

ILLUSTRATED PARTS MANUAL

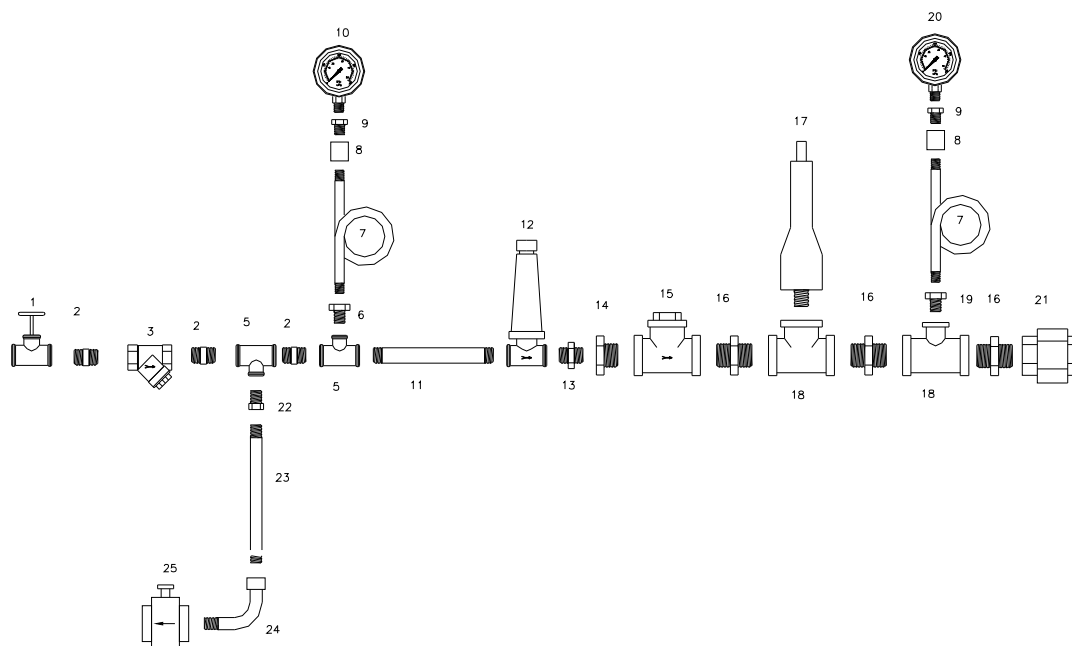
51-SP EXTRUDER

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1. Extruder Layout

2. Steam Valve Kit

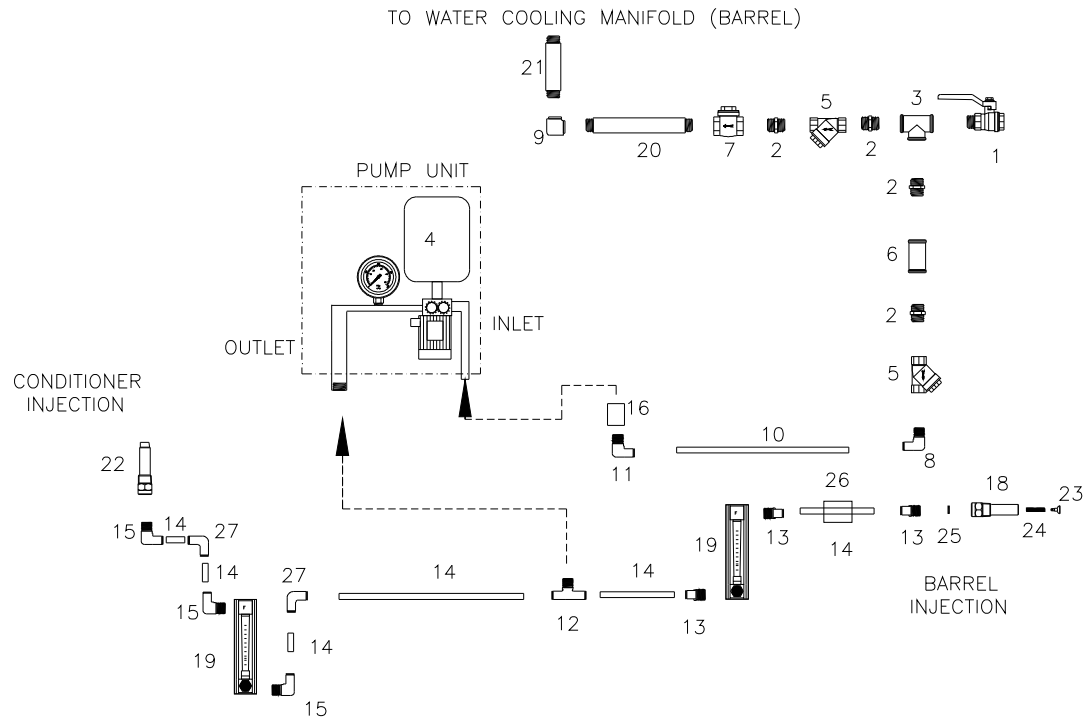


Item	Part No.	Description	No/Assy
1	S005-SV001	Valve, isolation, 15mm	1
2	S005-SV020	Nipple, barrel, 15mm	3
3	S005-SV004	Strainer, 15mm	1
5	S005-SV016	Tee, steam, 15mm	2
6	S005-SV021	Bush, reducing, 15-10mm	1
7	S100-SV010	Siphon, pigtail	2
8	S100-SV013	Socket, 10mm	2
9	S100-SV014	Bush, reducing, 10mm-1/4"	2
10	S100-SV009	Gauge, high pressure steam	1
11	S050-SV022	Nipple, barrel, 2mm x 150	1
12	S005-SV005	Valve, pressure reducing	1
13	S005-SV020	Nipple, barrel, 15mm	1
14	S050-SV015	Bush, reducing, 20-15mm	1
15	S005-SV006	Check valve, 20mm	1
16	S050-SV024	Nipple, hex, 20mm	3
17	S005-SV007	Valve, steam safety, 15mm	1
18	S050-SV016	Tee, steam, 20mm	2
19	S050-SV021	Bush, reducing, 20-10mm	1
20	S100-SV008	Gauge, steam, low pressure	1

Refer Dwg. **Steam Conditioner Valve Kit**

Item	Part No.	Description	No/Assy
21	S050-SV023	Union, Mac, 20mm	1
22		Not Required	
23	S100-SV017	Nipple, steam pipe, 15mm x 150	1
24	S100-SV018	Bend, steam pipe, m & f	1
25	S100-SV003	Steam trap, float, 15mm	1
26	E005-SV015	Nipple, reducing, 20-15mm (alt. to item 19)	1

