

**MODEL H-2000-E**

**HIGH PRESSURE PROPORTIONING UNIT**

**Parts Identification**

**GUSMER EUROPE, S.A.**

**A SUBSIDIARY OF THE GUSMER MACHINERY GROUP, INC.**

**Rambla Torre de l'Onclet, 7**

**Sector Industrial Masia d'en Barreres**

**08800 Vilanova i la Geltru**

**Barcelona, Spain**

**Phone: Int + 34 93 811 53 00**

**Fax: Int + 34 93 893 96 00**

**GUSMER EUROPE, S.A.**

**(Website: <http://www.gusmer-europe.com>)**

## Parts Identification

---

### NOTICE:

The equipment described in this technical manual must only be operated or serviced by properly trained individuals, thoroughly familiar with the operating instructions and limitations of the equipment. For technical service, call your local distributor

---

**USE ONLY ORIGINAL  
SPARE PARTS**



---

### NOTICE:

All statements, information and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty or responsibility of any kind expressed or implied. Statements or suggestions concerning possible use of GUSMER EUROPE equipment are made without representation or warranty that any such use is free of patent infringement, and are not recommendations to infringe any patent. The user should assume that all safety measures have not been indicated and that other additional safety measures may be required.

---

# TABLE OF CONTENTS

CE CONFORMITY DECLARATION .....2

TABLE OF CONTENTS .....4

LIST OF PARTS .....5

LIST OF ILLUSTRATIONS.....5

WARRANTY GUSMER EUROPE, S.A. ....6

FINAL ASSEMBLY .....7

ELECTRICAL CONSOLE .....9

CENTER AND BASE ASSEMBLY .....13

BASE ASSEMBLY .....15

TRANSFORMER ASSEMBLY.....17

REVERSING SWITCH.....19

LUBE RESERVOIR HOSE ASSEMBLY .....20

HYDRAULIC CYLINDER WITH SPACER .....21

PROPORTIONING PUMP ASSEMBLY .....23

    # 60 AND 96 SIZE PUMPS.....27

    # 120 SIZE PUMP .....29

PUMP BASE ASSEMBLY .....31

PRIMARY HEATER.....33

ELECTRICAL SCHEMATIC DIAGRAMS .....35

INSTRUCTION MANUAL DISCREPANCY REPORT.....39

## LIST OF PARTS

TABLE 1. H-2000-E ASSEMBLY, (PART NO. 55000-SIZE-GE), PARTS .....	8
TABLE 2. ELECTRICAL CONSOLE, FRONT VIEW, PARTS, SHEET 1 OF 2 .....	10
TABLE 3. ELECTRICAL CONSOLE, INTERIOR VIEW, PARTS, SHEET 2 OF 2 .....	12
TABLE 4. CENTER AND BASE ASSEMBLY (PART NO. 55500A-5HP-SIZE), PARTS .....	14
TABLE 5. BASE ASSEMBLY (PART NO. 55501A-5HP-3PH), PARTS .....	16
TABLE 6. TRANSFORMER ASSEMBLY (PART NO. 040-00004-000), PARTS .....	18
TABLE 7. REVERSING SWITCH (PART NO. 1521), PARTS .....	19
TABLE 8. LUBE RESERVOIR HOSE ASSEMBLY (PART NO. 15585), PARTS .....	20
TABLE 9. HYDRAULIC CYLINDER WITH SPACER (PART NO. 15511), PARTS .....	22
TABLE 10. PROPORTIONING PUMP ASSEMBLY (PART NO. 15400-SIZE AND 15450-SIZE), PARTS .....	24
TABLE 11. SCHEDULE OF PARTS (PUMP SIZES 24, 30, 44, AND 48).....	24
TABLE 12. SCHEDULE OF PARTS (PUMP SIZES 80, 88, 104, AND 112).....	25
TABLE 13. SCHEDULE OF QUANTITIES .....	25
TABLE 14. PUMP CYCLE COUNTER CHART (CYCLE TO PROPORTIONING PUMP RATIO RELATIONSHIP).....	26
TABLE 15. PROPORTIONING PUMP RATIO SPECIFICATIONS .....	26
TABLE 16. # 60 AND 96 SIZE PUMPS (PART NO. 15400-SIZE AND 15450-SIZE), PARTS.....	28
TABLE 17. SCHEDULE OF PARTS (PUMP SIZES 60 AND 96).....	28
TABLE 18. # 120 SIZE PUMP (PART NO. 15400-120 AND 15450-120), PARTS.....	30
TABLE 19. PUMP BASE ASSEMBLY (PART NO. 15428 AND 15478), PARTS .....	32
TABLE 20. PRIMARY HEATER (PART NO. 55310B AND 55360B), PARTS .....	34
TABLE 21. RESISTANCE OF PRIMARY HEATER HEATING ELEMENTS .....	34
TABLE 22. H-2000-E SCHEMATIC DIAGRAM, PARTS LIST .....	38

## LIST OF ILLUSTRATIONS

FIGURE 1. H-2000-E ASSEMBLY (PART NO. 55000-SIZE-GE), EXPLODED VIEW .....	7
FIGURE 2. ELECTRICAL CONSOLE (PART NO. 030-00006-001), SHEET 1 OF 2 .....	9
FIGURE 3. ELECTRICAL CONSOLE (PART NO. 030-00006-001), SHEET 2 OF 2 .....	11
FIGURE 4. CENTER AND BASE ASSEMBLY (PART NO. 55500A-5HP-SIZE), EXPLODED VIEW .....	13
FIGURE 5. BASE ASSEMBLY (PART NO. 55501A-5HP-3PH), EXPLODED VIEW .....	15
FIGURE 6. TRANSFORMER ASSEMBLY, EXPLODED VIEW .....	17
FIGURE 7. REVERSING SWITCH (PART NO. 1521), EXPLODED VIEW .....	19
FIGURE 8. LUBE RESERVOIR HOSE ASSEMBLY (PART NO. 15585), EXPLODED VIEW .....	20
FIGURE 9. HYDRAULIC CYLINDER WITH SPACER (PART NO. 15511), EXPLODED VIEW .....	21
FIGURE 10. PROPORTIONING PUMP ASSEMBLY (PART NO. 15400-SIZE AND 15450-SIZE) .....	23
FIGURE 11. # 60 AND 96 SIZE PUMPS (PART NO. 15400-SIZE AND 15450-SIZE).....	27
FIGURE 12. # 120 SIZE PUMP (PART NO. 15400-120 AND 15450-120).....	29
FIGURE 13. PUMP BASE ASSEMBLY (PART NO. 15428 AND 15478), EXPLODED VIEW .....	31
FIGURE 14. PRIMARY HEATER (PART NO. 55310B AND 55360B), EXPLODED VIEW.....	33
FIGURE 15. H-2000-E SCHEMATIC DIAGRAM, SHEET 1 OF 3 .....	35
FIGURE 16. H-2000-E SCHEMATIC DIAGRAM, SHEET 2 OF 3 .....	36
FIGURE 17. H-2000-E SCHEMATIC DIAGRAM, SHEET 3 OF 3 .....	37



## WARRANTY GUSMER EUROPE, S.A.

GUSMER EUROPE provides a limited warranty to the original purchaser (Customer) of GUSMER EUROPE manufactured parts and equipment (Product) against any defects in material or workmanship for a period of one year from the date of shipment from GUSMER EUROPE facilities.

In the event Product is suspected to be defective in material or workmanship, it must be returned to GUSMER EUROPE, freight prepaid. If Product is found to be defective in material or workmanship, as determined solely by GUSMER EUROPE, GUSMER EUROPE will issue full credit to Customer for the freight charges incurred in returning the defective Product, and either credit will be issued for the replacement cost of the Product or a replacement part will be forwarded no-charge, freight prepaid to Customer.

This warranty shall not apply to Product GUSMER EUROPE finds to be defective resulting from: installation, use, maintenance, or procedures not accomplished in accordance with our instructions; normal wear; accident; negligence; alterations not authorized in writing by GUSMER EUROPE; or Product used in conjunction with any other manufacturer's pumping or proportioning equipment. Further, the terms and conditions of this warranty shall not apply to services or repairs made to Product by any third party not authorized in writing by GUSMER EUROPE. For such Product, a written estimate will be submitted to Customer at a nominal service charge, itemizing the cost for repair. Disposition of Product will be done in accordance with the terms stated on the written estimate.

The warranty provisions applied to product that are not manufactured by GUSMER EUROPE will be solely in accordance with the warranty provided by the original manufacturer of the product.

GUSMER EUROPE MAKES NO WARRANTY WHATSOEVER AS TO THE MERCHANTABILITY OF, OR SUITABILITY FOR, ITS PRODUCT TO PERFORM ANY PARTICULAR PURPOSE. CREDIT FOR, OR REPLACEMENT OF, PRODUCT DEFECTIVE IN MATERIAL OR WORKMANSHIP SHALL CONSTITUTE COMPLETE FULFILLMENT OF GUSMER EUROPE OBLIGATIONS TO CUSTOMER. NO OTHER WARRANTY, EXPRESSED OR IMPLIED ON ANY PRODUCT IT MANUFACTURES AND/OR SELLS, WILL BE RECOGNIZED BY GUSMER EUROPE UNLESS SAID WARRANTY IS IN WRITING AND APPROVED BY AN OFFICER OF GUSMER EUROPE.

Under no circumstances shall GUSMER EUROPE be liable for loss of prospective or speculative profits, or special indirect, incidental or consequential damages. Further, GUSMER EUROPE shall have no liability for any expenses including, but not limited to personal injury or property damage resulting from failure of performance of the Product, use of the Product, or application of the material dispensed through the Product. Any information provided by GUSMER EUROPE that is based on data received from a third source, or that pertains to product not manufactured by GUSMER EUROPE, while believed to be accurate and reliable, is presented without guarantee, warranty, or responsibility of any kind, expressed or implied..

GUSMER EUROPE through the sale, lease, or rental of Product in no way expresses or implies a license for the use of, nor encourages the infringement of any patents or licenses.

