

PARTS MANUAL

E-SERIES

HITACHI ROTARY SCREW COMPRESSOR

Model:

ES-10

ES-15

ES-20

ES-25

ES-30

ES-40

ES-50

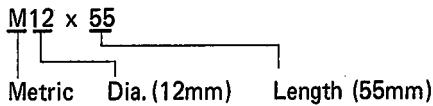
ES-60

HOW TO USE THIS PARTS MANUAL

1. Refer to the table of contents below and find the page in which the desired part is used.
2. Turn to the page and find the reference number of desired part on the illustration.
3. Find the part number and description on the following tabulated page.

Note:

1. All bolts and nuts used in this unit are ISO metric type. For example;



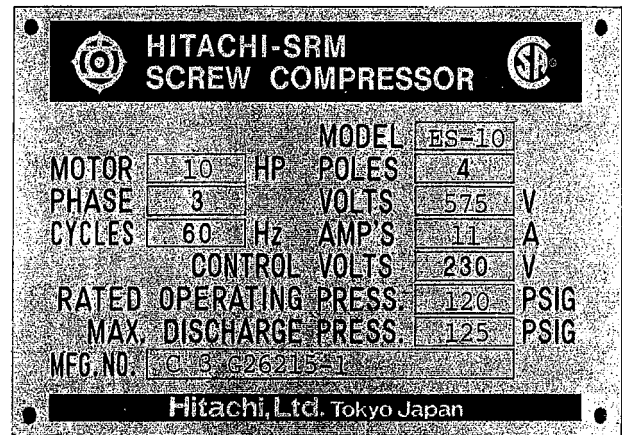
2. All fitting threads used in this unit are ISO type pipe threads.

HOW TO ORDER PARTS

When ordering the parts, always specify the followings:

1. The MODEL of the unit which is indicated on the compressor name plate.*
2. The MANUFACTURING NUMBER of the unit which is indicated on the compressor name plate.*
3. The DESCRIPTION, PARTS NUMBER and QUANTITY of parts desired.
NEVER USE REF. No. or FIG. No.

* The compressor name plate is located on the base plate; near right. It can be seen by opening a front door.



Record the manufacturing number and model number.

Model: _____

Manufacturing No.: _____

Date of Purchase: _____

Customer Order No.: _____

Purchased from: _____

CONTENTS

Model	ES-10	ES-15	ES-20	ES-25	ES-30	ES-40	ES-50	ES-60
Air End Assembly	2	2	2	2	2	2	2	2
Motor & Fan	6	6	6	6	8	8	10	10
Suction Throttle Valve & Air Intake Filter	12	12	12	12	14	14	14	14
Oil Separator	16	16	16	16	18	18	18	18
Aftercooler & Air Piping	20	20	20	22	24	24	26	26
Air Piping (Without Aftercooler)	28	28	28	28	—	—	—	—
Oil Cooler & Oil Piping	30	30	30	30	32	32	34	34
Control Air Piping	36	36	36	36	38	38	38	38
Enclosure	40	40	40	40	42	42	42	42
Starter & Control Box	44	44	46	46	48	48	50	50

Fig. 1 AIR END ASSEMBLY (ES-10/15/20/25/30/40/50/60)

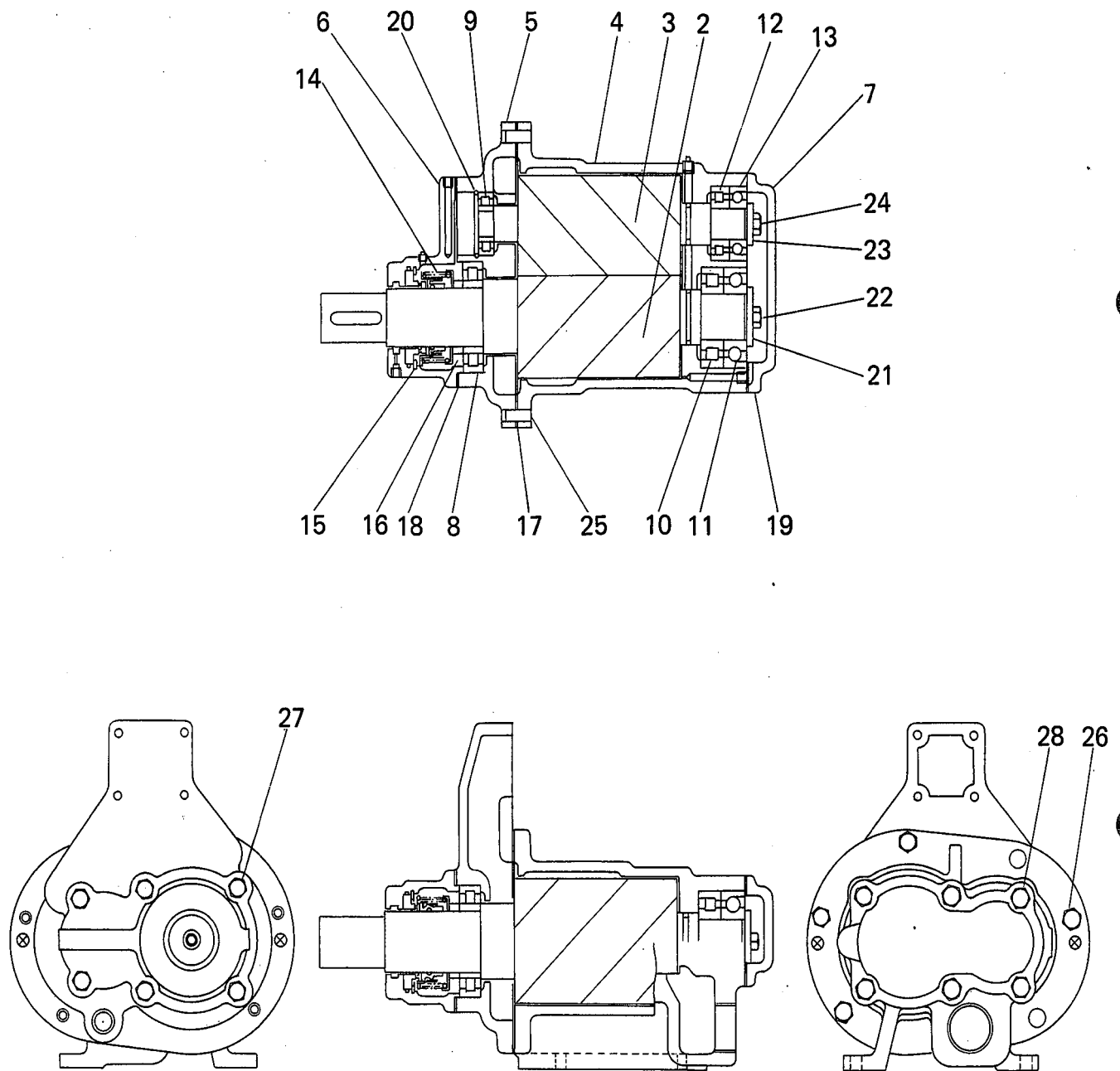


Fig. 1 AIR END ASSEMBLY (ES-10/15/20/25/30/40/50/60)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY							REMARKS	
			ES								
			10	15	20	25	30	40	50	60	
1	30700100	Air End—complete	1	1	1	1	0	0	0	0	
1	31100100	Air End—complete	0	0	0	0	1	1	0	0	
1	31300100	Air End—complete	0	0	0	0	0	0	1	1	
2	30700200	Male Rotor	1	1	1	1	0	0	0	0	
2	31100200	Male Rotor	0	0	0	0	0	0	0	0	
2	31300200	Male Rotor	0	0	0	0	0	0	0	0	
3	30700300	Female Rotor	1	1	1	1	0	0	0	0	
3	31100300	Female Rotor	0	0	0	0	1	1	0	0	
3	31300300	Female Rotor	0	0	0	0	0	0	1	1	
4	30700400	Casing	1	1	1	1	0	0	0	0	
4	31100400	Casing	0	0	0	0	1	1	0	0	
4	31300400	Casing	0	0	0	0	0	0	1	1	
5	30700500	Suction Casing	1	1	1	1	0	0	0	0	
5	31100500	Suction Casing	0	0	0	0	1	1	0	0	
5	31300500	Suction Casing	0	0	0	0	0	0	1	1	
6	30700600	Suction Cover	1	1	1	1	0	0	0	0	
6	31100600	Suction Cover	0	0	0	0	1	1	0	0	
6	31300600	Suction Cover	0	0	0	0	0	0	1	1	
7	30700700	Discharge Cover	1	1	1	1	0	0	0	0	
7	31100700	Discharge Cover	0	0	0	0	1	1	0	0	
7	31300700	Discharge Cover	0	0	0	0	0	0	1	1	
8	21111030	Roller Bearing—male/suction	1	1	1	1	0	0	0	0	
8	21711030	Roller Bearing—male/suction	0	0	0	0	1	1	0	0	
8	22111030	Roller Bearing—male/suction	0	0	0	0	0	0	1	1	
9	21111040	Roller Bearing—female/suction	1	1	1	1	0	0	0	0	
9	21711040	Roller Bearing—female/suction	0	0	0	0	1	1	0	0	
9	22111040	Roller Bearing—female/suction	0	0	0	0	0	0	1	1	
10	21111630	Roller Bearing—male/discharge	1	1	1	1	0	0	0	0	
10	21711630	Roller Bearing—male/discharge	0	0	0	0	1	1	0	0	
10	22111630	Roller Bearing—male/discharge	0	0	0	0	0	0	1	1	
11	21111060	Angular Ball Bearing—male/discharge	1	1	1	1	0	0	0	0	
11	21711060	Angular Ball Bearing—male/discharge	0	0	0	0	1	1	0	0	
11	22111060	Angular Ball Bearing—male/discharge	0	0	0	0	0	0	1	1	
12	21111621	Roller Bearing—female/discharge	1	1	1	1	0	0	0	0	
12	21711620	Roller Bearing—female/discharge	0	0	0	0	1	1	0	0	
12	22111620	Roller Bearing—female/discharge	0	0	0	0	0	0	1	1	
13	21111051	Angular Ball Bearing—female/discharge	1	1	1	1	0	0	0	0	
13	21711050	Angular Ball Bearing—female/discharge	0	0	0	0	1	1	0	0	
13	22111050	Angular Ball Bearing—female/discharge	0	0	0	0	0	0	1	1	
14	30700800	Mechanical Seal (with O ring)	1	1	1	1	0	0	0	0	
14	31100800	Mechanical Seal (with O ring)	0	0	0	0	1	1	0	0	
14	31300800	Mechanical Seal (with O ring)	0	0	0	0	0	0	1	1	
15	21111680	Snap Ring—mechanical seal	1	1	1	1	0	0	0	0	
15	31100900	Snap Ring—mechanical seal	0	0	0	0	1	1	0	0	
15	31300900	Snap Ring—mechanical seal	0	0	0	0	0	0	1	1	
16	30701000	Spacer	1	1	1	1	0	0	0	0	
16	21711090	Spacer	0	0	0	0	1	1	0	0	
17	21111700	Gasket	1	1	1	1	0	0	0	0	
17	31101000	Gasket	0	0	0	0	1	1	0	0	
17	31301000	Gasket	0	0	0	0	0	0	1	1	
18	21111181	Gasket	1	1	1	1	0	0	0	0	
18	31101100	Gasket	0	0	0	0	1	1	0	0	
18	31301100	Gasket	0	0	0	0	0	0	1	1	

Fig. 1 AIR END ASSEMBLY (ES-10/15/20/25/30/40/50/60)

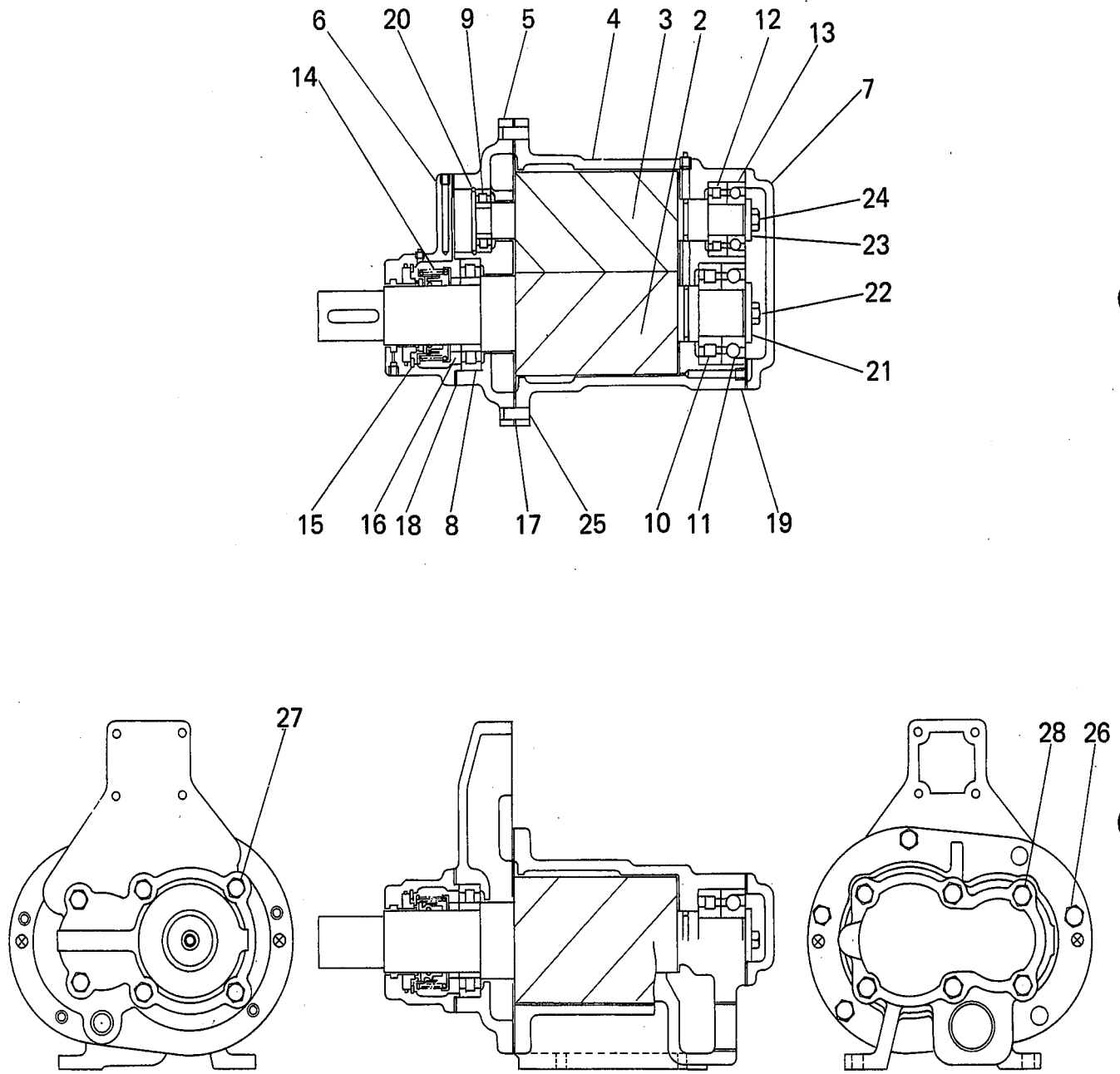


Fig. 1 AIR END ASSEMBLY (ES-10/15/20/25/30/40/50/60)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY								REMARKS
			ES								
			10	15	20	25	30	40	50	60	
19	21111241	Gasket	1	1	1	1	0	0	0	0	
19	31101200	Gasket	0	0	0	0	1	1	0	0	
19	31301200	Gasket	0	0	0	0	0	0	1	1	
20	21111150	Snap Ring	1	1	1	1	0	0	0	0	
20	21711150	Snap Ring	0	0	0	0	1	1	0	0	
20	22111150	Snap Ring	0	0	0	0	0	0	1	1	
21	21111560	End Plate—male rotor	1	1	1	1	0	0	0	0	
21	21711560	End Plate—male rotor	0	0	0	0	1	1	0	0	
21	22111560	End Plate—male rotor	0	0	0	0	0	0	1	1	
22	21111580	Bolt	1	1	1	1	0	0	0	0	
22	21711580	Bolt	0	0	0	0	1	1	0	0	
22	22111580	Bolt	0	0	0	0	0	0	1	1	
23	21111570	End Plate—female rotor	1	1	1	1	0	0	0	0	
23	21711570	End Plate—female rotor	0	0	0	0	1	1	0	0	
23	22111570	End Plate—female rotor	0	0	0	0	0	0	1	1	
24	21111590	Bolt	1	1	1	1	0	0	0	0	
24	21711590	Bolt	0	0	0	0	1	1	0	0	
24	22111590	Bolt	0	0	0	0	0	0	1	1	
25	21111341	Knock Pin	2	2	2	2	0	0	0	0	
25	22111340	Knock Pin	0	0	0	0	2	2	2	2	
26	33281028	Bolt	7	7	7	7	0	0	0	0	M10x28
26	33281230	Bolt	0	0	0	0	7	7	11	11	M12x30
27	33281025	Bolt	6	6	6	6	0	0	0	0	M10x25
27	33281225	Bolt	0	0	0	0	6	6	0	0	M12x25
27	33281230	Bolt	0	0	0	0	0	0	6	6	M12x30
28	33281020	Bolt	6	6	6	6	0	0	0	0	M10x20
28	33281230	Bolt	0	0	0	0	6	6	8	8	M12x30

Fig. 2 MOTOR and FAN (ES-10/15/20/25)

