hard to hard drilling formation. Face design allows for increased body support for gauge carbide. There are two gauges and the inner gauge row helps to protect the outer row from excessive wear. The convex style tends to keep the drilling face intact longer by drilling with the two rows of the buttons on the convex face. This face style gives good hole penetration in medium to hard rock formations.



Flat

This bit is very aggressive in drilling application and is suited best for hard to very hard rock and broken formation. Face slots help eliminate bit plugging in softer zones. More carbide to surface contact for better rock fracture. It is a simple and robust design well suited for hard to very hard rock formation.

BUTTON SHAPES



Spherical (Dome)

This button is the most common shape utilized in DTH bits. This type of shape is the strongest and most resistant to breakage. The domed shape provides excellent penetration in medium rock, hard rock, and hard rock broken formations, in all types of drilling.



Ballistic

Normally this button is used in less hard consolidated drilling formations. This type of button is very aggressive and drills faster than domed. However, because the ballistic tip protrudes out farther than domed, the ballistic is prone to breakage if used in the wrong formations. Care should be taken when drilling with this type of button. Ballistic buttons yield high penetration rates and efficient rock breakage.



Parabolic

Suitable for all soft and medium rock conditions including fractured and fissured rocks.

DTH BITS & HAMMERS

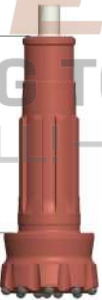
- Sai Deepa Rock Drills manufactures extensive range of DTH Bits and Hammers with good quality and most economical.
- Our products are suited to all type of drilling like Water well, Mining, Construction and Quarry.
- Our products are the preferred by drilling engineers in many countries because of their precision design and efficient drilling during use.
- We manufacture wide range hammers with suitable bits for different applications. The bit range varies from 3" to 20" (diameter) with different face styles like Concave, Convex and Flat. The hammer range varies from 2.5" to 18".

FEATURES & BENEFITS

- SDRD products are designed, engineered and manufactured, for superior penetration while maintaining maximum cleaning action at the face of the bit, thus extending the working of the product.
- Products are field tested to stringent quality requirements to provide consistent performance results in the field.
- Bits are conditioned by a special manufacturing procedure which establishes a protective cushion on the bits, thus reducing chances of cracking which often occur in hi-impact drilling products.
- Products are heat treated applying most advanced heat treatment technology that extends the product life for maximum wear and performance in the toughest of drilling conditions. Relevant quality checks are applied in various stages of manufacture.
- Saideepa products are manufactured right from raw material to finish stage, All in house production efficiency using advance technology with international standards.
- The combination of premium steel, carbide, state of the art design and manufacturing Techniques, yields a superior product, capable of performing in the toughest of drilling conditions.



BIT SHANK IDENTIFICATION CHART

BR2	 165 mm 6 SPLINES	BR3	 165 mm 6 SPLINES	BR33	 165 mm 7 SPLINES
DHD 3.5	 181 mm 8 SPLINES	DHD 340	 208.5 mm 8 SPLINES	DHD 350	 260 mm 8 SPLINES
DHD 360	 308 mm 8 SPLINES	DHD 380	 350 mm 10 SPLINES	SD4	 260 mm 8 SPLINES
SD5	 260 mm 8 SPLINES	SD6	 324 mm 8 SPLINES	SD8	 320.5 mm 8 SPLINES
SD10	 356 mm 8 SPLINES	SD12	 470 mm 8 SPLINES	QL40	 279 mm 10 SPLINES

BIT SHANK IDENTIFICATION CHART

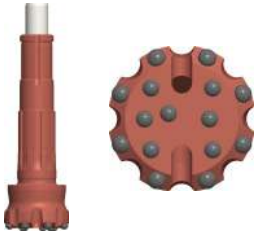
QL50	 240 mm	QL60	 253.5 mm	QL80	 332.5 mm		
12 SPLINES		12 SPLINES		16 SPLINES			
CHEETHA	 134.9 mm	PANTHER	 192 mm	DHD 17	 280 mm		
6 SPLINES		6 SPLINES		8 SPLINES			
MACH303	 170 mm	MACH44	 243.7 mm	MX40	 243.7 mm		
8 SPLINES		8 SPLINES		8 SPLINES			
MACH50	 265 mm	RK1	 324 mm	RK3	 324 mm	NUMA	 490.5 mm
8 SPLINES		8 SPLINES		10 SPLINES		12 SPLINES	
PUMA	 335.8 mm	QLX40	 209 mm	TD40	 208.9 mm	RC5	 263 mm
12 SPLINES		12 SPLINES		12 SPLINES		6 SPLINES	

SD Shanks



SD SHANKS

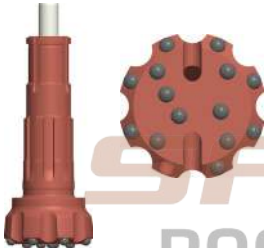
SD4

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	105	4 1/8	2	14X8	12X6	9.1	20.1	36-41967105S
	110	4 1/3	2	14X8	12X6	9.3	20.5	36-41967110S
	115	4 1/2	2	14X8	12X6	9.3	20.7	36-41967115S
	121	4 3/4	2	14X8	12X7	9.8	21.6	36-41977121S
	127	5	2	14X8	14X8	10.4	23.0	36-41989127S
	130	5 1/8	2	14X8	14X8	10.8	23.8	36-41989130S
	165	6 1/2	2	16X8	14X10	13.2	29.1	36-4190C165S

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	105	4 1/8	2	14X8	12X6	9.1	20.0	36-41767105S
	110	4 1/3	2	14X8	12X6	9.2	20.4	36-41767110S
	115	4 1/2	2	14X8	12X6	9.4	20.7	36-41767115S
	127	5	2	14X8	14X7	10.3	22.8	36-41779127S
	130	5 1/8	2	14X8	14X7	10.5	23.2	36-41779130S

CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	105	4 1/8	2	14X8	12X6	9.0	19.8	36-41867105S
	110	4 1/3	2	14X8	12X6	9.2	20.2	36-41867110S
	115	4 1/2	2	14X8	12X7	9.6	21.1	36-41877115S
	127	5	2	14X8	14X8	10.5	23.1	36-41889127S
	130	5 1/8	2	14X8	14X8	10.8	23.8	36-41889130S

SD5

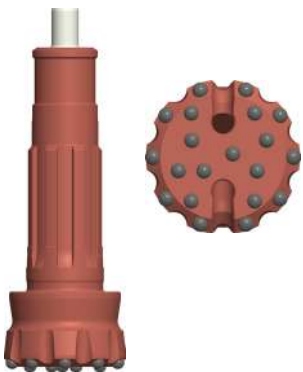
FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	125	4 15/16	2	14X8	14X7	13.0	28.7	36-51979125S
	127	5	2	14X8	14X7	13.2	29.1	36-51979127S
	140	5 1/2	2	16X8	16X8	15.5	34.1	36-5198D140S
	146	5 3/4	2	16X8	16X8	15.9	35.1	36-5198D146S
	152	6	2	16X8	16X10	16.6	36.6	36-5190D152S
	165	6 1/2	2	16X8	16X10	17.5	38.6	36-5190D165S

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	125	4 15/16	2	14X8	14X7	13.0	28.6	36-51779125S
	127	5	2	14X8	14X7	13.2	29.0	36-51779127S
	140	5 1/2	2	16X8	16X8	15.6	34.3	36-5178D140S
	146	5 3/4	2	16X8	16X7	15.9	35.0	36-5177D146S
	152	6	2	16X8	16X10	16.6	36.6	36-5170D152S
	165	6 1/2	2	16X8	16X10	17.5	38.6	36-5170D165S

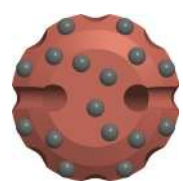
CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	127	5	2	14X8	14X7	12.9	28.4	36-51879127S
	140	5 1/2	2	16X8	14X8	15.5	34.1	36-5188C140S
	146	5 3/4	2	16X8	16X8	16.0	35.0	36-5188D146S

SD SHANKS

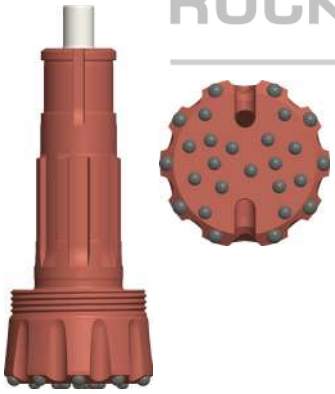
SD6

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	152	6	2	16X8	16X10	26.3	58.0	36-6190D152S
	156	6 1/8	2	16X8	16X10	26.5	58.4	36-6190D156S
	165	6 1/2	3	16X9	16X10	28.8	63.4	36-61P0D165S
	172	6 3/4	3	16X9	16X10	29.0	63.9	36-61P0D172S
	178	7	2	16X10	16X13	29.5	65.1	36-61KED178S
	190	7 1/2	2	16X10	16X14	31.9	70.2	36-61KFD190S
	200	7 7/8	2	16X10	16X14	33.1	73.0	36-61KFD200S
	203	8	2	19X10	16X16	33.6	74.1	36-61KHI203S
	216	8 1/2	2	19X10	16X16	35.9	79.3	36-61KHI216S
	216	8 1/2	2	18X10	16X16	36.0	79.4	36-61KHE216S
	254	10	2	19X10	16X20	43.1	95.0	36-61KII254S

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	152	6	2	16X8	16X10	26.1	57.4	36-6170D152S
	165	6 1/2	2	16X10	16X10	27.9	61.4	36-61I0D165S
	172	6 3/4	2	16X10	16X11	28.8	63.4	36-61I1D172S
	178	7	3	16X9	16X12	29.4	64.9	36-61N2D178S
	190	7 1/2	2	16X10	16X14	31.8	70.0	36-61IFD190S
	203	8	2	19X10	16X16	33.1	73.0	36-61IHI203S
	216	8 1/2	2	19X10	16X16	34.8	76.6	36-61IHI216S
	219	8 5/8	2	19X10	16X16	35.1	77.3	36-61IHI219S
	219	8 5/8	2	19X10	16X17	35.1	77.4	36-61III219S

CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	152	6	2	16X8	16X10	26.0	57.3	36-6180D152S
	165	6 1/2	2	16X10	16X10	27.7	61.1	36-61J0D165S
	172	6 3/4	3	16X12	16X10	28.5	62.8	36-61R0D172S

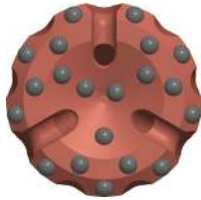
SD8

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	200	7 7/8	2	19X10	16X15	43.7	96.3	36-81KGI200S
	203	8	2	19X10	16X16	44.1	97.1	36-81KHI203S
	203	8	3	19X9	19X6	44.3	97.6	36-81PGI203S
				16X9				
	216	8 1/2	2	19X10	16X16	44.5	98.1	36-81KHI216S
	219	8 5/8	2	19X10	16X16	45.6	100.6	36-81KHI219S
	222	8 3/4	2	19X10	16X18	45.8	100.9	36-81KII222S
	225	8 7/8	2	19X10	16X20	46.5	102.5	36-81KII225S
	240	9 4/9	2	19X10	16X20	50.0	110.1	36-81KII240S
	241	9 1/2	2	19X10	16X20	50.0	110.1	36-81KII241S
	250	9 5/6	2	19X10	16X20	52.5	115.7	36-81KII250S
	254	10	2	19X10	16X20	53.5	117.9	36-81KII254S
	292	11 1/2	3	19X12	16X30	61.3	135.0	36-81SJI292S
	300	11 4/5	3	19X12	16X27	62.2	137.1	36-81SJI300S

SD SHANKS

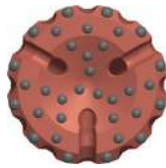
SD8

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	200	7 7/8	2	19X10	16X15	43.5	95.8	36-81IGI200S
	203	8	3	19X9	19X6	43.8	96.5	36-81NGI203S
					16X9			
	216	8 1/2	2	19X10	16X16	43.4	95.6	36-81IHI216S
	216	8 1/2	3	19X12	19X6	44.5	98.1	36-81QHI216S
					16X10			
	222	8 3/4	2	19X10	16X16	47.0	103.6	36-81IHI222S
	241	9 1/2	2	19X10	16X19	50.5	111.3	36-81III241S
	251	9 7/8	2	19X10	16X20	51.0	112.4	36-81III251S
	254	10	2	19X10	16X20	51.4	113.4	36-81III254S
	270	10 5/8	3	19X12	16X25	57.1	126.0	36-81QII270S
	280	11	3	19X12	16X30	59.3	130.8	36-81QJI280S
	305	12	3	19x18	19X15	70.9	156.4	36-81UJI305S
					16X13			
	311	12 1/4	3	19X12	19X21	73.7	162.5	36-81QJI311S
					16X9			



SD10

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	254	10	2	19X12	16X24	81.5	179.7	36-S1LII254S
	270	10 5/8	3	19X12	16X25	87.8	193.5	36-S1QII270S
	280	11	3	19X12	16X27	90.3	199.1	36-S1QJI280S
	292	11 1/2	3	19X21	16X23	91.6	201.9	36-S1UII292S
	305	12	3	19X18	19X15	97.6	215.1	36-S1UJI305S
					16X13			
	330	13	3	19X18	19X18	102.7	226.4	36-S1UJI330S
					16X13			



SD12

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	305	12	3	19x12	16x27	123.1	271.4	36-S2SJI305S

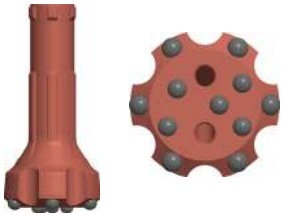


Panther Shanks

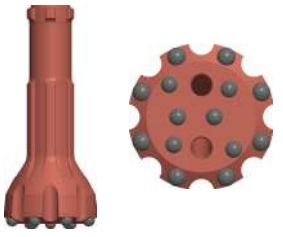


PANTHER SHANKS

CHEETHA

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	83	3 1/4	2	12x6	10x4	3.2	7.1	36-37341083S
	90	3 1/2	2	12x6	10x5	3.5	7.7	36-37351090S

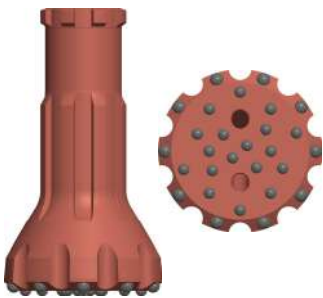
PANTHER

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	110	4 1/3	2	14X8	12X6	7.1	15.7	36-47967110S
	115	4 1/2	2	14X8	13X6	7.2	15.9	36-47968115S
	121	4 3/4	2	14X8	13X8	8.1	17.9	36-47988121S
	127	5	2	14X8	13X8	8.4	18.5	36-47988127S
	140	5 1/2	2	14X8	14X8	9.8	21.6	36-47989140S
	152	6	2	16X8	14X10	14.1	31.1	36-4790C152S
	165	6 1/2	2	16X10	14X10	15.2	33.4	36-47K0C165S
	172	6 3/4	2	16X10	16X13	16.3	35.9	36-47K3D172S

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	140	5 1/2	2	16X8	14x4	9.8	21.7	36-4778Q140S
					13X4			

CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	115	4 1/2	2	14x8	12x7	7.1	15.7	36-47877115B
	127	5	2	14x8	14x6	7.9	17.3	36-47807127P
					12X4			
	133	4 1/4	2	14x8	14x8	8.5	18.8	36-47889133P

D17

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	203	8	2	18X10	16X16	43.8	96.6	36-87KHE203S
	216	8 1/2	2	18X10	16X18	45.2	99.6	36-87KIE216S
	228	9	2	18x10	16X20	47.1	103.7	36-87KIE228S
	241	9 1/2	2	18x10	16x24	49.8	109.8	36-87KIE241S
	254	10	3	18X12	16X24	57.0	125.6	36-87SIE254S
	267	10 1/2	3	18x12	16x24	63.0	138.9	36-87SIE267S
	280	11	3	18x12	16X24	67.1	148.0	36-87SIE280S
	305	12	3	18X12	16X27	69.7	153.7	36-87SJE305S
	330	13	3	18X14	16X36	71.0	156.5	36-87TJE330S
	337	13 1/4	3	18X14	16X36	71.8	158.3	36-87TJE337S
	343	13 1/2	3	19X12	16X36	90.0	198.4	36-87SJ1343S
	356	14	3	19X14	16X36	105.5	232.6	36-87TJ1356S

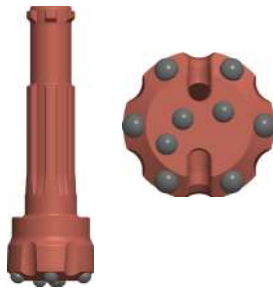
BR Shanks



BR SHANKS

BR2

FLAT FACE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
76	3	2	12x6	11x4	2.5	5.5	36-22342076P
76	3	2	11X6	11X4	2.5	5.5	36-2234Z076P
76	3	2	12X6	10X4	2.5	5.5	36-22341076S
80	3 1/7	2	12X6	11X4	2.8	6.2	36-22342080S
89	3 1/2	2	12X7	11X6	2.8	6.2	36-22662089S
95	3 3/4	2	12X6	10X6	3.5	7.7	36-22361095S

CONCAVE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
70	2 3/4	2	11X6	10X4	2.3	5.0	36-2215R070S
76	3	2	12X6	10X6	2.5	5.5	36-22161076S
85	3 1/3	2	12X6	10X6	2.6	5.8	36-22161085S
90	3 1/2	2	12X7	11X5	3.5	7.6	36-22452090S

CONVEX



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
70	2 3/4	2	10X6	10X5	2.3	5.0	36-2225P070B
76	3	2	11X6	11X5	2.5	5.5	36-2225Z076B
76	3	2	11X6	11X5	2.5	5.5	36-2225Z076P
86	3 2/5	2	11X7	11X6	2.9	6.3	36-2256Z086B
95	3 3/4	2	12X7	12X6	3.1	6.8	36-22563095S

BR3

FLAT FACE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
90	3 1/2	2	13X7	12X5	4.2	9.3	36-32655090S
90	3 1/2	2	12X7	12X5	4.2	9.3	36-32653090B
90	3 1/2	2	13X6	12X5	4.2	9.3	36-32355090S
95	3 3/4	2	13X7	13X5	4.6	10.2	36-32656095S
95	3 3/4	2	12X8	12X6	4.6	10.2	36-32963095S
95	3 3/4	2	13X7	13X5	4.6	10.2	36-32656095P
100	3 15/16	2	12X8	12X6	4.7	10.4	36-32963100S
102	4	2	14X8	12X6	4.9	10.7	36-32967102S
105	4 1/8	2	14X8	12X6	4.9	10.7	36-32967105S
130	5 1/8	2	16X8	14X8	8.2	18.1	36-3298C130S

CONCAVE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
90	3 1/2	2	12X7	12X5	4.3	9.4	36-32453090B
90	3 1/2	2	12X7	12X5	4.3	9.4	36-32453090S
95	3 3/4	2	12X7	12X6	4.5	10.0	36-32463095S
95	3 3/4	2	12X7	12X6	4.5	10.0	36-32463095B
100	3 15/16	2	12X8	12X6	4.6	10.1	36-32763100S
100	3 15/16	2	12X8	12X6	4.6	10.1	36-32763100B
105	4 1/8	2	14X8	12X6	4.9	10.8	36-32767105S

CONVEX



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
90	3 1/2	2	12X7	12X4	4.2	9.3	36-32543090B
95	3 3/4	2	12X7	12X7	4.3	9.5	36-32573095B
100	3 7/8	2	14X8	12X6	4.7	10.3	36-32867100P
102	4	2	14X8	12X6	4.8	10.5	36-32867102P
105	4 1/8	2	14X8	12X6	5.1	11.1	36-32867105B

BR SHANKS

BR33

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	90	3 1/2	2	12X7	11X5	4.6	10.2	36-42652090S
	95	3 3/4	2	12X7	12X6	4.9	10.8	36-42663095S
	100	3 15/16	2	14X8	12X6	5.3	11.6	36-42967100S
	102	4	2	14X8	12X6	5.6	12.3	36-42967102S
	105	4 1/8	2	14X8	12X6	5.9	13.0	36-42967105S

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	90	3 1/2	2	12X7	11X5	4.5	10.0	36-42452090S
	95	3 3/4	2	12X7	12X6	4.8	10.5	36-42463095B
	100	3 15/16	2	14X8	12X6	5.3	11.7	36-42767100S
	102	4	2	14X8	12X6	5.6	12.3	36-42767102S
	102	4	2	13X8	12X6	5.6	12.2	36-42765102B
	105	4 1/8	2	14X8	12X6	5.9	13.1	36-42767105S

CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	90	3 1/2	2	12X7	12X5	4.5	9.9	36-42553090S
	95	3 3/4	2	12X7	12X6	4.7	10.3	36-42563095B
	100	3 15/16	2	14X8	12X6	5.4	11.8	36-42867100S
	100	3 15/16	2	14X8	12X6	5.4	11.9	36-42867100B
	102	4	2	14X8	12X6	5.5	12.1	36-42867102S

SAI DEEPA
ROCK DRILLING TOOLS
 ——— JUST DRILL! ———

Mach Shanks



MACH SHANKS

MACH303

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	90	3 1/2	2	12X6	12X6	4.7	10.4	36-34363090S



MACH44

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	140	5 1/2	2	16X8	14X8	11.3	24.9	36-4498C140S



CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	108	4 1/4	2	14X8	12X6	9.2	20.3	36-44767108S
	127	5	2	14X8	14X7	10.4	22.9	36-44779127S
	133	5 1/4	2	14X8	14X7	11.0	24.3	36-44779133S
	140	5 1/2	2	14X8	14X8	12.3	27.1	36-44789140S
	150	6	2	16X8	14X10	11.7	25.9	36-4470C150S



CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	120	4 5/7	2	14X8	13X7	9.7	21.5	36-44878120S
	140	5	2	14X8	14X8	11.4	25.0	36-44889140S
	150	6	2	16X8	16X10	13.2	29.1	36-4480D150S



MACH50

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	165	6 1/2	2	16X8	16X10	19.1	42.0	36-5490D165S



CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	140	5 1/2	3	16X9	14X9	16.8	37.0	36-54N9C140S
	146	5 3/4	2	16X8	14X10	17.0	37.4	36-5470C146S
	150	6	2	16X8	16X8	17.3	38.1	36-5478D150S



CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	135	5 1/3	2	16X8	16X4	16.2	35.7	36-5487C135S
					14X3			
	140	5 1/2	2	16X8	16X7	16.5	36.4	36-5487D140S
	146	5 3/4	3	16X9	16X10	17.3	38.1	36-5400D146S
	150	6	2	16X8	16X10	17.7	38.9	36-5480D150S



MACH SHANKS

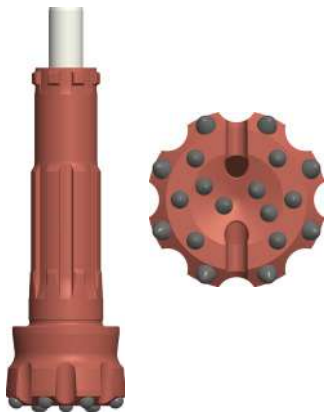
MX40

FLAT FACE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
105	4 1/8	2	14X8	12X6	9.3	20.5	36-X4967105S
110	4 1/3	2	14X8	12X6	9.4	20.8	36-X4967110S
115	4 1/2	2	14X8	13X6	9.5	21.0	36-X4968115S
121	4 3/4	2	14X8	13X7	10.3	22.7	36-X4978121S
127	5	2	16X8	13X7	10.5	23.2	36-X497B127S
130	5 1/8	2	14X8	14X8	11.5	25.4	36-X4989130S
140	5 1/2	2	16X8	16X8	11.4	25.2	36-X498D140S
152	6	2	16X8	14X9	13.3	29.3	36-X499C152S
178	7	2	16X10	16X13	18.3	40.3	36-X4KED178S

CONCAVE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
105	4 1/8	2	14X8	12X6	9.1	20.0	36-X4767105S
105	4 1/8	2	14X8	12X6	9.1	20.0	36-X4767105P
107	4 1/5	2	14X8	13X6	8.5	18.8	36-X4768107S
107	4 1/5	2	14X8	12X6	8.5	18.8	36-X4767107P
107	4 1/5	2	14X8	12X6	8.5	18.8	36-X4767107B
115	4 1/2	2	14X8	12X6	9.5	20.8	36-X4767115S
115	4 1/2	2	14X8	12X6	9.5	20.8	36-X4767115B
115	4 1/2	2	14X8	12X6	9.5	20.8	36-X4767115C
115	4 1/2	2	14X8	13X8	9.5	20.8	36-X4788115S
120	4 5/7	2	16X8	13X9	10.3	22.6	36-X479B120S
121	4 3/4	2	14X8	13X7	10.3	22.6	36-X4778121S
127	5	2	14X8	14X6	10.4	22.8	36-X4769127S
127	5	2	14X8	14X6	10.4	22.8	36-X4769127P
127	5	2	14X8	14X7	10.4	22.8	36-X4779127B
127	5	2	14X8	14X6	10.4	22.8	36-X4769127D
130	5 1/8	2	14X8	14X7	11.0	24.2	36-X4779130S
133	5 1/4	2	14X8	14X6	11.0	24.2	36-X4769133S
133	5 1/4	2	14X8	14X6	11.0	24.2	36-X4769133P
140	5 1/2	2	16X8	14X10	12.5	27.6	36-X470C140S
140	5 1/2	2	16X8	14X10	12.5	27.6	36-X470C140D
146	5 3/4	2	16X8	14X10	12.6	27.8	36-X470C146S
150	6	2	16X8	14X10	11.9	26.3	36-X470C150S
165	6 1/2	2	16X8	14X10	14.1	31.1	36-X470C165S
165	6 1/2	2	16X8	16X10	14.1	31.3	36-X470D165P

CONVEX



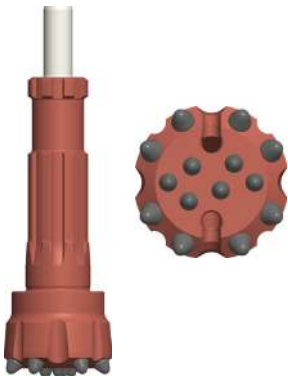
Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
105	4 1/8	2	14X8	12X6	9.1	20.1	36-X4867105S
108	4 1/4	2	14X8	13X6	9.4	20.6	36-X4868108P
115	4 1/2	2	14X8	14X7	9.5	21.0	36-X4879115S
115	4 1/2	2	14X8	13X7	9.5	21.0	36-X4878115S
121	4 3/4	2	14X8	13X8	9.8	21.7	36-X4888121P
127	5	2	14X8	14X8	10.3	22.7	36-X4889127S
127	5	2	14X8	14X8	10.3	22.7	36-X4889127P
127	5	2	14X8	14X8	10.3	22.7	36-X4889127D
130	5 1/8	3	14X9	13X11	10.5	23.1	36-X4018130P
133	5 1/4	2	14X8	14X9	10.7	23.6	36-X4899133S
133	5 1/4	2	14X8	14X9	10.7	23.6	36-X4899133P
133	5 1/4	2	14X8	14X9	10.7	23.6	36-X4899133D
140	5 1/2	2	16X8	14X10	12.3	27.1	36-X480C140S
140	5 1/2	2	16X8	14X10	12.3	27.1	36-X480C140P
140	5 1/2	2	16X8	14X10	12.3	27.1	36-X480C140D
146	5 3/4	2	16X8	16X10	12.8	28.3	36-X480D146S
150	6	2	16X8	16X10	13.2	29.1	36-X480D150S
191	7 1/2	3	16X9	16X12	17.2	38.0	36-X402D191D

DHD Shanks



DHD SHANKS

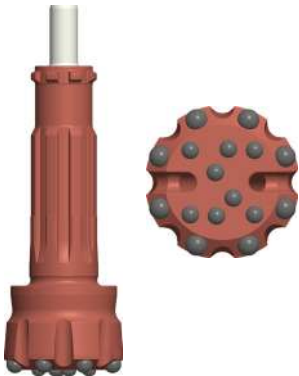
DHD3.5

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	90	3 1/2	2	12X7	12X5	4.7	10.4	36-33653090B
	90	3 1/2	2	13X7	12X5	4.7	10.4	36-33655090S
	90	3 1/2	2	13X6	13X6	4.7	10.4	36-33366090P
	95	3 3/4	2	14X8	11X6	5.1	11.3	36-3396K095S
	95	3 3/4	2	12X7	12X6	5.1	11.3	36-33663095B
	95	3 3/4	2	13X7	13X6	5.1	11.3	36-33666095P
	95	3 3/4	2	13X7	12X6	5.1	11.3	36-33665095B
	100	3 15/16	2	14X8	12X6	5.4	11.9	36-33967100S
	100	3 15/16	2	14X8	12X6	5.4	11.9	36-33967100P
	100	3 15/16	2	14X8	12X6	5.4	11.9	36-33967100B
	102	4	2	12X8	12X6	5.6	12.2	36-33963102B
	102	4	2	14X8	12X6	5.6	12.2	36-33967102S
	102	4	2	14X8	11X7	5.6	12.2	36-3397K102B
	105	4 1/7	2	14X8	12X6	5.5	12.2	36-33967105S
	115	4 1/2	2	14X8	13X6	6.1	13.4	36-33968115P
	115	4 1/2	2	14X8	13X6	6.1	13.4	36-33968115S

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	90	3 1/2	2	12X7	12X5	4.8	10.5	36-33453090S
	90	3 1/2	2	12X7	12X5	4.8	10.5	36-33453090B
	95	3 3/4	2	12X7	12X6	5.1	11.3	36-33463095B
	95	3 3/4	2	14X6	13X4	5.1	11.3	36-33148095B
	100	3 15/16	2	14X8	12X6	5.4	11.9	36-33767100S
	102	4	2	14X8	12X6	5.5	12.2	36-33767102S
	105	4 1/7	2	14X8	12X7	5.6	12.3	36-33777105S
	105	4 1/7	2	14X8	12X7	5.6	12.3	36-33777105C

CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	90	3 1/2	2	12X8	12X6	4.9	10.8	36-33863090B
	90	3 1/2	2	13X7	12X6	4.9	10.8	36-33565090P
	90	3 1/2	2	13X7	12X6	4.9	10.8	36-33565090S
	92	3 5/8	2	11X7	11X6	4.9	10.8	36-3356Z092C
	95	3 3/4	2	13X7	12X6	4.9	10.8	36-33565095C
	98	3 6/7	2	12X10	12X7	5.0	10.9	36-33J73098B
	100	3 15/16	2	14X8	12X6	5.3	11.7	36-33867100P
	102	4	2	14X8	12X6	5.6	12.2	36-33867102B
	105	4 1/7	2	14X8	13X6	5.7	12.6	36-33868105S
	115	4 1/2	2	14X8	13X7	6.2	13.7	36-33878115S

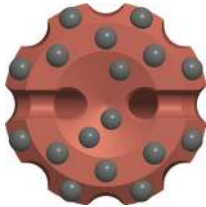
DHD340

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	105	4 1/8	2	14X8	12X6	7.9	17.4	36-43967105S
	108	4 1/4	2	14X8	12X6	8.0	17.5	36-43967108S
	110	4 1/3	2	14X8	12X6	8.1	17.9	36-43967110P
	115	4 1/2	2	14X8	13X6	8.4	18.5	36-43968115S
	115	4 1/2	2	14X8	13X7	8.4	18.6	36-43978115P
	116	4 4/7	2	16X8	13X6	8.5	18.8	36-4396B116S
	120	4 5/7	2	14X8	12X8	8.9	19.6	36-43987120S
	127	5	2	14X8	14X8	9.3	20.5	36-43989127S
	127	5	2	14X8	14X8	9.3	20.6	36-43989127P
	130	5 1/8	2	16X8	14X8	9.5	21.0	36-4398C130S
	135	5 1/3	2	14X8	14X8	10.1	22.2	36-43989135S
	140	5 1/2	2	16X8	14X10	10.3	22.7	36-4390C140S
	146	5 3/4	2	16X8	14X10	10.7	23.5	36-5390C146S
	150	6	2	16X8	16X10	11.1	24.5	36-4390D150P
	152	6 1/8	2	16X8	14X10	11.1	24.5	36-4390C152P
	178	7	2	16X8	14X10	12.9	28.3	36-4390C178S

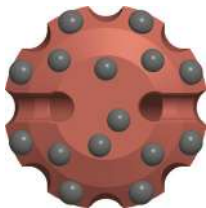
DHD SHANKS

DHD340

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	105	4 1/8	2	14X8	12X7	7.9	17.4	36-43777105S
	108	4 1/4	2	14X8	12X6	8.0	17.6	36-43767108S
	110	4 1/3	2	14X8	12X6	8.2	18.0	36-43767110S
	115	4 1/2	2	14X8	12X6	8.4	18.4	36-43767115P
	115	4 1/2	2	14X8	13X6	8.4	18.6	36-43768115S
	115	4 1/2	2	14X8	12X6	8.4	18.6	36-43767115B
	120	4 5/7	2	16X8	14X7	9.3	20.6	36-4377C120S
	121	4 3/4	2	14X8	13X8	9.3	20.6	36-43788121P
	127	5	2	16X8	14X7	9.4	20.7	36-4377C127S
	127	5	2	14X8	14X7	9.4	20.7	36-43779127B
	130	5 1/8	2	16X8	14X6	9.4	20.7	36-4376C130S
	140	5 1/2	2	16X8	14X8	10.5	23.2	36-4378C140S
	146	5 3/4	2	16X8	14X8	11.1	24.4	36-4378C146S
	152	6	2	16X8	16X10	12.3	27.1	36-4370D152S
	159	5 1/2	2	16X8	14X10	12.6	27.8	36-4370C159S



CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	105	4 1/8	2	13X7	12X7	7.9	17.3	36-43575105S
	115	4 1/2	2	14X8	13X7	8.4	18.6	36-43878115S
	115	4 1/2	2	14X8	12X7	8.4	18.3	36-43877115B
	120	4 5/7	2	14X8	12X7	9.0	19.8	36-43877120B
	121	4 3/4	2	14X8	13X7	9.1	20.1	36-43878121S
	127	5	2	14X8	14X6	9.2	20.3	36-43869127S
	127	5	2	14X8	12X10	9.2	20.3	36-43807127C
	130	5 1/8	3	14X9	13X11	9.4	20.7	36-43018130P
	133	5 1/4	2	14X8	14X8	9.5	20.8	36-43889133S
	135	5 1/3	2	14X8	14X8	9.6	21.1	36-43889135S
	140	5 1/2	2	16X8	16X7	10.2	22.5	36-4387D140S
	140	5 1/2	2	16X8	14X10	10.2	22.5	36-4380C140C
	152	6	2	16X8	14X10	12.1	26.7	36-4380C152S



DHD350

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	125	4 15/16	2	14X8	14X7	14.0	30.9	36-53979125S
	127	5	2	14X8	14X7	14.5	32.0	36-53979127S
	130	5 1/8	2	14X8	14X8	14.9	32.8	36-53989130S
	140	5 1/2	2	16X8	16X8	16.6	36.5	36-5398D140S
	140	5 1/2	2	16X8	14X10	16.6	36.5	36-5390C140S
	146	5 3/4	2	16X8	14X10	17.1	37.6	36-5390C146S
	150	6	2	18X8	16X10	17.5	38.5	36-5390E150S
	152	6	2	16X8	16X10	17.9	39.4	36-5390D152S
	165	6 1/2	2	16X8	16X10	18.9	41.6	36-5390D165S
	203	8	2	18X10	16X16	22.1	48.6	36-53KHE203S



CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	125	4 15/16	2	14X8	14X7	14.2	31.3	36-53779125S
	127	5	2	14X8	14X7	14.5	31.9	36-53779127S
	140	5 1/2	2	16X8	14X10	16.4	36.2	36-5370C140S
	146	5 3/4	2	16X8	14X10	16.7	36.7	36-5370C146S
	150	6	2	16X8	16X10	16.9	37.1	36-5370D150S
	152	6	2	16X8	16X10	17.0	37.5	36-5370D152S
	165	6 1/2	2	16X8	16X10	18.6	41.1	36-5370D165S
	190	7 1/2	2	16X10	16X14	22.8	50.2	36-531FD190S
	200	8	2	16X10	16X14	23.6	51.9	36-531FD200S



DHD SHANKS

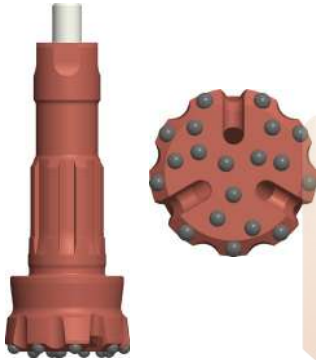
CONVEX



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
127	5	2	14X8	14X7	14.5	32	36-53879127S
140	5 1/2	2	16X8	14X8	16.2	35.7	36-5388C140S
140	5 1/2	2	16X8	16X7	16.4	36	36-5387D140S
146	5 3/4	2	16X8	16X8	16.6	36.6	36-5388D146S
150	6	2	16X8	16X10	16.9	37.1	36-5380D150S

