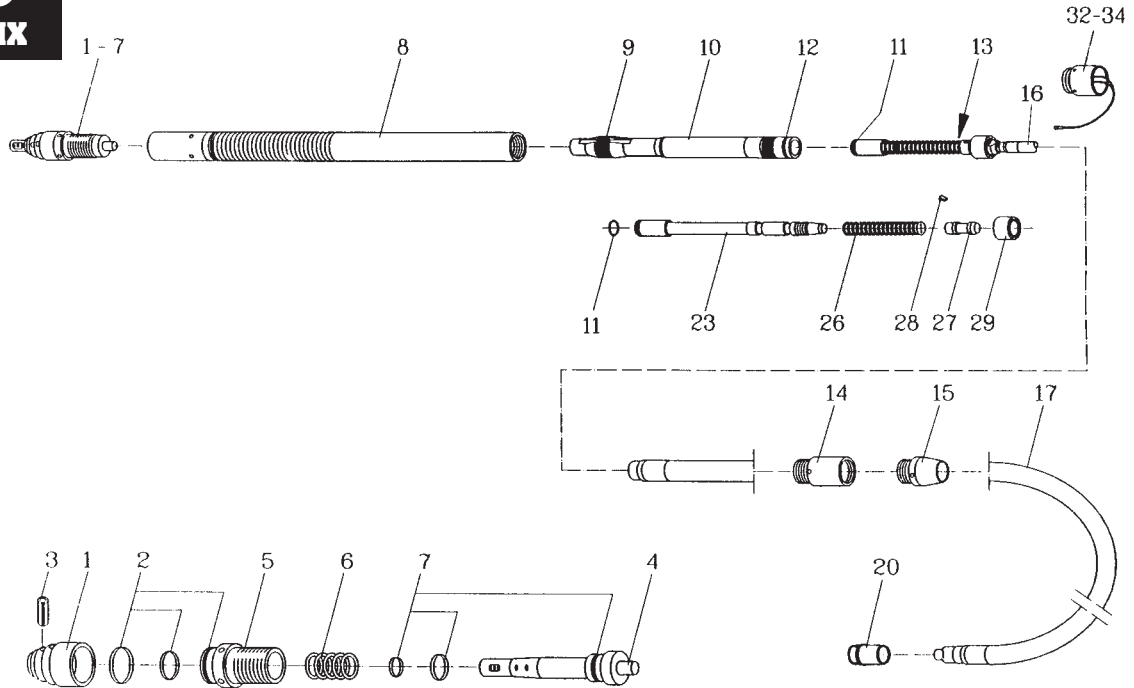


GRUNDOMAT Model P

(with push control stud, models 45-75)