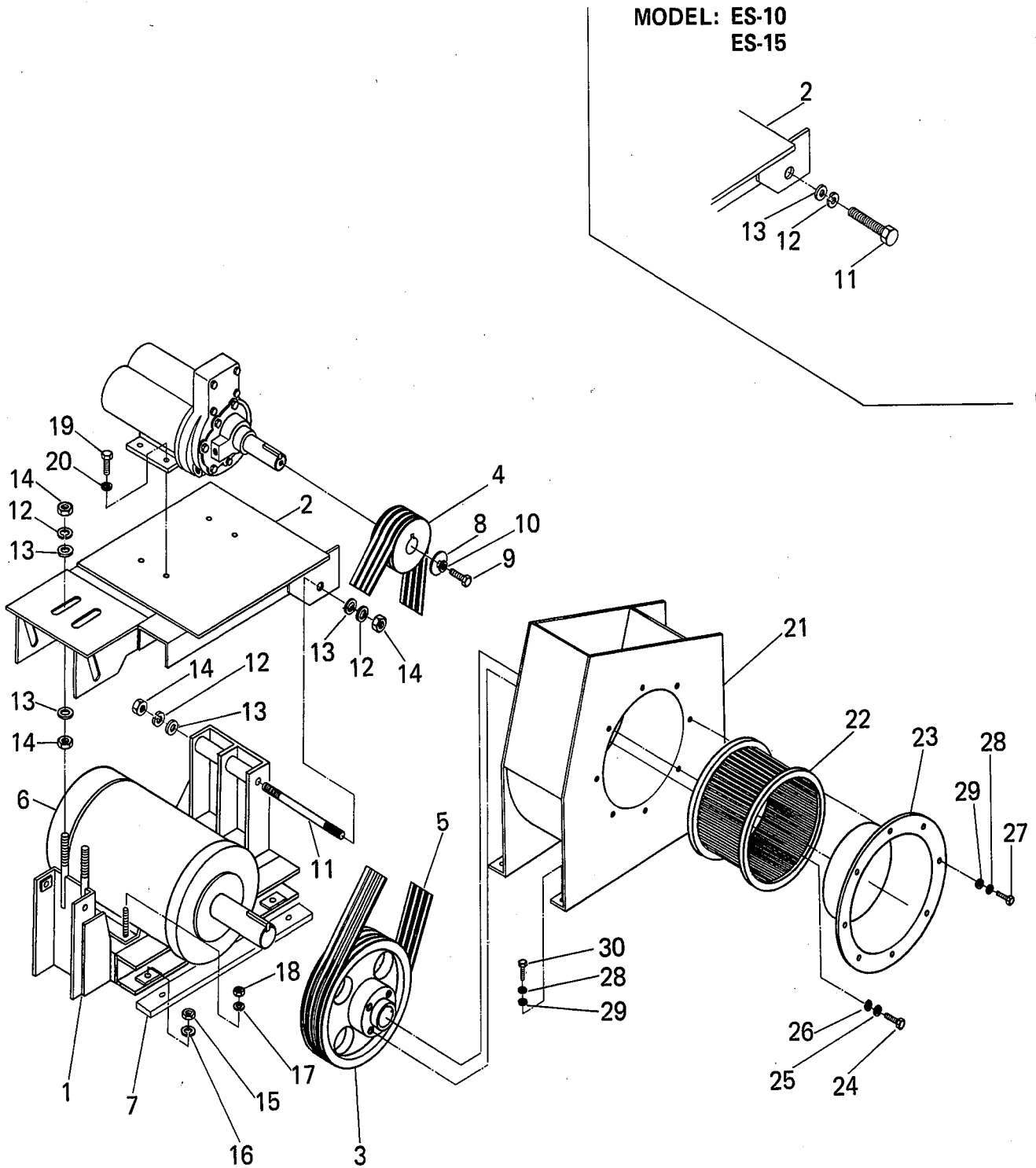
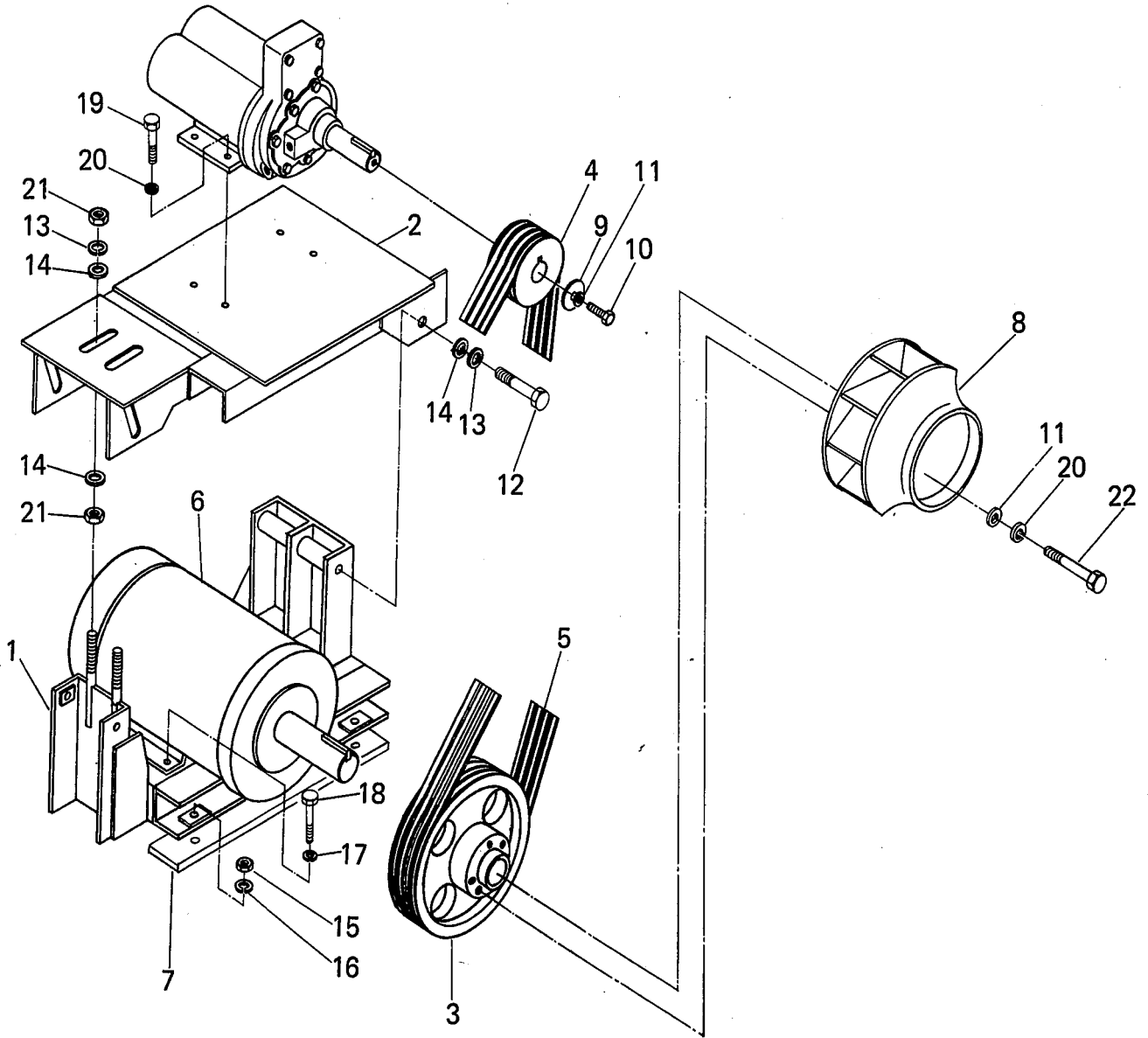


Fig. 2 MOTOR and FAN (ES-10/15/20/25)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY								REMARKS
			ES								
			10	15	20	25	30	40	50	60	
1	30710000	Motor Base	1	0	0	0	-	-	-	-	
1	30810000	Motor Base	0	1	0	0	-	-	-	-	
1	30910000	Motor Base	0	0	1	1	-	-	-	-	
2	30710100	Compressor Base	1	1	0	0	-	-	-	-	
2	30910100	Compressor Base	0	0	1	0	-	-	-	-	
2	31010100	Compressor Base	0	0	0	1	-	-	-	-	
3	30710200	Motor Sheave	1	0	0	0	-	-	-	-	
3	30810200	Motor Sheave	0	1	0	0	-	-	-	-	
3	30910200	Motor Sheave	0	0	1	0	-	-	-	-	
3	31010200	Motor Sheave	0	0	0	1	-	-	-	-	
4	30710300	Pulley	1	1	1	1	-	-	-	-	
5	30710400	V-Belts Set	1	0	0	0	-	-	-	-	
5	30810400	V-Belts Set	0	1	0	0	-	-	-	-	
5	30910400	V-Belts Set	0	0	1	0	-	-	-	-	
5	31010400	V-Belts Set	0	0	0	1	-	-	-	-	
6	30720000	Motor 10HP 230V 60Hz	1	0	0	0	-	-	-	-	
6	30720100	Motor 10HP 460V 60Hz	1	0	0	0	-	-	-	-	
6	30720200	Motor 10HP 575V 60Hz	1	0	0	0	-	-	-	-	
6	30820000	Motor 15HP 230V 60Hz	0	1	0	0	-	-	-	-	
6	30820100	Motor 15HP 460V 60Hz	0	1	0	0	-	-	-	-	
6	30820200	Motor 15HP 575V 60Hz	0	1	0	0	-	-	-	-	
6	30920000	Motor 20HP 230V 60Hz	0	0	1	0	-	-	-	-	
6	30920100	Motor 20HP 460V 60Hz	0	0	1	0	-	-	-	-	
6	30920200	Motor 20HP 575V 60Hz	0	0	1	0	-	-	-	-	
6	31020000	Motor 25HP 230V 60Hz	0	0	0	1	-	-	-	-	
6	31020100	Motor 25HP 460V 60Hz	0	0	0	1	-	-	-	-	
6	31020200	Motor 25HP 575V 60Hz	0	0	0	1	-	-	-	-	
7	30710500	Rubber Sheet	2	2	2	2	-	-	-	-	
8	30792700	Washer-pulley	1	1	1	1	-	-	-	-	
9	30795700	Bolt	1	1	1	1	-	-	-	-	
10	33761212	Washer	1	1	1	1	-	-	-	-	M12
11	33282011	Bolt	2	2	0	0	-	-	-	-	M20x200
11	30910600	Bolt	0	0	1	1	-	-	-	-	
12	33761420	Spring Washer	4	4	4	4	-	-	-	-	M20
13	33761220	Washer	6	6	6	6	-	-	-	-	M20
14	33750420	Nut	4	4	6	6	-	-	-	-	M20
15	33750416	Nut	4	4	4	4	-	-	-	-	M16
16	33761416	Spring Washer	4	4	4	4	-	-	-	-	M16
17	33761412	Spring Washer	4	4	4	4	-	-	-	-	M12
18	33750412	Nut	4	4	4	4	-	-	-	-	M12
19	33281040	Bolt	4	4	4	4	-	-	-	-	M10x40
20	33761410	Spring Washer	4	4	4	4	-	-	-	-	M10
21	30710700	Fan Case	1	1	1	1	-	-	-	-	
22	30710800	Impeller	1	1	1	0	-	-	-	-	
22	31010800	Impeller	0	0	0	1	-	-	-	-	
23	30710900	Bellmouth	1	1	1	0	-	-	-	-	
23	31010900	Bellmouth	0	0	0	1	-	-	-	-	
24	33280820	Bolt	3	3	3	3	-	-	-	-	M8x20
25	33761408	Spring Washer	3	3	3	3	-	-	-	-	M8
26	33761208	Washer	3	3	3	3	-	-	-	-	M8
27	33530612	Bolt	8	8	8	8	-	-	-	-	M6x14
28	33761406	Spring Washer	12	12	12	12	-	-	-	-	M6
29	33761206	Washer	12	12	12	12	-	-	-	-	M6
30	33530616	Bolt	4	4	4	4	-	-	-	-	M6x16

Fig. 3 MOTOR and FAN (ES-30/40)



MODEL: ES-40

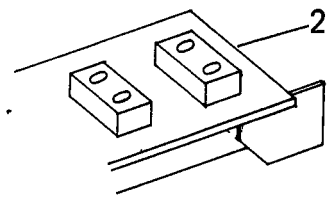


Fig. 3 MOTOR and FAN (ES-30/40)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY							REMARKS	
			10	15	20	ES			50		60
1	31110000	Motor Base	-	-	-	-	1	1	-	-	
2	31110100	Compressor Base	-	-	-	-	1	0	-	-	
2	31210100	Compressor Base	-	-	-	-	0	1	-	-	
3	31110200	Motor Sheave	-	-	-	-	1	0	-	-	
3	31210200	Motor Sheave	-	-	-	-	0	1	-	-	
4	31110300	Pulley	-	-	-	-	1	1	-	-	
5	31110400	V-Belts Set	-	-	-	-	1	0	-	-	
5	31210400	V-Belts Set	-	-	-	-	0	1	-	-	
6	31120000	Motor 30HP 230V 60Hz	-	-	-	-	1	0	-	-	
6	31120100	Motor 30HP 460V 60Hz	-	-	-	-	1	0	-	-	
6	31120200	Motor 30HP 575V 60Hz	-	-	-	-	1	0	-	-	
6	31220000	Motor 40HP 230V 60Hz	-	-	-	-	0	1	-	-	
6	31220100	Motor 40HP 460V 60Hz	-	-	-	-	0	1	-	-	
6	31220200	Motor 40HP 575V 60Hz	-	-	-	-	0	1	-	-	
7	31110500	Rubber Sheet	-	-	-	-	2	2	-	-	
8	31110800	Cooling-Fan	-	-	-	-	1	1	-	-	
9	31192700	Washer, pulley	-	-	-	-	1	1	-	-	
10	31195700	Bolt	-	-	-	-	1	1	-	-	
11	33761212	Washer	-	-	-	-	7	7	-	-	M12
12	33282416	Bolt	-	-	-	-	2	2	-	-	M24x16
13	33761424	Spring Washer	-	-	-	-	4	4	-	-	M24
14	33761224	Washer	-	-	-	-	6	6	-	-	M24
15	33750416	Nut	-	-	-	-	4	4	-	-	M16
16	33761416	Spring Washer	-	-	-	-	4	4	-	-	M16
17	33761412	Spring Washer	-	-	-	-	4	4	-	-	M12
18	33281250	Bolt	-	-	-	-	4	4	-	-	M12x50
19	33281250	Bolt	-	-	-	-	4	4	-	-	M12x50
20	33761412	Spring Washer	-	-	-	-	10	10	-	-	M12
21	33750424	Nut	-	-	-	-	4	4	-	-	M24
22	33281220	Bolt	-	-	-	-	6	6	-	-	M12x20

Fig. 4 MOTOR and FAN (ES-50/60)

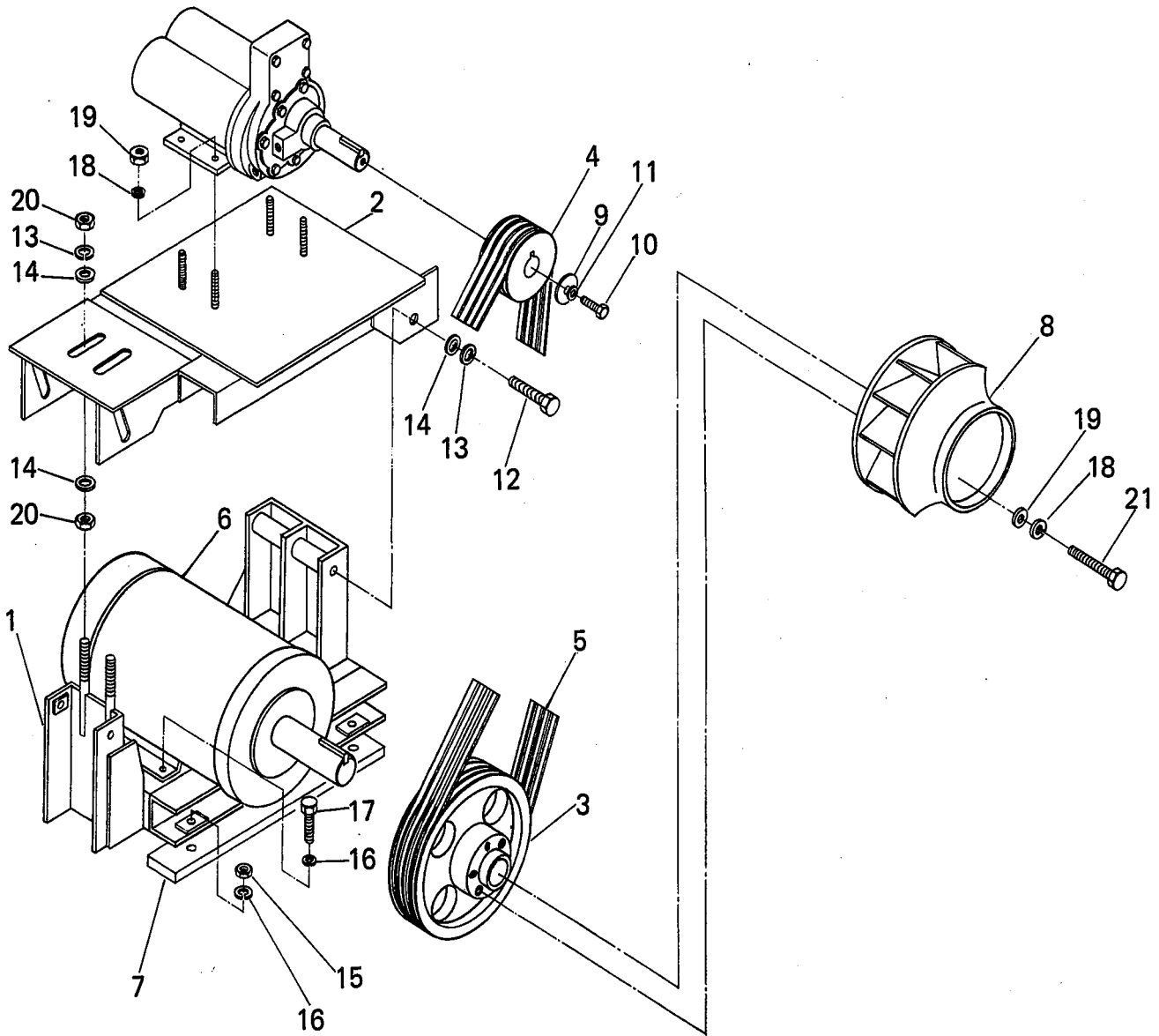


Fig. 4 MOTOR and FAN (ES-50/60)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY								REMARKS
			10	15	20	25	30	40	50	60	
1	31310000	Motor Base	-	-	-	-	-	-	1	0	
1	31410000	Motor Base	-	-	-	-	-	-	0	1	
2	31310100	Compressor Base	-	-	-	-	-	-	1	1	
3	31310200	Motor Sheave	-	-	-	-	-	-	1	0	
3	31410200	Motor Sheave	-	-	-	-	-	-	0	1	
4	31310300	Pulley	-	-	-	-	-	-	1	1	
5	31310400	V-Belts Set	-	-	-	-	-	-	1	0	
5	31410400	V-Belts Set	-	-	-	-	-	-	0	1	
6	31320000	Motor 50HP 230V 60Hz	-	-	-	-	-	-	1	0	
6	31320100	Motor 50HP 460V 60Hz	-	-	-	-	-	-	1	0	
6	31320200	Motor 50HP 575V 60Hz	-	-	-	-	-	-	1	0	
6	31420000	Motor 60HP 230V 60Hz	-	-	-	-	-	-	0	1	
6	31420100	Motor 60HP 460V 60Hz	-	-	-	-	-	-	0	1	
6	31420200	Motor 60HP 575V 60Hz	-	-	-	-	-	-	0	1	
7	31310500	Rubber Sheet	-	-	-	-	-	-	2	2	
8	31310600	Cooling Fan	-	-	-	-	-	-	1	1	
9	31393100	Washer, pulley	-	-	-	-	-	-	1	1	
10	31396100	Bolt	-	-	-	-	-	-	1	1	
11	33761220	Washer	-	-	-	-	-	-	1	1	M20
12	33282460	Bolt	-	-	-	-	-	-	2	2	M24x60
13	33761424	Spring Washer	-	-	-	-	-	-	4	4	M24
14	33761224	Washer	-	-	-	-	-	-	6	6	M24
15	33750416	Nut	-	-	-	-	-	-	4	4	M16
16	33761416	Spring Washer	-	-	-	-	-	-	8	8	M16
17	33281650	Bolt	-	-	-	-	-	-	4	4	M16x50
18	33761412	Spring Washer	-	-	-	-	-	-	10	10	M12
19	33750412	Nut	-	-	-	-	-	-	10	10	M12
20	33750424	Nut	-	-	-	-	-	-	4	4	M24
21	33281220	Bolt	-	-	-	-	-	-	6	6	M12x20

Fig. 5 SUCTION THROTTLE VALVE & AIR INTAKE FILTER (ES-10/15/20/25)

