



# Parts Manual

## Metering Unit

### evolution VR

Issue 6.0    10/07/26  
Ref. NR-00014-ENG



***Before installing the unit and starting it up, carefully read all the technical and safety documentation included in this manual. Pay special attention to the information to know and understand the handling and the conditions of use of the unit. All of the information is aimed at enhancing User Safety and avoiding possible breakdowns derived from the incorrect use of the unit.***



## WARRANTY

HI-TECH SPRAY EQUIPMENT, S. A. (hereinafter "HI-TECH") grants this Limited Guarantee to the original buyer (hereinafter the "Client") for the unit and the original accessories given with the unit (hereinafter the "Product") against any fault in the design, materials or manufacture of the Product at the time of the first purchase by the user and for a duration of two (2) years thereafter, except in the case of hoses and TSU's, which will have a warranty period of one (1) year. Additionally, for any other product manufactured by external suppliers, the warranty period will be as specified by the manufacturer.

If during the guarantee period and under normal conditions of use, the Product should fail to work correctly due to defects of design, material or manufacture, the authorised distributor of the country where the HI-TECH Product or technical assistance service has been purchased shall repair or replace the Product in accordance with what is established in the following:

### CONDITIONS

- a) The validity of this guarantee will be subject to the presentation of the original invoice issued by the HI-TECH authorised distributor for the sale of the Product along with the Product handed over for repair or replacement, which must show the date of purchase and the serial number. HI-TECH reserves the right to refuse to give the guarantee service when the indicated data fail to appear on the invoice or have been modified after the purchase of the Product.
- b) The repaired or replaced Product will continue to maintain the original guarantee for the time remaining until the end of the guarantee or for three (3) months from the repair date, if the remaining period of the original guarantee were shorter.
- c) This guarantee will not be applied to the faults in the Product caused by its faulty installation, the natural wear and tear of the components, any use other than that considered normal for this Product or which should fail to strictly comply with the instructions of use provided by HI-TECH; due to accident, carelessness, adjustments, alterations or modifications of the Product not authorised by HI-TECH or due to the use of accessories, heating devices, pumping equipment and/or dispensers that have not been approved or manufactured by HI-TECH.
- d) The guarantee applicable to the components and accessories forming part of the Product and which have not been made by HI-TECH will be limited to the guarantee offered by the original manufacturer thereof.

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All information provided in this manual has been included in the confidence that it is true, although it does not constitute any responsibility or implicit or explicit guarantee. HI-TECH reserves the right at any time and without prior warning to make all improvements and modifications necessary to this manual, in order to rectify any possible typographical errors, increase the information contained or insert the changes caused to the characteristics and performance of the unit.

## SAFETY AND HANDLING

The equipment described in this manual has been designed and manufactured in compliance with the following European Directives, following as application guide the harmonized standards detailed and in conformity with the relevant UK Statutory Instruments (and their amendments):

**2006/42/EC Machinery Directive**

**2014/35/EU Low Voltage Directive**

**2014/30/EU EMC Directive**

**2011/65/EU RoHS Directive with amendment 2015/863**

**2012/19/EU Directive on waste electrical and electronic equipment**

Standards used:

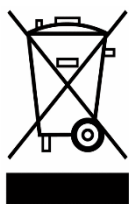
EN ISO 12100:2010

EN 60204-1:2018

EN IEC 61000-6-4:2019

EN IEC 61000-6-2:2019

EN IEC 63000:2018



recycling sectors.

Electrical products cannot be thrown out with the rubbish. They must be taken to a dedicated collection point for an environmentally sound disposal in accordance with local regulations. You must contact your local collective or retailer for information about recycling. Before leaving WEEE at appropriate collection facilities, batteries must be removed and disposed of separately for proper recycling. The packaging materials are recyclable. Dispose of packaging materials in an environmentally sound manner and place them at the disposal of

### TRANSPORT AND STORAGE

Proper precautions must be taken so that the equipment can withstand the effects of transport and storage temperatures between -25°C and +55°C or up to +70°C for short periods that do not exceed 24 hours. Also, appropriate means to prevent damage from moisture, vibrations or shocks must be foreseen.

## METERING UNIT evolution VR MODEL

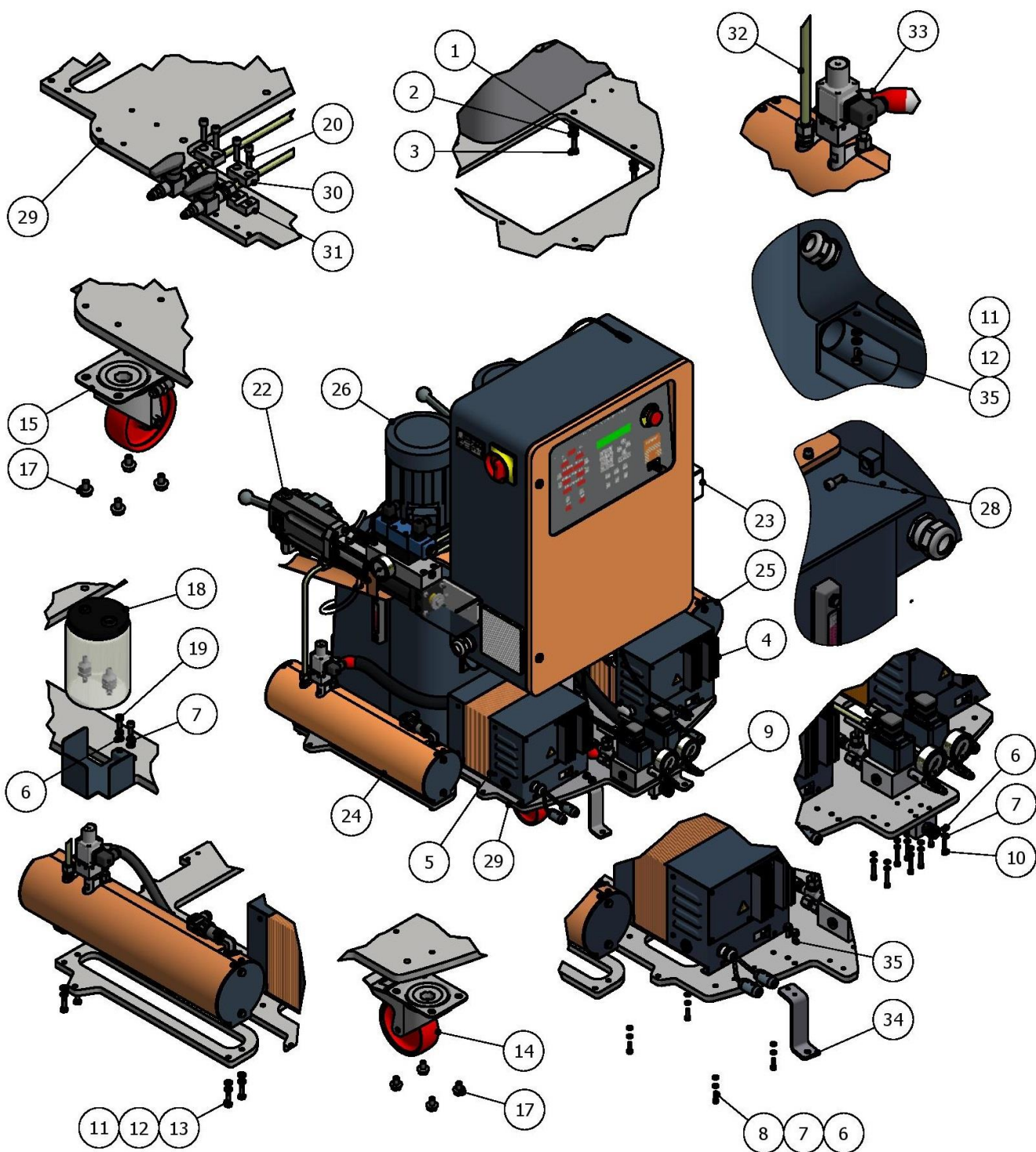


Figure 1. Metering Unit evolution VR Model

**Table 1. Metering Unit evolution VR Model, Parts List**

| Ref. | Description                            | Parts Number | Qty. |
|------|----------------------------------------|--------------|------|
| 1    | Washer                                 | TN-00162     | 4    |
| 2    | Lock Washer                            | TN-00087     | 4    |
| 3    | Hex Head Cap Screw                     | TN-00163     | 4    |
| 4    | R Transformer (3x400v-N)               | EL-00127-15  | 1    |
| 5    | A Transformer (3x400v-N)               | EL-00127-15  | 1    |
| 6    | Washer                                 | TN-00024     | 18   |
| 7    | Lock Washer                            | TN-00025     | 18   |
| 8    | Socket Head Cap Screw                  | TN-00026     | 8    |
| 9    | Recirculation Kit (Manual – Automatic) | See Table 3  | 1    |
| 10   | Socket Head Cap Screw                  | TN-00014     | 8    |
| 11   | Washer                                 | TN-00119     | 20   |
| 12   | Lock Washer                            | TN-00028     | 27   |
| 13   | Hex Head Cap Screw                     | TN-00146     | 8    |
| 14   | Front Wheel with Brake                 | MQ-01002     | 2    |
| 15   | Back Wheel                             | MQ-01016     | 2    |
| 16   |                                        |              |      |
| 17   | Hex Head Flange Screw                  | TN-00504     | 16   |
| 18   | Lube Reservoir Assembly                | MQ-01009-01  | 1    |
| 19   | Socket Head Cap Screw                  | TN-00248     | 2    |
| 20   | Socket Head Cap Screw                  | TN-00245     | 4    |
| 21   |                                        |              |      |
| 22   | A Pump/Heater Hose Assy.               | See Table 4  | 1    |
| 23   | R Pump/Heater Hose Assy.               | See Table 5  | 1    |
| 24   | A Primary Heater                       | See Table 2  | 1    |
| 25   | R Primary Heater                       | See Table 2  | 1    |
| 26   | Pump Motor Assembly                    | See Table 6  | 1    |
| 27   | Electrical Console Assy.               | EL-00077-00  | 1    |
| 28   | Socket Head Cap Screw                  | TN-00176     | 2    |
| 29   | Base Plate                             | MQ-05001     | 1    |
| 30   | Upper Tube Clamp                       | MQ-05013     | 2    |



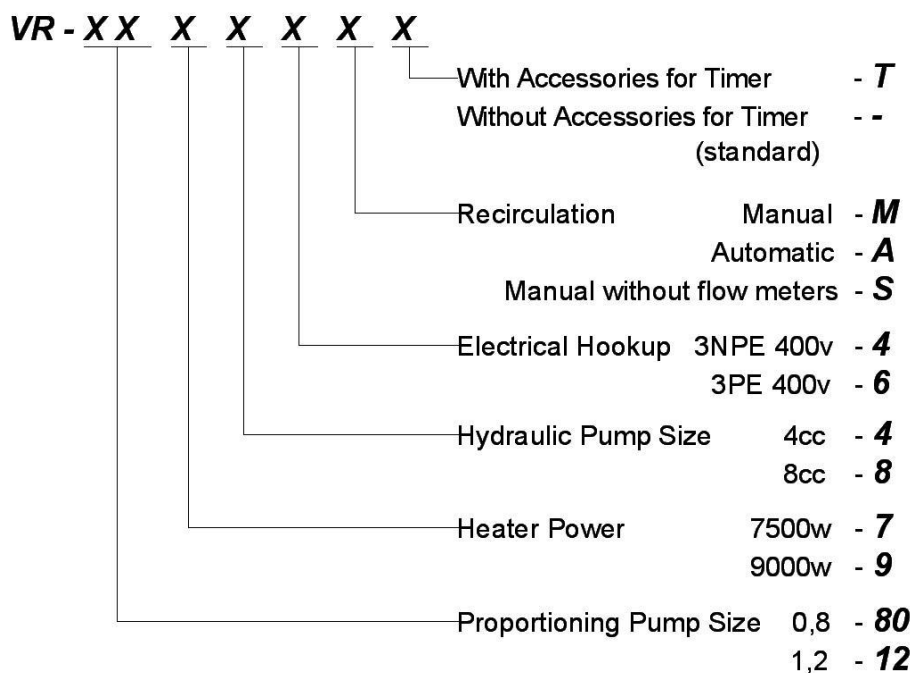
| Ref. | Description                                | Parts Number | Qty. |
|------|--------------------------------------------|--------------|------|
| 31   | Lower Tube Clamp                           | MQ-05014     | 2    |
| 32   | Tube Inlet to Heater                       | HI-00186 (*) | 2    |
| 33   | Heater Output Hose                         | MA-00051     | 2    |
| 34   | "Z" Bracket without Transfer Pumps Bracket | MQ-01017     | 2    |
| 35   | Hex. Head Cap Screw                        | TN-00187     | 7    |