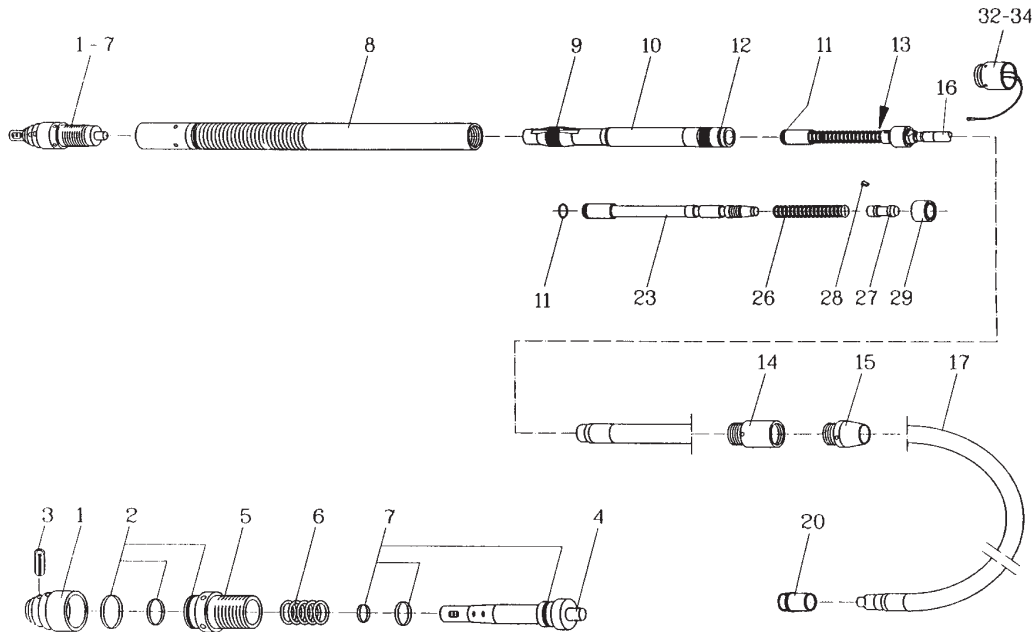
GRUNDOMAT Model			45P	55P	65P	75P
GRUNDOMAT Size			1.75"	2.00"	2.50"	3.00"
Ref.	Qty	Description	Part Number	Part Number	Part Number	Part Number
1	1	Stepped Cone	GE 045 5014	GP 055 5014	GP 065 5014	GP 075 5014
2	1	Stepped Cone Seal (set)*	YY 191648	GS 055 5030	GE 065 5030	GE 075 5030
3	1	Roll Pin Kit	GE 045 3020	GP 055 3020	GRU 065 3020	GE 075 3020
4	1	Chisel	GP 045 5062	GP 055 5062	GP 065 5062	GP 075 5062
5	1	Casing Tip	GE 045 5090	GP 055 5090	GP 065 5090	GP 075 5090
6	1	Chisel Spring	GE 045 5050	GP 055 5050	GRU 065 5050	GE 075 5050
7	1	Chisel Seal (set)*	GE 045 5080	GP 055 5080	GRU 065 5080	GE 075 5080
1-7	1	Casing Tip assembly, head stepped	GP 045 5514	GP 055 5514	GP 065 5514	GP 075 5514
8	1	Casing (Smooth)	GP 045 5122	GP 055 5122	GP 065 5122	GP 075 5122
8	1	Casing (Semi-Toothed)	GP 045 5121	GP 055 5121	GP 065 5121	GP 075 5121
9	1	Piston Slide Tapes (set)*	GE 045 5130	GS 055 5130	GP 065 5130	GP 075 5130
10	1	Piston	GE 045 5141	GS 055 5141	GP 065 5141	GP 075 5141
11	1	Control Stud Seal	YY 191605	YY 191679	YY 191608	YY 191636
12	1	Piston Seal*	YY 191607	YY 191678	GP 065 5160	YY 192128
13	1	Control Stud with connection air hose (Items 11, 16, 17, 20, 23-29)	GS 045 8004	GP 055 8004	GS 065 8004	GS 075 8004
14	1	Control Stud Housing	GS 045 6460	GS 055 6460	GZ 065 6460	GZ 075 6460
15	1	Reverse Cone	GE 045 6450	GS 055 6450	GE 065 6450	GZ 075 6450
16	1	Control Stud Adapter	YY 081716	YY 081716	YY 031708	YY 051708
17	1	Connection Air Hose, Complete	7022720	7022720	7022731	7022731
20	1	Cap	GE 045 2390	GE 045 2390	GE 090 2390	GE 090 2390
11, 23	1	Control Pipe and Liner	GS 045 8040	GS 055 8040	GS 065 8040	GS 075 8040
26	1	Spring	YY 081707	YY 300115	YY 031707	YY 051707
27	1	Lock Sleeve	GS 045 8055	GS 055 8055	GS 065 8055	GS 075 8055
28	1	Safety Segment	YY 081705	YY 301705	YY 031705	YY 051705
29	1	Elastic Block	GP 045 8025	GP 055 8025	GZ 065 8025	GZ 075 8025
32-34	1	Pipe Pulling Tail Piece (Optional)	N/A	N/A	N/A	GZ 075 0300
		Complete Seal Kit (Items # 2, 7, 9, 11, 12, seal for female coupling)	GS 045 6320	GP 055 6320	GP 065 6320	GP 075 6320

*Included in Complete Seal Kit above.