3. Water Injection Assembly

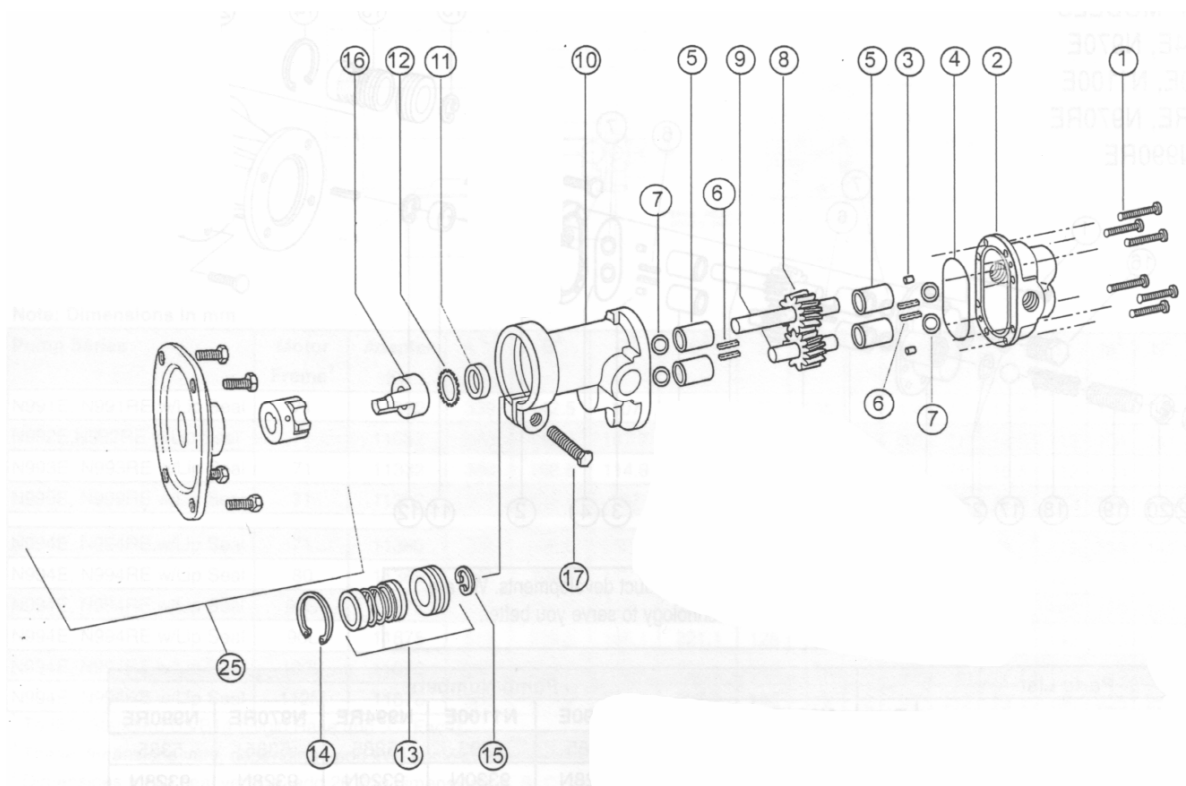


Item	Part No.	Description	No/assy
1	E100-WI013	Valve, 1/2" control	1
2	E100-WI017	Nipple, 1/2" hex	4
3	E100-WI018	Tee, 1/2" brass	1
4	E005-WISA01	Kit, Water pump	1
5	E100-WI012	Valve, filter, 1/2"	2
6	E005-WI056	Valve, non-return, 1/2"	1
7	E100-WI016	Valve, non-return, 1/2"	1
8	E100-WI168	Elbow, swivel, 1/2"-8mm	1
9	E100-WI039	Elbow, 1/2" female	1

Refer Dwg. **Water Injection Assembly**

Item	Part No.	Description	No/Assy
10	E100-WI155	Tube, Nylon 8mm dia.	1m
11	E100-WI153	Elbow, swivel, 1/4" bsp-8mm	1
12	E100-WI169	Tee, 1/4" bsp-8mm	1
13	E100-WI167	Adaptor, 6mm-1/4" straight	3
14	E005-WI031	Tube, Nylon, 6mm dia.	5m
15	E100-WI150	Elbow, swivel, 1/4" bsp-6mm	3
16	E100-WI003	Socket, 1/4" hex	1
17			
18	E005-WI025	Nozzle, water injection	1
19	E005-WI002	Flowmeter	2
20	S100-SV058	Pipe, 150mm x 1/2" bsp	1
21	S100-SV058	Pipe, 100mm x 1/2" bsp	1
22	S005-SC100	Nozzle, conditioner	1
23	E005-WI028	Valve seat, Water Injection Nozzle	1
24	E005-WI026	Spring, W.I. Nozzle	1
25	E005-WI027	Pin, W.I. Nozzle	1
26	E100-EL099	Gland	1
27	E100-WI170	Connector, elbow, 6mm	2

4. Water Pump

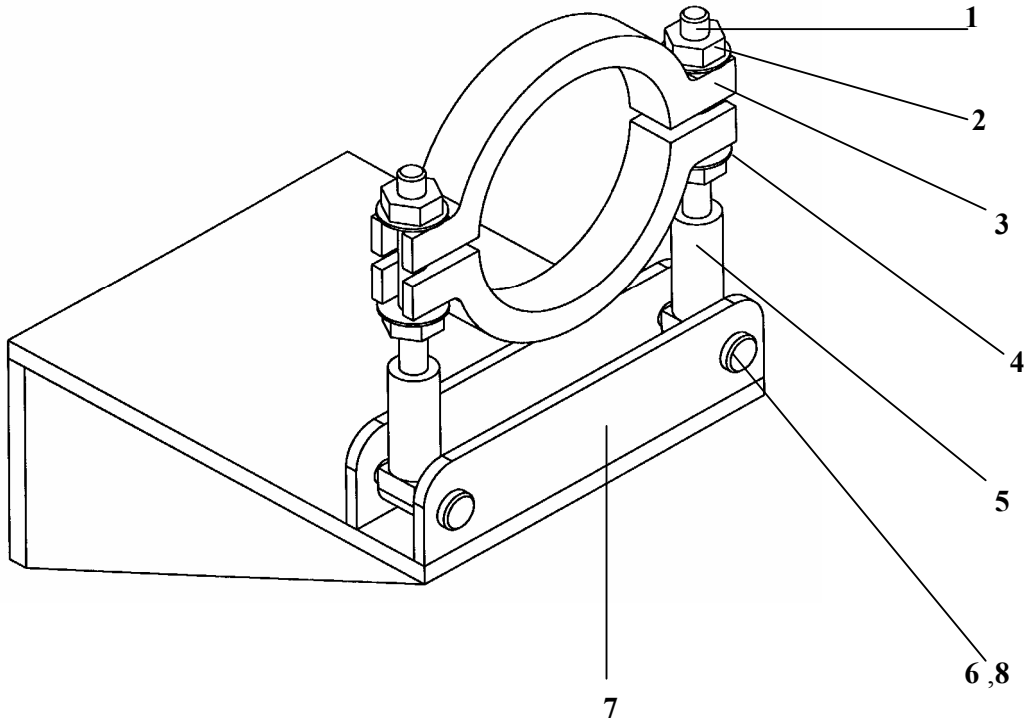


Item	Part No.	Description	No/Assy
1	5013	Screw	6
2	9300N	Assy. body	1
3	8885	Pin, dowel	2
4	9797-033	`O' Ring, Viton	1
5	9337-01	Bearing	4
6		Pin, bearing	
7	9334	Washer, wave	4
8	32980	Assy, drive gear lip seal	1
9	32979	Assy, Idle gear	1
10	9303N	Assy, cover	1
11	5007	Seal, lip, Buna-N	1
11	7580	Seal, lip, Viton	1
12	7626	Lock ring	1

Refer Dwg. **Water Pump**

Item	Part No.	Description	No/Assy
13	32584	Seal, mech, Buna-N (S16)	1
13	32585	Seal, mech, Viton (S17)	1
14	7639	Ring, retaining, internal (S16, 17)	1
15	5373	Ring, retaining, external (S16, 17)	1
16	5604	Coupling half	1
17	5595	Screw	1
25		Adaptor kit	1

