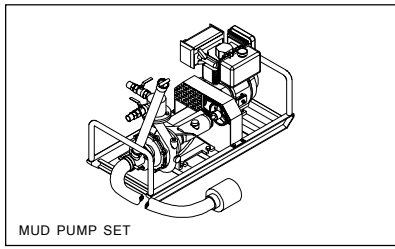
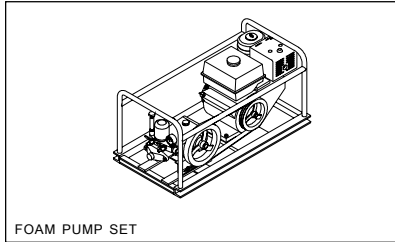


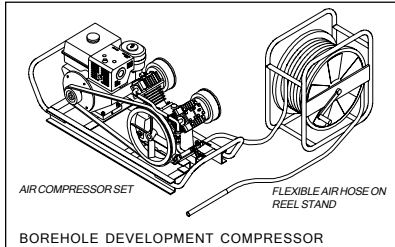
# DRILL ACCESSORIES



MUD PUMP SET



FOAM PUMP SET

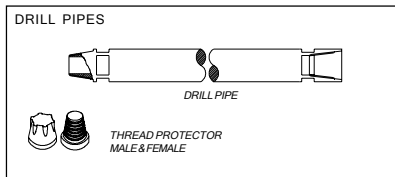


AIR COMPRESSOR SET  
BOREHOLE DEVELOPMENT COMPRESSOR  
FLEXIBLE AIR HOSE ON REEL STAND

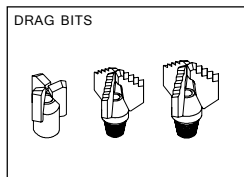
Drilling machines are only part of the PAT story essential to efficient water well construction are a large range of complementary ancillary equipment and accessories. In our modern purpose built factory in Bangkok (Thailand) we conceive, design and manufacture an extensive range of supporting equipment to make the detail of water well constructing an easy and efficient task for our customers.

PAT has built an international reputation for innovative design and high quality of build of its equipment second to none. The majority of accessories and drill components are designed by us, for use with PAT drilling rigs. All meet strict safety regulations and are manufactured from high-quality materials to make a reliable drilling product of quality. PAT offers suitable drill pipes, drag bits, sub adaptors, reamers and stabilisers, DTH-hammers, button bits, air compressors, and hand tools to support their PAT drilling equipment. Generally not only new rigs are available from stock but also a full range of accessories. Items of specialised nature are sourced on the world market selected on strict criteria of quality and proven field performance.

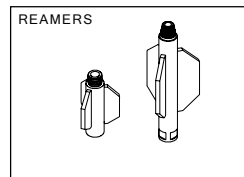
We are determined to satisfy the detailed requirements of the people who use our products and services, giving the maximum choice to meet all drilling needs. In addition to the standard range, special drilling equipment can be designed, fabricated and supplied overseas often within a matter of days.



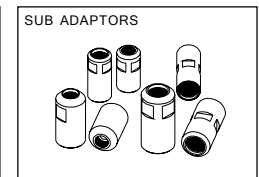
DRILL PIPES  
DRILL PIPE  
THREAD PROTECTOR MALE & FEMALE



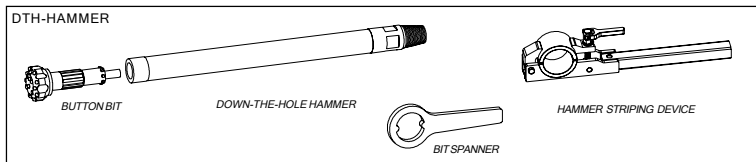
DRAG BITS



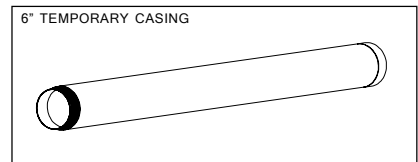
REAMERS



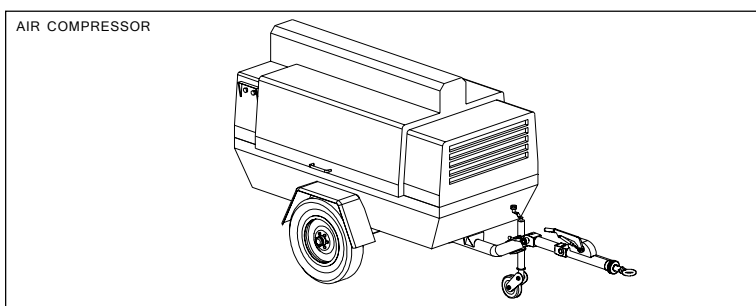
SUB ADAPTORS



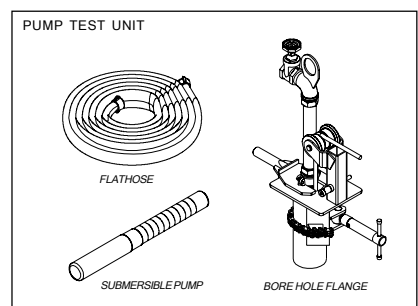
DTH-HAMMER  
BUTTON BIT  
DOWN-THE-HOLE HAMMER  
BIT SPANNER  
HAMMER STRIPPING DEVICE