*(\*) For replacement part, the tube HI-00186 is delivered curved with excess material at both ends to adapt it to the existing assembly.*

**Table 2. List of heaters as the Main Voltage of the unit**

| Main Voltage | "A" Heater    | "R" Heater    | Power & Voltage of Resistance |
|--------------|---------------|---------------|-------------------------------|
| 3PE~400V     | CLH-05001-00C | CLH-05002-00C | 9000W(6x1500W) @ 400V         |
|              | CLH-05001-00D | CLH-05002-00D | 7500W(6x1250W) @ 400V         |

## DESCRIPTION OF THE NOMENCLATURE



**Table 3. Recirculation Kit, Parts Number List**

| Part Number Unit | Ref. 9   | Description                                  |
|------------------|----------|----------------------------------------------|
| VR-XXXXXA-       | KT-00055 | Automatic Recirculation Kit                  |
| VR-XXXXXM-       | KT-00054 | Manual Recirculation Kit                     |
| VR-XXXXXS-       | KT-00056 | Manual Recirculation Kit without Flow Meters |

**N:B.:**

*Optionally the recirculation kits will be completed up to the tanks with the KT-00038-06*

**Table 4. A Pump Line Assembly, Parts Number List**

| Part Number Unit | POS. 22       | Description                |
|------------------|---------------|----------------------------|
| VR-80XXXXX       | PU-06200-008G | A Pump Line Assembly # 0.8 |
| VR-12XXXXX       | PU-06200-012G | A Pump Line Assembly # 1.2 |



***Table 5. R Pump Line Assembly, Parts Number List***

| <b>Part Number<br/>Unit</b> | <b>POS. 23</b> | <b>Description</b>         |
|-----------------------------|----------------|----------------------------|
| VR-80XXXXX                  | PU-06300-008G  | R Pump Line Assembly # 0.8 |
| VR-12XXXXX                  | PU-06300-012G  | R Pump Line Assembly # 1.2 |

***Table 6. Pump Motor Assembly, Parts List***

| <b>Part Number<br/>Unit</b> | <b>POS. 26</b> | <b>Description</b>               |
|-----------------------------|----------------|----------------------------------|
| VR-XXX4XXX                  | HI-00055-02    | Motor 3kW and Hydraulic Pump 4cc |
| VR-XXX8XXX                  | HI-00055-03    | Motor 3kW and Hydraulic Pump 8cc |
| VR-12X8XXX                  | HI-00055-04    | Motor 4kW and Hydraulic Pump 8cc |

## ELECTRICAL CONSOLE ASSEMBLY

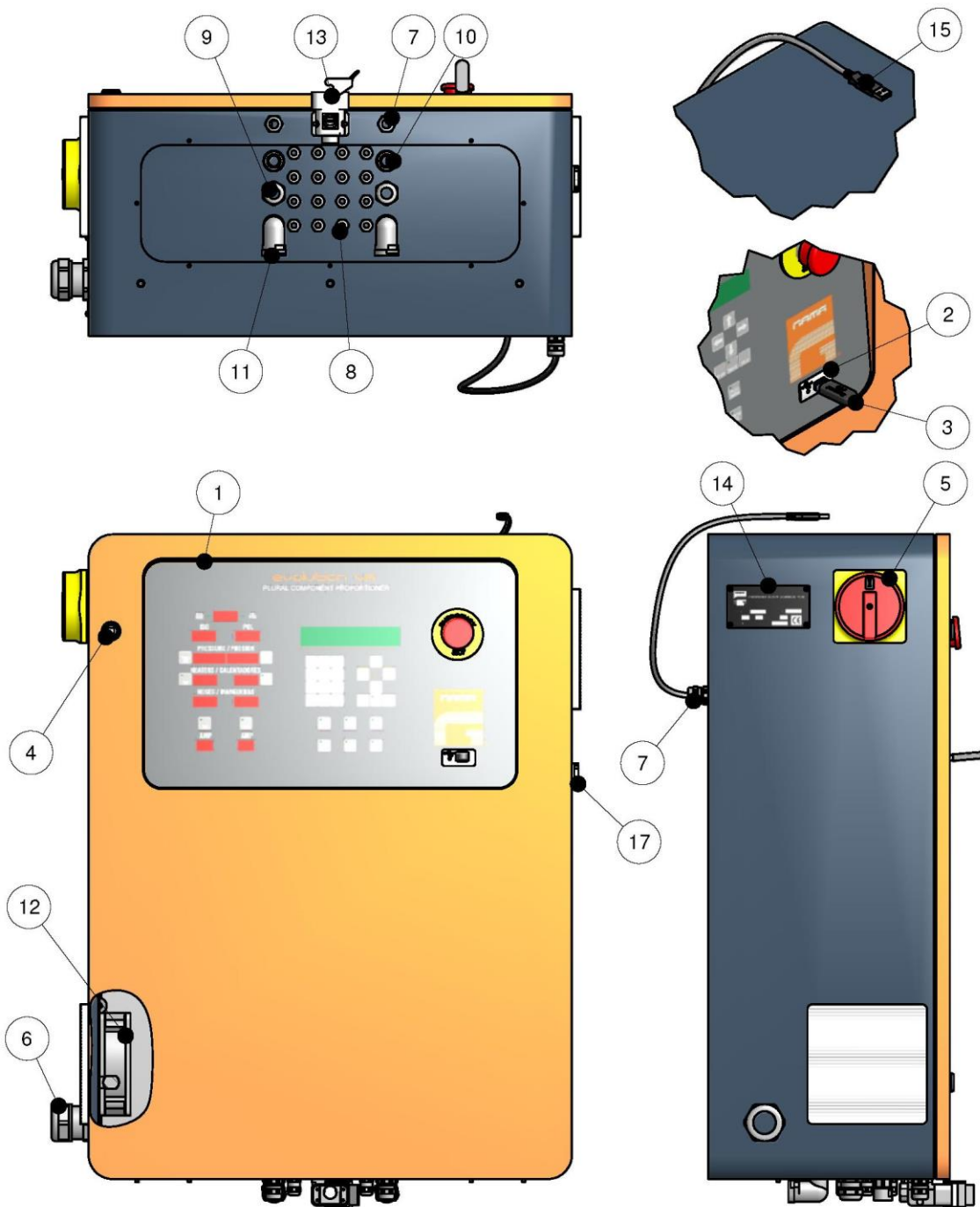


Figure 2. Electrical Console Assembly, evolution VR

**Table 7. Electrical Console, Parts List**

| Ref. | Description                         | Parts Number | Qty. |
|------|-------------------------------------|--------------|------|
| 1    | Bezel                               | EL-00078-01  | 1    |
|      | Electric Circuit                    | EL-00078-02  | 1    |
| 2    | USB Port (Included in Ref.1)        | EL-00078-04  | 1    |
| 3    | Pen Drive 1 GB (Included in Ref.1)  | EL-00078-05  | 1    |
| 4    | Lock Electrical Console Assembly    | EL-00034     | 2    |
| 5    | Main Switch                         | EL-00107-23  | 1    |
|      | Command Switch                      | EL-00107-19  | 1    |
| 6    | Cable Connector                     | EL-00088-04  | 1    |
|      | Nut                                 | EL-00090-05  | 1    |
| 7    | Strain Relief                       | EL-00088-05  | 3    |
|      | Nut                                 | EL-00090-06  | 3    |
| 8    | Strain Relief                       | EL-00088-00  | 16   |
|      | Nut                                 | EL-00090-00  | 16   |
| 9    | Strain Relief                       | EL-00088-02  | 2    |
|      | Nut                                 | EL-00090-01  | 2    |
| 10   | Strain Relief                       | EL-00087-00  | 2    |
|      | Nut                                 | EL-00090-01  | 2    |
| 11   | Strain Relief                       | EL-00087-02  | 2    |
|      | Nut                                 | EL-00090-01  | 2    |
| 12   | Fan                                 | EL-00133-00  | 1    |
| 13   | Base Connector                      | EL-00096-04  | 1    |
| 14   | Standard Features Bezel             | MQ-01010     | 1    |
| 15   | Aerial USB Port                     | EL-00078-08  | 1    |
| 16   | Internal Electronic Board           | EL-00078-09  | 1    |
| 17   | Acoustic adviser                    | EL-00130-00  | 1    |
| 18   | Power Circuit (not show in drawing) | EL-00078-03  | 1    |