5. Barrel Support



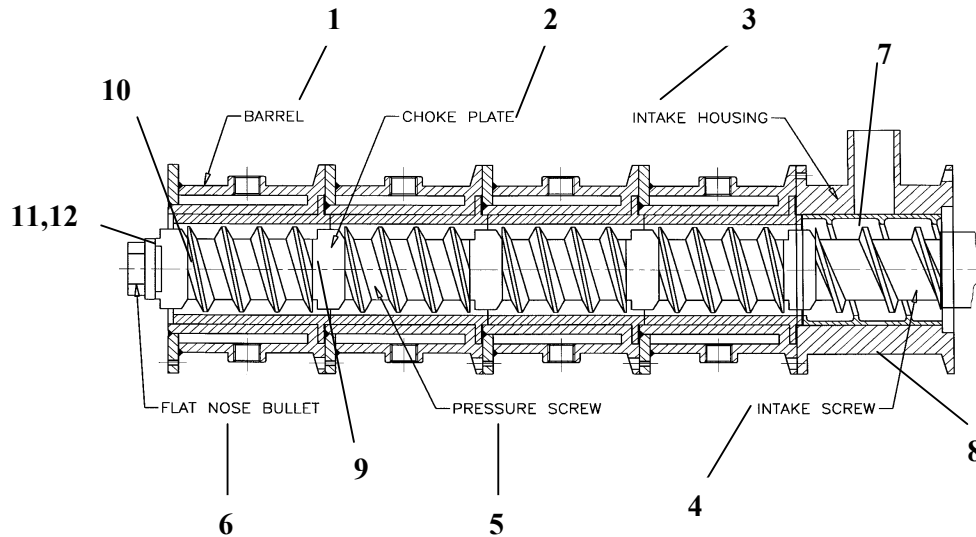
Item	Part No	Description	No. reqd. per assembly
1	E005-BA040	Barrel Support Screw	2
2	Common	Adjusting Nuts, M10 S/S	4
3	E005-BA034	Clamp	2/assy (Ref)
4	Common	Washer, M10, flat, S/S	4
5	E005-BA040	Barrel Support Pin	2
6	E005-BA040	Pin	2
7	E005-BA041	Support Bracket*	1
8	Common	'E' Clip, S/S, 9-13mm	2
9			

Notes:

*This bracket for four barrel assembly, use E005-BA042 for three barrel version.

Items 1,5 & 6 form E005-BA041 Barrel Support Pin Assembly.

6. Barrel & Screw Assembly

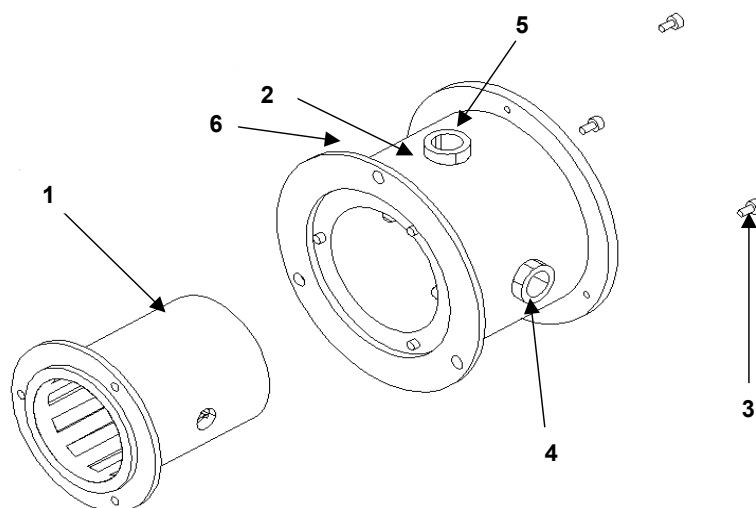


Item	Part No.	Description	No./assy
1	E005-BA031	Barrel, outer housing*	As reqd.
2	E005-BA050,51,52,53	Choke plate	As reqd.
3	E005-BA028	Intake Housing, R/H	1
4	E005-BA056	Intake Screw	1
5	E005-BA057	Pressure Screw*	As reqd.
6	Ref.	For Bullets see Barrel Components II	1
7	E005-BA027	Liner, intake	1
8	E005-CU021	Dowel, liner locating	1
9	E005-BA065	Key, std.	As reqd.
10	E005-BA066	Key, extension	As reqd.
11	E005-BA055	Washer, retainer	As reqd.
12	E005-BA081	Main shaft extension spacer ring**	1

*For Barrel Assembly parts listing see: **Barrel section**

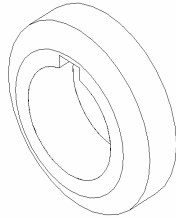
** Spacer required for one and two barrel extension

7. Barrel Section

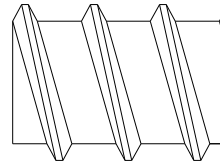


Item	Part No.	Description	No./assy
1	E005-BA031	Liner	1
2	E005-BA030	Barrel, Outer Housing	1
3	E005-BA045	Outer Housing locating dowels	3
4	E005-BA039	Dowel, liner locating	1
5	E100-WI020	Elbow, barrel heating and cooling	2
6	E005-BA070	Temp probe	1

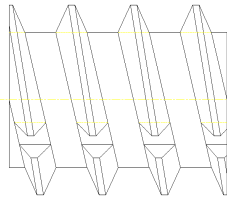
8. Barrel Components I



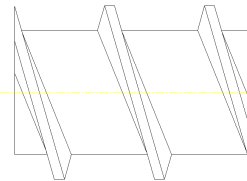
1



2



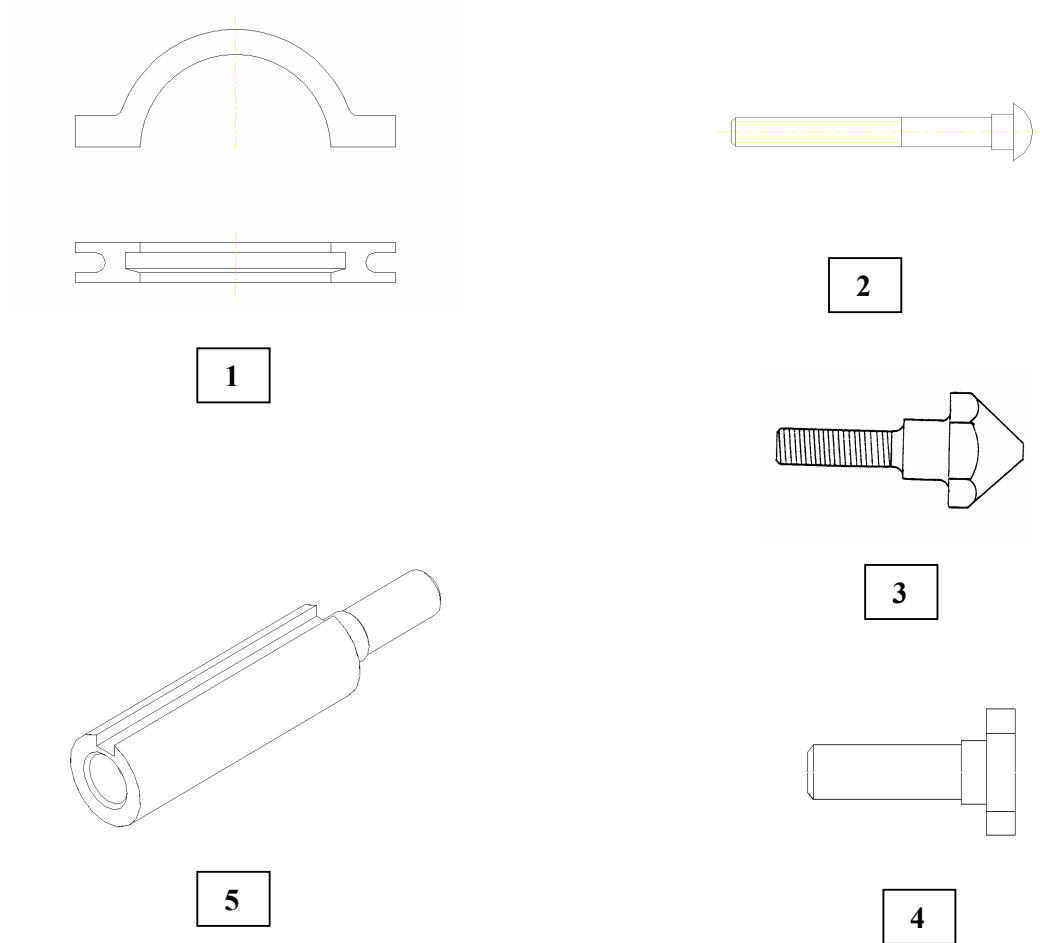
3



4

Item	Part No.	Description	No./assy
1	E005-BA050	Choke Plate, 40mm	As reqd.
1	E005-BA051	Choke Plate, 41mm	As reqd.
1	E005-BA052	Choke Plate, 42mm	As reqd.
1	E005-BA053	Choke Plate, 43mm	As reqd.
2	E005-BA057	Screw, Pressure, single flight	As reqd.
3	E005-BA058	Screw, Single cut, single flight, 3x6mm	As reqd.
3	E005-BA059	Screw, Single cut, single flight, 3x10mm	As reqd.
3	E005-BA060	Screw, Single cut, single flight, 2x6mm	As reqd.
3	E005-BA061	Screw, Single cut, single flight, 2x10mm	As reqd.
4	E005-BA056	Intake Screw	1