DHD360

FLAT FACE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
152	6	2	16X8	16X10	23.9	52.7	36-6390D152S
156	6 1/8	2	16X8	16X10	24.1	53.2	36-6390D156S
165	6 1/2	3	16X9	16X10	26.7	58.8	36-63P0D165S
165	6 1/2	2	16X8	16X10	26.7	58.8	36-6390D165S
172	6 3/4	2	16X10	16X12	27.5	60.6	36-63K2D172S
178	7	2	18X10	16X12	28	61.7	36-63K2E178S
180	7 1/8	2	16X10	16X13	28.2	62.2	36-63KED180S
185	7 2/7	2	16X10	16X13	29.1	64.0	36-63KED185S
190	7 1/2	2	18X10	16X13	30.1	66.4	36-63KEE190S
200	7 7/8	2	16X10	16X14	32.1	70.7	36-63KFD200S
203	8	2	18X10	16X16	32.7	72.0	36-63KHE203S
203	8	2	16X10	16X16	32.7	72.0	36-63KHD203S
216	8 1/2	2	19X10	16X16	33.1	72.9	36-63KHI216S
216	8 1/2	3	19X9	16X18	33.1	72.9	36-63PII216S
220	8 5/8	2	19X10	16X16	33.8	74.4	36-63KHI220S
220	8 2/3	2	19X10	16X18	33.6	74.0	36-63KII220S
225	8 6/7	2	19X10	16X18	34.1	75.1	36-63KII225S
250	9 5/6	3	19X12	16X22	35.2	77.6	36-63SII250S
254	10	3	18X12	16X24	35.9	79.0	36-63SIE254S
300	11 4/5	2	18X12	16X27	36.8	81.1	36-63MJE300S

CONCAVE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
152	6	2	16X8	16X10	23.6	52.1	36-6370D152S
154	6	2	16X8	16X10	23.8	52.4	36-6370D154S
165	6 1/2	2	16X10	16X10	24.1	53.2	36-63I0D165P
165	6 1/2	2	16X10	16X10	24.1	53.2	36-63I0D165S
165	6 1/2	3	18X9	16X10	24.7	54.5	36-63N0E165S
170	6 2/3	2	19X8	16X11	25.8	56.8	36-6371I170S
171	6 3/4	2	16X10	16X13	26.0	57.3	36-63IED171S
172	6 7/9	2	16X10	16X14	26.2	57.7	36-63IFD172S
178	7	2	16X10	16X12	26.7	58.9	36-63I2D178S
178	7	2	16X8	16X10	27.1	59.6	36-6370D178S
180	7	2	16X10	16X12	26.5	58.3	36-63I2D180S
185	7 2/7	2	16X10	16X16	26.4	58.1	36-63IHD185S
190	7 1/2	2	16X10	16X16	29.8	65.8	36-63IHD190S
192	7 5/9	2	18X10	16X14	30.0	66.1	36-63IFE192S
200	7 7/8	2	16X10	16X16	30.8	68.0	36-63IHD200S
203	8	2	19X10	16X16	31.2	68.8	36-63IHI203S
203	8	3	18X9	16X15	31.2	68.8	36-63NGE203S
216	8 1/2	2	19X10	16X16	32.3	71.2	36-63IHI216S
220	8 5/8	2	19X10	16X16	32.4	71.4	36-63IHI220S
240	9 4/9	3	19X12	16X24	34.2	75.3	36-63QII240S
254	10	3	18X12	16X20	36.2	79.8	36-63QIE254S

DHD SHANKS

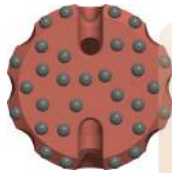
CONVEX



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
165	6 1/2	3	18X9	16X12	24.7	54.3	36-63O2E165B
172	6 7/9	3	16X12	16x10	25.5	56.2	36-63R0D172S
203	8	3	16X9	16X16	29.8	65.7	36-63OHD203S
216	8 1/2	3	19X9	16X18	31.0	68.2	36-63OII216S
250	9 5/6	3	19X12	19X18	34.3	75.6	36-63RIJ250S

DHD380

FLAT FACE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
203	8	2	19X10	16X15	49.7	109.6	36-83KGI203S
203	8	2	19X12	16X15	49.8	109.8	36-83MGI203S
216	8 1/2	2	19X10	16X16	50.7	111.8	36-83KHI216S
219	8 5/8	2	19X10	16X16	51.3	113.1	36-83KHI219S
220	8 5/8	2	19X12	16X16	51.9	114.4	36-83MHI220S
222	8 3/4	2	19X10	16X16	52.9	116.6	36-83KHI222S
225	8 7/8	2	19X10	16X14	53.7	118.3	36-83KFI225S
240	9 4/9	2	19X10	16X20	57.6	126.9	36-83KII240S
241	9 1/2	2	19X10	16X19	57.7	127.1	36-83KII241S
250	9 5/6	2	19X10	16X20	61.5	135.6	36-83KII250S
254	10	2	19x12	16x24	62.2	137.2	36-83MII254S
292	11 1/2	3	19X12	16X30	70.3	155.0	36-83SJI292S
300	11 4/5	3	19X12	16X27	71.5	157.5	36-83SJI300S
305	12	3	19X12	16X27	71.9	158.5	36-83SJI305S
311	12 1/4	3	19X12	16X30	72.7	160.3	36-83SJI311S

CONCAVE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
198	7 4/5	2	16X12	16X19	49.5	109.2	36-83LID198S
200	7 7/8	2	16X12	16X19	50.7	111.8	36-83LID200S
203	8	2	19X10	16X16	51.4	113.3	36-83IHI203S
216	8 1/2	2	19X10	16X16	52.0	114.5	36-83IHI216S
219	8 5/8	2	19X10	16X16	52.5	115.7	36-83IHI219S
229	9	2	16X10	16X18	53.8	118.6	36-83IID229S
241	9 1/2	2	19X10	16X19	55.1	121.6	36-83III241S
254	10	2	19x10	16x20	58.3	128.5	36-83III254S
267	10 1/2	3	19X12	16X25	62.5	137.8	36-83QII267S
280	11	3	19X12	16X30	65.9	145.2	36-83QJI280S
281	11	3	19X12	16X26	66.3	146.2	36-83QJI281S
300	11 4/5	3	19X18	16X24	71.9	158.4	36-83UII300S
305	12	3	19x18	19X15	74.0	163.1	36-83UJI305S
				16X13			

CONVEX



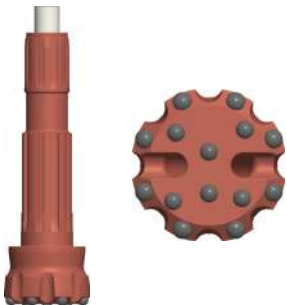
Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
300	11 4/5	3	19x12	19X9	72.2	159.2	36-83RJ1300S
				16X21			

QL Shanks



QL SHANKS

QL40

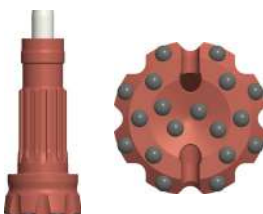
FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	105	4 1/8	2	14X8	12X6	8.5	18.7	36-45967105S
	110	4 1/3	2	14X8	12X6	9.1	20.0	36-45967110S
	115	4 1/2	2	14X8	12X6	9.6	21.3	36-45967115S
	115	4 1/2	2	16X7	12X7	10.1	22.2	36-4567A115S
	121	4 3/4	2	14X8	12X7	10.9	23.9	36-45977121S
	127	5	2	16X8	13X7	11.5	25.4	36-4597B127S
	127	5	2	19X7	13X7	11.9	26.1	36-4567G127S
	130	5 1/8	2	14X8	14X8	12.0	26.5	36-45989130S
	140	5 1/2	2	14X8	14X8	12.9	28.3	36-45989140S
	152	6	2	16X8	14X9	14.2	31.3	36-4599C152S

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	105	4 1/8	2	14X8	12X6	8.0	17.6	36-45767105S
	110	4 1/3	2	14X8	12X6	8.7	19.1	36-45767110S
	115	4 1/2	2	14X8	12X6	9.5	20.8	36-45767115S
	121	4 3/4	2	14X8	12X6	10.5	23.1	36-45767121S
	127	5	2	14X8	14X7	11.3	24.9	36-45779127S
	130	5 1/8	2	14X8	14X7	11.9	26.3	36-45779130S
	140	5 1/2	2	14X8	14X8	12.6	27.8	36-45789140S

CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	105	4 1/8	2	14X8	12X6	8.2	18.1	36-45867105S
	110	4 1/3	2	14X7	12X6	8.5	18.7	36-45567110S
	115	4 1/2	2	14X8	14X7	9.3	20.5	36-45879115S
	121	4 3/4	2	14X8	14X6	10.2	22.5	36-45869121S
	127	5	2	14X8	14X8	11.1	24.4	36-45889127S
	130	5 1/8	2	14X8	14X8	11.7	25.7	36-45889130S
	140	5 1/2	2	14X8	14X8	12.5	27.6	36-45889140S

QL50

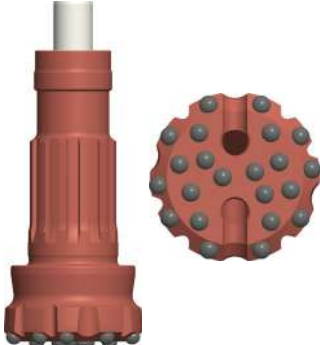
FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	125	5	2	14X8	14X7	14.6	32.1	36-55979125S
	127	5	2	14X8	14X7	14.9	32.7	36-55979127S
	130	5 1/8	3	14X9	14X9	15.0	33.1	36-55P99130B
	140	5 1/2	2	16X8	16X8	15.6	34.4	36-5598D140S
	146	5 3/4	2	16X8	16X8	16.0	35.2	36-5598D146S
	152	6	2	16X8	16X10	16.3	35.8	36-5590D152S
	165	6 1/2	2	16X8	16X10	18.5	40.8	36-5590D165S

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	125	5	2	14X8	14X7	14.5	31.9	36-55779125S
	127	5	2	14X8	14X7	14.8	32.5	36-55779127S
	130	5 1/8	3	16X9	14X9	15.1	33.2	36-55N9C130C
	140	5 1/2	2	16X8	14X8	15.8	34.7	36-5578C140S
	146	5 3/4	2	16X8	16X8	16.0	35.3	36-5578D146S
	152	6	2	16X8	16X10	16.7	36.8	36-5570D152S
	165	6 1/2	2	16X8	16X10	18.0	39.6	36-5570D165S
	165	6 1/2	2	16X10	16X13	18.3	40.3	36-55IED165S

CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	127	5	2	14X8	14X7	14.7	32.3	36-55879127S
	130	5 1/8	3	14X9	14X10	15.0	33.1	36-55O09130P
	134	5 2/7	3	14X9	14X10	15.2	33.5	36-55O09134P
	140	5 1/2	2	16X8	16X8	15.5	34.5	36-5588D140S
	140	5 1/2	3	16X9	14X10	15.5	34.5	36-55O0C140D
	146	5 3/4	2	16X8	16X8	15.9	35.1	36-5588D146S

QL SHANKS

QL60

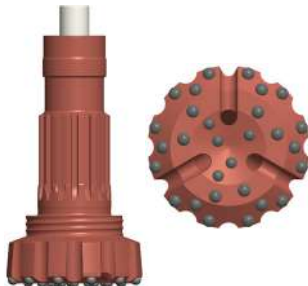
FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	152	6	2	16X8	16X9	23.7	52.1	36-6599D152S
	165	6 1/2	3	16X9	16X10	24.9	54.9	36-65P0D165S
	165	6 1/2	2	19X8	16X10	25.3	55.8	36-6590I165S
	165	6 1/2	2	16X10	16X10	24.9	54.9	36-65K0D165S
	171	6 3/4	3	18X9	18X9	26.7	58.8	36-65P9L171S
	172	6 3/4	2	19X10	16X10	25.8	56.8	36-65K0I172S
	178	7	3	16X9	16X10	27.5	60.6	36-65P0D178S
	178	7	3	19X9	16X12	26.7	58.8	36-65P2I178S
	203	8	2	18X9	16X10	28.8	63.5	36-65KHE203S
	216	8 1/2	2	19X10	19X16	32.4	71.4	36-65KHJ216S

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	152	6	2	16X8	16X4	24.4	53.7	36-6578D152S
	154	6	2	16X8	16X4	24.6	54.2	36-6578D154S
	156	6 1/8	2	19X8	16X10	24.1	53.1	36-6570I156S
	156	6 1/8	2	16X8	16X6	24.8	54.6	36-6578D156S
	165	6 1/2	2	16X8	16X10	25.1	55.4	36-6570D165S
	172	6 3/4	2	19X10	16X11	25.8	56.9	36-65I1I172S
	172	6 3/4	2	19X8	16X11	25.8	56.9	36-6571I172S
	178	7	2	16.7X10	16X6	26.5	58.4	36-65I2D178S
	190	7 1/2	3	18X10	18X8	29.3	64.6	36-65NIJ190SN
	203	8	3	18X10	18X8	30.6	67.4	36-65NHE203N
	216	8 1/2	3	18X9	16X16	32.0	70.5	36-65NHE216S
	220	8 2/3	2	16X10	16X16	32.2	71.0	36-65IHD220P
	254	10	2	19X2	16X10	39.9	87.9	36-65LI254S

CONVEX	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	165	6 1/4	3	18X9	16X4	25.8	56.9	36-6500E165S
	171	6 3/4	3	18X9	18X6	25.9	57.0	36-6502L171S
	178	7	3	16X9	16X6	26.0	57.3	36-6502D178K

QL80

FLAT FACE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	203	8	2	19X10	16X13	50.5	111.3	36-85KEI203S
	216	8 1/2	2	19X10	16X16	51.8	114.2	36-85KHI216S
	240	9 4/9	2	19X10	16X20	55.3	121.9	36-85KII240S
	254	10	2	19x12	16x24	59.4	130.9	36-85MII254S

CONCAVE	Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
	MM	Inch		Outer	Front	KG	LBS	
	203	8	3	19X9	16X15	50.6	111.5	36-85NGI203S
	216	8 1/2	2	19X10	16X16	50.8	111.9	36-85IHI216S
	225	8 7/8	2	19x10	16x14	53.2	117.3	36-85IFI225S
	227	8 7/16	3	16X18	16X17	53.5	117.9	36-85UID227S
	228	9	3	16X18	16X17	53.6	118.1	36-85UID228S
	254	10	2	19X12	16X24	59.8	131.7	36-85LII254S
	270	10 5/8	3	19x12	16x25	65.2	143.7	36-85QII270S
	305	12	3	19X18	16X29	79.2	174.5	36-85UJI305S

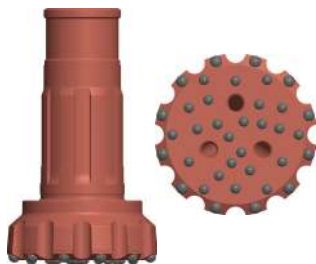
RK Shanks



RK SHANKS

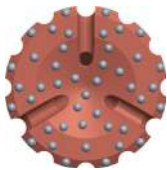
RK1

FLAT FACE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
229	9	3	18.7X12	16X24	58.5	128.9	36-R1SJE229S
241	9 1/2	3	18.7X12	16X26	60.6	133.6	36-R1SJE241S
251	9 3/4	3	18.7X12	16X24	62.3	137.3	36-R1SJE251S
254	10	3	18.7X12	16X24	62.6	138.0	36-R1SJE254S
280	11	3	18.7X12	16X30	79.0	174.2	36-R1SJE280S
292	11 1/2	3	18.7X21	16X27	79.6	175.4	36-R1SJE292S
305	12	3	18.7X12	16X33	80.2	176.8	36-R1SJE305S
331	13	3	18.7X12	16X32	92.3	203.4	36-R1SJE331S
356	14	3	19X14	16X36	98.3	216.7	36-R1TJ1356S
406	16	3	19X15	16X38	106.5	234.7	36-R1XJ1406S

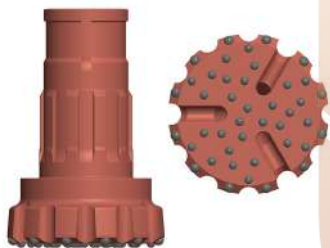
CONCAVE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
234	9 1/4	3	19X12	18X9	55.1	121.4	36-R1QIM234S/G
241	9 1/2	3	19X12	18X9	56.5	124.5	36-R1QIM241S/G
245	9 1/2	3	19X12	18X9	56.8	125.2	36-R1QIM245S/G
251	9 3/4	3	19X12	18X9	61.3	135.1	36-R1QIM251S/G
254	10	3	19X12	18X9	61.5	135.5	36-R1QIM254S/G

RK3

FLAT FACE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
305	12	3	18X12	18X29	110.9	244.4	36-R3SJE305S
311	12 1/4	3	18.7X12	16X30	112.4	247.4	36-R3SJE311S
407	16	3	18.7X16	18X65	127	279.9	36-R3XKL407S

CONCAVE

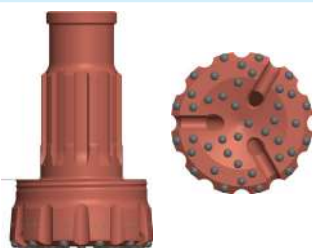


Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
311	12 1/4	3	20x18	19x9	111.2	245.1	36-R3UIA3311S/G
330	13	3	19x12	18x15	117.7	259.4	36-R3QJM330S/G
336	13 1/4	3	19x12	18x15	119.8	264.1	36-R3QJM336S/G
343	13 1/2	3	19x15	18x21	122	268.9	36-R3UJM343S/G
406	16	3	20x27	18x21	125	275.5	36-R3VJS406S/G
432	17	3	20x27	20x21	170	374.7	36-R3VKA3432S/G
445	17 1/2	3	20x27	20x21	172	379.1	36-R3UKA3445S/G
457	18	3	20x27	20x21	175.4	386.6	36-R3VKA3457/G
489	19 1/4	3	20x27	20x21	209.7	462.3	36-R3VKA3489S/G

OTHER SHANKS SERIES

FD11

CONCAVE



MM	Inch	Flush Hole	Buttons Dia x Qty		Weight		Product No
			Outer	Front	KG	LBS	
302	12	3	19x12	18x15	103.6	228.3	36-F1QJM302S/G
311	12 1/4	3	20x18	19x9	106.2	234.1	36-1UIA3311S/G
330	13	3	19x12	18x15	112.8	248.6	36-F1QJM304S/G
336	13 1/4	3	19x12	18x15	114.5	252.4	36-F1QJM305S/G
343	13 1/2	3	19x15	18x21	117	257.9	36-F1QJM306S/G
381	15	4	19x28	19x20	129.5	285.4	36-F1QJM307S/G
406	16	4	19x28	19x24	136.9	301.8	36-F1QJM308S/G
432	17	4	19x32	19x20	145.7	321.2	36-F1QJM309S/G

PUMA

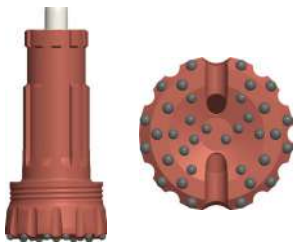
CONCAVE

Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
200	7 7/8	3	19X12	16X15	45.2	99.7	36-P8QGI200S

OTHER SHANKS

NUMA

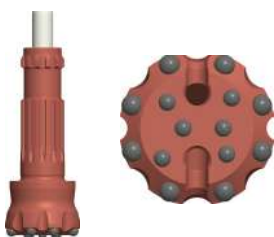
CONCAVE



MM	Inch		Outer	Front	KG	LBS	
254	10	2	19X12	16X24	93.1	205.1	36-N1LI254S
270	10 5/8	3	19X12	16X25	97.5	215.0	36-N1QII270S
280	11	3	19X12	16X27	100.0	220.2	36-N1QJI280S
292	11 1/2	3	19X21	16X23	102.0	224.8	36-N1UII292S
305	12	3	19X18	19X15	103.5	228.2	36-N1UJI305S
				16X13			
330	13	3	19X18	19X18	110.4	243.4	36-N1UJI330S
				16X13			

QLX40

FLATFACE



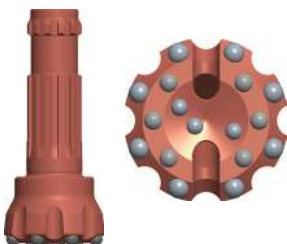
Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
115	4 4/8	2	16X8	13X6	9.1	20.0	36-Q496B115S-04
115	4 4/8	2	16X8	13X6	9.1	20.0	36-Q496B115S-04
127	5	2	16X8	13X6	10.5	23.5	36-Q497B127S

CONCAVE

Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
127	5	2	16X8	13X6	10.5	23.5	36-Q476C127S

TD40

CONCAVE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
115	4 4/8	2	14 X 8	13 X 8	9.8	21.6	36-T4788115S
115	4 4/8	2	16 X 8	13 X 6	9.9	21.8	36-T476B115S
127	5	2	16 X 8	14 X 6	10.5	23.5	36-T479C127S
127	5	2	16 X 8	14 X 8	10.1	22.3	36-T498C127S

FLATFACE

Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
127	5	2	16 X 8	14 X 8	10.1	22.3	36-T498C127S

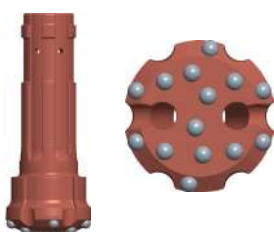
RC 4

CONCAVE

Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
115	4 4/8	2	14x6	14x4	7.2	15.87	36-RC4169115S
127	4 1/2	2	14x6	14x4	8	17.63	36-RC4169127S

RC 5

FLAT FACE



Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
140	5 1/2	2	16x6	14x10	15.6	34.93	36-RC530C140S
140	5 1/2	2	16x6	16x8	15.6	34.93	36-RC538D140S

CONCAVE

Diameter		Flush Hole	Buttons Dia x Qty		Weight		Product No
MM	Inch		Outer	Front	KG	LBS	
140	5 1/2	2	16x6	16x6	15.6	34.93	36-RC519D143S
143	5 1/2	2	16x6	16x4	15.5	34.17	36-RC527D140S

BUTTON BIT GRINDING

When the button bit was first introduced, it was widely assumed that sharpening was unnecessary. Such an understanding was not unfortunate since the button bit is also subjected to wear and tear even if it may give, when compared to the conventional bits; a 300% increase in footage before sharpening becomes necessary. If re-sharpening is imperfect or if not done at the correct intervals, the button bit is likely to lose penetration speed and thereafter be subject to failure.

While it was granted that in softer formations, an unsharpened button bit may continue to serve without carbide failure long after it ought to have been withdrawn from service it must also be appreciated that a similarly abused bit in a massive crystalline formation will very quickly fail. It is essential to remember that in hard rock, button bits are susceptible to failure from over drilling in the same way as any other bit. It is more economical to regrind too soon than to run the risk of damage by regrinding too late.

EQUIPMENT REQUIRED

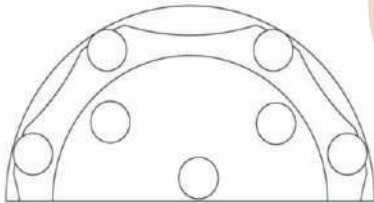
- A reliable pencil type air grinder capable of approximately 25000rpm.
- Spindle mounted grind stones, 1" (or 1.5") x 1" (or 0.75") x 0.25" spindle, and suitable for high speeds.
- One unused new bit similar to the one being grounded (this may be dispensed by experience), or a button gauge.
- Safety glasses and protective clothing.

Pencil type air grinders consume very little air, and it is best if bit regrinding is done while drilling is in progress. Ringing a button bit does not require brute strength; rather it is an art and the lighter the touch, the better. With proper care the button bit will greatly reduce drilling costs.

WHEN TO REGRIND

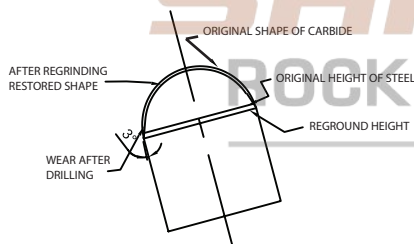
If a new bit is likely to fail due to material or manufacturing defects, it will normally do so in the initial half regrind life. The nature of such defects is dealt with later, but it is wise to withdraw and check any new bit early in life. Sometimes the gauge buttons may show slightly uneven wear or removal, i.e. while most show normal wear patterns the odd button may show excessive wear. This may be attributed to the slightly variation in setting of the gauge buttons. In such a case, one or two buttons may be over ground while majority still requires no grinding. Prolonged initial drilling may thus lead to individual inset failure.

GAUGE BUTTONS



When the bit is withdrawn from the bore, it will be noticed that the gauge buttons are worn in such a way that the outermost wear faces are equidistant from the bit center. When regrinding the gauge buttons it is essential to maintain the equidistance. This is best achieved by grinding in such a way as to leave a very tiny unground portion on the extreme outer edge of each button. A perfect circle of the buttons can thus be maintained.

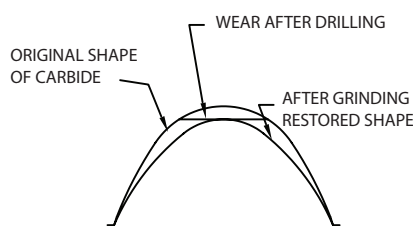
BUTTON GRINDING



The object of grinding is to return the carbides to their original shape. This, in effect, means the removing of an equal depth of carbide from unworn areas of each insert. For the gauge buttons this means that most of the material must be ground from the inner side of the button hemisphere gradually extending around until only the slight unground outer portion is left as mentioned earlier.

For the inner buttons the grinding must be done around the base of the hemisphere where it emerges from the steel bit body, since the wear generally occurs at the crown.

STEEL GRINDING



It will be noticed that after the button grinding is complete, there may remain an excess of steel between the buttons. This must be removed. More significantly, the chip-ways around the periphery of the bit must be restored to approximately to the original depth to facilitate free scavenging of cuttings from the bit face. In bits with central flushing, special attention must be paid to see that the free flow of exhaust air from the hammer is not in any way impeded by metal expansion around the flushing hole. Such an obstruction can seriously affect the efficiency of the hammer, and must be removed while grinding.

ANTI TAPER

Only the slightest anti-taper is required at the periphery of a well-designed button bit. It is essential to remember that the gauge buttons are inserted at an angle to the face buttons. As a consequence, if the anti-taper is excessive, the gauge button may fallout during work. It is rarely necessary to grind much from the periphery as the natural wear of the steel in work automatically reduces the bit body diameter.

FINISHING

During the above mentioned operation, it is wise (until experience makes it necessary) to check the reground bit carefully against a new unused bit of same type, or by using a suitable gauge. This helps in seeing that the contours and gradients confirm as nearly as possible to the original.

CHECK LIST

- See that the face buttons are so ground that they are equal in height and in same horizontal plane.
- See that the gauge buttons, with respect to their outer periphery, are in the same radius. Each button should show at its outer edge a very slightly unground portion.
- Check the buttons individually to see that they are roughly hemispherical in shape and not lob sided.
- See that all chip ways are clear and adequate both on cutting face and ground the bit circumference.
- Allow 3 degrees of anti-taper not more
- See that the hammer exhaust passage within the bit is clear.
- See that the reground bit counters confirm to the new unused bit.

GENERAL COMMENTS

In general, a button-insert type of bit, compared to a cross or carset bit, will give two to four times the life between regrinds. It should be ground when the width of the flat developing on the outside edge of the gauge buttons is 0.25-0.33 times the diameter of the button insert itself. In soft ground this can be extended slightly but very hard rock the lesser figure should be taken as a guide. Although a well-grounded button bit will drill slightly faster than a similar cross bit, the main advantage of the button lies in its longer life between regrinds.

LOSS OF BUTTONS

• MANUFACTURING DEFECT

This normally occurs only very early in life, usually before the first regrind.

• BAD BIT GRINDING

In this case the side supportive steel may have been removed when grinding. The hole becomes elongated and the button is lost.

• UNDERFEEDING WHILE DRILLING IS IN PROGRESS

In such a case, there is tendency for the hammer blows to drive the carbide inserts out of the body. It is, therefore important that adequate feed pressures be given at all times.

• WEAR AND TEAR

Frequently the first sign that bit has completed its life the "pop-out" of one or more gauge buttons, which means that they have common loose in the steel bit body. The correct use of rotation speed and feed pressures will, however, go along way towards increasing bit life.

BREAKAGE BUTTONS

• FAULTY CARBIDE

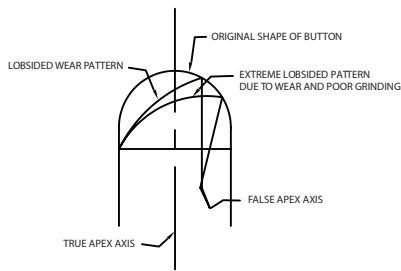
In button bits this is very rare.

• BAD HANDLING

Due to bad handling in transit carbides may chip. It is well protect carbides at all times when they are not in actual use. A wooden box with compartments for bit storage is recommended.

THE LOB SIDED INSERT

OVER DRILLING / IMPROPER GRINDING



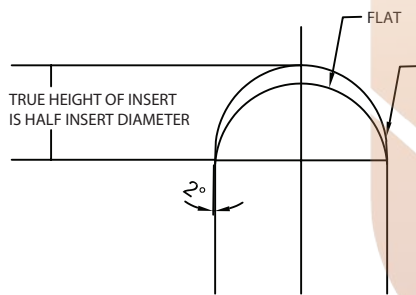
These are the most usual causes of button breakage or buttons coming loose in the steel bit body. Normally it is the gauge buttons that are most seriously affected. Gauge buttons that break will usually be found to have sheared within the body itself. This is indicative of "pinch" action resulting from insufficient or improper grinding.

The diagram clearly indicates why this occurs. As the apex of each gauge-carbide wears, the carbides are subjected to increased side thrust. Instead of hemisphere chipping a clear hole for the bit to follow, the sides of the bit and the sides of the carbide inserts forced into undersize bore. If this is not corrected by regrinding, the stresses finally become so severe that the inserts are either sheared or forced out of the bitbody.

Bad grinding has exactly the same effect. It is essential to maintain the hemispherical shape of the new carbide. Furthermore, the apex of the hemisphere must be true to the axis of the insert. If this is not observed while grinding the "lob-side inset" fault will develop in such a way that the apex of the gauge button insert hemispheres will start to shift towards the center point of the rock bit. The results are same as over drilling and broken or lost inserts will normally be results.

THE FLAT HEMISPHERE

OVER DRILLING / IMPROPER GRINDING



The second type of insert type due to over drilling or bad is illustrated in the diagram.

Here the true axis/apex relationship is retained but instead of a hemisphere the insert is allowed to develop a pronounced sub hemispherical contour.

Due to the flattened nature of the insert hemisphere, the tendency is for the inserts to crush rather than chip the rock. The height of the apex of the insert above the steel bit body should be half the diameter of the insert. Check this point after grinding with a vernier gauge or an insert template.

The results of following the flat hemisphere fault to develop will be put excessive shock loads on the equipment. Apart from a reduced penetration speed, this can result in insert shatter, failure of the steel bit body or hammer component failure. Proper grinding is the only answer.

CARBIDE INSERTS BREAKAGE

Finally, carbide inserts will break quite spectacularly if in contact with steel or other inserts in the bore. After a failure, all carbide and steel must be removed from the bore before drilling is continued.

Buttons bits have a large advantage over the conventional cross insert bit in that the failure of one button does not normally result in the breakage of other buttons and the bit may continue to be used satisfactorily even after inserts have failed. If a button breaks, grind away any projecting carbide, regrind the entire bit, and carry on.

The WDS button bit is a perfect model of skilled craftsmanship. The finest materials and the most meticulous care go into making. At every stage of manufacture, the button bit is checked and rechecked to ensure the final product a maximum of durability, efficiency and profitability. WDS button bits are the products of years of painstaking research and the unending quest for perfection.



SPEED

QUALITY

SERVICE

ECONOMICAL

SAI DEEPA

ROCK DRILLING TOOLS

— JUST DRILL —

COMPLETE

RANGE



WORLDWIDE

DISTRIBUTION

STUNNER SERIES

- 3.0" ST25BR
- 3.5" ST30BR

DESIGN HIGHLIGHTS

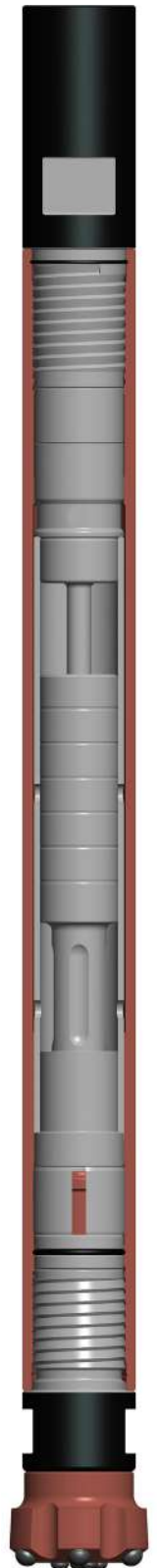
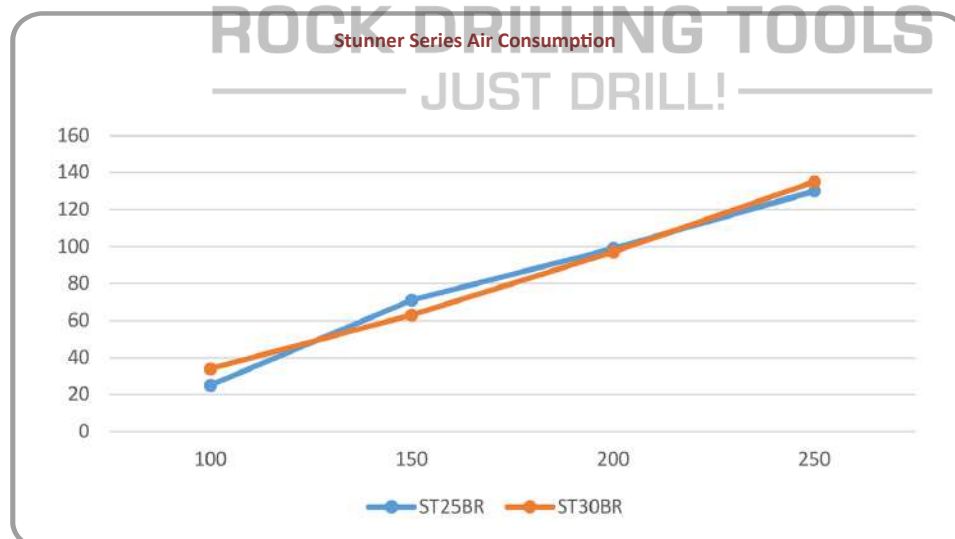
- Stunner Series is a valve type hammers designed for high performance at low operating air pressures.
- Suitable bits has a strong robust design without foot valve to withstand heavy duty application.
- Stunner Series Hammers maximizes energy output and reduces service requirements.
- Wear Sleeve is not reversible.
- All critical internal components are heat treated under strict control to maximize tool longevity.

EXCLUSIVE FEATURES

- Flapper mechanism helps to adjust inflow air pressure and it is guided with valve centralizer for correct positioning/movement of flapper valve.
- Split bush used for guiding the bit and it provided with a groove for easy removal.
- Inner cylinder guides piston and supplies air into piston area where the air flow is controlled.