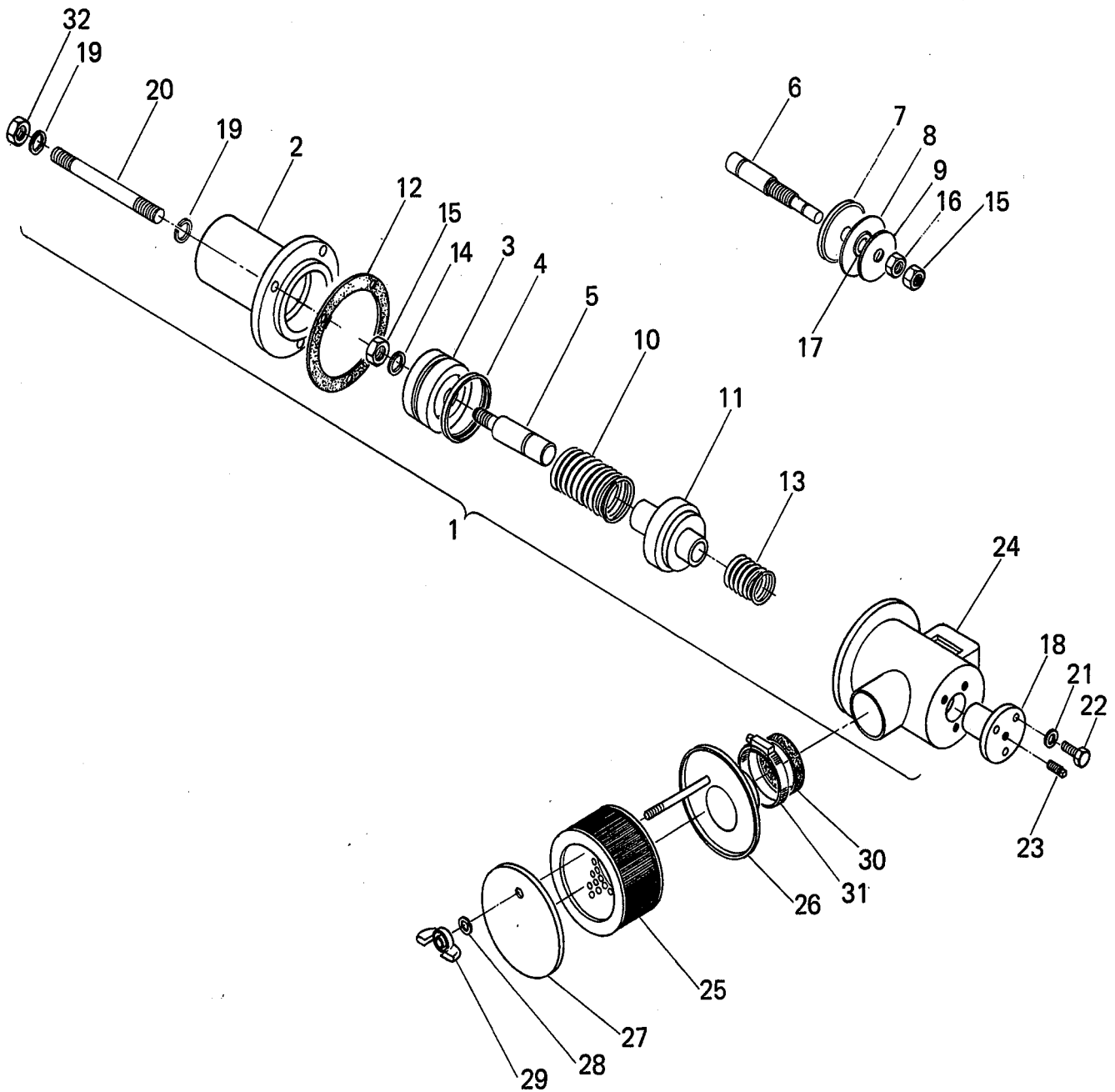
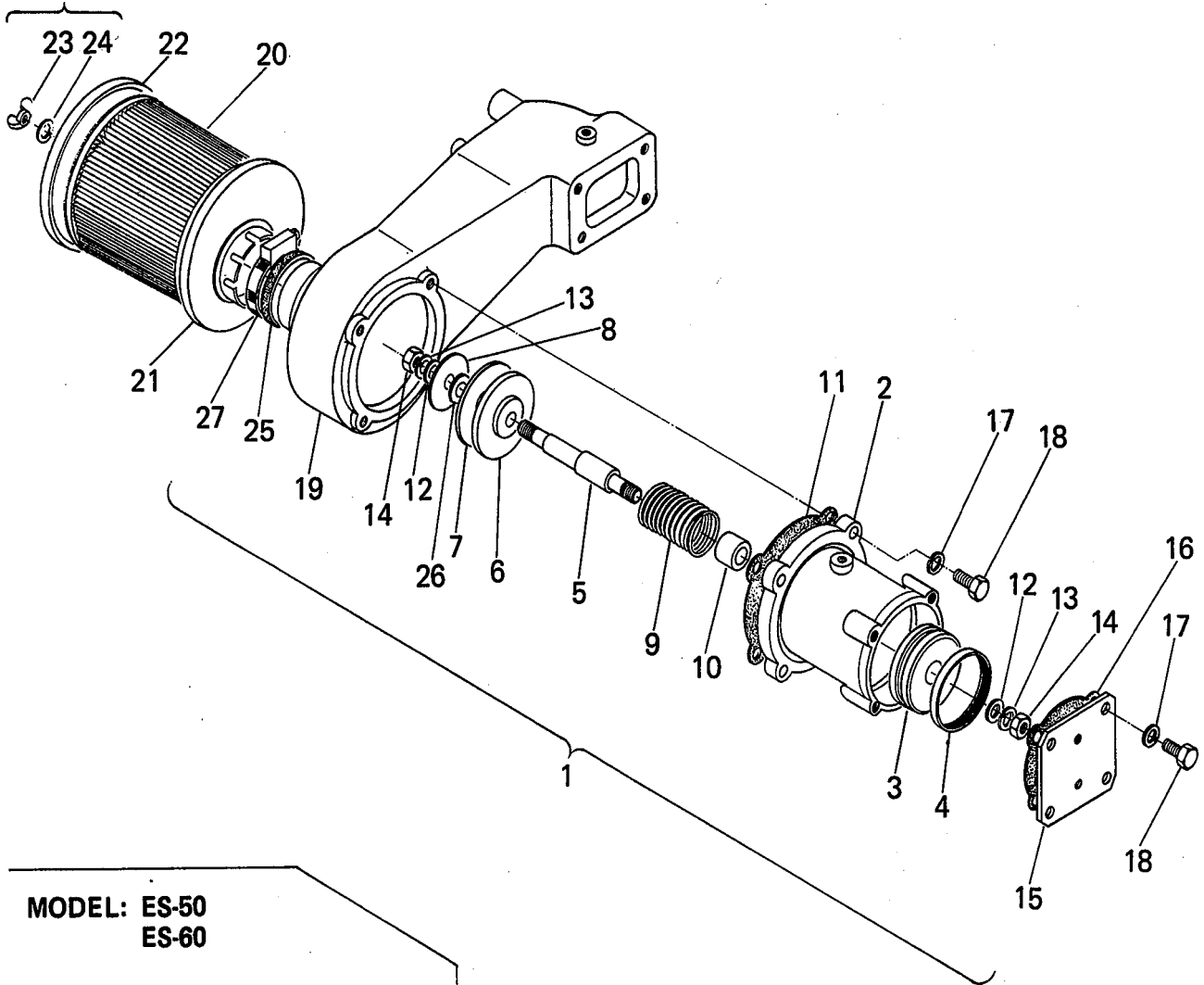


Fig. 5 SUCTION THROTTLE VALVE & AIR INTAKE FILTER (ES-10/15/20/25)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY								REMARKS
			10	15	20	ES				60	
1	30715000	Suction Throttle Valve Assembly	1	1	1	1	-	-	-	-	
2	30715010	Cover	1	1	1	1	-	-	-	-	
3	21113020	Piston	1	1	1	1	-	-	-	-	
4	20113030	Packing	1	1	1	1	-	-	-	-	
5	21113040	Spindle (1)	1	1	1	1	-	-	-	-	
6	30715050	Spindle (2)	1	1	1	1	-	-	-	-	
7	21113060	Valve Plate	1	1	1	1	-	-	-	-	
8	30715070	Valve Sheet	1	1	1	1	-	-	-	-	
9	21113080	Washer	1	1	1	1	-	-	-	-	
10	21113110	Spring	1	1	1	1	-	-	-	-	
11	30715100	Spring Holder	1	1	1	1	-	-	-	-	
12	21113150	Gasket	1	1	1	1	-	-	-	-	
13	30715120	Spring	1	1	1	1	-	-	-	-	
14	33761410	Spring Washer	1	1	1	1	-	-	-	-	M10
15	33750410	Nut	2	2	2	2	-	-	-	-	M10
16	33750810	Nut	1	1	1	1	-	-	-	-	M10
17	30715130	Copper Packing	1	1	1	1	-	-	-	-	
18	30715140	Cylinder Cover	1	1	1	1	-	-	-	-	
19	33761412	Spring Washer	3	3	3	3	-	-	-	-	M12
20	33450640	Stud Bolt	3	3	3	3	-	-	-	-	M12x40
21	33761406	Spring Washer	3	3	3	3	-	-	-	-	M6
22	33280618	Bolt	3	3	3	3	-	-	-	-	M6x18
23	33018002	Plug	1	1	1	1	-	-	-	-	1/4"
24	30715150	Valve Body	1	1	1	1	-	-	-	-	
25	30715160	Air Intake Filter	1	1	1	1	-	-	-	-	
26	30715170	Holder-air intake filter	1	1	1	1	-	-	-	-	
27	30715180	Filter Cover	1	1	1	1	-	-	-	-	
28	33761408	Spring Washer	1	1	1	1	-	-	-	-	M8
29	21117341	Wing Nut	1	1	1	1	-	-	-	-	
30	21117360	Packing-air intake filter	1	1	1	1	-	-	-	-	
31	21117350	Band-air intake filter	1	1	1	1	-	-	-	-	
32	33750412	Nut	3	3	3	3	-	-	-	-	M12

Fig. 6 SUCTION THROTTLE VALVE & AIR INTAKE FILTER (ES-30/40/50/60)

**MODEL: ES-30
ES-40**



**MODEL: ES-50
ES-60**

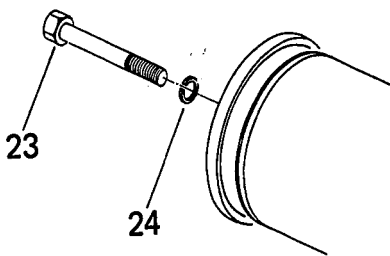


Fig. 6 SUCTION THROTTLE VALVE & AIR INTAKE FILTER (ES-30/40/50/60)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY							REMARKS	
			ES								
			10	15	20	25	30	40	50	60	
1	31315000	Suction Throttle Valve Assembly	-	-	-	-	0	0	1	1	
1	31115000	Suction Throttle Valve Assembly	-	-	-	-	1	1	0	0	
2	31115010	Cover	-	-	-	-	1	1	1	1	
3	25302230	Piston	-	-	-	-	1	1	1	1	
4	31115180	Packing	-	-	-	-	1	1	1	1	
5	31115020	Spindle	-	-	-	-	1	1	1	1	
6	31115030	Valve Plate	-	-	-	-	1	1	1	1	
7	31115040	Valve Sheet	-	-	-	-	1	1	1	1	
8	31115050	Washer	-	-	-	-	1	1	1	1	
9	31315010	Spring	-	-	-	-	0	0	1	1	
9	31115060	Spring	-	-	-	-	1	1	0	0	
10	25302310	Bush	-	-	-	-	1	1	1	1	
11	31115080	Gasket	-	-	-	-	1	1	1	1	
12	33761216	Washer	-	-	-	-	2	2	2	2	M16
13	33761416	Spring Washer	-	-	-	-	2	2	2	2	M16
14	33750416	Nut	-	-	-	-	2	2	2	2	M16
15	31115090	Cylinder Cover	-	-	-	-	1	1	1	1	
16	31115100	Gasket	-	-	-	-	1	1	1	1	
17	33761412	Spring Washer	-	-	-	-	8	8	8	8	M12
18	33251235	Bolt	-	-	-	-	8	8	8	8	M12x35
19	31115110	Valve Body	-	-	-	-	1	1	1	1	
20	31315020	Air Intake Filter	-	-	-	-	0	0	1	1	
20	31115120	Air Intake Filter	-	-	-	-	1	1	0	0	
21	31315030	Holder—air intake filter	-	-	-	-	0	0	1	1	
21	31115130	Holder—air intake filter	-	-	-	-	1	1	0	0	
22	31115140	Element Cover	-	-	-	-	1	1	1	1	
23	33250800	Bolt	-	-	-	-	0	0	1	1	
23	21117341	Wing Nut	-	-	-	-	1	1	0	0	
24	33761408	Spring Washer	-	-	-	-	1	1	1	1	M8
25	31115160	Band—air intake filter	-	-	-	-	1	1	1	1	
26	31115170	Copper Packing	-	-	-	-	1	1	1	1	
27	31115150	Packing—air intake filter	-	-	-	-	1	1	1	1	

Fig. 7 OIL SEPARATOR (ES-10/15/20/25)

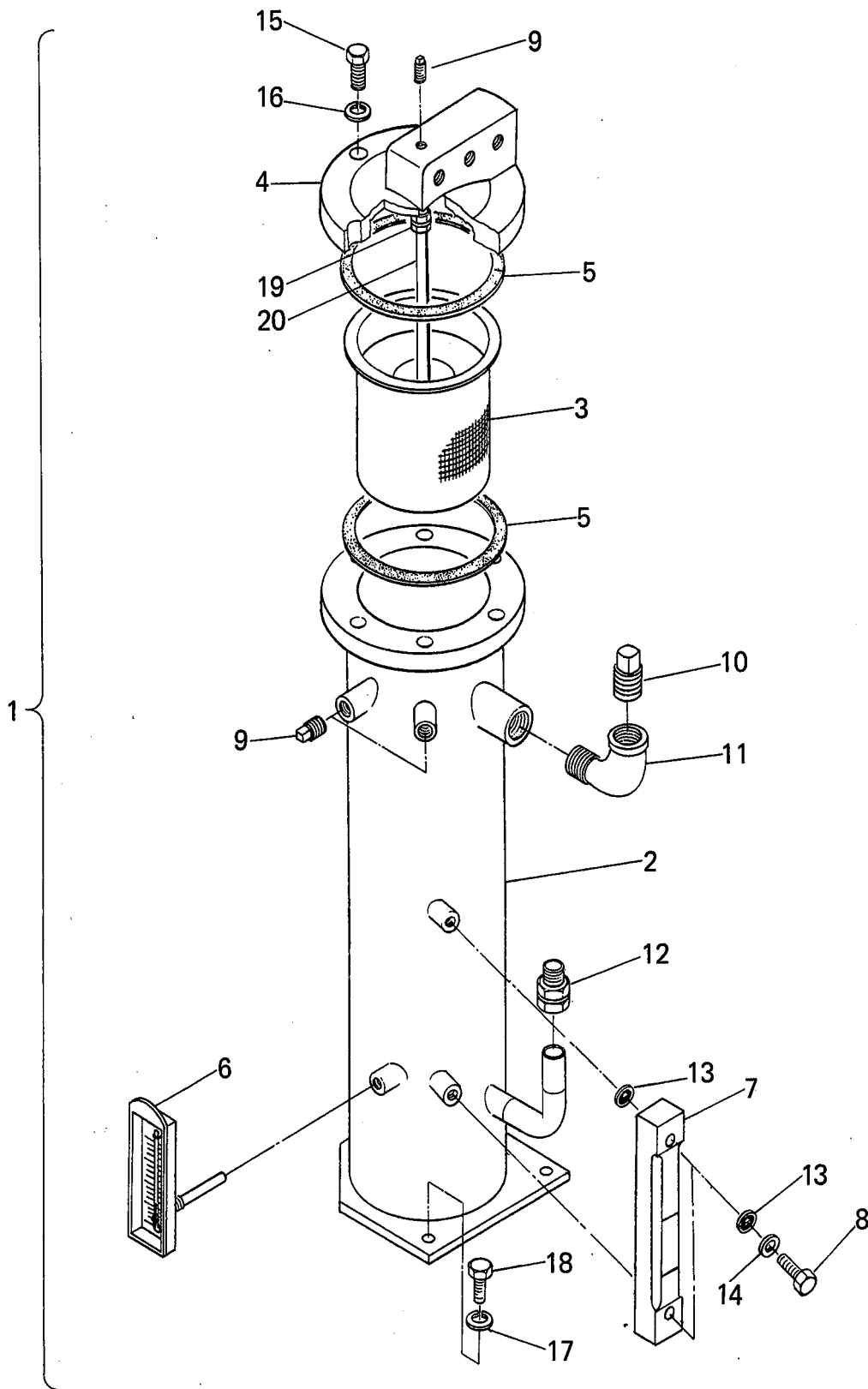


Fig. 7 OIL SEPARATOR (ES-10/15/20/25)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY						REMARKS		
			ES								
			10	15	20	25	30	40	50	60	
1	30750000	Oil Separator Assembly	1	1	1	1	-	-	-	-	
2	30750010	Oil Separator Shell	1	1	1	1	-	-	-	-	
3	30750020	Separator Element	1	1	1	1	-	-	-	-	
4	30750030	Cover	1	1	1	1	-	-	-	-	
5	30750040	Gasket	2	2	2	2	-	-	-	-	
6	30750050	Oil Temperature Gauge	1	1	1	1	-	-	-	-	
7	30750060	Oil Level Gauge	1	1	1	1	-	-	-	-	
8	30750070	Bolt	2	2	2	2	-	-	-	-	
9	33017002	Plug	3	3	3	3	-	-	-	-	¼"
10	33017007	Plug	1	1	1	1	-	-	-	-	1¼"
11	33008007	Elbow	1	1	1	1	-	-	-	-	1¼"
12	33084134	Straight Coupling	1	1	1	1	-	-	-	-	
13	25502600	Seal Washer	4	4	4	4	-	-	-	-	
14	31506870	Copper Gasket	2	2	2	2	-	-	-	-	
15	30750080	Bolt	6	6	6	6	-	-	-	-	
16	33761416	Washer	6	6	6	6	-	-	-	-	M16
17	33761412	Washer	3	3	3	3	-	-	-	-	M12
18	33281245	Bolt	3	3	3	3	-	-	-	-	M12x45
19	33084062	Straight Coupling	1	1	1	1	-	-	-	-	½"
20	30750090	Copper Tube	1	1	1	1	-	-	-	-	Dia. 6mm

Fig. 8 OIL SEPARATOR (ES-30/40/50/60)

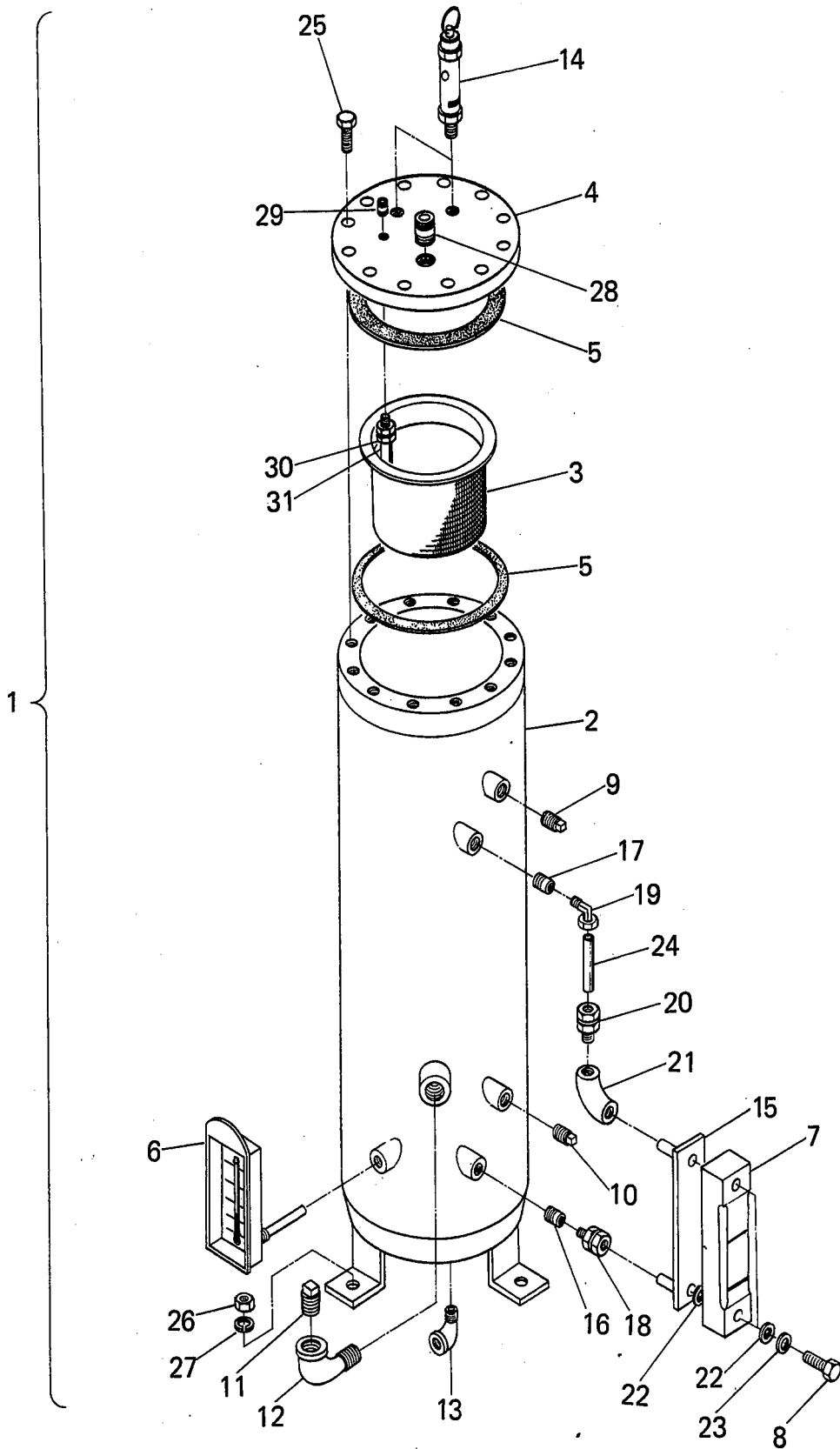


Fig. 8 OIL SEPARATOR (ES-30/40/50/60)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY							REMARKS	
			ES								
			10	15	20	25	30	40	50	60	
1	31350000	Oil Separator Assembly	-	-	-	-	0	0	1	1	
1	31150000	Oil Separator Assembly	-	-	-	-	1	1	0	0	
2	31350010	Oil Separator Shell	-	-	-	-	0	0	1	1	
2	31150010	Oil Separator Shell	-	-	-	-	1	1	0	0	
3	31350020	Separator Element	-	-	-	-	0	0	1	1	
3	31150020	Separator Element	-	-	-	-	1	1	0	0	
4	31350030	Cover	-	-	-	-	0	0	1	1	
4	31150030	Cover	-	-	-	-	1	1	0	0	
5	31350040	Gasket	-	-	-	-	0	0	2	2	
5	31150040	Gasket	-	-	-	-	2	2	0	0	
6	31150050	Oil Temperature Gauge	-	-	-	-	1	1	1	1	
7	31150060	Oil Level Gauge	-	-	-	-	1	1	1	1	
8	30750070	Bolt	-	-	-	-	2	2	2	2	
9	31183860	Plug	-	-	-	-	1	1	1	1	1/2" NPT
10	31183870	Plug	-	-	-	-	1	1	1	1	1" NPT
11	31183870	Plug	-	-	-	-	1	1	1	1	1" NPT
12	31183880	Elbow	-	-	-	-	0	0	1	1	1" NPT
13	31183910	Elbow	-	-	-	-	1	1	1	1	1/2" NPT
14	31370140	Safety Valve	-	-	-	-	0	0	2	2	1/2"
14	31170130	Safety Valve	-	-	-	-	2	2	0	0	3/8"
15	31150070	Support—oil level gauge	-	-	-	-	1	1	1	1	
16	31150080	Bushing	-	-	-	-	1	1	1	1	
17	31150090	Bushing	-	-	-	-	1	1	1	1	
18	33084134	Straight Coupling	-	-	-	-	1	1	1	1	1/2"x1/2"
19	33083124	Elbow Coupling	-	-	-	-	1	1	1	1	12x1/4"
20	33080062	Straight Coupling	-	-	-	-	1	1	1	1	12x1/2"
21	33002004	Elbow	-	-	-	-	1	1	1	1	1/2"
22	25502600	Seal Washer	-	-	-	-	4	4	4	4	
23	31506870	Copper Gasket	-	-	-	-	2	2	2	2	
24	31186500	Copper Tube	-	-	-	-	1	1	1	1	Dia. 12mm
25	31150110	Bolt	-	-	-	-	12	12	12	12	
26	33750412	Nut	-	-	-	-	3	3	3	3	M12
27	33761412	Washer	-	-	-	-	3	3	3	3	M12
28	31384800	Pipe	-	-	-	-	0	0	1	1	1 1/2" NPT-PT
28	31184610	Pipe	-	-	-	-	1	1	0	0	1" NPT-PT
29	31189070	Pipe	-	-	-	-	1	1	1	1	1/4" NPT-PT
30	33084062	Straight Coupling	-	-	-	-	1	1	1	1	6x1/4"
31	3138908	Copper Tube	-	-	-	-	0	0	1	1	Dia. 6mm
31	3118908	Copper Tube	-	-	-	-	1	1	0	0	Dia. 6mm

