



PARTS MANUAL

EMP 285ic 1ph & EMP 285ic 3ph



Valid for: serial nos. 745-xxx-xxxx, 747-xxx-xxxx

Rights reserved to alter specifications without notice.

Ordering number	Product	Notes
0558102554	EMP 285ic 1ph	Bobbin Ø4-12 in. (100-300 mm) CSA, bayonet
0558102556	EMP 285ic 3ph	Bobbin Ø4-12 in. (100-300 mm) CSA, bayonet

Spare parts are to be ordered through the nearest ESAB agency. Kindly indicate type of unit, serial number, denominations and ordering numbers according to the spare parts list.

Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended spare parts.

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HOUSING PARTS

SECTION 1

HOUSING PARTS

1.1 HOUSING PARTS

Table 1-1. Housing Parts

Item	Part #	Description	Qty
1	0558 102 537	Hinge	1
2	0558 102 538	Door pull & latch	1
3	0558 102 620	Side door, spool side (EMP 285ic)	1
4	0558 102 544	Side frame, spool side	1
5	0558 102 399	Handle	4
6	0558 102 545	Foot (With 2× M6x20 screw)	2
7	0558 102 546	Side frame, power side	1
8	0558 102 547	Side door, power side	1

HOUSING PARTS

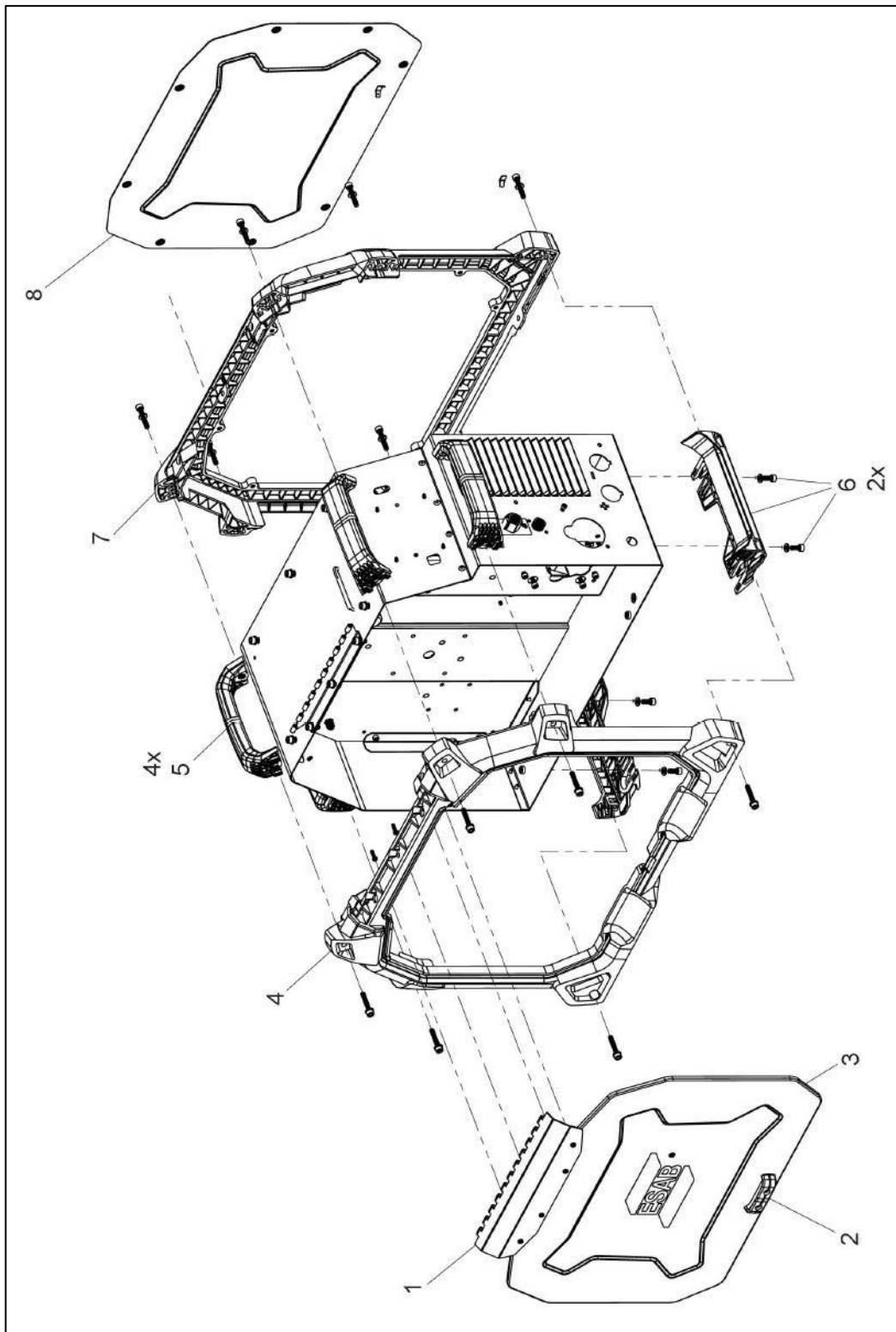


Figure 1-1. Housing

SECTION 2

CONNECTION PARTS

2.1 CONNECTION PARTS



NOTE

Except for the Power Switch (6), all Connection Parts are the same for both the 3ph and 1ph.

Table 2-1. Connection Parts

Item	Part #	Description	Qty
1	0558 102 521	Brake hub kit	1
2	0558 102 522	MIG gas solenoid system	1
3	0558 102 523	TIG/Spool gun gas solenoid system	1
4	0558 102 525	Bracket, gas solenoid mounting	1
5	0558 102 524	Gas inlet/outlet, bulkhead fitting	3
6	0558 102 615	Power switch, 1ph only	1
	0464 646 880	Power switch, 3ph only	1
7	0558 102 611	Fan Bracket assembly	1
8	0558 102 527	Female OKC connector	2
9	0558 102 593	Polarity change cable & male OKC connector	1
10	0558 102 612	Wire drive assembly, bayonet connector	1
11	0558 102 530	8 pin female remote receptacle and harness	1