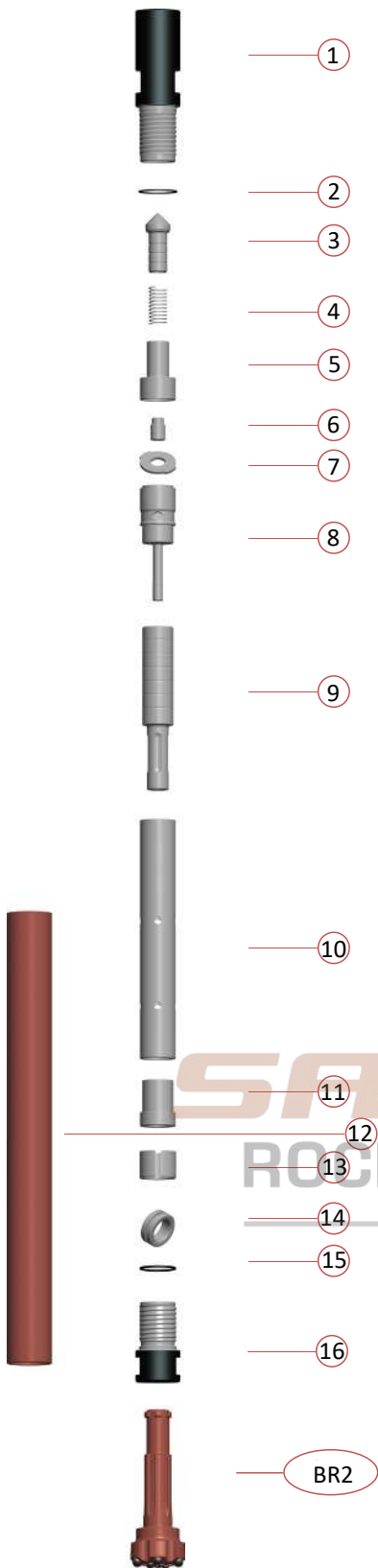
APPLICATIONS

- Water Well • Mining • Construction • Quarry



STUNNER SERIES

ST25BR HAMMER



A DEDICATED TOOL FOR 3" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB (2.5D 4 TPI BOX)	1 NO	15-2B2500-25DF
	TOP SUB (CHEETHA THREAD)	1 NO	15-2B2500-5DF
	TOP SUB (3.5D 4 TPI BOX)	1 NO	15-2B2500-35DF
	TOP SUB(RD50 BOX THREAD)	1 NO	15-2B2500-RD50F
	TOP SUB (CA21 BOX THREAD)	1 NO	15-2B2500-CA21F
	TOP SUB (2 IF 4TPI 5° BOX)	1 NO	15-2B2500-2IFF
2	"O" RING FOR TOP SUB	1 NO	37-04602H
3	CHECK VALVE	1 NO	19-23082N
4	SPRING	1 NO	17-110513
5	TOP VALVE	1 NO	22-2B2500
6	VALVE CENTRALISER	1 NO	59-121523
7	DISC VALVE	1 NO	69-421603
8	BOTTOM VALVE	1 NO	32-2B2500
9	PISTON	1 NO	52-2B2500
10	INNER CYLINDER	1 NO	42-2B2500
11	GUIDE BUSH	1 NO	65-2B2500
12	WEAR SLEEVE	1 NO	45-2B2500
13	SPLIT BUSH	1 NO	B9-050437
14	BIT RETAINER RING	1 NO	99-040319
15	"O" RING FOR BIT RETAINER RING	1 NO	37-03702H
16	DRIVE SUB	1 NO	75-2B2500
	SERVICE KIT (S.NO:2,4&15)	1 SET	2B2500BRK
	HAMMER ASSEMBLY	1 NO	34-2B2500BR-25DFS
	HAMMER ASSEMBLY	1 NO	34-2B2500BR-5DFS
	HAMMER ASSEMBLY	1 NO	34-2B2500BR-35DFS
	HAMMER ASSEMBLY	1 NO	34-2B2500BR-RD50FS
	HAMMER ASSEMBLY	1 NO	34-2B2500BR-CA21FS
	HAMMER ASSEMBLY	1 NO	34-2B2500BR-2IFFS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	810.0
2	HAMMER OUTSIDE DIA	mm	62.0
3	HAMMER WEIGHT	kg	13.0
4	CYLINDER BORE	mm	42.7
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	1.75
7	HOLE SIZES	mm	70-80
8	WRENCH SIZE A/F	mm	A/F 48.0 / W-32.0
9	SUITABLE SHANK	---	BR2 (Without Foot Valve)

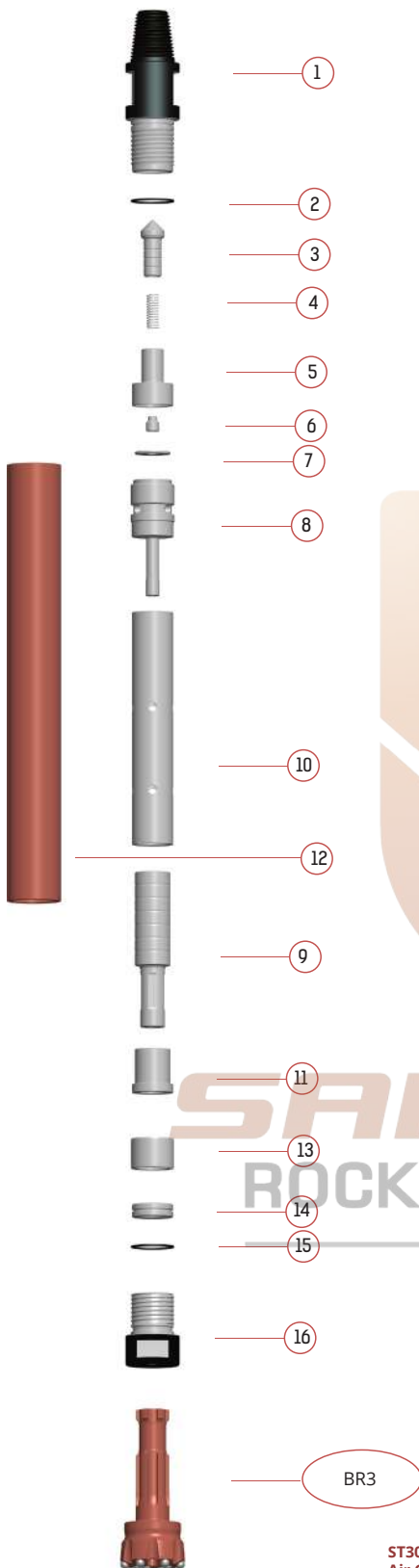
* TWO START THREAD ON TOP SUB & DRIVE SUB

ST25BR Air Consumption

PSI	100	150	200	250	300
CFM	30	50	70	100	130
BPM	1220	1490	1730	1930	2120

STUNNER SERIES

ST30BR HAMMER



A DEDICATED TOOL FOR 3.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB (2 3/8 API REG PIN)	1 NO	15-3B3000-23ARM
	TOP SUB (2 3/8 API REG BOX)	1 NO	15-3B3000-23ARF
2	"O" RING FOR TOP SUB	1 NO	37-05403H
3	CHECK VALVE	1 NO	19-23082N
4	SPRING	1 NO	17-110511
5	TOP VALVE	1 NO	22-3B3000
6	VALVE CENTRALISER	1 NO	59-121921
7	DISC VALVE	1 NO	69-511902
8	BOTTOM VALVE	1 NO	32-3B3000
9	PISTON	1 NO	52-3B3000
10	INNER CYLINDER	1 NO	42-3B3000
11	GUIDE BUSH	1 NO	65-3B3000
12	WEAR SLEEVE	1 NO	45-3B3000
13	SPLIT BUSH	1 NO	B9-060443
14	BIT RETAINER RING	1 NO	99-050319
15	"O" RING FOR BIT RETAINER RING	1 NO	37-04603H
16	DRIVE SUB	1 NO	75-3B3000
	SERVICE KIT (S.NO:2,4&15)	1 SET	3B3000BRK
	HAMMER ASSEMBLY	1 NO	34-3B3000BR-23ARMS
	HAMMER ASSEMBLY	1 NO	34-3B3000BR-23ARFS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	769.0
2	HAMMER OUTSIDE DIA	mm	78.0
3	HAMMER WEIGHT	kg	24.0
4	CYLINDER BORE	mm	50.8
5	PISTON STROKE	mm	82.0 (approx.)
6	PISTON WEIGHT	kg	2.80
7	HOLE SIZES	mm	85 - 95
8	WRENCH SIZE A/F	mm	A/F 57.0 /W-50.0
9	SUITABLE SHANK	-	BR3 (Without Foot Valve)

* THREE START THREAD ON TOP SUB & DRIVE SUB

ST30BR
Air Consumption

PSI	100	150	200	250
CFM	40	60	100	140
BPM	1130	1380	1590	1780

DTH HAMMERS

WINNER SERIES

- 3.5" WIN35DH
- 4.5" WIN45DH / MX

DESIGN HIGHLIGHTS

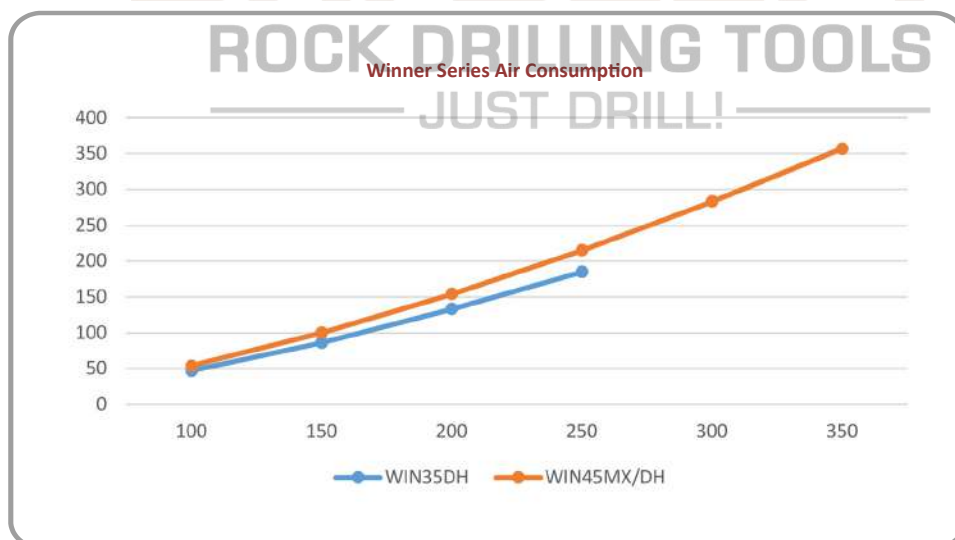
- WINNER Series is a valve type hammers designed for high performance at low operating air pressures.
- Suitable bits has a strong robust design with and without foot valve to withstand heavy duty application.
- WINNER Series Hammers maximizes energy output and reduces service requirements.
- Wear Sleeve is not reversible.
- All critical internal components are heat treated under strict control to maximize tool longevity.

EXCLUSIVE FEATURES

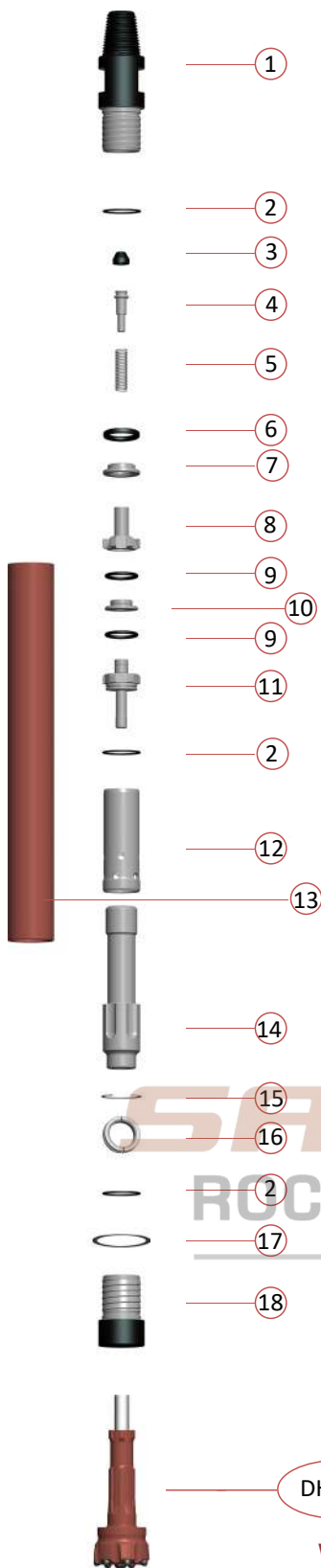
- Hammer is inbuilt with buffer ring which will sustain the compressive load generated from drill string.
- Flapper mechanism helps to adjust inflow air pressure so as to increase the volume of air to be occupied.
- Inner cylinder guides piston and supplies air into piston area where the air flow is controlled.

APPLICATIONS

- Water Well • Mining • Construction • Quarry



WIN35DH HAMMER



A DEDICATED TOOL FOR 3.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB (2 3/8 API REG PIN)	1 NO	15-3W3500-23ARM
	TOP SUB (5D KOREAN THREAD PIN)	1 NO	15-3W3500-5DKM
2	"O" RING FOR (TS,BV,BRR)	3 NO	37-04603H
3	CHECK VALVE CAP	1 NO	57-281820
4	CHECK VALVE	1 NO	19-12069M
5	SPRING	1 NO	17-110610
6	BUFFER RING	1 NO	27-060408
7	TOP SUB SPACER	1 NO	29-060316
8	TOP VALVE	1 NO	22-3W3500
9	"O" RING FOR TV & FV	2 NO	37-02302H
10	FLAPPER VALVE	1 NO	69-562316
11	BOTTOM VALVE	1 NO	32-3W3500
12	INNER CYLINDER	1 NO	42-3W3500
13	WEAR SLEEVE	1 NO	45-3W3500
14	PISTON	1 NO	55-3W3500
15	PISTON RETAINER RING	1 NO	89-060330
16	BIT RETAINER RING	1 NO	99-060415
17	COPPER SHIM	1NO	77-07061C
18	DRIVE SUB	1 NO	75-3W3500
	SERVICE KIT (S.NO:2,3,5,6,9&17)	1 SET	3W3500DHK
	HAMMER ASSEMBLY	1 NO	34-3W3500DH-23ARMS
	HAMMER ASSEMBLY	1 NO	34-3W3500DH-5DKMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	776.3
2	HAMMER OUTSIDE DIA	mm	78.0
3	HAMMER WEIGHT	kg	21.0
4	CYLINDER BORE	mm	63.0
5	PISTON STROKE	mm	80.0
6	PISTON WEIGHT	kg	4.0
7	HOLE SIZES	mm	90-115
8	WRENCH SIZE A/F	mm	A/F 57.0/W-40.0
9	SUITABLE SHANK	-	DHD 3.5 (With Foot Valve)

* SINGLE START THREAD ON TOP SUB & DRIVE SUB

DHD3.5

WIN35DH
Air Consumption

PSI	100	150	200	250
CFM	50	85	130	185
BPM	1320	1615	1865	2085

WINNER SERIES

WIN45DH / MX HAMMER

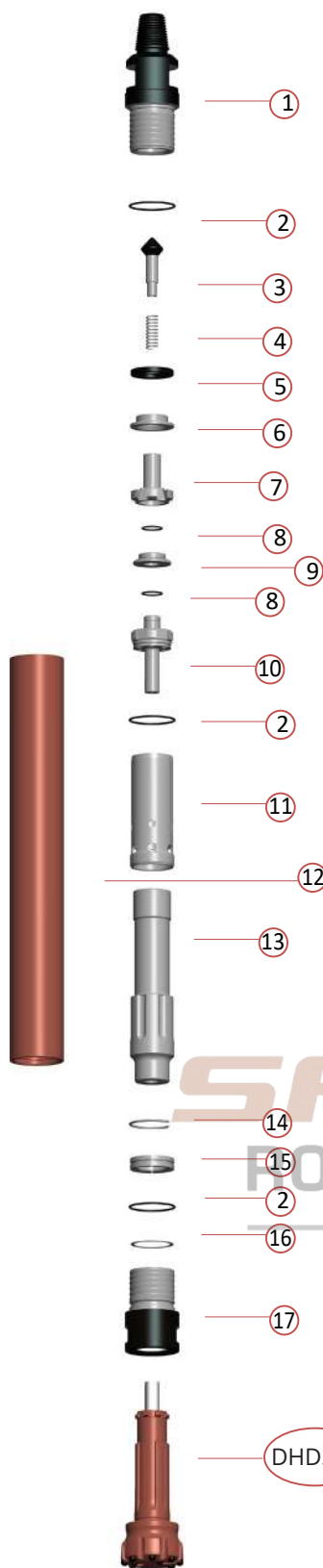
A DEDICATED TOOL FOR 4.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB (2 3/8 API REG PIN)	1 NO	15-4W4500-23ARM
	TOP SUB (7D 5TPI KOREAN THREAD)	1 NO	15-4W4500-7DKM
2	"O" RING FOR T/S, B/V & BRR	3 NO	37-06203H
3	CHECK VALVE	1 NO	19-24109R
4	SPRING	1 NO	17-220610
5	BUFFER RING	1 NO	27-070510
6	TOP SUB SPACER	1 NO	29-070521
7	TOP VALVE	1 NO	22-4W4500
8	"O" RING FOR T/V & F/V	2 NO	37-02902H
9	FLAPPER VALVE	1 NO	69-692918
10	BOTTOM VALVE	1 NO	32-4W4500
11	INNER CYLINDER	1 NO	42-4W4500
12	WEAR SLEEVE [WIN45DH]	1 NO	45-4W4501
	WEAR SLEEVE [WIN45MX]	1 NO	45-4W4500
13	PISTON [WIN45DH]	1 NO	55-4W4501
	PISTON [WIN45MX]	1 NO	55-4W4500
14	PISTON RETAINER RING	1 NO	89-080446
15	BIT RETAINER RING [WIN45DH]	1 NO	99-070520
	BIT RETAINER RING [WIN45MX]	1 NO	99-070529
16	COPPER SHIM	1 NO	77-09081C
17	DRIVE SUB [WIN45DH]	1 NO	75-4W4501
	DRIVE SUB [WIN45MX]	1 NO	75-4W4500
	SERVICE KIT (S.NO 2,4,5,8&16)	1 SET	4W4500MXK
	HAMMER ASSEMBLY [WIN45DH]	1 NO	34-4W4500DH-23ARMS
	HAMMER ASSEMBLY [WIN45MX]	1 NO	34-4W4500MX-23ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH [45DH/MX]	mm	919.6 / 955.0
2	HAMMER OUTSIDE DIA	mm	98.0
3	HAMMER WEIGHT	kg	37.0
4	CYLINDER BORE	mm	80.0
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	8.85
7	HOLE SIZES	mm	115-140
8	TOP SUB WRENCH SIZE	mm	A/F 61.5/W 40.0
9	SUITABLE SHANK [WIN45DH]	-	DHD340 (With Foot Valve)
	SUITABLE SHANK [WIN45MX]	-	MX40 (With Foot Valve)

* SINGLE START THREAD ON TOP SUB & DRIVE SUB



WIN45DH/MX
Air Consumption

PSI	100	150	200	250	300	350
CFM	54	100	155	215	280	360
BPM	1080	1320	1530	1710	1870	2020

JDM SERIES

- 3.5" JDM35MD / DH
- 4.5" JDM45DH / QLX
- 5.0" JDM55QL / DH
- 6.0" JDM60QL / DH
- 8.0" JDM80QL / DH
- 10.0" JDM10SD
- 12.0" JDM 12SD

DESIGN HIGHLIGHTS

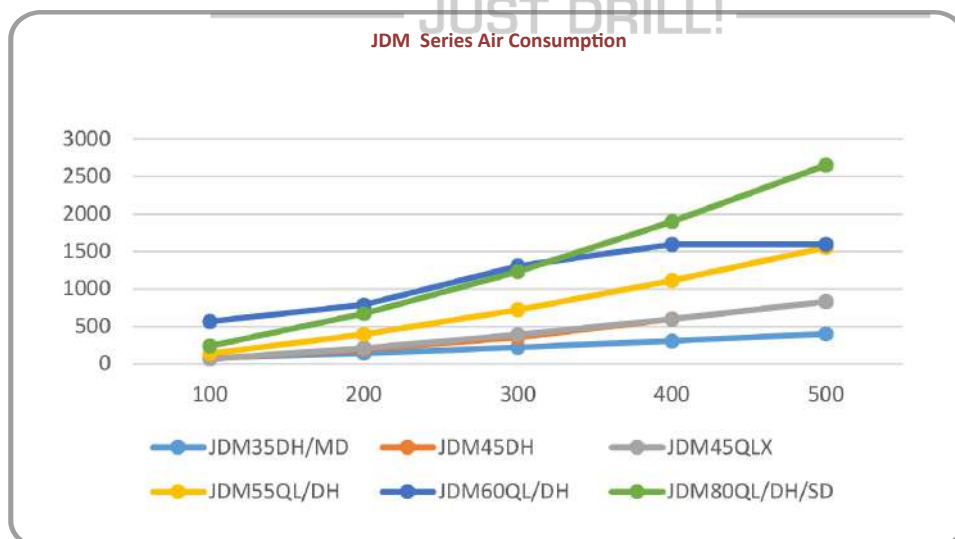
- JDM Series is a valve less type hammers designed for high performance at low operating air pressures.
- Suitable bits has a strong robust design without foot valve to withstand heavy duty application.
- JDM Series Hammers maximizes energy output and reduces service requirements.
- Wear Sleeve is not reversible except JDM60QL
- All critical internal components are heat treated under strict control to maximize tool longevity.

EXCLUSIVE FEATURES

- A built-in choke facility allows the driller to adjust the volume of air through the hammer to optimize cuttings evacuation.
- Robust piston design for optimum strength and performance
- Fitted with a reversible cylinder to maximize operating life.
- Multi-start threads on backhead and chuck ensure easy coupling / uncoupling of hammer.
- Excellent for all types of drilling applications including residential geothermal, production quarry drilling, seismic drilling and small construction drilling.

APPLICATIONS

- Water Well • Mining • Construction • Quarry



JDM SERIES

JDM35MD / DH HAMMER

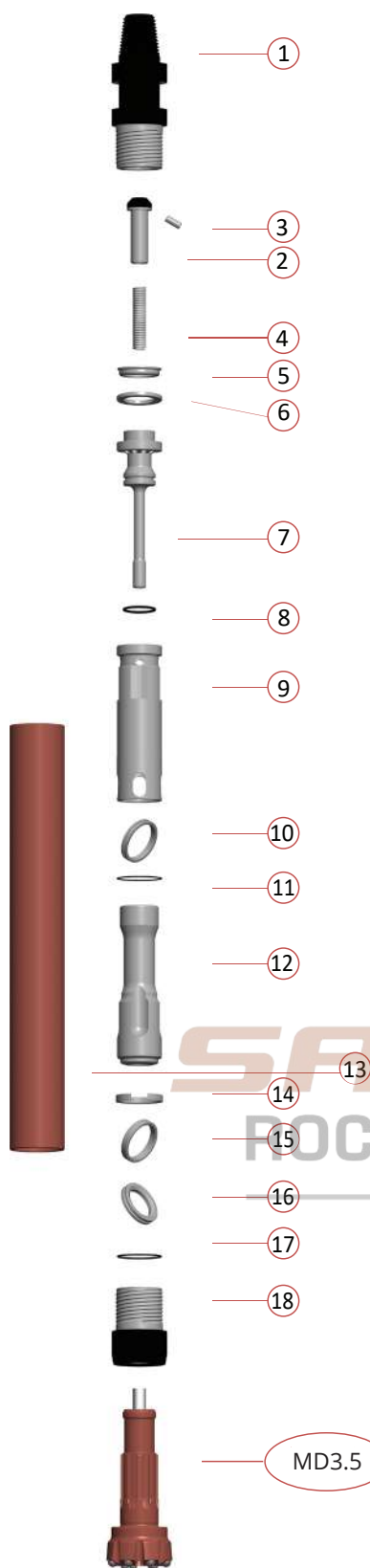
A DEDICATED TOOL FOR 3.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-3C3500-23ARM
2	CHECK VALVE	1 NO	19-23101R/A
3	CHOKE (FULL, HALF, QUARTER)	1 NO	47-0125N(A)(C)(D)
4	SPRING	1 NO	17-220925
5	LOCK RING	1 NO	29-060412
6	STEEL MAKE UP RING	1 NO	M9-060405
7	AIR DISTRIBUTOR	1 NO	12-3C3500
8	"O"RING FOR AIR DISTRIBUTOR	1 NO	37-03903H
9	INNER CYLINDER	1 NO	42-3C3500
10	SEATING RING	1 NO	79-060510
11	"O"RING FOR SEATING RING	1 NO	37-05901H
12	PISTON	1 NO	55-3C3500
13	WEAR SLEEVE	1 NO	45-3C3500
14	PISTON RETAINER RING	1 NO	89-060430
15	GUIDE BUSH SPACER	1 NO	29-060511
16	BIT RETAINER RING	1 NO	99-060411/A
17	"O" RING FOR BIT RETAINER RING	1 NO	37-04602H
18	DRIVE SUB(WITH TAPER)	1 NO	75-3C3501
18	DRIVE SUB(W/O TAPER)	1 NO	75-3C3502
	DRIVE SUB(JDM35MD)(W/O TAPER)	1 NO	75-3C3504
	SERVICE KIT (S.NO:3,4,8,11&17)	1 SET	3C3500MDK
	HAMMER ASSEMBLY	1 NO	34-3C3500DH-23ARMS
	HAMMER ASSEMBLY(W/O TAPER)	1 NO	34-3C3501DH-23ARMS
	HAMMER ASSEMBLY(JDM35MD)	1 NO	34-3C3501MD-23ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH [35MD/DH]	mm	804.8 / 804.0 (W/O BIT)
2	HAMMER OUTSIDE DIA	mm	85.0
3	HAMMER WEIGHT	kg	21.6
4	CYLINDER BORE	mm	68.70
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	3.9
7	HOLE SIZES	mm	95 - 115
8	WRENCH SIZE A/F	mm	A/F 63.0 /W 41.5
9	SUITABLE SHANK [JDM35MD]	----	MD3.5 (With Foot Valve)
	SUITABLE SHANK [JDM35DH]	----	DHD3.5 (With Foot Valve)

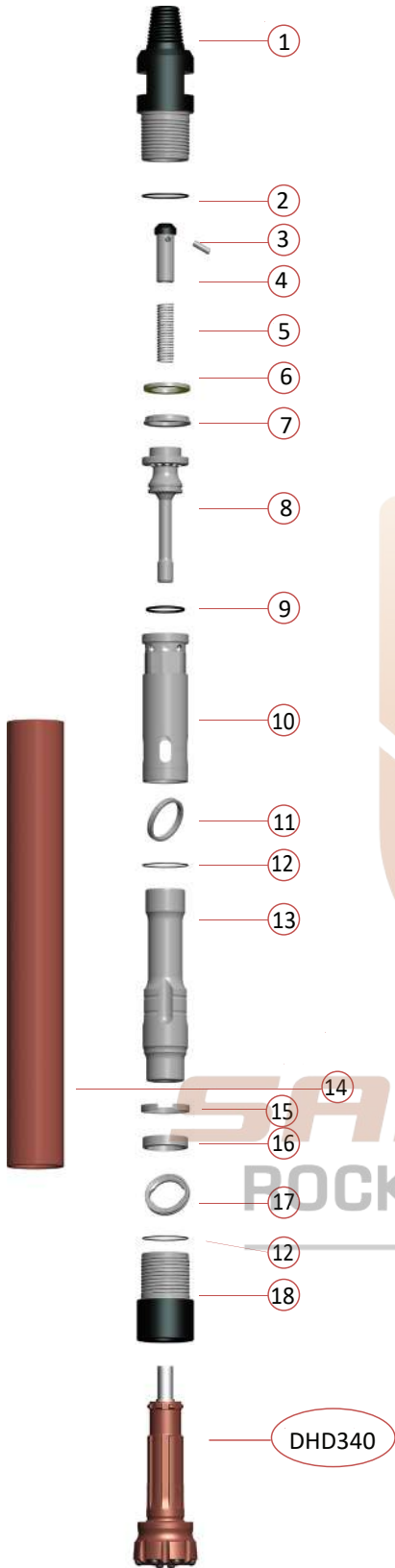
* THREE START THREAD ON TOP SUB & DRIVE SUB



JDM35MD/DH
Air Consumption

PSI	100	150	200	250	250
CFM	80	140	220	305	400
BPM	1540	1880	2175	2430	3660

JDM45DH / QLX HAMMER



A DEDICATED TOOL FOR 4.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-4C4500-23ARM
	TOP SUB	1 NO	15-4C4500-27ARM
2	"O" RING FOR TOP SUB	1 NO	37-07503H
3	CHOKE'S (FULL, HALF, QUARTER)	1 NO	47-0127N(A)(C)(D)
4	CHECK VALVE	1 NO	19-23101R
5	SPRING	1 NO	17-221017
6	STEEL MAKEUP RING	1 NO	M9-080507
7	LOCK RING	1 NO	29-070512
8	AIR DISTRIBUTOR	1 NO	12-4C4500
9	"O" RING FOR AIR DISTRIBUTOR	1 NO	37-05103H
10	INNER CYLINDER	1 NO	42-4C4500
11	SEATING RING	1 NO	79-070610
12	"O" RING FOR SEATING RING, BRR	2 NO	37-05901H
13	PISTON	1 NO	55-4C4500
	PISTON [JDM45QLX]	1 NO	55-4C4501
14	WEAR SLEEVE	1 NO	45-4C4500
15	PISTON RET RING	1 NO	89-070425
16	ALINGER / GUIDE BUSH	1 NO	65-4C4500
	GUDIE BUSH [JDM45QLX]	1 NO	65-4C4502
17	BIT RETAINER RING	1 NO	99-070509
	BIT RETAINER RING [JDM45QLX]	1 NO	99-080522
18	DRIVE SUB	1 NO	75-4C4500
	DRIVE SUB [JDM45QLX]	1 NO	75-4C4502
	SEAL KIT (S.NO: 2, 3, 5, 9 & 12)	1 SET	4C4500DHK
	HAMMER ASSEMBLY	1 NO	34-4C4500DH-23ARMS
	HAMMER ASSEMBLY [JDM45QLX]	1 NO	34-4C4500QLX-23ARMS
	HAMMER ASSEMBLY [JDM45QLX]	1 NO	34-4C4500QLX-27ARMS

HAMMER SPECIFICATION

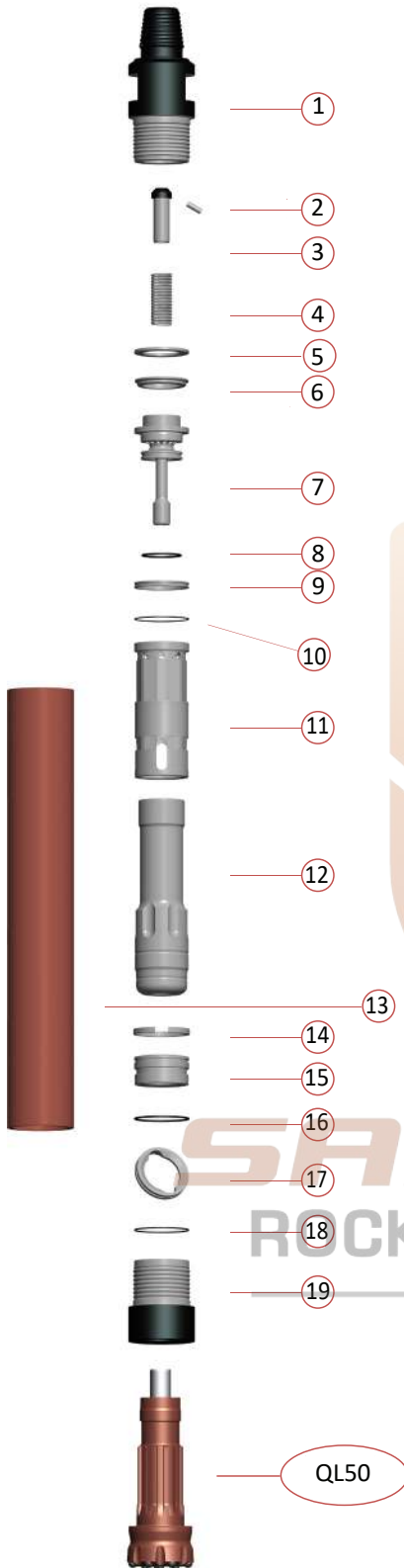
SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	955.7
2	HAMMER OUTSIDE DIA	mm	98.0
3	HAMMER WEIGHT	kg	39.0
4	CYLINDER BORE	mm	78.2
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	7.7
7	HOLE SIZES	mm	115-127
8	WRENCH SIZE A/F	mm	A/F 65.0 / W - 40.0
9	SUITABLE SHANK	-----	DHD340 / QLX40 (With F.V)

* THREE START THREAD ON TOP SUB & DRIVE SUB

JDM45DH / QLX Air Consumption

PSI	100	200	300	400	500
CFM	70	190	350	595	830
BPM	1030	1460	1790	2440	2730

JDM55QL / DH HAMMER



A DEDICATED TOOL FOR 5.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-5C5500-31ARM
	TOP SUB	1 NO	15-5C5500-27ARM
2	CHOKE (FULL/HALF/QUARTER)	1 NO	47-0127N/(A)(C)(D)
3	CHECK VALVE	1 NO	19-24101R
4	SPRING	1 NO	17-221017
5	STEEL MAKEUP RING	1 NO	M9-100705
6	LOCK RING	1 NO	29-100712
7	AIR DISTRIBUTOR	1 NO	12-5C5500
8	"O" RING FOR AIR DISTRIBUTOR	1 NO	37-06803H
9	SEATING RING	1 NO	79-100910
10	"O" RING FOR SEATING RING	1 NO	37-06002H
11	INNER CYLINDER	1 NO	42-5C5500
12	PISTON[JDM55QL]	1 NO	55-5C5500
	PISTON[JDM55DH]	1 NO	55-5C5501
13	WEAR SLEEVE	1 NO	45-5C5500
14	PISTON RET RING	1 NO	89-090324
15	GUIDE BUSH[JDM55QL]	1 NO	65-5C5500
	GUIDE SPACER[JDM55DH]	1 NO	29-100818
16	"O" RING FOR GUIDE BUSH	1 NO	37-09003H
17	BIT RETAINER RING[JDM55QL]	1 NO	99-100716
	BIT RETAINER RING[JDM55DH]	1 NO	99-100718
18	"O" RING FOR BIT RETAINER RING	1 NO	37-08402H
19	DRIVE SUB SPACER (Copper shim)	1NO	77-12101C
20	DRIVE SUB[JDM55QL]	1 NO	75-5C5500
	DRIVE SUB[JDM55QL]	1 NO	75-5C5500/L
	DRIVE SUB[JDM55DH]	1 NO	75-5C5502
	DRIVE SUB[JDM55DH]	1 NO	75-5C5502/L
	SERVICE KIT (S.NO:2,4,8,10,16&18)	1 SET	5C5500QLK
	HAMMER ASSEMBLY[JDM55QL]	1 NO	34-5C5500QL-31ARMR
	HAMMER ASSEMBLY[JDM55QL]	1 NO	34-5C5500QL-31ARMR/L
	HAMMER ASSEMBLY[JDM55QL]	1 NO	34-5C5500QL-27ARMR
	HAMMER ASSEMBLY[JDM55DH]	1 NO	34-5C5500DH-31ARMR
	HAMMER ASSEMBLY[JDM55DH]	1 NO	34-5C5500DH-31ARMR/L

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	994.0
2	HAMMER OUTSIDE DIA	mm	124.0
3	HAMMER WEIGHT	kg	70.0
4	CYLINDER BORE	mm	99.80
5	PISTON STROKE	mm	80.0 (opprox.)
6	PISTON WEIGHT	kg	15.0
7	HOLE SIZES	mm	140-165
8	WRENCH SIZE A/F	mm	A/F 90.0 / W-50.0
9	SUITABLE SHANK	----	QL50 (With Foot Valve)
	SUITABLE SHANK	----	DMD50 (With Foot Valve)

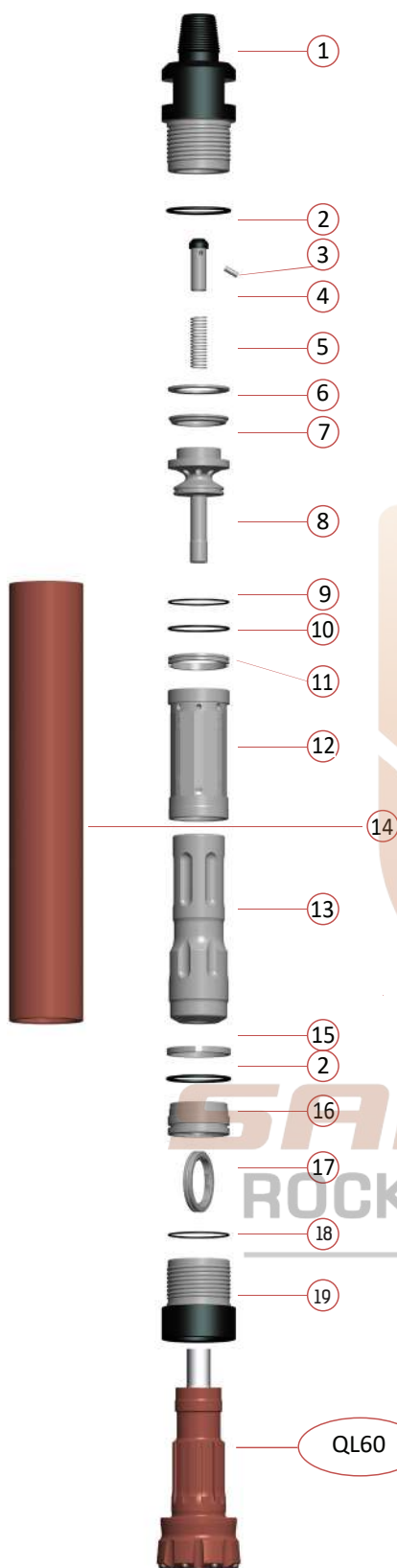
* TWO START THREAD ON TOP SUB & DRIVE SUB