# FINAL ASSEMBLY

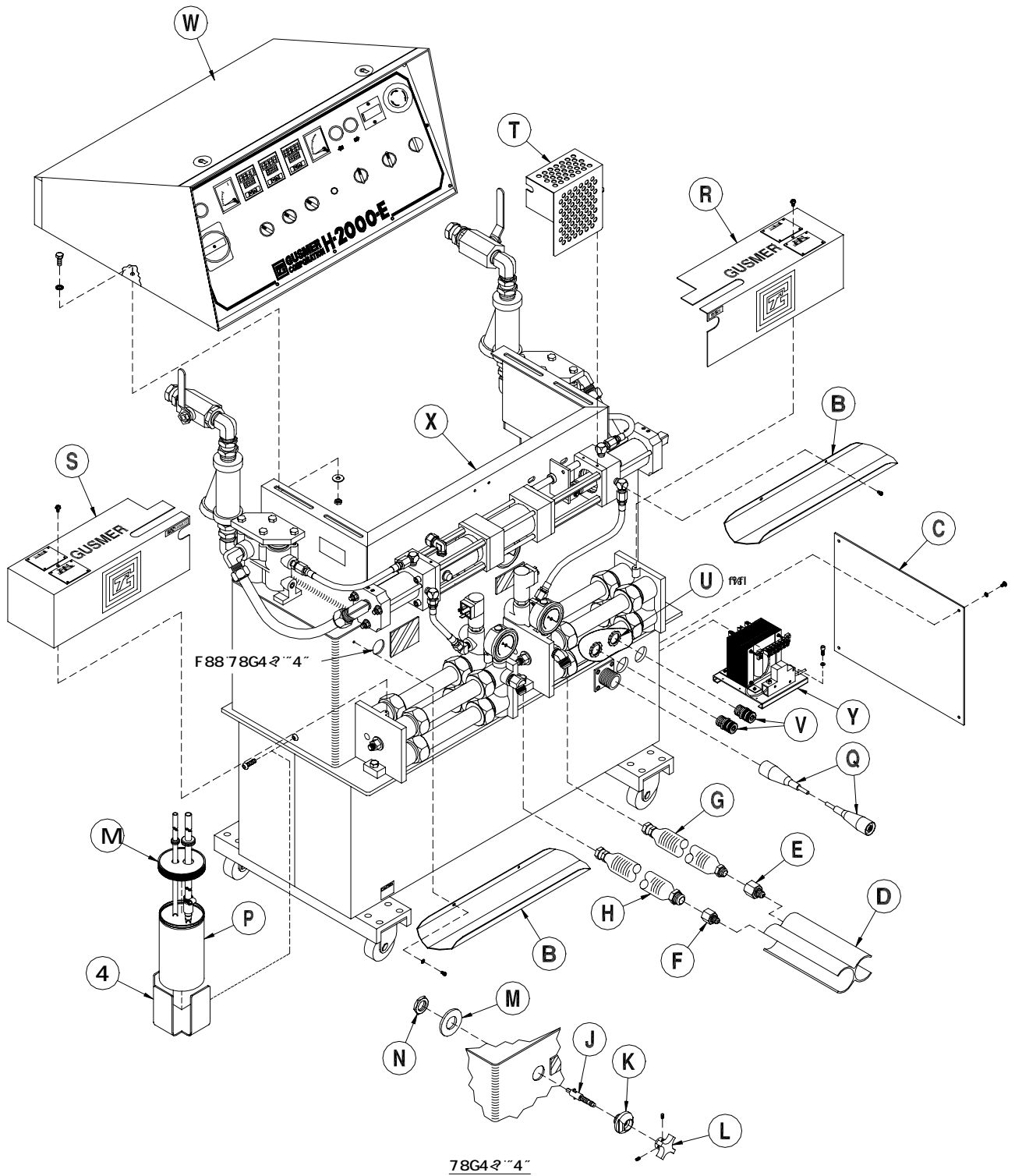


Figure 1. H-2000-E Assembly (Part No. 55000-SIZE-GE), Exploded View

TABLE 1. H-2000-E ASSEMBLY, (PART NO. 55000-SIZE-GE), PARTS

Reference Letter	Part Number	Description	Quantity
A	1486A	Lube Reservoir Bracket	1
B	1702-8	Service Pan	2
C	1703	Door Frame	1
D	5204	Electrical Isolator	1
E	5253A	R-Hose Adapter	1
F	5254A	A-Hose Adapter	1
G	14270-1/2-1	R-Isolation Hose	1
H	14270-1/2-2	A-Isolation Hose	1
J	14556	Compensator Shaft	1
K	14557	Retainer	1
L	14558	Knob	1
M	14559	Washer	1
N	14560	Hex Nut	1
P	15586	Lube Bottle	1
Q	20207-3	TSU Extension Adapter	1
R	55311	R-Preheater Cover	1
S	55361	A-Preheater Cover	1
T	55401	Resin Pump Guard	1
U	OP482-17-2	Lock nut	2
V	OP482-17-1	Bushing	2
W	See Assembly	Electrical Console Assembly	1
X	See Assembly	Center & Base Assembly	1
Y	See Assembly	Transformer Assembly	1
Z	See Assembly	Lube Reservoir Hose Assembly	1

# ELECTRICAL CONSOLE

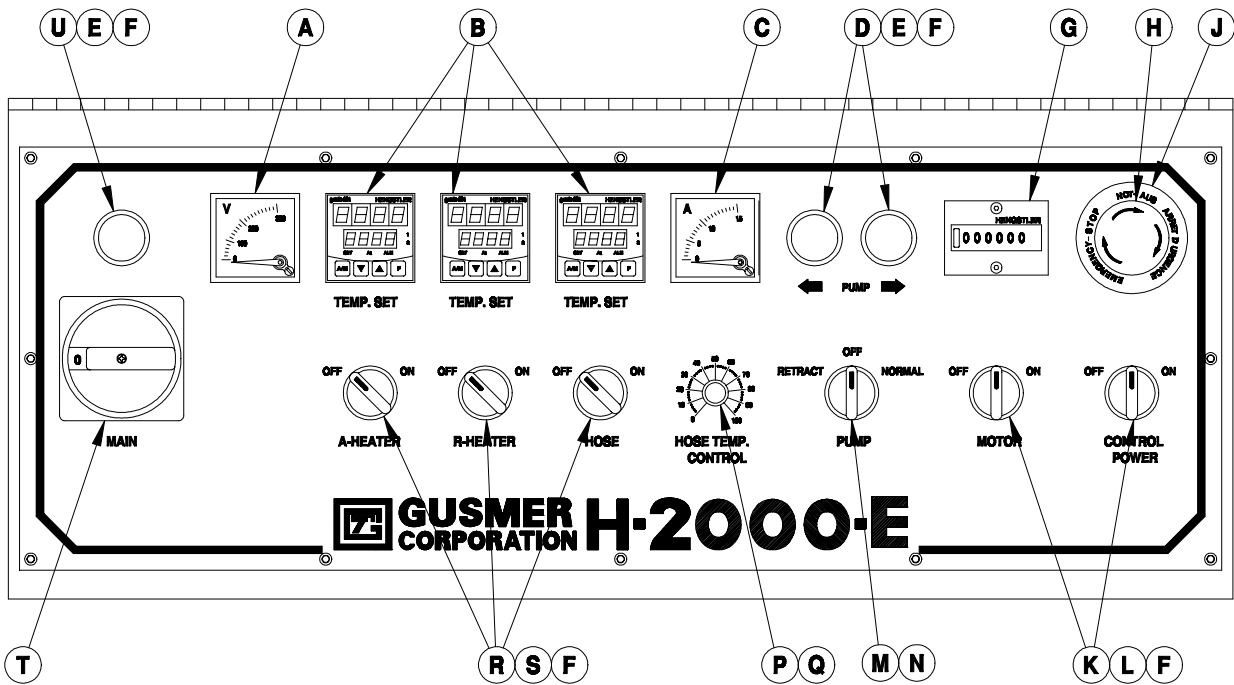


Figure 2. Electrical Console (Part No. 030-00006-001), Sheet 1 of 2

TABLE 2. ELECTRICAL CONSOLE, FRONT VIEW, PARTS, SHEET 1 OF 2

Reference Letter	Part Number	Description	Quantity
A	047-00003-000	Voltmeter	1
B	047-00015-000	Temperature Controller	3
C	047-00002-000	Ammeter	1
D	042-00018-000	Pilot Light: Amber	2
E	042-00020-000	Lamp-Holder	3
F	042-00001-000	Lamp	8
G	047-00005-000	Counter	1
H	042-00006-000	Emergency Switch	1
J	042-00017-000	Emergency Bezel	1
K	042-00007-000	Lighted Switch Body	2
L	042-00016-000	Switch Contact	2
M	042-00012-000	Lighted Switch Body	1
N	042-00015-000	Switch Contact	1
P	6690-5-17	Potentiometer	1
Q	091-00001-000	Potentiometer Cover	1
R	042-00013-000	Lighted Switch Body	3
S	042-00014-000	Switch Contact	3
T	042-00002-000	Switch	1
U	042-00019-000	Pilot Light: Green	1

