ROTARY PERCUSSION SYSTEM™

RPS TOOLS SERIES
FOR MINING APPLICATIONS

Terelion manufactures and services application specific drilling tools for the Mining and Construction industries. Our proprietary design capabilities, efficient manufacturing, and global sales force uniquely positions us to provide reliable drilling solutions faster than anyone else. We are a customer focused company with an innovative team conducting business sin a responsible manner and a passion to win.

ROTARY PERCUSSION SYSTEM ™

ADD SOME RPS TO YOUR ROP.

The patented RPS Rotary Percussion System combines the best advantages of rotary drilling and percussive drilling. The rotary cutting action combined with a percussive element allows for formations to fracture more easily. Thereby, RPS can drill efficiently in most formations whether hard or soft which leads to improved penetration rates and reduced drilling costs. The plug and play design makes it easy to fit the RPS system on your existing rotary drills.

Product Range in RP Bits

DIAMETER		SOFT TO MEDIUM			MEDIUM TO HARD	HARD TO VERY HARD	PIN SIZE	APPROX. WEIGHT	
in	mm						Inches	lbs	kg
6.75	171		RP43	RP50	RP60		3 1/2	46	21
7.875	200		RP43			RP70	4 1/2	76	35
9	229	RP35	RP40 RP43	RP53			4 1/2	96	43
9.875	251	RP35	RP53	RP60		RP67	6 5/8	145	66
10.625	270		RP40 RP53		RP63		6 5/8	157	72
12.25	311		RP53	RP60	RP63	RP67	6 5/8	225	102

AV/AVL products can be modified to run under RPS by special request. Your Terelion representative can assist you in selecting the proper bits to suit your application and maximize your productivity. The availability of specific products may change from time to time.

PLUG AND PLAY The Plug and play design to fit on your existing rotary drills effectively makes the RPS a broad application tool for the blast hole market. RPS will operate efficiently on any air rotary drill rig with 80–105 psi available.

UTILIZE PERCUSSION ENERGY Combining percussive energy with a rotary action allows formations to fracture more easily which in turn leads to increased drilling penetration rates.

VERSATILE IN ALL FORMATIONS The combined RPS action also drills without problem in consolidated or broken formations and transitional hard or soft formation changes. The system works as a rotary drill bit when a percussive action is not possible, such as when encountering groundwater.

OPTIMIZED RP DRILL BITS A high quality, energy focused bit is necessary to ensure the best drilling results possible. The RP bit series is designed specifically for use with the RPS tool to maximize ROP and minimize TDC. Switching out bits is easy – all RPS tools are built with API bit connections.

RPS62

TOOL WEIGHT		TOOL DIAMETER		TOOL LENGTH		BIT SIZE	
kg	lb	mm	inch	mm	inch	mm	inch
170	374	159	6 ¼	1245	49	200 - 216	7 ⅞ - 8 ½

AIR CONSUMPTION		
OPERATING RANGE	85 - 135 PSI	5.9 - 9.3 BAR
RECOMMENDED AIR	1200 CFM	34 M³/MIN

ASSEMBLY		
Type	Part#	Description
RPS62	P09882	RPS62 TOOL - MILL FLAT 5.00"
RPS62	P09872	RPS62 TOOL - MILL FLAT 5.00" – HIGH FLOW PISTON