JDM55QL / DH Air Consumption

PSI	100	200	300	400	500
CFM	140	390	720	1110	1550
BPM	1155	1635	2000	2310	2585

JDM60QL HAMMER

A DEDICATED TOOL FOR 6" DRILLING



SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-6C6000-31ARM
2	TOP SUB	1 NO	15-6C6000-31ARM/R
3	"O" RING (FOR TS , ALINGER)	2 NO	37-10505H
4	CHOKE (FULL/HALF/QUARTER)	1 NO	47-0127N/(A)(C)(D)
5	CHECK VALVE	1 NO	19-24101R
6	SPRING	1 NO	17-221017
7	STEEL MAKEUP RING	1 NO	M9-110805
8	LOCK RING	1 NO	29-110812
9	AIR DISTRIBUTOR	1 NO	12-6C6000
10	"O" RING FOR A.D& B R RING	2 NO	37-08703H
11	"O" RING FOR SEATING RING	1 NO	37-08101H
12	SEATING RING	1 NO	79-111012
13	INNER CYLINDER	1 NO	42-6C6000
14	PISTON	1 NO	55-6C6000
15	WEAR SLEEVE	1 NO	45-6C6000
16	PISTON RET RING	1 NO	89-110524
17	ALIGNER (GUIDE BUSH)	1 NO	65-6C6000
18	BIT RETAINER RING	1 NO	99-110815/A
19	DRIVE SUB SPACER	1 NO	77-14121C
	DRIVE SUB	1 NO	75-6C6000
	DRIVE SUB	1 NO	75-6C6000/L
	SERVICE KIT (S.NO:2,3,5,9&10)	1 SET	6C6000QLK
	HAMMER ASSEMBLY	1 NO	34-6C6000QL-31ARMR
	HAMMER ASSEMBLY	1 NO	34-6C6000QL-31ARMR/R/L

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1035.0
2	HAMMER OUTSIDE DIA	mm	144.0
3	HAMMER WEIGHT	kg	100.0
4	CYLINDER BORE	mm	115.8
5	PISTON STROKE	mm	80.0(approx.)
6	PISTON WEIGHT	kg	20.0
7	HOLE SIZES	mm	156-178
8	WRENCH SIZE A/F	mm	A/F 100.0 / W-50.0
9	SUITABLE SHANK	----	QL60 (With Foot Valve)

* THREE START THREAD ON TOP SUB & DRIVE SUB

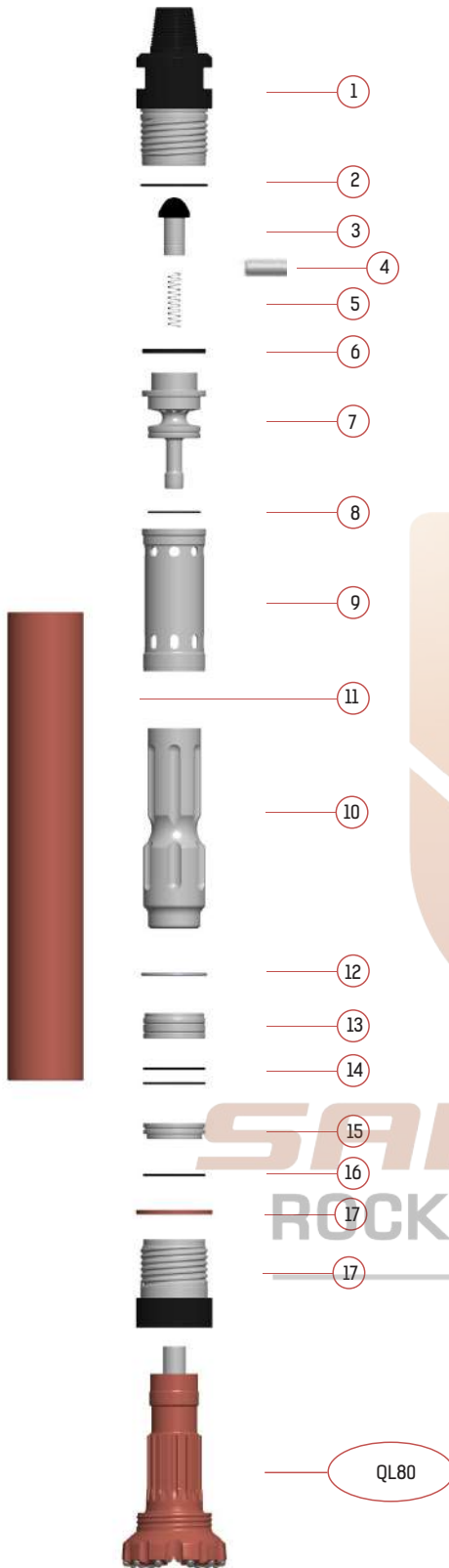
JDM60QL Air Consumption

PSI	150	200	250	300	350	400
CFM	360	560	780	1030	1300	1590
BPM	1290	1490	1670	1820	1970	2110

JDM SERIES

JDM80QL / DH / SD HAMMER

A DEDICATED TOOL FOR 8" DRILLING



SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-8J8000-41ARM
2	TOP SUB	1 NO	15-8J8000-41ARM/R
2	"O" RING FOR TOP SUB	1 NO	37-14005H
3	CHECK VALVE	1 NO	19-37138R
4	CHOKE (FULL/HALF/QUARTER)	1NO	47-0147N(A)(C)(D)
5	SPRING	1 NO	17-331220
6	BUFFER RING	1 NO	27-151111
7	AIR DISTRIBUTOR	1 NO	12-8J8000
8	"O" RING FOR AIR DISTRIBUTOR	1 NO	37-10604H
9	INNER CYLINDER	1 NO	42-8J8000
10	PISTON	1 NO	55-8C8000
	PISTON [JDM80DH]	1 NO	55-8C8002
	PISTON[JDM80SD]	1 NO	55-8C8003
11	WEAR SLEEVE	1 NO	45-8C8000
	WEAR SLEEVE[JDM80DH]	1 NO	45-8C8002
	WEAR SLEEVE[JDM80SD]	1 NO	45-8C8003
12	PISTON RETAINER RING	1 NO	89-140635
13	GUIDE BUSH	1 NO	65-8C8000
	GUIDE BUSH[JDM80DH/SD]	1 NO	65-8C8001
14	"O"RING FOR GUIDE BUSH	2 NO	37-13204H
15	BIT RETAINER RING	1 NO	99-141037
	BIT RETAINER RING[JDM80DH]	1 NO	99-141033
	BIT RETAINER RING[JDM80SD]	1 NO	99-140944
16	"O" FOR BIT RETAINER RING	1 NO	37-13204H
17	DRIVE SUB SPACER	1 NO	29-181610
18	DRIVE SUB[JDM80QL]	1 NO	75-8J8000
	DRIVE SUB[JDM80DH]	1 NO	75-8C8000
	DRIVE SUB[JDM80SD]	1 NO	75-8C8001
	SERVICE KI T (S.NO: 2,4,5,6,8,14&16)	1 SET	8J8000QLK
	HAMMER ASSEMBLY	1 NO	34-8C8000QL-41ARMS
	HAMMER ASSEMBLY	1 NO	34-8C8000QL-41ARMS/R
	HAMMER ASSEMBLY	1 NO	34-8C8001DH-41ARMS
	HAMMER ASSEMBLY	1 NO	34-8C8001DH-41ARMS/R
	HAMMER ASSEMBLY	1 NO	34-8C8000SD-41ARMS
	HAMMER ASSEMBLY	1 NO	34-8C8000SD-41ARMS/R

HAMMER SPECIFICATION

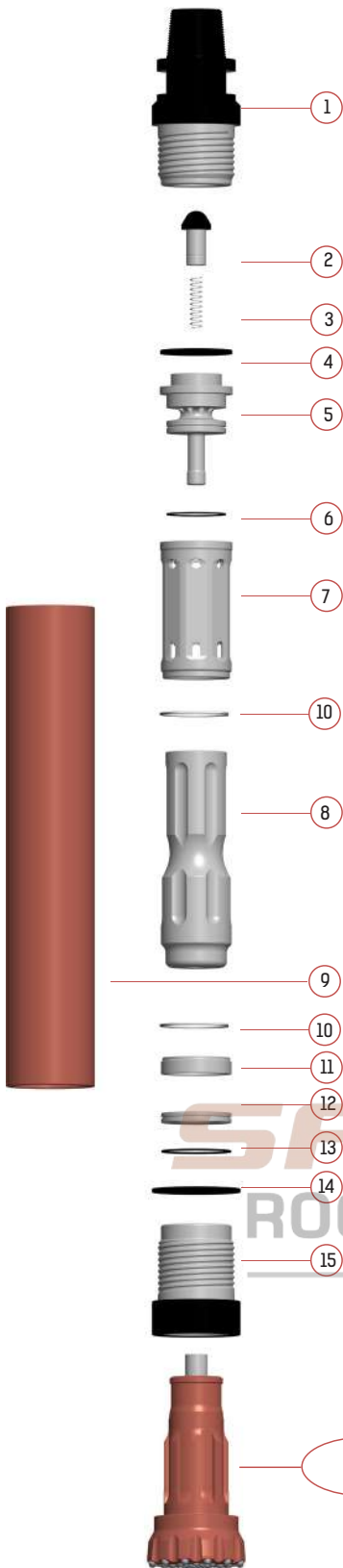
SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1334.0
2	HAMMER OUTSIDE DIA	mm	182.0
3	HAMMER WEIGHT	kg	190.0
4	CYLINDER BORE	mm	149.0
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	42.0
7	HOLE SIZES	mm	200 - 305
8	WRENCH SIZE A/F	mm	A/F 140 / W-50
9	SUITABLE SHANK	-----	QL80(With Foot Valve)
	SUITABLE SHANK	-----	DH380(With Foot Valve)
	SUITABLE SHANK	-----	S80(With Foot Valve)

* TWO START THREAD ON TOP SUB & DRIVE SUB

JDM80QL / DH / SD Air Consumption

PSI	100	200	300	400	500
CFM	240	670	1230	1890	2650
BPM	1020	1440	1770	2040	2280

JDM10SD HAMMER



A DEDICATED TOOL FOR 10" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB (6 5/8 API REG PIN)	1 NO	15-1JX100-65ARM
2	CHECK VALVE	1 NO	19-37138R
3	SPRING	1 NO	17-331220
4	BUFFER RING	1 NO	27-181310
5	AIR DISTRIBUTOR	1 NO	12-1JX100
6	"O" RING FOR AIR DISTRIBUTOR	1 NO	37-13504H
7	INNER CYLINDER	1 NO	42-1JX100
8	PISTON	1 NO	52-1CX100
9	WEAR SLEEVE	1 NO	45-1CX100
10	PISTON RETAINER RING	2 NO	89-191745
11	GUIDE BUSH	1 NO	65-1CX101
12	BIT RETAINER RING	1 NO	99-171325
13	"O" RING FOR BIT RETAINER RING	1 NO	37-16004H
14	DRIVE SUB SPACER	1 NO	29-221910
15	DRIVE SUB	1 NO	75-1JX100
	SERVICE KIT (S.NO: 3,4,6,&14)	1 SET	1JX100SDK
	HAMMER ASSEMBLY	1 NO	34-1CX100SD-65ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1490.0
2	HAMMER OUTSIDE DIA	mm	225.0
3	HAMMER WEIGHT	kg	355.0(approx)
4	CYLINDER BORE	mm	179.0
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	68.0
7	HOLE SIZES	mm	254 - 305
8	WRENCH SIZE A/F	mm	A/F 152 / W- 60.0
9	SUITABLE SHANK	----	SD10 (With Foot Valve)

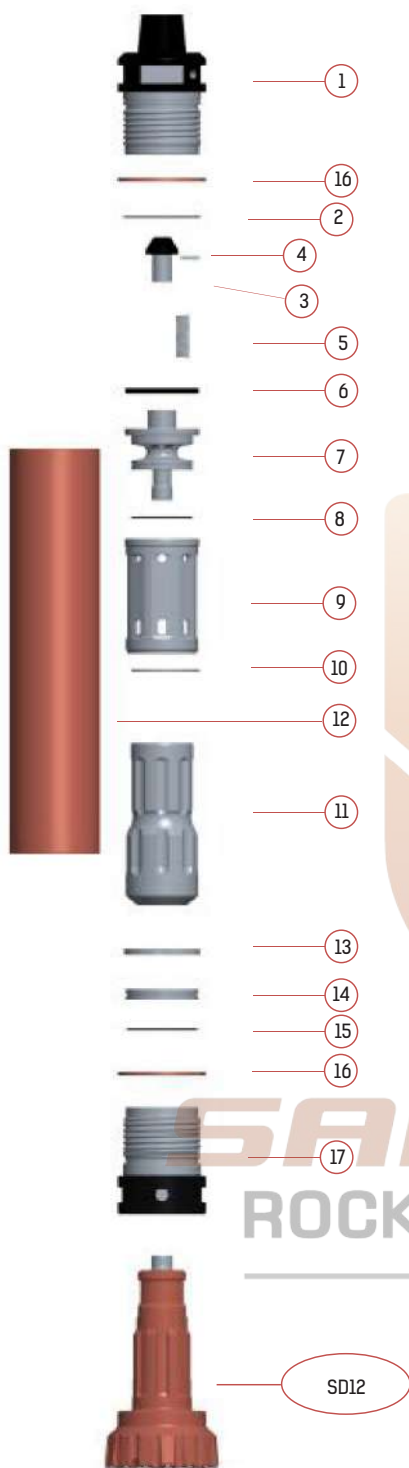
* TWO START THREAD ON TOP SUB & DRIVE SUB

SD10

JDM10SD
Air Consumption

PSI	150	200	250	300	350	400
CFM	690	980	1290	1610	1910	2200
BPM	1078	1224	1352	1468	1575	1674

JDM12SD HAMMER



A DEDICATED TOOL FOR 12" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB (6 5/8 API REG PIN)	1 NO	15-2CX200-65ARM
2	"O" RING (FOR TOP SUB)	1 NO	37-23005H
3	CHECK VALVE	1 NO	19-510149R
4	CHOKE	1 NO	47-0157N(A)(C)(D)
5	SPRING	1 NO	17-441411
6	BUFFER RING	1NO	27-221518
7	AIR DISTRIBUTOR	1 NO	12-2CX200
8	"O" RING FOR AIR DISTRIBUTOR	1NO	37-17305H
9	INNER CYLINDER	1 NO	42-2CX200
10	INNER CYLINDER (RETAINER RING)	1 NO	89-210891
11	PISTON	1 NO	55-2CX200
12	WEAR SLEEVE	1 NO	45-2CX200
13	PISTON RETAINER RING	1 NO	89-231545
14	BIT RETAINER RING	1 NO	99-221440
15	"O" FOR BIT RETAINER RING	1 NO	37-20905H
16	DRIVE SUB & TOP SUB SPACER	2 NO	77-272412E
17	DRIVE SUB	1 NO	75-2CX200
	SERVICE KI T (S.NO: 2,4,8&15)	1 SET	2CX200SDK
	HAMMER ASSEMBLY	1 NO	34-2CX200SD-65ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1624.0
2	HAMMER OUTSIDE DIA	mm	270.0
3	HAMMER WEIGHT	kg	540.0
4	CYLINDER BORE	mm	226.0
5	PISTON STROKE	mm	65.0 (approx.)
6	PISTON WEIGHT	kg	124.2
7	HOLE SIZES	mm	300-400
8	WRENCH SIZE A/F	mm	A/F 240/ W-60
9	SUITABLE SHANK	----	SD12 (With Foot Valve)

* TWO START THREAD ON TOP SUB & DRIVE SUB

JDM12SD Air Consumption

PSI	100	150	200	250	300	350
CFM	364	669	1030	1440	1893	2386
BPM	820	1004	1160	1296	1420	1534

JDC SERIES

- 4.5" JDC45S
- 5.0" JDC55QL / DH
- 6.0" JDC60QL / DH
- 8.0" JDC80QL / DH
- 10.0" JDC10SD

DESIGN HIGHLIGHTS

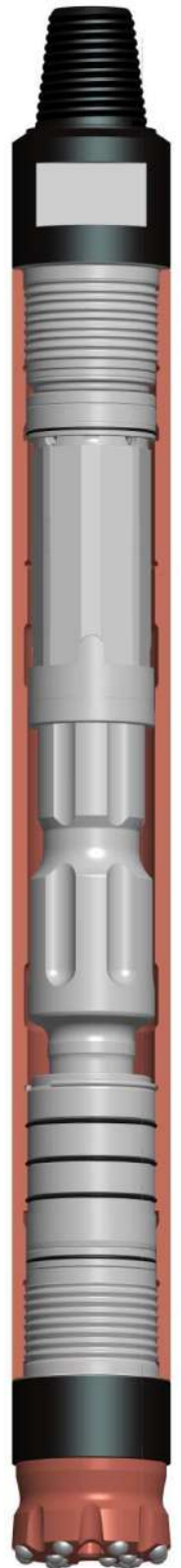
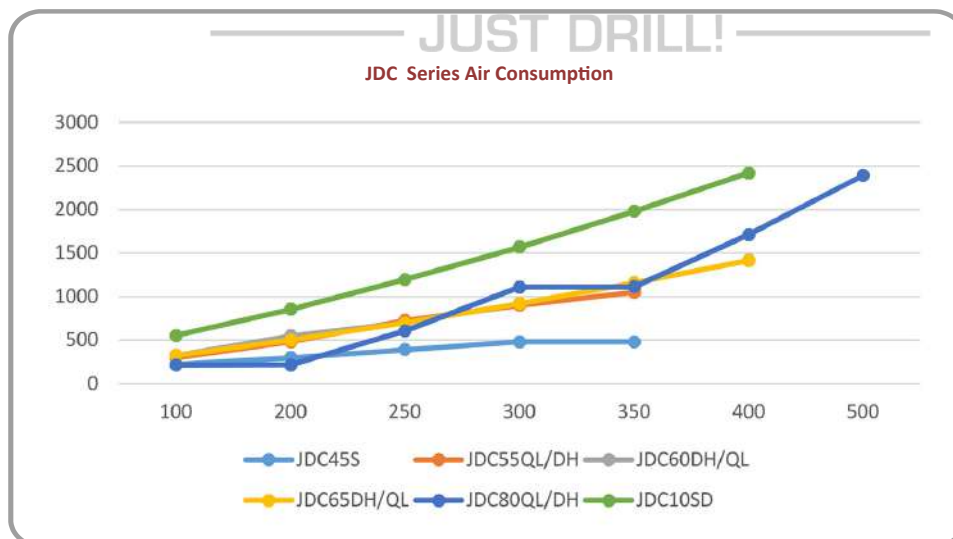
- JDC Series is a valve less type hammers designed for high performance at low operating air pressures.
- Suitable bits has a strong robust design without foot valve to withstand heavy duty application.
- JDC Series Hammers maximizes energy output and reduces service requirements.
- Wear Sleeve is not reversible.
- All critical internal components are heat treated under strict control to maximize tool longevity.

EXCLUSIVE FEATURES

- Hammer is designed with the adjustable Choke which allows you to adjust the volume of air that is used to power the Piston.
- With help of steel make up ring and lock ring it will able to sustain the compressive load generated from drill string.
- Piston breakage is minimum as it guided with inner cylinder where there will be even amount of air flow.
- Air distributor distributes air to cylinder ports and controls air flow.

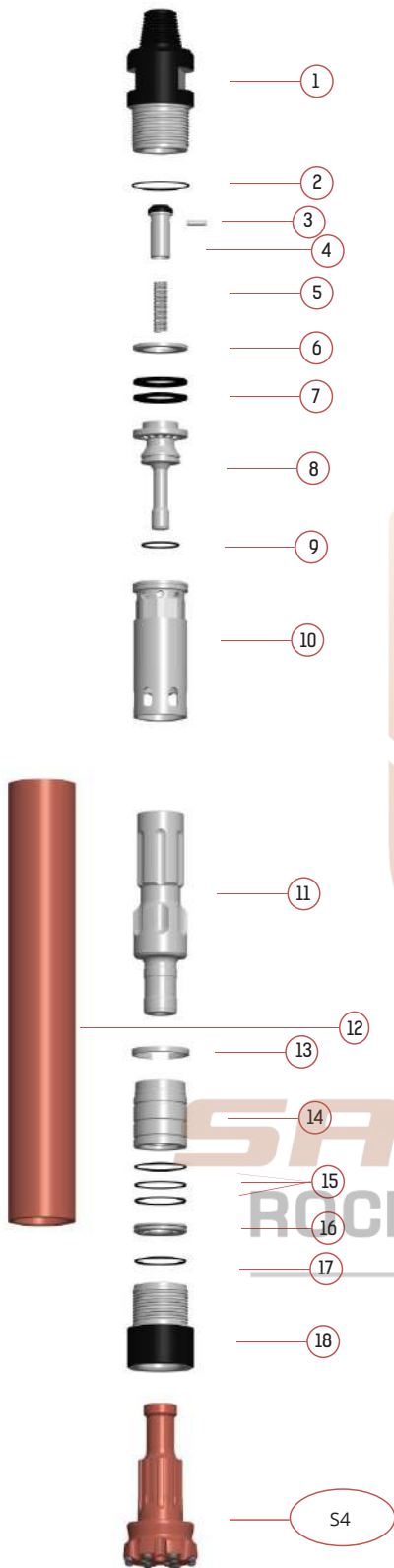
APPLICATIONS

- Water Well • Mining • Construction • Quarry



JDC SERIES

JDC45S HAMMER



A DEDICATED TOOL FOR 4.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB (2 3/8API REG PIN)	1 NO	15-4J4501-23ARM
2	"O" RING FOR TOP SUB	1 NO	37-07503H
3	CHOKE (FULL/HALF/QUARTER)	1 NO	47-0127N(A)(C)(D)
4	CHECK VALVE	1 NO	19-23101R
5	SPRING	1 NO	17-221017
6	STEEL MAKE UP RING	1NO	M9-080507/A
7	BUFFER RING	2 NO	27-080506/A
8	AIR DISTRIBUTOR	1 NO	12-4J4501
9	"O" RING FOR AIR DISTRIBUTOR	1 NO	37-05103H
10	INNER CYLINDER	1 NO	42-4J4502
11	PISTON	1 NO	52-4J4501
12	WEAR SLEEVE	1 NO	45-4J4504
13	PISTON RETAINER RING	1 NO	89-080425/A
14	GUIDE BUSH	1 NO	65-4J4501
15	"O" RING FOR GUIDE BUSH	3 NO	37-06803H
16	BIT RETAINER RING	1 NO	99-080412
17	"O" RING FOR B.R RING	1 NO	37-06803H
18	DRIVE SUB	1NO	75-4J4501
	SERVICE KIT (S.NO:2,3,5,9,15&17)	1 SET	4J4501S4K
	HAMMER ASSEMBLY	1 NO	34-4J4503S4-23ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1025.0
2	HAMMER OUTSIDE DIA	mm	98.0
3	HAMMER WEIGHT	kg	45.0
4	CYLINDER BORE	mm	80.7
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	8.6
7	HOLE SIZES	mm	115 - 127
8	WRENCH SIZE A/F	mm	A/F 65.0 / W-40.0
9	SUITABLE SHANK	----	S4 BIT

* TWO START THREAD ON TOP SUB & DRIVE SUB

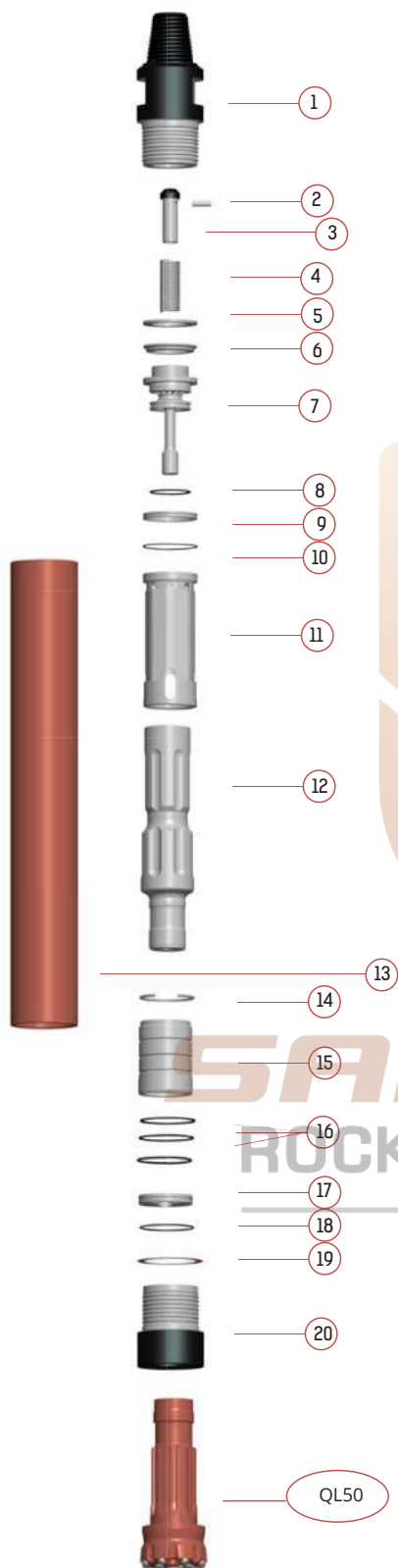
JDC45S Air Consumption

PSI	150	200	250	300
CFM	125	190	270	350
BPM	1260	1460	1630	1790

JDC SERIES

JDC55QL / DH HAMMER

A DEDICATED TOOL FOR 5.5" DRILLING



SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-5C5500-31ARM
2	CHOKE (FULL/HALF/QUARTER)	1 NO	47-0127N/(A)(C)(D)
3	CHECK VALVE	1 NO	19-24101R
4	SPRING	1 NO	17-221017
5	STEEL MAKEUP RING	1 NO	M9-100705
6	LOCK RING	1 NO	29-100712
7	AIR DISTRIBUTOR	1 NO	12-5C5500
8	"O" RING FOR AIR DISTRIBUTOR	1 NO	37-06803H
9	SEATING RING	1 NO	79-100910
10	"O" RING FOR SEATING RING	1 NO	37-06002H
11	INNER CYLINDER	1 NO	42-5J5501
12	PISTON [JDC55QL]	1 NO	52-5J5501
	PISTON [JDC55DH]	1 NO	52-5J5501
13	WEAR SLEEVE [JDC55QL]	1 NO	45-5J5501
	WEAR SLEEVE [JDC55DH]	1 NO	45-5J5500
14	PISTON RETAINER RING [JDC55QL]	1 NO	89-090429
	PISTON RET RING [JDC55DH]	1 NO	89-090324
15	GUIDE BUSH [JDC55QL]	1 NO	65-5J5501
	GUIDE BUSH [JDC55DH]	1 NO	65-5J5500
16	"O" RING FOR GUIDE BUSH	1 NO	37-09003H
17	BIT RETAINER RING [JDC55QL]	1 NO	99-100716
	BIT RETAINER RING [JDC55DH]	1 NO	99-090718
18	"O" RING FOR BIT RETAINER RING	1 NO	37-08402H
19	COPPER SHIM	1 NO	77-12101C
20	DRIVE SUB [JDC55QL]	1 NO	75-5C5500
	DRIVE SUB [JDC55QL]	1 NO	75-5C5500/L
	DRIVE SUB [JDC55DH]	1 NO	75-5J5500
	SERVICE KIT (S.NO:2,4,8,10,16&18)	1 SET	5J5500QLK
	HAMMER ASSEMBLY [JDC55QL]	1 NO	34-5J5501QL-31ARMR
	HAMMER ASSEMBLY [JDC55QL]	1 NO	34-5J5501QL-31ARMR/L
	HAMMER ASSEMBLY [JDC55DH]	1 NO	34-5J5500DH-31ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH [55QL/55DH]	mm	1056.0 / 1050.0 (W/O BIT)
2	HAMMER OUTSIDE DIA	mm	124.0
3	HAMMER WEIGHT	kg	70.0
4	CYLINDER BORE	mm	99.75
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	15.0
7	HOLE SIZES	mm	140-165
8	WRENCH SIZE A/F	mm	A/F 90.0 / W-50.0
9	SUITABLE SHANK [JDC55QL]	----	QL50 (Without Foot Valve)
	SUITABLE SHANK [JDC55DH]	----	DHD350 (W/O Foot Valve)

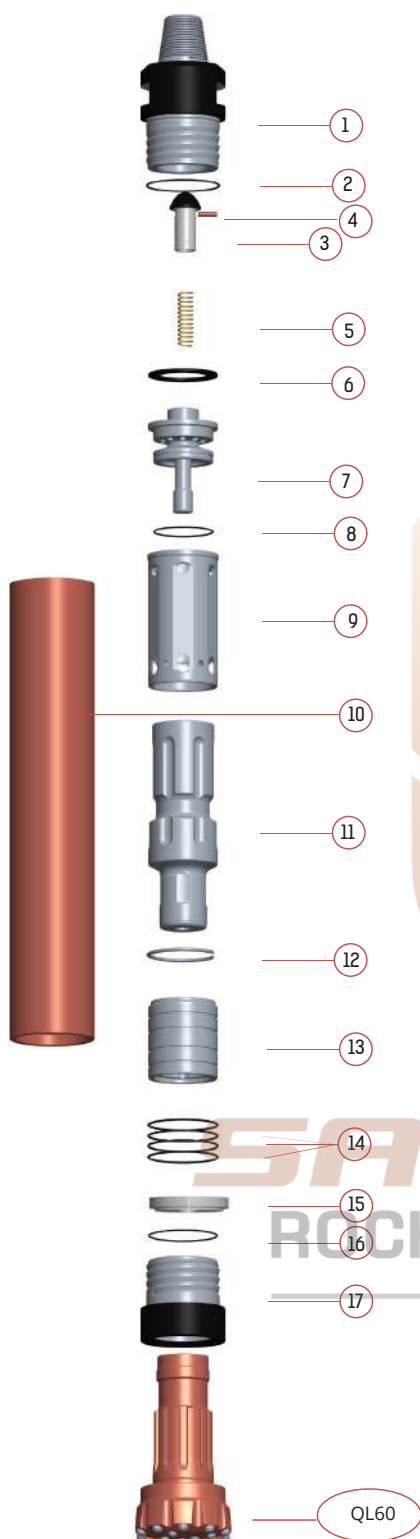
* TWO START THREAD ON TOP SUB & DRIVE SUB

JDC55QL/DH
Air Consumption

PSI	150	200	300	350	400
CFM	230	355	650	820	1005
BPM	1280	1480	1815	1960	2095

JDC SERIES

JDC60QL / DH HAMMER



A DEDICATED TOOL FOR 6.0" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-6J6000-31ARM
2	"O" RING FOR TOP SUB	1 NO	37-11803H
3	CHECK VALVE	1 NO	19-35113R
4	CHOKE	1 NO	47-0134N (A)(C)(D)
5	SPRING	1 NO	17-231216
6	BUFFER RING	1 NO	27-120806/B
7	AIR DISTRIBUTOR	1 NO	12-6J6500
8	"O" RING FOR AIR DISTRIBUTOR	1 NO	37-09403H
9	INNER CYLINDER	1 NO	42-6J6501
10	WEAR SLEEVE	1 NO	45-6J6000
11	WEAR SLEEVE [JDC60DH]	1 NO	45-6J6002
12	PISTON	1 NO	52-6J6500
13	PISTON RETAINER RING	1 NO	89-110645
14	ALIGNER	1 NO	65-6J6500
15	ALIGNER / GUIDE BUSH[JDC60DH]	1 NO	65-6J6002
16	"O" RING FOR ALIGNER	4NO'S	37-10604H
17	"O" RING FOR ALIGNER [JDC60DH]	2NO'S	37-10604H
18	BIT RETAINER RING	1 NO	99-120820
19	BIT RETAINER RING[JDC60DH]	1 NO	99-120825/A
20	"O" RING FOR BIT RETAINER RING	1 NO	37-08603H
21	DRIVE SUB	1 NO	75-6J6000
22	DRIVE SUB[JDC60DH]	1 NO	75-6J6003
23	SEAL KIT (PRT NO 2,4,5,8&14)	1 NO	6J6500QLK
24	HAMMER ASSEMBLY[JDC60QL]	1 SET	34-6J6000QL-31ARMS
25	HAMMER ASSEMBLY[JDC60DH]	1 SET	34-6J6000DH-31ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1051.0
2	HAMMER LENGTH W/O BIT[JDC60DH]	mm	1104.9
3	HAMMER OUTSIDE DIA	mm	144.0
4	HAMMER WEIGHT	kg	95.0(approx.)
5	CYLINDER BORE	mm	120.50
6	PISTON STROKE	mm	80.0 (approx.)
7	PISTON WEIGHT	kg	22.70
8	HOLE SIZES	mm	152.4 - 177.8
9	WRENCH SIZE A/F	mm	A/F 101.0 /W-50.0
10	SUITABLE SHANK	----	QL60/DHD360 (W/O F.Valve)

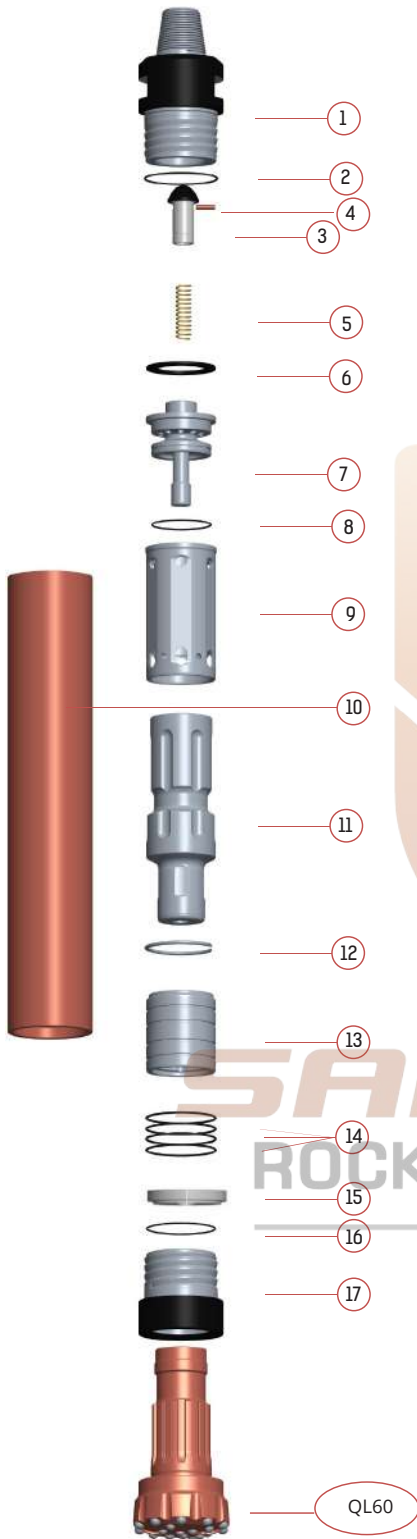
* THREE START THREAD ON TOP SUB & DRIVE SUB

JDC60QL/DH
Air Consumption

PSI	150	200	250	300	350	400
CFM	320	550	700	920	1160	1415
BPM	1215	1400	1565	1715	1850	1980

JDC SERIES

JDC65QL / DH HAMMER



A DEDICATED TOOL FOR 6.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-6J6500-31ARM
2	"O" RING FOR TOP SUB	1 NO	37-11803H
3	CHECK VALVE	1 NO	19-35113R
4	CHOKE	1 NO	47-0134N (A)(C)(D)
5	SPRING	1 NO	17-231216
6	BUFFER RING	1 NO	27-120806/B
7	AIR DISTRIBUTOR	1 NO	12-6J6500
8	"O" RING FOR AIR DISTRIBUTOR	1 NO	37-09403H
9	INNER CYLINDER	1 NO	42-6J6501
10	WEAR SLEEVE	1 NO	45-6J6500
	WEAR SLEEVE [JDC65DH]	1 NO	45-6J6503
11	PISTON	1 NO	52-6J6500
12	PISTON RETAINER RING	1 NO	89-110645
13	ALIGNER/GUIDE BUSH	1 NO	65-6J6500
	ALIGNER / GUIDE BUSH[JDC65DH]	1 NO	65-6J6002
14	"O" RING FOR ALIGNER	4NO'S	37-10604H
	"O" RING FOR ALIGNER [JDC65DH]	2NO'S	37-10604H
15	BIT RETAINER RING	1 NO	99-120820
	BIT RETAINER RING	1 NO	99-120825/A
16	"O" RING FOR BIT RETAINER RING	1 NO	37-08603H
17	DRIVE SUB	1 NO	75-6J6500
	DRIVE SUB	1 NO	75-6J6500/L
	DRIVE SUB[JDC65DH]	1 NO	75-6J6503
	SEAL KIT (PRT NO 2,4,5,8&14)	1 SET	6J6500QLK
	HAMMER ASSEMBLY	1 NO	34-6J6500QL-31ARMS
	HAMMER ASSEMBLY	1 NO	34-6J6500QL-31ARMS/L
	HAMMER ASSEMBLY[JDC65DH]	1 NO	34-6J6500DH-31ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1051.0
	HAMMER LENGTH W/O BIT[JDC65DH]	mm	1104.9
2	HAMMER OUTSIDE DIA	mm	148.0
3	HAMMER WEIGHT	kg	98.0(approx.)
4	CYLINDER BORE	mm	120.50
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	22.70
7	HOLE SIZES	mm	165-190
8	WRENCH SIZE A/F	mm	A/F 101.0 /W-50.0
9	SUITABLE SHANK		QL60/DHD360 (W/O F.Valve)