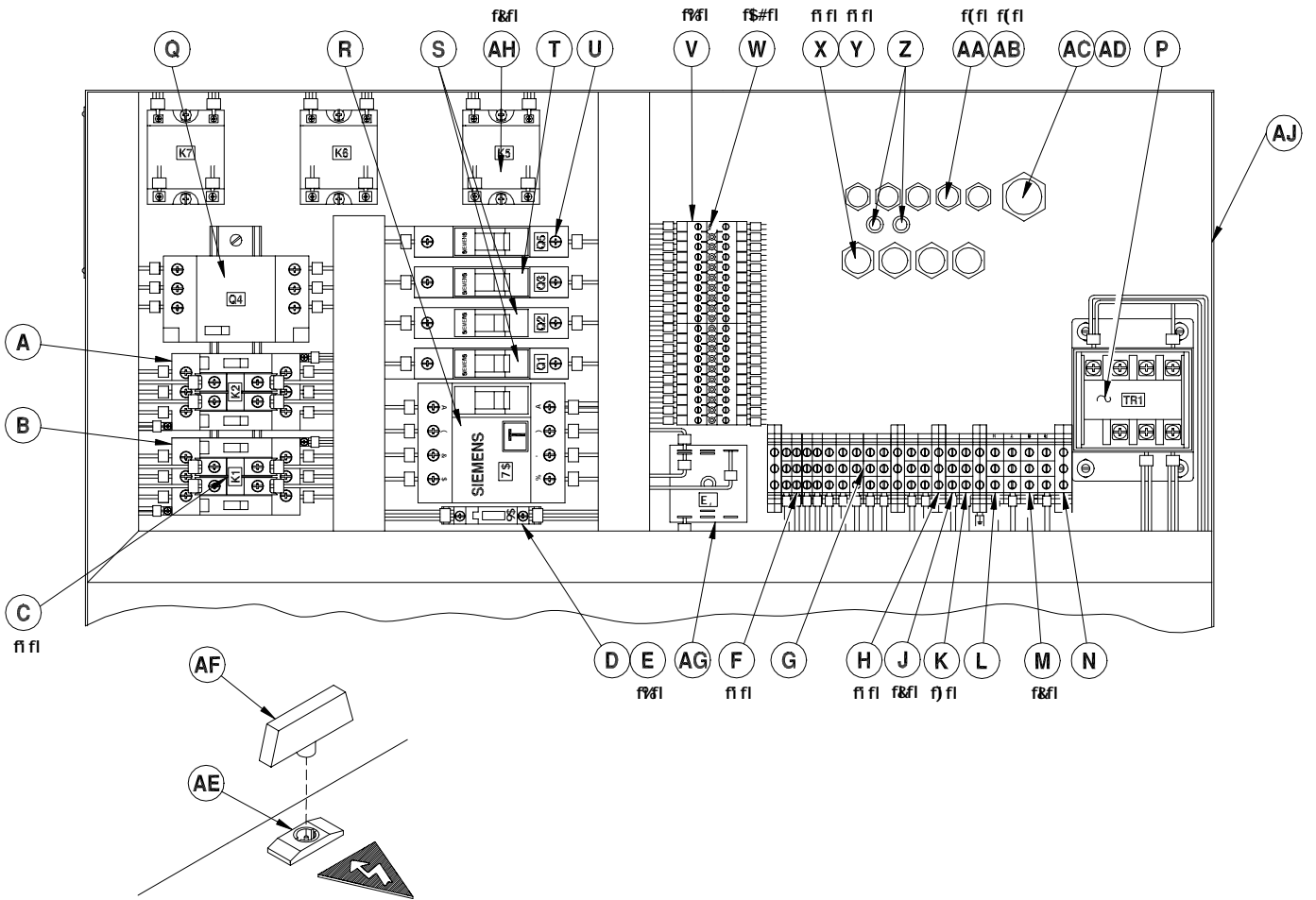


Figure 3. Electrical Console (Part No. 030-0006-001), Sheet 2 of 2

TABLE 3. ELECTRICAL CONSOLE, INTERIOR VIEW, PARTS, SHEET 2 OF 2

Reference Letter	Part Number	Description	Quantity
A	041-00002-000	Contactora	1
B	041-00005-000	Contactora	1
C	041-00001-000	Auxiliary Contactora	4
D	050-00002-000	Fuse Terminal	1
E	050-00011-000	Fuse	2
F	045-00002-002	Terminal Block:Brown;2.5mm	4
G	050-00012-000	Terminal Separator	1
H	045-00001-000	Terminal Block:Yellow/Green;6mm	4
J	045-00001-001	Terminal Block:Blue;6mm	3
K	045-00001-002	Terminal Block:Brown;6mm	6
L	045-00003-001	Terminal Block:Blue;16mm	1
M	045-00003-002	Terminal Block:Brown;16mm	3
N	045-00003-000	Terminal Block: Yellow/Green;16mm	1
P	040-00002-000	Transformer	1
Q	050-00010-000	Circuit Breaker: 6-10A	1
R	050-00008-000	Voltage Differential Switch	1
S	050-00009-000	Circuit Breaker: 30A.	2
T	050-00005-000	Circuit Breaker: 10A.	1
U	050-00006-000	Circuit Breaker: 3A.	1
V	045-00004-000	Block	2
W	041-00008-000	Terminal Jumper	10
X	044-00008-000	Bushing	4
Y	044-00015-000	Nut	4
Z	044-00034-000	Bushing	2
AA	044-00006-000	Bushing	5
AB	044-00013-000	Nut	5
AC	044-00010-000	Bushing	1
AD	044-00017-000	Nut	1
AE	054-00007-000	Console Safety Lock	2
AF	054-00008-000	Safety Lock Key	2
AG	6690-26-18	Triac	1
AH	041-00011-000	Static Relay	3
AJ	043-00010-000	Electric Console	1

# CENTER AND BASE ASSEMBLY

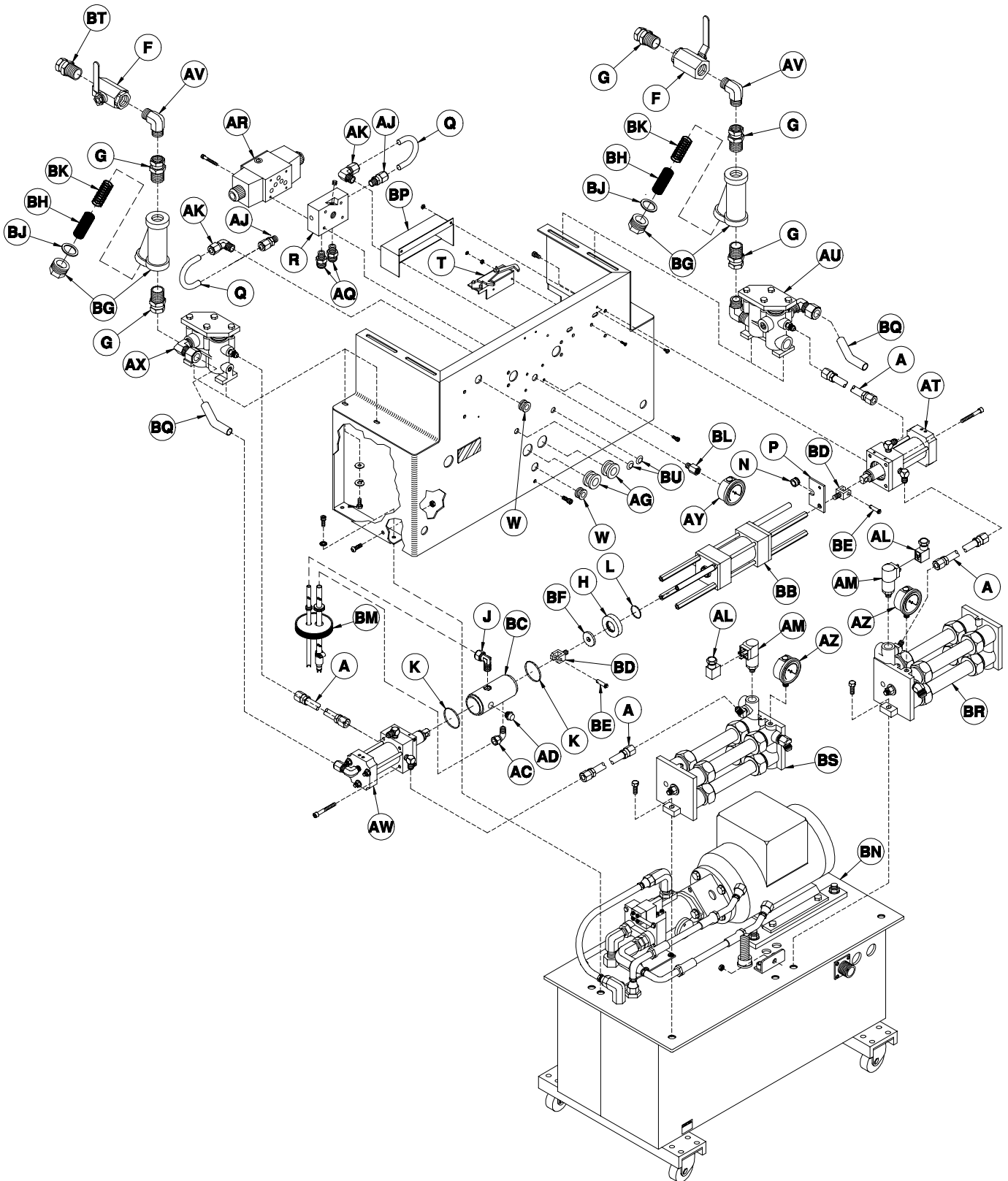


Figure 4. Center and Base Assembly (Part No. 55500A-5HP-SIZE), Exploded View

**TABLE 4. CENTER AND BASE ASSEMBLY (PART NO. 55500A-5HP-SIZE), PARTS**

Reference Letter	Part Number	Description	Quantity
A	0372	Interconnecting Hose	4
F	1433A-1	Ball Valve	2
G	1433A-3	Swivel Union	5
H	1484-2	Lube Cylinder Adapter Plate	1
J	1484-3	Male Elbow	1
K	1484-5	O-Ring	2
L	1484-6	O-Ring	1
N	1501-7-2	Bronze Bushing	1
P	1501A-7-1	Activator Plate	1
Q	1503-1	Connection Tube Assembly (Includes AJ & AK)	2
R	1504-1	Direct Valve Manifold	1
T	1521	Reversing Switch Assembly	1
W	1701-16	Grommet	2
AC	5484-3	Lube Hose Fitting	1
AD	5484A-4	Polyethylene Pipe Plug	1
AG	5701-12	Grommet	2
AJ	6306-26	Tube Nipple	2
AK	6306-27	Tube Elbow	2
AL	6690-16-76-1	Din Connector	2
AM	6690-16-772200R	Pressure Switch	2
AQ	14534	Hose Nipple	2
AR	077-00001-002	Directional Valve	1
AT	15400-SIZE	Resin Prop Pump Assembly	1
AU	15428	Resin Pump Base Assembly	1
AV	15428-5	Male Elbow	2
AW	15450- SIZE	Iso Prop Pump Assembly	1
AX	15478	Iso Pump Base Assembly	1
AY	15502	0-2000 PSI Liquid Fill Gauge	1
AZ	15503	0-3000 PSI Liquid Fill Gauge	2
BB	15511	Hydraulic Cylinder W/Spacers	1
BC	15513	Iso Lube Cylinder	1
BD	15514	Hydraulic Cylinder Clevis	2
BE	15515	Clevis Pin Assembly	2
BF	15517	Baffle	1
BG	15520	Strainer (Includes BH, BJ, & BK)	2
BH	15520-1	30 Mesh Strainer (Includes BK)	2
	15520-3	80 Mesh Strainer (Optional) (Includes BK)	2
BJ	15520-2	Gasket	2
BK	15520-4	Spring	2
BL	15521	Bushing	1
BM	15585	Lube Reservoir Hose Assembly	1
BN	See Assembly	Base Assembly	1
BP	55722	Reversing Switch Cover	1
BQ	15518	Inlet Tube	2
BR	55310B	R-Basic Preheater	1
BS	55360B	A-Basic Preheater	1
BT	OP156-33	Swivel Union	1
BU	OP312-3	Cap Plug	2