SPARES LIST				
Item	Part#	Description	lb	kg
3	41910B	4 ½" BECO TOPSUB - MILL FLAT 5.00"	87	39
4	41787	345 O-RING		
5	41914	GUIDE SLEEVE	12	5
6	38350	SOLID CHOKE		
7	41916	PISTON - FOR P09882		
	48083	PISTON - FOR P09872		
8	41919B	CASE		
9	41920	SPLIT CATCH RING		
10	41821	350 O-RING		
11	4909	DRIVE LUG		
12	48084	DRIVE SUB	22	10
13	48086	EXHAUSTER		
14	48085	4 ½" API MANDREL	57	26
OPTIONAL ACCESSORY				
1	18970	VH393 SNAP RING		
2	42746	SCREEN PLATE		
SERVICE KIT				
32pcs of #11, 1pc of #10, 1pc of #6, 1pc of #4				
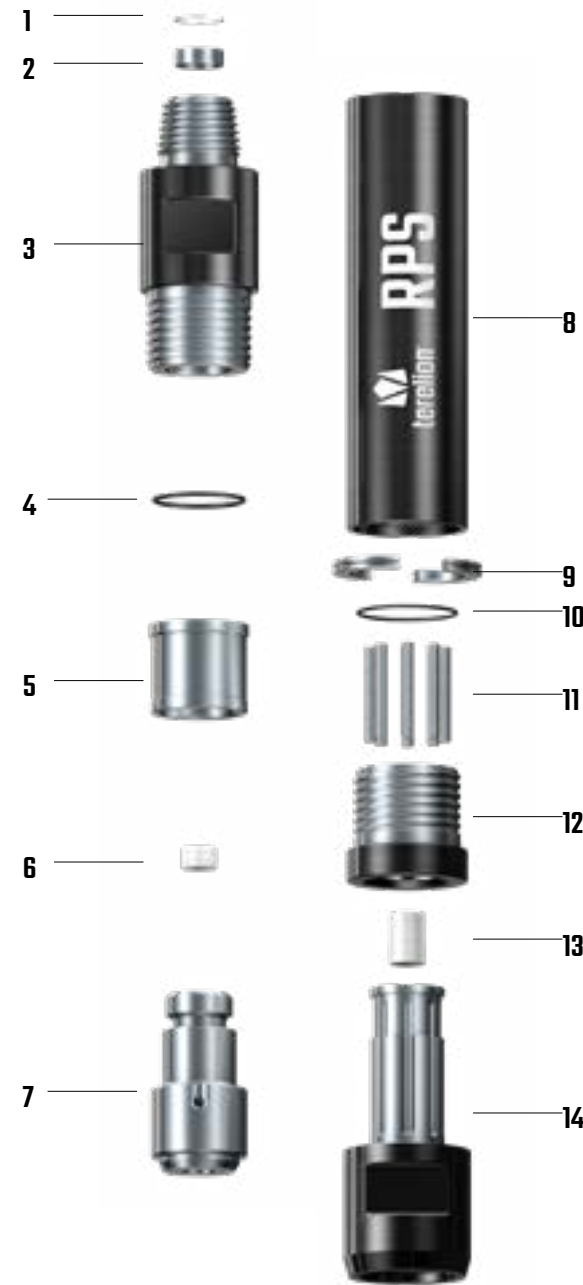
RPS75

TOOL WEIGHT		TOOL DIAMETER		TOOL LENGTH		BIT SIZE	
kg	lb	mm	inch	mm	inch	mm	inch
210	463	194	7 ⅝	1194	47	251	9 ⅞

AIR CONSUMPTION		
OPERATING RANGE	85 - 135 PSI	5.9 - 9.3 BAR
RECOMMENDED AIR	1900 CFM	54 M³/MIN

ASSEMBLY		
Type	Part#	Description
RPS75	P20006	RPS75 TOOL - MILL FLAT 6.00"