USER-INTERFACE PARTS

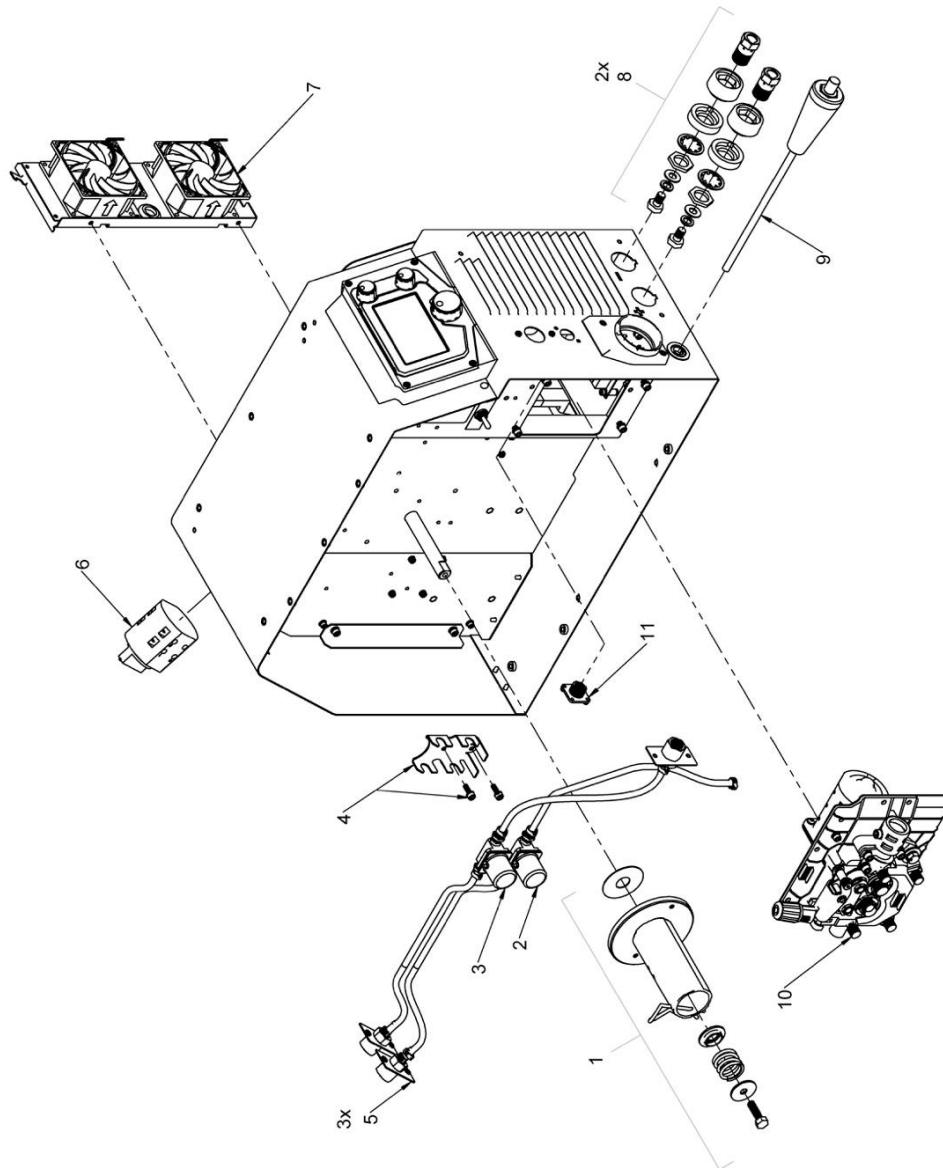


Figure 2-1. Connections

SECTION 3

USER-INTERFACE PARTS

3.1 USER-INTERFACE PARTS

Table 3-1. User-Interface Parts

EMP 285ic 1ph

Item	Part #	Description	Qty
1	0558 102 618	User interface complete	1
2	0558 102 438	Replaceable display lens	1
3	0558 102 423	Encoder for small knob	2
4	0558 102 424	Encoder for large knob	1
5	0558 102 440	Knob, small	2
6	0558 102 441	Knob, large	1
7	0558 102 616	Lens assembly kit	1

EMP 285ic 3ph

Item	Part #	Description	Qty
1	0558 102 619	User interface complete	1
2	0558 102 438	Replaceable display lens	1
3	0558 102 423	Encoder for small knob	2
4	0558 102 424	Encoder for large knob	1
5	0558 102 440	Knob, small	2
6	0558 102 441	Knob, large	1
7	0558 102 617	Lens assembly kit	1