## HIDRAULIC MANIFOLD (PUMPS WITH SAE CONNECTIONS, DISUSED)

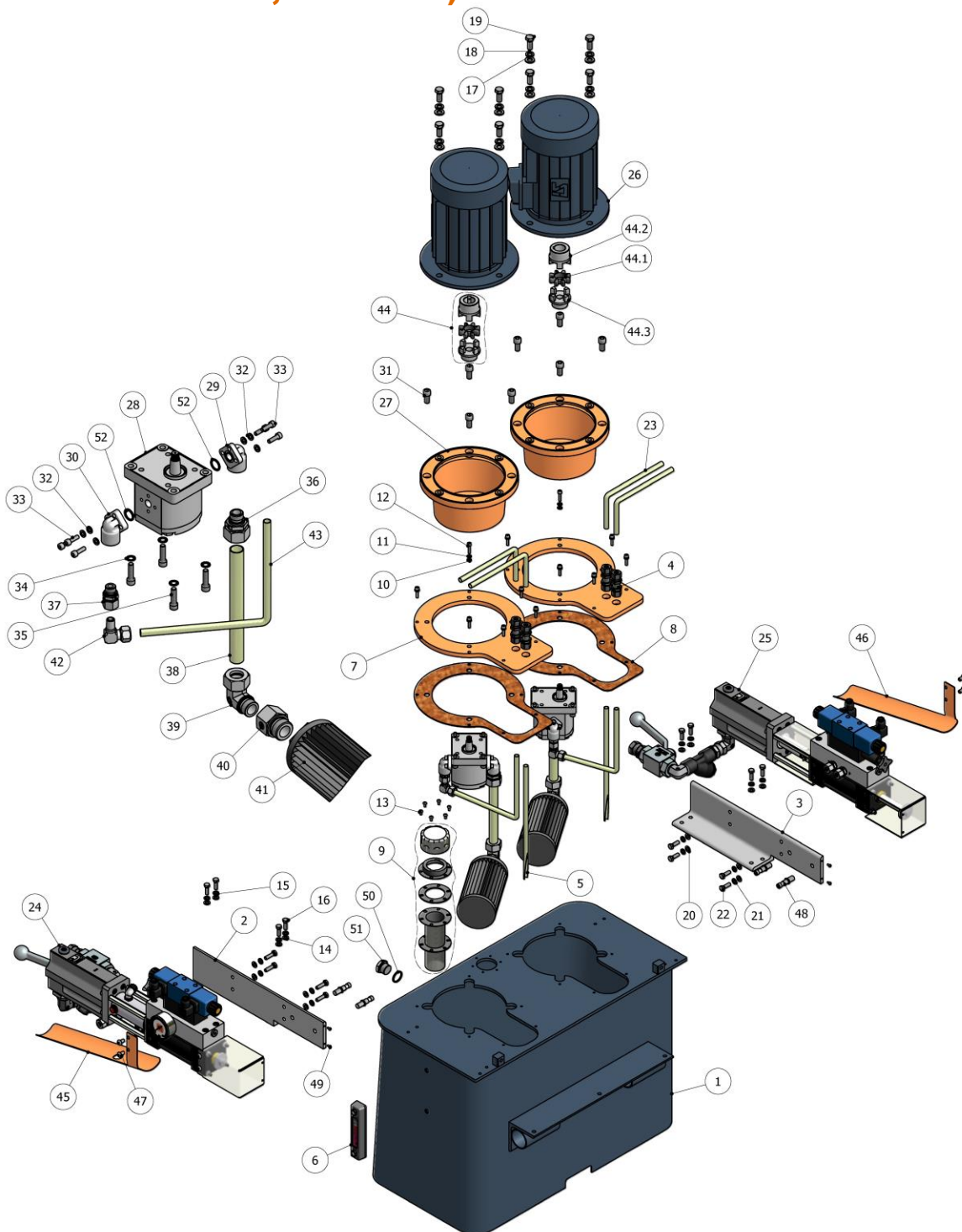


Figure 3. Hyd. Manifold (Pumps with SAE Connections, disused),exploded View



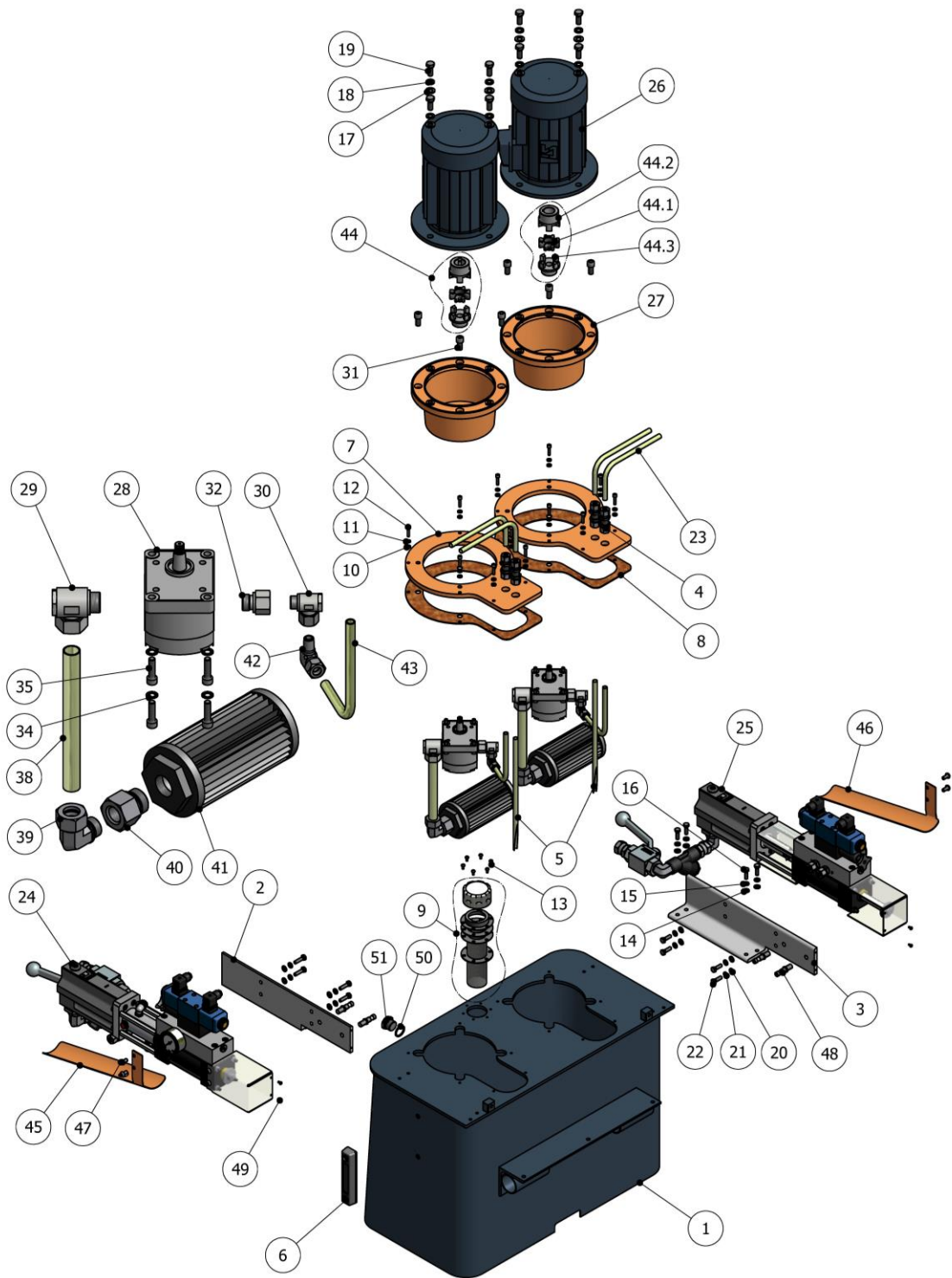
**Table 8. Hydraulic Manifold (Pumps with SAE Connections, disused),  
Parts List**

| Ref. | Description                       | Parts Number | Qty. |
|------|-----------------------------------|--------------|------|
| 1    | Oil Tank                          | HI-00055-01  | 1    |
| 2    | A Pump Bracket                    | MQ-05005     | 1    |
| 3    | R Pump Bracket                    | MQ-05006     | 1    |
| 4    | Adapter Bulkhead Union            | RA-00025     | 4    |
| 5    | Return Tube                       | MP-00002 (*) | 2    |
| 6    | Thermometer and Fluid Level Gauge | HI-00001     | 1    |
| 7    | Motor Support                     | HI-00055-01G | 2    |
| 8    | Gasket                            | HI-00055-01H | 2    |
| 9    | HYD-Oil Filler                    | HI-00002     | 1    |
| 10   | Washer                            | TN-00024     | 14   |
| 11   | Lock Washer                       | TN-00025     | 14   |
| 12   | Socket Head Cap Screw             | TN-00169     | 14   |
| 13   | ULS Screw                         | TN-00166     | 6    |
| 14   | Washer                            | TN-00119     | 8    |
| 15   | Lock Washer                       | TN-00028     | 8    |
| 16   | Hex Head Cap Screw                | TN-00146     | 8    |
| 17   | Washer                            | TN-00040     | 8    |
| 18   | Lock Washer                       | TN-00015     | 8    |
| 19   | Hex Head Cap Screw                | TN-00060     | 8    |
| 20   | Washer                            | TN-00119     | 8    |
| 21   | Lock Washer                       | TN-00028     | 8    |
| 22   | Hex Head Cap Screw                | TN-00146     | 8    |
| 23   | Tube                              | MP-00002 (*) | 4    |
| 24   | A Pump Line assembly              | See Table 10 | 1    |
| 25   | R Pump Line Assembly              | See Table 10 | 1    |
| 26   | Electric Motor                    | See Table 10 | 2    |
| 27   | Bell Housing                      | HI-00056     | 2    |
| 28   | Hydraulic Pump                    | See Table 10 | 2    |
| 29   | Suction Bridle                    | HI-00072     | 2    |
| 30   | Pressure Bridle                   | HI-00071     | 2    |



| Ref. | Description           | Parts Number | Qty. |
|------|-----------------------|--------------|------|
| 31   | Socket Head Cap Screw | TN-00177     | 8    |
| 32   | Lock Washer           | TN-00025     | 12   |
| 33   | Socket Head Cap Screw | TN-00257     | 12   |
| 34   | Lock Washer           | TN-00038     | 8    |
| 35   | Socket Head Cap Screw | TN-00062     | 8    |
| 36   | Male Stud Connector   | RA-00198     | 2    |
| 37   | Male Stud Connector   | RA-00036     | 2    |
| 38   | Tube                  | HI-00074 (*) | 2    |
| 39   | Street Elbow          | RA-00199     | 2    |
| 40   | Thread Reducer        | RA-00175     | 2    |
| 41   | Filter                | HI-00070     | 2    |
| 42   | Street Elbow          | RA-00196     | 2    |
| 43   | Tube                  | MP-00002 (*) | 2    |
| 44   | Couple Assembly       | HI-00069-00  | 2    |
| 44.1 | Alignment Spider      | HI-00069-01  | 2    |
| 44.2 | Shaft Coupling        | HI-00069-02  | 2    |
| 44.3 | Shaft Coupling        | HI-00069-03  | 2    |
| 45   | A Drip Pan            | MQ-05017     | 1    |
| 46   | R Drip Pan            | MQ-05018     | 1    |
| 47   | ULS Screw             | TN-00135     | 4    |
| 48   | Inductive Detector    | EL-00136-03  | 4    |
| 49   | ULS Screw             | TN-00031     | 4    |
| 50   | O-Ring                | OR-00082     | 1    |
| 51   | Plug                  | RA-00022     | 1    |
| 52   | O-Ring                | OR-00087     | 4    |

*The codes of the marked parts (\*), are referenced to the code of the raw material.*



**Figure 4. Hyd. Manifold (Pumps with Threaded Connections, actual),exploded View**



**Table 9. Hydraulic Manifold (Pumps with Threaded Connections, actual),  
Parts List**

| Ref. | Description                       | Parts Number | Qty. |
|------|-----------------------------------|--------------|------|
| 1    | Oil Tank                          | HI-00055-01  | 1    |
| 2    | A Pump Bracket                    | MQ-05005     | 1    |
| 3    | R Pump Bracket                    | MQ-05006     | 1    |
| 4    | Adapter Bulkhead Union            | RA-00025     | 4    |
| 5    | Return Tube                       | MP-00002 (*) | 2    |
| 6    | Thermometer and Fluid Level Gauge | HI-00001     | 1    |
| 7    | Motor Support                     | HI-00055-01G | 2    |
| 8    | Gasket                            | HI-00055-01H | 2    |
| 9    | HYD-Oil Filler                    | HI-00002     | 1    |
| 10   | Washer                            | TN-00024     | 14   |
| 11   | Lock Washer                       | TN-00025     | 14   |
| 12   | Socket Head Cap Screw             | TN-00169     | 14   |
| 13   | ULS Screw                         | TN-00166     | 6    |
| 14   | Washer                            | TN-00119     | 8    |
| 15   | Lock Washer                       | TN-00028     | 8    |
| 16   | Hex Head Cap Screw                | TN-00146     | 8    |
| 17   | Washer                            | TN-00040     | 8    |
| 18   | Lock Washer                       | TN-00015     | 8    |
| 19   | Hex Head Cap Screw                | TN-00060     | 8    |
| 20   | Washer                            | TN-00119     | 8    |
| 21   | Lock Washer                       | TN-00028     | 8    |
| 22   | Hex Head Cap Screw                | TN-00146     | 8    |
| 23   | Tube                              | MP-00002 (*) | 4    |
| 24   | A Pump Line assembly              | See Table 10 | 1    |
| 25   | R Pump Line Assembly              | See Table 10 | 1    |
| 26   | Electric Motor                    | See Table 10 | 2    |
| 27   | Bell Housing                      | HI-00056     | 2    |
| 28   | Hydraulic Pump                    | See Table 10 | 2    |
| 29   | Suction Banjo Elbow               | RA-00008     | 2    |
| 30   | Pressure Banjo Elbow              | RA-00007     | 2    |
| 31   | Socket Head Cap Screw             | TN-00177     | 8    |