Fig. 9 AFTERCOOLER & AIR PIPING (ES-10/15/20)

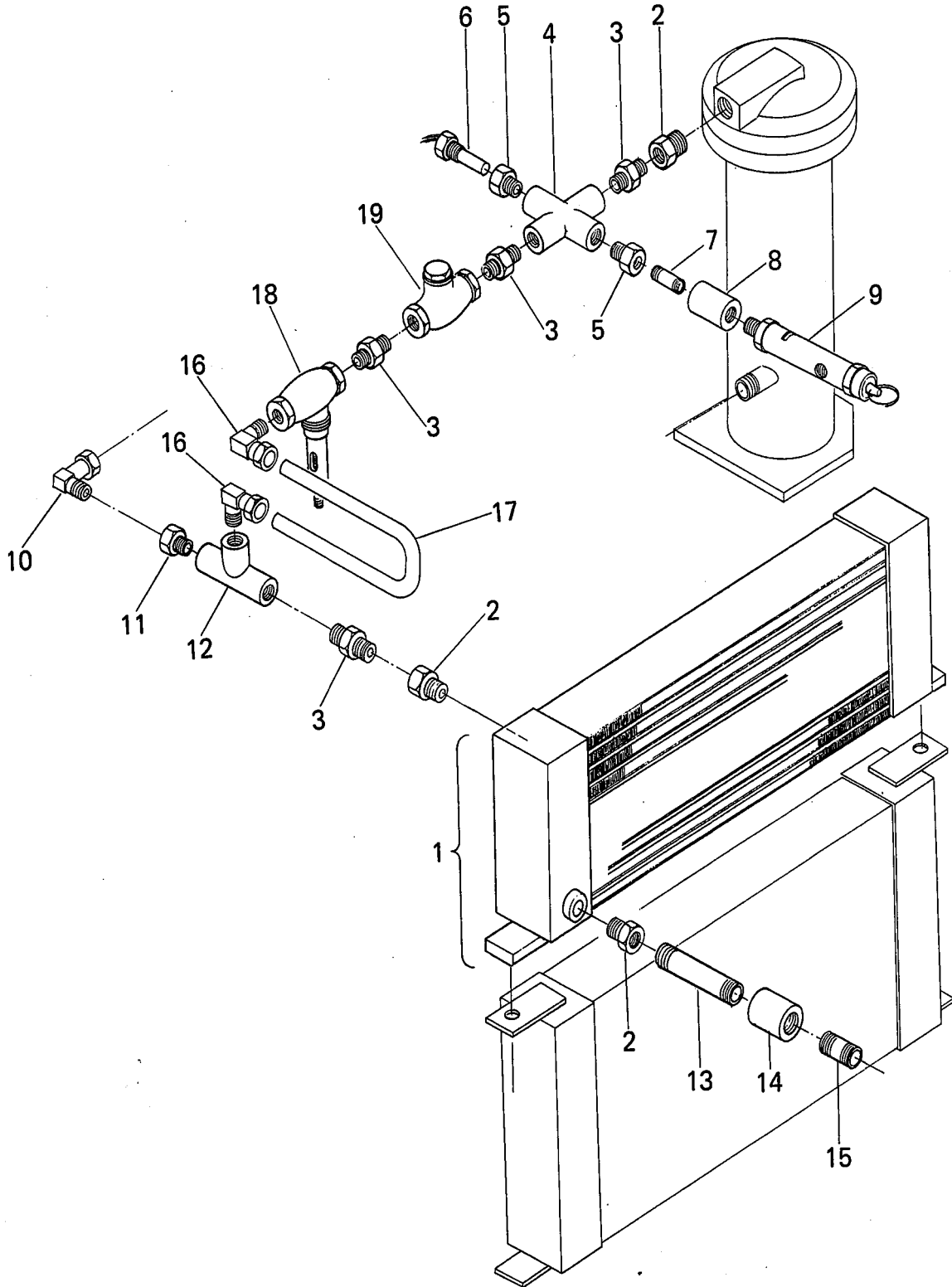


Fig. 9 AFTERCOOLER & AIR PIPING (ES-10/15/20)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY								REMARKS
			ES								
			10	15	20	25	30	40	50	60	
1	30740000	Aftercooler	1	0	0	-	-	-	-	-	
1	30840000	Aftercooler	0	1	0	-	-	-	-	-	
1	30940000	Aftercooler	0	0	1	-	-	-	-	-	
2	33014009	Bushing	3	3	3	-	-	-	-	-	1"x3/4"
3	33012005	Nipple	4	4	4	-	-	-	-	-	3/4"
4	33006005	Cross	1	1	1	-	-	-	-	-	3/4"
5	33014007	Bushing	2	2	2	-	-	-	-	-	3/4"x1/2"
6	30735000	High Temperature Shut Down Switch	1	1	1	-	-	-	-	-	
7	30784400	Pipe	1	1	1	-	-	-	-	-	1/2" NPT-PT
8	30783810	Socket	1	1	1	-	-	-	-	-	1/2" NPT
9	30770140	Safety Valve	1	1	1	-	-	-	-	-	
10	33083062	Elbow Coupling	1	1	1	-	-	-	-	-	1/4"
11	33014005	Bushing	1	1	1	-	-	-	-	-	3/4"x1/4"
12	33004005	Tee	1	1	1	-	-	-	-	-	3/4"
13	30784520	Pipe	1	1	1	-	-	-	-	-	3/4"
14	33008005	Socket	1	1	1	-	-	-	-	-	3/4"
15	30784530	Pipe	1	1	1	-	-	-	-	-	3/4" NPT-PT
16	33082050	Elbow Coupling	2	2	2	-	-	-	-	-	20mm x3/4"
17	30786800	Copper Tube	1	1	1	-	-	-	-	-	Dia. 20mm
18	20115420	Minimum Pressure Valve	1	1	1	-	-	-	-	-	
19	20114100	Check Valve	1	1	1	-	-	-	-	-	

Fig. 10 AFTERCOOLER & AIR PIPING (ES-25)

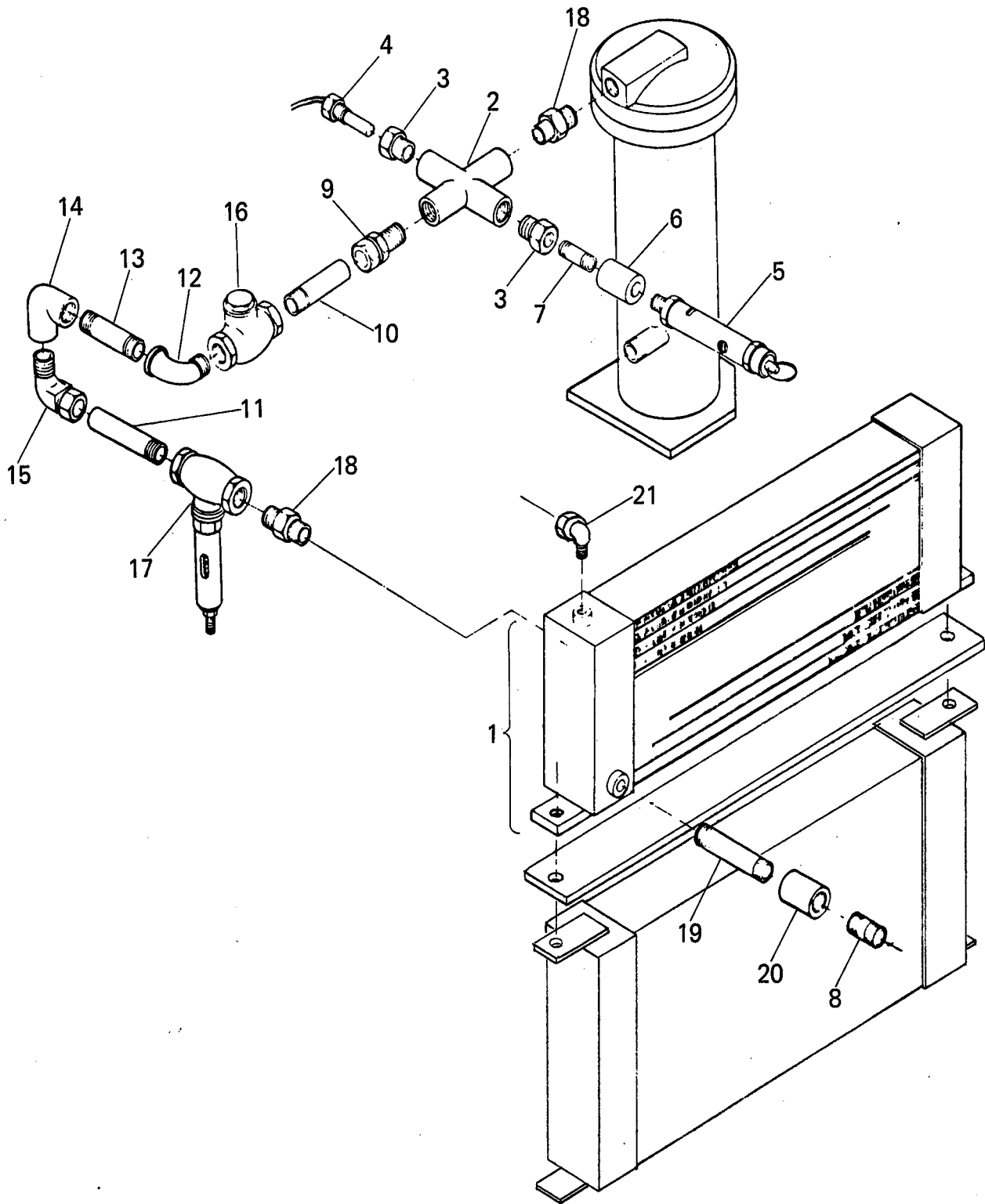


Fig. 10 AFTERCOOLER & AIR PIPING (ES-25)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY							REMARKS			
			10	15	20	ES			40		50	60	
1	31040000	Aftercooler	-	-	-	1	-	-	-	-	-	-	
2	33006006	Cross	-	-	-	1	-	-	-	-	-	-	1"
3	33014008	Bushing	-	-	-	1	-	-	-	-	-	-	1"x½"
4	30735000	High Temperature Shut Down Switch	-	-	-	1	-	-	-	-	-	-	
5	30770140	Safety Valve	-	-	-	1	-	-	-	-	-	-	
6	30783810	Socket	-	-	-	1	-	-	-	-	-	-	½" NPT
7	30784400	Pipe	-	-	-	1	-	-	-	-	-	-	½" NPT-PT
8	31084620	Pipe	-	-	-	1	-	-	-	-	-	-	1" NPT-PT
9	31083810	Straight Coupling	-	-	-	1	-	-	-	-	-	-	1"x1"
10	31084630	Pipe	-	-	-	1	-	-	-	-	-	-	1"
11	31084640	Pipe	-	-	-	1	-	-	-	-	-	-	1"
12	33008006	Elbow	-	-	-	1	-	-	-	-	-	-	1" MF
13	31084650	Pipe	-	-	-	1	-	-	-	-	-	-	1"
14	33002006	Elbow	-	-	-	1	-	-	-	-	-	-	1"
15	31083820	Elbow Coupling	-	-	-	1	-	-	-	-	-	-	1"x1"
16	20514100	Check Valve	-	-	-	1	-	-	-	-	-	-	
17	20515421	Minimum Pressure Valve	-	-	-	1	-	-	-	-	-	-	
18	33012006	Nipple	-	-	-	2	-	-	-	-	-	-	1"
19	31084660	Pipe	-	-	-	1	-	-	-	-	-	-	1"
20	33010006	Socket	-	-	-	1	-	-	-	-	-	-	1"
21	33083062	Elbow Coupling	-	-	-	1	-	-	-	-	-	-	6x¼"

Fig. 11 AFTERCOOLER & AIR PIPING (ES-30/40)

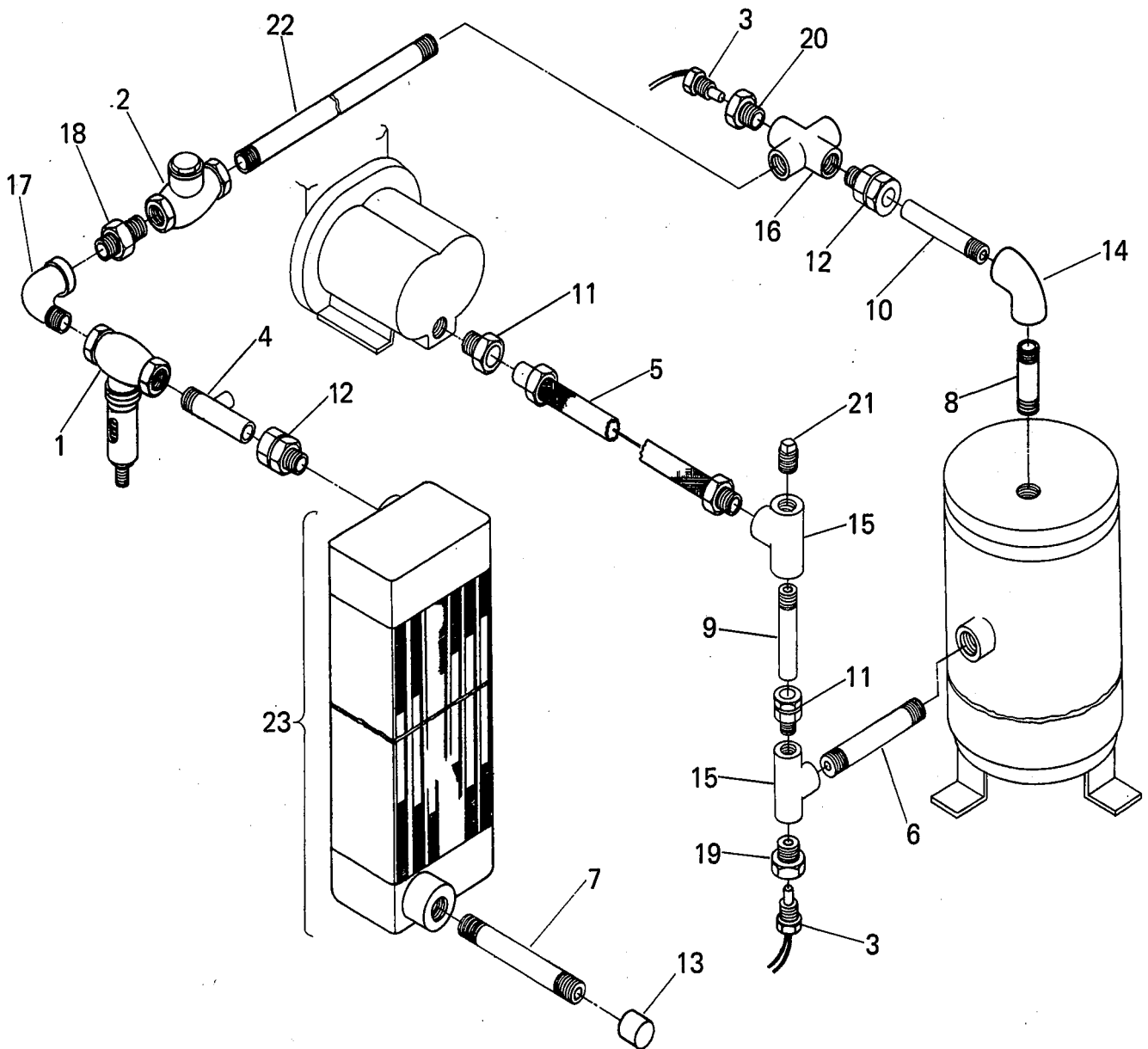


Fig. 11 AFTERCOOLER & AIR PIPING (ES-30/40)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY							REMARKS	
			ES								
			10	15	20	25	30	40	50	60	
1	20515421	Minimum Pressure Valve	-	-	-	-	1	1	0	0	
2	20514100	Check Valve	-	-	-	-	1	1	0	0	
3	30735000	High Temperature Shut Down Switch	-	-	-	-	2	2	0	0	
4	31189000	Pipe	-	-	-	-	1	0	0	0	
4	31289000	Pipe	-	-	-	-	0	1	0	0	
5	31185700	Flexible Tube	-	-	-	-	1	1	0	0	
6	31184700	Pipe	-	-	-	-	1	1	0	0	1 1/4" NPT-PT
7	31184600	Pipe	-	-	-	-	1	1	0	0	1" NPT-PT
8	31184610	Pipe	-	-	-	-	1	1	0	0	1" NPT-PT
9	31189010	Pipe	-	-	-	-	1	0	0	0	1 1/2"
9	31289010	Pipe	-	-	-	-	0	1	0	0	1 1/2"
10	31189020	Pipe	-	-	-	-	1	1	0	0	1"
11	31183800	Straight Coupling	-	-	-	-	2	2	0	0	1 1/4"x1 1/4"
12	31183810	Straight Coupling	-	-	-	-	2	2	0	0	1"x1"
13	31183830	Socket	-	-	-	-	1	1	0	0	1" NPT
14	33002006	Elbow	-	-	-	-	1	1	0	0	1"
15	33004007	Tee	-	-	-	-	2	2	0	0	1 1/4"
16	33006006	Cross	-	-	-	-	1	1	0	0	1"
17	33008006	Elbow	-	-	-	-	1	1	0	0	1" MF
18	33012006	Nipple	-	-	-	-	1	1	0	0	1"
19	33014010	Bushing	-	-	-	-	1	1	0	0	1 1/4"x1/2"
20	33014080	Bushing	-	-	-	-	1	1	0	0	1"x1/2"
21	33018070	Plug	-	-	-	-	1	1	0	0	1 1/4"
22	31184610	Pipe	-	-	-	-	1	1	0	0	1"
23	31140000	Aftercooler	-	-	-	-	1	0	0	0	
23	31240000	Aftercooler	-	-	-	-	0	1	0	0	

Fig. 12 AFTERCOOLER & AIR PIPING (ES-50/60)