SPARES LIST				
Item	Part#	Description	lb	kg
3	60091A	5 ¼" BECO TOPSUB - MILL FLAT 6.00"	125	57
4	38319	433 O-RING		
5	60092	GUIDE SLEEVE	20	9
6	48982	SOLID CHOKE		
7	60093	PISTON		
8	60090	CASE		
9	60089	SPLIT CATCH RING		
10	38346	361 O-RING		
11	4909	DRIVE LUG	8	3,6
12	60094	DRIVE SUB	36	16
13	60095	EXHAUSTER		
14	60096	6 ⅝" API MANDREL	98	45
OPTIONAL ACCESSORY				
1	43713	VH312 SNAP RING		
2	60087	SCREEN PLATE		
SERVICE KIT				
32pcs of #11, 1pc of #10, 1pc of #6, 1pc of #4				
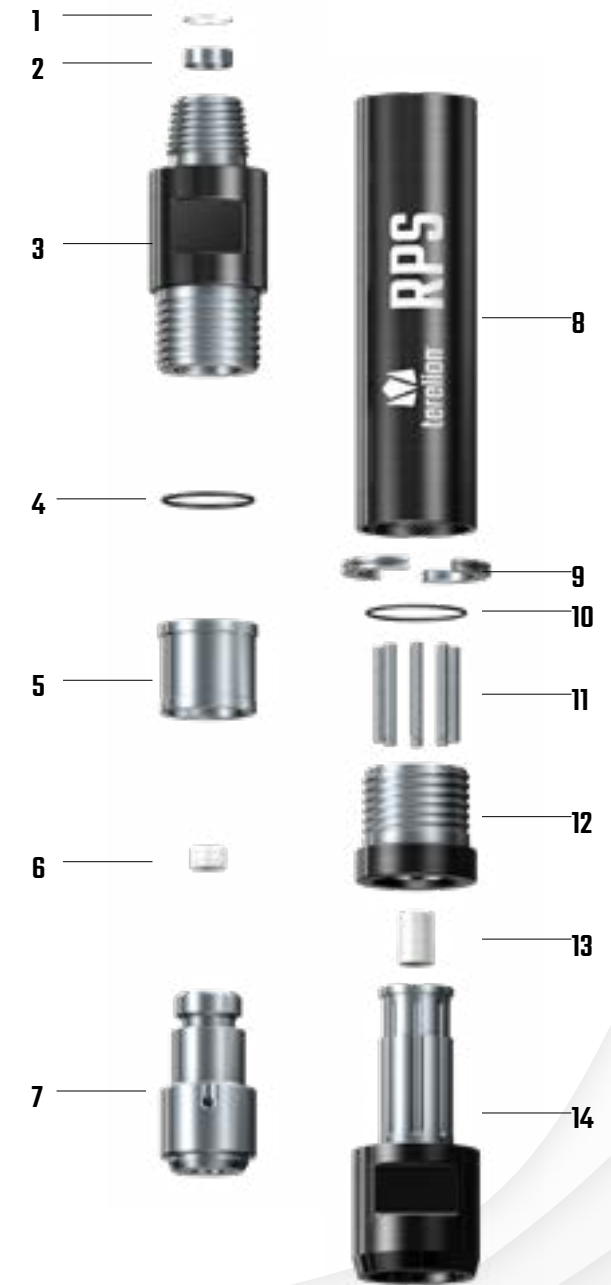
RPS85

TOOL WEIGHT		TOOL DIAMETER		TOOL LENGTH		BIT SIZE	
kg	lb	mm	inch	mm	inch	mm	inch
265	585	219	8 ⅝	1194	47	270 – 279	10 ⅝ – 11

AIR CONSUMPTION

OPERATING RANGE	85 – 135 PSI	5.9 – 9.3 BAR
RECOMMENDED AIR	2600 CFM	74 M³/MIN

ASSEMBLY

Type	Part#	Description
RPS85	P09949	RPS85 TOOL – MILL FLAT 7.75"
RPS85	P20068	RPS85 TOOL – MILL FLAT 7.75" – HARD METAL MANDREL
RPS85	P20084	RPS85 TOOL – MILL FLAT 6.00"

SPARES LIST

Item	Part#	Description	lb	kg
3	48980B	6" BECO TOPSUB – MILL FLAT 7.75" – FOR P09949, P20068	157	71
	60619A	6" BECO TOPSUB – MILL FLAT 6.00" – FOR P20084	157	71
4	38319	433 O-RING		
5	48979	GUIDE SLEEVE	25	11
6	48982	SOLID CHOKE		
7	48977	PISTON		
8	48978	CASE		
9	48976	SPLIT CATCH RING		
10	38320	364 O-RING		
11	4909	DRIVE LUG	8	3,6
12	48975	DRIVE SUB	48	22
13	48981	EXHAUSTER		
14	48974	6 ⅝" API MANDREL – FOR P09949	126	57
	60514	6 ⅝" API MANDREL – FOR P20068	126	57
	48947	6 ⅝" API MANDREL – FOR P20084	126	57