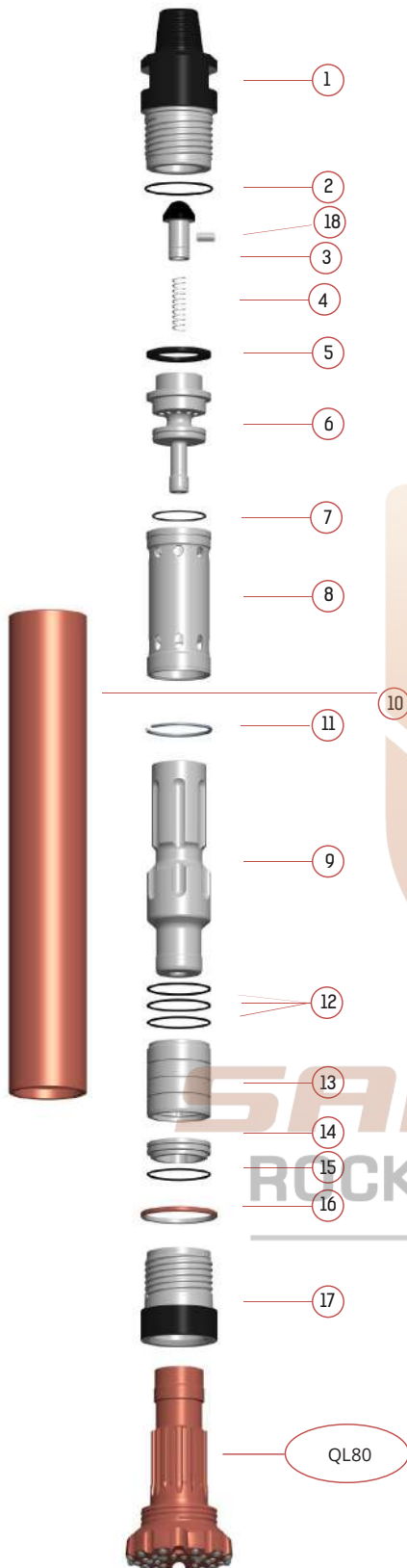
* THREE START THREAD ON TOP SUB & DRIVE SUB

JDC65QL / DH Air Consumption

PSI	100	200	300	400	500
CFM	215	605	1110	1710	2390
BPM	920	1305	1595	1845	2060

JDC SERIES

JDC80QL HAMMER



A DEDICATED TOOL FOR 8" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-8J8000-41ARM
2	"O" RING FOR TOP SUB	1 NO	37-14005H
3	CHECK VALVE	1 NO	19-37138R
4	SPRING	1 NO	17-331220
5	BUFFER RING	1 NO	27-151111
6	AIR DISTRIBUTOR[JDC80QL]	1 NO	12-8J8000
	AIR DISTRIBUTOR[JDC80DH]	1 NO	12-8J8002
7	"O" RING FOR AIR DISTRIBUTOR	1 NO	37-10604H
8	INNER CYLINDER[JDC80QL]	1 NO	42-8J8000
	INNER CYLINDER[JDC80DH]	1 NO	42-8J8001
9	PISTON	1 NO	52-8J8000
10	WEAR SLEEVE[JDC80QL]	1 NO	45-8J8000
	WEAR SLEEVE[JDC80DH]	1 NO	45-8J8001
11	PISTON RETAINER RING	1 NO	89-140635
12	"O"RING FOR GUIDE BUSH	3 NO	37-13204H
13	GUIDE BUSH[JDC80QL]	1 NO	65-8J8000
	GUIDE BUSH[JDC80DH]	1 NO	65-8J8001
14	BIT RETAINER RING[JDC80QL]	1 NO	99-141037
	BIT RETAINER RING[JDC80DH]	1 NO	99-141039/A
15	"O" FOR BIT RETAINER RING	1 NO	37-13204H
16	"O" FOR BIT RETAINER RING[JDC80DH]	1 NO	37-11602H
17	DRIVE SUB SPACER	1 NO	29-181610
	DRIVE SUB[JDC80QL]	1 NO	75-8J8000
	DRIVE SUB[JDC80QL]	1 NO	75-8J8000/L
	DRIVE SUB[JDC80DH]	1 NO	75-8J8001
18	CHOKE (FULL/HALF/QUARTER)	1NO	47-0147N(A)(C)(D)
	SERVICE KIT (S.NO: 2,4,5,7,12,15&18)	1 SET	8J8000QLK
	HAMMER ASSEMBLY[JDC80QL]	1 NO	34-8J8000QL-41ARMS
	HAMMER ASSEMBLY[JDC80QL]	1 NO	34-8J8000QL-41ARMS/L
	HAMMER ASSEMBLY[JDC80DH]	1 NO	34-8J8001DH-41ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1353.60
	HAMMER LENGTH W/O BIT[JDC80DH]	mm	1371.0
2	HAMMER OUTSIDE DIA	mm	182.0
3	HAMMER WEIGHT	kg	198.0
	HAMMER WEIGHT[JDC80DH]	kg	180.0
4	CYLINDER BORE	mm	149.0
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	41.60
7	HOLE SIZES	mm	200 - 254
8	WRENCH SIZE A/F	mm	A/F 140 / W-50
9	SUITABLE SHANK	-----	QL80(W/O Foot Valve)
	SUITABLE SHANK	-----	DHD380(W/O Foot Valve)

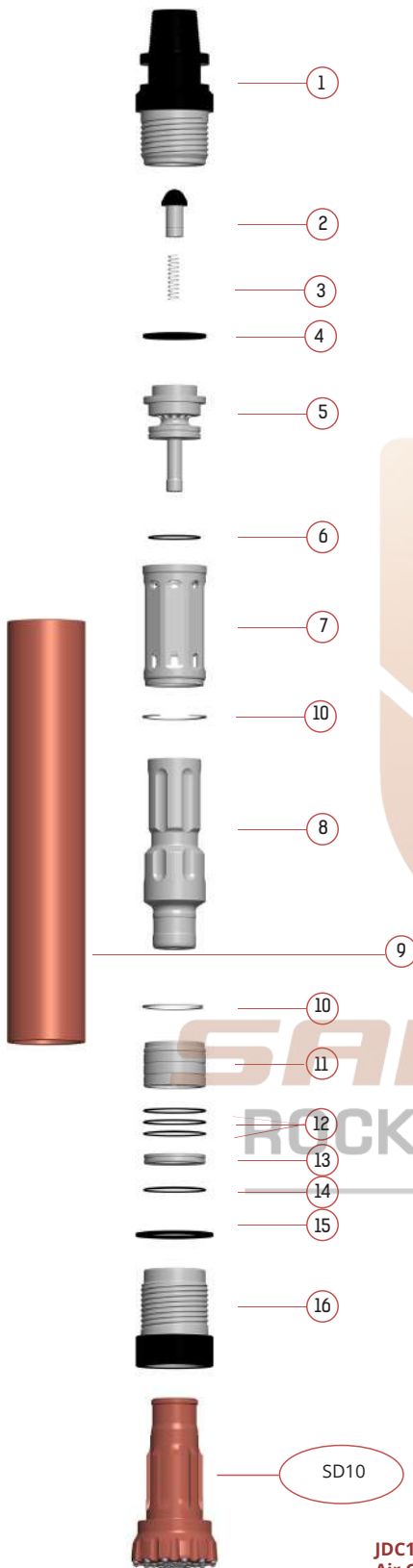
* TWO START THREAD ON TOP SUB & DRIVE SUB

JDC80QL / DH Air Consumption

PSI	100	200	300	400	500
CFM	215	605	1110	1710	2390
BPM	920	1305	1595	1845	2060

JDC SERIES

JDC10SD HAMMER



A DEDICATED TOOL FOR 10" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB (6 5/8 API REG PIN)	1 NO	15-1JX100-65ARM
2	CHECK VALVE	1 NO	19-37138R
3	SPRING	1 NO	17-331220
4	BUFFER RING	1 NO	27-181310
5	AIR DISTRIBUTOR	1 NO	12-1JX100
6	"O" RING FOR AIR DISTRIBUTOR	1 NO	37-13504H
7	INNER CYLINDER	1 NO	42-1JX100
8	PISTON	1 NO	52-1JX100
9	WEAR SLEEVE	1 NO	45-1JX100
10	PISTON RETAINER RING	2 NO	89-191745
11	GUIDE BUSH	1 NO	65-1JX100
12	"O" RING FOR GUIDE BUSH	3 NO	37-16504H
13	BIT RETAINER RING	1 NO	99-171325
14	"O" RING FOR BIT RETAINER RING	1 NO	37-16004H
15	DRIVE SUB SPACER	1 NO	29-221910
16	DRIVE SUB	1 NO	75-1JX100
	SERVICE KIT (S.NO: 3,4,6,12&14)	1 SET	1JX100SDK
	HAMMER ASSEMBLY	1 NO	34-1JX100SD-65ARMS
	HAMMER ASSEMBLY	1 NO	34-1JX100SD-65ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1490.0
2	HAMMER OUTSIDE DIA	mm	225.0
3	HAMMER WEIGHT	kg	355.0(approx)
4	CYLINDER BORE	mm	179.0
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	68.0
7	HOLE SIZES	mm	254 - 305
8	WRENCH SIZE A/F	mm	A/F 152 / W- 60.0
9	SUITABLE SHANK	----	SD10 (With out Foot Valve)

* TWO START THREAD ON TOP SUB & DRIVE SUB

JDC10SD
Air Consumption

PSI	150	200	250	300	350	400
CFM	555	860	1190	1570	1980	2420
BPM	940	1090	1220	1330	1440	1540

FD SERIES

- 4.5" FDS47DI
- 7.0" FDS70DI
- 8.0" FD80FD

DESIGN HIGHLIGHTS

- FD Series is a valve less type hammers designed for high performance at low operating air pressures.
- Suitable bits has a strong robust design without foot valve to withstand heavy duty application.
- FD Series Hammers maximizes energy output and reduces service requirements.
- Wear Sleeve is reversible except FDS47DI
- All critical internal components are heat treated under strict control to maximize tool longevity.

EXCLUSIVE FEATURES

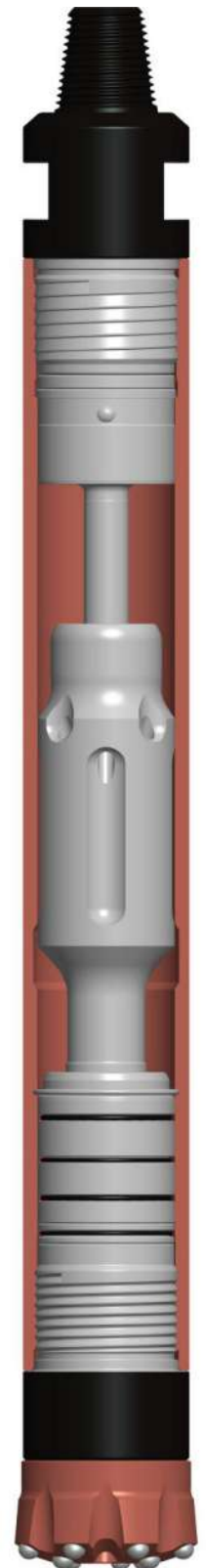
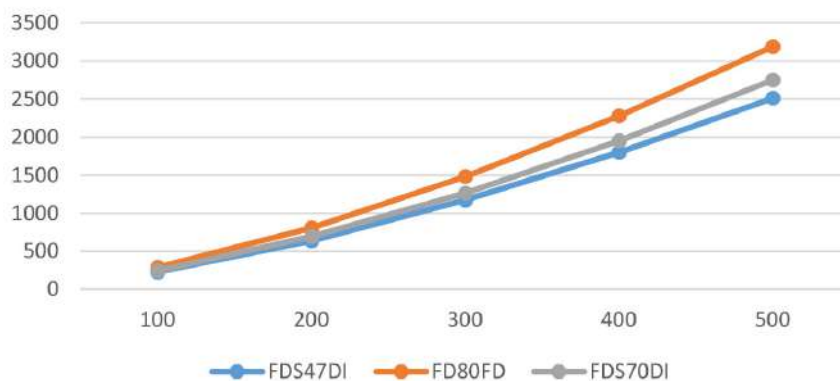
- Control tube sub assembly is used for guiding piston which minimizes the service requirements.
- Hammer is inbuilt with buffer ring which will sustain the compressive load generated from drill string.

APPLICATIONS

- Water Well • Mining • Construction • Quarry

SAI DEEPA
ROCK DRILLING TOOLS
JUST DRILL!

FD Series Air Consumption



FDS47DI HAMMER

A DEDICATED TOOL FOR 4.5" DRILLING

SL.NO	PRODUCT NAME	QTY	PRODUCT NO
1	TOP SUB (2 3/8 API REG PIN)	1 NO	15-4F4700-23ARM
2	CHECK VALVE	1 NO	19-24109R
3	SPRING	1 NO	17-220610
4	BUFFER RING	1 NO	27-080610
5	TOP VALVE	1 NO	25-4F4700
6	CONTROL TUBE HEAD	1 NO	10-4F4700
7	TUBE	1 NO	11-4F4703
8	HEAD BUFFER RING	1NO	27-060405/A
9	C/TUBE LOCK PIN	1 NO	39-11085A
10	PISTON	1 NO	52-4F4703
11	WEAR SLEEVE	1 NO	45-4F4700
12	PISTON RETAINER RING	1 NO	89-080430
13	GUIDE BUSH	1 NO	65-4F4702
14	"O" RING GUIDE BUSH	2 NO	37-07504H
15	BIT RETAINER RING	1 NO	99-080515
16	"O" RING FOR BIT RETAINER RING	1 NO	37-06203H/A
17	DRIVE SUB	1 NO	75-4F4700
	SEAL KIT (PRT NO3,4,8,14&16)	1 SET	4F4700DIK
	HAMMER ASSEMBLY	1 NO	34-4F4704DI-23ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	980.0
2	HAMMER OUTSIDE DIA	mm	107.0
3	HAMMER WEIGHT	kg	44.5
4	CYLINDER BORE	mm	88.0
5	PISTON STROKE	mm	90.0 (approx.)
6	PISTON WEIGHT	kg	9.40
7	HOLE SIZES	mm	120-140
8	WRENCH SIZE A/F	mm	A/F 74.5 /W-40.0
9	SUITABLE SHANK	-----	D4

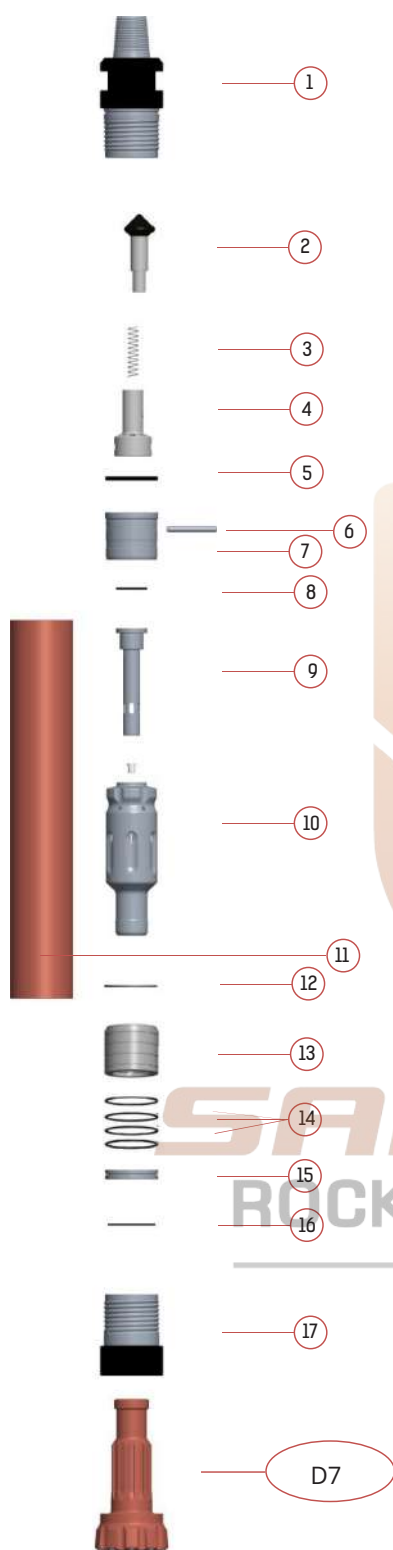
* SINGLE START THREAD ON TOP SUB & THREE START THREAD ON DRIVE SUB

FDS47DI Air Consumption

PSI	150	200	250	300	350
CFM	230	400	580	730	880
BPM	1857	2144	2397	2626	2837

FD SERIES

FDS70DI HAMMER



A DEDICATED TOOL FOR 7.0" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-7F7001-27IFM
2	CHECK VALVE	1 NO	19-25140R
3	SPRING	1 NO	19-220912
4	TOP VALVE	1 NO	25-6M6500
5	BUFFER RING	1 NO	27-120806/A
6	LOCK PIN	1 NO	39-16125A
7	CONTROL TUBE HEAD	1 NO	10-7F7001
8	HEAD BUFFER RING	1NO	27-060405
9	TUBE	1 NO	11-6F6505
10	PISTON	1 NO	52-7F7001
11	WEAR SLEEVE	1 NO	45-7F7002
12	PISTON RETAINER RING	1 NO	89-120645
13	GUIDE BUSH	1 NO	65-7M7000
14	"O" RING FOR GUIDE BUSH	4 NO'S	37-10604H
15	BIT RETAINER RING	1NO	99-120619/B
16	"O" RING FOR BIT RETAINER RING	1 NO	37-08603H
17	DRIVE SUB	1 NO	75-7F7001
	SERVICE KIT (S.NO:5,14&16)	1 SET	7F7000DIK
	HAMMER ASSEMBLY	1 NO	34-7F7002DI-27IFMR

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	992.00
2	HAMMER OUTSIDE DIA	mm	157.0
3	HAMMER WEIGHT	kg	95.0(approx.)
4	CYLINDER BORE	mm	127.0
5	PISTON STROKE	mm	93.0(approx.)
6	PISTON WEIGHT	kg	21.10(approx.)
7	HOLE SIZES	mm	177.8-203.2
8	WRENCH SIZE A/F	mm	A/F 115.0 / W-40.0
9	SUITABLE SHANK	-----	D7

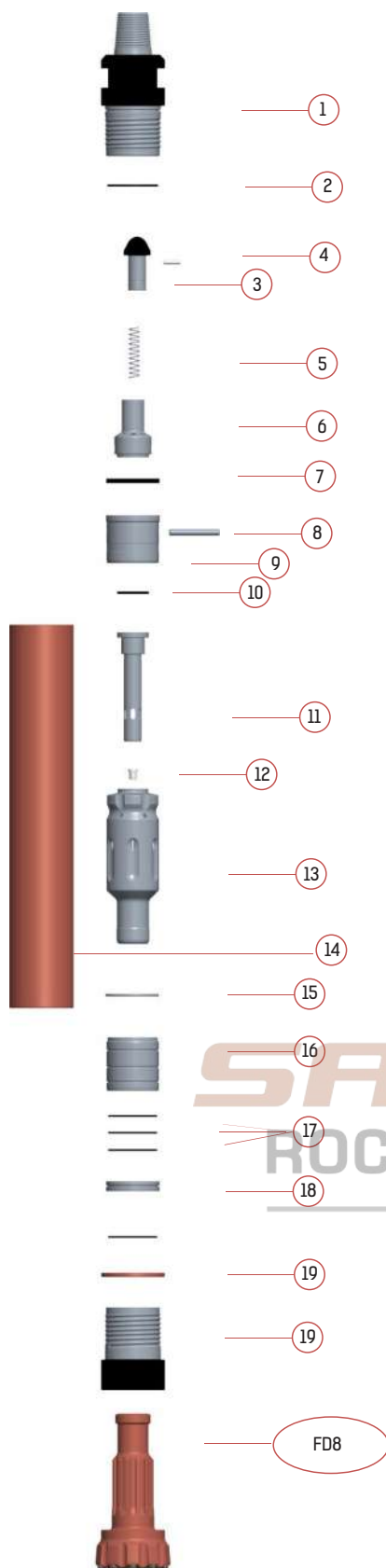
* SINGLE START THREAD ON TOP SUB & DRIVE SUB

FDS70DI Air Consumption

PSI	150	200	250	300	350	400
CFM	440	680	960	1260	1590	1940
BPM	1192	1376	1539	1686	1821	1947

FD SERIES

FD80FD HAMMER



A DEDICATED TOOL FOR 8.0" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB (4 1/2 API REG)	1 NO	15-8F8001-41ARM
	TOP SUB (3 7/8 (D17) THREAD)	1 NO	15-8F8001-D17M
2	O" RING FOR TOP SUB	1 NO	37-14005H
3	CHECK VALVE	1 NO	19-37138R
4	CHECK VALVE CHOKE	1 NO	47-0147N(A)(C)(D)
5	SPRING	1 NO	17-331220
6	TOP VALVE	1 NO	25-8F8002
7	BUFFER RING	1 NO	27-151111
8	LOCK PIN	1 NO	39-15145A
9	CONTROL TUBE HEAD	1 NO	10-8F8001
10	HEAD BUFFER RING	1NO	27-090606
11	TUBE	1 NO	11-8F8001
12	TUBE CHOKE	1 NO	47-3228NB
13	PISTON	1 NO	52-8F8002
14	WEAR SLEEVE	1 NO	45-8F8002
15	PISTON RETAINER RING	1 NO	89-140635
16	GUIDE BUSH	1 NO	65-8F8002
17	"O" RING FOR GUIDE BUSH/ BIT RETAINER RING	4 NO'S	37-13204H
18	BIT RETAINER RING	1NO	99-140819/B
19	DRIVE SUB SPACER	1 NO	77-181610
20	DRIVE SUB	1 NO	75-8F8002
	SERVICE KIT (S.NO:2,4,5,12&17)	1 SET	8F8000FDK
	HAMMER ASSEMBLY	1 NO	34-8F8000FD-41ARMR
	HAMMER ASSEMBLY	1 NO	34-8F8000FD-D17MR

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1211.40
2	HAMMER OUTSIDE DIA	mm	182.0
3	HAMMER WEIGHT	kg	184.0(approx.)
4	CYLINDER BORE	mm	149.0
5	PISTON STROKE	mm	80.0(approx.)
6	PISTON WEIGHT	kg	33.9(approx.)
7	HOLE SIZES	mm	203-254
8	WRENCH SIZE A/F	mm	A/F 140.0 / W-50.0
9	SUITABLE SHANK	-----	FD8

* TWO START THREAD ON TOP SUB & DRIVE SUB

FD80FD
Air Consumption

PSI	100	150	200	250	300	350
CFM	285	520	800	1100	1480	1860
BPM	974	1192	1377	1539	1686	1821

D SERIES

- 4.5" S45S4
- 5.5" D55DI
- 6.5" DM65DI
- 8.0" D80M

DESIGN HIGHLIGHTS

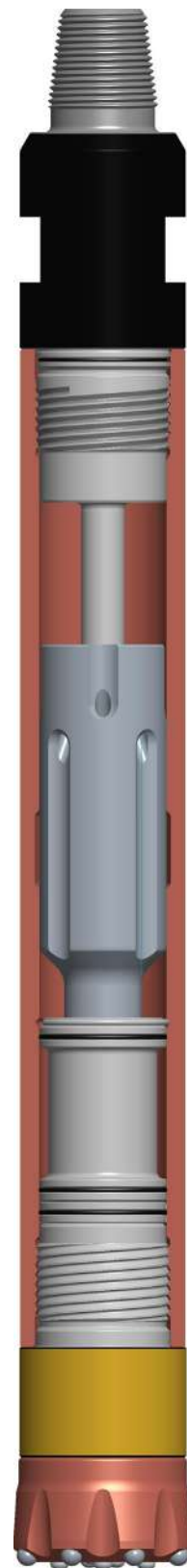
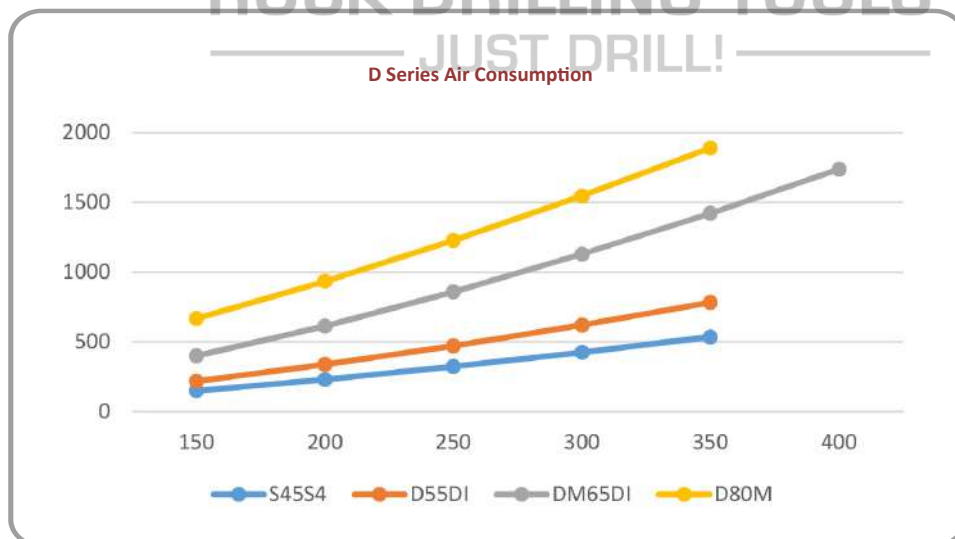
- D Series is a valve less type hammers designed for high performance at low operating air pressures.
- Suitable bits has a strong robust design without foot valve to withstand heavy duty application.
- D Series Hammers maximizes energy output and reduces service requirements.
- Wear Sleeve is reversible except DMD40DH and DMD50DH
- All critical internal components are heat treated under strict control to maximize tool longevity.

EXCLUSIVE FEATURES

- Simplified piston geometry for improved balance and location within cylinder.
- Improved chamber volumes and cycle timing to optimize performance
- Suitable for drilling at a wide range of air pressures, excelling at higher working pressure.
- Fitted with a reversible cylinder to maximize operating life.
- Fewer internal parts minimize service requirements

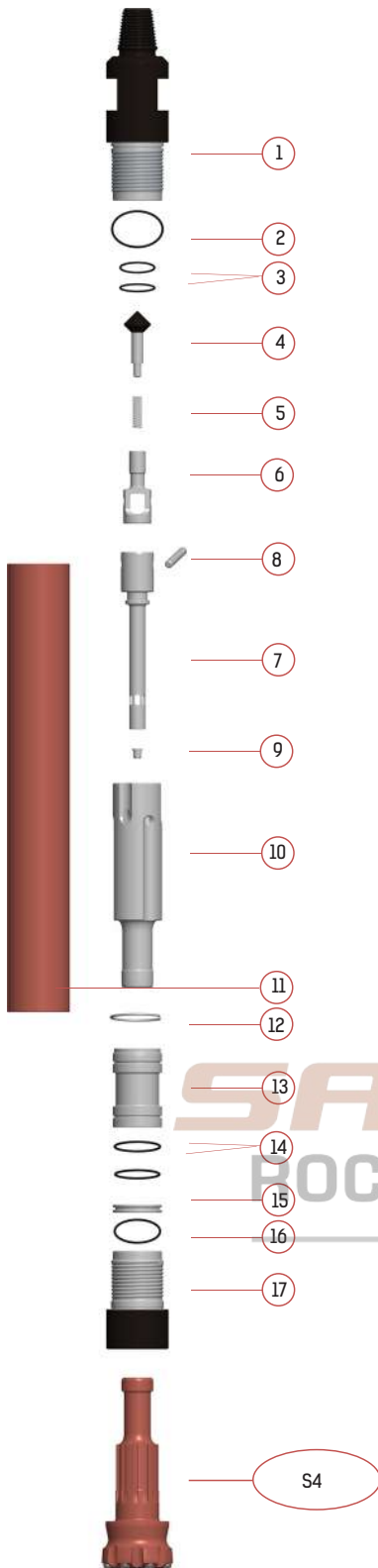
APPLICATIONS

- Water Well • Mining • Construction • Quarry



D SERIES

S45S4 HAMMER



A DEDICATED TOOL FOR 4.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-4S4500-23ARM/1
1	TOP SUB	1 NO	15-4S4500-27ARM
2	"O" RING FOR TOP SUB OD	1 NO	37-06803H
3	"O" RING FOR TOP SUB ID	2 NO	37-05103H/A
4	CHECK VALVE	1 NO	19-13103R
5	SPRING	1 NO	17-110512
6	TOP VALVE	1 NO	25-4S4500
7	CONTROL TUBE	1 NO	35-4S4500
8	CHOKE	1 NO	47-1120NA
9	LOCK PIN	1 NO	39-12076A
10	PISTON	1 NO	52-4S4500
11	WEAR SLEEVE	1 NO	45-4S4500
12	PISTON RETAINER RING	1 NO	89-080430
13	GUIDE BUSH	1 NO	65-4S4500
14	"O" RING FOR GUIDE BUSH	2 NO	37-06803H
15	BIT RETAINER RING	1NO	99-070412
16	"O" RING FOR BIT RETAINER RING	1 NO	37-06203H/A
17	DRIVE SUB	1 NO	75-4S4500
	SEAL KIT (PRT NO 2,5,8,14& 16)	1 SET	4S4500S4K
	HAMMER ASSEMBLY	1 NO	34-4S4500S4-23ARMR/1
	HAMMER ASSEMBLY	1 NO	34-4S4500S4-27ARMR

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	912.0
2	HAMMER OUTSIDE DIA	mm	98.0
3	HAMMER WEIGHT	kg	42.0
4	CYLINDER BORE	mm	77.6
5	PISTON STROKE	mm	85.0 (approx.)
6	PISTON WEIGHT	kg	7.40
7	HOLE SIZES	mm	120-125
8	WRENCH SIZE A/F	mm	A/F 65.5 /W-50.0
9	SUITABLE SHANK	-----	S4 BIT

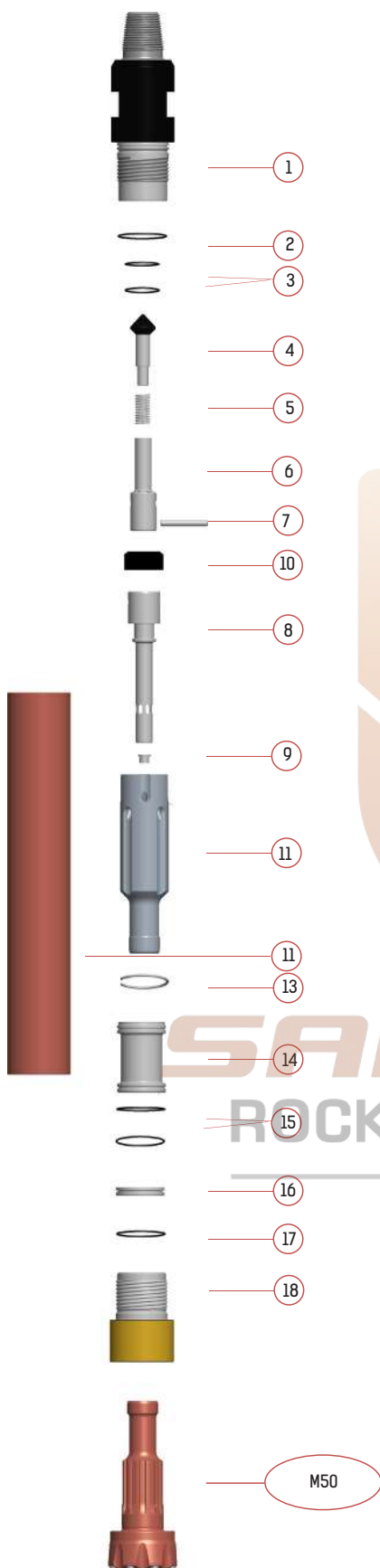
* THREE START THREAD ON TOP SUB & DRIVE SUB

S45S4 Air Consumption

PSI	150	200	250	300	350
CFM	150	230	325	425	535
BPM	1510	1740	1950	2140	2310

D SERIES

D55DI HAMMER



A DEDICATED TOOL FOR 5.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-5M5501-31ARM/1
1	TOP SUB	1 NO	15-5M5501-31ARM/1/R
2	"O" RING FOR TOPSUB OD	1 NO	37-08703H
3	"O" RING FOR TOPSUB ID	2 NO	37-06303H
4	CHECK VALVE	1 NO	19-25140R
5	SPRING	1 NO	17-220912
6	TOP VALVE	1 NO	25-5M5500
7	LOCK PIN	1 NO	39-01295A
8	CONTROL TUBE	1 NO	35-5M5501
9	CHOKE	1 NO	47-2119NA
10	TURNING RINGS	1NO	27-070336
11	PISTON	1 NO	52-5M5501
12	WEAR SLEEVE	1 NO	45-5M5501
13	PISTON RET RING	1 NO	89-100527
14	GUIDE BUSH	1 NO	65-5M5500
15	"O" RING FOR GUIDE BUSH	2 NO	37-08703H
16	BIT RETAINER RING	1 NO	99-090516
17	"O" RING FOR BIT RETAINER RING	1 NO	37-08703H
18	DRIVE SUB	1 NO	75-5M5501
18	DRIVE SUB (HARD FACE)	1 NO	75-5M5501/L
	SERVICE KIT (S.NO:2,3,5,9,15&17)	1 SET	5M5500M50K
	HAMMER ASSEMBLY	1 NO	34-5M5501M50-31ARMR/1
	HAMMER ASSEMBLY	1 NO	34-5M5501M50-31ARMR/1/R/L

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1013.5
2	HAMMER OUTSIDE DIA	mm	125
3	HAMMER WEIGHT	kg	60.0(approx.)
4	CYLINDER BORE	mm	96.65
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	13.1
7	HOLE SIZES	mm	140-165
8	WRENCH SIZE A/F	mm	A/F 95.0 / W-50.0
9	SUITABLE SHANK	----	M50

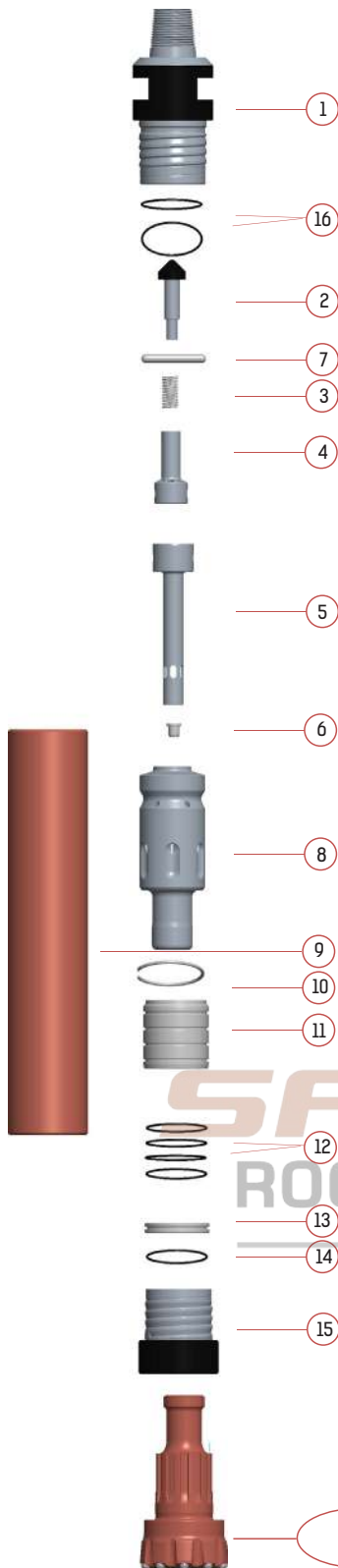
* THREE START THREAD ON TOP SUB & DRIVE SUB