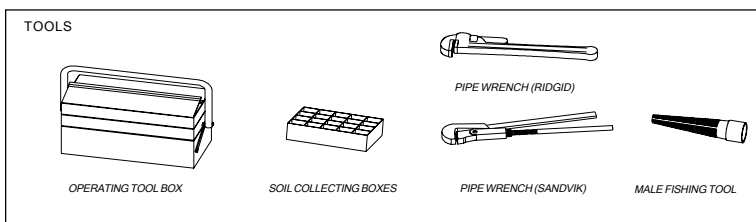
6" TEMPORARY CASING



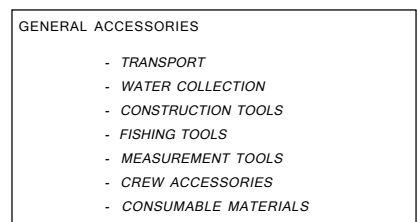
AIR COMPRESSOR



PUMP TEST UNIT  
FLATHOSE  
SUBMERSIBLE PUMP  
BORE HOLE FLANGE



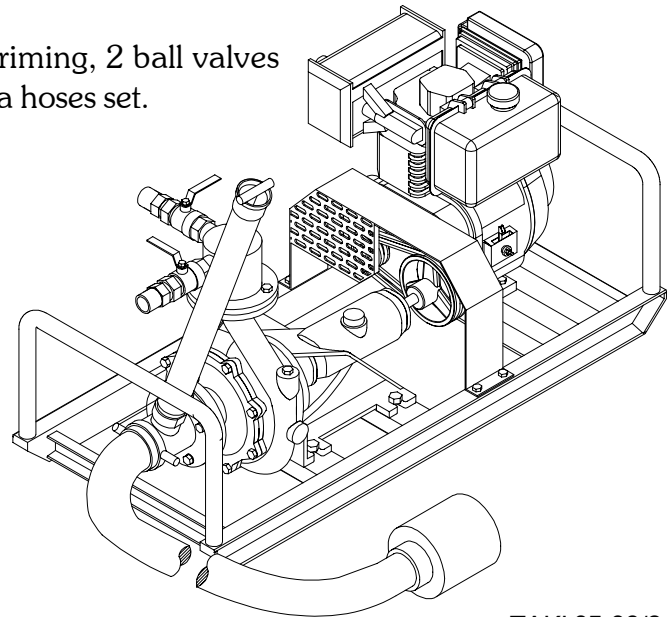
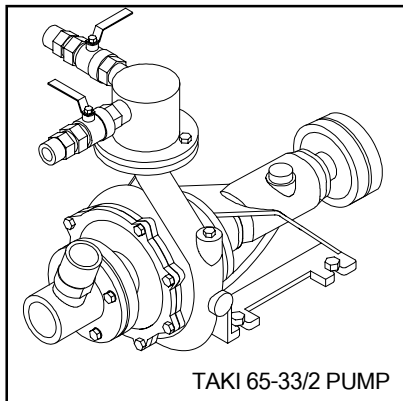
TOOLS  
OPERATING TOOL BOX  
SOIL COLLECTING BOXES  
PIPE WRENCH (RIDGID)  
PIPE WRENCH (SANDVIK)  
MALE FISHING TOOL



- GENERAL ACCESSORIES
- TRANSPORT
  - WATER COLLECTION
  - CONSTRUCTION TOOLS
  - FISHING TOOLS
  - MEASUREMENT TOOLS
  - CREW ACCESSORIES
  - CONSUMABLE MATERIALS

Mud pump set is mounted on a steel skid, powered by a petrol/diesel engine, and mechanically driven by 2 V-belts.

The pump is 2-stages centrifugal, self-priming, 2 ball valves and hand primer pump, completed with a hoses set.



## Technical Specifications

Engine Type :	10 HP YANMAR diesel engine (Optional 13 HP HONDA petrol) hand starting, 3600 rpm, air-cooled
Mud Pump Type :	2-stages centrifugal, TAKI model : 65-33/2 Displacement : 1000 litres/min at 30 metres head 600 litres/min at 50 metres head Max. pressure : 4 bar
Weight :	Skid unit: 156 kg (diesel), 146 kg (petrol)
Water Hoses :	Suction hose 3 inch x 4 m long Pressure hose 1 1/2 inch x 6 m long Drain hose 1 1/2 inch x 4 m long
Shipping Data :	NW : 172 kg (petrol), 182 kg (diesel) GW : 209 kg (petrol), 220 kg (diesel) DIM: 71 x 130 x 75 cm

Foam injection pump is a high pressure pump to facilitate drilling operations when using compressed air soft through to hard rock formations.

The pump is also useful for cleaning drilling rig and ancillary equipment.

The Foam Injection Pump is mounted on a skid, powered by a small engine, and mechanically driven by 2 V-Belts with safety guard.

Flow output is regulated by a flow control valve and system pressure is regulated by an adjustable pressure relief valve fitted with a pressure gauge.



## Technical Specifications

Engine Type :	4.0 HP YANMAR diesel engine, hand starting, 3600 rpm, air-cooled (3.8 HP HONDA petrol engine also available)
Pump Type :	Triplex piston pump
Max. displacement :	20 litres/min
Max. pressure :	35 bar
Hoses :	25 mm x 2 m suction hose and strainer used for drawing water/foam from a tank or 200 litres drum placed on ground adjacent.  6 mm x 20 m injection hose with quick coupling to connect the rig when drilling with foam, or connects with jet gun when cleaning applications. Hose is stored wrapped on special frame on the skid.
Jet Gun :	Adjustable flow jet gun with connections to fit the above hose line.
Weight :	Skid unit 53 kg (diesel), 43 kg (petrol)
Shipping Data :	NW: 61 kg (diesel), 51 kg (petrol) GW: 82 kg (diesel), 71 kg (petrol) DIM: 53 x 90 x 52 cm

# BOREHOLE DEVELOPMENT COMPRESSOR SET

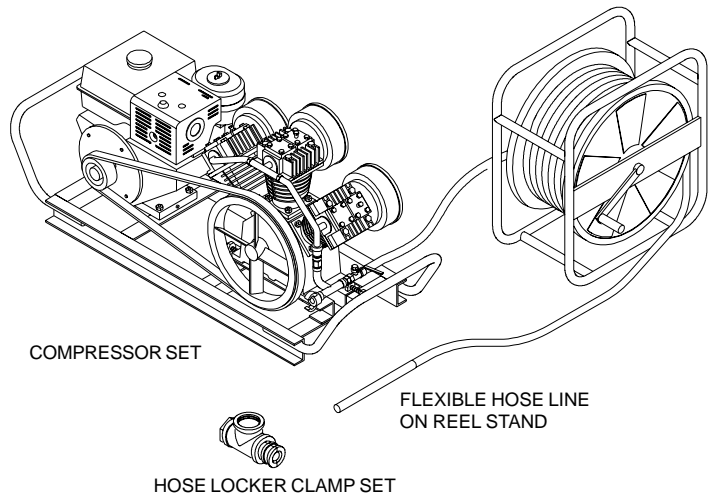
Part no 30 4 0080-diesel, 30 4 0080-petrol

Piston Compressor Driven by Diesel / Petrol Engine

A dedicated borehole development compressor can be used in place of the main drilling compressor in order to free up the main compressor and drilling rig, for move on to the next drilling site. PAT offers a borehole development compressor with a flexible hose system on a steel reel and stand.

Borehole development compressor is mounted on a steel skid, powered by a small engine, and mechanically driven by 2 V-Belts with attached safety guard.

The flexible rubber hose system with an attached development probe, which is all mounted on a combined steel reel and stand.