OPTIONAL ACCESSORY

1	AC-17712	VH393 SNAP RING
2	42653	SCREEN PLATE

SERVICE KIT

40pcs of #11, 1pc of #10, 1pc of #6, 1pc of #4
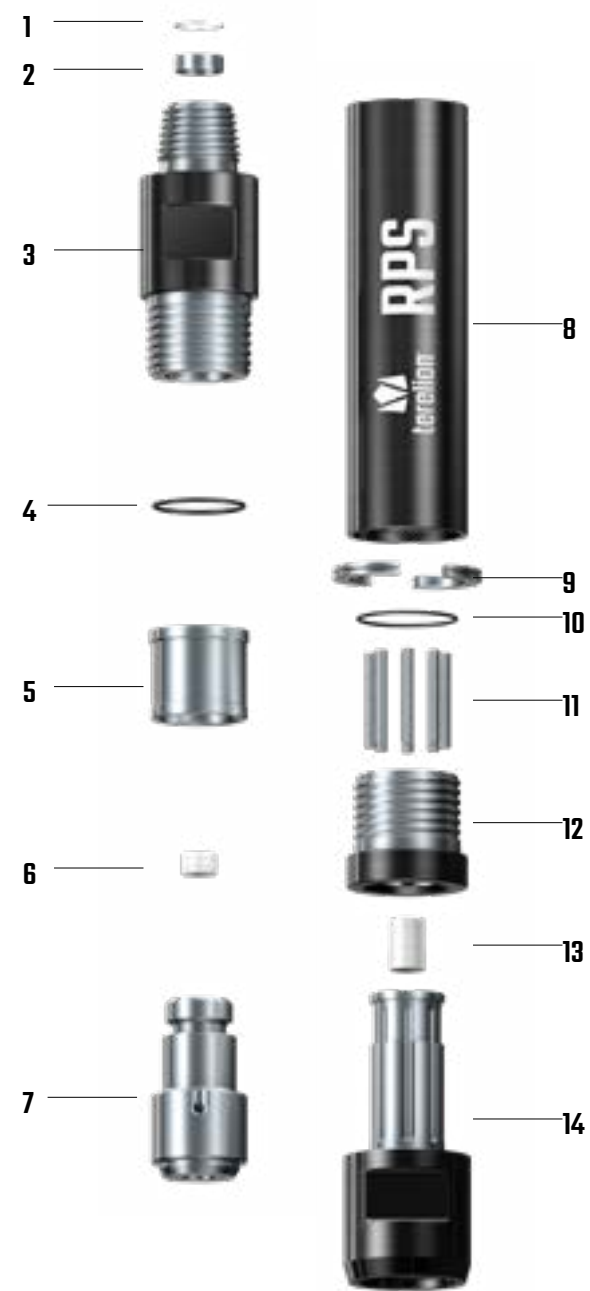
RPS92

TOOL WEIGHT		TOOL DIAMETER		TOOL LENGTH		BIT SIZE	
kg	lb	mm	inch	mm	inch	mm	inch
345	760	235	9 ¼	1283	50 ½	270 – 311	10 ⅝ – 12 ¼

AIR CONSUMPTION

OPERATING RANGE	85 – 135 PSI	5.9 – 9.3 BAR
RECOMMENDED AIR	2400 CFM	68 M³/MIN

ASSEMBLY

Type	Part#	Description
RPS92	P09754	RPS92 TOOL

SPARES LIST

Item	Part#	Description	lb	kg
3	46971	6" BECO TOPSUB	200	91
4	38319	433 O-RING		
5	46970	GUIDE SLEEVE	32	15
6	43929	SOLID CHOKE		
7	46968	PISTON		
8	46969	CASE		
9	38309	SPLIT CATCH RING		
10	38320	364 O-RING		
11	4909	DRIVE LUG		
12	46966	DRIVE SUB	53	24
13	46965	EXHAUSTER		
14	46972	6 ⅝" API MANDREL	157	71