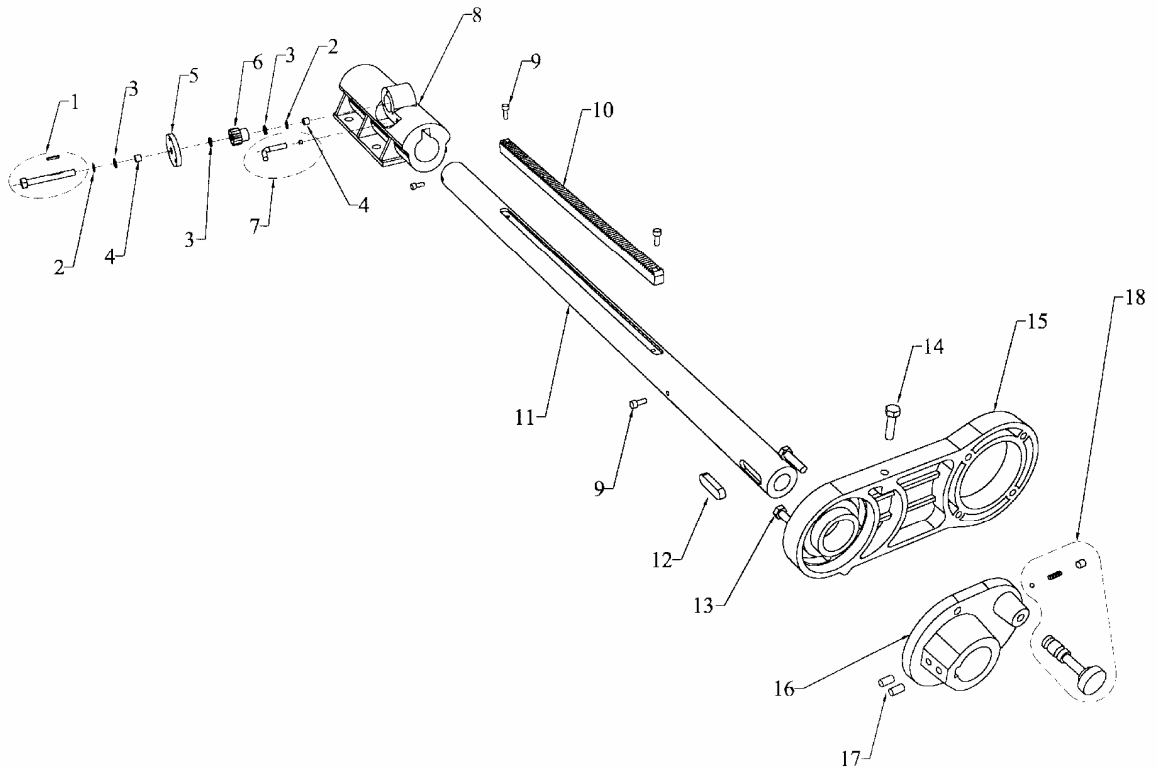
9. Barrel Components II



Item	Part No.	Description	No./assy
1	E005-BA034	Barrel Clamp	A.R.
2	E005-BA035	Clamp Bolt	A.R.
3	E005-BA037	Conical Nose Bullet	1
4	E005-BA036	Flat Nose Bullet	1
5	E005-BA025	Mainshaft Extension, 1 Barrel	*
5	E005-BA026	Mainshaft Extension, 2 Barrels	*
5	E005-BA037	Mainshaft Extension, 3 Barrels	*

* Included in spares per Customer Requirements.

10.Cutter Support

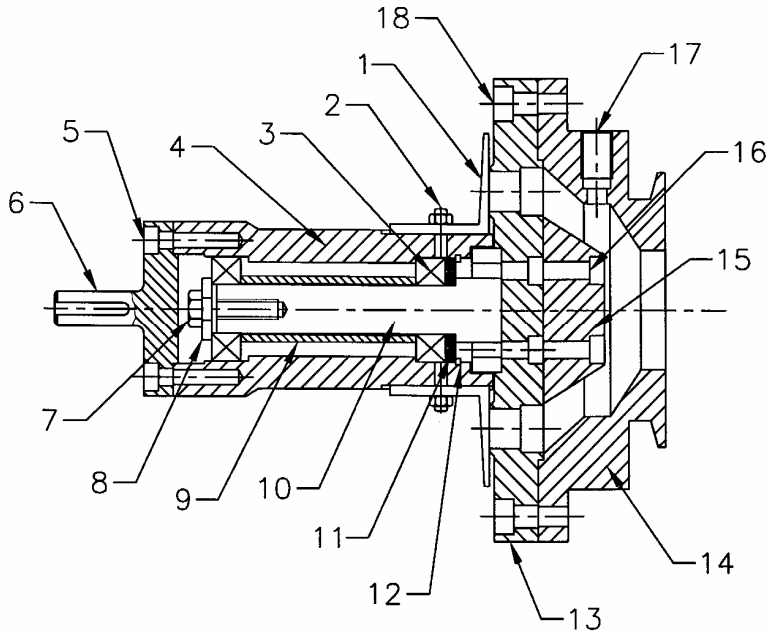


Item	Part No.	Description	No./assy
1	E005-OC052	Shaft, crank and key.	1 ea
2	E100-OC061	Circlip	2
3	E100-OC058	Cover, Thrust washer	3
	Common	Bolt, M6x20 zp	3
	Common	Washer, spring, M6 zp	3
4	E100-OC059	Bushing, shaft	2
5	E100-OC056	Plate, Retainer	1
6	E100-OC053	Gear, spur	1
7	E005-OC053	Screw & plug, locking	1 ea
8	E100-OC051	Support, cutter slide shaft – ver. 2	1
	Common	Nut, M16 S/S	4
	Common	Nipple, grease	1
9	E100-OC064	Screw, M8 x 16, S/S	4
10	E005-OC051	Rack, sliding arm	1
11	E005-OC050	Shaft, cutter slide	1
12	E100-OC028	Key, 18x11x42	1

Refer Dwg: **Cutter Support**

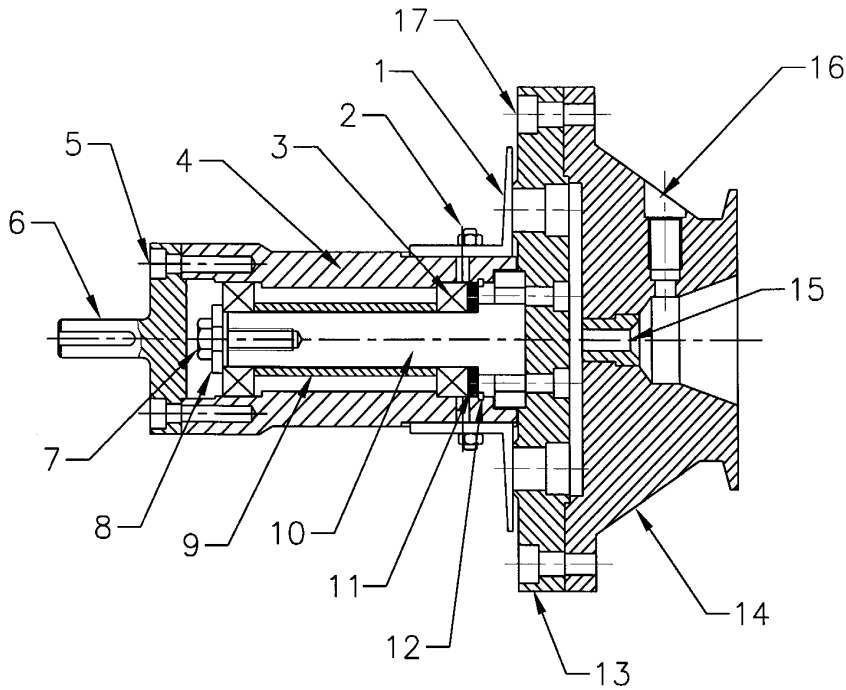
Item	Part No.	Description	No./assy
13	E100-OC026	Bolt, end flange	2
14	E100-CU046	Screw, M12 x 65 shcs	1
15	E005-OC009	Bracket, cutter support	1
	E005- OC010	Flange, motor mount	1
	E005-OC008	Retainer, motor mount flange	1
	Common	Bolt M8 x 20 zp	8
	Common	Washer, spring M8 zp	8
	Common	Grub screw, M12	3
16	E100-OC019	Flange, end	1
17	E100-OC027	Screw, grub, end flange retaining	2
18	E100-OC022	Kit, lock pin.	1 ea
19			
20			