D55DI Air Consumption

PSI	150	200	250	300	350
CFM	219	338	472	621	782
BPM	1455	1680	1878	2057	2222

D SERIES

DM65DI HAMMER



A DEDICATED TOOL FOR 6.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-6M6500-27IFM
1	TOP SUB	1 NO	15-6M6500-31ARM
2	CHECK VALVE	1 NO	19-25140R
3	SPRING	1 NO	17-220912
4	TOP VALVE	1 NO	25-6M6500
5	CONTROL TUBE	1 NO	35-6M6500
6	CHOKE	1 NO	47-2225NA
7	LOCK PIN	1 NO	39-16118A
8	PISTON	1 NO	52-6M6500
9	WEAR SLEEVE	1 NO	45-6M6500
10	PISTON RETAINER RING	1 NO	89-110645
11	GUIDE BUSH	1 NO	65-6M6500
12	"O" RING FOR GUIDE BUSH	4 NO	37-10604H
13	BIT RETAINER RING	1 NO	99-120619
14	"O" RING FOR BIT RETAINER RING	1 NO	37-08603H
15	DRIVE SUB	1 NO	75-6M6500
16	TOP SUB ID "O" RINGS	2NO	37-07403H/A
	SEAL KIT (3,6,12&14)	1 SET	6M6500DIK
	HAMMER ASSEMBLY	1 NO	34-6M6500DI-27IFMR
	HAMMER ASSEMBLY	1 NO	34-6M6500DI-31ARMR

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	931.0
2	HAMMER OUTSIDE DIA	mm	148.0
3	HAMMER WEIGHT	kg	95.0
4	CYLINDER BORE	mm	120.5
5	PISTON STROKE	mm	90.0 (approx.)
6	PISTON WEIGHT	kg	18.8
7	HOLE SIZES	mm	165-203
8	WRENCH SIZE A/F	mm	A/F 90.0 /W-40.0
9	SUITABLE SHANK	----	D6

* SINGLE START THREAD ON TOP SUB & DRIVE SUB

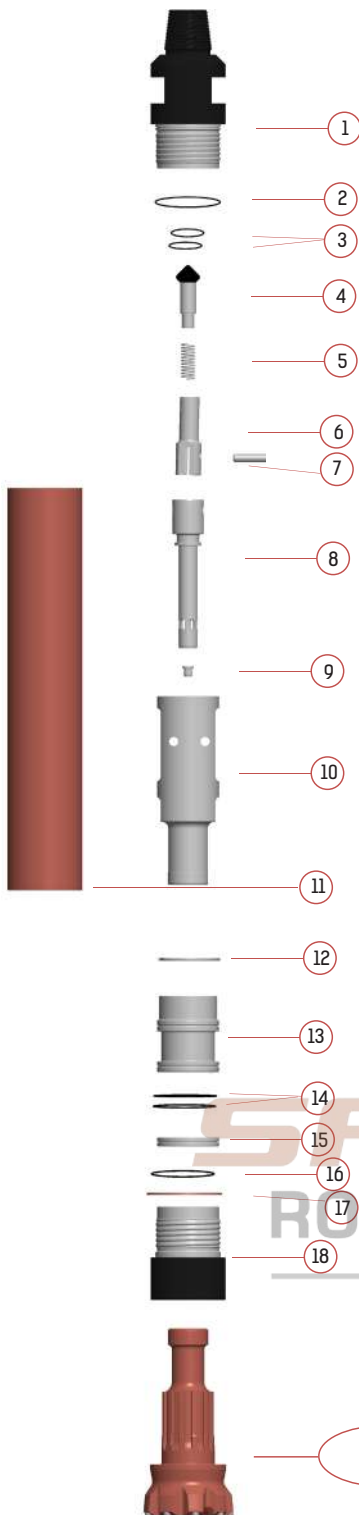
DM65DI Air Consumption

D6

PSI	150	200	250	300	350	400
CFM	399	614	859	1129	1423	1739
BPM	1356	1566	1751	1918	2072	2215

D SERIES

D80M HAMMER



A DEDICATED TOOL FOR 8" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-8M8002-41ARM/R
2	"O" RING FOR TOP SUB OD	1 NO	37-14003H
3	"O"RING FOR TOP SUB ID	2 NO	37-07403H/A
4	CHECK VALVE	1 NO	19-37148R
5	SPRING	1 NO	17-331111
6	TOP VALVE	1 NO	25-8M8000
7	LOCK PIN	1 NO	39-18149A
8	CONTROL TUBE	1 NO	35-8M8002
9	CHOKE	1 NO	47-2225NA
10	PISTON	1 NO	52-8M8000
11	WEAR SLEEVE	1 NO	45-8M8001
12	PISTON RETAINER RING	1 NO	89-150727
13	GUIDE BUSH	1 NO	65-8M8000
14	"O"RING FOR GUIDE BUSH	2 NO	37-14003H
15	BIT RETAINER RING	1 NO	99-140721
16	"O" RING FOR BIT RETAINER RING	1 NO	37-11203H
17	DRIVE SUB SPACER	1NO	29-181510/A
18	DRIVE SUB(SPM)	1 NO	75-8M8002
	SEAL KIT (PRT NO 2,5,9,14&16)	1 SET	8M8000M80K
	HAMMER ASSEMBLY	1 NO34	8M8005M80-41ARM/R

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1195.0
2	HAMMER OUTSIDE DIA	mm	181.0
3	HAMMER WEIGHT	kg	175.0 (approx.)
4	CYLINDER BORE	mm	149.40
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	41.30
7	HOLE SIZES	mm	200-300
8	WRENCH SIZE A/F	mm	A/F 114.60 /W-63.0
9	SUITABLE SHANK	-----	M80

* SINGLE START THREAD ON TOP SUB & DRIVE SUB

D80M Air Consumption

PSI	200	250	300	350	400
CFM	668	934	1228	1547	1891
BPM	1251	1398	1532	1655	1769

DRT SERIES

- 9.0" DRT9RK
- 12.0" DRT11R3 / FD11

DESIGN HIGHLIGHTS

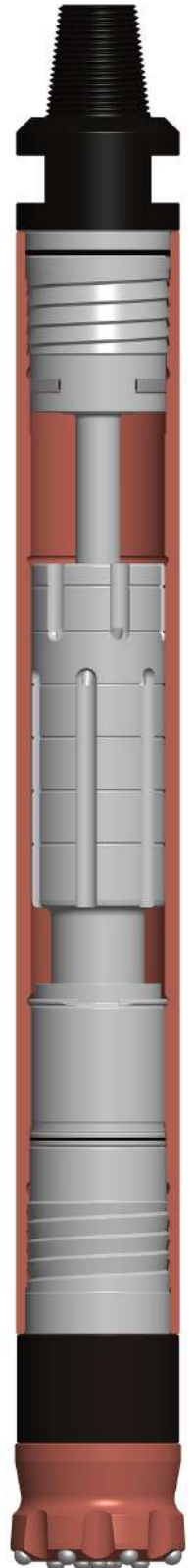
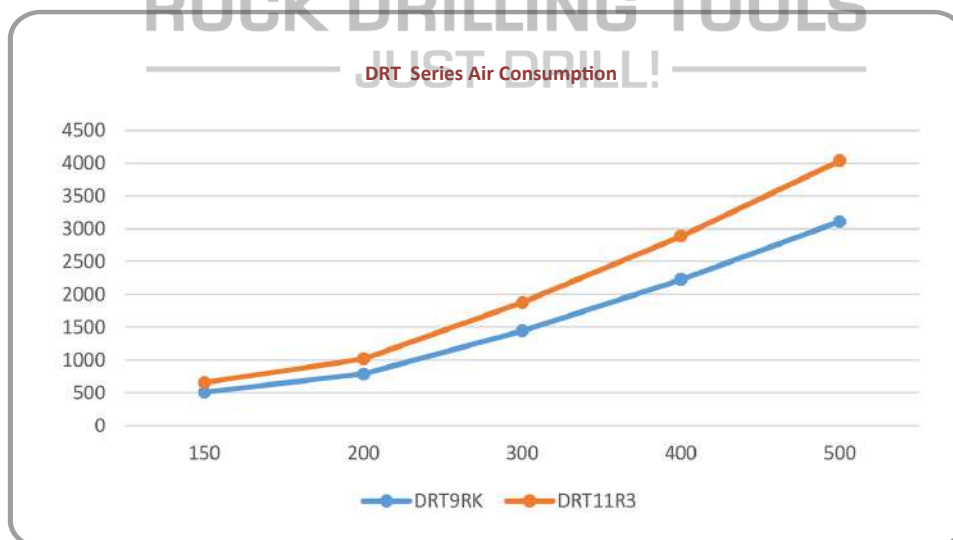
- DRT Series is a valve less type hammers designed for high performance at low operating air pressures.
- Suitable bits has a strong robust design without foot valve to withstand heavy duty application.
- DRT Series Hammers maximizes energy output and reduces service requirements.
- Wear Sleeve is reversible.
- All critical internal components are heat treated under strict control to maximize tool longevity.

EXCLUSIVE FEATURES

- Hammer is inbuilt with buffer ring and metal spacer, to sustain the compressive load generated from drill string.
- Lock plates are used for locking the control tube and drive sub spacer is used for easy coupling / uncoupling of drive sub.
- Hammer is designed with the adjustable Choke which allows you to adjust the volume of air that is used to power the Piston.

APPLICATIONS

- Water Well • Mining • Construction • Quarry



DRT SERIES

DRT9RK HAMMER

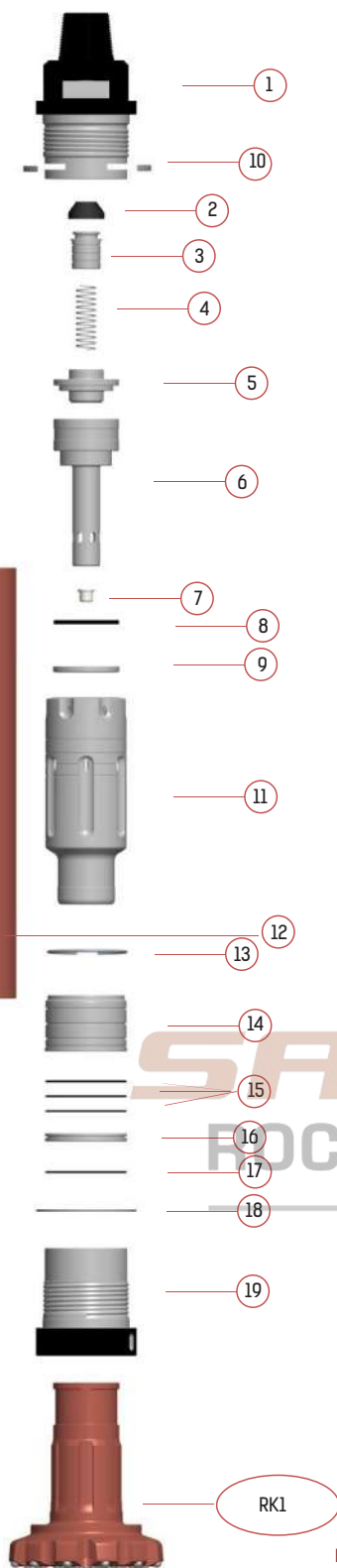
A DEDICATED TOOL FOR 9" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-1TX100-D17M
2	CHECK VALVE CAP	1 NO	57-704539
3	CHECK VALVE	1 NO	19-56085M
4	SPRING	1 NO	17-431412
5	TOP VALVE	1 NO	12-1TX100
6	CONTROL TUBE	1 NO	35-9T9000
7	CHOKE	1NO	47-2225NA
8	BUFFER RING	1 NO	27-121009
9	METAL SPACER	1 NO	29-121013
10	LOCK PLATE (2 PIECES)	1 SET	49-110712
11	PISTON	1 NO	52-9T9000
12	WEAR SLEEVE	1 NO	45-9T9000
13	PISTON RETAINER RING	1NO	89-160750
14	GUIDE BUSH	1 NO	65-9T9000
15	"O" RING FORGUIDE BUSH	3 NO	37-13204H
16	BIT RETAINER RING	1 NO	99-151219
17	"O" RING FOR BRR	1 NO	37-13204H
18	DRIVE SUB SPACER	1 NO	77-19165E
19	DRIVE SUB	1 NO	75-9T9000
	SERVICE KI T (S.NO: 2,4,7,15&17)	1 SET	1TX100RK1
	HAMMER ASSEMBLY	1 NO	34-9T9000R1-D17MR

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1172.0
2	HAMMER OUTSIDE DIA	mm	195.0
3	HAMMER WEIGHT	kg	195.0
4	CYLINDER BORE	mm	157.3
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	51.20
7	HOLE SIZES	mm	228.6 - 254
8	WRENCH SIZE A/F	mm	A/F140 / W- 48.0
9	SUITABLE SHANK	-----	RK1 (Without Foot Valve)

* THREE START THREAD ON TOP SUB & DRIVE SUB



DRT9RK
Air Consumption

PSI	150	200	250	300	350	400
CFM	511	787	1100	1446	1823	2227
BPM	1049	1176	1315	1441	1556	1664

DRT SERIES

DRT11R3 / FD11 HAMMER

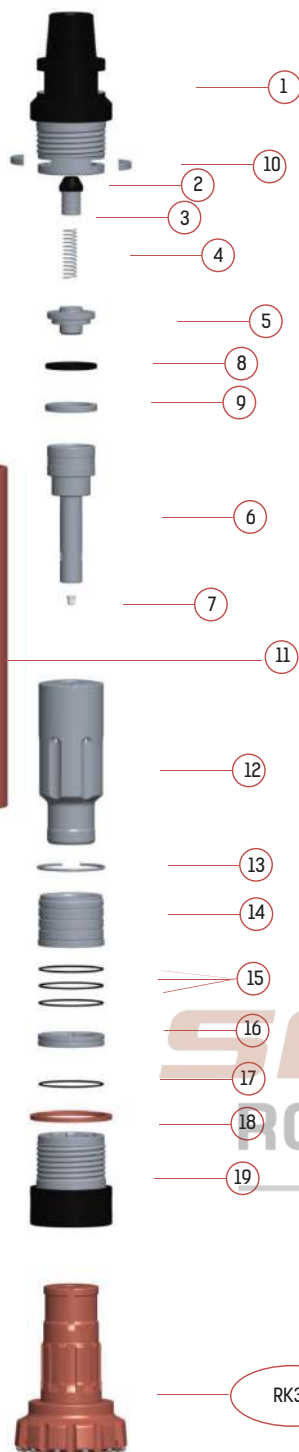
A DEDICATED TOOL FOR 12" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-1TX110-65ARM
2	CHECK VALVE CAP	1 NO	57-704539
3	CHECK VALVE	1 NO	19-56085M
4	SPRING	1 NO	17-431412
5	AIR DISTRIBUTOR	1 NO	12-2VX200
6	CONTROL TUBE	1 NO	35-1TX110
7	CHOKE	1 NO	47-2225NA
8	BUFFER RING	1 NO	27-151112
9	METAL SPACER	1 NO	29-151118
10	LOCK PLATE	2 NO	49-150918
11	WEAR SLEEVE	1 NO	45-1TX110
12	PISTON	1 NO	52-1TX110
13	PISTON RETAINER RING	1NO	89-180850
14	GUIDE BUSH	1 NO	65-1TX111
	GUIDE BUSH[DRT11FD]	1 NO	65-1TX110
15	"O" RING FOR GUIDE BUSH	3NO'S	37-17605H
16	BIT RETAINER RING	1 NO	99-191523
17	"O" RING FOR B.R RING [DRT11FD]	1NO	37-18303H
18	DRIVE SUB SPACER	1 NO	77-242012
19	DRIVE SUB	1NO	75-1TX101
	DRIVE SUB[DRT11FD]	1NO	75-1TX110
	SERVICE KIT (S.NO:(4,7,8,14&16)	1 SET	1TX110FDK
	HAMMER ASSEMBLY	1 NO	34-1TX110R3-65ARMR
	HAMMER ASSEMBLY	1 NO	34-1TX110FD-65ARMR

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1220.0
1	HAMMER LENGTH W/O BIT[DRT11FD]	mm	1240.0
2	HAMMER OUTSIDE DIA	mm	240.0
3	HAMMER WEIGHT	kg	305.0
4	CYLINDER BORE	mm	190.0
5	PISTON STROKE	mm	90.0(approx.)
6	PISTON WEIGHT	kg	73.0
7	HOLE SIZES	mm	300-400
8	WRENCH SIZE A/F	mm	A/F 155/ W 60.0
9	TOP SUB THRED CONNECTION	-----	6 5/8" API REG PIN
10	SUITABLE SHANK	-----	RK3 / FD11 (W/O F.Valve)

* TWO START THREAD ON TOP SUB & DRIVE SUB



RK3

FD11

DRT11R3 / FD11
Air Consumption

PSI	150	200	250	300	350	400
CFM	662	1020	1420	1870	2360	2880
BPM	962	1111	1242	1361	1470	1571

UDC SERIES

- 3.7" UDC37DH
- 4.0" UDC40DH
- 4.7" UDC47DI

DESIGN HIGHLIGHTS

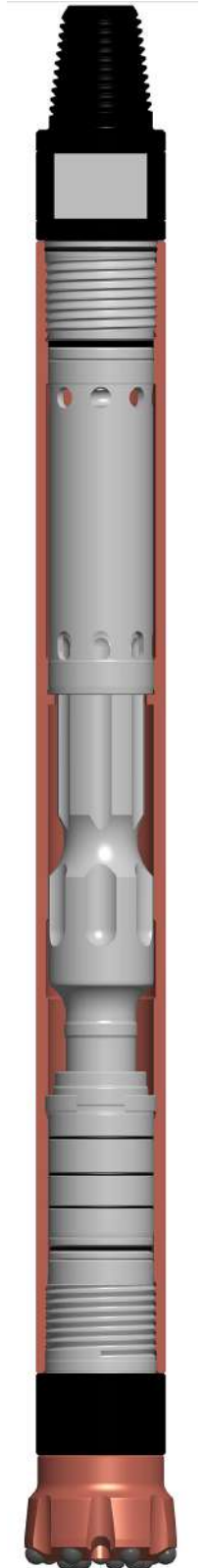
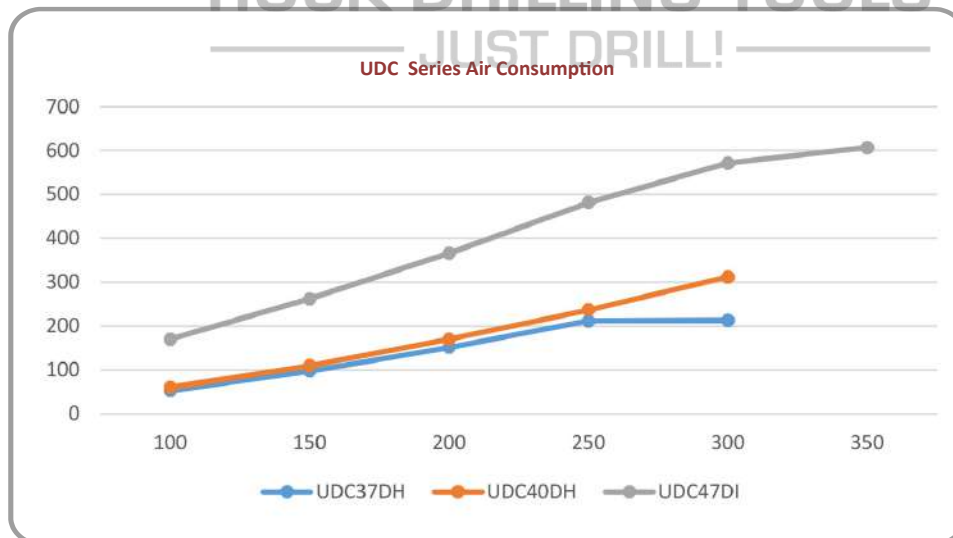
- UDC Series is a valve less type hammers designed for high performance at low operating air pressures.
- Suitable bits has a strong robust design without foot valve to withstand heavy duty application.
- UDC Series Hammers maximizes energy output and reduces service requirements.
- Wear Sleeve is not reversible.
- All critical internal components are heat treated under strict control to maximize tool longevity.

EXCLUSIVE FEATURES

- A built-in choke facility allows the driller to adjust the volume of air through the hammer to optimize cuttings evacuation.
- Unique internal mounting of liner eliminates the need for seating ring.
- Fewer internal components minimize service requirements.
- Multi-start threads on backhead and chuck ensure easy coupling / uncoupling of hammer.
- Excellent for all types of drilling applications typically for water well drilling and geothermal applications.

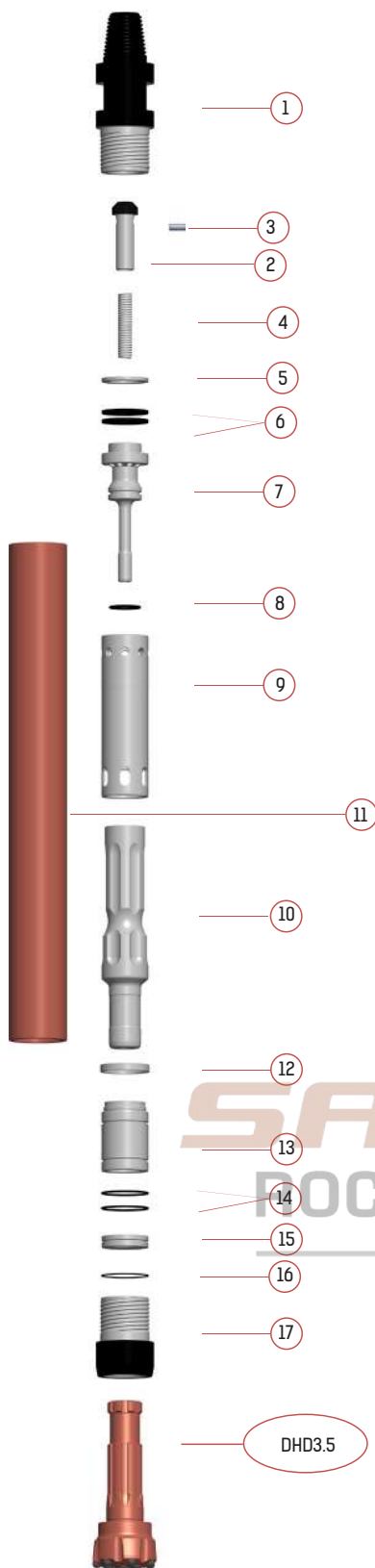
APPLICATIONS

- Water Well • Mining • Construction • Quarry



UDC SERIES

UDC37DH HAMMER



A DEDICATED TOOL FOR 3.7" DRILLING

SL.NO	PRODUCT NAME	QTY	PRODUCT NO
1	TOP SUB	1 NO	15-3C3500-23ARM
2	CHECK VALVE	1 NO	19-23101R/A
3	CHOKE (FULL, HALF, QUARTER)	1 NO	47-0125N(A)(C)(D)
4	SPRING	1 NO	17-220925
5	STEEL MAKE UP RING	1 NO	M9-060405/A
6	BUFFER RING	2 NO	27-060405/B
7	AIR DISTRIBUTOR	1 NO	12-3U3700
8	"O"RING FOR AIR DISTRIBUTOR	1 NO	37-03903H
9	INNER CYLINDER	1 NO	42-3U3700
10	PISTON	1 NO	52-3U3700
11	WEAR SLEEVE	1 NO	45-3U3700
12	CIRCLIP	1 NO	89-060430
13	GUIDE BUSH	1 NO	65-3U3700
14	"O" RING FOR GUIDE BUSH	1 NO	37-05403H
15	BIT RETAINER RING	1 NO	99-060416
16	"O" RING FOR BIT RETAINER RING	1 NO	37-04602H
17	DRIVE SUB	1 NO	75-3C3502
	DRIVE SUB(WITH SPANNER MILLING)	1 NO	75-3C3503
	SERVICE KIT (S.NO:3,4,8,14&16)	1 SET	3C3500MDK
	HAMMER ASSEMBLY	1 NO	34-3U3700DH-23ARMS
	HAMMER ASSEMBLY (WITH DRIVE SUB SPANNER MILLING)	1 NO	34-3U3701DH-23ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	886.50
2	HAMMER OUTSIDE DIA	mm	85.0
3	HAMMER WEIGHT	kg	28.0
4	CYLINDER BORE	mm	68.70
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	5.4
7	HOLE SIZES	mm	95 - 115
8	WRENCH SIZE A/F	mm	A/F 63.0 /W 41.5
9	SUITABLE SHANK	----	DHD3.5 (W/O Foot Valve)

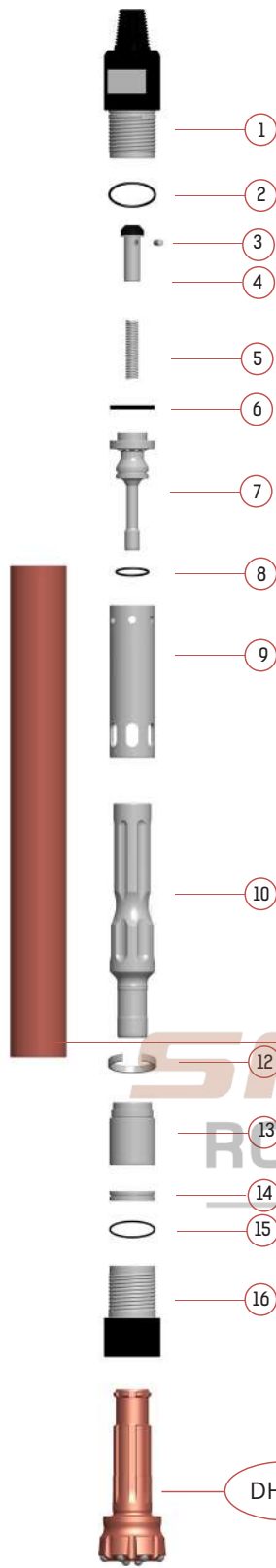
* THREE START THREAD ON TOP SUB & DRIVE SUB

UDC37DH Air Consumption

PSI	100	150	200	250
CFM	55	100	150	210
BPM	1210	1480	1710	1910

UDC SERIES

UDC40 DH HAMMER



A DEDICATED TOOL FOR 4.0" DRILLING

SL.NO	PRODUCT NAME	QTY	PROUDUCT NO
1	TOP SUB (2 3/8" API REG PIN)	1 NO	15-4U4000-23ARM
2	"O"RING FOR TOPSUB	1NO	37-06203H
3	CHOKE (FULL, HALF, QUARTER)	1 NO	47-0125N(A)(C)(D)
4	CHECK VALVE	1 NO	19-23101R/A
5	SPRING	1 NO	17-221017
6	BUFFER RING	1 NO	27-070406
7	AIR DISTRIBUTOR	1 NO	12-4U4000
8	"O"RING FOR AIR DISTRIBUTOR	1 NO	37-05103H
9	INNER CYLINDER	1 NO	42-4U4000
10	PISTON	1 NO	52-4U4000
11	WEAR SLEEVE	1 NO	45-4U4000
12	PISTON RETAINER RING	1 NO	89-070711
13	GUIDE BUSH	1 NO	65-4U4000
14	BIT RETAINER RING	1 NO	99-070515/A
15	"O" RING FOR BIT RETAINER RING	1 NO	37-06203H
16	DRIVE SUB	1 NO	75-4U4000
	SERVICE KIT (S.NO:2,3,5,6,8&15)	1 SET	4U4000DHK
	HAMMER ASSEMBLY	1 NO	34-4U4000DH-23ARMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	974.0
2	HAMMER OUTSIDE DIA	mm	92.5
3	HAMMER WEIGHT	kg	30.0
4	CYLINDER BORE	mm	74.0
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	7.0
7	HOLE SIZES	mm	102-127
8	WRENCH SIZE A/F	mm	A/F 65.0 /W 40.0
9	SUITABLE SHANK	----	DHD340 (Without Foot Valve)

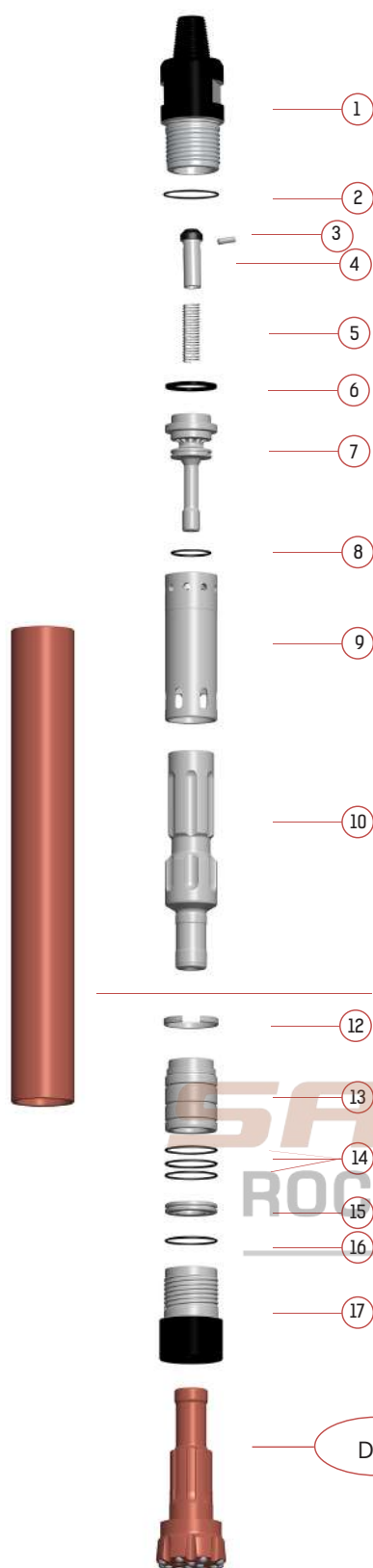
* TWO START THREAD ON TOP SUB & DRIVE SUB

UDC40DH Air Consumption

PSI	100	150	200	250	300
CFM	60	110	170	240	310
BPM	1135	1390	1605	1795	1970

UDC SERIES

UDC47DI HAMMER



A DEDICATED TOOL FOR 4.7" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP SUB	1 NO	15-4U4700-23ARM
	TOP SUB	1 NO	15-4U4700-31ARM
	TOP SUB	1 NO	15-4U4700-5DKM
2	"O" RING FOR TOPSUB	1 NO	37-07503H
3	CHOKE'S(FULL,HALF,QUARTER)	1 NO	47-012N(A)(C)(D)
4	CHECK VALVE	1 NO	19-23101R
5	SPRING	1 NO	17-221017
6	BUFFER RING	1 NO	27-080606
7	AIR DISTRIBUTOR	1 NO	12-4U4700
8	"O" RING AIRDISTRIBUTOR	1 NO	37-05103H
9	INNER CYLINDER	1 NO	42-4U4700
10	PISTON	1 NO	52-4U4700
11	WEAR SLEEVE	1 NO	45-4U4700
12	PISTON RETAINER RING	1 NO	89-090430/A
13	GUIDE BUSH	1 NO	65-4U4700
14	"O" RING GUIDE BUSH	3 NO	37-07603H
15	BIT RETAINER RING	1 NO	99-080515/A
16	"O" RING FOR BIT RETAINER RING	1 NO	37-06203H/A
17	DRIVE SUB	1 NO	75-4U4700
	SEAL KIT (PRT NO 2,3,5,6,8,14&16)	1 SET	4U4700DIK
	HAMMER ASSEMBLY	1 NO	34-4U4700DI-23ARMS
	HAMMER ASSEMBLY	1 NO	34-4U4700DI-31ARMS
	HAMMER ASSEMBLY	1 NO	34-4U4700DI-5DKMS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	999.0
2	HAMMER OUTSIDE DIA	mm	108.0
3	HAMMER WEIGHT	kg	45.0
4	CYLINDER BORE	mm	89.0
5	PISTON STROKE	mm	85.0 (approx.)
6	PISTON WEIGHT	kg	10.0
7	HOLE SIZES	mm	120-140
8	WRENCH SIZE A/F	mm	A/F 85.7 /W-40.0
9	SUITABLE SHANK	-----	D4 (Without Foot Valve)

* SINGLE START THREAD ON TOP SUB & DRIVE SUB

UDC47DI Air Consumption

PSI	150	200	250	300	350
CFM	170	262	366	482	607
BPM	1475	1703	1905	2086	2253

RC SERIES

- 4" RC4
- 5" RC5
- 5.5" RC55
- 5.0" FCR55

DESIGN HIGHLIGHTS

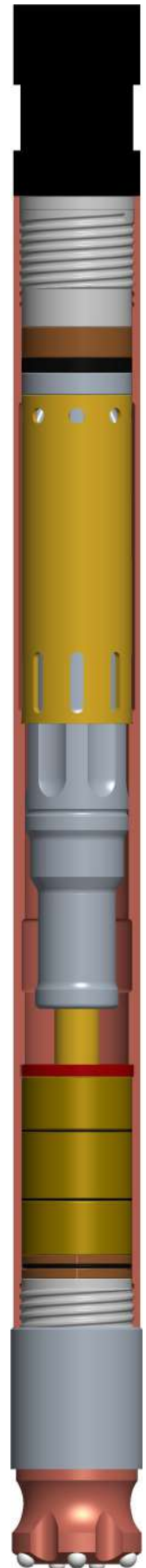
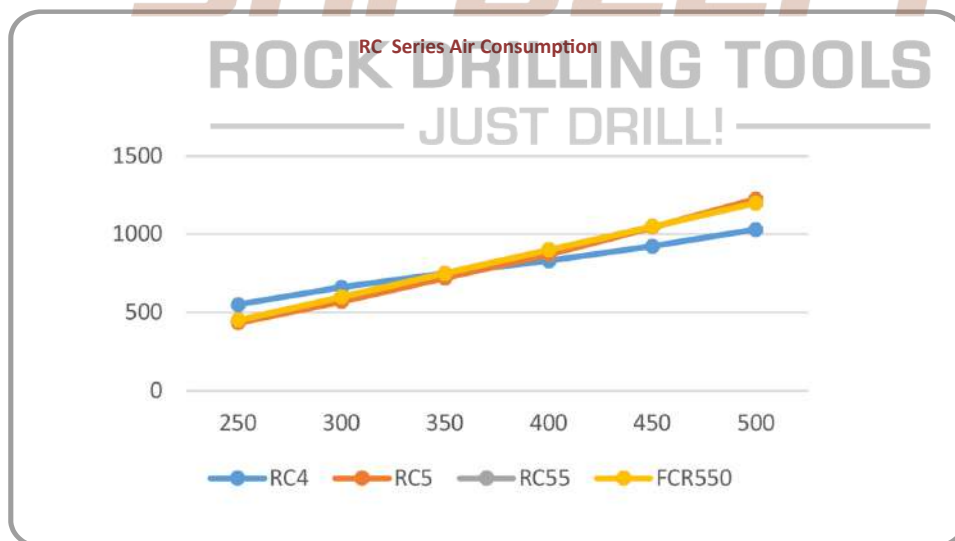
- Maximum material recovery up to 98% .
- Special heat-treated sample tubes offer superior wear resistance.
- Variable sample tube bore sizes allows greater flexibility.
- Return tube can be changed without stripping the Hammer and also makes clearing blockages quickly.
- Delivers maximum drilling under water
- Specialized heat-treatment hardening for critical components for maximum longevity.
- High durability shank design with short length allows for great transfer of energy .

EXCLUSIVE FEATURES

- The return tube can be changed without stripping the Hammer, that's one feature. This helps in the field as being able to take out the return tube also makes clearing blockages quickly,
- Also having the return tube in two pieces should keep down the cost of replacing the bottom section which is the high wear area Variable sample tube bore sizes allows greater flexibility.
- Having the bit shroud should also increase the percentage of sample return..