USER-INTERFACE PARTS

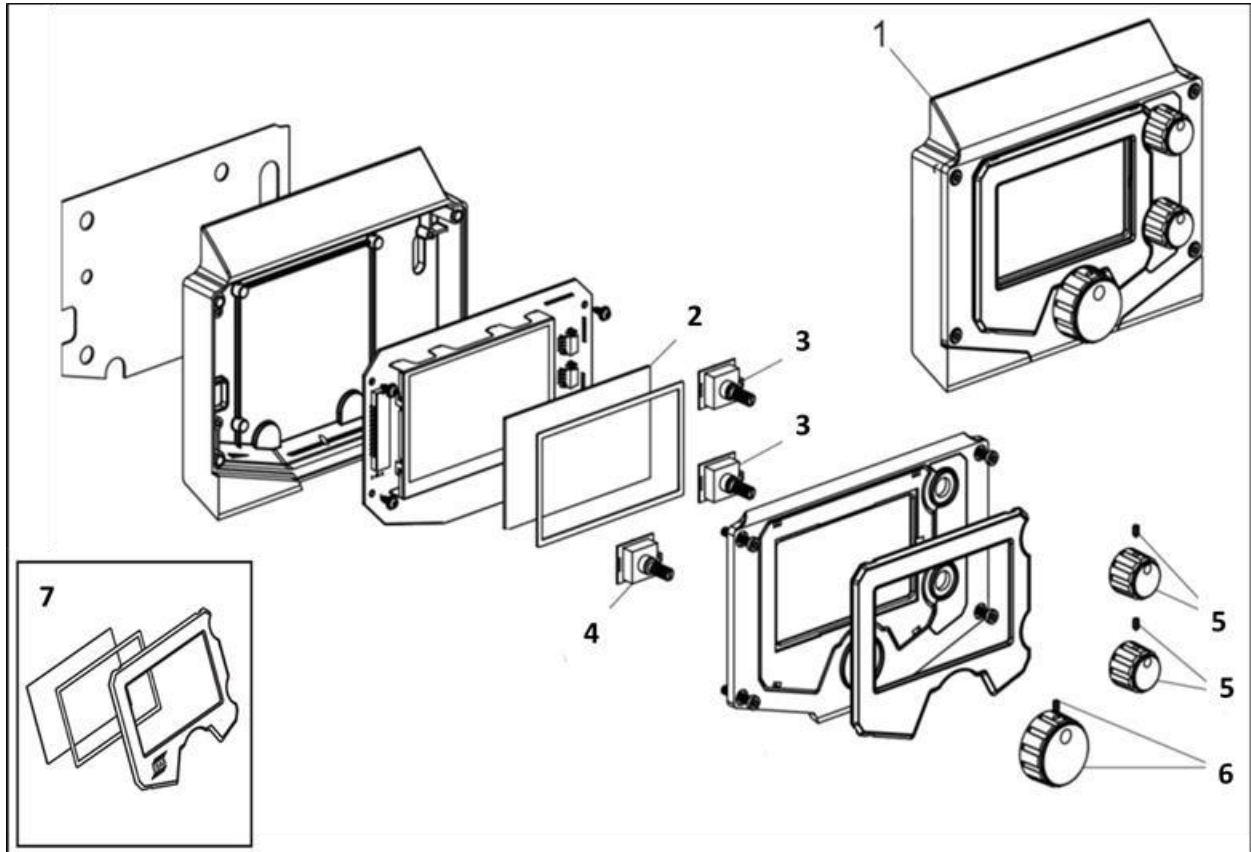


Figure 3-1. User-Interface

SECTION 4

CONTROL/POWER MODULE PARTS

4.1 CONTROL/POWER MODULE PARTS FOR EMP 285ic 1ph**Table 4-1. Control/Power Module Parts, for EMP 285ic 1ph**

Item	Part #	Description	Qty
1	0558 102 427	Control PCB	1
2	0558 102 613	Main Power Board Assembly	1
3	0558 102 595	Output Inductor	1
4	0558 102 596	Output Diode Assembly	1
5	0464 625 880	Main Transformer	1
6	0558 102 431	PFC Inductor assembly	1
7	0558 102 535	Strain relief, mains cable	1
8	0558 102 614	Mains Cable	1
9	0464 752 405	Current sensor	1