11.Cutter Assembly – Single Die



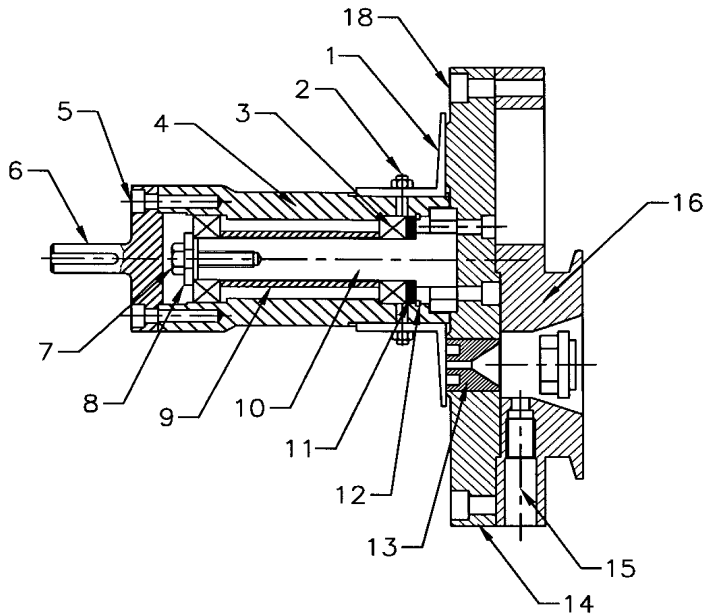
Item	Part No.	Description	No./assy
1	E100-CU200	Knife Blade	8
2	E100-CU205	Knife attachment kit; Consists of 1ea. M5 x 20 sh set screw, nyloc nut and washer.	8
3	E005-CU010	Bearing	2
4	E005-CU014	Cutter Cage	1
5	E005-CU023	Cap Screw, M6 x 15 S/S	4
6	E005-CU012	Cutter Drive Stub	1
7	Common	Bolt, M8 x 25 S/S	1
8	E005-CU013	Retainer Washer	1
9	E005-CU017	Bearing Spacer Sleeve	1
10	E005-CU011	Cutter Shaft	1
11	E005-CU009	Labyrinth Seal	1
12	E005-CU008	Circlip, internal, 42mm	1
13	E005-CU100	Die Plate Blank	1
14	E005-CU001	Cutter head	1
15	E005-CU016	Die Plate Cone	1
16	E005-CU019	Cap Screw, M6 x 45 S/S	3
17	Ref	Pressure Sensor gate.	
18	E005-CU020	Cap Screw, M8 x 25 S/S	8

12.Cutter Assembly – Double Die



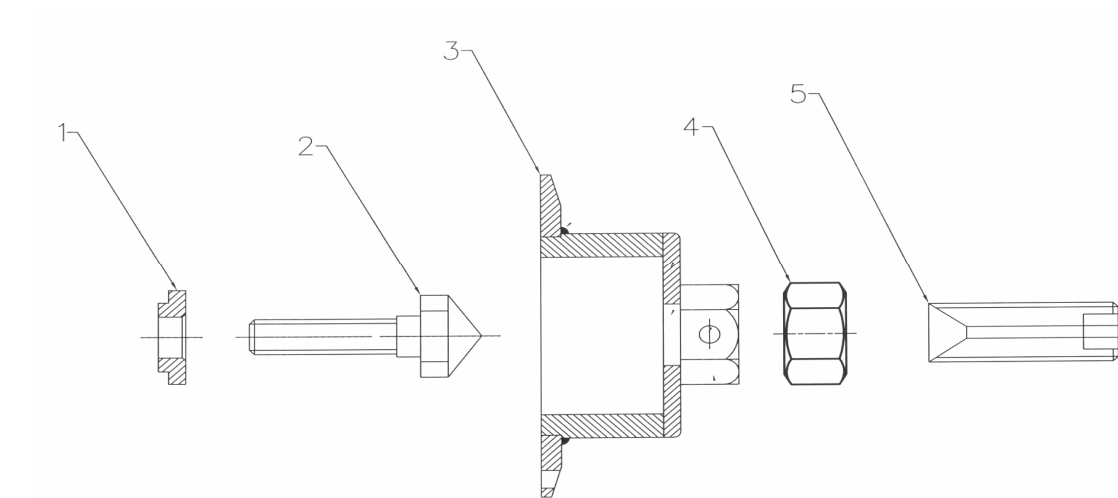
Item	Part No.	Description	No./ assy
1 to12		See cutter assembly – single die	
13	E005-CU100	Die Plate Blank	1
14	E005-CU002	Cutter Head, Double Die Plate	1
15		Double Die Insert Port	1
16	Ref.	Pressure Sensor Gate	
17	E005-CU020	Cap Screw M8 x 25 S/S.	8

13.Cutter Assembly - Offset



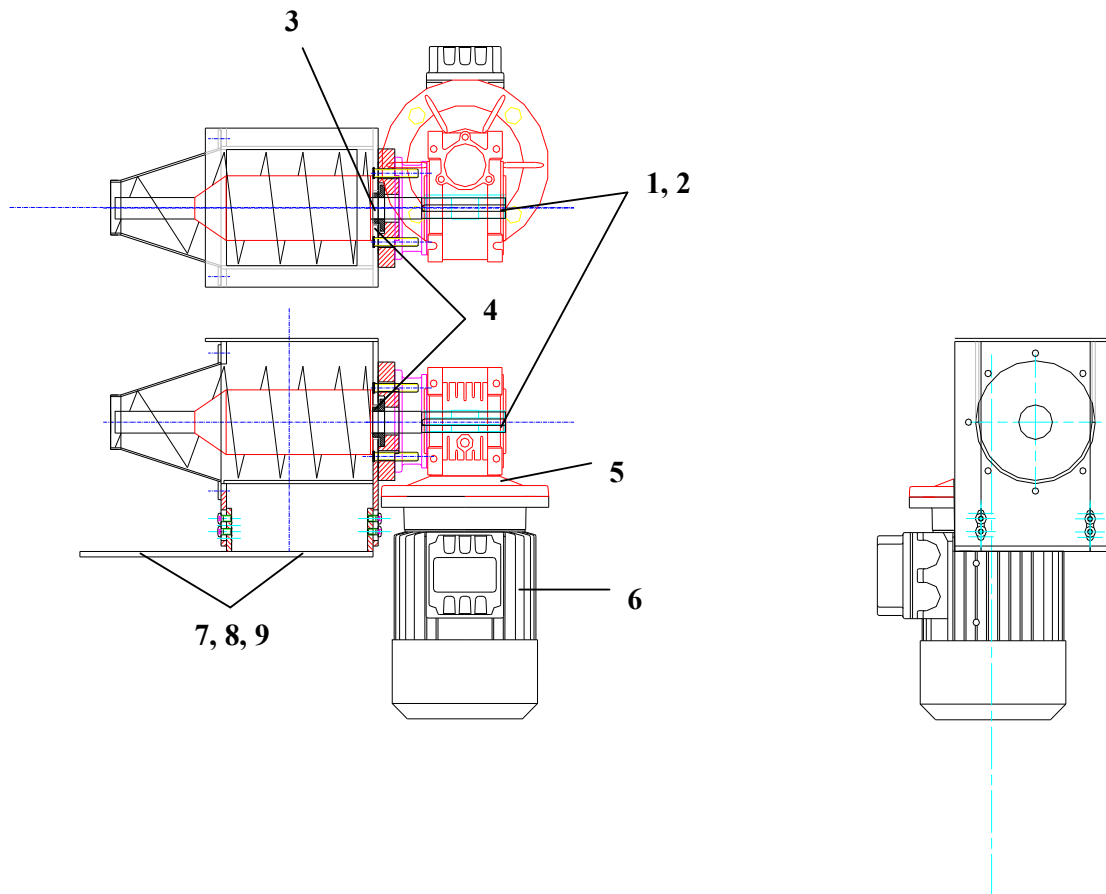
Item	Part No.	Description	No./assy
1 to 12		See cutter assembly – single die	
13	E005-CU087	Nozzle, 3.8mm die, Exit.	1
14	E005-CU089	Nozzle Cutter Plate	1
15	Ref.	Pressure Sensor Gate	
16	E005-CU088	Head, Nozzle Cutter	1
18	E005-CU020	Cap Screw, M8 x 25, S/S	10