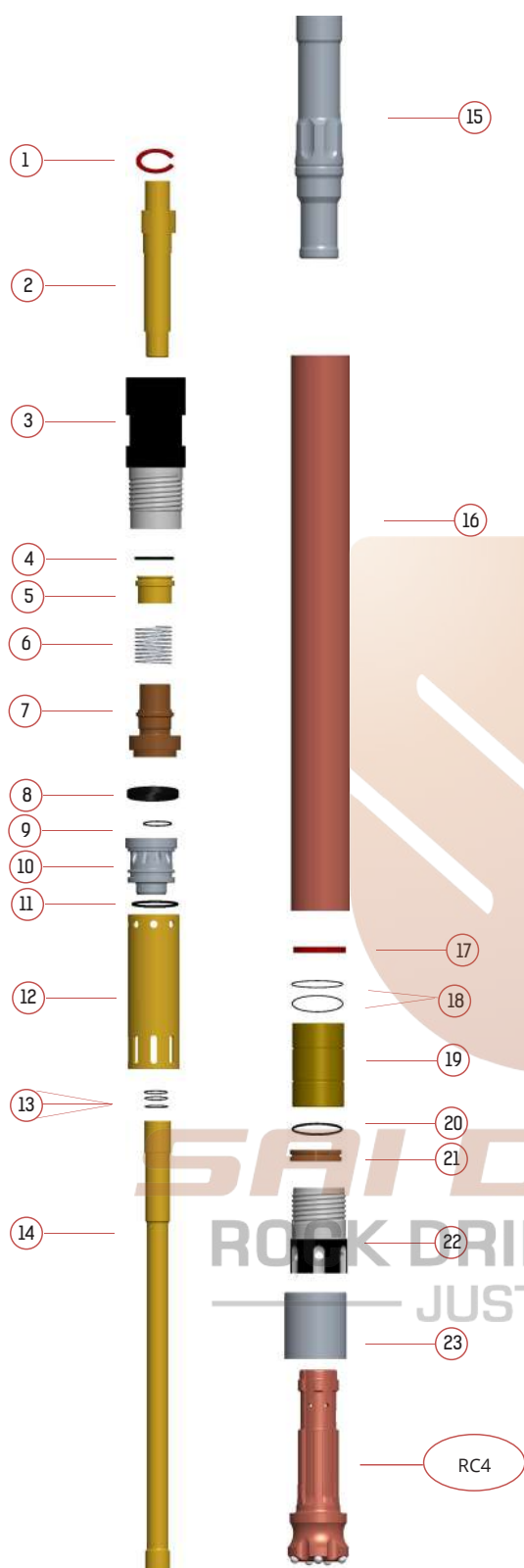
APPLICATIONS

- Water Well • Mining • Construction • Quarry



RC SERIES

RC4 HAMMER



A DEDICATED TOOL FOR 4.0" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	RETURN TUBE TOP RETAINER RING	1NO	89-040225
2	RETURN TUBE TOP	2NO	32-4RC4000
3	BACK HEAD	1NO	13-4RC4000-3.5"METFS
4	CHECK VALVE O RING	1NO	37-05302H
5	CHECK VALVE	1NO	19-65044M
6	SPRING	1NO	17-620610
7	TOP VALVE	1NO	25-4RC4000
8	COMPRESSION RING	1NO	27-080611
9	"O" RING FOR AIR DISTRIBUTOR ID	1NO	37-03401H
10	AIR DISTRIBUTOR	1NO	12-4RC4000
11	"O" RING FOR AIR DISTRIBUTOR OD	1NO	37-04201H
12	INNER CYLINDER	1NO	42-4RC4000
13	RETURN TUBE BOTTOM O RING	3NO	37-06702H
14	RETURN TUBE BOTTOM	1NO	43-4RC4000
15	PISTON	1NO	52-4RC4000
16	WEAR SLEEVE	1NO	45-4RC4000
17	PISTON RETAINER RING	1NO	89-070420
18	O RING FOR GUIDE BUSH	2NO	37-08001H
19	GUIDE BUSH	1NO	65-4RC4000
20	O RING FOR BIT RETAINER RING	1NO	37-07503H
21	BIT RETAINER RING	1NO	99-080618
22	DRIVE SUB	1NO	75-4RC4000
23	BIT SHROUD	1NO	63-1000810
	SEAL KIT(4,10,12,14,19)	1SET	4CR4000RCK
	HAMMER ASSEMBLY	1NO	44-4RC4000RC-3.5"METFS

HAMMER SPECIFICATION

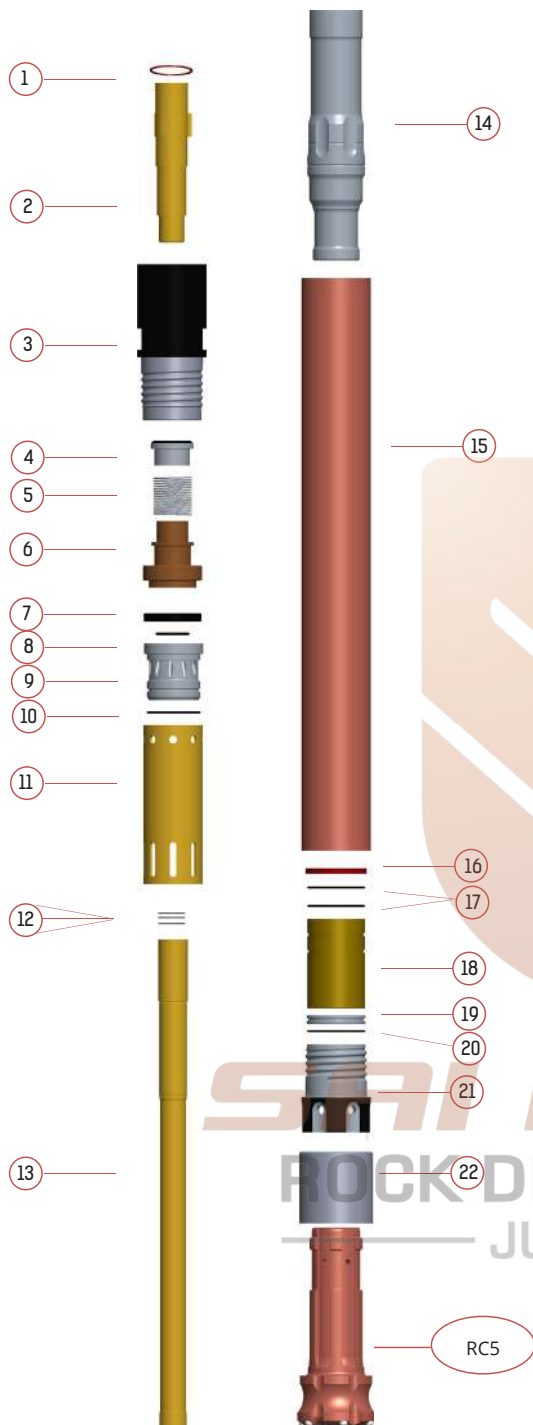
SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1110
2	HAMMER OUTSIDE DIA	mm	96
3	HAMMER WEIGHT	kg	43
4	CYLINDER BORE	mm	78.4
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	6.8
7	HOLE SIZES	mm	102-115mm
8	WRENCH SIZE A/F	mm	A/F 85.0 /W-50.0
9	SUITABLE SHANK	----	RC4

RC4 Air Consumption

PSI	250	300	350	400	450	500
CFM	391	514	648	791	945	1106
BPM	1922	2106	2275	2432	2579	2719

RC SERIES

RC5 HAMMER



A DEDICATED TOOL FOR 5.0" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	RETURN TUBE TOP RETAINER RING	1NO	89-060325
2	RETURN TUBE TOP	1NO	32-5RC5000
3	BACK HEAD	1NO	13-5RC5000-4.5"REMFS
4	CHECK VALVE	1NO	19-060744M
5	SPRING	1NO	17-746815
6	TOP VALVE	1NO	25-5RC5000
7	COMPRESSION RING	1NO	27-108415
8	"O" RING FOR AIR DISTRIBUTOR ID	1NO	37-05002H
9	AIR DISTRIBUTOR	1NO	12-5RC5000
10	"O" RING FOR AIR DISTRIBUTOR OD	1NO	37-05103H/A
11	INNER CYLINDER	1NO	42-5RC5000
12	RETURN TUBE BOTTOM O RING	3NO	37-03501H
13	RETURN TUBE BOTTOM	1NO	43-5RC5000
14	PISTON	1NO	52-5RC5000
15	WEAR SLEEVE	1NO	45-5RC5000
16	PISTON RETAINER RING	1NO	89-100909
17	O RING FOR GUIDE BUSH	2NO	37-09403H
18	GUIDE BUSH	1NO	65-5RC5000
19	BIT RETAINER RING	1NO	99-100815
20	O RING FOR BIT RETAINER RING	1NO	37-08703H
21	DRIVE SUB	1NO	75-5RC5000
22	BIT SHROUD	1NO	63-1301012
	SEAL KIT(8,10,12,17,20)	1SET	5R5000RCK
	HAMMER ASSEMBLY	1NO	44-5RC5000RC-4.5"REMFS

HAMMER SPECIFICATION

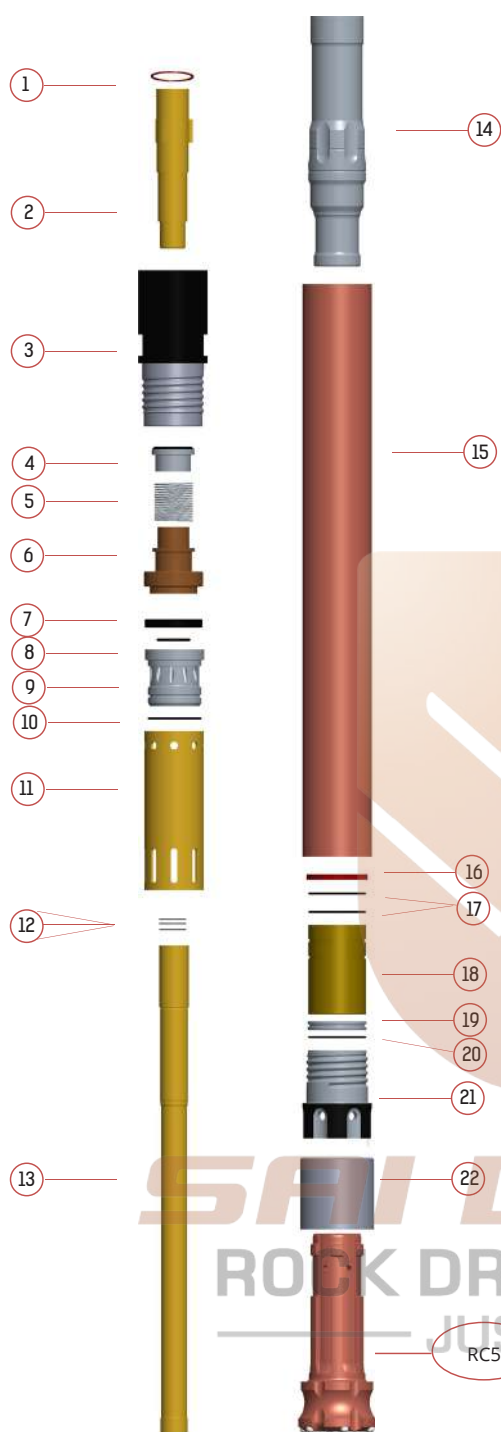
SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1253.0
2	HAMMER OUTSIDE DIA	mm	121.0
3	HAMMER WEIGHT	kg	72.0
4	CYLINDER BORE	mm	101.7
5	PISTON STROKE	mm	85.0 (approx)
6	PISTON WEIGHT	kg	14
7	HOLE SIZES	mm	127.00-143.00 mm
8	WRENCH SIZE A/F	mm	A/F 108 /W-38.0
9	SUITABLE SHANK	----	RC5

RC5 Air Consumption

PSI	250	300	350	400	450	450
CFM	430	570	720	870	1045	1225
BPM	1390	1520	1640	1750	1860	1960

RC SERIES

RC55 HAMMER



A DEDICATED TOOL FOR 5.5" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	RETURN TUBE TOP RETAINER RING	1NO	89-070425
2	RETURN TUBE TOP	1NO	32-5RC5500
3	BACK HEAD	1NO	13-5RC5500-4.5"REMFS
4	CHECK VALVE	1NO	19-82684M
5	SPRING	1NO	17-720708
6	TOP VALVE	1NO	25-4RC5500
7	COMPRESSION RING	1NO	27-110915
8	"O" RING FOR AIR DISTRIBUTOR ID	1NO	37-05002H
9	AIR DISTRIBUTOR	1NO	12-5RC5500
10	"O" RING FOR AIR DISTRIBUTOR OD	1NO	37-09702H
11	INNER CYLINDER	1NO	42-5RC5500
12	RETURN TUBE BOTTOM O RING	3NO	37-04401H
13	RETURN TUBE BOTTOM	1NO	43-5RC5000
14	PISTON	1NO	52-5RC5500
15	WEAR SLEEVE	1NO	45-5RC5500
16	PISTON RETAINER RING	1NO	89-110425
17	O RING FOR GUIDE BUSH	2NO	37-10702H
18	GUIDE BUSH	1NO	65-5RC5500
19	BIT RETAINER RING	1NO	99-110815
20	O RING FOR BIT RETAINER RING	1NO	37-10701H
21	DRIVE SUB	1NO	75-5RC5500
22	BIT SHROUD	1NO	63-1301012
	SEAL KIT(8,10,12,17,20)	1SET	5R5500RCK
	HAMMER ASSEMBLY	1NO	44-5RC5500RC-4.5"REMFS

HAMMER SPECIFICATION

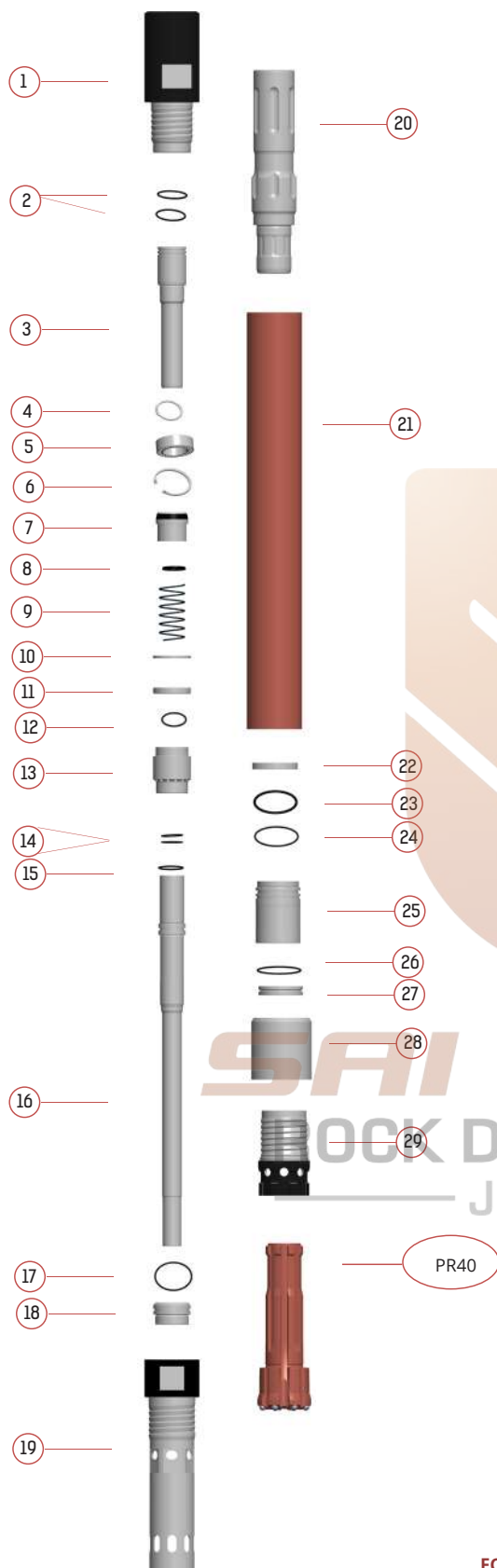
SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1255.0
2	HAMMER OUTSIDE DIA	mm	134
3	HAMMER WEIGHT	kg	77
4	CYLINDER BORE	mm	111.8
5	PISTON STROKE	mm	90.0 (approx.)
6	PISTON WEIGHT	kg	19
7	HOLE SIZES	mm	137-146mm
8	WRENCH SIZE A/F	mm	A/F 120.0 /W-50.0
9	SUITABLE SHANK	-----	RC55

RC55 Air Consumption

PSI	250	300	350	400	450	450
CFM	430	570	720	870	1045	1225
BPM	1390	1520	1640	1750	1860	1960

RC SERIES

FCR 55 HAMMER



A DEDICATED TOOL FOR 5.0" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	ADAPTOR	1NO	13-5CR5500-41/2"REMF
	ADAPTOR	1NO	13-5CR5500-4"METZKE
2	"O" RING FOR ADAPTOR	2NO	37-05503H
3	ADAPTOR TUBE	1NO	23-5CR5500
4	AIR SCREEN TOP LOAD	1NO	33-5CR5500
5	CIRCLIP	1NO	89-040203
6	CIRCLIP	1NO	89-080325
7	CHECK VALVE	1NO	19-66061M
8	"O"RING FOR CHECK VALVE	1NO	37-04305H
9	SPRING	1NO	17-531108
10	STEEL MAKE UP RING	1NO	M9-080605
11	VITON MAKE UP RING	1NO	29-080613
12	"O" RING FOR DISTRIBUTOR	1NO	37-04903H
13	DISTRIBUTOR	1NO	12-5CR5500
14	"O" RING FOR SAMPLE TUBE VENTURI	2NO	37-04302H
15	"O" RING FOR SAMPLE TUBE VENTURI	1NO	37-04703H
16	SAMPLE TUBE VENTURI	1NO	43-5CR5500
17	"O" RING FOR MOUNT SAMPLE TUBE	1NO	37-07603H
18	MOUNT SAMPLE TUBE	1NO	53-5CR5500
19	INNER CYLINDER	1NO	42-5CR5500
20	PISTON	1NO	52-5CR5500
21	WEAR SLEEVE	1NO	45-5CR5500
22	PISTON RETAINER RING	1NO	89-100428
23	"O"RING FOR BUSH DRIVE SUB	1NO	37-08605H
24	"O"RING FOR BUSH DRIVE SUB	1NO	37-09003H
25	BUSH DRIVE SUB	1NO	65-5CR5500
26	"O"RING FOR BIT RETAINER RING	1NO	37-08303H
27	BIT RETAINER RING	1NO	99-090819
28	DRIVE SUB RING	1NO	63-1381008
29	DRIVE SUB	1NO	75-5CR5500
	SEAL KIT(2,8,12,14,15,17,23,24,&26)	1SET	5CR5500PRK
	HAMMER ASSEMBLY	1NO	44-5CR5500PR-41/2"REMFS
	HAMMER ASSEMBLY	1NO	44-5CR5500PR-4"METZKEFS

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	HAMMER LENGTH W/O BIT	mm	1245.0
2	HAMMER OUTSIDE DIA	mm	121.0
3	HAMMER WEIGHT	kg	72.0
4	CYLINDER BORE	mm	99.86
5	PISTON STROKE	mm	80.0 (approx.)
6	PISTON WEIGHT	kg	13.550
7	HOLE SIZES	mm	140-177.8mm
8	WRENCH SIZE A/F	mm	A/F 94.0 /W-50.0
9	SUITABLE SHANK	----	PR40

FCR55 Air Consumption

PSI	250	300	350	400	450	500
CFM	450	600	750	900	1050	1200
BPM	1390	1520	1640	1760	1860	1960

DTH HAMMERS MAINTENANCE

GENERAL INSTRUCTIONS

GENERAL CARE

- All rods should be cleaned before use to remove scrap (sometimes found in new rods), rust scales and debris.
- Ensure that the air screen is in place and free from obstruction.
- If hammer oil is only added at each rod change, care should be taken to ensure that an adequate supply of oil is maintained to the hammer at the recommended rate. Therefore, in hard formations, it may be necessary to add oil between rod changes.

RECOMMENDED WEIGHT ON THE BIT / ROTATION SPEEDS

As a guide to the most efficient weight the following procedure should be used.

- Increase down-pressure until air pressure ceases to increase.
- Note hydraulic feed pressure.
- Reduce down the pressure until air pressure starts to decrease and note hydraulic feed pressure.
- Operate between these two settings.
- As a rule of thumb, rotate the bit 2 revolutions per inch (25.4mm) of penetration.
- Rotation too slow or too fast can cause premature bit failure.

SHUT DOWN

Before shutting down at the end of each shift, we recommend the following procedures.

- Flush hammer with air/water for few minutes and then turn off water injection.
- Flush hammer with air/oil for a few minutes. This will coat the hammer parts preventing corrosion/rust.
- Never leave the tool in a wet/muddy hole. Pull back from bottom as far as necessary to prevent the hammer sitting under water.
- It is also good practice to pour at least half litre of oil down the drill at start-up of new shift.
- If the hammer is removed from the drill rig for any reason, it is wise to pour some quantity of oil into it and block both ends. Provided the flushing, as outlined in steps one and two above have been carried out, the hammer should be stripped, cleaned and oiled before being stored.

HAMMER BREAKOUT

- Pipe wrenches with flat jaws are not recommended as break-out tools. A more suitable tool would be a chain wrench, or similar type tool, which encircles the circumferences of cylinder (pipe wrenches with radial jaws approximating the curvature of the cylinder are also acceptable).
- It is not recommended to use heat on any part of the hammer to assist break-out, as this will affect the structure of the steel.
- It is not recommended to subject the hammer to any external impact to assist break-out, as deformation of the cylinder and damage to threads may occur.
- Break-out tool placement should not be over the cylinder thread area as this can lead to distortion and ultimate breakage.
- Break-out tool placement on the bit shank is not recommended as this will damage the lower seal area. This will cause misalignment of the bit in the drive sub

LUBRICATION

It is extremely important that an adequate supply of the correct type of rock drill oil is constantly fed to the hammer whilst it is operating.

Failure to do so will quickly lead to excessive component wear and if the oil supply is cut off for any reason, the piston will quickly seize inside the wearsleeve, resulting in irreparable damage to both components.

An airline lubrication system should be installed, preferable on the drill rig. The lubricator reservoir should be of sufficient capacity to supply the required volume of rock drill oil for a full shift. With this hammer, this might prove impractical, but the capacity should be sufficient for at least half a shift. This is equally important that the lubricator system must be adjustable and have a visual check to ensure the lubricator does not run out of oil.

The amount of lubricating oil should be increased by 50% when drilling with water or foam. When new drill pipes are added to the drill string, it is recommended that a half pint (quarter of a litre) of rock drill oil is poured into the pipe to provide a good internal coating and helps prevent the hammer from running dry at any time. The grade of rock drill oil will be determined by the ambient temperature at the drilling site. If the ambient temperature is between 0 and 25 degree centigrade, then 30 grade oil should be used. If the ambient temperature is greater than 25 degree centigrade, use 50 grade oil.

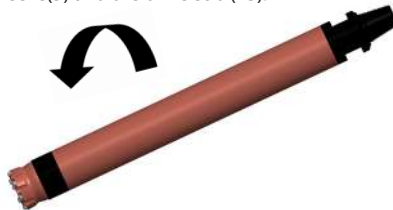
DTH HAMMERS MAINTENANCE

DISASSEMBLY

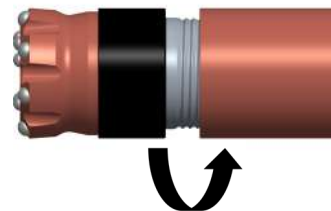
A. When dismantling the hammer it is essential that cylinder are clamped in correct position, away from threads, which can be damaged.



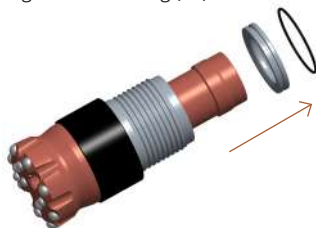
B. Break the tap joint between the wear sleeve(9) and the drive sub (15).



C. Unscrew and remove the drill bit and drive sub (15)



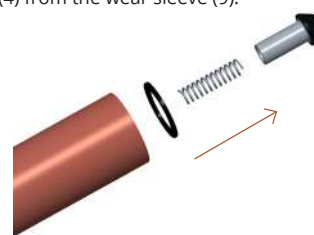
D. Remove the drive sub (15) bit retainer ring (13) along with its "O" ring (14).



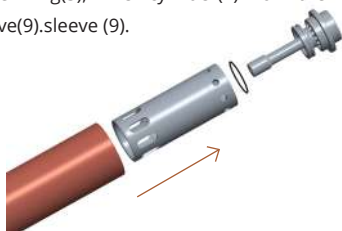
E. Unscrew and remove the top sub (1) from wear sleeve (9).



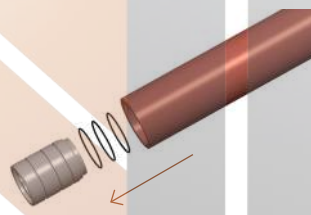
F. Take out the check valve (2), spring (3), buffer ring (4) from the wear sleeve (9).



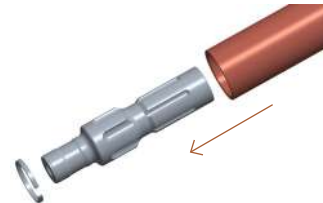
G. Take out the air distributor (6) along with its "O" ring(5), inner cylinder(7) from the wear sleeve(9).sleeve (9).



H. Remove the aligner (11) along with its "O"ring(12) from the wear sleeve(9).

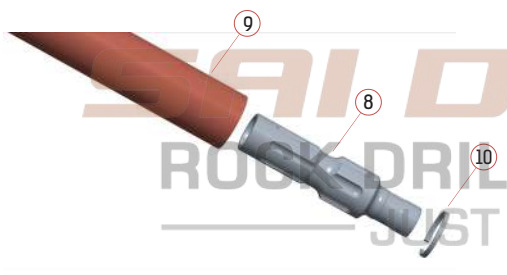


I. Remove the piston retainer ring(10) and piston(8) from the wear sleeve(9).

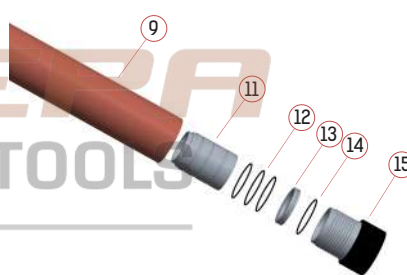


ASSEMBLY

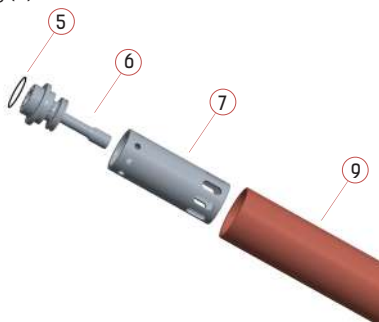
- Inspect all the components free from burrs, dirt. Liberally coat all the parts with good quality of drill oil and threads with grease.
- Place the piston (8) and piston retainer ring (10) in the wear sleeve (9).



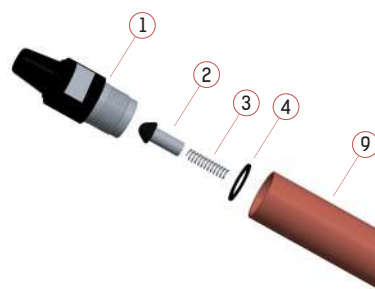
- Place the guide bush (11), along with "O" ring (12) in the wear sleeve (9).
- Place the bit retainer ring (13), along with its "O" ring (14).
- Screw-up the drive sub (15) in the wear sleeve (9).



- Place the inner cylinder(7) and air distributor(6) along with the "o" ring (5) in the wear sleeve.



- Place the buffer ring (4), spring (3) and check valve (2) in the wear sleeve. Screw-up the top sub (1) and the wear sleeve (9)



DTH HAMMERS MAINTENANCE

INSPECTION

PISTON

- There are two main areas to examine on a used piston:-
- Check the body diameter for signs of pick-up and burning (both are signs of poor lubrication). Using a micrometer measure the diameter and refer to the quoted minimum size above.
- Any light 'Pick up' marks can be removed using emery cloth, however if there are signs of overheating and cracking the piston should be replaced and the lubrication system examined.
- Secondly, using a micrometer, measure the diameter of the bore at both ends of the piston and refer to the maximum quoted sizes.
- Examine the striking face. Some degree of distortion is acceptable providing there are no signs of cracking. If distortion has affected the chamfer and possibly distorted the foot valve bore diameter, this needs to be reformed on a lathe and the foot valve bore re-ground to its original diameter. Burrs and dents can be removed with an emery stone.

WEAR SLEEVE

- Either a micrometer or a vernier, measure the outer diameter of the wear sleeve. If it is below the minimum it must be replaced. The wear rate of the wear sleeve can be slowed by replacing the chuck before the wear area reaches the wear sleeve.
- The bore of the wear sleeve should be periodically checked for any signs of 'pick-up'. If a piston has broken within the wear sleeve it is imperative that the bore is honed to remove any burrs or 'pick-up'. Failure to do so will result in 'pick-up' on the replaced piston and will lead to early failure of this component.

AIR DISTRIBUTOR	• Inspect the O.D. for nicks, burrs and scoring. • Remove all minor irregularities with emery cloth. • Replace if necessary.
CHECK VALVE	• The check valve should be smooth and free from abrasions. Replace if necessary.
BACK HEAD	• Check make-up face, removing all nicks and marks. • Remove all burrs on the thread area with a fine file.
O RINGS	• Inspect for damage such as cracks and deformations. • Replace if necessary.
CHUCK	• Check for wear and cracks. • Always try and keep the chuck diameter should not be small than the wear sleeve this extends the service life of the wear sleeve.

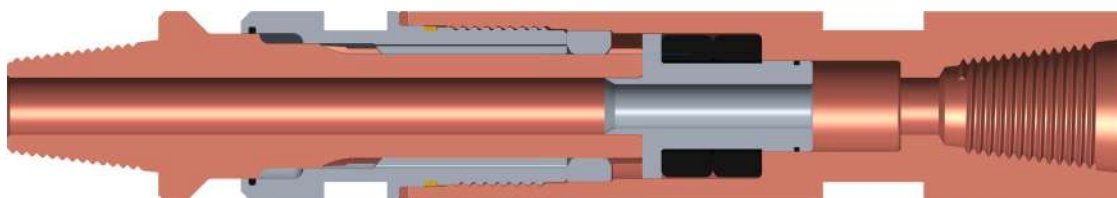
SHILEPPA
ROCK DRILLING TOOLS
— JUST DRILL! —

OTHER DTH PRODUCTS



SHOCK ABSORBER

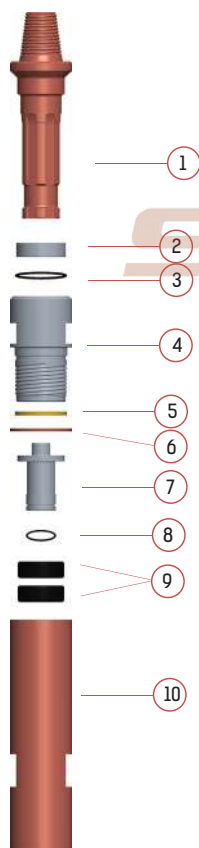
- 4" SHOCK ABSORBER
- 5" SHOCK ABSORBER
- 6" SHOCK ABSORBER
- 8" SHOCK ABSORBER
- 10" SHOCK ABSORBER



KEY FEATURES

- Innovative Design For Air And Water Well Application.
- Increased Rate Of Penetration.
- Drive Splines For More Better Torque Handling And Wear Resistance
- DRT Series Hammers maximizes energy output and reduces service requirements.
- Superior Shock Absorption.
- Rig Top Drive Protection Through Hyper Absorption Technology.

4" SHOCK ABSORBER



A DEDICATED TOOL FOR 4.0" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP CONNECTOR	1	91-SA4000-23ARM
2	RETAINER RING	1	99-SA4000
3	SPLINED NUT O RING	1	37-SA07203H
4	SPLINED NUT	1	92-SA4000
5	NUT SEALING RING	1	27-SA807406
6	BREAK OUT WASHER	1	29-SA4000
7	THRUST WASHER	1	93-SA4000
8	THRUST WASHER O RING	1	37-SA04002H
9	BUFFER RING	2	27-SA714626
10	BOTTOM CONNECTOR	1	94-SA4000-23ARF
	SHOCK ABSORBER ASSEMBLY	1	84-SA095-23ARMF

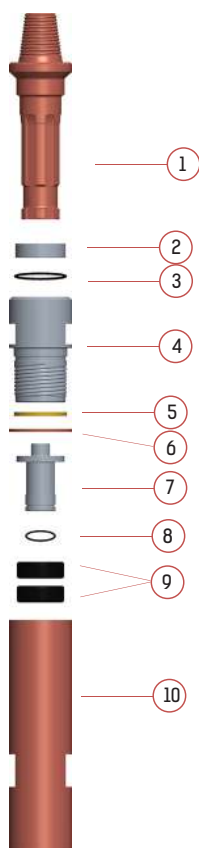
HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	OUSIDE DIAMETER	MM	95.00
2	EFFECTIVE LENGTH	MM	490.00
3	NET WEIGHT	KG	23

OTHER DTH
PRODUCTS

SHOCK ABSORBER

5"SHOCK ABSORBER



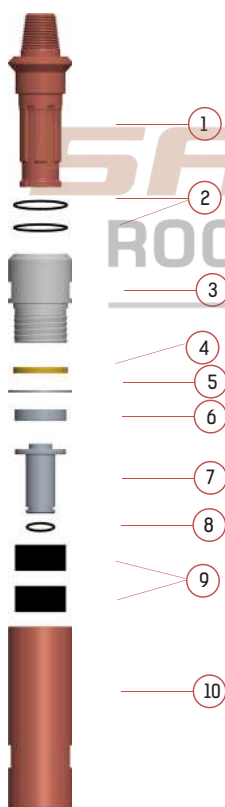
A DEDICATED TOOL FOR 5.0" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP CONNECTOR	1	91-SA5000-31ARM
2	RETAINER RING	1	99-SA5000
3	SPLINED NUT O RING	1	37-SA8803H
4	SPLINED NUT	1	92-SA5000
5	NUT SEALING RING	1	27-SA989011
6	BREAK OUT WASHER	1	29-SA5000
7	THRUST WASHER	1	93-SA5000
8	THRUST WASHER O RING	1	37-SA4703H
9	BUFFER RING	2	27-SA895943
10	BOTTOM CONNECTOR	1	94-SA5000-31ARF
	SHOCK ABSORBER ASSEMBLY	1	84-SA114-23ARMF

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	OUSIDE DIAMETER	MM	114.30
2	EFFECTIVE LENGTH	MM	525.00
3	NET WEIGHT	KG	36

6"SHOCK ABSORBER



A DEDICATED TOOL FOR 6.0" DRILLING

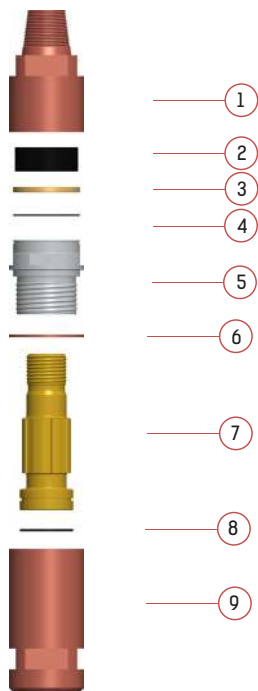
SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP CONNECTOR	1	91-SA6000-31ARM
2	SPLINED NUT O RING	2	37-SA1003H
3	SPLINED NUT	1	92-SA6000
4	SPLINED NUT SEAL	1	27-SA111112
5	BREAK OUT WASHER	1	29-SA6000
6	RETAINER RING	1	99-SA6000
7	THRUST WASHER	1	93-SA6000
8	THRUST WASHER O RING	1	37-SA5305H
9	BUFFER RING	2	27-SA116557
10	BOTTOM CONNECTOR	1	94-SA6000-31ARF
	SHOCK ABSORBER ASSEMBLY	1	84-SA140-31ARMF

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	OUSIDE DIAMETER	MM	140
2	EFFECTIVE LENGTH	MM	585.00
3	NET WEIGHT	KG	53

SHOCK ABSORBER

8"SHOCK ABSORBER



A DEDICATED TOOL FOR 8.0" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP CONNECTOR	1	91-SA8000-41ARM
2	BUFFER RING	1	27-SA159258
3	THRUST WASHER	1	93-SA8000
4	SPLINED NUT O RING	1	37-SA1503H
5	SPLINED NUT	1	92-SA8000
6	BREAKER OUT WASHER	1	29-SA8000
7	SHAFT	1	96-SA8000
8	SHAFT O-RING	1	37-SA11604H
9	BOTTOM CONNECTOR	1	94-SA8000-41ARF
	SHOCK ABSORBER ASSEMBLY	1	84-SA178-41ARMF

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	OUSIDE DIAMETER	MM	178.00
2	EFFECTIVE LENGTH	MM	600.00
3	NET WEIGHT	KG	84