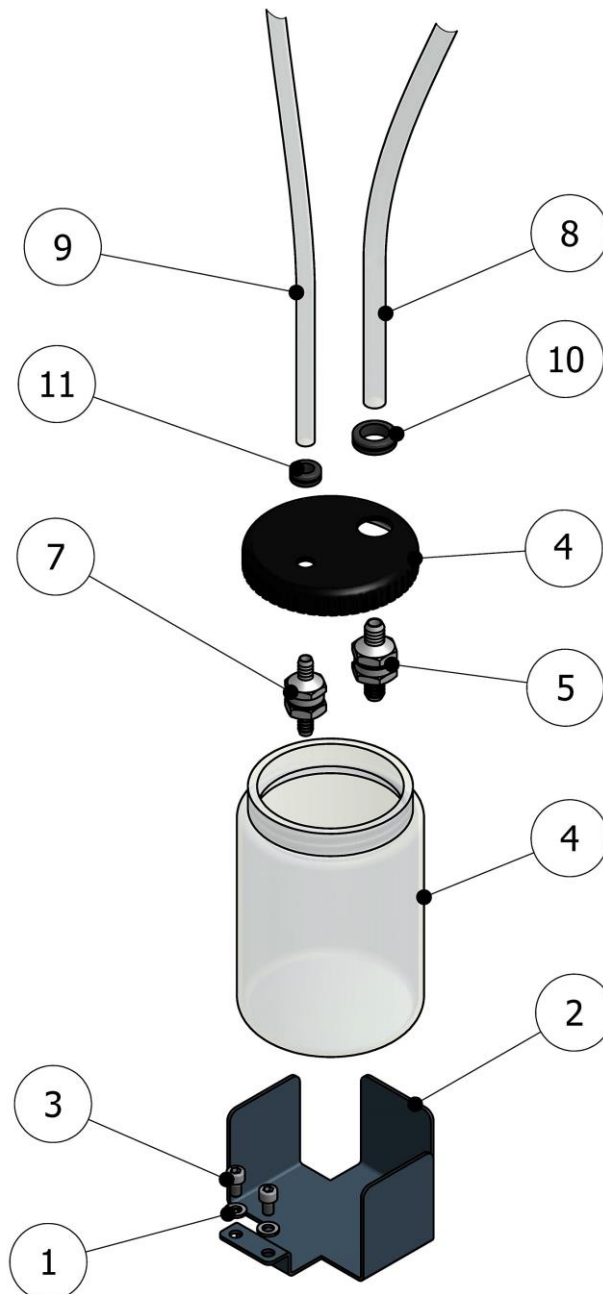
| Ref. | Description           | Parts Number | Qty. |
|------|-----------------------|--------------|------|
| 32   | Reduction             | RA-00011     | 2    |
| 33   |                       |              |      |
| 34   | Lock Washer           | TN-00038     | 8    |
| 35   | Socket Head Cap Screw | TN-00062     | 8    |
| 36   |                       |              |      |
| 37   |                       |              |      |
| 38   | Tube                  | HI-00074 (*) | 2    |
| 39   | Street Elbow          | RA-00199     | 2    |
| 40   | Thread Reducer        | RA-00175     | 2    |
| 41   | Filter                | HI-00070     | 2    |
| 42   | Street Elbow          | RA-00196     | 2    |
| 43   | Tube                  | MP-00002 (*) | 2    |
| 44   | Couple Assembly       | HI-00069-00  | 2    |
| 44.1 | Alignment Spider      | HI-00069-01  | 2    |
| 44.2 | Shaft Coupling        | HI-00069-02  | 2    |
| 44.3 | Shaft Coupling        | HI-00069-03  | 2    |
| 45   | A Drip Pan            | MQ-05017     | 1    |
| 46   | R Drip Pan            | MQ-05018     | 1    |
| 47   | ULS Screw             | TN-00135     | 4    |
| 48   | Inductive Detector    | EL-00136-03  | 4    |
| 49   | ULS Screw             | TN-00031     | 4    |
| 50   | O-Ring                | OR-00082     | 1    |
| 51   | Plug                  | RA-00022     | 1    |

*The codes of the marked parts (\*), are referenced to the code of the raw material.*

**Table 10. Hydraulic Manifold, Parts List**

| Part Number Unit | 24            | 25            | 26          | 28       |
|------------------|---------------|---------------|-------------|----------|
| VR-80X44XX       | PU-06201-008G | PU-06301-008G | EL-00138-06 | HI-00057 |
| VR-80X84XX       | PU-06201-008G | PU-06301-008G | EL-00138-06 | HI-00058 |
| VR-12X84XX       | PU-06201-012G | PU-06301-012G | EL-00138-07 | HI-00058 |

## LUBE RESERVOIR HOSE ASSEMBLY

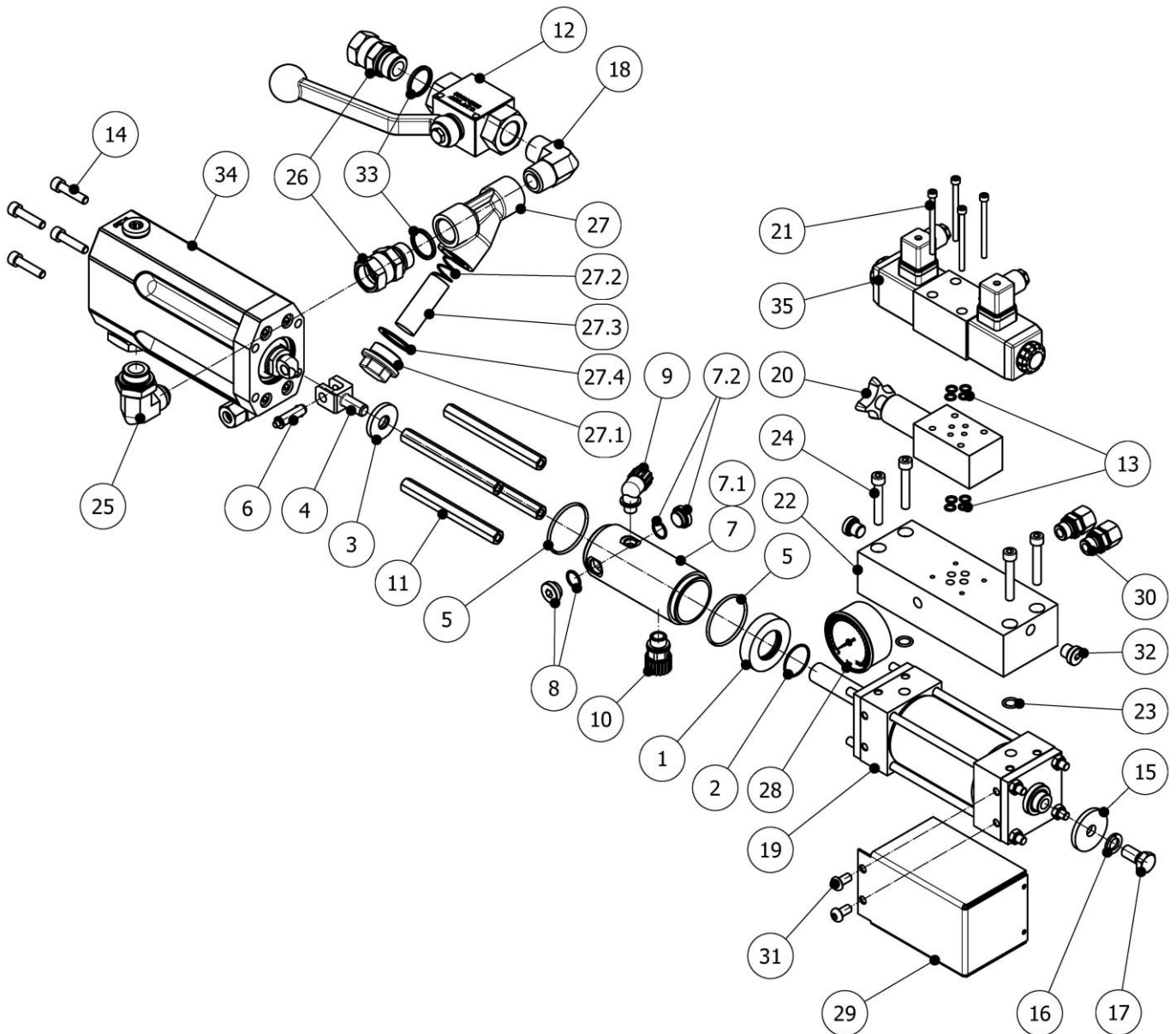


*Figure 5. Lube Reservoir Hose Assembly, Exploded View*

**Table 11. Lube Reservoir Hose Assembly, Parts List**

| Ref. | Description                              | Parts Number | Qty. |
|------|------------------------------------------|--------------|------|
| 1.1  | Washer                                   | TN-00024     | 2    |
| 1.2  | Washer                                   | TN-00025     | 2    |
| 2    | Lube Reservoir Bracket                   | MQ-01008     | 1    |
| 3    | Socket Head Cap Screw                    | TN-00248     | 2    |
| 4    | Lube Reservoir Bottle with Drilled Cap   | MQ-01009-01  | 1    |
| 5    | Lube Reservoir Check Valve for Pipe 12x1 | RA-00068     | 1    |
| 6    |                                          |              |      |
| 7    | Lube Reservoir Check Valve for Pipe 10x1 | RA-00283     | 1    |
| 8    | Supply Line                              | MA-00025     | 1    |
| 9    | Return Line                              | MA-00024     | 1    |
| 10   | Rubber Grommet                           | EL-00095-03  | 1    |
| 11   | Rubber Grommet                           | EL-00095-01  | 1    |

## **“A” PUMP LINE ASSEMBLY**



**Figure 6. “A” Pump Line Assembly, Exploded View**

**Table 12. "A" Pump Line Assembly, Parts List**

| Ref. | Description                                      | Parts Number | Qty. |
|------|--------------------------------------------------|--------------|------|
| 1    | Lube Cylinder Adapter Plate                      | PU-01021     | 1    |
| 2    | O-Ring                                           | OR-00021     | 1    |
| 3    | Baffle                                           | PU-01019     | 1    |
| 4    | Hydraulic Cylinder Clevis                        | PU-01043     | 1    |
| 5    | Lube Cylinder O-Ring                             | OR-00020     | 2    |
| 6    | "A" Clevis Pin Assembly (Include 6.1 + 6.2+6.3)  | PU-01044-00  | 1    |
| 6.1  | Clevis Pin (included in Ref. 6)                  | PU-01044-01M | 1    |
| 6.2  | Clevis Pin Clip (included in Ref. 6)             | TN-00136     | 1    |
| 6.3  | Washer Supplement (Included in Ref. 7) not shown | TN-00024     | 1    |
| 7    | Lube Cylinder Assy. With Plug & O-Ring           | PU-01018     | 1    |
| 7.1  | Lube Cylinder                                    | PU-01018M    | 1    |
| 7.2  | AL. Plung with O-Ring                            | RA-00116     | 1    |
| 8    | AL. Plung with O-Ring                            | RA-00116     | 1    |
| 9    | Lube Cylinder Elbow                              | RA-00066     | 1    |
| 10   | Lube Cylinder fitting                            | RA-00067     | 1    |
| 11   | Proportioning Pump Spacer                        | PU-01025     | 4    |
| 12   | Ball Valve                                       | RA-00293     | 1    |
| 13   | O-Ring                                           | OR-00035     | 8    |
| 14   | Socket Head Cap Screw                            | TN-00245     | 4    |
| 15   | Reversing Switch Activate Plate                  | PU-01037     | 1    |
| 16   | Lock Washer                                      | TN-00039     | 1    |
| 17   | Hex Head Cap Screw                               | TN-00130     | 1    |
| 18   | Street Elbow                                     | RA-00194     | 1    |
| 19   | Hydraulic Cylinder With Spacers                  | HI-00101     | 1    |
| 20   | Safety Valve                                     | HI-00067     | 1    |
| 21   | Socket Head Cap Screw                            | TN-00243     | 4    |
| 22   | Hydraulic Manifold                               | MQ-01007     | 1    |
| 23   | O-Ring                                           | OR-00019     | 2    |
| 24   | Socket Head Cap Screw                            | TN-00090     | 4    |
| 25   | Street Elbow                                     | RA-00072     | 1    |
| 26   | Swivel Union                                     | RA-00073     | 2    |



| Ref. | Description                    | Parts Number   | Qty. |
|------|--------------------------------|----------------|------|
| 27   | Y Strainer                     | RA-00074-00    | 1    |
| 27.1 | Filter Plug                    | RA-00074-01    | 1    |
| 27.2 | Filter Spring                  | SP-00017       | 1    |
| 27.3 | Filter                         | RA-00074-03-30 | 1    |
| 27.4 | Filter Gasket                  | OR-00061       | 1    |
| 28   | Hydraulic Gauge                | HI-00078       | 1    |
| 29   | Activator Plate Cover          | PU-01038       | 1    |
| 30   | Hex nipple                     | RA-00036       | 2    |
| 31   | ULS Screw                      | TN-00135       | 2    |
| 32   | Polyethylene Pipe Plug         | RA-00013       | 2    |
| 33   | Gasket                         | OR-00082       | 2    |
| 34   | A" Proportioning Pump Assembly | See Table 13   | 1    |
| 35   | Directional valve              | HI-00054       | 1    |