# BASE ASSEMBLY

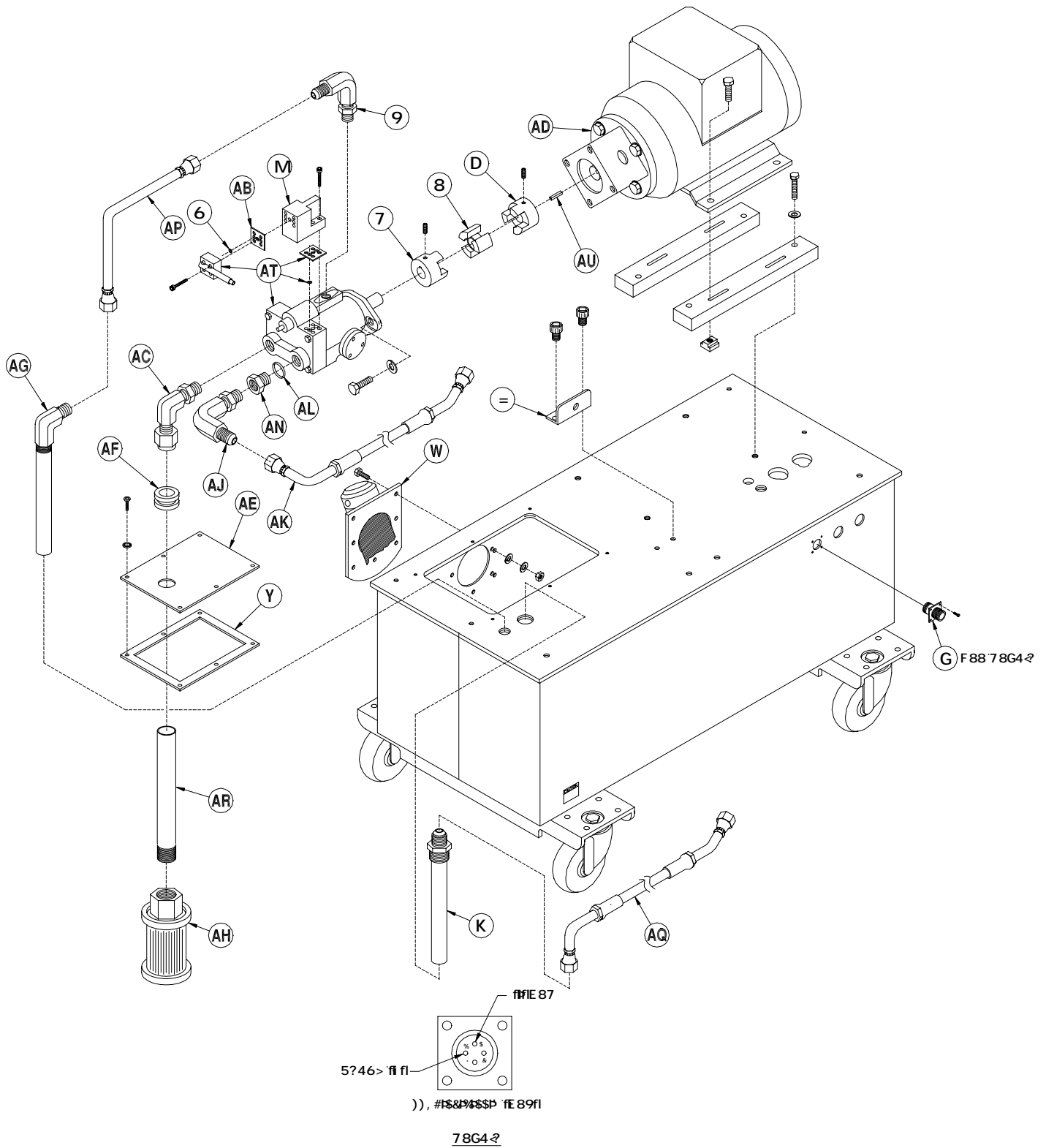
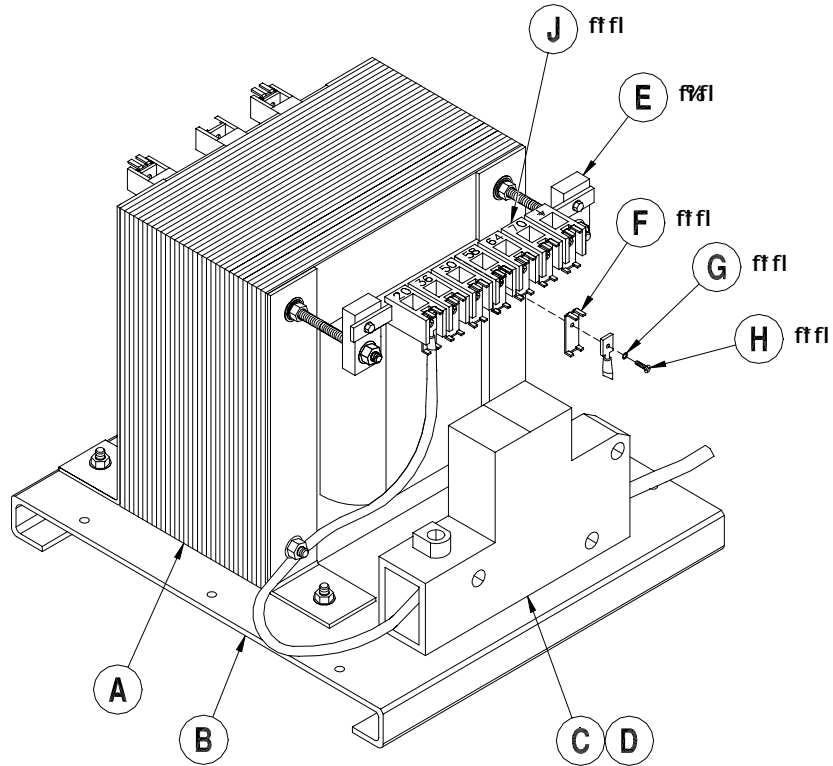


Figure 5. Base Assembly (Part No. 55501A-5HP-3PH), Exploded View

**TABLE 5. BASE ASSEMBLY (PART NO. 55501A-5HP-3PH), PARTS**

Reference Letter	Part Number	Description	Quantity
C	1413-40/24	O-Ring	1
D	1513-1	Shaft Coupling	1
E	1513-3	Alignment Spider	1
F	1514-10	Hose Elbow	1
J	1701-8	Mounting Bracket	1
Q	5513-2	Shaft Coupling	1
T	6690-13-2-11-4	4 CKT MA Pin Housing	1
W	14501-1	Hydraulic Oil Filler	1
X	14501-13	Hydraulic Reservoir Return Tube	1
Y	14501-3	Reservoir Cover Plate Gasket	1
Z	14501-31-1	Compensator Manifold	1
AB	14501-31-3	Gasket	1
AC	14502	O-Ring Elbow	1
AD	15501-10	Electric Motor (5 HP, 3 pH) (Includes AU)	1
AE	15501-12	Reservoir Cover Plate	1
AF	15501-13	Rubber Grommet	1
AG	15501-14	1/2 TBE 90 Hydraulic Reservoir Return	1
AH	15501-15	Cartridge Strainer	1
AJ	15501-17	O-Ring Elbow	1
AK	15501-19	P-Port Hose	1
AL	15501-22	O-Ring	1
AN	15501-3	O-Ring Adapter	1
AP	15501-5	Bleed Hose	1
AQ	15501-6	T Port Hose	1
AR	15501-8	Suction Tube	1
AT	15501-1	Hydraulic Pump Assembly (Includes C, Z, AB)	1
AU	1516-1-1	Shaft Key	1

# TRANSFORMER ASSEMBLY



## TAP SETTINGS FOR MULTI-TAP TRANSFORMERS

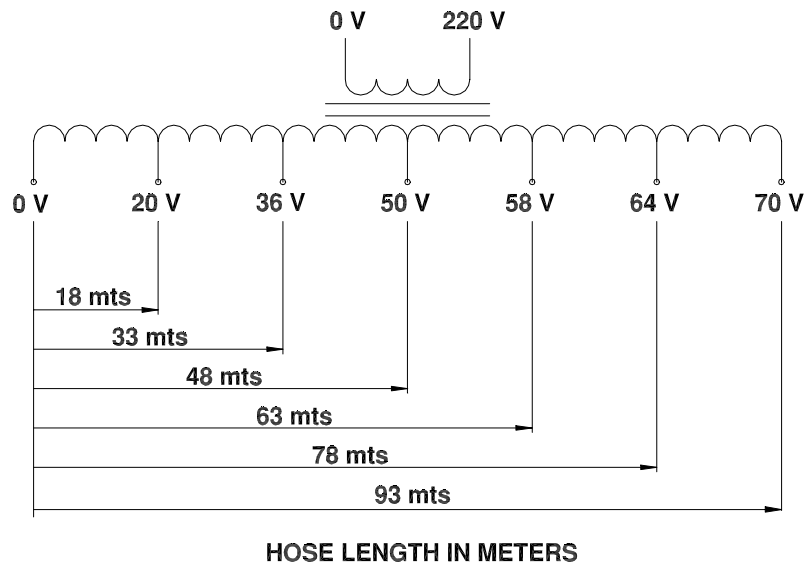
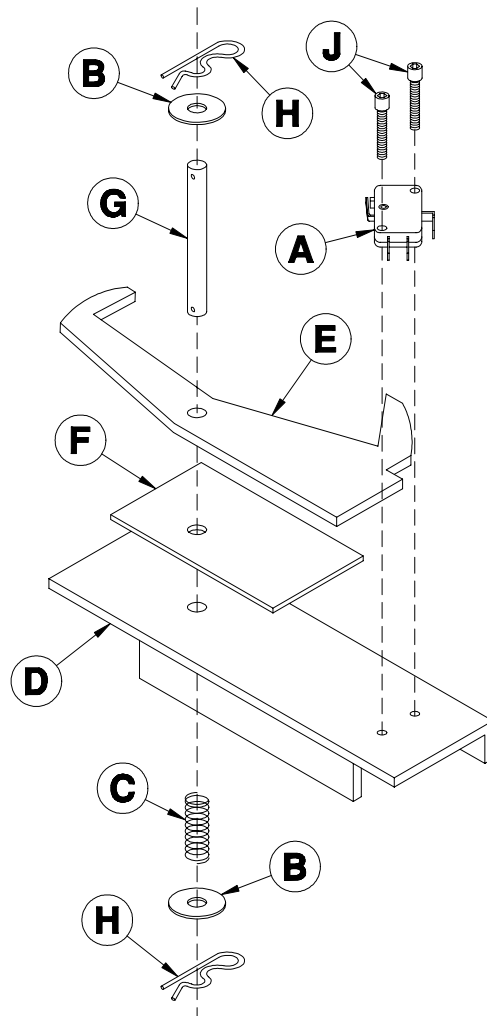


Figure 6. Transformer Assembly, Exploded View

TABLE 6. TRANSFORMER ASSEMBLY (PART No. 040-00004-000), PARTS

Reference Letter	Part Number	Description	Quantity
A	040-00004-000	Transformer	1
B	040-00004-002	Transformer Base	1
C	040-00003-003	Fuse Holder Base	1
D	040-00003-004	Fuse	1
E	040-00004-003	Insulating Fixing Terminal	2
F	040-00004-004	Terminal Clamp	7
G	040-00004-005	Washer	7
H	040-00004-006	Screw	7
J	040-00004-007	Terminal	7

# REVERSING SWITCH



**Figure 7. Reversing Switch (Part No. 1521), Exploded View**

**TABLE 7. REVERSING SWITCH (PART NO. 1521), PARTS**

Reference Letter	Part Number	Description	Quantity
A	0578A	Reversing Switch	1
B	0579-4	Flat Washer	2
C	0579-5	Spring	1
D	1521-1-1	Reversing Switch Bracket	1
E	1521-2-1	Rocker Arm	1
F	1521-2-2	Rocker Arm Slide Pad	1
G	1521-2-3	Rocker Arm Pin	1
H	1521-2-6	Hitch Pin	2
J	9577-10	Socket Head Cap Screw	2