OPTIONAL ACCESSORY

1	AC-17712	VH393 SNAP RING
2	42653	SCREEN PLATE

SERVICE KIT

40pcs of #11, 1pc of #10, 1pc of #6, 1pc of #4
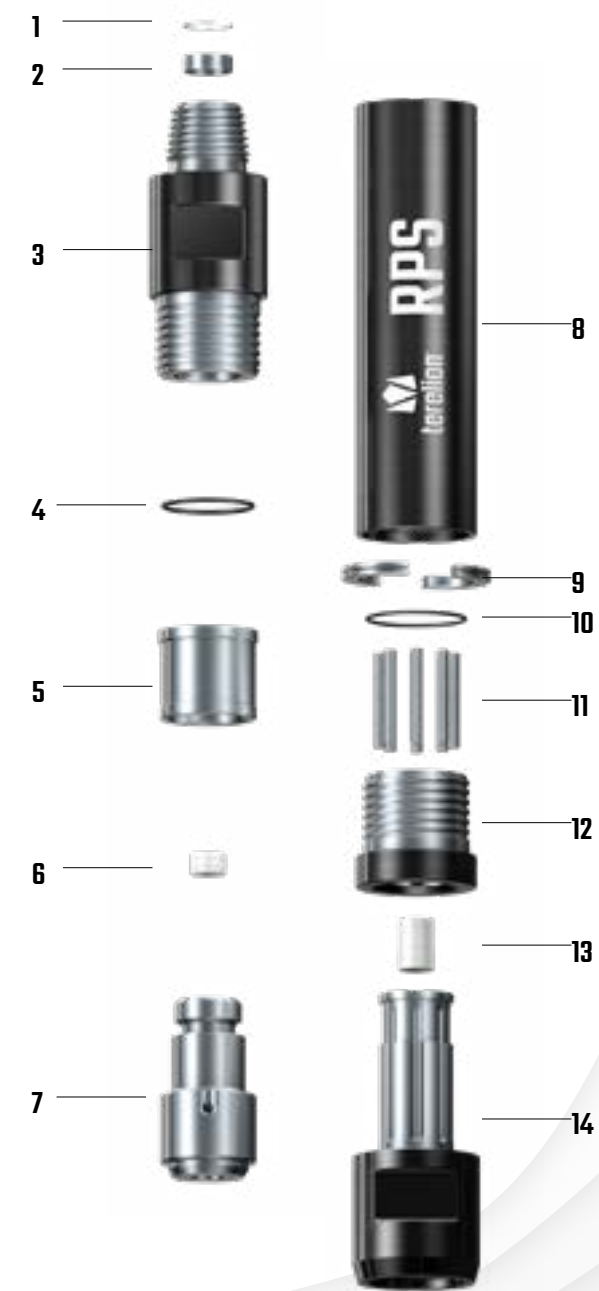
RPS106

TOOL WEIGHT		TOOL DIAMETER		TOOL LENGTH		BIT SIZE	
kg	lb	mm	inch	mm	inch	mm	inch
454	1000	273	10 ¾	1235	48 ⅝	311 - 349	12 ¼ - 13 ¾

AIR CONSUMPTION		
OPERATING RANGE	85 - 135 PSI	5.9 - 9.3 BAR
RECOMMENDED AIR	2600 CFM	74 M³/MIN

ASSEMBLY		
Type	Part#	Description
RPS92	P09719	RPS106 TOOL

SPARES LIST				
Item	Part#	Description	lb	kg
3	43815	8" BECO TOPSUB	293	133
4	38443	441 O-RING		
5	43817	GUIDE SLEEVE	40	18
6	38444	SOLID CHOKE		
7	43818	PISTON		
8	38438	CASE		
9	38445	SPLIT CATCH RING		
10	38446	370 O-RING		
11	40301	DRIVE LUG		
12	43819	DRIVE SUB	73	33
13	46533	EXHAUSTER		
14	46625	6 ⅝" API MANDREL	215	98
OPTIONAL ACCESSORY				
1	AC-17712	VH393 SNAP RING		
2	42653	SCREEN PLATE		
SERVICE KIT				
24pcs of #11, 1pc of #10, 1pc of #6, 1pc of #4				