**Table 13. "A" Proportioning Pump Size, List**

| Part Number<br>Pump Line<br>Assy. | Pump Size | Description                | POS. 34       |
|-----------------------------------|-----------|----------------------------|---------------|
| PU-06200-008G                     | 0.8       | A Pump Line Assembly # 0.8 | PU-06201-008G |
| PU-06200-012G                     | 1.2       | A Pump Line Assembly # 1.2 | PU-06201-012G |

## "R" PUMP LINE ASSEMBLY

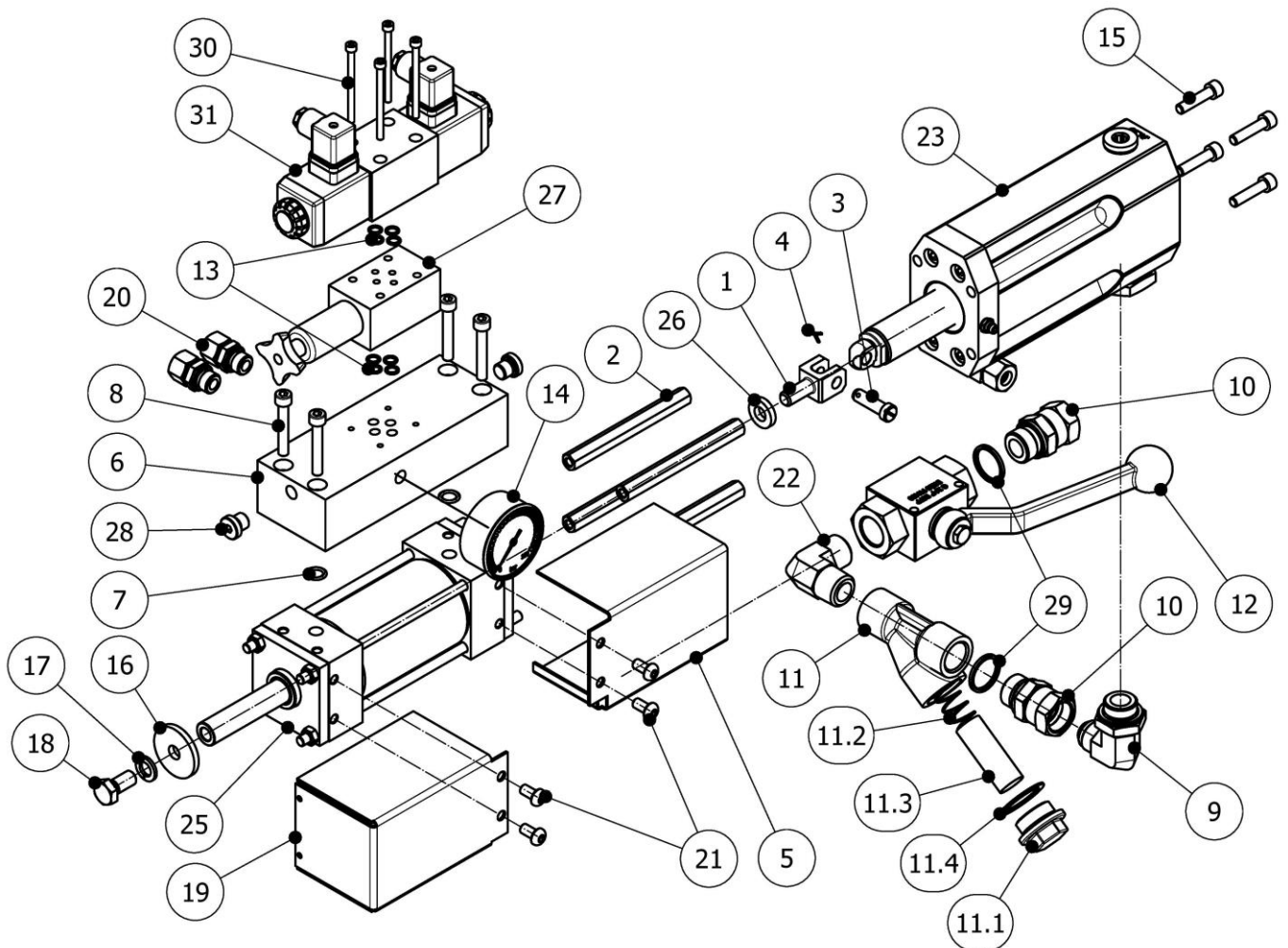


Figure 7. "R" Pump Line Assembly, Exploded View



**Table 14. "R" Pump Line Assembly, Parts List**

| Ref. | Description                                  | Parts Number   | Qty. |
|------|----------------------------------------------|----------------|------|
| 1    | Hydraulic Cylinder Clevis                    | PU-01043       | 1    |
| 2    | Proportioning Pump Spacer                    | PU-01025       | 4    |
| 3    | "R" Clevis Pin Assembly                      | PU-01045-01    | 1    |
| 4    | Pin                                          | TN-00077       | 1    |
|      | "R" Clevis Pin Assembly (Include ref. 3 & 4) | PU-01045-00    | 1    |
| 5    | Activator Plate Cover                        | PU-01027       | 1    |
| 6    | Hydraulic Manifold                           | MQ-01007       | 1    |
| 7    | O-Ring                                       | OR-00019       | 2    |
| 8    | Socket Head Cap Screw                        | TN-00090       | 4    |
| 9    | Street Elbow                                 | RA-00072       | 1    |
| 10   | Swivel Union                                 | RA-00073       | 1    |
| 11   | Y-Strainer                                   | RA-00074-00    | 1    |
| 11.1 | Filter Plug                                  | RA-00074-01    | 1    |
| 11.2 | Filter Spring                                | SP-00017       | 1    |
| 11.3 | Filter                                       | RA-00074-03-30 | 1    |
| 11.4 | Filter Gasket                                | OR-00061       | 1    |
| 12   | Ball Valve                                   | RA-00293       | 1    |
| 13   | O-Ring                                       | OR-00035       | 8    |
| 14   | Hydraulic Gauge                              | HI-00078       | 1    |
| 15   | Socket Head Cap Screw                        | TN-00245       | 4    |
| 16   | Reversing Switch Activate Plate              | PU-01037       | 1    |
| 17   | Lock Washer                                  | TN-00039       | 1    |
| 18   | Hex Head Cap Screw                           | TN-00130       | 1    |
| 19   | Activator Plate Cover                        | PU-01038       | 1    |
| 20   | Hex nipple                                   | RA-00036       | 2    |
| 21   | ULS Screw                                    | TN-00135       | 2    |
| 22   | Street Elbow                                 | RA-00194       | 1    |
| 23   | R Proportioning Pump Assembly                | See Table 15   | 1    |
| 25   | Hydraulic Cylinder With Spacers              | HI-00101       | 1    |
| 26   | Hydraulic Cylinder Clevis Washer             | PU-01039       | 1    |

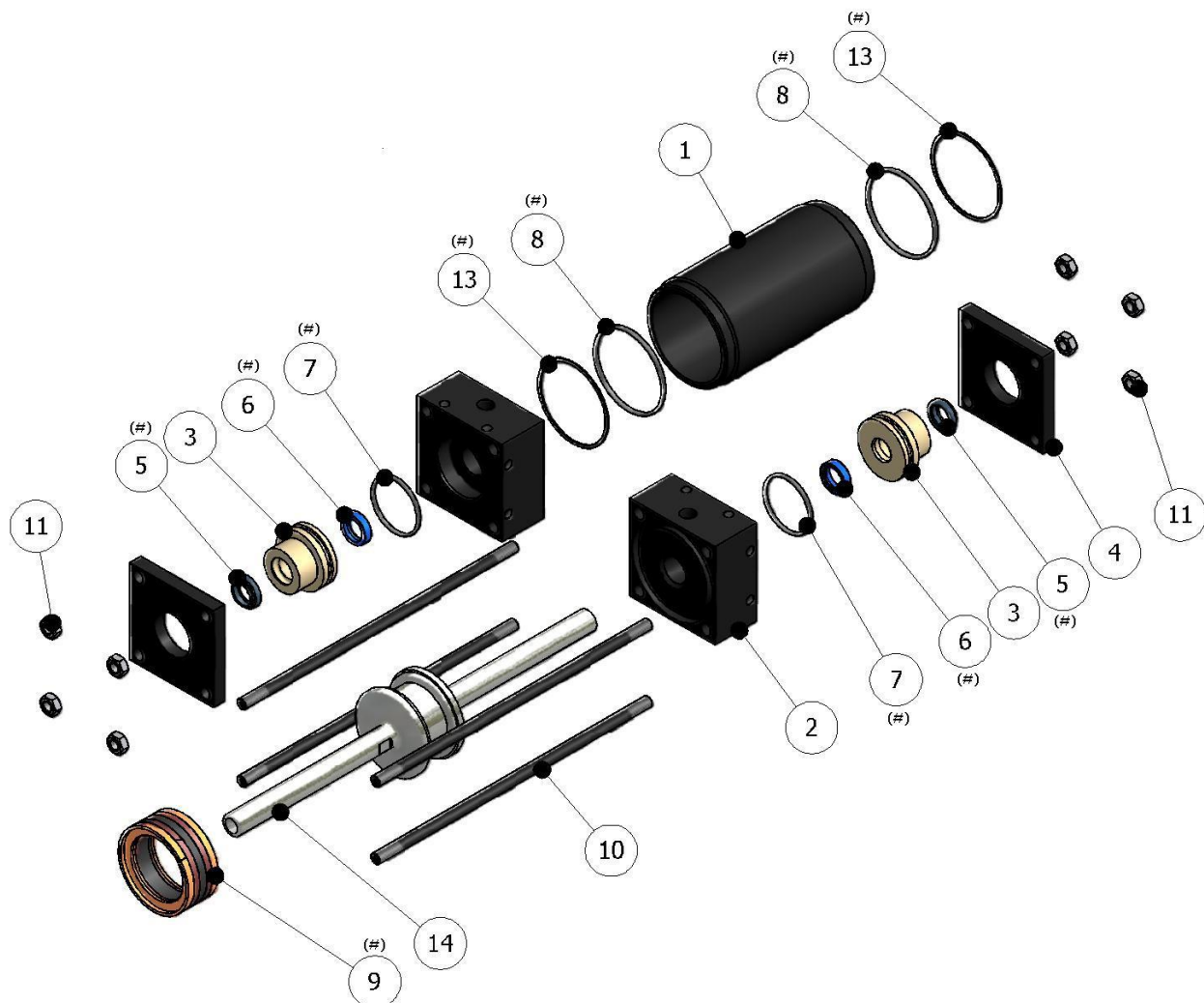


| Ref. | Description            | Parts Number | Qty. |
|------|------------------------|--------------|------|
| 27   | Safety Valve           | HI-00067     | 1    |
| 28   | Polyethylene Pipe Plug | RA-00013     | 2    |
| 29   | Gasket                 | OR-00082     | 2    |
| 30   | Socket Head Cap Screw  | TN-00243     | 4    |
| 31   | Directional valve      | HI-00054     | 1    |