## LUBE RESERVOIR HOSE ASSEMBLY

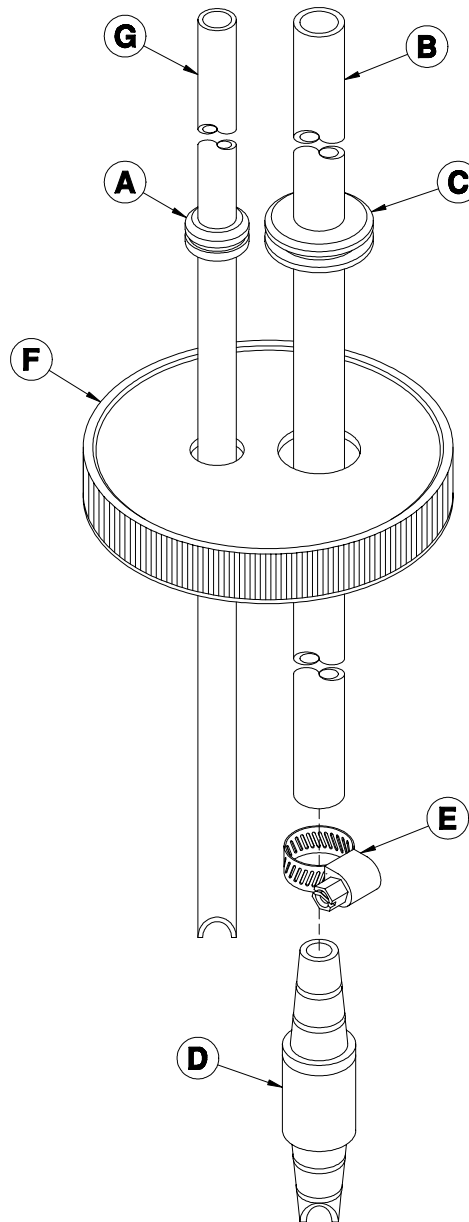


Figure 8. Lube Reservoir Hose Assembly (Part No. 15585), Exploded View

TABLE 8. LUBE RESERVOIR HOSE ASSEMBLY (PART NO. 15585), PARTS

Reference Letter	Part Number	Description	Quantity
A	1275-1-2	Grommet	1
B	1485A-7	Supply Line	1
C	1701-16	Grommet	1
D	5485-6	Lube Reservoir Check Valve	1
E	5485-7-2	Hose Clamp	1
F	15585-1	Lube Bottle-Cap	1
G	15585-2	Return Line	1



**TABLE 9. HYDRAULIC CYLINDER WITH SPACER (PART NO. 15511), PARTS**

Reference Letter	Part Number	Description	Quantity
A	1501B-10-1	Port Block	2
B	1501B-10-10	Piston Assembly	1
C	1501B-10-2	Retainer Plate	2
D	1501B-10-4	Cylinder Body	1
E	1501B-10-5	Rod Bushing	2
F	1501B-10-6	Shaft Seal Expander	2
G	1501B-11-1	O-Ring	2
H	1501B-11-2	U-Cup	2
J	1501B-11-3	Back-Up Ring	2
K	1501B-11-4	Teflon Glass Wear Ring	1
L	1501B-11-5	V-Ring	8
M	1501B-11-6	O-Ring	2
N	1501B-11-7	Back-Up Ring	2
P	1501B-11-8	Rod Wiper	2
Q	15511-1	Prop. Pump Spacer	7
R	15511-2	Reversing Switch Pump Spacer	1
S	15511-3	Hydraulic. Cylinder Tie Rod	4

# PROPORTIONING PUMP ASSEMBLY

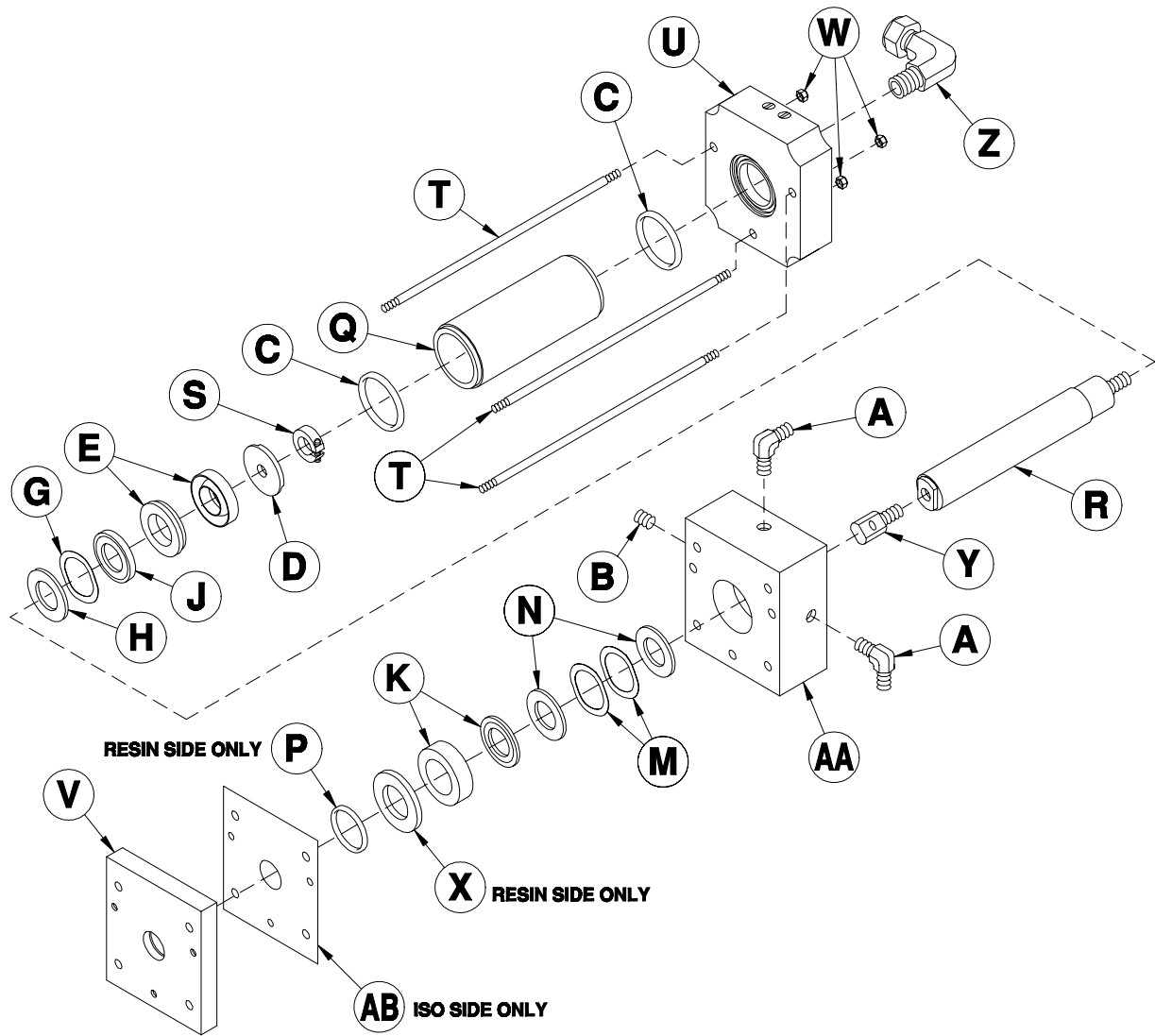


Figure 10. Proportioning Pump Assembly (Part No. 15400-SIZE and 15450-SIZE)

**TABLE 10. PROPORTIONING PUMP ASSEMBLY (PART NO. 15400-SIZE AND 15450-SIZE), PARTS**

Reference Letter	Part Number	Description	Quantity
A	0373	Male Elbow	2
B	0576	Pipe Plug	1
C	1402	O-Ring	2
* D	See Schedule	Packing Retainer Washer	1
* E	See Schedule	Packing Set	1
* G	See Schedule	Wave Spring	**
* H	See Schedule	Spring Retainer Washer	1
* J	See Schedule	Packing Support Washer	1
* K	See Schedule	Packing Set	1
* M	See Schedule	Wave Spring	**
* N	See Schedule	Packing Support Washer	2
* P	See Schedule	O-Ring (Resin only)	1
* Q	See Schedule	Pump Cylinder	1
* R	See Schedule	Piston Rod	1
* S	See Schedule	Shaft Collar	1
T	15427	Pump Tie Rod	3
U	15435-120	Inlet Flange	1
* V	See Schedule See Schedule	R-Packing Retainer Flange A-Packing Retainer Flange	1 1
W	15438	Flange Nut	3
* X	See Schedule	Piston RD Wiper CVR PLT (Resin only)	1
* Y	See Schedule	Clevis Link	1
Z	15441	Tube Elbow	1
* AA	See Schedule See Schedule	R-Outlet Flange (Includes B) A-Outlet Flange (Includes B)	1 1
AB	15444-3	Gasket (ISO only)	1

\* Scheduling of Parts listed in Table 11 and Table 12.

\*\* Specified quantities listed in Table 13.

**TABLE 11. SCHEDULE OF PARTS (PUMP SIZES 24, 30, 44, AND 48)**

Reference Letter	Pump Size			
	24 (ISO only)	30	44	48
D	15412-24	15412-30	15412-44	15412-48
E	1415/1416-24	1415/1416-30	1415/1416-44	1415/1416-48
G	1417-24	1417-30	1417-40/44	1417-48
H	1418-24	1418-30	1418-44	1418-48
J	1419-24	1419-30	1419-44	1419-48
K	1423/1424-24	1423/1424-30	1423/1424-44	1423/1424-48
M	1417-60	1417-60	1425-48/44	1425-48/44
N	1426-24	1426-30	1426-44	1426-48
P (Resin only)		15402	15406	15406
Q	15401-24	15401-30	15401-44	15401-48
R	15411-24	15411-30	15411-44	15411-48
S	15411-5/16	15411-5/16	15411-3/8	15411-3/8
V		15437-30 15487-30	15437-44 15487-44	15437-48 15487-48
X (Resin only)		15439-30	15439-44	15439-48
Y	15440-40	15440-40	15440-40	15440-40
AA		15436-30 15486-30	15436-44 15486-44	15436-48 15486-48

Parts Identification

**TABLE 12. SCHEDULE OF PARTS (PUMP SIZES 80, 88, 104, AND 112)**

Reference Letter	Pump Size			
	80	88	104	112
<b>D</b>	15412-80	15412-88	15412-104	15412-112
<b>E</b>	1415/1416-80	1423/1424-60	1415/1416-104	1415/1416-112
<b>G</b>	1417-104/80	1417-104/80	1417-104/80	1417-120/112
<b>H</b>	1418-80	1418-88	1418-104	1418-112
<b>J</b>	1419-80	1419-88	1419-104	1419-112
<b>K</b>	1423/1424-80	1415/1416-112	1423/1424-104	1423/1424-112
<b>M</b>	1425-104	1425-104	1425-104	1425-120
<b>N</b>	1426-80	1426-88	1426-104	1426-112
<b>P (Resin only)</b>	4401-2-18-2	4401-2-18-2	5436-110	1436-120
<b>Q</b>	15401-80	15401-88	15401-104	15401-112
<b>R</b>	15411-80	15411-88	15411-104	15411-112
<b>S</b>	15411-1/2	15411-1/2	15411-1/2	15411-1/2
<b>V</b>	15437-80	15437-88	15437-104	15437-112
	15487-80	15487-88	15487-104	15487-112
<b>X (Resin only)</b>	15439-80	15439-88	15439-104	15439-112
<b>Y</b>	15829-10	15829-10	15829-10	15829-10
<b>AA</b>	15436-80	15436-88	15436-104	15436-112
	15486-80	15486-88	15486-104	15486-112

**TABLE 13. SCHEDULE OF QUANTITIES**

Reference Letter	(IS0 only)	30	44	48	80	88	104	112
<b>G</b>	2	2	2	1	1	1	2	2
<b>M</b>	2	2	1	1	1	1	1	1

**TABLE 14. PUMP CYCLE COUNTER CHART (CYCLE TO PROPORTIONING PUMP RATIO RELATIONSHIP)**

Pump Ratio*	Number of Cycles Required to Dispense Approximately	
	1 lb (0.5 kg) of Mixed Material **	1 Gal (3.8 l) of Mixed Material **
50 – 50	1,6 cycles	16 cycles
52 – 48	1,7 cycles	16 1/2 cycles
53,5 – 46,5	1,7 cycles	17 cycles
55,5 – 44,5	1,8 cycles	18 cycles
57,5 – 42,5	1,9 cycles	18 1/2 cycles
60 – 40	1,9 cycles	19 1/2 cycles
66,7 – 33,3	2,2 cycles	21 1/2 cycles
71 – 29	2,3 cycles	23 cycles
73,2 – 26,8	2,4 cycles	23 1/2 cycles
75 – 25	2,4 cycles	24 cycles
80 – 20	2,6 cycles	26 cycles
83,3 – 16,7	2,7 cycles	27 cycles

\* Based on use of size #120 Pump in calculating ratio for all combinations.