## Technical Specifications

### Borehole Development Compressor

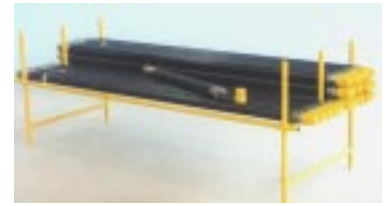
Engine Type:	10 HP YANMAR diesel engine, hand starting, 3600 rpm, air-cooled (13 HP HONDA petrol engine available)
Compressor Type:	3 cylinder piston compressor
Displacement :	27.1 cfm
Max. pressure :	10 bar
Net Weight :	Skid unit, 146 kg (diesel), 128 kg (petrol)
Shipping Data :	GW: 176 kg (diesel), 154 kg (petrol) DIM: 57x130x71 cm

### Flexible Hose Line System

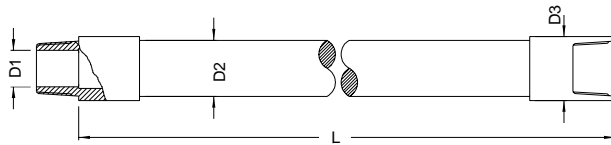
Hose :	1/2 inch x 5 metres flexible rubber hose with connections from reel stand to borehole development compressor  1/2 inch x 50 metres (Optional 80 metres) flexible rubber hose with connections and attached an air probe
Reel and Stand :	Tubular steel frame with detachable steel handle for rolling up and storing the hose line after well development
Shipping Data :	NW: 54 kg (50 m), 84 kg (80 m) GW: 76 kg (50 m), 108 kg (80 m) DIM: 52 x 70 x 76 cm (50 m), 63 x 70 x 76 cm (80 m)

# DRILL PIPE

Drilling pipes and threaded accessories are provided with all our rigs, manufactured by PAT in our facilities located in Bangkok (Thailand). All threading are automated by CNC machinery, tailor made to suit specific lengths and sizes for special requirements. All drilling pipes are provided with thread protectors also made in house.

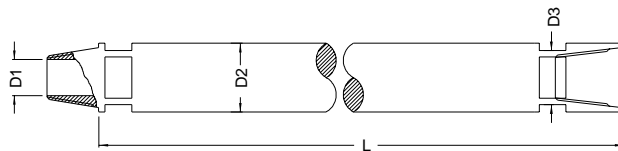


Drill Pipes



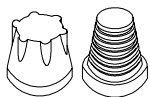
Drill Pipes for PAT-Drill 201

Part no.	Reference	Description	L (m)	d1 (mm)	d2 (mm)	d3 (mm)	Weight (kg.)
22 5 1000	PAT-Drill 201	Drill pipe 50 mm, 1.5 m long	1.5	32.5	50	57	7.2



Drill Pipes for PAT-Drill 301, 401, 501

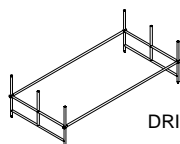
Part no.	Reference	Description	L (m)	d1 (mm)	d2 (mm)	d3 (mm)	Weight (kg.)
30 5 1044	OPTIONAL	Drill pipe 60 mm, 1.5 m long	1.5	28	60	50	5.3
30 5 1003	OPTIONAL	Drill pipe 60 mm, 0.9 m long	0.9	28	60	50	6.4
30 5 1000	OPTIONAL	Drill pipe 60 mm, 2.0 m long	2.0	28	60	50	12.4
40 5 1000	PAT-Drill 301, 401	Drill pipe 76 mm, 2.0 m long	2.0	40	76	60	18.2
40 5 2000	OPTIONAL	Drill collar pipe 76 mm, 2.0 m long	2.0	40	76	60	53.0
60 5 1000	PAT-Drill 501	Drill pipe 76 mm, 3.0 m long	3.0	40	76	60	25.8
40 5 1003	PAT-Drill 301, 401, 501	3" Hammer starter Drill pipe, 0.9 m	0.9	40	76	60	9.7
40 5 1044	PAT-Drill 301, 401, 501	4"-5" Hammer starter Drill pipe, 0.7 m	0.7	40	76	60	8.4



THREAD PROTECTOR  
MALE & FEMALE

Thread Protector

Part no.	Reference	Description	Weight (kg.)
20 5 1100	50 mm drill pipe	50 mm Drill pipe Thread Protector, male&female	-
23 5 1100	60 mm drill pipe	60 mm Drill pipe Thread Protector, male&female	-
40 5 1100	76 mm drill pipe	76 mm Drill pipe Thread Protector, male&female	-



DRILL PIPE RACK

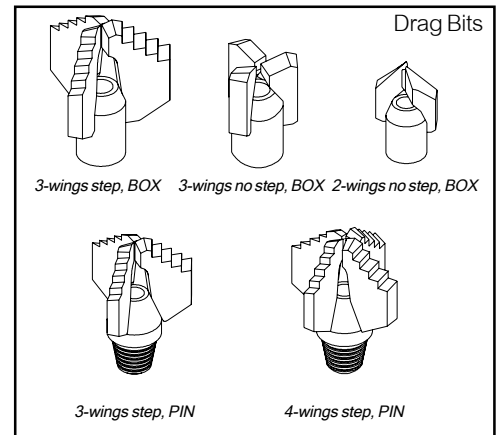
Drill pipe rack

Part no.	Reference	Description	Weight (kg.)
30 5 1111	PAT-Drill 301	Drill pipe rack	21.8

# DRAG BITS

PAT manufactures a complete range of drag bits in our factory sited in Bangkok (Thailand), all finished with high grade tungsten carbide.

Drag bits are available on 4-, 3-, or 2-wing shape, with step or no-step edges, standard rang in sizes from 3 1/2" to 12" (90-300 mm) diameter. However in house design and manufacture can meet any customer requirement.