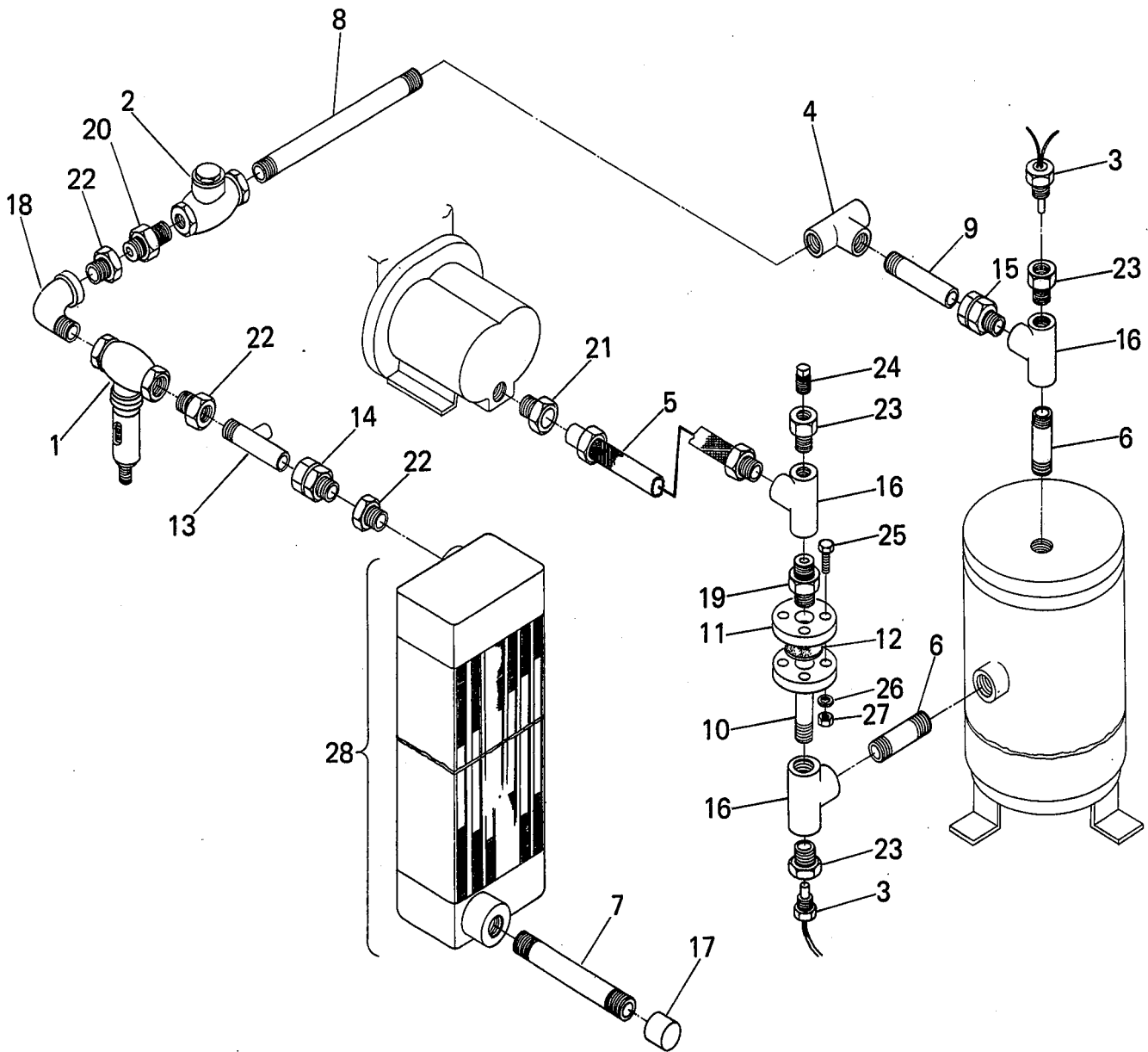


Fig. 12 AFTERCOOLER & AIR PIPING (ES-50/60)

REF. NO.	PARTS NO.	DESCRIPTION .	QUANTITY								REMARKS
			ES								
			10	15	20	25	30	40	50	60	
1	29415300	Minimum Pressure Valve	-	-	-	-	-	-	1	1	
2	22114100	Check Valve	-	-	-	-	-	-	1	1	
3	30735000	High Temperature Shut Down Switch	-	-	-	-	-	-	2	2	
4	33004007	Tee	-	-	-	-	-	-	1	1	1/4"
5	31385900	Flexible Tube	-	-	-	-	-	-	1	1	
6	31384800	Pipe	-	-	-	-	-	-	2	2	1/2" NPT-PT
7	31384810	Pipe	-	-	-	-	-	-	1	1	1/2" NPT-PT
8	31384700	Pipe	-	-	-	-	-	-	1	1	1/4"
9	31389000	Pipe	-	-	-	-	-	-	1	1	1/4"
10	31389010	Pipe with Flange	-	-	-	-	-	-	1	1	
11	31389020	Flange Coupling	-	-	-	-	-	-	1	1	
12	33205040	Gasket	-	-	-	-	-	-	1	1	
13	31389030	Pipe	-	-	-	-	-	-	1	0	
13	31489030	Pipe	-	-	-	-	-	-	0	1	
14	31383800	Straight Coupling	-	-	-	-	-	-	1	1	1/4"x1/4"
15	31383810	Straight Coupling	-	-	-	-	-	-	1	1	1/4"x1/2"
16	33004008	Tee	-	-	-	-	-	-	3	3	1/2"
17	31383830	Socket	-	-	-	-	-	-	1	1	1/2" NPT
18	33008008	Elbow	-	-	-	-	-	-	1	1	1/2"
19	33012008	Nipple	-	-	-	-	-	-	1	1	1/2"
20	33012007	Nipple	-	-	-	-	-	-	1	1	1/4"
21	33014190	Bushing	-	-	-	-	-	-	1	1	2"x1/2"
22	33014160	Bushing	-	-	-	-	-	-	3	3	1/2"x1/4"
23	33014130	Bushing	-	-	-	-	-	-	3	3	1/2"x1/2"
24	33018040	Plug	-	-	-	-	-	-	1	1	1/2"
25	33281655	Bolt	-	-	-	-	-	-	4	4	M16x55
26	33761416	Spring Washer	-	-	-	-	-	-	4	4	M16
27	33750416	Nut	-	-	-	-	-	-	4	4	M16
28	31340000	Aftercooler	-	-	-	-	-	-	1	0	
28	31440000	Aftercooler	-	-	-	-	-	-	0	1	

Fig. 13 AIR PIPING (ES-10/15/20/25 without aftercooler)

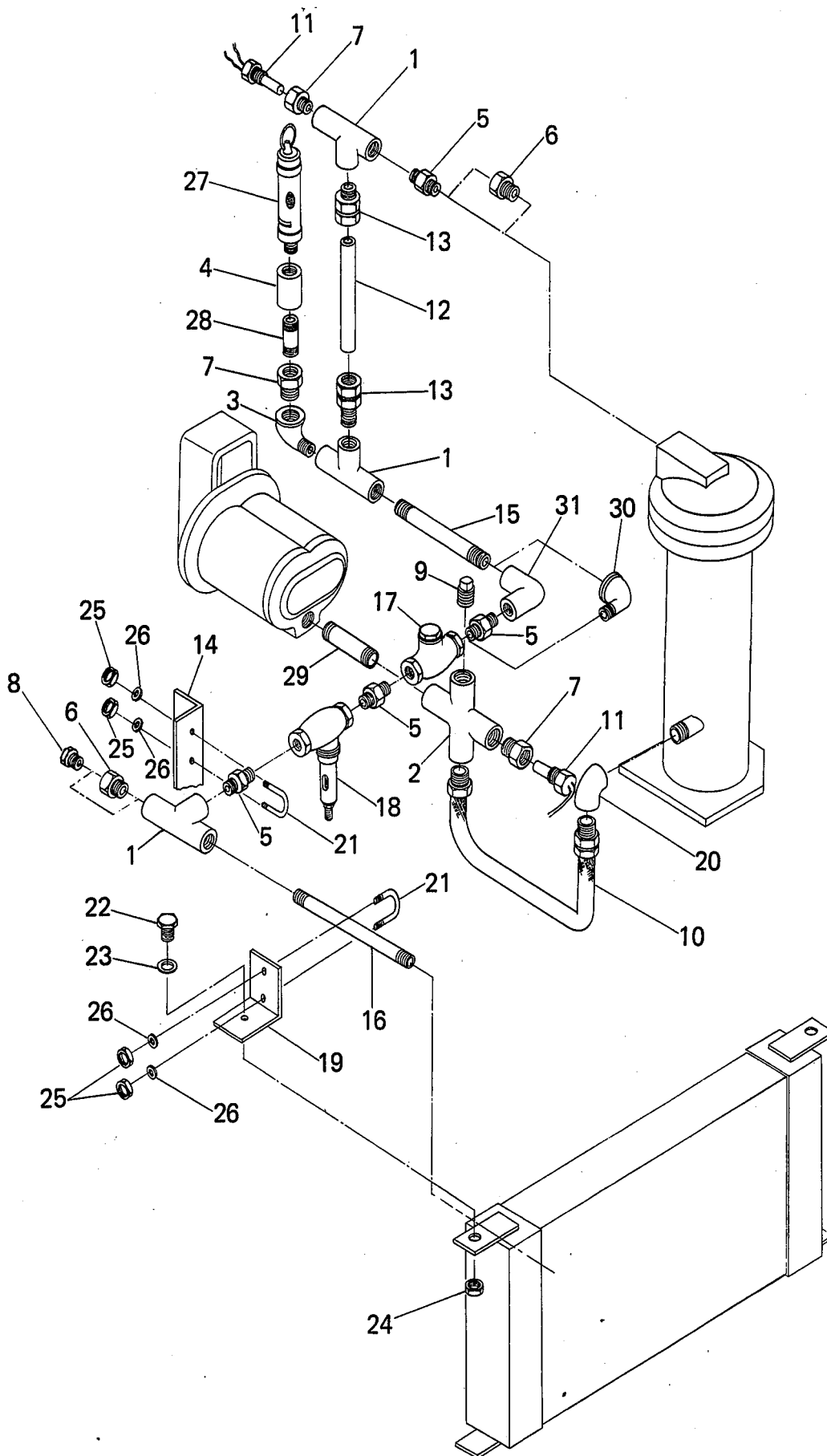


Fig. 13 AIR PIPING (ES-10/15/20/25 without aftercooler)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY								REMARKS
			10	15	20	ES				60	
1	33004006	Tee	0	0	0	3	-	-	-	-	1"
1	33004005	Tee	3	3	3	0	-	-	-	-	3/4"
2	33006006	Cross	1	1	1	1	-	-	-	-	1"
3	33008006	Elbow	0	0	0	1	-	-	-	-	1" MF
3	33008005	Elbow	1	1	1	0	-	-	-	-	3/4" MF
4	30783810	Socket	1	1	1	1	-	-	-	-	1/2" NPT
5	33012006	Nipple	0	0	0	3	-	-	-	-	1"
5	33012005	Nipple	4	4	4	0	-	-	-	-	3/4"
6	33014009	Bushing	1	1	1	1	-	-	-	-	1"x3/4"
7	33014008	Bushing	1	1	1	3	-	-	-	-	1"x1/2"
7	33014007	Bushing	2	2	2	0	-	-	-	-	3/4"x1/2"
8	33014005	Bushing	1	1	1	1	-	-	-	-	3/4"x1/4"
9	33018006	Plug	1	1	1	1	-	-	-	-	1"
10	30785600	Flexible Tube	1	1	0	0	-	-	-	-	
10	30985600	Flexible Tube	0	0	1	1	-	-	-	-	
11	30735000	High Temperature Shut Down Switch	2	2	2	2	-	-	-	-	
12	30788200	Pipe	1	1	1	0	-	-	-	-	
12	31088400	Pipe	0	0	0	1	-	-	-	-	
13	30783800	Straight Coupling	2	2	2	0	-	-	-	-	20x3/4"
13	31083800	Straight Coupling	0	0	0	2	-	-	-	-	25x3/4"
14	30789000	Support	1	1	1	0	-	-	-	-	
14	31089000	Support	0	0	0	1	-	-	-	-	
15	30784500	Pipe	1	1	1	0	-	-	-	-	3/4"
15	31084600	Pipe	0	0	0	1	-	-	-	-	1"
16	30784510	Pipe	1	1	1	0	-	-	-	-	3/4"
16	31084610	Pipe	0	0	0	1	-	-	-	-	1"
17	20114100	Check Valve	1	1	1	0	-	-	-	-	
17	20514100	Check Valve	0	0	0	1	-	-	-	-	
18	20115420	Minimum Pressure Valve	1	1	1	0	-	-	-	-	
18	20515421	Minimum Pressure Valve	0	0	0	1	-	-	-	-	
19	30780800	Support	1	1	1	1	-	-	-	-	
20	33002006	Elbow	1	1	1	1	-	-	-	-	1" 45°
21	33910305	U-Bolt	2	2	2	0	-	-	-	-	3/4"
21	33910306	U-Bolt	0	0	0	2	-	-	-	-	1"
22	33281025	Bolt	1	1	1	1	-	-	-	-	M10x25
23	33761210	Washer	1	1	1	1	-	-	-	-	M10
24	33750410	Nut	1	1	1	1	-	-	-	-	M10
25	33750408	Nut	4	4	4	4	-	-	-	-	M8
26	33761208	Washer	4	4	4	4	-	-	-	-	M8
27	30770140	Safety Valve	1	1	1	1	-	-	-	-	
28	30784400	Pipe	1	1	1	1	-	-	-	-	1/2" NPT-PT
29	31084610	Pipe	1	1	1	0	-	-	-	-	1"
29	31084660	Pipe	0	0	0	1	-	-	-	-	1"
30	33004006	Elbow	0	0	0	1	-	-	-	-	1" MF
31	33008005	Elbow	1	1	1	0	-	-	-	-	3/4"

Fig. 14 OIL COOLER & OIL PIPING (ES-10/15/20/25)

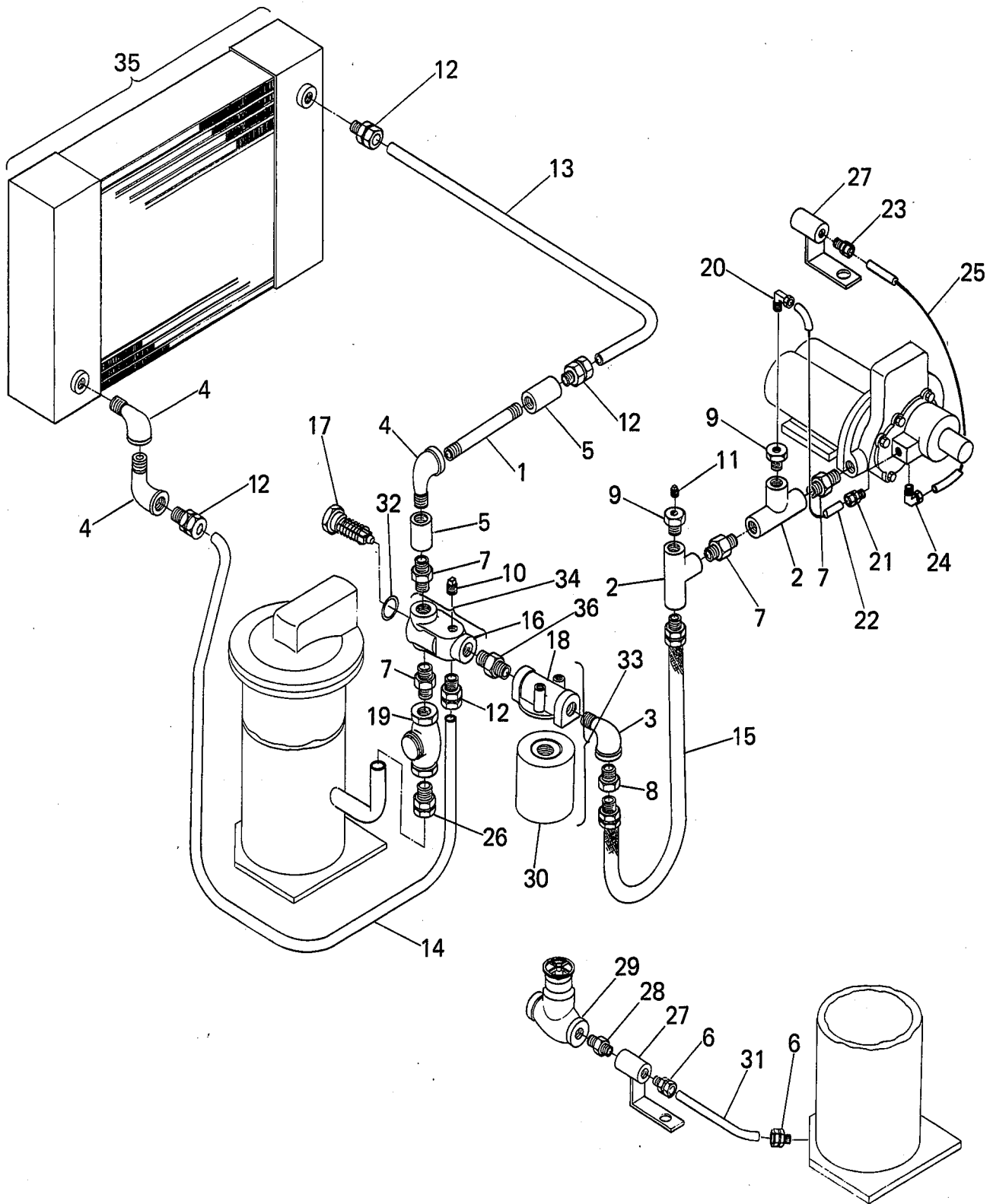


Fig. 14 OIL COOLER & OIL PIPING (ES-10/15/20/25)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY								REMARKS
			ES								
			10	15	20	25	30	40	50	60	
1	30784410	Pipe	1	1	1	1	-	-	-	-	
2	33004004	Tee	2	2	2	2	-	-	-	-	½"
3	33008005	Elbow	1	1	1	1	-	-	-	-	¾" MF
4	33008004	Elbow	3	3	3	3	-	-	-	-	½" MF
5	33010004	Socket	2	2	2	2	-	-	-	-	½"
6	33081020	Straight Coupling	2	2	2	2	-	-	-	-	10x¼"
7	33012004	Nipple	4	4	4	4	-	-	-	-	½"
8	33014007	Bushing	1	1	1	1	-	-	-	-	¾"x½"
9	33014003	Bushing	2	2	2	2	-	-	-	-	½"x¼"
10	33018004	Plug	1	1	1	1	-	-	-	-	½"
11	33018002	Plug	1	1	1	1	-	-	-	-	¼"
12	33082164	Straight Coupling	4	4	4	4	-	-	-	-	16x½"
13	30786700	Copper Tube	1	1	1	1	-	-	-	-	Dia. 16mm
14	30786710	Copper Tube	1	1	1	1	-	-	-	-	Dia. 16mm
15	30785400	Flexible Tube	1	1	1	1	-	-	-	-	
16	30771010	Thermostatic Control Valve Body	1	1	1	1	-	-	-	-	
17	20119300	Thermostatic Control Valve	1	1	1	1	-	-	-	-	
18	30776010	Oil Filter Body	1	1	1	1	-	-	-	-	
19	21115500	Check Valve	1	1	1	1	-	-	-	-	
20	33081062	Elbow Coupling	1	1	1	1	-	-	-	-	6x¼"
21	33080062	Straight Coupling	1	1	1	1	-	-	-	-	6x¼"
22	30786200	Copper Tube	1	1	1	1	-	-	-	-	Dia. 6mm
23	33086062	Straight Coupling	1	1	1	1	-	-	-	-	¼"x¼"
24	33087022	Elbow Coupling	1	1	1	1	-	-	-	-	¼"x¼"
25	30787300	Nylon Tube	1	1	1	1	-	-	-	-	Dia. ¼"
26	33086022	Straight Coupling	1	1	1	1	-	-	-	-	½"x½"
27	30789010	Welded Socket	2	2	2	2	-	-	-	-	
28	33012002	Nipple	1	1	1	1	-	-	-	-	¼"
29	20116080	Stop Valve	1	1	1	1	-	-	-	-	¼"
30	30776020	Oil Filter Element	1	1	1	1	-	-	-	-	
31	30786400	Copper Tube	1	1	1	1	-	-	-	-	Dia. 10mm
32	33211045	O-Ring	1	1	1	1	-	-	-	-	
33	30776000	Oil Filter Assembly	1	1	1	1	-	-	-	-	
34	30771000	Thermostatic Control Valve Assembly	1	1	1	1	-	-	-	-	
35	30745000	Oil Cooler	1	0	0	0	-	-	-	-	
35	30845000	Oil Cooler	0	1	0	0	-	-	-	-	
35	30945000	Oil Cooler	0	0	1	0	-	-	-	-	
35	31045000	Oil Cooler	0	0	0	1	-	-	-	-	
36	33012005	Nipple	1	1	1	1	-	-	-	-	¾"

Fig. 15 OIL COOLER & OIL PIPING (ES-30/40)