\*\* Provided that hoses and gun is filled with chemical components.

**TABLE 15. PROPORTIONING PUMP RATIO SPECIFICATIONS**

Pump Size	Cross-Sectional Area		Ratio with #120
	Sq. Inches	mm <sup>2</sup>	
120	1,20	774,2	50 – 50
112	1,12	722,6	52 – 48
104	1,04	671,0	53,5 – 46,5
96	0,96	619,3	55,5 – 44,5
88	0,88	567,7	57,5 – 42,5
80	0,80	516,1	60 – 40
60	0,60	387,1	66,7 – 33,3
48	0,48	309,7	71 – 29
44	0,44	283,9	73,2 – 26,8
40	0,40	258,1	75 – 25
30	0,30	193,6	80 – 20
24	0,24	154,9	83,3 – 16,7

\* Standard Pump Size #120

# 60 AND 96 SIZE PUMPS

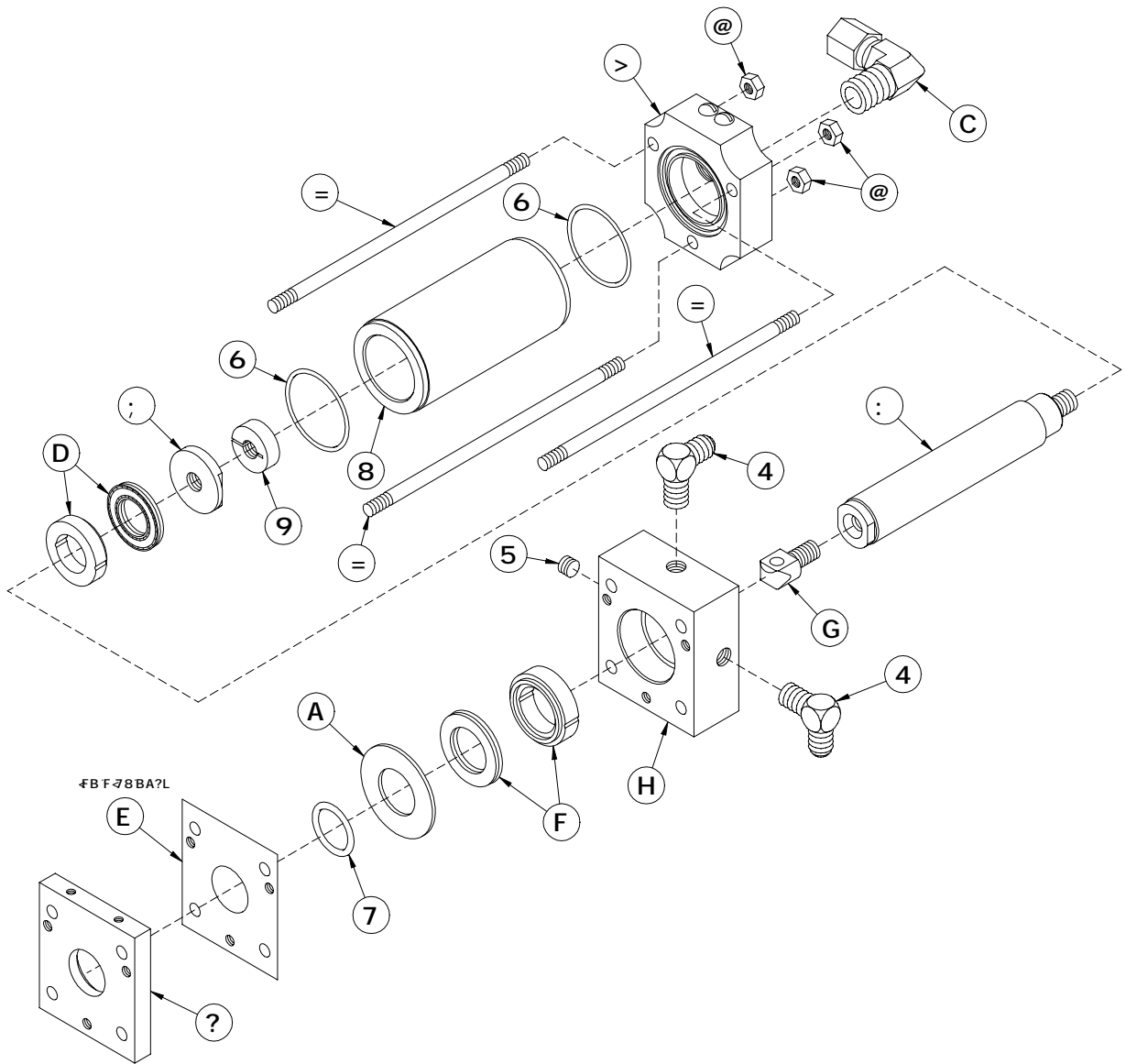


Figure 11. # 60 and 96 Size Pumps (Part No. 15400-SIZE and 15450-SIZE)

**TABLE 16. # 60 AND 96 SIZE PUMPS (PART NO. 15400-SIZE AND 15450-SIZE), PARTS**

Reference Letter	Part Number	Description	Quantity
A	0373	Male Elbow	2
B	0576	Pipe Plug	1
C	1402	O-Ring	2
D	See Schedule	O-Ring (RESIN only)	1
E	See Schedule	Pump Cylinder	1
F	See Schedule	Shaft Collar	1
G	See Schedule	Piston Rod	1
H	See Schedule	Packing Retainer Washer	1
J	15427	Pump Tie Rod	3
K	15435-120	Inlet Flange	1
L	See Schedule See Schedule	R-Packing Retainer Flange A-Packing Retainer Flange	1 1
M	15438	Flange Nut	3
N	See Schedule	Piston Rod Wiper Cover Plate (RESIN only)	1
P	15441	Tube Elbow	1
Q	See Schedule	Piston Seal Set	1
R	15444-3	Gasket (ISO only)	1
S	See Schedule	Cylinder Seal Set (Includes R on ISO side)	1
T	15829-10	Pump Clevis	1
U	See Schedule See Schedule	R-Outlet Pump Flange (Includes B) A-Outlet Pump Flange (Includes B)	1 1

**TABLE 17. SCHEDULE OF PARTS (PUMP SIZES 60 AND 96)**

Reference Letter	Pump Size	
	60	96
D	15405	5436-100
E	15401-60	15401-96
F	15411-1/2-60	15411-1/2
G	15411-60	15411-96
H	15412-60	15412-96
L	15437-60 15487-60	15437-96 15487-96
N	15439-60	15439-96
Q	15443-60	15443-96
S	15444-60	15444-96
U	15436-60 15486-60	15436-96 15486-96

# 120 SIZE PUMP

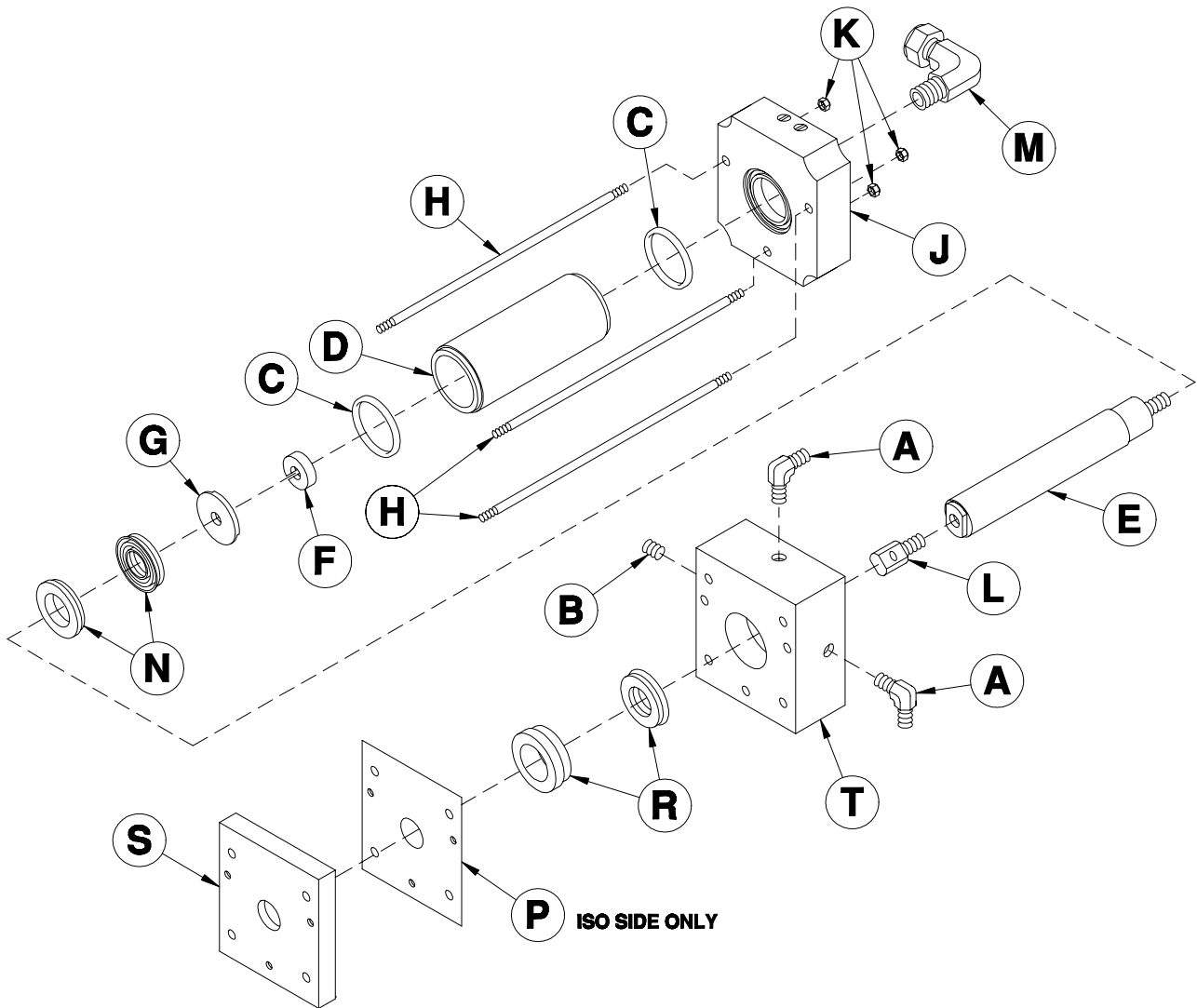


Figure 12. # 120 Size Pump (Part No. 15400-120 and 15450-120)