Drag Bits

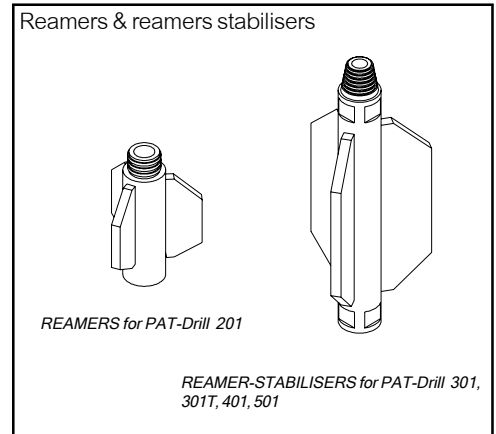
Part no.	Reference	Description	Thread	Weight (kg)
22 6 1312-2NS	PAT-Drill-201	Drag bit, 3 1/2" (90 mm), 2-wings no step	201 BOX, 50 mm Drill pipe	1.5
22 6 1312-3NS	PAT-Drill-201	Drag bit, 3 1/2" (90 mm), 3-wings no step	201 BOX, 50 mm Drill pipe	1.8
22 6 1334-3NS	PAT-Drill-201	Drag bit, 3 3/4" (95 mm), 3-wings no step	201 BOX, 50 mm Drill pipe	1.9
22 6 1400-3NS	PAT-Drill-201	Drag bit, 4" (100 mm), 3-wings no step	201 BOX, 50 mm Drill pipe	2
22 6 1412-3NS	PAT-Drill-201	Drag bit, 4 1/2" (115 mm), 3-wings no step	201 BOX, 50 mm Drill pipe	2.4
22 6 1412-3S	PAT-Drill-201	Drag bit, 4 1/2" (115 mm), 3-wings step	201 BOX, 50 mm Drill pipe	2.5
22 6 1534-3S	PAT-Drill-201	Drag bit, 5 3/4" (146 mm), 3-wings step	201 BOX, 50 mm Drill pipe	3.8
22 6 1600-3S	PAT-Drill-201	Drag bit, 6" (150 mm), 3-wings step	201 BOX, 50 mm Drill pipe	3.9
30 6 1400-3S	All models	Drag bit 4" (100 mm), 3-wings step	2 3/8 API Reg Mod. PIN	3.5
30 6 1412-3S	All models	Drag bit 4 1/2" (115 mm), 3-wings step	2 3/8 API Reg Mod. PIN	3.6
30 6 1534-3S	All models	Drag bit 5 3/4" (146 mm), 3-wings step	2 3/8 API Reg Mod. PIN	4.7
30 6 1600-3S	All models	Drag bit 6" (150 mm), 3-wings step	2 3/8 API Reg Mod. PIN	4.8
30 6 1612-3S	All models	Drag bit 6 1/2" (165 mm), 3-wings step	2 3/8 API Reg Mod. PIN	5
30 6 1700-3S	All models	Drag bit 7" (178 mm), 3-wings step	2 3/8 API Reg Mod. PIN	6.5
30 6 1800-3S	All models	Drag bit 8" (200 mm), 3-wings step	2 3/8 API Reg Mod. PIN	7.4
30 6 1900-3S	All models	Drag bit 9" (230 mm), 3-wings step	2 3/8 API Reg Mod. PIN	8
30 6 1900-4S	All models	Drag bit 9" (230 mm), 4-wings step	2 3/8 API Reg Mod. PIN	8.5
30 6 1000-4S	All models	Drag bit 10" (250 mm), 4-wing step	2 3/8 API Reg Mod. PIN	10
30 6 1200-4S	All models	Drag bit 12" (300 mm), 4-wing step	2 3/8 API Reg Mod. PIN	15

Tungsten Carbides for Bit Repairing

Part no.	Reference	Description	Weight (kg)
00 6 2530		CARBIDE PIECE, 25.3-12.6-4.5 mm	
00 6 1670		CARBIDE PIECE, 16.7-12.0-4.5 mm	
00 6 1600		CARBIDE PIECE, 16.0-7.5-4.5 mm	
00 6 1400		CARBIDE PIECE, 14.0-10.0-4.5 mm	
00 6 1700		CARBIDE PIECE, 17.0-10.5-4.5 mm	
00 6 2050		CARBIDE PIECE, 20.5-14.5-4.5 mm	

# REAMERS & REAMERS-STABILISERS

PAT manufactures a complete set of reamers, and reamer-stabilizers in our factory sited in Bangkok (Thailand), all finished with high grade tungsten carbide on 3-wing shape, ranging in size from 4" to 12" (100-300 mm), also open to demand other dimensions.



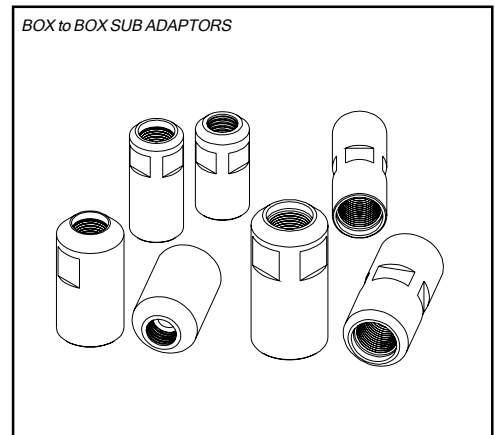
Reamers				
Part no.	Reference	Description	Thread	Weight (kg.)
22 6 2400	PAT-Drill 201	Reamer 4" (100 mm), 3 wings	BOX-PIN, 50 mm. Drill pipe	
22 6 2412	PAT-Drill 201	Reamer 4 1/2" (115 mm), 3 wings	BOX-PIN, 50 mm. Drill pipe	
22 6 2500	PAT-Drill 201	Reamer 5" (127 mm), 3 wings	BOX-PIN, 50 mm. Drill pipe	
22 6 2534	PAT-Drill 201	Reamer 5 3/4" (146 mm), 3 wings	BOX-PIN, 50 mm. Drill pipe	
22 6 2600	PAT-Drill 201	Reamer 6" (150 mm), 3 wings	BOX-PIN, 50 mm. Drill pipe	
22 6 2612	PAT-Drill 201	Reamer 6 1/2" (165 mm), 3 wings	BOX-PIN, 50 mm. Drill pipe	
22 6 2800	PAT-Drill 201	Reamer 8" (200 mm), 3 wings	BOX-PIN, 50 mm. Drill pipe	