10"SHOCK ABSORBER



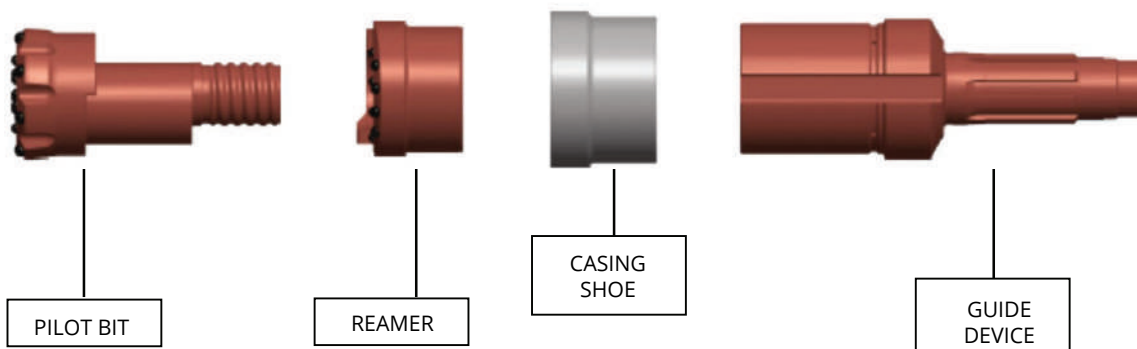
A DEDICATED TOOL FOR 10.0" DRILLING

SL.NO	NAME OF THE ITEM	QTY	PART NO
1	TOP CONNECTOR	1	91-SA10000-65ARM
2	BUFFER RING	1	27-SA181357
3	BREAKER OUT WASHER	1	29-SA10000
4	SHAFT O-RING	1	37-SA15504H
5	SHAFT	1	96-SA10000
6	SPLINED NUT ORING	1	37-SA9503H
7	SPLINED NUT	1	92-SA10000
8	THRUST WASHER	1	93-SA10000
9	BOTTOM CONNECTOR	1	94-SA10000-65ARF
	SHOCK ABSORBER ASSEMBLY	1	84-SA215-65ARMF

HAMMER SPECIFICATION

SL.NO	DESCRIPTION	UNIT	DIMENSION
1	OUSIDE DIAMETER	MM	216.0
2	EFFECTIVE LENGTH	MM	654.0
3	NET WEIGHT	KG	98.0

ODEX



DEEPEX 90 (DX90DHW)



PART	DESCRIPTION	PRODUCT NUMBER
DX90DHW	DEEPEX ASSEMBLY	26-33090R123AW
GUIDE DEVICE SHANK	DHD3.5 SHANK	G6-33090R123AW
PILOT BIT	90 mm DIA	P6-090R123AW
REAMER BIT	123 mm DIA	R6-090R123AW
CASING SHOE	PIPE 115/102 MM	S6-090AW

DEEPEX 115 (DX115DHW)



PART	DESCRIPTION	PRODUCT NUMBER
DX115DHW	DEEPEX ASSEMBLY	26-43115R152BW
GUIDE DEVICE SHANK	DHD340 SHANK	G6-43115R152BW
PILOT BIT	115 mm DIA	P6-115R152BW
REAMER BIT	152 mm DIA	R6-115R152BW
CASING SHOE	PIPE 142/128 MM	S6-115BW

DEEPEX 115 (DX115QLW)



PART	DESCRIPTION	PRODUCT NUMBER
DX115QLW	DEEPEX ASSEMBLY	26-45115R152BW
GUIDE DEVICE SHANK	QL40 SHANK	G6-45115R152BW
PILOT BIT	115 mm DIA	P6-115R152BW
REAMER BIT	152 mm DIA	R6-115R152BW
CASING SHOE	PIPE 142/128 MM	S6-115BW

DEEPEX 115 (DX115MXW)



PART	DESCRIPTION	PRODUCT NUMBER
DX115MXW	DEEPEX ASSEMBLY	26-44115R152BW
GUIDE DEVICE SHANK	MX4 SHANK	G6-44115R152BW
PILOT BIT	115 mm DIA	P6-115R152BW
REAMER BIT	152 mm DIA	R6-115R152BW
CASING SHOE	PIPE 142/128 MM	S6-115BW

DEEPEX 115 (DX115PAW)



PART	DESCRIPTION	PRODUCT NUMBER
DX115PAW	DEEPEX ASSEMBLY	26-47115R152BW
GUIDE DEVICE SHANK	PANTHER SHANK	G6-47115R152BW
PILOT BIT	115 mm DIA	P6-115R152BW
REAMER BIT	152 mm DIA	R6-115R152BW
CASING SHOE	PIPE 142/128 MM	S6-115BW

DEEPEX 140 (DX140DHW)



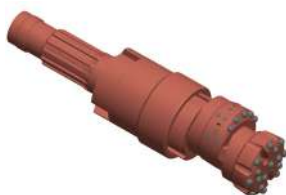
PART	DESCRIPTION	PRODUCT NUMBER
DX140DHW	DEEPEX ASSEMBLY	26-53140R181CW
GUIDE DEVICE SHANK	DHD350 SHANK	G6-53140R181CW
PILOT BIT	140 mm DIA	P6-140R181CW
REAMER BIT	181 mm DIA	R6-140R181CW
CASING SHOE	171/157 MM	S6-140CW

DEEPEX 140 (DX140D4W)



PART	DESCRIPTION	PRODUCT NUMBER
DX140D4W	DEEPEX ASSEMBLY	26-56140R181CW
GUIDE DEVICE SHANK	D4 SHANK	G6-56140R181CW
PILOT BIT	140 mm DIA	P6-140R181CW
REAMER BIT	181 mm DIA	R6-140R181CW
CASING SHOE	171/157 MM	S6-140CW

DEEPEX 140 (DX140QLW)



PART	DESCRIPTION	PRODUCT NUMBER
DX140QLW	DEEPEX ASSEMBLY	26-55140R181CW
GUIDE DEVICE SHANK	QL50 SHANK	G6-55140R181CW
PILOT BIT	140 mm DIA	P6-140R181CW
REAMER BIT	181 mm DIA	R6-140R181CW
CASING SHOE	171/157 MM	S6-140CW

DEEPEX 165 (DX165DHW)



PART	DESCRIPTION	PRODUCT NUMBER
DX165DHW	DEEPEX ASSEMBLY	26-63165R209DW
GUIDE DEVICE SHANK	DHD360 SHANK	G6-63165R209DW
PILOT BIT	165 mm DIA	P6-165R209DW
REAMER BIT	209 mm DIA	R6-165R209DW
CASING SHOE	196/183 MM	S6-165DW

DEEPEX 165 (DX165SDW)



PART	DESCRIPTION	PRODUCT NUMBER
DX165SDW	DEEPEX ASSEMBLY	26-61165R209DW
GUIDE DEVICE SHANK	SD6 SHANK	G6-61165R209DW
PILOT BIT	165 mm DIA	P6-165R209DW
REAMER BIT	209 mm DIA	R6-165R209DW
CASING SHOE	196/183 MM	S6-165DW

DEEPEX 165 (DX165QLW)



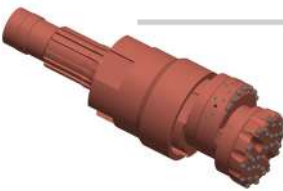
PART	DESCRIPTION	PRODUCT NUMBER
DX165QLW	DEEPEX ASSEMBLY	26-65165R209DW
GUIDE DEVICE SHANK	QL60 SHANK	G6-65165R209DW
PILOT BIT	165 mm DIA	P6-165R209DW
REAMER BIT	209 mm DIA	R6-165R209DW
CASING SHOE	PIPE 196/183 MM	S6-165DW

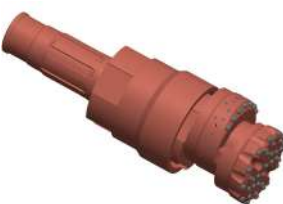
DEEPEX 190 (DX190DHW)	PART	DESCRIPTION	PRODUCT NUMBER
	DX190DHW	DEEPEX ASSEMBLY	26-63190R237EW
	GUIDE DEVICE SHANK	DHD 360 SHANK	G6-63190R237EW
	PILOT BIT	190 mm DIA	P6-190R237EW
	REAMER BIT	237 mm DIA	R6-190R237EW
	CASING SHOE	PIPE 222/205 MM	S6-190EW

DEEPEX 190 (DX190SDW)	PART	DESCRIPTION	PRODUCT NUMBER
	DX190SDW	DEEPEX ASSEMBLY	26-61190R237EW
	GUIDE DEVICE SHANK	SD6 SHANK	G6-61190R237EW
	PILOT BIT	190 mm DIA	P6-190R237EW
	REAMER BIT	237 mm DIA	R6-190R237EW
	CASING SHOE	PIPE 222/205 MM	S6-190EW

DEEPEX 190 (DX190QLW)	PART	DESCRIPTION	PRODUCT NUMBER
	DX190QLW	DEEPEX ASSEMBLY	26-65190R237EW
	GUIDE DEVICE SHANK	QL60 SHANK	G6-65190R237EW
	PILOT BIT	190 mm DIA	P6-190R237EW
	REAMER BIT	237 mm DIA	R6-190R237EW
	CASING SHOE	PIPE 222/205 MM	S6-190EW

DEEPEX 240 (DX240DHW)	PART	DESCRIPTION	PRODUCT NUMBER
	DX240DHW	DEEPEX ASSEMBLY	26-83240R306FW
	GUIDE DEVICE SHANK	DHD380 SHANK	G6-83240R306FW
	PILOT BIT	240 mm DIA	P6-240R306FW
	REAMER BIT	306 mm DIA	R6-240R306FW
	CASING SHOE	PIPE 273/260 MM	S6-240FW

DEEPEX 240 (DX240QLW)	PART	DESCRIPTION	PRODUCT NUMBER
	DX240QLW	DEEPEX ASSEMBLY	26-85240R306FW
	GUIDE DEVICE SHANK	QL80SHANK	G6-85240R306FW
	PILOT BIT	240 mm DIA	P6-240R306FW
	REAMER BIT	306 mm DIA	R6-240R306FW
	CASING SHOE	PIPE 273/260 MM	S6-240FW

DEEPEX 240 (DX240RKW)	PART	DESCRIPTION	PRODUCT NUMBER
	DX240QLW	DEEPEX ASSEMBLY	26-R1240R306FW
	GUIDE DEVICE SHANK	RK1SHANK	G6-R1240R306FW
	PILOT BIT	240 mm DIA	P6-240R306FW
	REAMER BIT	306 mm DIA	R6-240R306FW
	CASING SHOE	PIPE 273/260 MM	S6-240FW

ADAPTERS

BOX - BOX



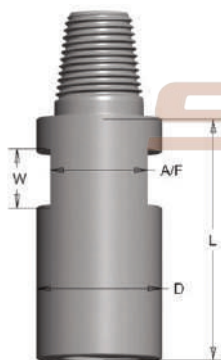
CONNECTION A	CONNECTION B	INNER DIA mm	DIA mm	LENGTH mm	A/F	WRENCH Width	Product No
2 3/8 API REG BOX	2 3/8 API REG BOX	28	89	250	70	40	24-B17B17089250070
2 3/8 API REG BOX	2 7/8 API IF BOX	32	114	280	90	50	24-B17B20114280090
2 3/8 API REG BOX	3 1/2 API REG BOX	32	114	280	70	50	24-B17B21114280070
2 7/8 API IF BOX	2 7/8 API IF BOX	38	114	310	90	50	24-B20B20114310090
2 7/8 API IF BOX	3 1/2 API REG BOX	38	114	310	90	50	24-B18B21114310090
2 3/8 API REG BOX	2 3/8 API IF BOX	30	89	260	70	40	24-B17B18089260070
2 3/8 API IF BOX	3 1/2 API REG BOX	38	114	310	90	50	24-B18B21114310090
2 3/8 API IF BOX	4 1/2 API REG BOX	38	140	330	90	50	24-B18B24140330090
3 1/2 API REG BOX	3 1/2 API IF BOX	36	130	330	90	50	24-B21B23130330090
4 1/2 API REG BOX	3 1/2 API IF BOX	45	140	360	90	50	24-B24B23140360090

PIN - PIN



CONNECTION A	CONNECTION B	INNER DIA mm	DIA mm	LENGTH mm	A/F	WRENCH Width	Product No
2 3/8 API REG PIN	2 7/8 API IF PIN	32	114	280	90	50	24-P17P20114280090
2 7/8 API IF PIN	3 1/2 API REG PIN	38	114	300	90	50	24-P20P21114300090
2 7/8 API IF PIN	2 7/8 API IF PIN	38	114	300	90	50	24-P20P20114300090
2 3/8 API REG PIN	3 1/2 API REG PIN	32	114	280	90	50	24-P17P21114280090
2 3/8 API REG PIN	2 3/8 API REG PIN	28	89	240	70	40	24-P17P17089240070
2 3/8 API REG PIN	2 3/8 API REG PIN	28	76	240	54	40	24-P17P17076240054
2 3/8 API IF PIN	3 1/2 API REG PIN	38	114	280	90	50	24-P18P21114280090
3 1/2 API REG PIN	3 1/2 API REG PIN	38	114	320	90	50	24-P21P21114320090
4 1/2 API REG PIN	3 1/2 API REG PIN	45	140	360	90	50	24-P24P21140360090
4 1/2 API REG PIN	4 1/2 API REG PIN	45	140	400	90	50	24-P24P24140400090

PIN - BOX



CONNECTION A	CONNECTION B	INNER DIA mm	DIA(mm) min max	LENGTH mm	A/F	WRENCH Width	Product No
2 3/8 API REG PIN	2 3/8 API REG BOX	28	89 89	250	70	40	24-P17B17089250070
3 1/2 API IF PIN	6 5/8 API REG BOX	45	160 180	400	115	50	24-P23B27180400115
3 1/2 API IF PIN	4 1/2 API REG BOX	45	120 140	350	90	50	24-P23B24140350090
3 1/2 API REG PIN	6 5/8 API REG BOX	40	160 180	400	115	50	24-P21B27180400115
3 1/2 API REG PIN	D17 BOX	38	114 140	330	90	50	24-P21B30140330090
3 1/2 API REG PIN	3 1/2 API REG BOX	38	114 114	300	90	50	24-P21B21114300090
3 1/2 API REG PIN	2 7/8 API IF BOX	38	114 114	310	90	50	24-P21B20114310090
3 1/2 API REG PIN	2 3/8 API REG BOX	32	114 114	280	90	50	24-P21B17114280090
2 7/8 API IF PIN	D17 BOX	38	114 140	330	90	50	24-P20B30140330090
2 7/8 API IF PIN	4 1/2 API REG BOX	38	114 148	330	90	50	24-P20B24148330090
2 7/8 API IF PIN	3 1/2 API REG BOX	38	114 114	300	90	50	24-P20B21114300090
2 7/8 API IF PIN	2 7/8 API IF BOX	38	114 114	300	90	50	24-P20B20114300090
2 7/8 API IF PIN	2 3/8 API REG BOX	32	114 114	280	90	50	24-P20B17114280090
2 7/8 API REG PIN	3 1/2 API REG BOX	30	89 114	300	70	40	24-P19B21114300070
2 7/8 API REG PIN	2 7/8 API IF BOX	30	89 114	300	70	40	24-P19B20114300070
2 7/8 API REG PIN	2 3/8 API REG BOX	30	89 89	260	70	40	24-P19B17089260070
2 3/8 API IF PIN	2 3/8 API IF BOX	38	89 89	280	65	40	24-P18B18089280065
2 3/8 API REG PIN	3 1/2 API REG BOX	32	114 114	280	90	50	24-P17B21114280090
2 7/8 API IF PIN	6 5/8 API REG BOX	40	160 180	400	115	50	24-P20B27180400115
3 1/2 API IF PIN	D17 BOX	50	140 140	331	115	50	24-P23B30140331115
3 1/2 API REG BOX	3 1/2 API IF PIN	36	130 130	330	90	60	24-B21P23130330090
6 5/8 API REG BOX	4 1/2 API REG PIN	40	150 195	383	115	50	24-B24P27195383115
4 1/2 API REG BOX	4 1/2 API REG PIN	45	114 140	400	90	50	24-B24P24140400090
4 1/2 API REG PIN	3 1/2 API REG BOX	45	140 140	360	90	50	24-P24B21140360090
4 1/2 API REG PIN	D17 BOX	40	140 140	330	100	50	24-P24B30140330100

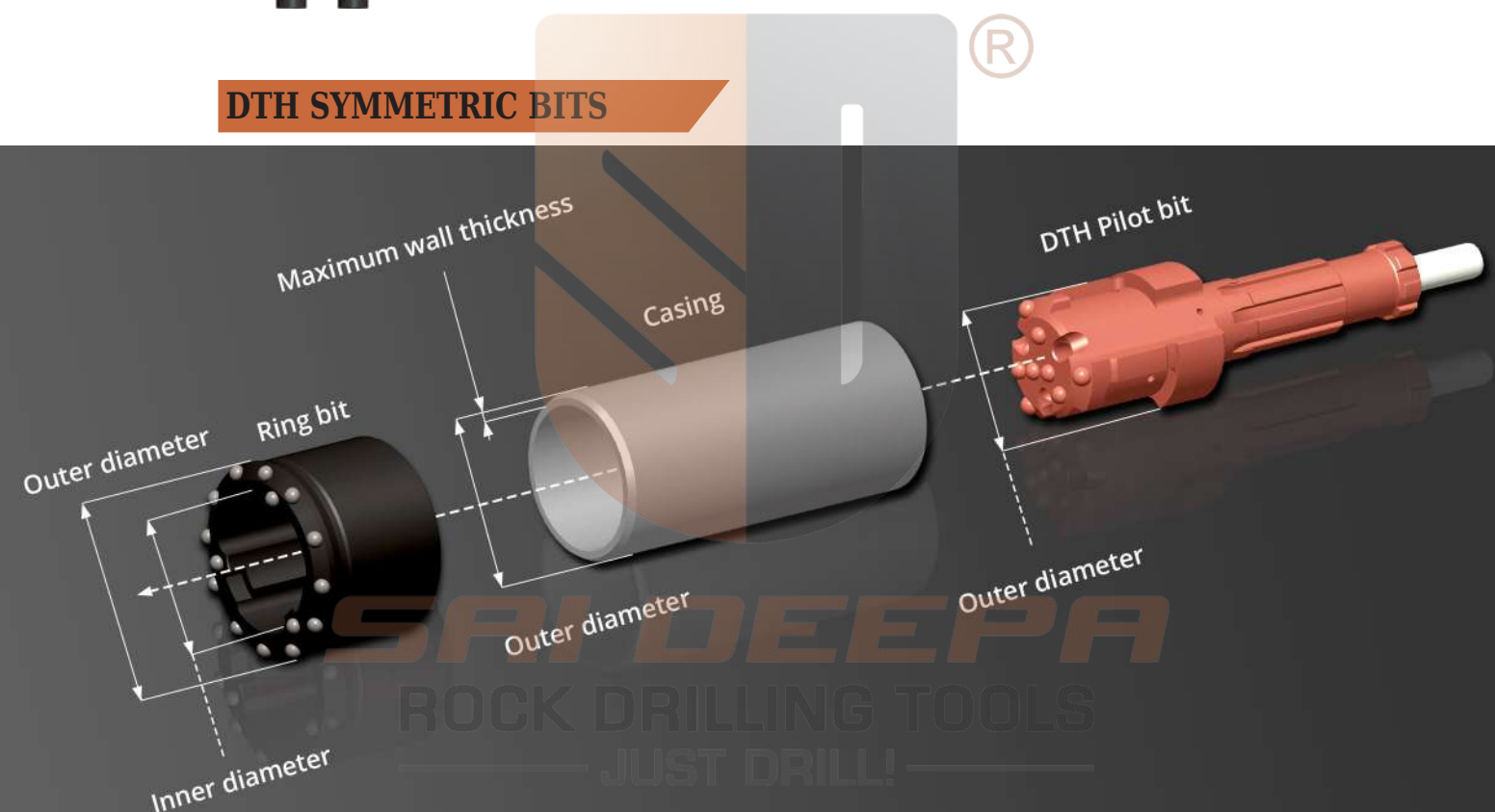
DRILL PIPES

PIN - BOX



THREAD FOR PIPE MALE (PIN)	THREAD FOR PIPE FEMALE (BOX)	DIA mm	WALL Thickness	LENGTH mm	FLAT mm	PRODUCT NO
2 3/8 API REG	2 3/8 API REG	76	4	3000	63	14-0760430023AR/W
2 3/8 API REG	2 3/8 API REG	89	4	3000	65	14-0890430023AR/W
2 3/8 API REG	2 3/8 API REG	76	6.3	4000	63	14-0760640023AR/W
2 3/8 API REG	2 3/8 API REG	89	6.3	5000	65	14-0890650023AR/W
2 3/8 API IF	2 3/8 API IF	89	4	3000	65	14-0890430023IF/W
2 7/8 API REG	2 7/8 API REG	102	6.3	5000	75	14-1020650027AR/W
2 7/8 API IF	2 7/8 API IF	114	6.3	5000	95	14-1140650031IF/W
3 1/2 API REG	3 1/2 API REG	114	6.3	5000	95	14-1140650031AR/W
2 3/8 API REG	2 3/8 API REG	73	5.16	3000	63	14-0730530023AR/W
5D KOREAN	5D KOREAN	73	5.16	1500	62.5	14-073051505DK/W
5D KOREAN	5D KOREAN	73	5.5	3000	62.5	14-073053005DK/W
7D KOREAN	7D KOREAN	73	5.5	1500	56	14-073051507DK/W
2 3/8 API REG	2 3/8 API REG	73	5.16	2000	63	14-0730520023AR/W
5D KOREAN	5D KOREAN	60.5	5.5	3000	62.5	14-060063005DK/W
7D KOREAN	7D KOREAN	60.5	5.5	1500	56	14-060063007DK/W

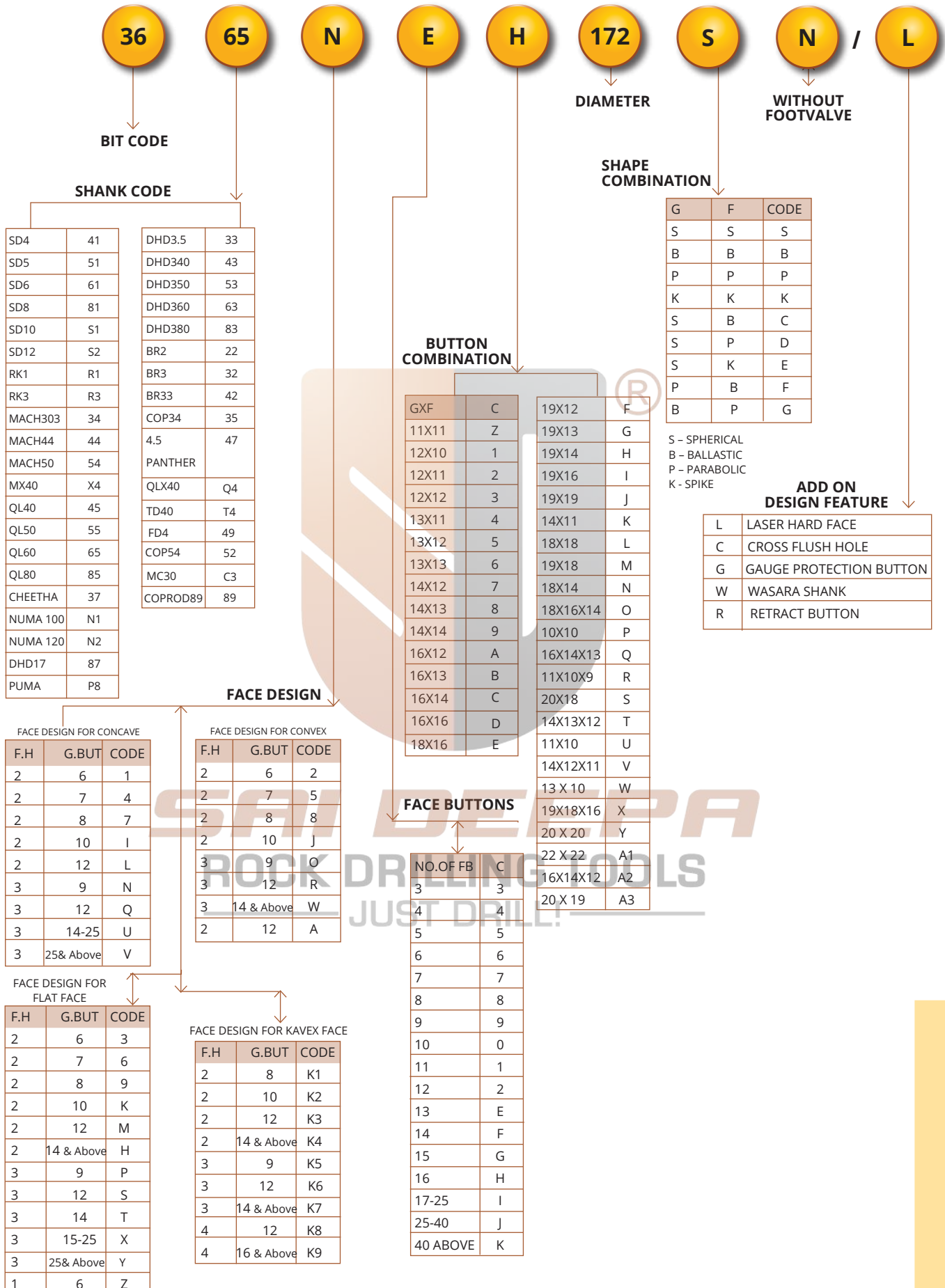
DTH SYMMETRIC BITS



OD Casing	Casing Wall Thickness	ID Ring	OD Ring	Pilot Dia	Shank
114.3	8	76	129	93	DHD3.5
139.7	5	116	160	127	DHD340
	10	100		116	
152.4	5.5	126	170	139	DHD340
168.3	5.5	142	190	155	DHD350
	12.7	123		141	
177.8	7	131	200	150	DHD350 / DHD360 / QL60
	12.7	153		162	
193.7	5.5	147	220	166	DHD360 / QL60
	12.7	167		180	

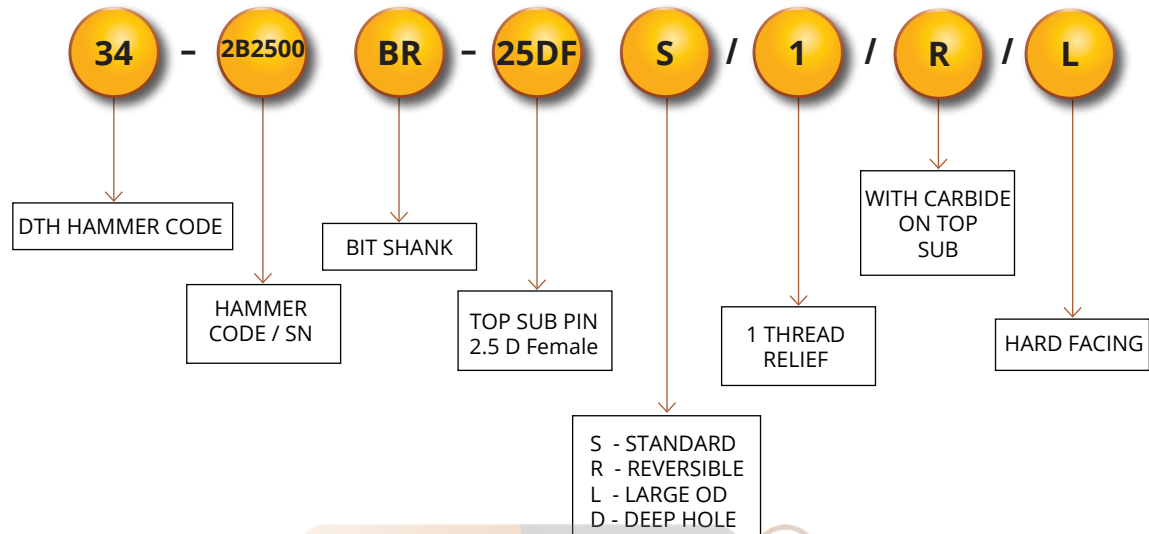
SPECIFICATION CHARTS

BUTTON BIT

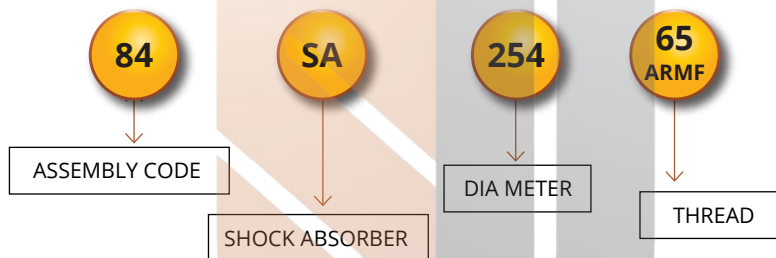


SPECIFICATION CHART

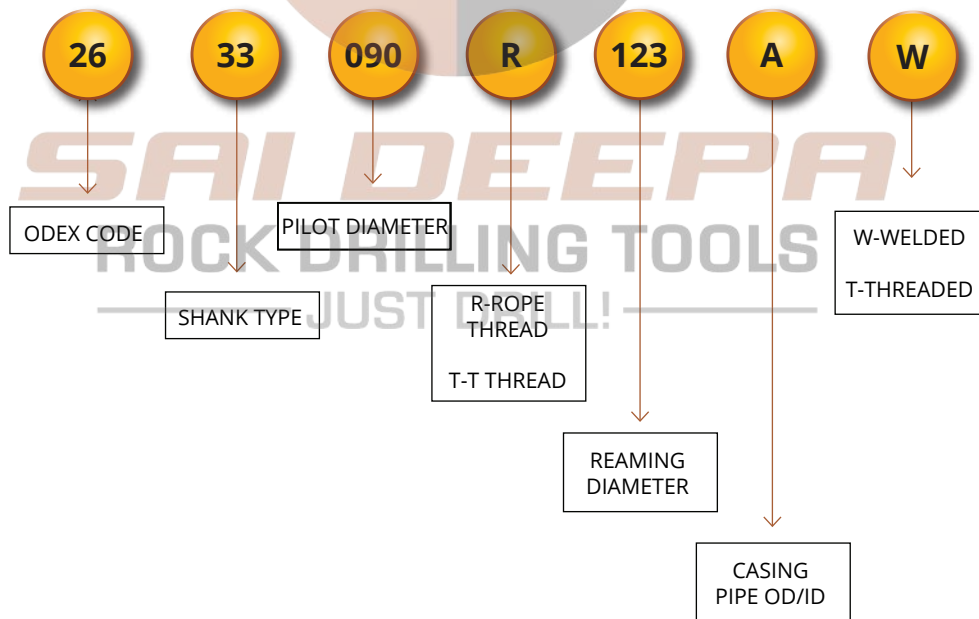
HAMMER ASSEMBLY



SHOCK ABSORBER



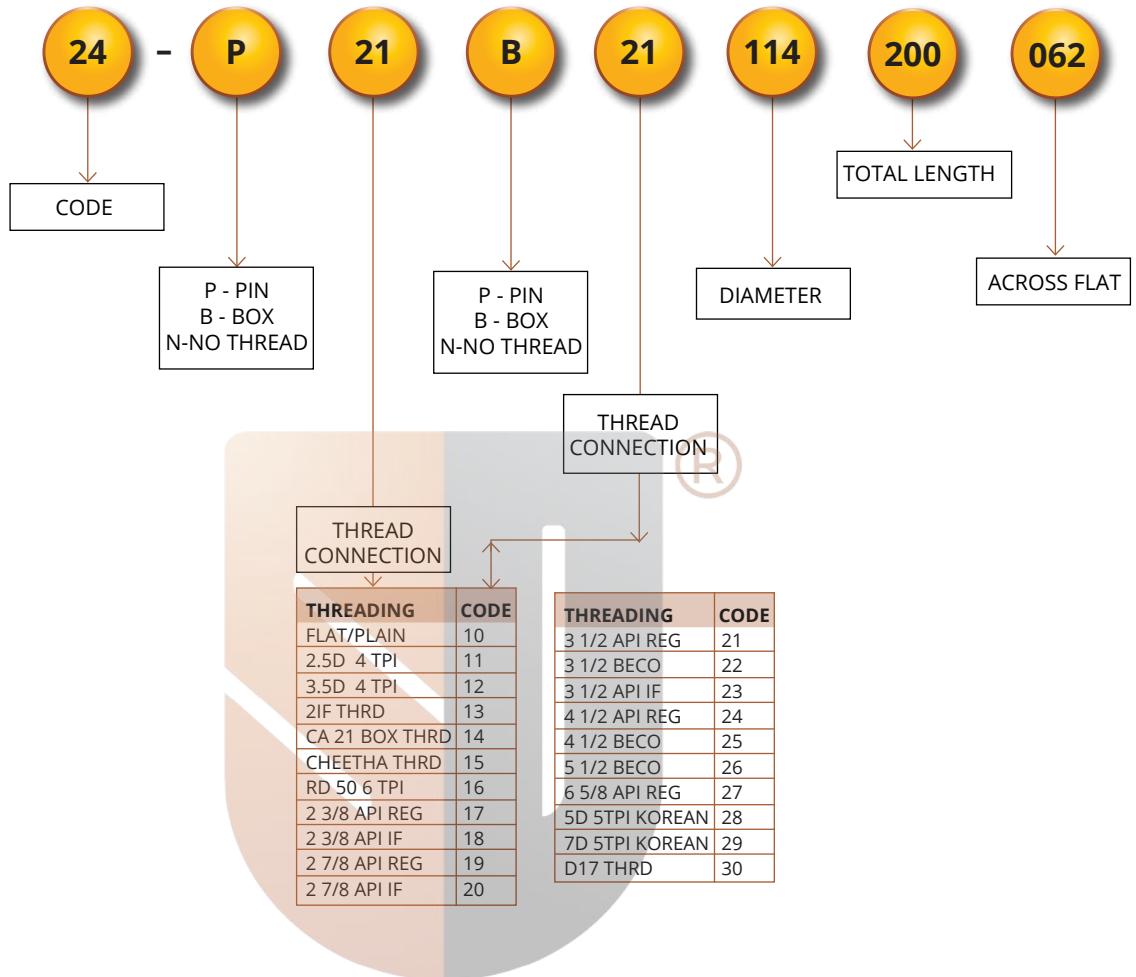
ODEX



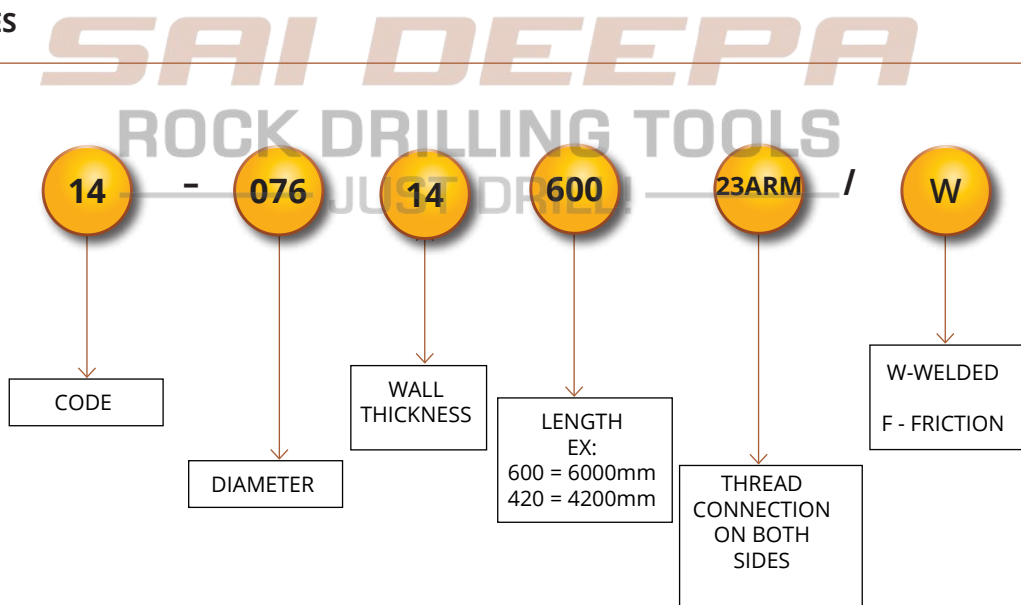
OD/ID	CODE
115/102	A
142/128	B
171/157	C
196/183	D
222/205	E
273/260	F

SPECIFICATION CHART

ADAPTERS



PIPES



NOTES



SAI DEEPA

ROCK DRILLING TOOLS

— JUST DRILL! —

Corporate Social Responsibility



We believe CSR is not a charity It is the necessity



SAI DEEPA

ROCK DRILLING TOOLS

— JUST DRILL! —



SAI DEEPA
ROCK DRILLING TOOLS
— JUST DRILL! —

SAI DEEPA ROCK DRILLS PVT. LTD.

Plot no 106 & 107, Phase II
IDA Cherlapally, Hyderabad – 500051
Telangana, India.

Ph : +91-40-27260217
+91-40-27260438
Fax : +91-40-27261231

Email: info@saideepa.com
sales@saideepa.com
Web: www.saideepa.com

ISO 9001: 2015 | 14001:2015 | 45001:2018 | 27001:2013