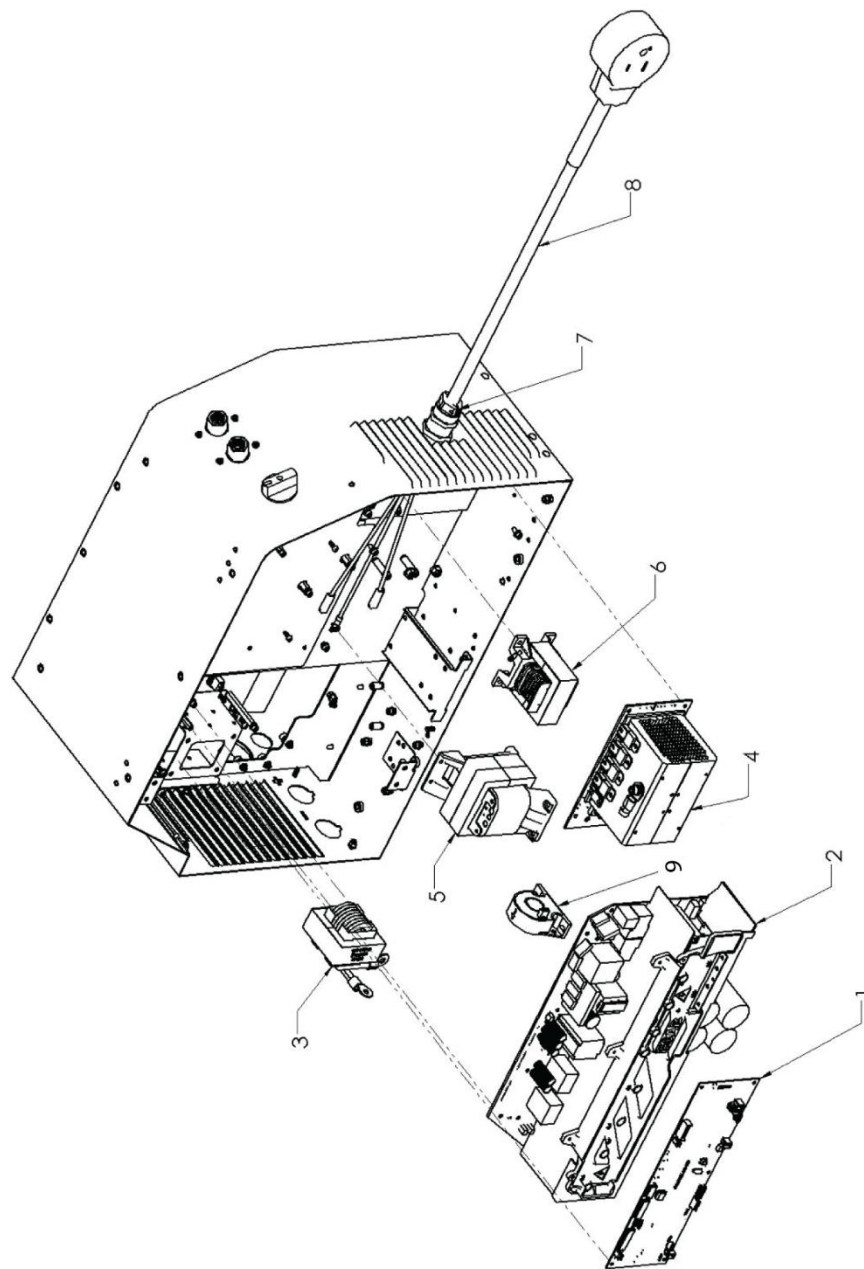


Figure 4-1. Power-Side Module Parts, EMP 285ic 1ph

4.2 CONTROL/POWER MODULE PARTS FOR EMP 285ic 3ph

Table 4-2. Control/Power Module Parts, for EMP 285ic 3ph

Item	Part #	Description	Qty
1	0558102427	Control PCB	1
2	0558102621	Main Power Board Assembly	1
3	0558102595	Output Inductor	1
4	0558102596	Output Diode Assembly	1
5	0558102626	Main Transformer	1
6	0558102628	IPS Board Assembly	1
7	0558102535	Strain relief, mains cable	1
8	0558102622	Mains Cable	1
9	0558102624	Filter Board Assembly	1
10	0464752405	Current sensor	1