Reamer-Stabilisers				
Part no.	Reference	Description	Thread	Weight (kg.)
23 6 2600	OPTION	Reamer-Stabiliser 6" (150 mm) 3 wings	BOX-PIN, 60 mm. Drill pipe	
23 6 2612	OPTION	Reamer-Stabiliser 6 1/2" (165 mm) 3 wings	BOX-PIN, 60 mm. Drill pipe	
23 6 2800	OPTION	Reamer-Stabiliser 8" (200 mm) 3 wings	BOX-PIN, 60 mm. Drill pipe	
23 6 2900	OPTION	Reamer-Stabiliser 9" (230 mm) 3 wings	BOX-PIN, 60 mm. Drill pipe	
40 6 2500	PAT-Drill 301, 401, 501	Reamer-Stabiliser 5" (127 mm) 3 wings	2 3/8 API Reg Mod. BOX-PIN	
40 6 2534	PAT-Drill 301, 401, 501	Reamer-Stabiliser 5 3/4" (146 mm) 3 wings	2 3/8 API Reg Mod. BOX-PIN	
40 6 2600	PAT-Drill 301, 401, 501	Reamer-Stabiliser 6" (150 mm) 3 wings	2 3/8 API Reg Mod. BOX-PIN	
40 6 2612	PAT-Drill 301, 401, 501	Reamer-Stabiliser 6 1/2" (165 mm) 3 wings	2 3/8 API Reg Mod. BOX-PIN	6.2
40 6 2700	PAT-Drill 301, 401, 501	Reamer-Stabiliser 7" (178 mm) 3 wings	2 3/8 API Reg Mod. BOX-PIN	
40 6 2800	PAT-Drill 301, 401, 501	Reamer-Stabiliser 8" (200 mm) 3 wings	2 3/8 API Reg Mod. BOX-PIN	14.6
40 6 2900	PAT-Drill 301, 401, 501	Reamer-Stabiliser 9" (230 mm) 3 wings	2 3/8 API Reg Mod. BOX-PIN	
40 6 2100	PAT-Drill 301, 401, 501	Reamer-Stabiliser 10" (250 mm) 3 wings	2 3/8 API Reg Mod. BOX-PIN	15.5
40 6 2200	PAT-Drill 301, 401, 501	Reamer-Stabiliser 12" (300 mm) 3 wings	2 3/8 API Reg Mod. BOX-PIN	

# SUB ADAPTORS

Threaded 'Sub Adaptors' are used to join drilling tools and accessories such as hammers or drill bits to common drill pipe. A standard range of sub adaptors are produced in our workshop by CNC turning and vertical machining centre and held in stock.

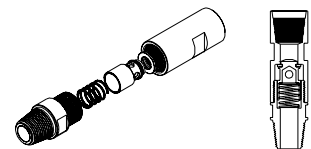
Also, we can manufacture special sub adaptors with specific threads to meet any customer requirement.



BOX to BOX Sub Adaptors

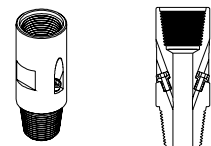
Part no .	Reference	Description	Weight (kg)
22 3 202 238	PAT-Drill 201	Sub adaptor, 50 mm x 2 3/8 API Reg	3.0
22 3 202 278	PAT-Drill 201	Sub adaptor, 50 mm x 2 7/8 API Reg	2.5
22 3 202 312	PAT-Drill 201	Sub adaptor, 50 mm x 3 1/2 API Reg	6.4
23 3 203 238	OPTIONAL	Sub adaptor, 60 mm x 2 3/8 API Reg	3.1
23 3 203 278	OPTIONAL	Sub adaptor, 60 mm x 2 7/8 API Reg	6.3
23 3 203 312	OPTIONAL	Sub adaptor, 60 mm x 3 1/2 API Reg	9.0
40 3 238 238	PAT-Drill 301 , 401 , 501	Sub adaptor, 2 3/8 API Reg x 2 3/8 API Reg	3.5
40 3 238 278	PAT-Drill 301 , 401 , 501	Sub adaptor, 2 3/8 API Reg x 2 7/8 API Reg	6.9
40 3 238 312	PAT-Drill 301 , 401 , 501	Sub adaptor, 2 3/8 API Reg x 3 1/2 API Reg	8.5

Fitted above a Drag bit when drilling with mud or foam to protect fluid flowing back up through drill pipe during drill pipe changes. Can also be fitted between drill pipe and DTH-Hammer when drilling under a head of water to back up valves fitted in the hammer.



BOX to PIN Sub Adaptors with non return valve

Part no .	Reference	Description	Weight (kg)
50 3 1060	OPTIONAL	60 mm Sub Adaptors with non return valve BOX to PIN	
50 3 1076	OPTIONAL	76 mm Sub Adaptors with non return valve BOX to PIN	



Fitted above a DTH hammer, the sub allows extra air to be exhausted to assist up-hole velocity when drilling with oversized bit diameters.

Air By-Pass Sub Adaptor

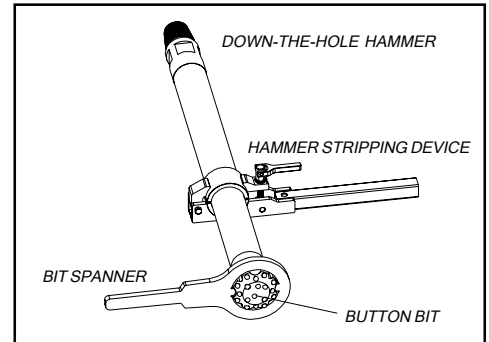
Part no .	Reference	Description	Weight (kg)
50 3 2076	OPTIONAL	76 mm Air-by pass Sub Adaptor BOX to PIN	

# DTH-HAMMERS & BUTTON BITS

Highly experienced and very skilled engineers will work closely with you to help arise solutions to your drilling issues.

PAT provides:

- Consulting to decide on the options that fit your drilling requirements.
- Training tailored to our clients drilling accessories.
- DTH-Hammer complete set, spare parts, service kits, and repair kits supplied with their respective adaptors.
- Effective matching hammer stripping and bit spanner tools developed by PAT for DTH-Hammers.



DTH-Hammers

Part no.	Reference	Description	Weight (kg)
30 6 3303	3" Hammer	3" Hammer, MACH-303	20.0
30 6 3044	4" Hammer	4" Hammer, MACH-44	36.0
30 6 3400	4" Hammer ( <i>high pressure</i> )	4" Hammer, SD-400	38.0
30 6 3050	5" Hammer	5" Hammer, MACH-50	54.0
30 6 3500	5" Hammer ( <i>high pressure</i> )	5" Hammer, D-500	58.0

Service Kits & Repair Kits

Part no.	Reference	Description	Weight (kg)
30 s 6303-1	MACH-303	MACH-303 Service kit	3.0
30 s 6044-1	MACH-44	MACH-44 Service kit	4.0
30 s 6400-1	SD-400	SD-400 Service kit	4.0
30 s 6050-1	MACH-50	MACH-50 Service kit	4.0
30 s 6500-1	D-500	D-500 Service kit	4.5
30 s 6303-2	MACH-303	MACH-303 Repair kit	4
30 s 6044-2	MACH-44	MACH-44 Repair kit	6
30 s 6400-2	SD-400	SD-400 Repair kit	6
30 s 6050-2	MACH-50	MACH-50 Repair kit	8.5
30 s 6500-2	D-500	D-500 Repair kit	8.5