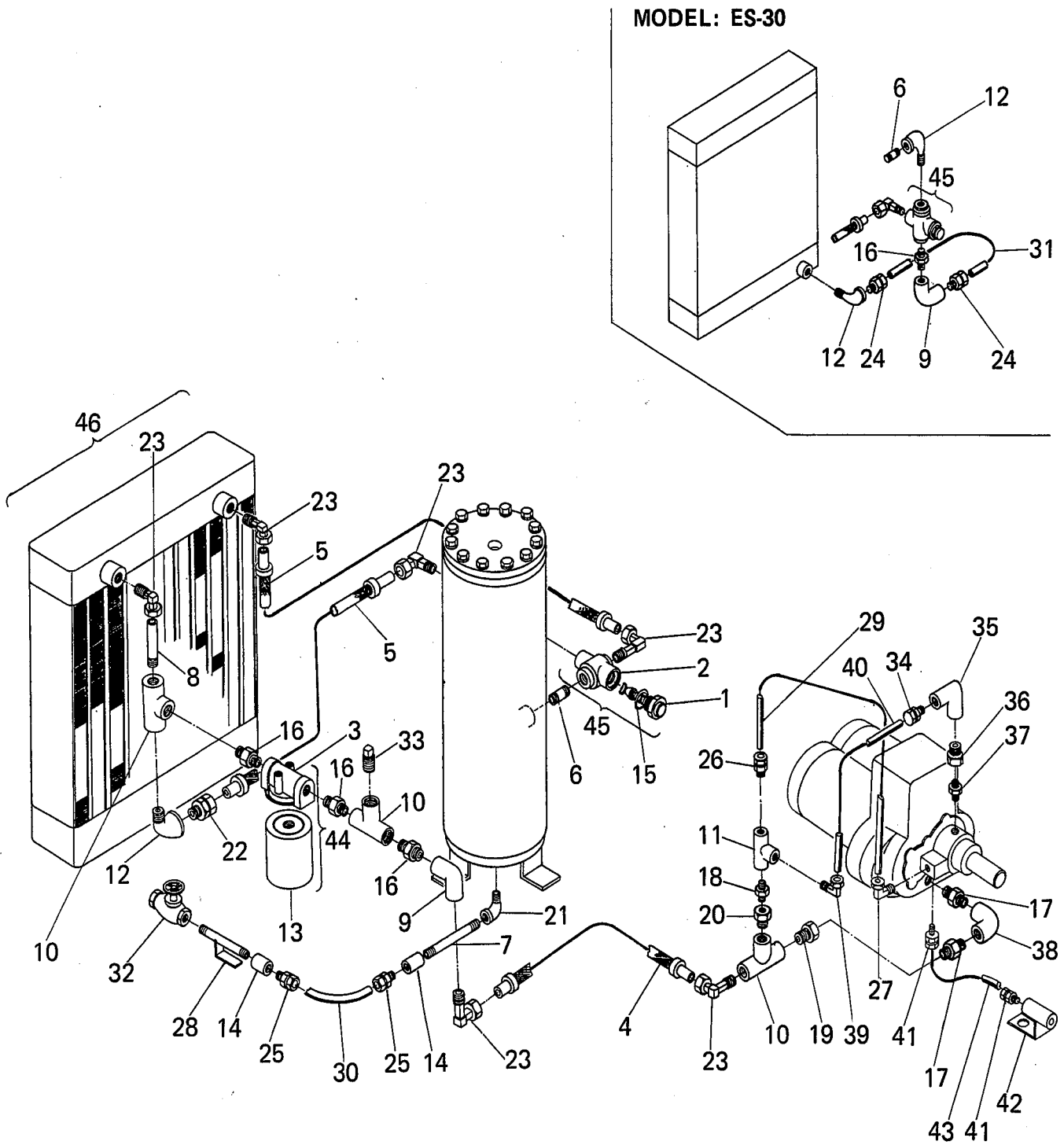


Fig. 15 OIL COOLER & OIL PIPING (ES-30/40)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY							REMARKS	
			10	15	20	ES			40		50
1	31171010	Thermostatic Control Valve	-	-	-	-	1	1	-	-	
2	31171020	Thermostatic Control Valve Body	-	-	-	-	1	1	-	-	
3	31176010	Oil Filter Body	-	-	-	-	1	1	-	-	
4	31185500	Flexible Tube	-	-	-	-	1	1	-	-	
5	31185510	Flexible Tube	-	-	-	-	2	2	-	-	
6	31184500	Pipe	-	-	-	-	1	1	-	-	3/4" NPT-PT
7	31184400	Pipe	-	-	-	-	1	1	-	-	1/2" NPT-PT
8	31184510	Pipe	-	-	-	-	1	1	-	-	3/4"
9	33010004	Elbow	-	-	-	-	2	1	-	-	3/4"
10	33004005	Tee	-	-	-	-	3	3	-	-	3/4"
11	33004002	Tee	-	-	-	-	1	1	-	-	1/4"
12	33008005	Elbow	-	-	-	-	3	1	-	-	3/4" MF
13	31176020	Oil Filter Element	-	-	-	-	1	1	-	-	
14	33010004	Socket	-	-	-	-	2	2	-	-	1/2"
15	21114260	O-Ring	-	-	-	-	1	1	-	-	
16	33012005	Nipple	-	-	-	-	4	3	-	-	3/4"
17	33012004	Nipple	-	-	-	-	2	2	-	-	1/2"
18	33012002	Nipple	-	-	-	-	1	1	-	-	1/4"
19	33014007	Bushing	-	-	-	-	1	1	-	-	3/4"x1/2"
20	33014005	Bushing	-	-	-	-	1	1	-	-	3/4"x1/4"
21	31381080	Elbow	-	-	-	-	1	1	-	-	1/2" NPT MF
22	31183820	Straight Coupling	-	-	-	-	1	1	-	-	3/4"x3/4"
23	31183830	Elbow Coupling	-	-	-	-	5	6	-	-	3/4"x3/4"
24	33082205	Straight Coupling	-	-	-	-	1	0	-	-	20x3/4"
25	33080124	Straight Coupling	-	-	-	-	2	2	-	-	12x1/2"
26	33080062	Straight Coupling	-	-	-	-	1	1	-	-	6x1/4"
27	33081062	Elbow Coupling	-	-	-	-	1	1	-	-	6x1/4"
28	31189030	Pipe	-	-	-	-	1	1	-	-	
29	31186200	Copper Tube	-	-	-	-	1	1	-	-	Dia. 6mm
30	31186500	Copper Tube	-	-	-	-	1	1	-	-	Dia. 12mm
31	31186900	Copper Tube	-	-	-	-	1	1	-	-	Dia. 20mm
32	18006440	Stop Valve	-	-	-	-	1	1	-	-	1/2"
33	33018005	Plug	-	-	-	-	1	1	-	-	3/4"
34	33080102	Straight Coupling	-	-	-	-	1	1	-	-	10x1/4"
35	33004002	Elbow	-	-	-	-	1	1	-	-	1/4"
36	33014001	Bushing	-	-	-	-	1	1	-	-	1/4"x1/8"
37	33012001	Nipple	-	-	-	-	1	1	-	-	1/8"
38	33004004	Elbow	-	-	-	-	1	1	-	-	1/2"
39	33081102	Elbow Coupling	-	-	-	-	1	1	-	-	10x1/4"
40	31186400	Copper Pipe	-	-	-	-	1	1	-	-	Dia. 10mm
41	33087022	Straight Coupling	-	-	-	-	2	2	-	-	1/4"x1/4"
42	30789010	Welded Socket	-	-	-	-	1	1	-	-	
43	31187300	Nylon Tube	-	-	-	-	1	1	-	-	Dia. 1/4"
44	31176000	Oil Filter Assembly	-	-	-	-	1	1	-	-	
45	31171000	Thermostatic Control Valve Assembly	-	-	-	-	1	1	-	-	
46	31145000	Oil Cooler	-	-	-	-	1	0	-	-	
46	31245000	Oil Cooler	-	-	-	-	0	1	-	-	

Fig. 16 OIL COOLER & OIL PIPING (ES-50/60)

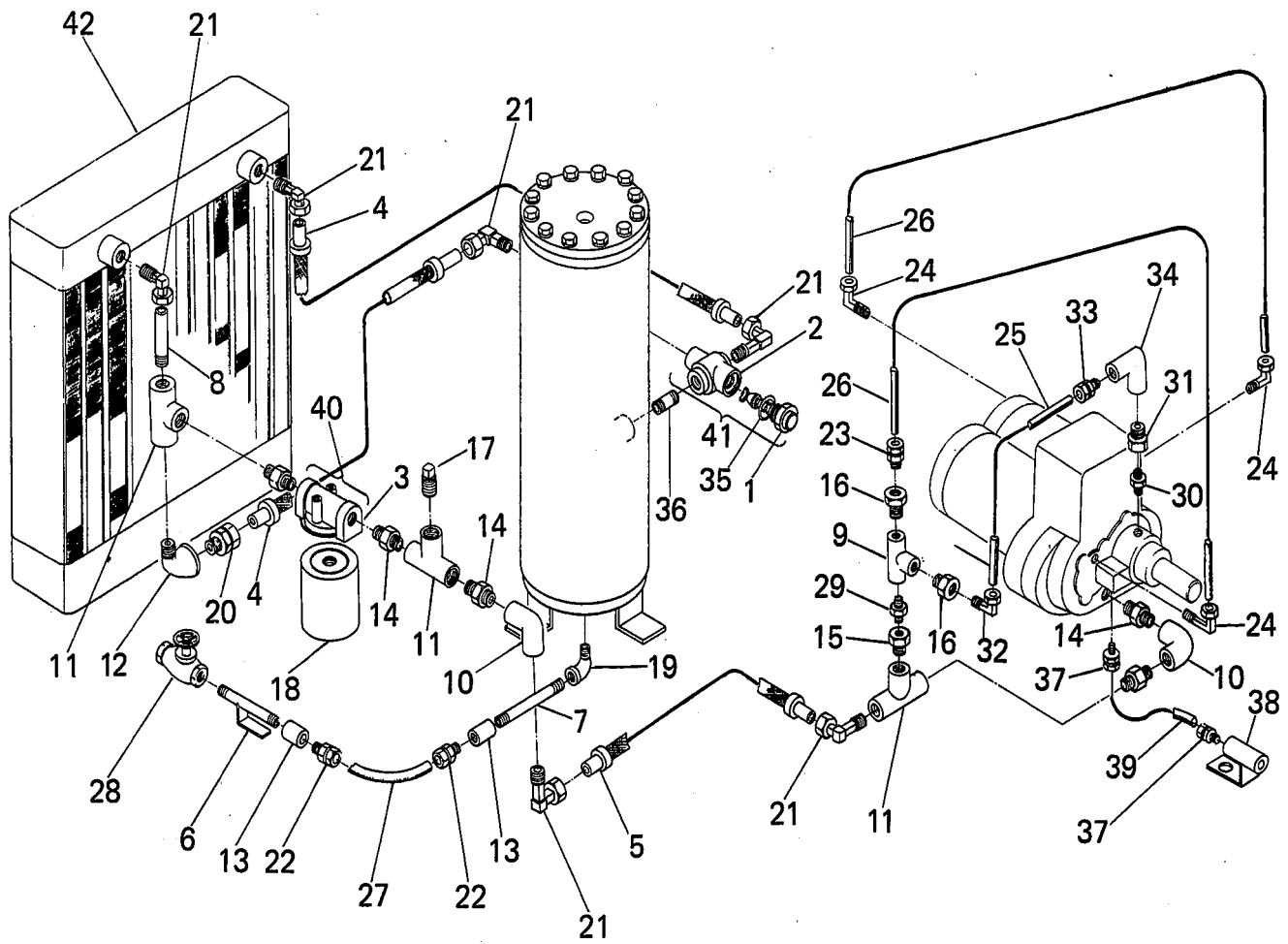


Fig. 16 OIL COOLER & OIL PIPING (ES-50/60)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY								REMARKS
			ES								
			10	15	20	25	30	40	50	60	
1	31171010	Thermostatic Control Valve	-	-	-	-	-	-	1	1	
2	31171020	Thermostatic Control Valve Body	-	-	-	-	-	-	1	1	
3	31176010	Oil Filter Body	-	-	-	-	-	-	1	1	
4	31385500	Flexible Tube-Oil	-	-	-	-	-	-	2	2	
5	31385510	Flexible Tube-Oil	-	-	-	-	-	-	1	1	
6	31189030	Pipe	-	-	-	-	-	-	1	1	
7	31184400	Pipe	-	-	-	-	-	-	1	1	1/2" NPT-PT
8	31389050	Pipe	-	-	-	-	-	-	1	1	3/4"
9	33004003	Tee	-	-	-	-	-	-	1	1	3/8"
10	33002005	Elbow	-	-	-	-	-	-	2	2	3/4"
11	33004005	Tee	-	-	-	-	-	-	3	3	3/4"
12	33008005	Elbow	-	-	-	-	-	-	1	1	3/4" MF
13	33008004	Socket	-	-	-	-	-	-	2	2	1/2"
14	33012005	Nipple	-	-	-	-	-	-	5	5	3/4"
15	33014006	Bushing	-	-	-	-	-	-	1	1	3/4" x 3/8"
16	33014002	Bushing	-	-	-	-	-	-	2	2	3/8" x 1/4"
17	33018005	Plug	-	-	-	-	-	-	1	1	3/4"
18	31176020	Oil Filter Element	-	-	-	-	-	-	1	1	
19	31381080	Elbow	-	-	-	-	-	-	1	1	1/2" NPT MF
20	31183820	Straight Coupling	-	-	-	-	-	-	1	1	3/4" x 3/4"
21	31183830	Elbow Coupling	-	-	-	-	-	-	6	6	3/4" x 3/4"
22	33080124	Straight Coupling	-	-	-	-	-	-	2	2	10x1/2"
23	33080062	Straight Coupling	-	-	-	-	-	-	1	1	6x1/4"
24	33083062	Elbow Coupling	-	-	-	-	-	-	3	3	6x1/4"
25	31386400	Copper Tube	-	-	-	-	-	-	1	1	Dia. 10mm
26	31386200	Copper Tube	-	-	-	-	-	-	2	2	Dia. 6mm
27	31386500	Copper Tube	-	-	-	-	-	-	1	1	Dia. 12mm
28	18006440	Stop Valve	-	-	-	-	-	-	1	1	
29	33012003	Nipple	-	-	-	-	-	-	1	1	3/8"
30	33012001	Nipple	-	-	-	-	-	-	1	1	1/8"
31	33014001	Bushing	-	-	-	-	-	-	1	1	1/4" x 1/8"
32	33083102	Elbow Coupling	-	-	-	-	-	-	1	1	10x3/8"
33	33083102	Straight Coupling	-	-	-	-	-	-	1	1	10x3/8"
34	33002002	Elbow	-	-	-	-	-	-	1	1	1/4"
35	21114260	O-Ring	-	-	-	-	-	-	1	1	
36	31184500	Pipe	-	-	-	-	-	-	1	1	3/4" NPT-PT
37	33086022	Straight Coupling	-	-	-	-	-	-	2	2	1/4" x 1/4"
38	30789010	Welded Socket	-	-	-	-	-	-	1	1	
39	31387300	Nylon Tube	-	-	-	-	-	-	1	1	1/4"
40	31176000	Oil Filter Assembly	-	-	-	-	-	-	1	1	
41	31171000	Thermostatic Control Valve Assembly	-	-	-	-	-	-	1	1	
42	31345000	Oil Cooler	-	-	-	-	-	-	1	0	
42	31445000	Oil Cooler	-	-	-	-	-	-	0	1	

Fig. 17 CONTROL AIR PIPING (ES-10/15/20/25)

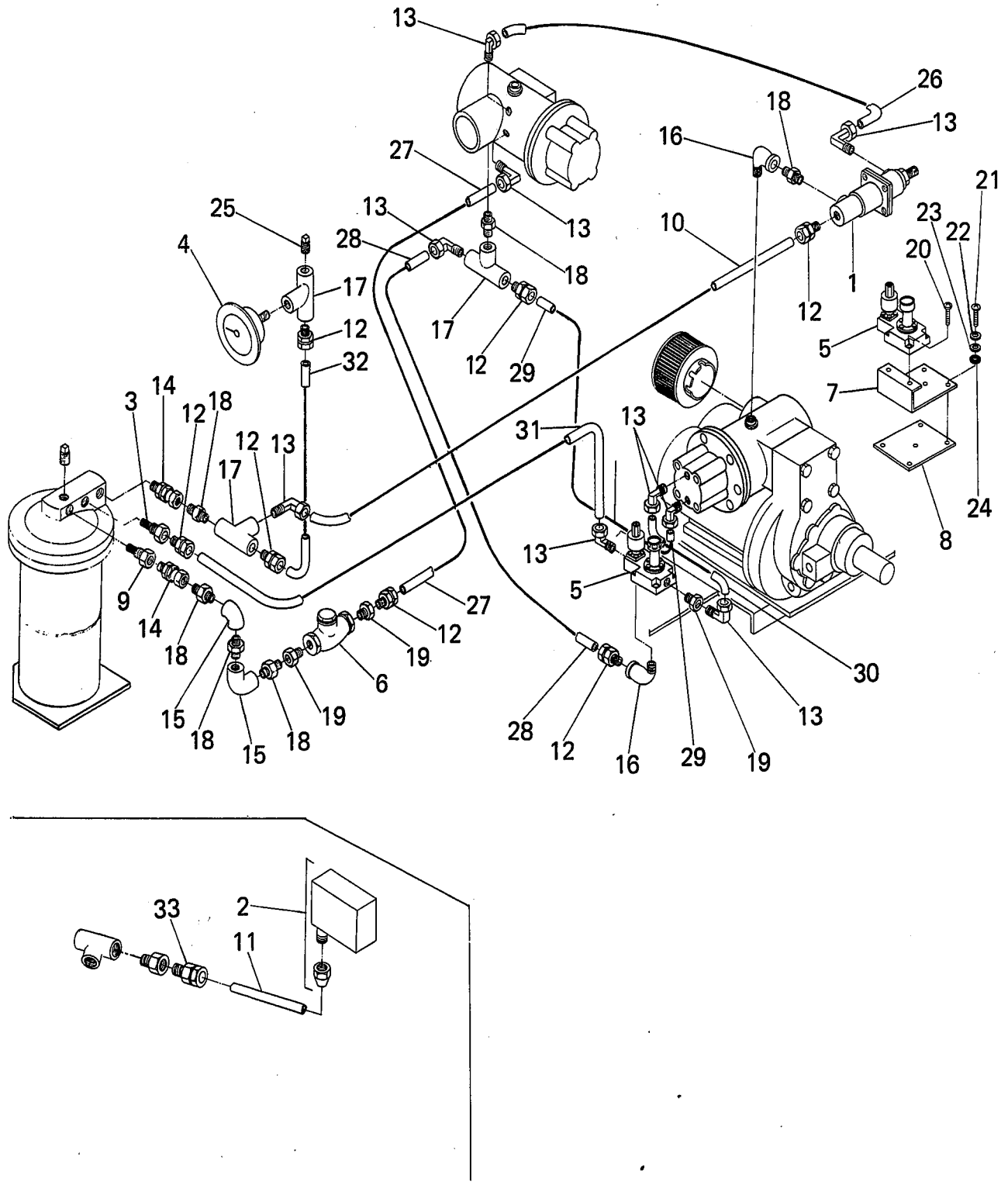


Fig. 17 CONTROL AIR PIPING (ES-10/15/20/25)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY							REMARKS	
			ES								
			10	15	20	25	30	40	50	60	
1	21116200	Vacuum Valve	1	1	1	1	-	-	-	-	
2	30725000	Pressure Switch	1	1	1	1	-	-	-	-	
3	20519000	Control Line Filter	1	1	1	1	-	-	-	-	
4	30778000	Pressure Gauge	1	1	1	1	-	-	-	-	
5	30731010	Control Valve Assembly	1	1	1	1	-	-	-	-	
6	21116370	Check Valve	1	1	1	1	-	-	-	-	
7	30789020	Support	1	1	1	1	-	-	-	-	
8	21113301	Rubber Sheet	1	1	1	1	-	-	-	-	
9	21116180	Scavenge Filter	1	1	1	1	-	-	-	-	
10	30787320	Nylon Tube	1	1	1	1	-	-	-	-	¼"
11	30786410	Copper Tube	1	1	1	1	-	-	-	-	Dia. 6mm
12	33086022	Straight Coupling	7	7	7	7	-	-	-	-	6x¼"
13	33087022	Elbow Coupling	9	9	9	9	-	-	-	-	¼"x¼"
14	31183850	Straight Coupling	2	2	2	2	-	-	-	-	
15	33002002	Elbow	2	2	2	2	-	-	-	-	¼"
16	33008002	Elbow	2	2	2	2	-	-	-	-	¼" MF
17	33004002	Tee	3	3	3	3	-	-	-	-	¼"
18	33012002	Nipple	6	6	6	6	-	-	-	-	¼"
19	33014002	Bushing	3	3	3	3	-	-	-	-	⅜" x ¼"
20	33530640	Bolt	2	2	2	2	-	-	-	-	M6x40
21	33610600	Bolt	3	3	3	3	-	-	-	-	M6
22	33761406	Spring Washer	3	3	3	3	-	-	-	-	M6
23	33761206	Washer	3	3	3	3	-	-	-	-	M6
24	21113700	Rubber Washer	3	3	3	3	-	-	-	-	
25	33018002	Plug	2	2	2	2	-	-	-	-	¼"
26	30787330	Nylon Tube	1	1	1	1	-	-	-	-	¼"
27	30787340	Nylon Tube	1	1	1	1	-	-	-	-	¼"
28	30787350	Nylon Tube	1	1	1	1	-	-	-	-	¼"
29	30787360	Nylon Tube	1	1	1	1	-	-	-	-	¼"
30	30787370	Nylon Tube	1	1	1	1	-	-	-	-	¼"
31	30787380	Nylon Tube	1	1	1	1	-	-	-	-	¼"
32	30787390	Nylon Tube	1	1	1	1	-	-	-	-	¼"
33	33080062	Straight Coupling	1	1	1	1	-	-	-	-	6x¼"