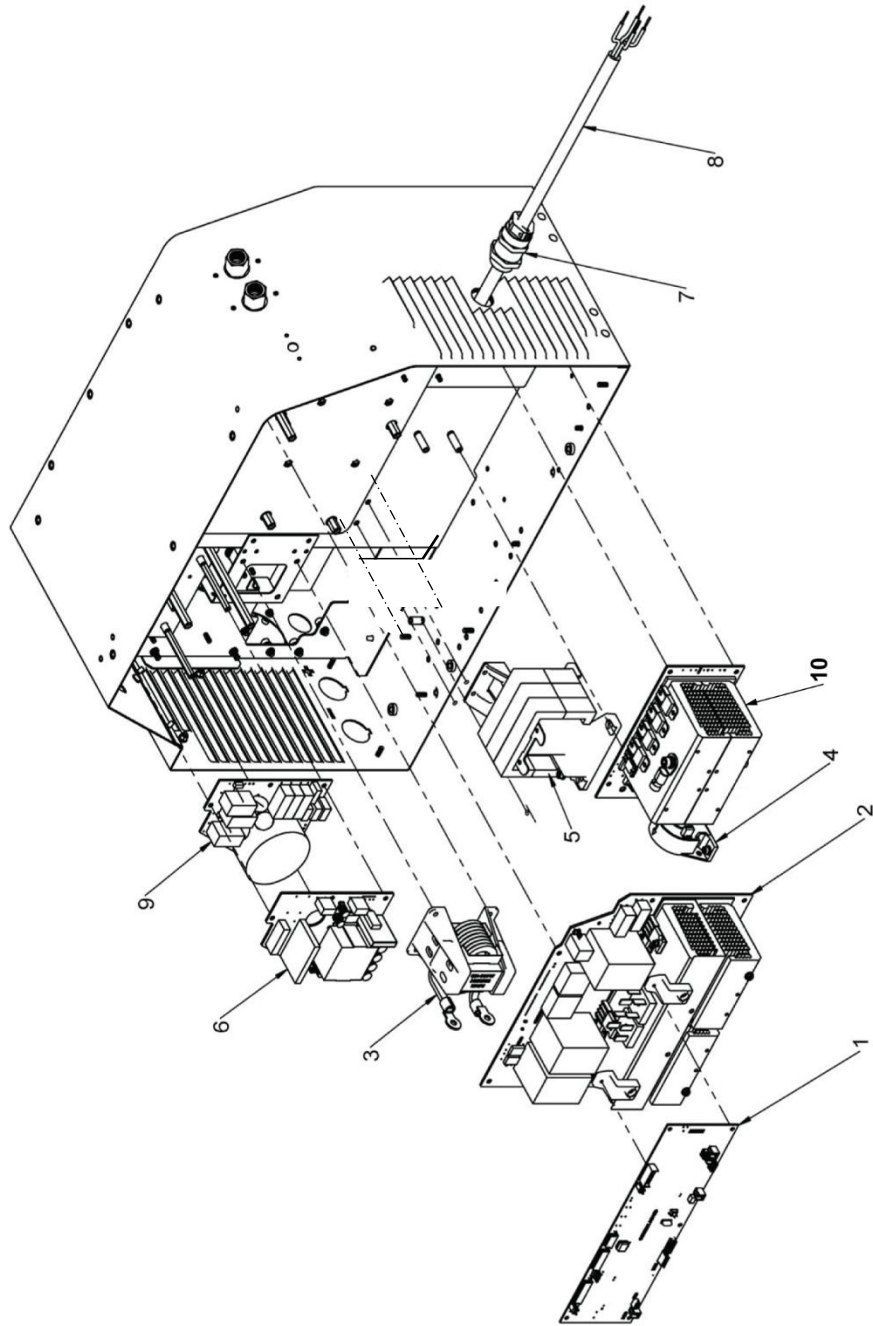


Figure 4-2. Power-Side Module Parts, EMP 285ic 3ph

SECTION 5

WIRE-FEED ASSEMBLY PARTS

5.1 WIRE-FEED ASSEMBLY PARTS



NOTE

All Wire-Feed Assembly Parts are common for both EMP 285ic 1ph & EMP 285ic 3ph

Table 5-1. Wire-Feed Assembly Parts

Item	Part #	DESCRIPTION	Qty
1	0558102591	PRESSURE ROLLER ASSEMBLY	1
2	0558102592	TENSION ADJUSTMENT ASSEMBLY	1
3	0558102608	CENTER WIRE-GUIDE TUBE	1
4	(SEE Table 5-3 BELOW)	OUTPUT WIRE-GUIDE TUBE	1
5	0558102609	MOTOR-GEAR SHAFT WOODRUFF KEY	1
6	0558102597	INLET QUAD WF	1
7	0558102605	DRIVEN GEAR ASSEMBLY	2
8	0558102606	DRIVE GEAR ASSEMBLY	1
9	(SEE Table 5-2 BELOW)	WIRE-FEED ROLLERS	2
10	0558102600	WASHER FLAT M4 LARGE OD	3
11	0558102601	THUMB SCREW M4 X 10 X 8 KNURLED	2
12	0558102602	THUMB SCREW M4 X 10 X 5 KNURLED	1
13	0558102603	QUAD WF COVER	1
14	0558102604	THUMB SCREW M5 X 14 KNURLED	5
15	0558102625	WIRE DRIVE KNOB, BAYONET	1

Table 5-2. Wire-Feed Rollers: Available Sizes for Models 285ic 1ph, 3ph

ITEM	PART #	DESCRIPTION	COMMENT
FEED ROLLERS FOR ALL WIRES EXCEPT ALUMINUM			
1	21155	ROLLER, .024 (.6) - .030 (.8), V-SOLID	OPTIONAL FOR PURCHASE
2	21156	ROLLER, .035 (0.9) - .045 (1.2), V-SOLID	DEFAULT*/ACCESSORY**