GRUNDOMAT Model P

(with push control stud, models 85-100)

2. APPENDIX



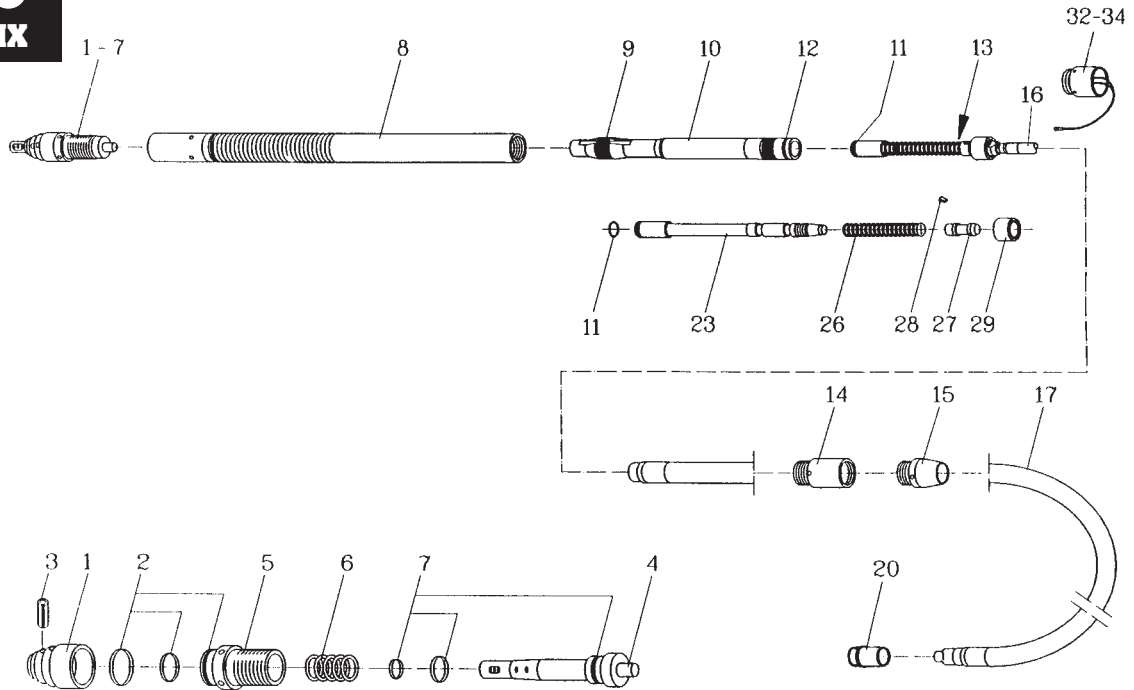
GRUNDOMAT Model			85P	95P	100P	100PK
GRUNDOMAT Size			3.33"	3.75"	4.00"	4.00"
Ref.	Qty	Description	Part Number	Part Number	Part Number	Part Number
1	1	Stepped Cone	GP 085 5014	GP 095 5014	GP 095 5018	—
2	1	Stepped Cone Seal (set)*	GZ 085 5030	GE 090 5030	GE 095 5030	—
3	1	Roll Pin Kit	GZ 085 3020	GRU 095 3020	GRU 095 3020	—
4	1	Chisel	GP 085 5062	GP 095 5062	GP 095 5062	—
5	1	Casing Tip	GP 085 5090	GP 095 5090	GP 095 5090	—
6	1	Chisel Spring	GZ 085 5050	GE 090 5050	GE 090 5050	—
7	1	Chisel Seal (set)*	GZ 085 5080	GE 090 5080	GE 090 5080	—
1-7	1	Casing Tip assembly, head stepped	GP 085 5514	GP 095 5514	GP 095 5518	—
8	1	Casing (Smooth)	GP 085 5122	GP 095 5122	GP 100 5122	YY 025292 w/head
8	1	Casing (Semi-Toothed)	GP 085 5121	GP 095 5121	GP 100 5121	YY 025284 w/head
9	1	Piston Slide Tapes (set)*	GZ 085 5130	GP 095 5130	GP 095 5130	GP 095 5130
10	1	Piston	GZ 085 5141	GP 095 5141	GP 095 5141	GKP 095 5141
11	1	Control Stud Seal	YY 191692	YY 191619	YY 191619	YY 191619
12	1	Piston Seal*	YY 191690	YY 192122	YY 192122	YY 192122
13	1	Control Stud w/connection air hose (Items 11, 16, 17, 20, 23-29)	GS 085 8004	GS 095 8004	GS 095 8004	GS 095 8000
14	1	Control Stud Housing	GZ 085 6460	GP 095 6460	GP 095 6460	GKP 100 6460
15	1	Reverse Cone	GZ 085 6450	GE 095 6450	GE 095 6450	YY 025288
16	1	Hose Nut Adapter	YY 021712	YY 021712	YY 021712	YY 021712
17	1	Connection Air Hose, Complete	07022740	07022740	07022740	07022740
20	1	Cap	GE 090 2390	GE 090 2390	GE 090 2390	GE 090 2390
11, 23	1	Control Pipe and Liner	GS 085 8040	GS 095 8040	GS 095 8040	GS 095 8040
26	1	Spring	YY 311707	YY 021707	YY 021707	YY 021707
27	1	Lock Sleeve	GS 085 8055	GS 095 8055	GS 095 8055	GS 095 8055
28	1	Safety Segment	YY 051705	YY 021705	YY 021705	YY 021705
29	1	Elastic Block	GZ 085 8025	GZ 095 8025	GZ 095 8025	GZ 095 8025
32-34	1	Pipe Pulling Tail Piece (Optional)	GZ 085 0300	GE 095 0300	GE 095 0300	—
		Complete Seal Kit (Items # 2, 7, 9, 11, 12, seal for female coupling)	GS 085 6320	GP 095 6320	GP 095 6320	—