TABLE 18. # 120 SIZE PUMP (PART NO. 15400-120 AND 15450-120), PARTS

Reference Letter	Part Number	Description	Quantity
A	0373	Male Elbow	2
B	0576	Pipe Plug	1
C	1402	O-Ring	2
D	15401-120	Pump Cylinder	1
E	15411-120	Piston Rod	1
F	15411-1/2	Shaft Collar	1
G	15412-120	Packing Retainer Washer	1
H	15427	Pump Tie Rod	3
J	15435-120	Inlet Flange	1
K	15438	Flange Nut	3
L	15829-10	Pump Clevis	1
M	15441	Tube Elbow	1
N	15443-120	Piston Seal Set	1
P	15444-3	Gasket (ISO only)	1
R	15445-120	R-Cylinder Seal Set	1
	15446-120	A-Cylinder Seal Set (includes P)	1
S	15447-120	R-Packing Retainer Flange	1
	15497-120	A-Packing Retainer Flange	1
T	15436-120	R-Outlet Pump Flange (includes B)	1
	15486-120	A-Outlet Pump Flange (includes B)	1

Replacement Cylinder Seal Sets:

**R-Cylinder** (Part No. 15445-120) - Order as required from your local distributor.

**A-Cylinder** (Part No. 15446-120) - Order as required from your local distributor.

# PUMP BASE ASSEMBLY

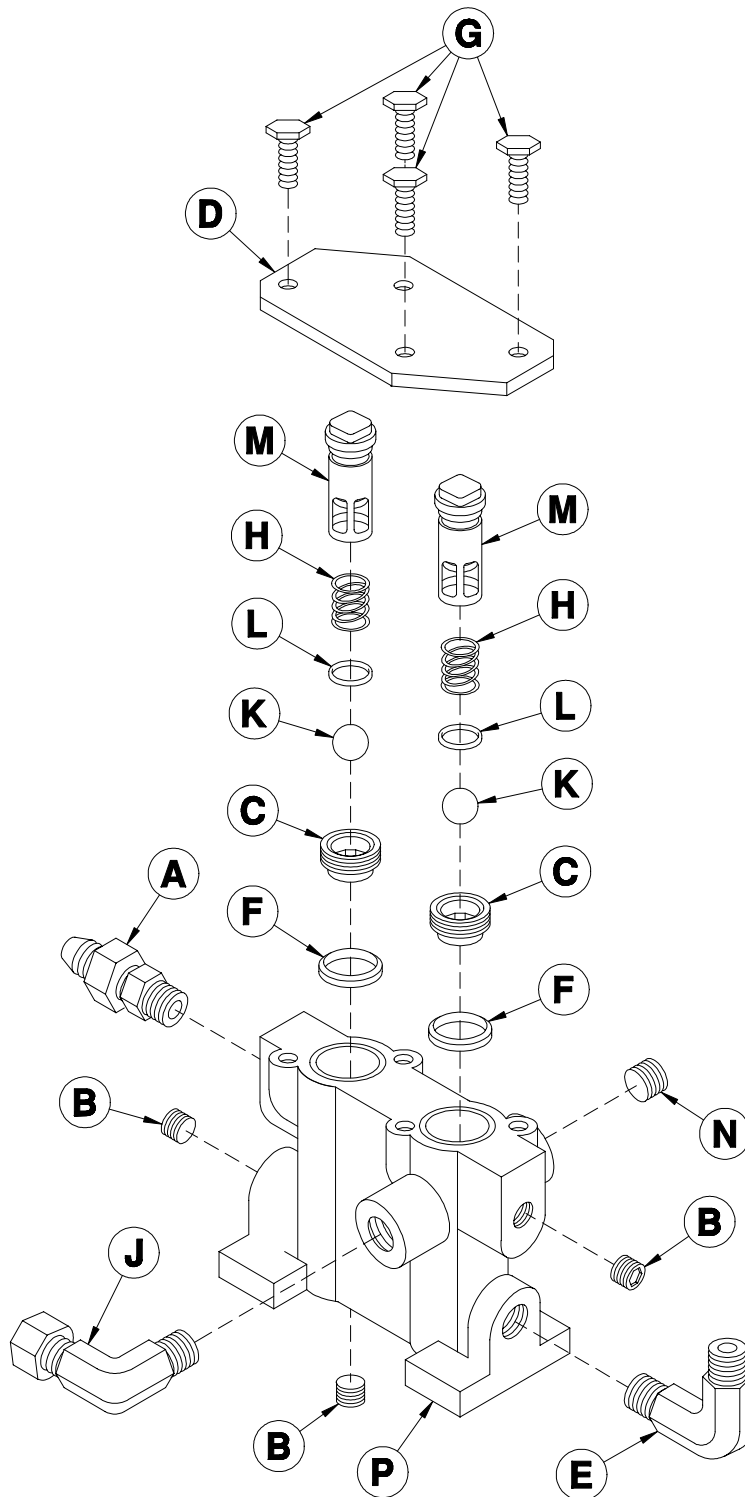


Figure 13. Pump Base Assembly (Part No. 15428 and 15478), Exploded View

**TABLE 19. PUMP BASE ASSEMBLY (PART NO. 15428 AND 15478), PARTS**

Reference Letter	Part Number	Description	Quantity
A	0381-2	Nipple	1
B	0576	Pipe Plug	3
C	15428-3	Valve Ball Seat	2
D	15428-4	Valve Cover Bracket	1
E	15428-5	Male Elbow	1
F	15428-7	Seat Seal	2
G	15428-8	Hex Head Cap Screw	4
H	15428-9	Spring	2
J	15441	Tube Elbow	1
K	5428-5	Valve Ball	2
L	5428-6-3	O-Ring	2
M	5428A-7-1	Discharge Valve Cover	2
N	6404-1	Pipe Plug	1
P	15428-1	R-Valve Block (includes B & N)	1
	15478-1	A-Valve Block (includes B & N)	1

# PRIMARY HEATER

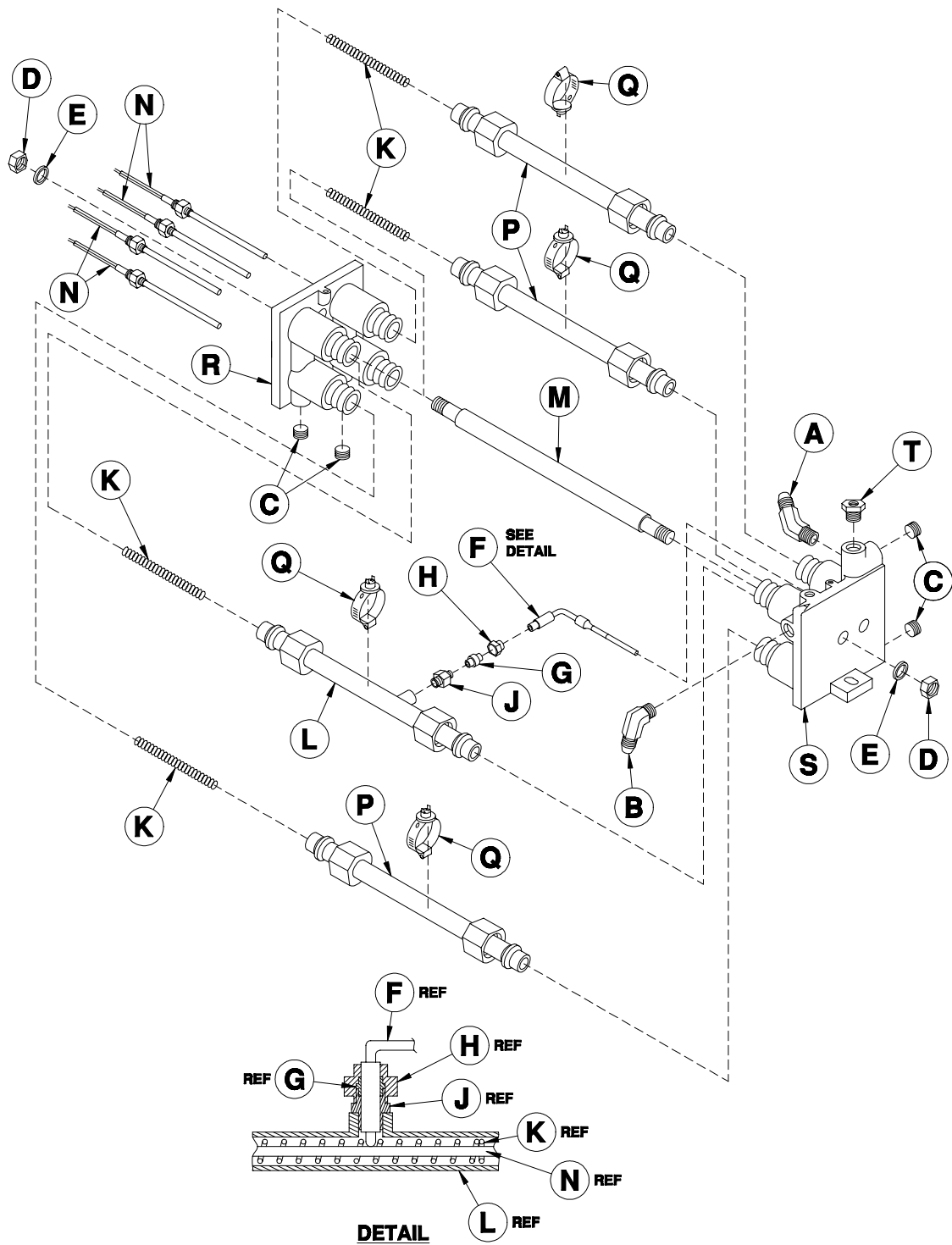


Figure 14. Primary Heater (Part No. 55310B and 55360B), Exploded View

**TABLE 20. PRIMARY HEATER (PART NO. 55310B AND 55360B), PARTS**

Reference Letter	Part Number	Description	Quantity
A	0465	Hose Elbow	1
B	5330-4	Hose Elbow (Resin Only)	1
	5380-4	Hose Elbow (Iso Only)	1
C	6404-1	Pipe Plug	4
D	14300-11	Hex Nut	2
E	14300-12	Flat Washer	2
F	15300A-25	Thermocouple (Includes G and H)	1
G	15300-30-1	Ferrule	1
H	15300-30-2	Nut	1
J	15300-30-3	1/4 Tube Body	1
K	15300-39	Spring	4
L	15300-40	Heat Exchanger w/Boss	1
M	15300-5	Tie Rod	1
N	15300-8	Heating Element 1500W	4
P	15310-1	Heat Exchanger	3
Q	15310-5-1	Thermostat	4
R	15310-4	Preheater Flange	1
S	15310-2	R-Preheater Flange	1
	15360-2	A-Preheater Flange	1
T	OP202-6	Bushing	1
Not Shown	0203-20	Slot Hex Head w/ Washer (To Secure Cover)	1
Not Shown	55311	R-Preheater Cover	1
Not Shown	55361	A-Preheater Cover	1