14.Soya Head Assembly



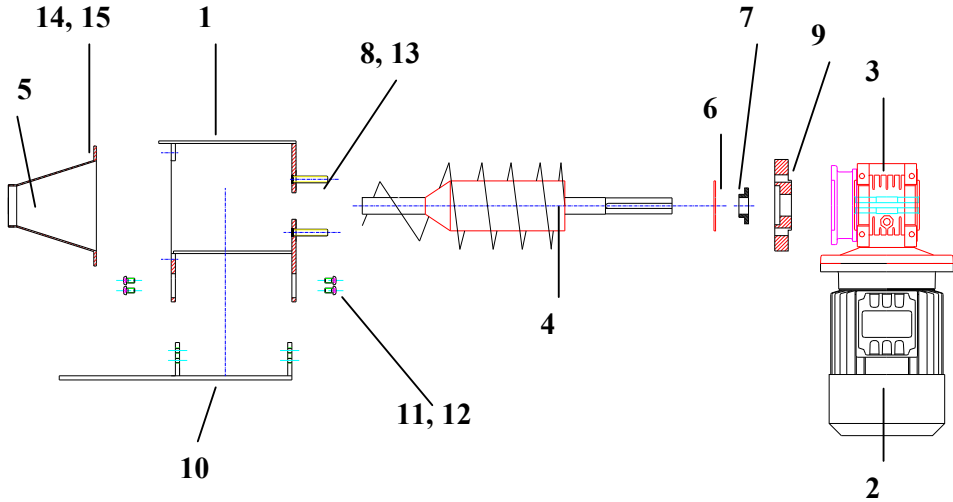
Item	Part No.	Description	No/assy
1	E005-BA055	Washer, retaining	1
2	E005-BA037	Nose Bullet, conical	1
3	E005-BA033	End Section, barrel	1
4	Common	Nut, Locking, M20	1
5	E005-BA038	Nozzle	1

15. Force Feeder Assembly



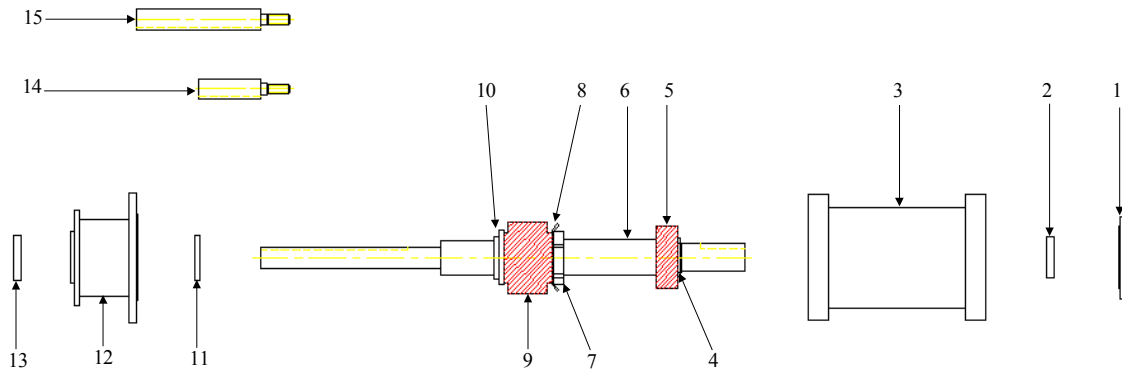
Item	Part No.	Description	No/Assy
1	E005-CU013	Washer, retainer.	1
2	Common	Bolt, M8 x 20 shcs S/S	1
3	E005-FF018	Washer, thrust. (inside hopper)	1
4	E005-VF012	Seal, teflon	1
5	E005-VF003	Gearbox, Force Feeder	1
6	E005-VF002	Motor, Force Feeder	1
	Common	Bolt, M12 x 30 zp	4
	Common	Washer, spring, M12 zp	4
7	E005-FF019	Washer, clamping	2
8	Common	Bolt, M10 x 30 S/S	2
9	Common	Washer, spring M10	2

16. Force Feeder Components



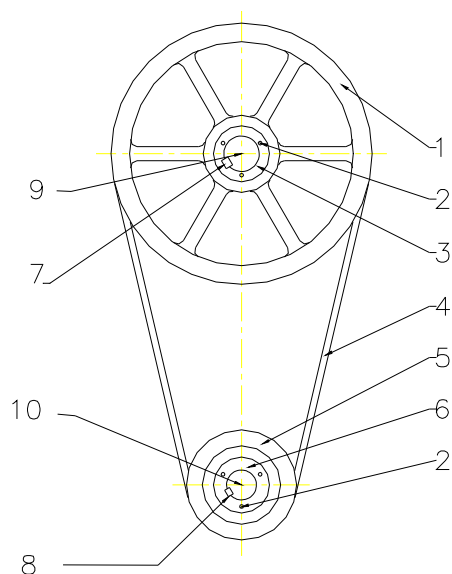
Item	Part No.	Description	No/Assy
1	E005-FF001	Assembly, Force Feeder Hopper	1
2	E005-VF002	Motor, Force Feeder Drive .375 kW	1
3	E005-VF003	Gearbox, Force Feeder	1
4	E005-FF015	Auger, Force Feeder V.3	1
5	E005-FF001	Cone assy, Hopper,	1
6	E005-FF018	Washer, thrust	1
7	E005-VF012	Seal, Teflon	1
8	Common	Nut, S/S 12mm	4
9	E005-FF016	Housing, auger seal	1
10	E005-FF001	Hopper, lower mount	1
11	Common	Screw, M6 x 12 shcs	8
12	Common	Washer, spring, M6 S/S	8
13	Common	Washer, spring, 12mm	4
14	Common	Screw, M6 x 8 shcs	8
15	Common	Washer, flat, M6 S/S	8