**Table 15. “R” Proportioning Pump Size, List**

| Part Number<br>Pump Line<br>Assy. | Pump Size | Description                | POS. 23       |
|-----------------------------------|-----------|----------------------------|---------------|
| PU-06300-008G                     | 0.8       | R Pump Line Assembly # 0.8 | PU-06301-008G |
| PU-06300-012G                     | 1.2       | R Pump Line Assembly #1.2  | PU-06301-012G |

## HYDRAULIC CYLINDER WITH SPACERS



**Figure 8. Hydraulic Cylinder with Spacers, Exploded View**

**N.B.:** The indicated parts (#), are included in the repair seal kit KT-00010-01 (these are not supply separately).

**Table 16. Hydraulic Cylinder with Spacers, Parts List**

| Ref. | Description                | Parts Number | Qty.  |
|------|----------------------------|--------------|-------|
| 1    | Cylinder Body              | HI-00025-05  | 1     |
| 2    | Port Block                 | HI-00101-04  | 2     |
| 3    | Rod Bushing                | HI-00101-03  | 2     |
| 4    | Front Plate                | HI-00025-02  | 2     |
| 5    | Rod Wiper                  | OR-00095     | 2 (#) |
| 6    | Shaft Seal                 | OR-00096     | 2 (#) |
| 7    | O-Ring                     | OR-00039     | 2 (#) |
| 8    | O-Ring                     | OR-00040     | 2 (#) |
| 9    | Piston O-ring              | OR-00041-00  | 1 (#) |
| 10   | Hydraulic Cylinder Tie Rod | HI-00025-06  | 4     |
| 11   | Nut (*)                    | TN-00029     | 4 (8) |
| 13   | O-Ring Anti Extrusion      | OR-00063     | 2 (#) |
| 14   | Piston                     | HI-00101-01  | 1     |

*(\*) When the cylinder is supplied as a spare part 8 units are enclosed. In the Pump Line fitted in the machine, 4 units are enclosed.*

*(#) Parts & Qtys. are included in the Repair Seal Kit KT-00010-01 (these parts are not supply separately).*

## “A” PROPORTIONING PUMP ASSEMBLY

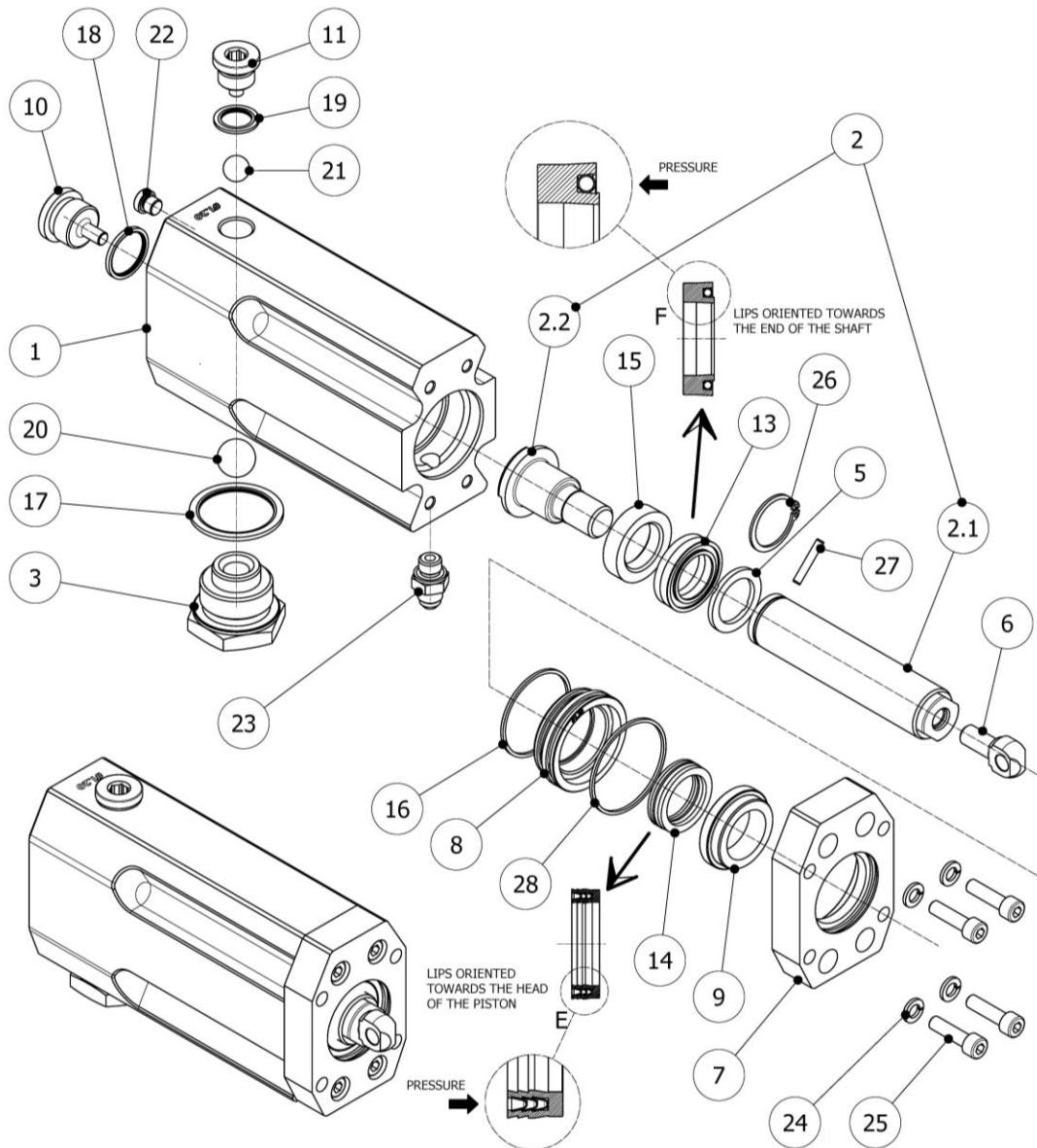


Figure 9. “A” Proportioning Pump Assembly, Exploded View

**Table 17. "A" Proportioning Pump Assembly, Parts List**

| item. | Description                                | Part Number  | Qty.  |
|-------|--------------------------------------------|--------------|-------|
| 1     | Body Pump with Check Valve Seat            | See Table 18 | 1     |
| 2     | Piston Rod Assembly (Only item. 2.1 y 2.2) | See Table 18 | 1     |
| 2.1   | Piston Rod (Included in item 2)            | See Table 18 | 1 (#) |
| 2.2   | Piston Head (Included in item 2)           | See Table 18 | 1 (#) |
| 3     | Inlet Ball Seat Assembly                   | PU-01003-0J  | 1     |
| 4     |                                            |              |       |
| 5     | Piston Seal                                | See Table 18 | 1     |
| 6     | Pump Clevis                                | See Table 18 | 1     |
| 7     | Monoblock Flange Pump – ISO                | See Table 18 | 1     |
| 8     | Seat Seal – ISO                            | See Table 18 | 1     |
| 9     | Bearing ISO                                | See Table 19 | 1 (*) |
| 10    | Plug Side Pump                             | PU-01003-0E  | 1     |
| 11    | Upper Plug Pump                            | PU-01003-0F  | 1     |
| 12    |                                            |              |       |
| 13    | Piston Seal                                | See Table 19 | 1 (*) |
| 14    | Cylinder Seal                              | See Table 19 | 1 (*) |
| 15    | Piston Guide                               | See Table 19 | 1 (*) |
| 16    | O-Ring                                     | See Table 19 | 1 (*) |
| 17    | Metallic Ring                              | OR-00088     | 1     |
| 18    | Metallic Ring                              | OR-00082     | 1     |
| 19    | Metallic Ring                              | OR-00023     | 1     |
| 20    | Lower Ball                                 | TN-00013     | 1     |
| 21    | Upper Ball                                 | TN-00012     | 1     |
| 22    | Plug                                       | See Table 18 | 1     |
| 23    | Output Elbow                               | RA-00038     | 1     |
| 24    | Washer                                     | See Table 18 | 4     |
| 25    | Allen Screw                                | See Table 18 | 4     |
| 26    | Seeger Ring                                | See Table 18 | 1     |
| 27    | Pin                                        | See Table 18 | 1     |
| 28    | O-Ring                                     | See Table 19 | 1 (*) |

**N.B.:** The parts marked with (\*), are included in the repair seal kit of "A" pump (see Table 20).

The parts marked with (#), are not supplied separately.

**Table 18. "A" Proportioning Pump Assembly, Parts List**

| Pump        | Item 1       | Item 2<br>(2.1 + 2.2) | Item 2.1     | Item 2.2     |
|-------------|--------------|-----------------------|--------------|--------------|
| <b>1.20</b> | PU-06001-012 | PU-01006-012          | PU-01007-012 | PU-01008-012 |
| <b>0.80</b> | PU-06001-008 | PU-01006-008          | PU-01007-008 | PU-01008-008 |

| Pump        | Item 5       | Item 6   | Item 7    | Item 8        | Item 22  |
|-------------|--------------|----------|-----------|---------------|----------|
| <b>1.20</b> | PU-01010-012 | PU-01042 | NPU-06004 | PU-06009-012G | RA-00211 |
| <b>0.80</b> | PU-01010-008 | PU-01042 | NPU-06004 | PU-06009-008G | RA-00211 |

| Pump        | Item 24  | Item 25  | Item 26  | Item 27  |
|-------------|----------|----------|----------|----------|
| <b>1.20</b> | TN-00028 | TN-00062 | TN-00070 | TN-00086 |
| <b>0.80</b> | TN-00028 | TN-00062 | TN-00067 | TN-00085 |

**Table 19. Seals Monobloc "A" Pump**

| item      | 1.20          | 0.80          |
|-----------|---------------|---------------|
| <b>9</b>  | PU-06007-012  | PU-06007-008  |
| <b>13</b> | PU-01016-012A | PU-01016-008A |
| <b>14</b> | PU-01017-012G | PU-01017-008G |
| <b>15</b> | PU-01014-012A | PU-01014-008A |
| <b>16</b> | OR-00009      | OR-00009      |
| <b>28</b> | OR-00115      | OR-00115      |

**Table 20. Repair Seal Kit "A" Pump**

| Pump        | Item     |
|-------------|----------|
| <b>1.20</b> | KT-00157 |
| <b>0.80</b> | KT-00159 |

**N.B :** The standard proportioning pump sizes are #0.80 & #1.20. Different sizes are available under order. For delivery time, please consult with Marketing department.

The Repair seal kit include the parts indicated with (\*) in the Table 17.