Fig. 18 CONTROL AIR PIPING (ES-30/40/50/60)

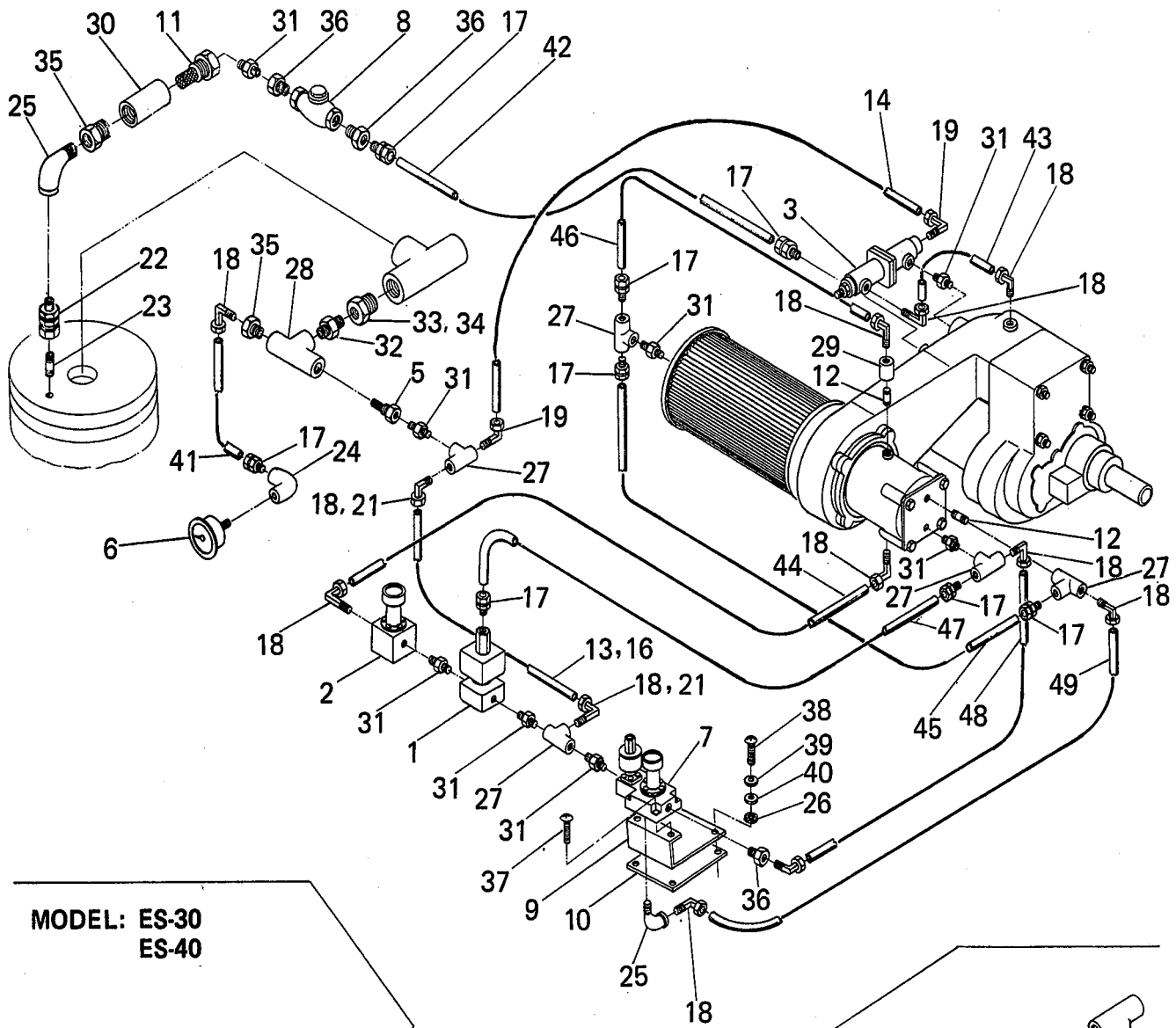


Fig. 18 CONTROL AIR PIPING (ES-30/40/50/60)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY							REMARKS	
			ES								
			10	15	20	25	30	40	50	60	
1	31131000	3-Way Solenoid Valve	-	-	-	-	1	1	1	1	
2	25302730	Regulator	-	-	-	-	1	1	1	1	
3	21116200	Vacuum Valve	-	-	-	-	1	1	1	1	
4	31125000	Pressure Switch—unloader	-	-	-	-	1	1	1	1	
5	20519000	Control Line Filter	-	-	-	-	1	1	1	1	
6	30778000	Pressure Gauge	-	-	-	-	1	1	1	1	
7	31331010	Control Valve Assembly	-	-	-	-	0	0	1	1	
7	30731010	Control Valve Assembly	-	-	-	-	1	1	0	0	
8	21116370	Check Valve	-	-	-	-	1	1	1	1	
9	30789020	Support	-	-	-	-	1	1	1	1	
10	21113301	Rubber Sheet	-	-	-	-	1	1	1	1	
11	22116180	Scavenge Filter	-	-	-	-	1	1	1	1	
12	31177220	Orifice Fitting	-	-	-	-	2	2	2	2	
13	31187310	Nylon Tube	-	-	-	-	1	1	1	1	1/4"
14	31187500	Nylon Tube	-	-	-	-	1	1	1	1	3/8"
15	31186210	Copper Tube	-	-	-	-	1	1	1	1	Dia. 6mm
16	31386410	Copper Tube	-	-	-	-	0	0	1	1	Dia. 10mm
17	33086022	Straight Coupling	-	-	-	-	8	8	8	8	1/4"
18	33087022	Elbow Coupling	-	-	-	-	12	12	10	10	1/4"
19	33087032	Elbow Coupling	-	-	-	-	2	2	2	2	3/8"x1/4"
20	33083062	Elbow Coupling	-	-	-	-	1	1	1	1	6x1/4"
21	33083102	Elbow Coupling	-	-	-	-	0	0	2	2	10x1/4"
22	31183850	Straight Coupling	-	-	-	-	1	1	1	1	
23	31189070	Pipe	-	-	-	-	1	1	1	1	1/4" NPT-PT
24	33002002	Elbow	-	-	-	-	2	2	1	1	1/4"
25	33008002	Elbow	-	-	-	-	2	2	2	2	1/4" MF
26	21113700	Rubber Washer	-	-	-	-	3	3	3	3	
27	33004002	Tee	-	-	-	-	5	5	5	5	1/4"
28	33004004	Tee	-	-	-	-	1	1	1	1	1/2"
29	33010002	Socket	-	-	-	-	1	1	1	1	1/4"
30	33010004	Socket	-	-	-	-	1	1	1	1	1/2"
31	33012002	Nipple	-	-	-	-	9	9	8	8	1/4"
32	33012004	Nipple	-	-	-	-	1	1	1	1	1/2"
33	33014008	Bushing	-	-	-	-	1	1	0	0	1"x1/2"
34	33014010	Bushing	-	-	-	-	0	0	1	1	1 1/4"x1/2"
35	33014003	Bushing	-	-	-	-	2	2	2	2	1/2"x1/4"
36	33014002	Bushing	-	-	-	-	3	3	3	3	3/8"x1/4"
37	21113511	Bolt	-	-	-	-	2	2	2	2	M6x40
38	33610600	Bolt	-	-	-	-	3	3	3	3	M6
39	33761406	Spring Washer	-	-	-	-	3	3	3	3	M6
40	33761206	Washer	-	-	-	-	3	3	3	3	M6
41	31187320	Nylon Tube	-	-	-	-	1	1	1	1	1/4"
42	31187330	Nylon Tube	-	-	-	-	1	1	1	1	1/4"
43	31187340	Nylon Tube	-	-	-	-	1	1	1	1	1/4"
44	31187350	Nylon Tube	-	-	-	-	1	1	1	1	1/4"
45	31187360	Nylon Tube	-	-	-	-	1	1	1	1	1/4"
46	31187370	Nylon Tube	-	-	-	-	1	1	1	1	1/4"
47	31187380	Nylon Tube	-	-	-	-	1	1	1	1	1/4"
48	31187390	Nylon Tube	-	-	-	-	1	1	1	1	1/4"
49	31187400	Nylon Tube	-	-	-	-	1	1	1	1	1/4"

Fig. 19 ENCLOSURE (ES-10/15/20/25)

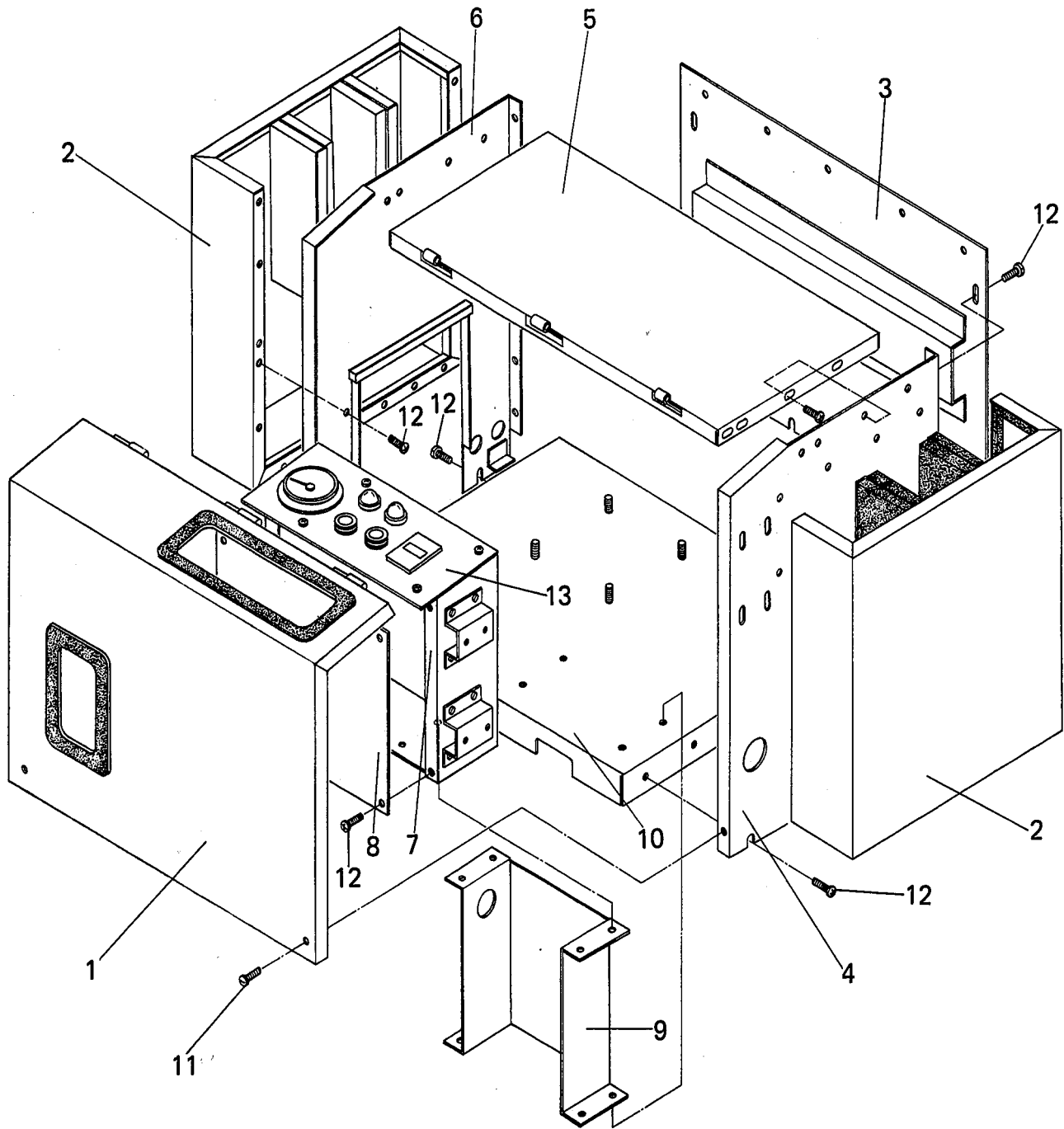


Fig. 19 ENCLOSURE (ES-10/15/20/25)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY								REMARKS
			ES								
			10	15	20	25	30	40	50	60	
1	30760000	Front Door	1	1	1	1	-	-	-	-	
2	30760010	Duct	2	2	2	2	-	-	-	-	
3	30760020	Panel-back	1	1	1	1	-	-	-	-	
4	30760030	Panel-right	1	1	1	1	-	-	-	-	
5	30760040	Panel-top	1	1	1	1	-	-	-	-	
6	30760050	Panel-left (without aftercooler)	1	1	1	0	-	-	-	-	
6	31060050	Panel-left (without aftercooler)	0	0	0	1	-	-	-	-	
6	30760150	Panel-left (with aftercooler)	1	1	0	0	-	-	-	-	
6	30960150	Panel-left (with aftercooler)	0	0	1	0	-	-	-	-	
6	31060150	Panel-left (with aftercooler)	0	0	0	1	-	-	-	-	
7	31060060	Starter And Control Box 230V 60Hz	0	0	0	1	-	-	-	-	
7	31060070	Starter And Control Box 460V 60Hz	0	0	0	1	-	-	-	-	
7	31060080	Starter And Control Box 575V 60Hz	0	0	0	1	-	-	-	-	
7	30960060	Starter And Control Box 230V 60Hz	0	0	1	0	-	-	-	-	
7	30960070	Starter And Control Box 460V 60Hz	0	0	1	0	-	-	-	-	
7	30960080	Starter And Control Box 575V 60Hz	0	0	1	0	-	-	-	-	
7	30860060	Starter And Control Box 230V 60Hz	0	1	0	0	-	-	-	-	
7	30860070	Starter And Control Box 460V 60Hz	0	1	0	0	-	-	-	-	
7	30860080	Starter And Control Box 575V 60Hz	0	1	0	0	-	-	-	-	
7	30760060	Starter And Control Box 230V 60Hz	1	0	0	0	-	-	-	-	
7	30760070	Starter And Control Box 460V 60Hz	1	0	0	0	-	-	-	-	
7	30760080	Starter And Control Box 575V 60Hz	1	0	0	0	-	-	-	-	
8	30760090	Cover	1	1	1	1	-	-	-	-	
9	30760100	Support	1	1	1	1	-	-	-	-	
10	30760110	Base Plate	1	1	1	1	-	-	-	-	
11	30760120	Bolt	4	4	4	4	-	-	-	-	M6
12	21117710	Bolt	71	71	71	71	-	-	-	-	M6
13	30760140	Instrument Panel	1	1	1	1	-	-	-	-	

Fig. 20 ENCLOSURE (ES-30/40/50/60)

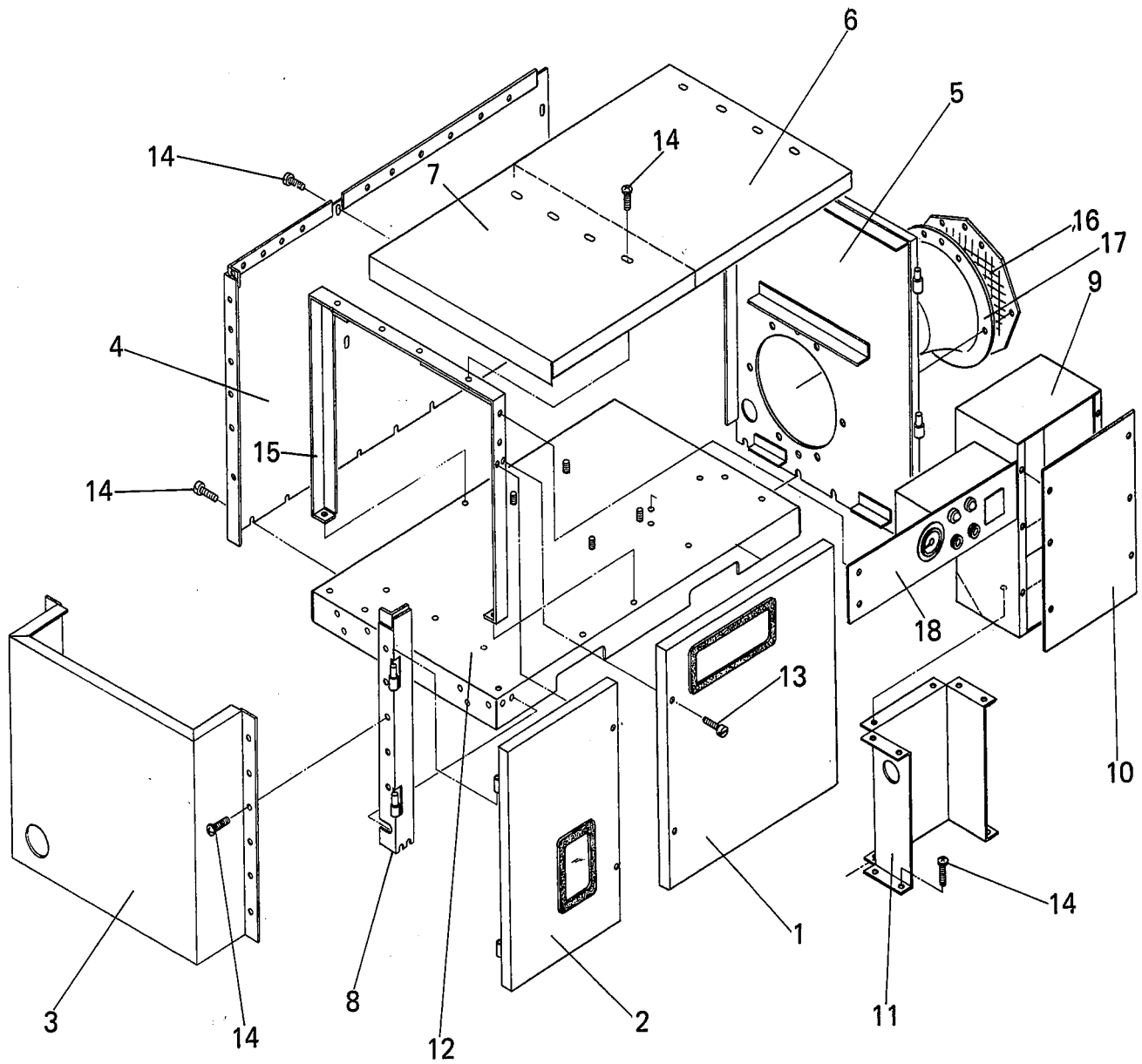


Fig. 20 ENCLOSURE (ES-30/40/50/60)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY								REMARKS
			ES								
			10	15	20	25	30	40	50	60	
1	31360000	Front Door—right	—	—	—	—	0	0	1	1	
1	31160000	Front Door—right	—	—	—	—	1	1	0	0	
2	31360010	Front Door—left	—	—	—	—	0	0	1	1	
2	31160010	Front Door—left	—	—	—	—	1	1	0	0	
3	31360020	Panel Duct	—	—	—	—	0	0	1	1	
3	31160020	Panel Duct	—	—	—	—	1	1	0	0	
4	31360030	Panel—back	—	—	—	—	0	0	1	1	
4	31160030	Panel—back	—	—	—	—	1	1	0	0	
5	31360040	Panel—right	—	—	—	—	0	0	1	1	
5	31160040	Panel—right	—	—	—	—	1	1	0	0	
6	31360050	Panel—top right	—	—	—	—	0	0	1	1	
6	31160050	Panel—top	—	—	—	—	1	1	0	0	
7	31360060	Panel—top left	—	—	—	—	0	0	1	1	
8	31360070	Frame	—	—	—	—	0	0	1	1	
8	31160070	Frame	—	—	—	—	1	1	0	0	
9	31460080	Starter And Control Box 230V 60Hz	—	—	—	—	0	0	0	1	
9	31460090	Starter And Control Box 460V 60Hz	—	—	—	—	0	0	0	1	
9	31460100	Starter And Control Box 575V 60Hz	—	—	—	—	0	0	0	1	
9	31360080	Starter And Control Box 230V 60Hz	—	—	—	—	0	0	1	0	
9	31360090	Starter And Control Box 460V 60Hz	—	—	—	—	0	0	1	0	
9	31360100	Starter And Control Box 575V 60Hz	—	—	—	—	0	0	1	0	
9	31260080	Starter And Control Box 230V 60Hz	—	—	—	—	0	1	0	0	
9	31260090	Starter And Control Box 460V 60Hz	—	—	—	—	0	1	0	0	
9	31260100	Starter And Control Box 575V 60Hz	—	—	—	—	0	1	0	0	
9	31160080	Starter And Control Box 230V 60Hz	—	—	—	—	1	0	0	0	
9	31160090	Starter And Control Box 460V 60Hz	—	—	—	—	1	0	0	0	
9	31160100	Starter And Control Box 575V 60Hz	—	—	—	—	1	0	0	0	
10	31360110	Cover-starter & control box	—	—	—	—	0	0	1	1	
10	31160110	Cover-starter & control box	—	—	—	—	1	1	0	0	
11	31360120	Support	—	—	—	—	0	0	1	1	
11	31160120	Support	—	—	—	—	1	1	0	0	
12	31360130	Base Plate	—	—	—	—	0	0	1	1	
12	31160130	Base Plate	—	—	—	—	1	1	0	0	
13	31160180	Bolt	—	—	—	—	6	6	6	6	M6
14	21117710	Bolt	—	—	—	—	94	94	109	109	M6
15	31360140	Frame	—	—	—	—	0	0	1	1	
15	31160140	Frame	—	—	—	—	1	1	0	0	
16	31360150	Cover—fan	—	—	—	—	0	0	1	1	
16	31160150	Cover—fan	—	—	—	—	1	1	0	0	
17	31360160	Suction Cone	—	—	—	—	0	0	1	1	
17	31160160	Suction Cone	—	—	—	—	1	1	0	0	
18	31360170	Instrument Panel	—	—	—	—	0	0	1	1	
18	31160170	Instrument Panel	—	—	—	—	1	1	0	0	