17.Main Shaft Assembly



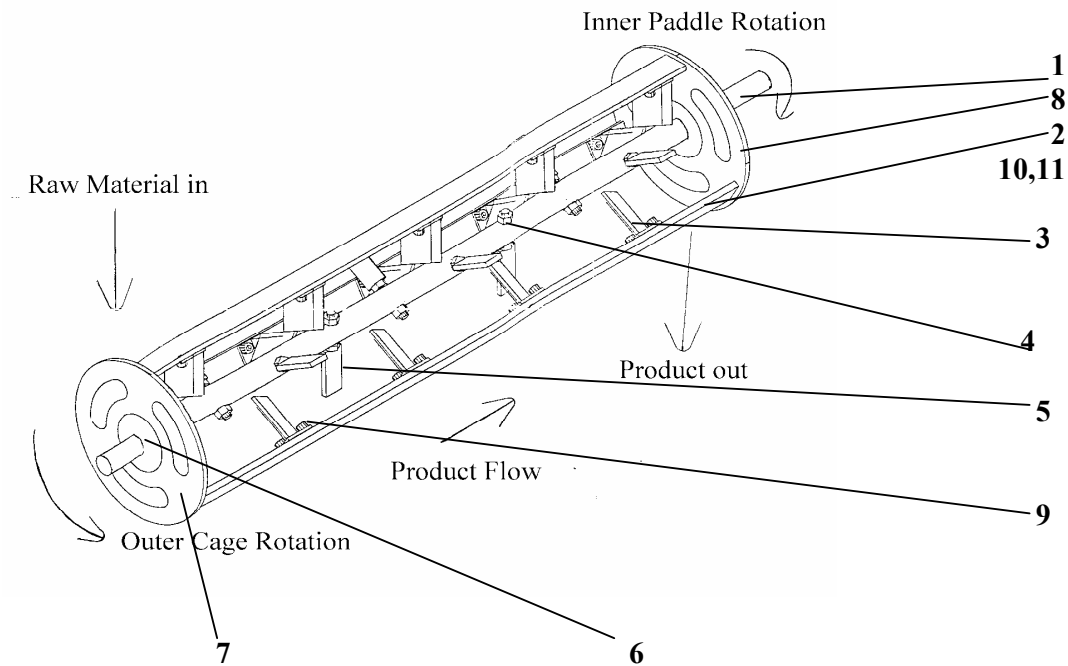
Item	Part No.	Description	No/Assy
1	E005-BA003	End plate, Rear	1
2	E005-BA017	Seal, rear, 32mm	1
3	E005-BA001	Housing, bearing	1
4	E005-BA012	Circlip, rear bearing	1
5	E005-BA014	Bearing, rear	1
6	E005-BA023	Main Shaft	1
7	E050-BA016	Lock Nut, rear bearing	1
8	E050-BA015	Washer, lock, rear bearing	1
9	E050-BA014	Bearing Assembly, rear	1
10	E050-BA013	Ring, rear bearing	1
11	E005-BA009	Seal, front, 40mm	1
12	E005-BA002	End plate, front	1
13	E005-BA006	Seal, outer	1
14	E005-BA025	Extension, Main shaft, one chamber	1
15	E005-BA026	Extension, Main Shaft, two chambers	1

18. Drive Assembly



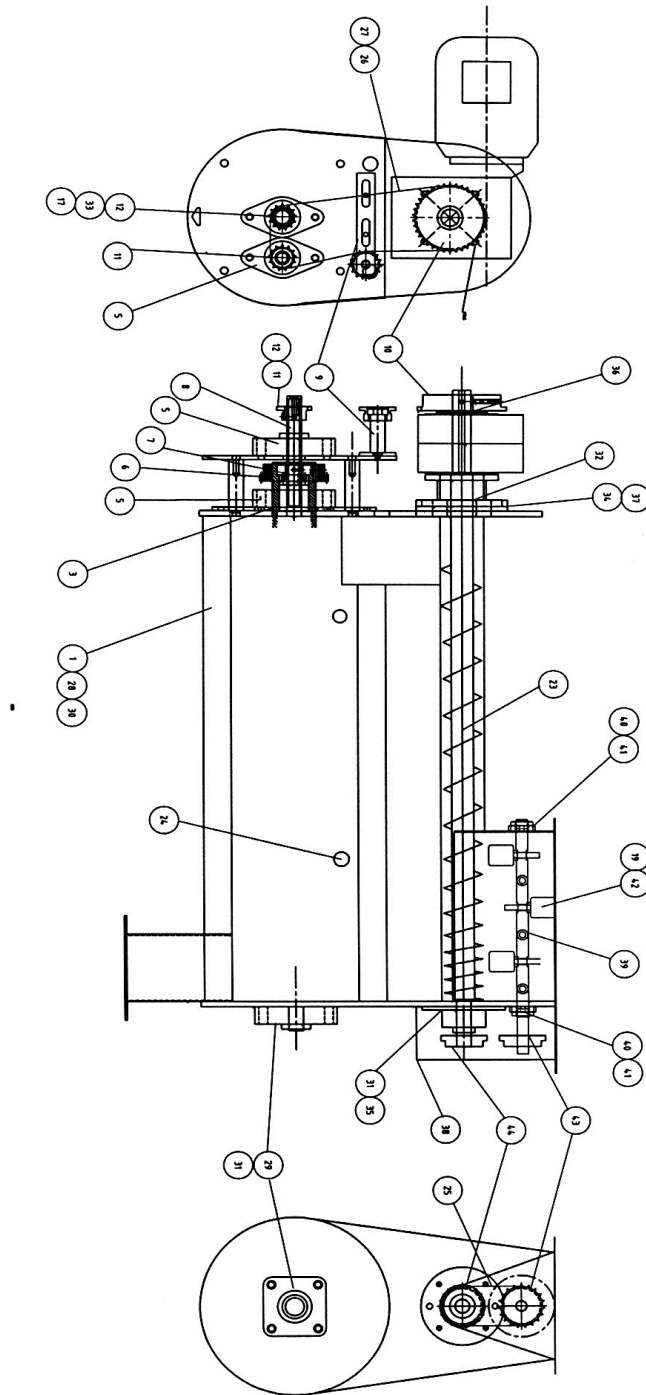
Item	Part No.	Description	No./assy
1	E005-DR036	Pulley, Mainshaft	1
2	Common	Bolts, pulley Bushing (with bush kit)	3
3	E005-DR035	Bush, Mainshaft	1
4	E005-DR025	Belt, Vee (1352)	2
5	E005-DR035	Pulley, Main Drive Motor	1
6	E005-DR034	Bush, Main Motor	1
7	E005-DR011	Key, Mainshaft	1
8	Common	Key, Main Motor (supplied with motor)	1
9	E005-BA023	Mainshaft (Ref)	1
10	E005-DR002	Shaft, Motor (Ref)	1