## "R" PROPORTIONING PUMP ASSEMBLY

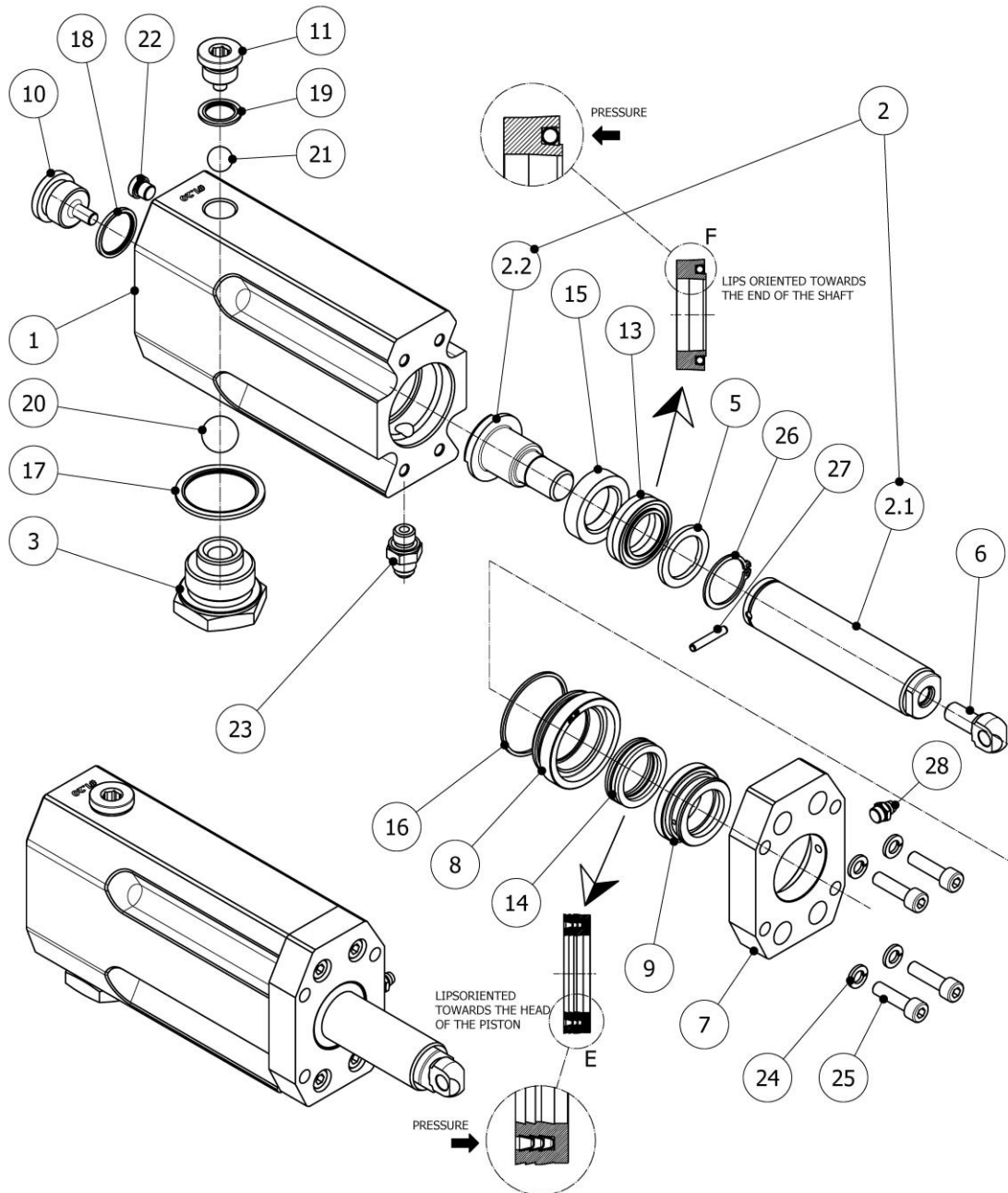


Figure 10. "R" Proportioning Pump Assembly, Exploded View

**Table 21. "R" Proportioning Pump Assembly, Parts List**

| item. | Description                                | Part Number  | Qty.  |
|-------|--------------------------------------------|--------------|-------|
| 1     | Body Pump with Check Valve Seat            | See Table 22 | 1     |
| 2     | Piston Rod Assembly (Only item. 2.1 y 2.2) | See Table 22 | 1     |
| 2.1   | Piston Rod (Included in item 2)            | See Table 22 | 1 (#) |
| 2.2   | Piston Head (Included in item 2)           | See Table 22 | 1 (#) |
| 3     | Inlet Ball Seat Assembly                   | PU-01003-0J  | 1     |
| 4     |                                            |              |       |
| 5     | Piston Seal                                | See Table 22 | 1     |
| 6     | Pump Clevis                                | See Table 22 | 1     |
| 7     | Monoblock Flange Pump – POL                | See Table 22 | 1     |
| 8     | Seat Seal – POL                            | See Table 22 | 1     |
| 9     | Bearing POL                                | See Table 23 | 1 (*) |
| 10    | Plug Side Pump                             | PU-01003-0E  | 1     |
| 11    | Upper Plug Pump                            | PU-01003-0F  | 1     |
| 12    |                                            |              |       |
| 13    | Piston Seal                                | See Table 23 | 1 (*) |
| 14    | Cylinder Seal                              | See Table 23 | 1 (*) |
| 15    | Piston Guide                               | See Table 23 | 1 (*) |
| 16    | O-Ring                                     | See Table 23 | 1 (*) |
| 17    | Metallic Ring                              | OR-00088     | 1     |
| 18    | Metallic Ring                              | OR-00082     | 1     |
| 19    | Metallic Ring                              | OR-00023     | 1     |
| 20    | Lower Ball                                 | TN-00013     | 1     |
| 21    | Upper Ball                                 | TN-00012     | 1     |
| 22    | Plug                                       | See Table 22 | 1     |
| 23    | Exit Elbow                                 | RA-00038     | 1     |
| 24    | Washer                                     | See Table 22 | 4     |
| 25    | Allen Screw                                | See Table 22 | 4     |
| 26    | Seeger Ring                                | See Table 22 | 1     |
| 27    | Pin                                        | See Table 22 | 1     |
| 28    | Grease Fiting                              | See Table 22 | 1     |

**N.B.:** The parts marked with (\*), are included in the repair seal kit of "R" pump (see Table 24)

The parts marked with (#), are not supplied separately.

**Table 22. "R" Proportioning Pump Assembly, Parts List**

| Pump        | Item 1       | Item 2<br>(2.1 + 2.2) | Item 2.1     | Item 2.2     |
|-------------|--------------|-----------------------|--------------|--------------|
| <b>1.20</b> | PU-06001-012 | PU-01006-012          | PU-01007-012 | PU-01008-012 |
| <b>0.80</b> | PU-06001-008 | PU-01006-008          | PU-01007-008 | PU-01008-008 |

| Pump        | Item 5       | Item 6   | Item 7    | Item 8        | Item 22  |
|-------------|--------------|----------|-----------|---------------|----------|
| <b>1.20</b> | PU-01010-012 | PU-01042 | NPU-06005 | PU-06006-012G | RA-00211 |
| <b>0.80</b> | PU-01010-008 | PU-01042 | NPU-06005 | PU-06006-008G | RA-00211 |

| Pump        | Item 24  | Item 25  | Item 26  | Item 27  | Item 28  |
|-------------|----------|----------|----------|----------|----------|
| <b>1.20</b> | TN-00028 | TN-00062 | TN-00070 | TN-00086 | TN-00073 |
| <b>0.80</b> | TN-00028 | TN-00062 | TN-00067 | TN-00085 | TN-00073 |

**Table 23. Seals Monobloc "R" Pump**

| Pump        | Item 9       | Item 13       | Item 14       | Item 15       | Item 16  |
|-------------|--------------|---------------|---------------|---------------|----------|
| <b>1.20</b> | PU-06008-012 | PU-01016-012A | PU-01017-012G | PU-01014-012A | OR-00009 |
| <b>0.80</b> | PU-06008-008 | PU-01016-008A | PU-01017-008G | PU-01014-008A | OR-00009 |

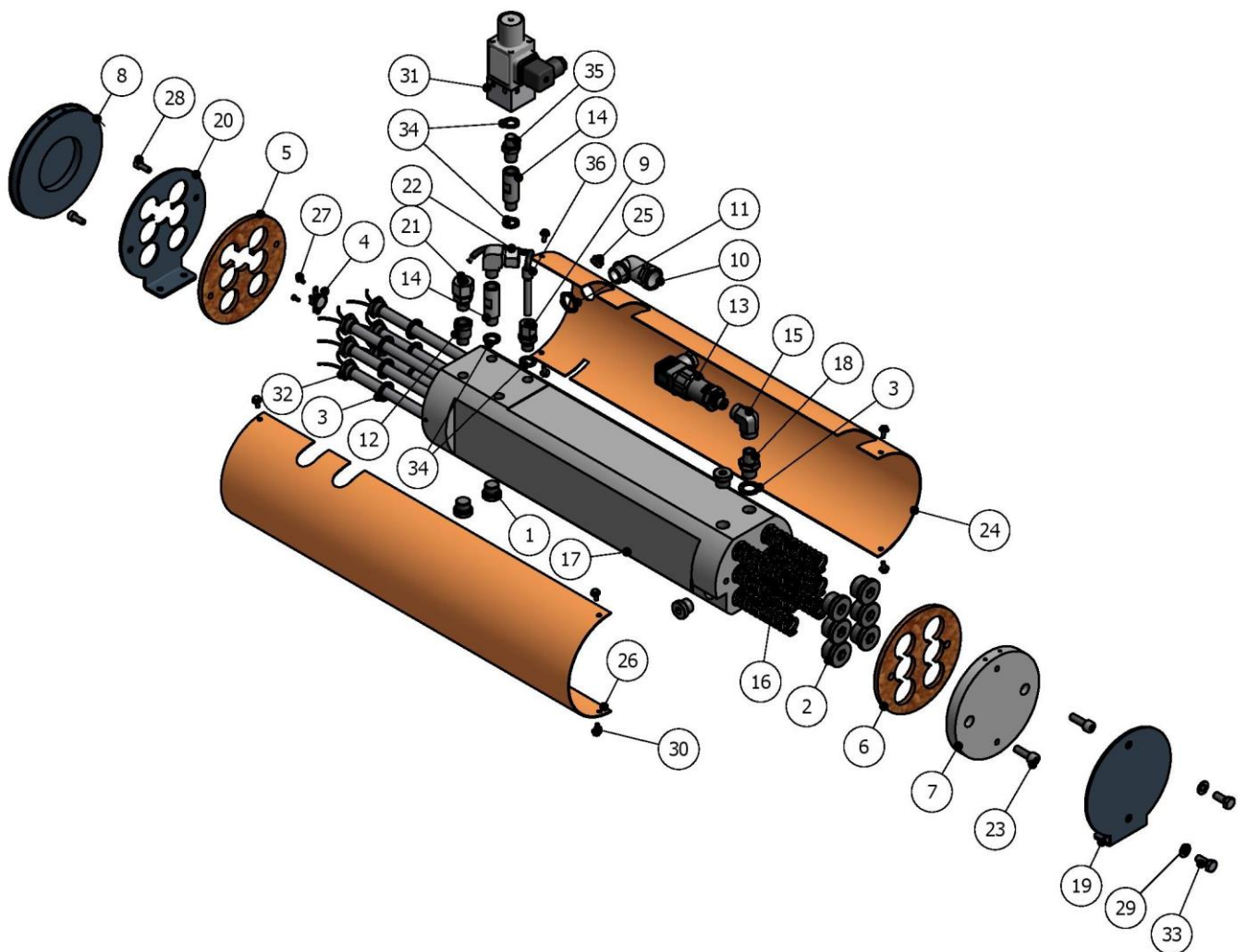
**Table 24. Repair Seal Kit "R" Pump**

| Pump        | Item     |
|-------------|----------|
| <b>1.20</b> | KT-00158 |
| <b>0.80</b> | KT-00160 |

**N.B :** The standard proportioning pump sizes are #0.80 & #1.20. Different sizes are available under order. For delivery time, please consult with Marketing department.

The Repair seal kit include the parts indicated with (\*) in the Table 21.