Button Bits

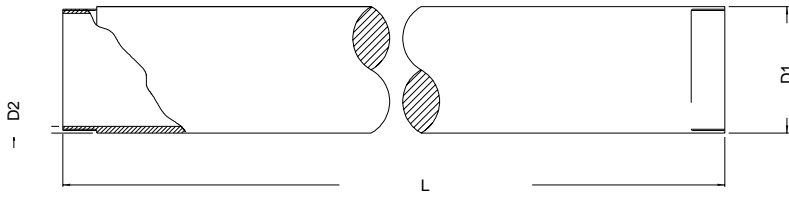
Part no.	Reference	Description	Weight (kg)
30 6 3312-303	3" Hammer	3 1/2" (90 mm) Button bit	3.7
30 6 3400-303	3" Hammer	4" (100 mm) Button bit	4.5
30 6 3412-44	4" Hammer	4 1/2" (115 mm) Button bit	9.7
30 6 3500-44	4" Hammer	5" (127 mm) Button bit	11.0
30 6 3512-44	4" Hammer	5 1/2" (140 mm) Button bit	12.5
30 6 3578-44	4" Hammer	5 7/8" (150 mm) Button bit	13.5
30 6 3500-50	5" Hammer	5" (127 mm) Button bit	15.0
30 6 3512-50	5" Hammer	5 1/2" (140 mm) Button bit	17.0
30 6 3534-50	5" Hammer	5 3/4" (146 mm) Button bit	17.8
30 6 3578-50	5" Hammer	5 7/8" (150 mm) Button bit	18.0
30 6 3612-50	5" Hammer	6 1/2" (165 mm) Button bit	18.5

# DTH-HAMMERS & BUTTON BITS

Hammer Tools

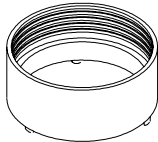
Part no.	Reference	Description	Weight (kg)
30 6 4003	3" Hammer	3" Hammer stripping device	15.5
30 6 4004	4" Hammer	4" Hammer stripping device	16.5
30 6 4005	5" Hammer	5" Hammer stripping device	16.6
30 6 5312-303	3" Hammer	3 1/2" Bit spanner	4.2
30 6 5400-303	3" Hammer	4" Bit spanner	4.2
30 6 5412-44	4" Hammer	4 1/2" Bit spanner	3.8
30 6 5500-44	4" Hammer	5" Bit spanner	4.2
30 6 5512-44	4" Hammer	5 1/2" Bit spanner	4.4
30 6 5578-44	4" Hammer	5 7/8" Bit spanner	4.5
30 6 5500-50	5" Hammer	5" Bit spanner	4.2
30 6 5512-50	5" Hammer	5 1/2" Bit spanner	4.2
30 6 5534-50	5" Hammer	5 3/4" Bit spanner	4.4
30 6 5578-50	5" Hammer	5 7/8" Bit spanner	4.4
30 6 5612-50	5" Hammer	6 1/2" Bit spanner	4.4

# 6" TEMPORARY CASING



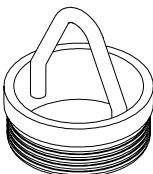
Casing Pipes

Part no.	Reference	Description	L M	d1 mm	d2 mm	Weight (kg.)
30 7 8200	OPTIONAL	6" TEMPORARY CASING PIPE, 2,00 m. Long	2	168.3	4	23.0
30 7 8100	OPTIONAL	6" TEMPORARY CASING PIPE, 1,00 m. Long	1	168.3	4	13.0
30 7 8050	OPTIONAL	6" TEMPORARY CASING PIPE, 0,50 m. Long	0.5	168.3	4	7.0
30 7 8030	OPTIONAL	6" TEMPORARY CASING PIPE, 0,30 m. Long	0.3	168.3	4	5.0
30 7 8020	OPTIONAL	6" TEMPORARY CASING PIPE, 0,20 m. Long	0.2	168.3	4	4.0



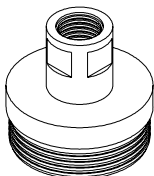
Casing Shoe

Part no .	Reference	Description	Weight (kg.)
30 7 8001	OPTIONAL	6" CASING SHOE with tungsten carbide (core bit)	1.7
30 7 8002	OPTIONAL	6" CASING SHOE	1.7



Lifting Plugs

Part no .	Reference	Description	Weight (kg.)
30 7 8005	OPTIONAL	LIFTING PLUGS	2.6



Casing Adaptor

Part no .	Reference	Description	Weight (kg.)
30 7 8006	OPTIONAL	CASING ADAPTOR	5.0

# AIR COMPRESSOR & AIR ACCESSORIES

Whatever your drilling questions, PAT is always ready to help you with your drilling project. We are always willing to share our knowledge and experience to provide a better service and welfare of the people served by our customers.

PAT provides:

- Advise and counselling to choose the best options for your drilling needs.
- Specific training personalized to our customer's drilling accessories choices.
- Drilling components and spare parts, produced or not by PAT, supplying and adapting a wide range of accessories.
- Mechanical support, machine management, spare parts and maintenance assistance to advantage our customers.
- Operational compatibility solutions like adapting Atlas Copco air compressors with Toyota Land Cruiser wheel to ensure complete availability of a spare tyre in a very remote location.
- Air hoses and coupling joints, air tools, and related air accessories.



Portable Air Compressor

Part no.	Reference	Description	Weight (kg)
91 1 0125	XA-125	Air compressor 7 bar, 250 cfm	n/a
91 1 0175	XA-175	Air compressor 7 bar, 370 cfm	n/a
91 1 0175 -H	XAH-175	Air compressor 12 bar, 370 cfm	n/a
91 1 0146	XAS-146	Air compressor 7 bar, 300 cfm	1690
91 1 0146 -H	XAHS-146	Air compressor 12 bar, 300 cfm	1725
91 1 0156	XATS-156	Air compressor 10.5 bar, 330 cfm	1725
91 1 0186	XAS-186	Air compressor 7 bar, 395 cfm	1725
91 1 0186 -H	XAHS-186	Air compressor 12 bar, 370 cfm	1968
91 1 0236	XAHS-236	Air compressor 12 bar, 500 cfm	2900

Spare Part for Air Compressor

Part no.	Reference	Description	Weight (kg)
91 1 0125 -2	XA-125	XA-125, 500 hrs. Service pack	2.0
91 1 0125 -4	XA-125	XA-125, 1000 hrs. Service pack	5.0
-	XA-125	Oil filter for 250 or 750 hrs. Service pack	0.9
91 1 0175 -2	XA-175	XA-175, 500 hrs. Service pack	2.0
91 1 0175 -4	XA-175	XA-175, 1000 hrs. Service pack	7.2
-	XA-175	Oil filter for 250 or 750 hrs. Service pack	0.9
91 1 0186 -2	XAS-186, XATS-156	XAS-186, 500 hrs. Service pack	2.0
91 1 0186 -4	XAS-186, XATS-156	XAS-186, 1000 hrs. Service pack	10.0
-	XAS-186, XATS-156	Oil filter for 250 or 750 hrs. Service pack	0.9
91 1 0186 -H2	XAHS-186	XAHS-186, 500 hrs. Service pack	2.0
91 1 0186 -H4	XAHS-186	XAHS-186, 1000 hrs. Service pack	10.0
-	XAHS-186	Oil filter for 250 or 750 hrs. Service pack	0.9

PAT also provide genuine parts for all models of air compressor, reference to factory's part numbers.