3	21157	ROLLER, .052 (1.4) - .062 (1.6), V-SOLID	OPTIONAL FOR PURCHASE
4	21160	ROLLER, .030 (0.8) - .035 (0.9), V-KNURLED	OPTIONAL FOR PURCHASE
5	21161	ROLLER, .045 (1.2) - .052 (1.4), V-KNURLED	ACCESSORY**
FEED ROLLERS FOR ALUMINUM WIRE			
6	21159	ROLLER, .045 (1.2) - .062 (1.6), ALUM (U-GROOVE)	OPTIONAL FOR PURCHASE
* DEFAULT (size included in package)			
** ACCESSORY (included with each model)			

Table 5-3. Output & Center Wire -Guide Tube: Available Sizes for Models 285ic 1ph, 3ph

ITEM #	PART #	DESCRIPTION	COMMENT
OUTPUT WIRE-GUIDE TUBES EXCEPT FOR ALUMINUM WIRE			
1	0558 102 585	TUBE, WIRE GUIDE .024 (.6), V-SOLID	OPTIONAL FOR PURCHASE
2	0558 102 584	TUBE, WIRE GUIDE .030 (.8) - .040 (1.0), V-SOLID	ACCESSORY**
3	0558 102 582	TUBE, WIRE GUIDE .035 (0.9) - .045 (1.2), V-SOLID	DEFAULT*
4	0558 102 583	TUBE, WIRE GUIDE .052 (1.4) - .062 (1.6), V-SOLID	ACCESSORY**
OUTPUT WIRE-GUIDE TUBES FOR ALUMINUM WIRE			
5	0558 102 586	TUBE, WIRE GUIDE .035 (0.9), ALUM	OPTIONAL FOR PURCHASE
6	0558 102 587	TUBE, WIRE GUIDE .045 (1.2), ALUM	OPTIONAL FOR PURCHASE
7	0558 102 588	TUBE, WIRE GUIDE .052 (1.4) - .062 (1.6), ALUM	OPTIONAL FOR PURCHASE
* DEFAULT (size included in package) ** ACCESSORY (optional size included with each model)			