Fig. 21 STARTER & CONTROL BOX (ES-10/15)

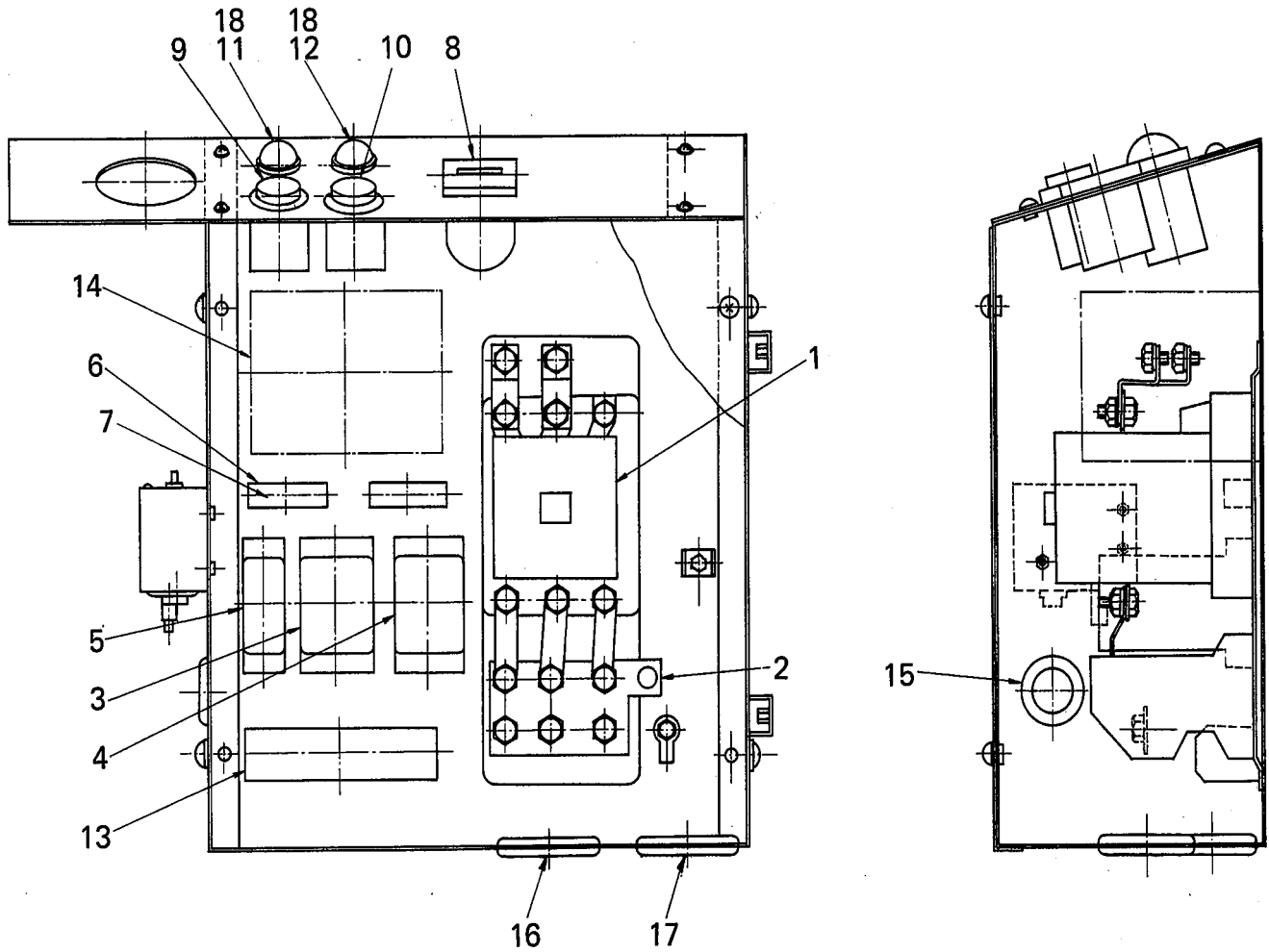


Fig. 21 STARTER & CONTROL BOX (ES-10/15)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY						REMARKS
			ES-10 230/60	ES-10 460/60	ES-10 575/60	ES-15 230/60	ES-15 460/60	ES-15 575/60	
1	30725010	Contactactor	1	0	0	1	0	0	Fuji SC-3/UL
1	30725020	Contactactor	0	1	1	0	1	1	Fuji SRC3631-2UL
2	30725030	Thermal Overload Relay	1	0	0	0	0	0	Fuji TR-3/UL 29-41A
2	30825030	Thermal Overload Relay	0	0	0	1	0	0	Fuji TR-3/UL 41-57A
2	30725040	Thermal Overload Relay	0	1	0	0	0	1	Fuji TR-2/UL 15-22A
2	30725050	Thermal Overload Relay	0	0	1	0	0	0	Fuji TR-2/UL 11-15A
2	30825040	Thermal Overload Relay	0	0	0	0	1	0	Fuji TR-2/UL 22-30A
3	30735000	Time Delay Relay	1	1	1	1	1	1	
4	30735010	Time Delay Relay	1	1	1	1	1	1	
5	30735020	Power Relay	1	1	1	1	1	1	
6	30735030	Fuse Holder	2	2	2	2	2	2	
7	30735040	Control Fuse Element	2	2	2	2	2	2	
8	30735050	Hour Meter	1	1	1	1	1	1	
9	30735060	Push Button Switch—start	1	1	1	1	1	1	
10	30735070	Push Button Switch—stop	1	1	1	1	1	1	
11	30735080	Run Light—green	1	1	1	1	1	1	
12	30735090	Power on Light—red	1	1	1	1	1	1	
13	30735100	Terminal Board	1	1	1	1	1	1	
14	30735110	Potential Transformer	0	1	0	0	1	0	
14	30735120	Potential Transformer	0	0	1	0	0	1	
15	30735130	Nylon Bushing	1	1	1	1	1	1	
16	30735140	Nylon Bushing	1	1	1	1	1	1	
17	30735150	Nylon Bushing	1	1	1	1	1	1	
18	30735160	Light Bulb	2	2	2	2	2	2	

Fig. 22 STARTER & CONTROL BOX (ES-20/25)

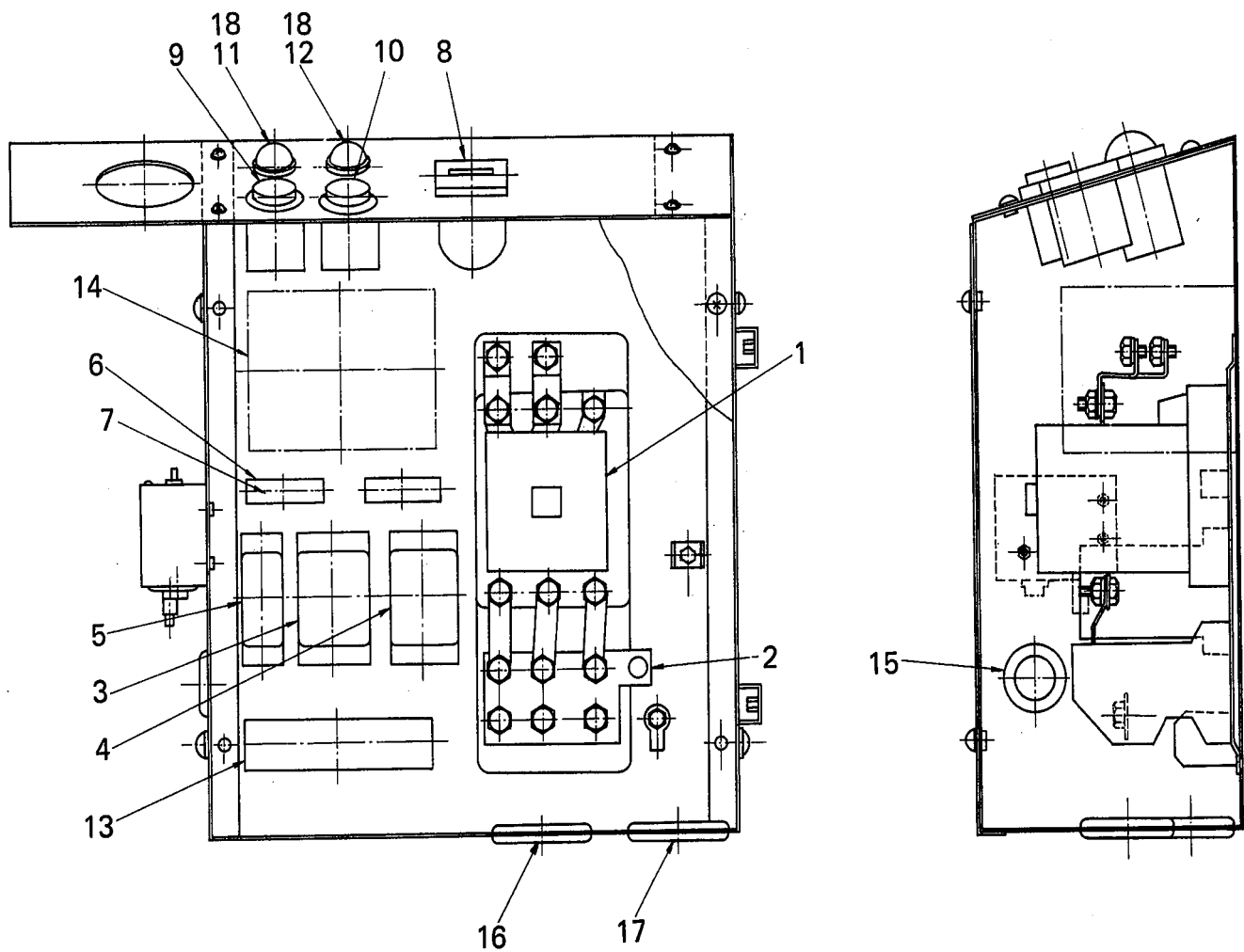


Fig. 22 STARTER & CONTROL BOX (ES-20/25)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY						REMARKS
			ES-20 230/60	ES-20 460/60	ES-20 575/60	ES-25 230/60	ES-25 460/60	ES-25 575/60	
1	30925010	Contactora	1	0	0	1	0	0	Fuji SC-4S/UL
1	30725010	Contactora	0	1	1	0	1	1	Fuji SC-3/UL
2	30925030	Thermal Overload Relay	1	0	0	0	0	0	Fuji TR-6/UL 54-77A
2	30725030	Thermal Overload Relay	0	1	0	0	0	1	Fuji TR-3/UL 29-41A
2	30925040	Thermal Overload Relay	0	0	1	0	0	0	Fuji TR-3/UL 22-30A
2	31025030	Thermal Overload Relay	0	0	0	1	0	0	Fuji TR-6/UL 78-97A
2	31025040	Thermal Overload Relay	0	0	0	0	1	0	Fuji TR-3/UL 34-46A
3	30735000	Time Delay Relay	1	1	1	1	1	1	
4	30735010	Time Delay Relay	1	1	1	1	1	1	
5	30735020	Power Relay	1	1	1	1	1	1	
6	30735030	Fuse Holder	2	2	2	2	2	2	
7	30735040	Control Fuse Element	2	2	2	2	2	2	
8	30735050	Hour Meter	1	1	1	1	1	1	
9	30735060	Push Button Switch—start	1	1	1	1	1	1	
10	30735070	Push Button Switch—stop	1	1	1	1	1	1	
11	30735080	Run Light—green	1	1	1	1	1	1	
12	30735090	Power On Light—red	1	1	1	1	1	1	
13	30735100	Terminal Board	1	1	1	1	1	1	
14	30735110	Potential Transformer	0	1	0	0	1	0	
14	30735120	Potential Transformer	0	0	1	0	0	1	
15	30735130	Nylon Bushing	1	1	1	1	1	1	
16	30735140	Nylon Bushing	1	1	1	1	1	1	
17	30735150	Nylon Bushing	1	1	1	1	1	1	
18	30735160	Light Bulb	2	2	2	2	2	2	

Fig. 23 STARTER & CONTROL BOX (ES-30/40)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY						REMARKS
			ES-30 230/60	ES-30 460/60	ES-30 575/60	ES-40 230/60	ES-40 460/60	ES-40 575/60	
1	31125010	Contactora	1	0	0	1	0	0	Fuji SC-6/UL
1	30725010	Contactora	0	1	1	0	0	1	Fuji SC-3/UL
1	30925010	Contactora	0	0	0	0	1	0	Fuji SC-4S/UL
2	31125030	Thermal Overload Relay	1	0	0	0	0	0	Fuji TR-6/UL 78-110A
2	30825030	Thermal Overload Relay	0	1	0	0	0	1	Fuji TR-3/UL 41-57A
2	31025040	Thermal Overload Relay	0	0	1	0	0	0	Fuji TR-3/UL 34-46A
2	31225030	Thermal Overload Relay	0	0	0	1	0	0	Fuji TR-6/UL 100-125A
2	30925030	Thermal Overload Relay	0	0	0	0	1	0	Fuji TR-6/UL 54-77A
3	30735030	Fuse Holder	2	2	2	2	2	2	
4	30735040	Control Fuse Element	2	2	2	2	2	2	
5	30735050	Hour Meter	1	1	1	1	1	1	
6	30735060	Push Button Switch—start	1	1	1	1	1	1	
7	30735070	Push Button Switch—stop	1	1	1	1	1	1	
8	30735080	Run Light—green	1	1	1	1	1	1	
9	30735090	Power On Light—red	1	1	1	1	1	1	
10	31135100	Terminal Board	1	1	1	1	1	1	
11	30735110	Potential Transformer	0	1	0	0	1	0	
11	30735120	Potential Transformer	0	0	1	0	0	1	
12	31135130	Nylon Bushing	1	1	1	1	1	1	
13	31135140	Nylon Bushing	1	1	1	1	1	1	
14	31135150	Nylon Bushing	1	1	1	1	1	1	
15	30735160	Light Bulb	2	2	2	2	2	2	

Fig. 24 STARTER & CONTROL BOX (ES-50/60)

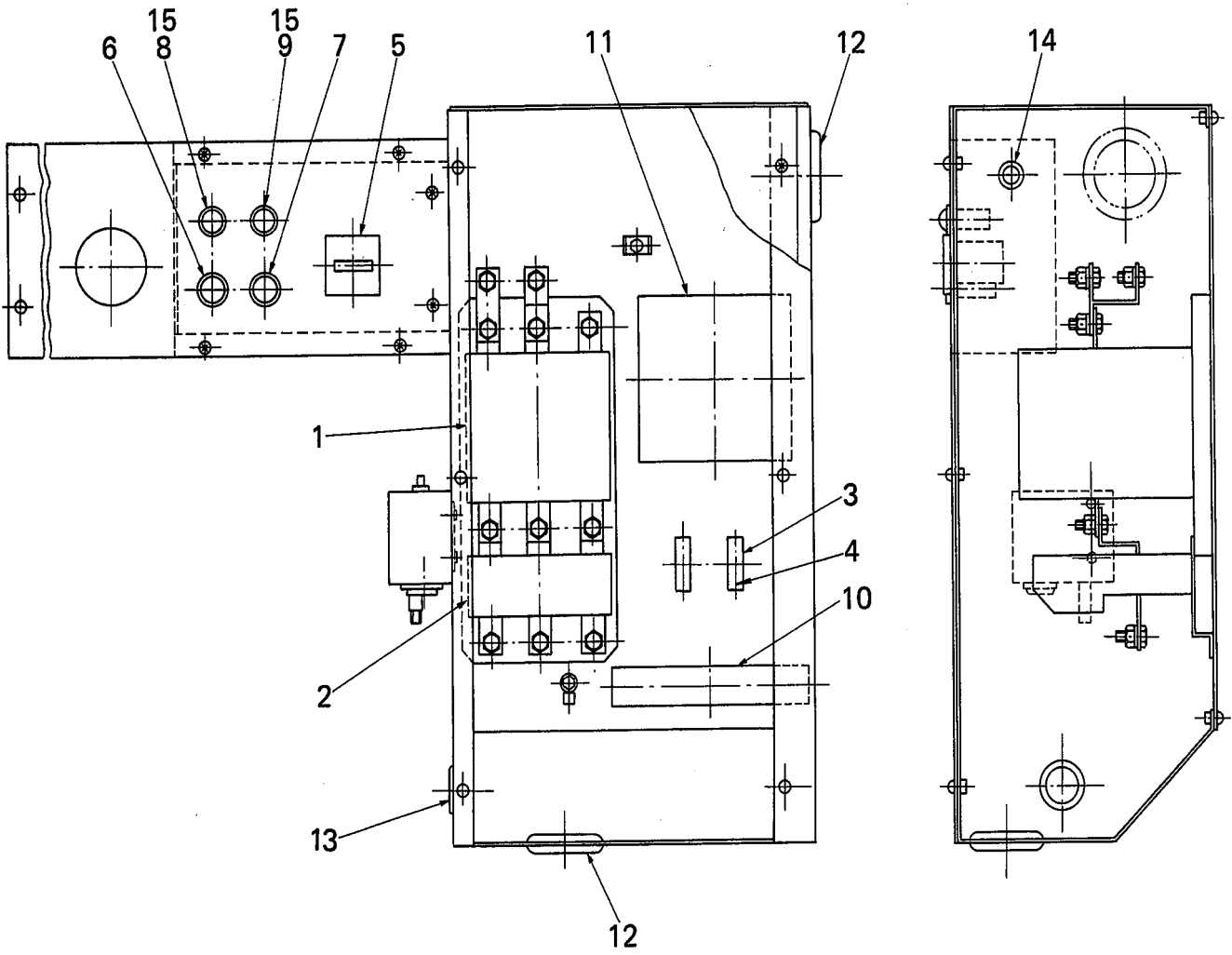


Fig. 24 STARTER & CONTROL BOX (ES-50/60)

REF. NO.	PARTS NO.	DESCRIPTION	QUANTITY						REMARKS
			ES-50 230/60	ES-50 460/60	ES-50 575/60	ES-60 230/60	ES-60 460/60	ES-60 575/60	
1	31325010	Contactora	1	0	0	1	0	0	Fuji SC-10/UL
1	30925010	Contactora	0	1	1	0	0	0	Fuji SC-4S/UL
1	31125010	Contactora	0	0	0	0	1	1	Fuji SC-6/UL
2	31325030	Thermal Overload Relay	1	0	0	1	0	0	Fuji TR-10/UL 150-210A
2	31325040	Thermal Overload Relay	0	1	0	0	0	1	Fuji TR-6/UL 65-92A
2	30925030	Thermal Overload Relay	0	0	1	0	0	0	Fuji TR-6/UL 54-77A
2	31125030	Thermal Overload Relay	0	0	0	0	1	0	Fuji TR-6/UL 78-110A
3	30735030	Fuse Holder	2	2	2	2	2	2	
4	30735040	Control Fuse Element	2	2	2	2	2	2	
5	30735050	Hour Meter	1	1	1	1	1	1	
6	30735060	Push Button Switch—start	1	1	1	1	1	1	
7	30735070	Push Button Switch—stop	1	1	1	1	1	1	
8	30735080	Run Light—green	1	1	1	1	1	1	
9	30735090	Power On Light—red	1	1	1	1	1	1	
10	31335100	Terminal Board	1	1	1	1	1	1	
11	30735110	Potential Transformer	0	1	0	0	1	0	
11	30735120	Potential Transformer	0	0	1	0	0	1	
12	31335130	Nylon Bushing	1	1	1	1	1	1	
13	31335140	Nylon Bushing	1	1	1	1	1	1	
14	31335150	Nylon Bushing	1	1	1	1	1	1	
15	30735160	Light Bulb	2	2	2	2	2	2	

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