*Included in Complete Seal Kit above.

GRUNDOMAT Model P

(with push control stud, model 110-130)

3. APPENDIX



GRUNDOMAT Model			110P	130P 1/4 Turn
GRUNDOMAT Size			4.25"	5.00"
Ref.	Qty	Description	Part Number	Part Number
1	1	Stepped Cone	GP 110 5014	GP 130 5014
2	1	Stepped Cone Seal (set)*	GE 110 5030	GE 130 5030
3	1	Roll Pin Kit	GE 110 3020	GRU 130 3020
4	1	Chisel	GP 110 5062	GP 130 5062
5	1	Casing Tip	GE 110 5090	GP 130 5090
6	1	Chisel Spring	GE 110 5050	GRU 130 5050
7	1	Chisel Seal (set)*	GE 110 5080	GRU 130 5080
1-7	1	Casing Tip assembly, head stepped	GP 110 5514	GP 130 5514
8	1	Casing (Smooth)	GP 110 5122	GP 130 5122
8	1	Casing (Semi-Toothed)	GP 110 5121	GP 130 5121
9	1	Piston Slide Tapes (set)*	GP 110 5130	GE 145 5130
10	1	Piston	GP 110 5141	GP 130 5141
11	1	Control Stud Seal	YY 192510	YY 192068
12	1	Piston Seal*	YY 192508	YY 191628
13	1	Control Stud with connection air hose (Items 11, 16, 17, 20, 23-29)	GP 110 8004	GS 130 8004
14	1	Control Stud Housing	GP 110 6460	GP 130 6460
15	1	Reverse Cone	GE 110 6450	GE 130 6450
16	1	Hose Nut Adapter	YY 091712	YY 061715
17	1	Connection Air Hose, Complete	7022740	07022751
20	1	Cap	GE 090 2390	GRU 200 6641
11, 23	1	Control Pipe and Liner	GP 110 8040	GS 130 8006
26	1	Spring	1401050004	YY 061712
27	1	Lock Sleeve	GS 110 8055	GS 130 8056
28	1	Safety Segment	YY 091705	YY 061716
29	1	Elastic Block	GZ 110 8025	GV 130 8025
32-34	1	Pipe Pulling Tail Piece (Optional)	GE 110 0300	GE 130 0300
		Complete Seal Kit (Items # 2, 7, 9, 11, 12, seal for female coupling)	GP 110 6320	GV 130 6320