**TABLE 21. RESISTANCE OF PRIMARY HEATER HEATING ELEMENTS**

No. of Operational Elements	Resistance in Ohms ( $\Omega$ )		
	4000 Watt Heater	5000 Watt Heater	6000 Watt Heater
4	14,4	12	8
3	19,2	16	11
2	28,8	24	16
1	57,6	48	32



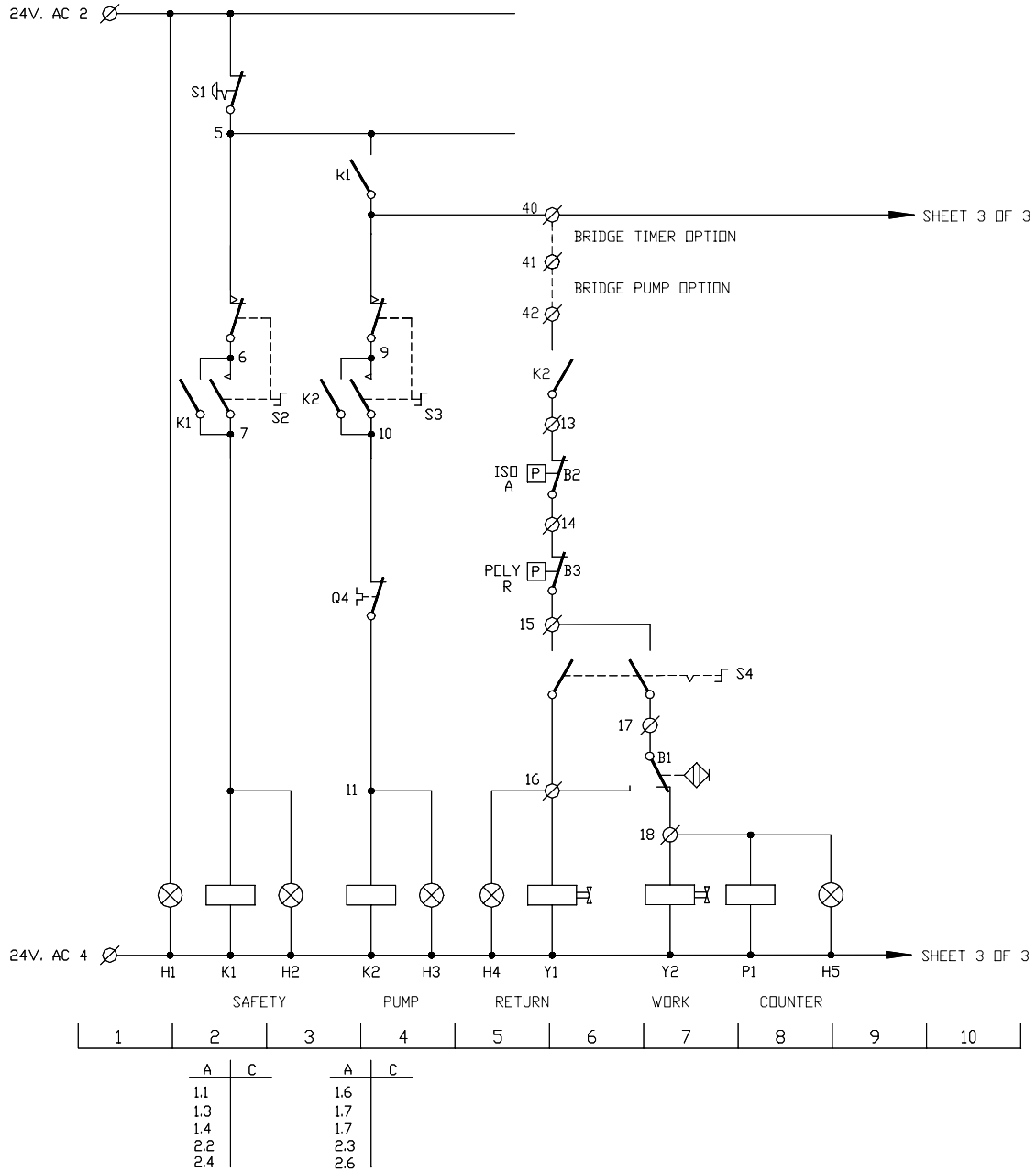


Figure 16. H-2000-E Schematic Diagram, Sheet 2 of 3

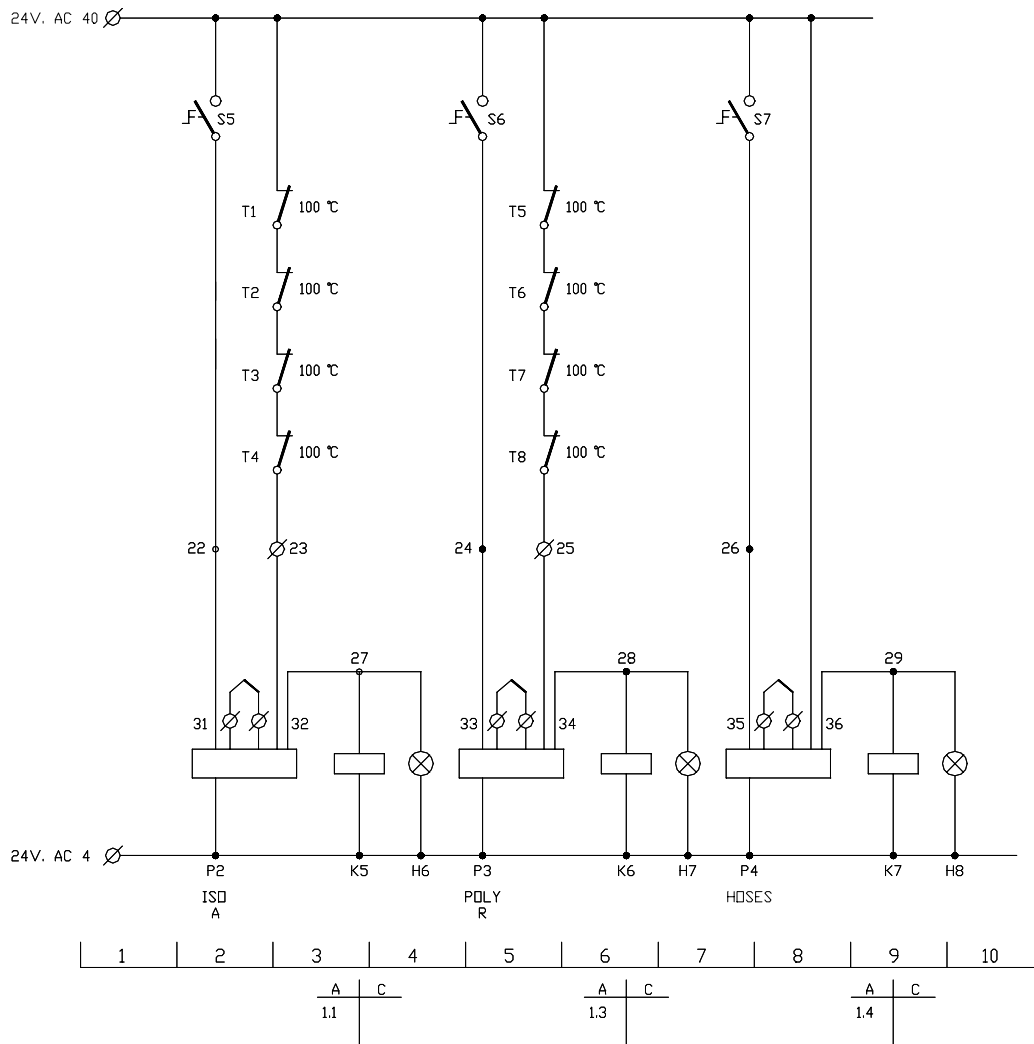


Figure 17. H-2000-E Schematic Diagram, Sheet 3 of 3

TABLE 22. H-2000-E SCHEMATIC DIAGRAM, PARTS LIST

Reference Letter	Part Number	Description	Quantity
A	047-00002-000	Ammeter	1
B1	0578A	Reversing Switch	1
B2-B3	6690-16-772200R	Pressure Switch	2
D1	050-00008-000	Voltage Differential Switch	1
F1	050-00011-000	Fuse	1
F2	040-00003-004	Fuse Transformer	1
H1	042-00019-000	Pilot Light: Green	1
H1	042-00020-000	Lamp Holder	1
H1	042-00001-000	Lamp	1
H2-H3	042-00001-000	Lamp	2
H4-H5	042-00018-000	Pilot Light: Amber	2
H4-H5	042-00020-000	Lamp Holder	2
H4-H5	042-00001-000	Lamp	2
H6-H7-H8	042-00001-000	Lamp	3
I1	042-00002-000	Switch	1
K1	041-00005-000	Contacto	1
K2	041-00002-000	Contacto	1
K5-K6-K7	041-00011-000	Static Relay	3
P1	047-00005-000	Counter	1
P2-P3-P4	047-00015-000	Temperature Controller	3
Q1-Q2	050-00009-000	Circuit Breaker: 30A.	2
Q3	050-00005-000	Circuit Breaker: 10A.	1
Q4	050-00010-000	Circuit Breaker: 6-10A.	1
Q5	050-00006-000	Circuit Breaker: 3A.	1
R10	6690-5-17	Potentiometer	1
R9	6690-26-18	Triac	1
S1	042-00006-000	Emergency Switch	1
S2-S3	042-00007-000	Lighted Switch Body	2
S2-S3	042-00016-000	Switch Contact	2
S4	042-00012-000	Lighted Switch Body	1
S4	042-00015-000	Switch Contact	1
S5-S6-S7	042-00013-000	Lighted Switch Body	3
S5-S6-S7	042-00014-000	Switch Contact	3
T1-T8	15310-5-1	Thermostat	8
TR1	040-00002-000	Transformer	1
TR2	040-00004-000	Transformer	1
V	047-00003-000	Voltmeter	1
Y1-Y2	077-00001-002	Directional Valve	2



Field Number	Field Title	Description
1	Date	Enter date report is submitted.
2	Name	Enter name of person making report.
3	IM Number	Enter the Part Number of the Instruction Manual from the title page.
4	Issue Number	Enter the Issue number of the Instruction Manual from the title page. If there is no issue number enter <b>NONE</b> .
5	Date of Issue	Enter the date of Issue of the Instruction Manual from the title page. If there is no issue date enter <b>NONE</b> .
6	Page Number	Enter the page number containing the discrepancy
7	Discrepancy	Provide a brief description of discrepancy

**NOTE:** You may send a marked copy of the page as an attachment to your submittal.