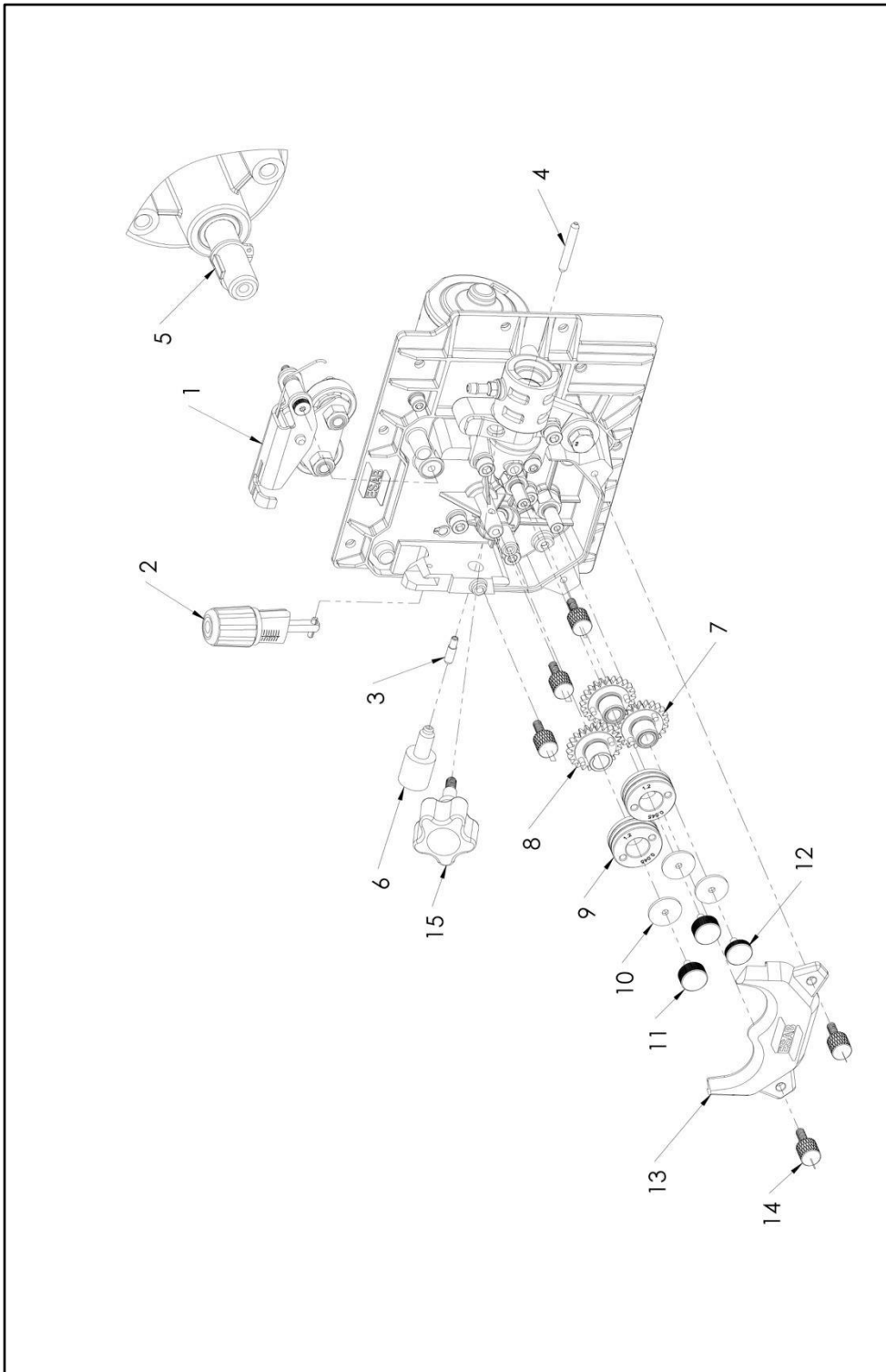


Figure 5-1. Wire-Feed Assembly

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