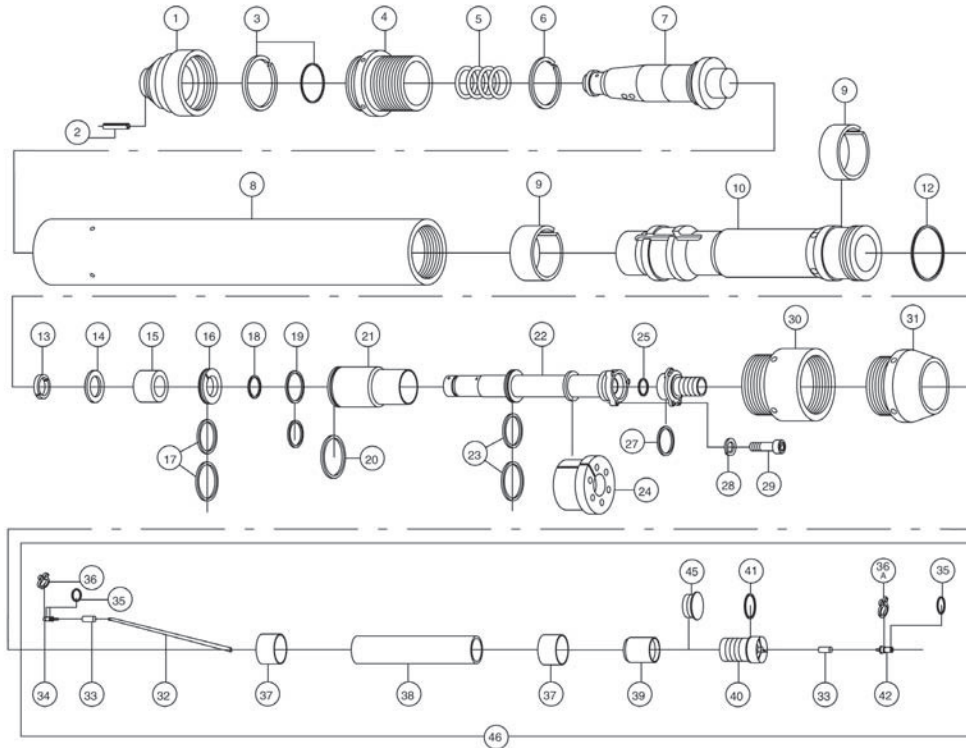
*Included in Complete Seal Kit above.

GRUNDOMAT Model P

(with air operated control stud, models 130-180)

4.