# AIR COMPRESSOR & AIR ACCESSORIES

## Air Accessories

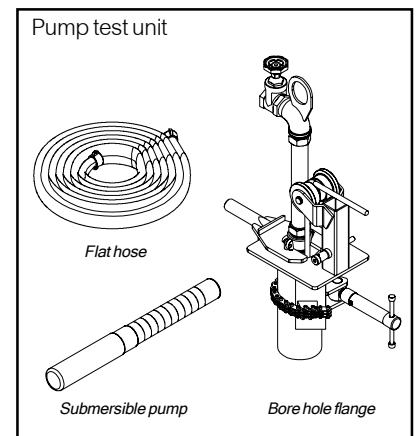
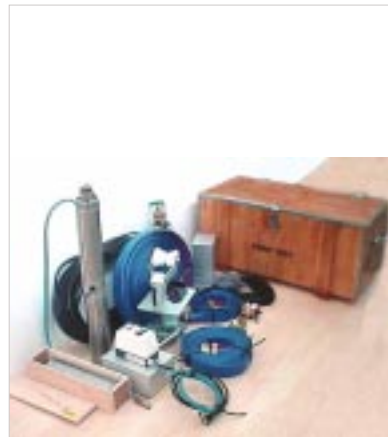
Part no.	Reference	Description	Weight (kg)
30 7 1000 -10	OPTIONAL	1 1/2" Air hose, 10 m	8.0
30 7 1000 -05	OPTIONAL	1 1/2" Air hose, 5 m	4.0
30 7 1000 -15	PAT-Drill 301, 401, 501	1 1/2" Air hose, 15 m	10.5
30 7 1100	PAT-Drill 301, 401, 501	1 1/2" Air hose coupling with clamp	0.8
30 7 1111	PAT-Drill 301, 401, 501	O ring, Air hose coupling	-
30 7 1112-112	PAT-Drill 301, 401, 501	Nipple 1 1/2" x 1 1/2"	0.6
30 7 1112-114	OPTIONAL	Nipple 1 1/2" x 1 1/4"	0.6
30 7 1112-100	OPTIONAL	Nipple 1 1/2" x 1"	0.5
	AIR TOOL	Claw coupling x6 mm Reducer	0.5
30 7 1200	PAT-Drill 301, 401, 501	Dust protect cap, 1 1/2" Air hose coupling	-
30 7 2100	OPTIONAL	PAT Oil lubricator (4 litres venturi type)	-

## Optional Accessories

Part no.	Reference	Description	Weight (kg)
91 2 1000	OPTIONAL	Tyre wheel adaptor for TOYOTA Land Cruiser tyre wheel	-
91 2 2000	OPTIONAL	Tandem undercarriage with fixed tow bar and mechanical surge brakes	-

# PUMP TEST UNIT

To complete a well and measure its discharge and drawdown with a mechanised pump can involve using some really unwieldy equipment that is difficult to transport and use in remote sites. PAT Pump Test Unit is a compact and easily transported unit comprising of a roller unit to feed the lay flat site pipe into the hole and support it on rigid support pipe on the surface. The operation of lowering the pump takes no more than a few minutes.



## Technical Specifications

Borehole flange :	Galvanized steel flange with chain vices for 4"-8" casing
Hoses type :	High-tensile yarns and thermoplastic materials.
	Inside diameter 40 mm
	Water column 1.94 kg/m
	Operating pressure 30 bar
	Theoretical tensile strength 2500 kg.
Hoses set :	Hose with end couplings, length of 30m-10m-5m (45 metres total)
Pump :	Submersible pump, capacity 3.6 m <sup>3</sup> /hr. at head 50 metres 220 V single phase (with control starter) 380 V three phase for optional
Electrical cable	4 x 2.5 mm <sup>2</sup> , 50 m long with water resistant sockets
Accessories :	Including re usable cable-ties, 1 1/2" nipples, 1 1/4" reducer, adjustable gate valve for full flow adjustment
Storage :	Sturdy wooden box GW : 98.0 kg DIM: 54 x 100 x 44 cm

We have selected an extensive package of hand tools suitable to support drilling operations, maintenance and repairing. We included especially developed tools from our workshop for optimal use of drilling rigs. We provided air tools as a boxed set.

			Hand Tools
Part no.	Reference	Description	Weight (kg)
20 8 1000	PAT-Drill 201	Tools complete set: - 2 x pipe wrench, 3" jaw and 24" Ridgid - 1 x 201 male fishing tools - 4 x soil collecting boxes - 5 x crew caps - 1 x set of operation tools box	31.0
30 8 1000	PAT-Drill 301, 401, 501	Tools complete set: - 2 x pipe wrench, 4" jaw and 36" Ridgid - 1 x 301 male fishing tools - 4 x soil collecting boxes - 5 x crew caps - 1 x set of metric sockets - 1 x set of operation tools box - 1 x set of basic air tools	55.0
30 8 1111	OPTIONAL	Chain Tong wrench for 6" pipe, heavy duty "RIDGID"	12.4
32 8 2000	PAT-Drill 301	Special wrench for repair rig	13.0
40 8 2000	PAT-Drill 401, 501	Special wrench for repair rig	15.0
30 7 4546	P/N 30 8 1000	Basic air tools set: - 1 x air blow gun - 1 x tyre inflating gun with pressure gauge - 1 x air hose with claw coupling	5.3
30 7 4000	OPTIONAL	Air tools set : (complete package contained in a sturdy wooden box ) - 1 x air die grinder with 50 carbide stones - 1 x air angle grinder with 25 grinding discs - 1 x air drill with drillers set - 1 x air blow gun, tyre inflating and gauge - 1 x pressure regulator and lubricator - 1 x accessories set: Air hoses, goggles, oil	27.0

## GENERAL ACCESSORIES

PAT also offer optional transportation amenities, water collection and storage supplements, construction utensils, extra fishing tools, measurement equipment, and a complements set for drilling crews. In addition, we supply you a wide range of high-quality consumable products for a better drilling operation.