19. Conditioner Agitator

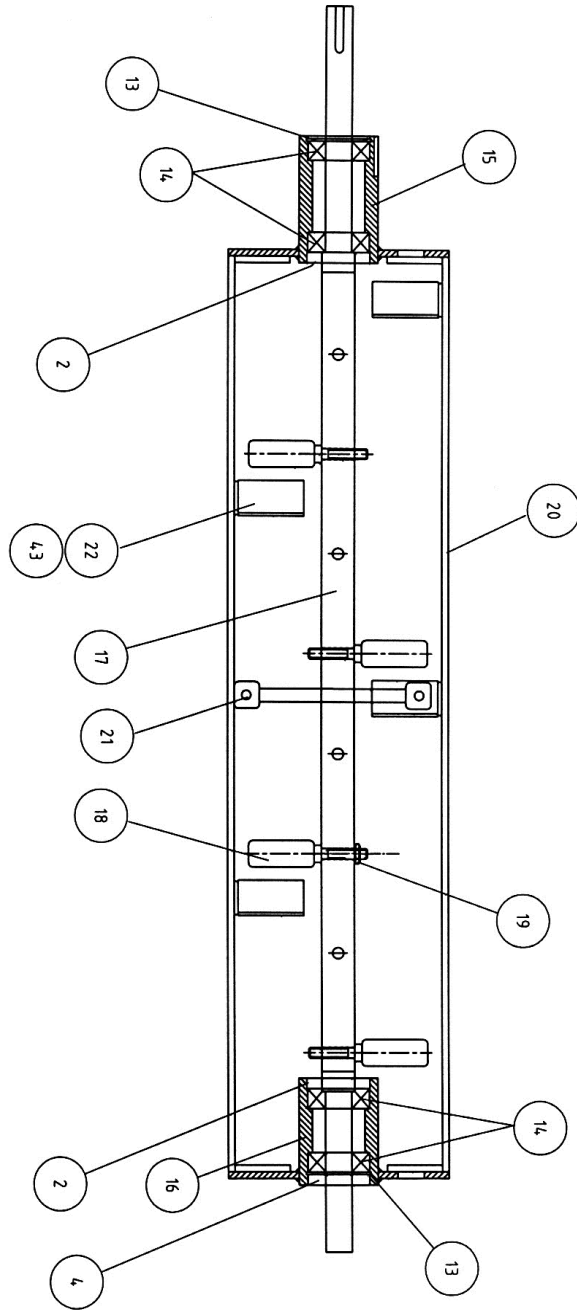


Item	Part No	Description	No./assy.
1	S005-SC052	Conditioner main shaft.	1
2	S005-SC055	Outer Cage Bar	3
3	S005-SC057	Outer Paddle	12
4	S005-SC054	M8 Glenloch nut	8
5	S005-SC053	Inner Paddle	8
6	S005-SC032	Seal, inlet, Bearing Housing	1
7	S005-SC050	Assembly, Bearing Housing, inlet	1
8	S005-SC051	Assembly, Bearing Housing, outlet	1
9	Common	M6 x 12 S/S Socket head set screw	26
10	Common	M6 x 12 S/S Socket head set screw	6
11	Common	M6 S/S Spring washer	38
12	S005-SC049	Bearing, Outer Cage	4
13	S005-SC030	Seal, bearing housing, inlet/outlet	2
14	S005-SC048	Circlip, internal, 47dia.	2
15	S005-SC056	Outer Cage Stiffener	3
16	Common	Outer Cage Stiffener attach. M6 x 12 S/S shcs	6

20. Conditioner Assembly



21. Agitator Assembly



Refer Dwg: **Conditioner Agitator (p. 1)**

Conditioner Assembly (p.2)

Agitator Assembly (p.3)

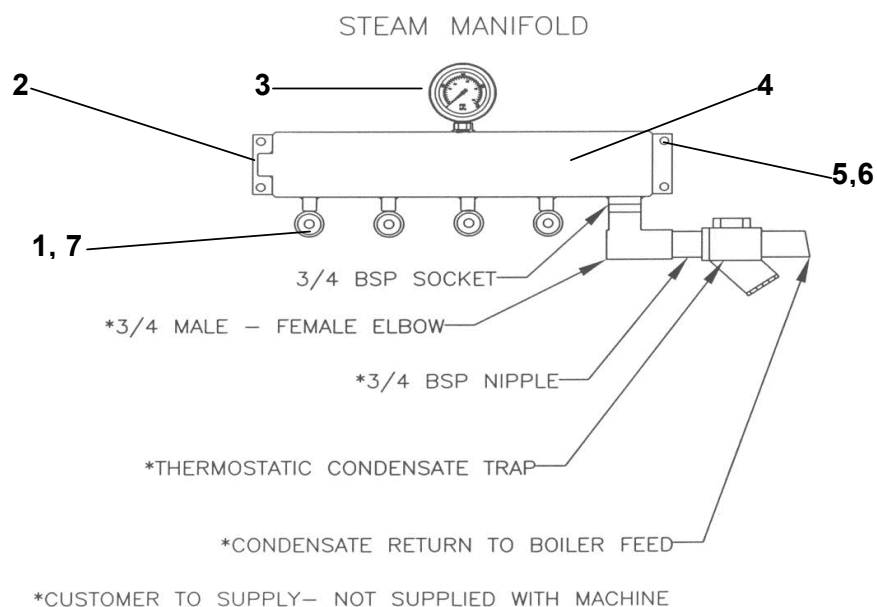
Item	Part No.	Description	No./Assy
1	S005-SC001 (p.2)	Body, Conditioner.	1
2	S005-SC030 (p.3)	Seal, Bearing Housing (Item 13, pg. 1)	2
3	S005-SC031	Seal, Main shaft Inlet	1
4	S005-SC032 (p.3)	Seal, Outlet, Bearing housing (Item 8, pg. 1)	1
5	S005-SC035	Bearing, oval	2
6	S005-SC036	Gear, Outer Cage	1
7	S005-SC037	Pinion, Outer Cage	1
8	S005-SC038	Shaft, Gear	1
9	S005-SC040	Tensioner assy, Chain (See items 47 to 50)	1
10	S005-SC041	Sprocket, Auger	1
11	S005-SC042	Sprocket, Main shaft	1
12	S005-SC043	Sprocket, Gear shaft	1
13	S005-SC048 (p.3)	Circlip, internal (Item 14, pg. 1)	2
14	S005-SC049 (p.3)	Bearing, Outer cage (Item 12, pg. 1)	4
15	S005-SC050 (p.3)	Bearing Housing, Inlet (Item 7, pg. 1)	1
16	S005-SC051 (p.3)	Bearing housing, Outlet (Item 8, pg. 1)	1
17	S005-SC052 (p.3)	Main Shaft, Conditioner (Item 1, pg. 1)	1
18	S005-SC053 (p.3)	Paddle, Inner (Item 5, pg. 1)	8
19	S005-SC054 (p.3)	Nut, self locking (Item 4, pg. 1)	14
20	S005-SC055 (p.3)	Bar, Outer Cage (Item 2, pg. 1)	3
21	S005-SC056 (p.3)	Stiffener, Outer Cage (Item 15, pg. 1)	3
22	S005-SC057 (p.3)	Paddle, Outer (Item 3, pg. 1)	12
23	S005-SC070	Auger, Inlet	1
24	S005-SC075	Plug, Slurry Inlet S/S	1
25	S005-SC115	Button Head Cap Screw, M6 x 10 S/S	As reqd.
26	S050-SC025	Chain, drive 3/8" Simplex	4 ft.
27	S050-SC026	Link, Drive chain connecting	2*
28	S100-SC023	Insulation, Main body, 19mm	1m
29	S100-SC026	Bearing assy, Self Aligning	1
30	S100-SC028	Seal, Main body Door	2m
31	S150-SC214	Seal, Teflon, Agitator Shaft (see also 45, 46)	1
32	Ref.	Support casting, Gearbox	1
33	S005-SC073	Bearing assy, Self Aligning	3
34	S005-SC202	Housing, Seal, Infeed Auger	1
35	E050-VF009	Seal, Agitator	1
36	E050-VF019	Circlip, external	1
37	S050-SC203	Seal, Teflon	1

Refer Dwg: **Conditioner Agitator (p. 1)**
Conditioner Assembly (p.2)
Agitator Assembly (p.3)

Item	Part No.	Description	No./assy
38	S005-SC084	Guard, Agitator Gear	1
39	S005-SC125	Shaft, Anti-Bridging	1
40	S100-SC120	Bearing (Gubal plastic)	2
41	S100-SC122	Seal, Felt washer	2
42	S100-SC118	Paddle, Anti-Bridging	6
43	S005-SC060	Sprocket, 15mm bore	1
44	S005-SC061	Sprocket, 20mm bore	1
45	S050-SC213	Housing, seal	1
46	S050-SC225	Spacer, washer	4
47	S005-SC039	Sprocket, Idler	1
48	S005-SC045	Circlip, 28mm internal	1
49	S005-SC046	Bearing (6001-2RS)	1
50	E100-OC061	Circlip, 12mm external	1
51	E100-BA059	Probe, temp	1

*Links as required to assemble chains, half links may be required.

22.Steam Manifold



Item	Part No.	Description	No/unit
1	E100-BJ045	Valve, needle, 1/4" bsp	4ea
2	S005-SM002	Valve, 3/4" globe	1ea
3	S100-SV008	Gauge, L.P. steam	1ea
4	S005-SM001	Manifold, steam	1ea
5	Common	Bolt, M8 x 20 S/S shcs	4ea
6	Common	Washer, spring, M8 S/S	4ea
7	S005-SC105	Hose, steam flexi	4ea
8			

23.Heating/cooling Layout