APPENDIX



GRUNDOMAT Model GRUNDOMAT Size			130P 5.00"	145P 5.75"	160P 6.25"	180P 7.00"
Ref.	Qty	Description	Part Number	Part Number	Part Number	Part Number
1	1	Stepped Cone	GP 130 5014	GP 145 5014	GP 160 5014	GP 180 5014
2	1	Roll Pin Kit	GRU 130 3020	GE 145 3020	GP 160 3020	GP 180 3020
3	1	Stepped Cone Seal (set)*	GE 130 5030	GE 145 5030	GF 160 5030	GE 180 5030
4	1	Casing Tip	GP 130 5090	GP 145 5090	GP 160 5090	GE 180 5090
5	1	Chisel Spring	GRU 130 5050	GE 145 5050	GP 160 5050	GE 180 5050
6	1	Chisel Seal (set)*	GRU 130 5080	GE 145 5080	GP 160 5080	H 220 0107
7	1	Chisel	GP 130 5062	GP 145 5062	GP 160 5062	GP 180 5062
1-7	1	Casing Tip assembly, head stepped	GP 130 5514	GP 145 5514	GP 160 5514	GP 180 5514
8	1	Casing (Smooth)	GP 130 5122	GP 145 5122	GP 160 5122	GP 180 5122
8	1	Casing (Semi-Toothed)	GP 130 5121	GP 145 5121	GP 160 5121	GP 180 5121
9	1	Piston Slide Tapes (set)*	GE 145 5130	GP 145 5130	GP 160 5130	GP 180 5130
10	1	Piston	GP 130 5141	GP 145 5141	GP 160 5141	GP 180 5141
12	1	Piston Seal*	YY 191628	YY 192114	GP 160 5160	GP 180 5160
-	1	Control Stud with connection air hose (Items 13-24, 25-29, 32-45)	GV 130 8000	GV 145 8000	GV 160 8000	GV 180 8000
13	1	Segment Ring	YY 140920	YY 140920	YY 140920	YY 150921
14	1	Support Ring for Elastic Block	YY 140919	YY 140919	YY 140919	YY 150920
15	1	Elastic Block for Control Sleeve	GV 130 8043	GV 160 8043	GV 160 8043	GV 180 8043
16	1	Stop Ring	YY 060998	YY 070917	YY 140917	YY 150918
17	1	Seal for Control Sleeve 1 (set)*	GV 130 8075	GV 145 8075	GV 160 8075	GV 180 8075
18	1	O-Ring	21252564	21252564	21252564	21253037
19	1	Seal for Control Tube (set)*	GV 130 8070	GV 130 8070	GV 160 8070	GV 180 8070
20	1	Seal for Control Sleeve (exterior)*	YY 192068	YY 192112	YY 192121	YY 192113
21	1	Control Sleeve	YY 060977	YY 070916	YY 140916	YY 150917
22	1	Control Tube	YY 060997	YY 070915	YY 140915	YY 150915
23	1	Seal for Control Sleeve 2 (set)*	GV 130 8080	GV 145 8080	GV 160 8080	GV 180 8080
24	1	Elastic Block for Air-Operated Control Stud	GV 130 8025	GV 145 8025	GV 160 8025	GV 180 8025
25	1	O-Ring	21252071	21252071	21252071	21252499
27	1	O-Ring	21252943	21252943	21252943	21253393
28	3	Lock Washer	180127012024	180127012024	180127012024	180127012027
29	3	Socket Head Cap Screw	180912512137	180912512138	180912512138	180912512178
30	1	Control Stud Housing	GP 130 6460	GP 145 6460	GP 160 6460	GP 180 6460
31	1	Reverse Cone	GE 130 6450	GE 145 6450	GF 160 6450	GE 180 6450
w/o ill.	1	Pipe Pulling Tail Piece	GE 130 0300	GE 145 0300	GF 160 0300	GE 180 0300
35	1	O-Ring	21250387	21250387	21250387	21250387
36	1	Securing Ring	180471010009	180471010009	180471010009	180471010009
36 A	1	Securing Ring	180471010012	180471010012	180471010012	180471010012
41	1	O-Ring	21252206	21252740	21252740	21252740
45	1	Dirt Plug	YY 060988	YY 150935	YY 150935	YY 150935
46	1	Connection Air Hose, Complete (Items 25-29, 32-45)	GV 130 8110	GV 160 8110	GV 160 8110	GV 180 8110
	1	Complete Seal Kit (Items # 3, 6, 9, 12, 17, 19, 20, & 23)	GV 130 6320	GV 145 6320	GV 160 6320	GV 180 6320

*Included in Complete Seal Kit above.