Part no .	Reference	Description	Weight (kg)
40 8 6110	OPTIONAL	Trailer 2 wheel trailer, high speed highway towing "A" frame drawbar which allows original 'pick-up' tray from a typical commercial pick -up to be fitted or alternative bodies to meet customers choice or purpose. Trailer fitted with 7.50 x 16 Wheels and tyres, auto reverse and parking brakes.	
40 8 6120	OPTIONAL	KUBOTA tractor with Basic trailer 2 wheels tractor, speed max . (on road) 30 km/hr, powered by KUBOTA 11.5 hp low speed diesel engine, mono cylinder, water cooled, hand starting . Complete with a basic 2 wheel trailer, light weight, without suspension .	325.0
40 8 6130	OPTIONAL	Sturdy wooden box 40x55x27 cm	12.0
40 8 6131	OPTIONAL	Sturdy wooden box 50x100x47 cm	24.0
40 8 6132	OPTIONAL	Sturdy wooden box 50x120x47 cm	29.0
40 8 6140	OPTIONAL	Jerry' can set Set of 5 x 20 litre 'Jerry' can each with different markings for Foam, Diesel, Rock Drill Oil, Engine oil and Hydraulic oil.	

## GENERAL ACCESSORIES

			Water collection
Part no .	Reference	Description	Weight (kg)
40 8 6210	OPTIONAL	Fresh water pump Portable 2" centrifugal pump, powered by 4 hp Yanmar diesel engine, air-cooled, hand starting Capacity: 500 litres/min	40.0
40 8 6221	P/N 4086210	2" Suction hose, 4 m	
40 8 6222	P/N 4086210	2" Flat hose, 50 m	
40 8 6230	OPTIONAL	Collapsible bladder tank, 1000 litre	15.0
40 8 6231	OPTIONAL	Collapsible bladder tank, 2000 litre	20.0
40 8 6232	OPTIONAL	Collapsible bladder tank, 5000 litre	35.0

			Construction tools
Part no .	Reference	Description	Weight (kg)
40 8 6310	OPTIONAL	Electrical generator Portable generator, powered by 10 hp Yanmar diesel engine, air-cooled, hand starting . Capacity : 5.5 KVA, 220V.	108.0
40 8 6320	OPTIONAL	Electrical welder kit 1x Mobile welder, capacity up to 3.2mm Rod 1x Electric terminal with cable, 10 m long 1x Night lights set, 220 V 1x weld accessories : Cable, Rods, Welder helmet, Gloves . 1x Sturdy wooden box	65.0
40 8 6330	OPTIONAL	Tripod, 4 metres high	82.0
40 8 6340	P/N 40 8 6330	Chain block, 1.5 ton	13.8
40 8 6341	P/N 40 8 6330	Chain block, 2.0 ton	21.6
40 8 6351	OPTIONAL	Cement vibration	

## GENERAL ACCESSORIES

			Fishing tools
Part no.	Reference	Description	Weight (kg)
22 8 2100	PAT-Drill 201	Male fishing tool, drill pipe	1.9
30 8 2100	PAT-Drill 301, 401, 501	Male fishing tool, drill pipe	4.6
40 8 6420	OPTIONAL	Fishing tool, India MK II pump Fishing tool for 1 1/4" rising pipe typical of India Mark II hand pump	
40 8 6422	OPTIONAL	Fishing tool, DUBA pump Fishing tool for 2 1/2" rising pipe of DUBA hand pump	
40 8 6430	OPTIONAL	Magnet fishing tool with 80 m cable	

			Measurement tools
Part no.	Reference	Description	Weight (kg)
40 8 6510	OPTIONAL	Dip Meter, 100 meter flat cable with aluminium case	
40 8 6520	OPTIONAL	Marsh funnel & Jug	
40 8 6530	OPTIONAL	Borehole camera	
40 8 6540	OPTIONAL	Mud pump testing device A pressure gauge with quick fit adaptor to measure discharge pressure for indication of efficiency/wear of mud pump components	

# GENERAL ACCESSORIES

## Crew accessories

Part no.	Reference	Description	Weight (kg)
40 8 6610	OPTIONAL	Tent, single	
40 8 6611	OPTIONAL	Sleeping bag, single	
40 8 6620	OPTIONAL	Overalls (State Sizes L, XL and XXL with order)	
40 8 6621	OPTIONAL	Polo-shirt with PAT-Drill logo (Sizes and other logos are on request )	
40 8 6622	ALL PAT-Drill MODELS	Crew cap with PAT -Drill logo (other logos are on request )	
40 8 6630	OPTIONAL	Safety helmets	
40 8 6631	OPTIONAL	Earmuffs	
40 8 6632	OPTIONAL	Earplugs	
40 8 6633	OPTIONAL	Boots. State foot sizes with order & convention used i.e. US, European or other	
40 8 6634	OPTIONAL	Leather Work Gloves - One size	
40 8 6635	OPTIONAL	Construction fencing tape, yellow -black, 3"x 250 m	

## Consumable materials

Part no.	Reference	Description	Weight (kg)
94 1 1102	ALL ENGINES	Motor oil SAE 40, 18 litre	
94 1 1103	ALL ENGINES	Motor oil SAE 40, 200 litre	
94 1 2102	HYDRAULIC SYSTEM	Hydraulic oil ISO 68, 18 litre	
94 1 2103	HYDRAULIC SYSTEM	Hydraulic oil ISO 68, 200 litre	
94 1 4101	DTH-HAMMER DRILLING	Rock drill oil ISO 320, 18 litre	
94 1 4102	DTH-HAMMER DRILLING	Rock drill oil ISO 320, 200 litre	
94 1 5101	DRILL PIPE AND HAMMER	PAT Copper grease, 1 kg	
94 1 6101	MULTIPURPOSE	PAT Lithium grease, 1 kg	
94 1 7202	MUD DRILLING	Biodegradable PAT polymer, 10 kg	
94 1 7203	MUD DRILLING	Biodegradable PAT polymer, 25 Kg	
94 1 8201	AIR DRILLING	Liquid drilling foam,25 lire	
94 1 8202	AIR DRILLING	Liquid drilling foam,200 litre	