## **“A” PRIMARY HEATER**



*Figure 11. “A” Primary Heater, Exploded View*

**Table 25. "A" Primary Heater, Parts List**

| Ref. | Description           | Part Number   | Qty. |
|------|-----------------------|---------------|------|
| 1    | Pipe Plug             | RA-00049      | 4    |
| 2    | Pipe Plug             | RA-00012      | 6    |
| 3    | Seal                  | OR-00018      | 7    |
| 4    | Thermal Limit Switch  | EL-00006      | 1    |
| 5    | Top Insulate Plate    | CL-01001-04   | 1    |
| 6    | Bottom Insulate Plate | CL-01001-03   | 1    |
| 7    | Bottom Cap            | CL-01001-02   | 1    |
| 8    | Cover                 | CL-01001-07   | 1    |
| 9    | Thermocouple Nipple   | RA-00231      | 1    |
| 10   | Conduit Connector     | EL-00087-02   | 1    |
| 11   | Nut                   | EL-00090-01   | 1    |
| 12   | Swivel Union          | RA-00077      | 1    |
| 13   | Pressure Transducer   | HI-00033      | 1    |
| 14   | Swivel Union          | RA-00100      | 2    |
| 15   | Male Elbow            | RA-00105      | 1    |
| 16   | Spring                | SP-00009      | 6    |
| 17   | Heat Block            | CLH-01001-01A | 1    |
| 18   | Thread Reducer        | RA-00160      | 1    |
| 19   | Heater Support Front  | CL-05001-08   | 1    |
| 20   | Heater Support Back   | CL-05001-07   | 1    |
| 21   | Tube Fitting          | RA-00182      | 1    |
| 22   | Elbow Tube Fitting    | RA-00038      | 1    |
| 23   | Socket Head Cap Screw | TN-00027      | 2    |
| 24   | Heater Cover          | CL-05001-05   | 1    |
| 25   | Rubber Grommet        | EL-00095-00   | 1    |
| 26   | Heater Cover          | CL-05001-06   | 1    |
| 27   | Screw                 | TN-00128      | 2    |
| 28   | ULS Screw             | TN-00170      | 2    |
| 29   | Washer                | TN-00119      | 2    |
| 30   | Hex. Cap Flange Screw | TN-00502      | 8    |

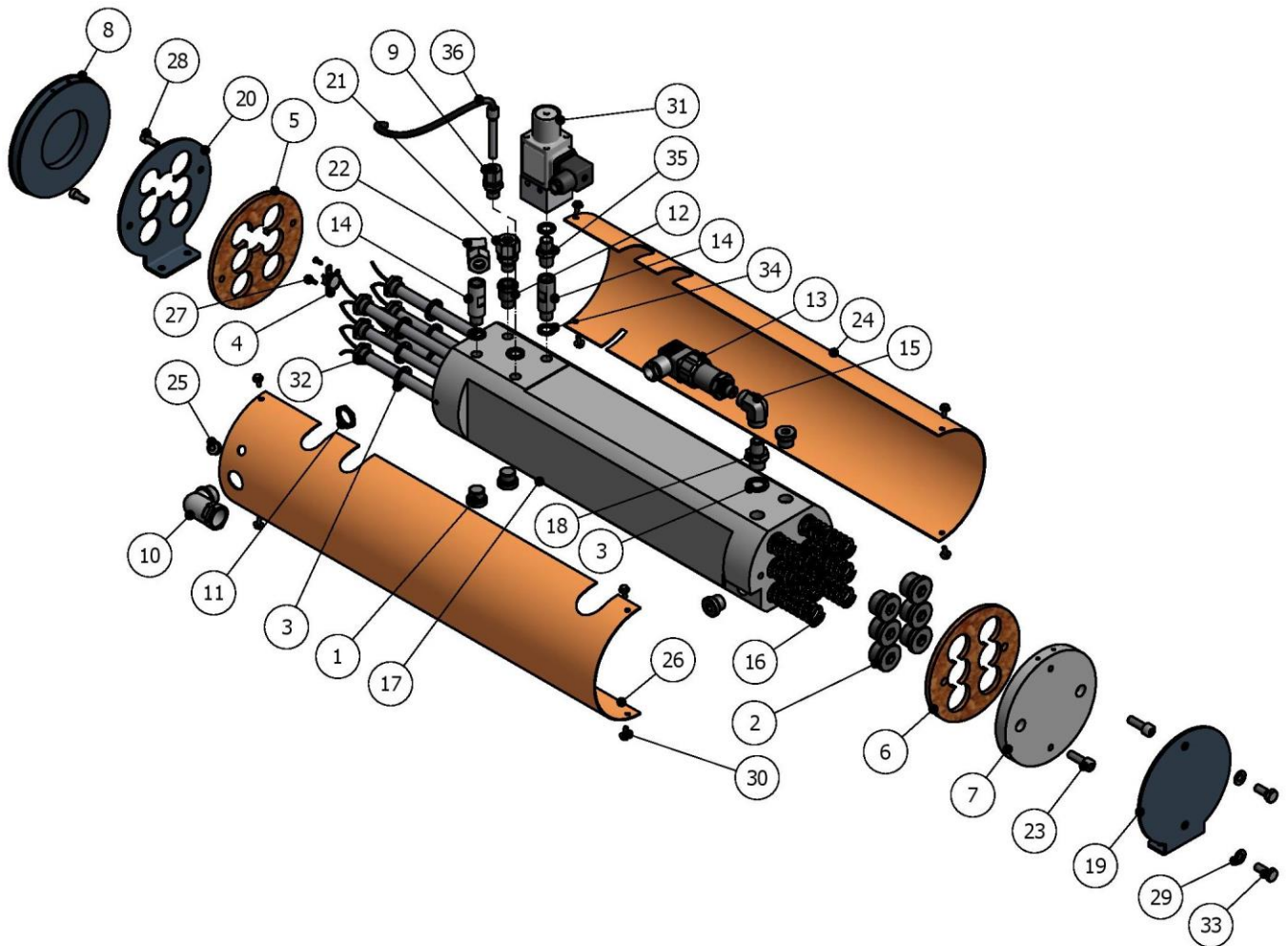


| Ref. | Description     | Part Number  | Qty. |
|------|-----------------|--------------|------|
| 31   | Pressure Switch | HI-00021     | 1    |
| 32   | Heat Resistance | See Table 26 | 6    |
| 33   | Hex. Screw      | TN-00187     | 2    |
| 34   | Seal            | OR-00054     | 4    |
| 35   | Swivel Union    | RA-00138     | 1    |
| 36   | Thermocouple    | EL-00146-00  | 1    |

**Table 26. Parts List for each model of “A”-Heater**

| Part Number   | Description             | POS. 32  |
|---------------|-------------------------|----------|
| CLH-05001-00C | “A”-Heater 9000 W 400 V | EL-00179 |
| CLH-05001-00D | “A”-Heater 7500 W 400 V | EL-00197 |

## **“R” PRIMARY HEATER**



*Figure 12. “R” Primary Heater, Exploded View*

**Table 27. “R” Primary Heater, Parts List**

| Ref. | Description           | Part Number   | Qty. |
|------|-----------------------|---------------|------|
| 1    | Pipe Plug             | RA-00049      | 4    |
| 2    | Pipe Plug             | RA-00012      | 6    |
| 3    | Seal                  | OR-00018      | 7    |
| 4    | Thermal Limit Switch  | EL-00006      | 1    |
| 5    | Top Insulate Plate    | CL-01001-04   | 1    |
| 6    | Bottom Insulate Plate | CL-01001-03   | 1    |
| 7    | Bottom Cap            | CL-01001-02   | 1    |
| 8    | Cover                 | CL-01001-07   | 1    |
| 9    | Thermocouple Nipple   | RA-00231      | 1    |
| 10   | Conduit Connector     | EL-00087-02   | 1    |
| 11   | Nut                   | EL-00090-01   | 1    |
| 12   | Swivel Union          | RA-00077      | 1    |
| 13   | Pressure Transducer   | HI-00033      | 1    |
| 14   | Swivel Union          | RA-00100      | 2    |
| 15   | Male Elbow            | RA-00105      | 1    |
| 16   | Spring                | SP-00009      | 6    |
| 17   | Heat Block            | CLH-01001-01A | 1    |
| 18   | Thread Reducer        | RA-00160      | 1    |
| 19   | Heater Support Front  | CL-05001-08   | 1    |
| 20   | Heater Support Back   | CL-05001-07   | 1    |
| 21   | Tube Fitting          | RA-00182      | 1    |
| 22   | Elbow Tube Fitting    | RA-00038      | 1    |
| 23   | Socket Head Cap Screw | TN-00027      | 2    |
| 24   | Heater Cover          | CL-05002-05   | 1    |
| 25   | Rubber Grommet        | EL-00095-00   | 1    |
| 26   | Heater Cover          | CL-05002-06   | 1    |
| 27   | Screw                 | TN-00128      | 2    |
| 28   | ULS Screw             | TN-00170      | 2    |
| 29   | Washer                | TN-00119      | 2    |
| 30   | Hex Cap Flange Screw  | TN-00502      | 8    |

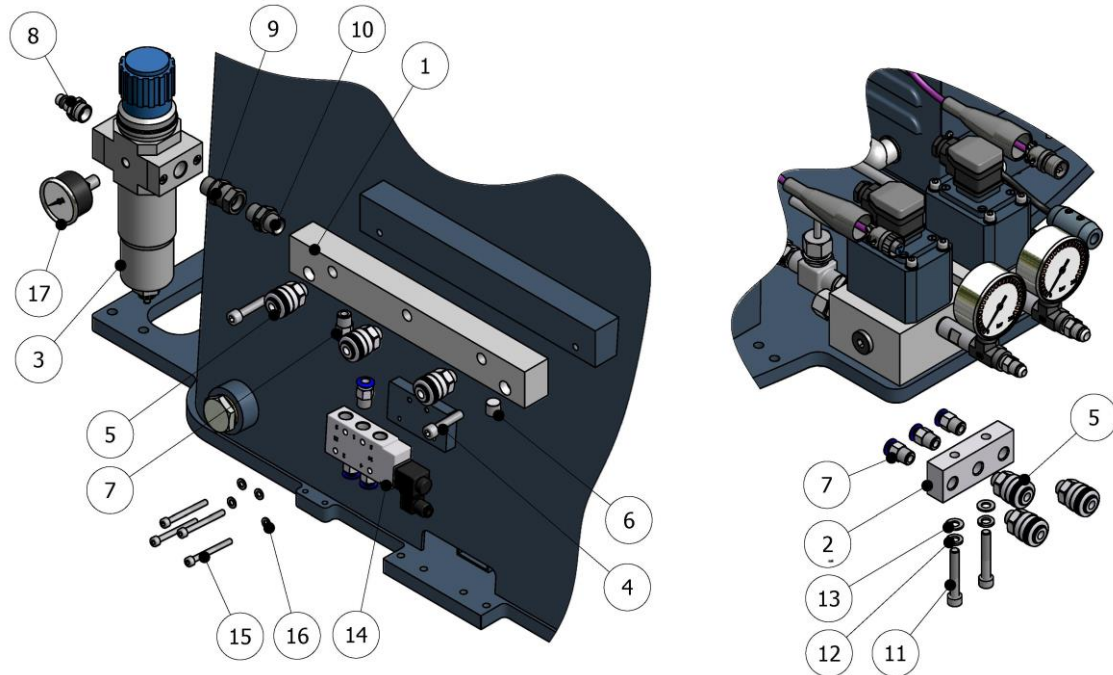


| Ref. | Description     | Part Number  | Qty. |
|------|-----------------|--------------|------|
| 31   | Pressure Switch | HI-00021     | 1    |
| 32   | Heat Resistance | See Table 28 | 6    |
| 33   | Hex. Screw      | TN-00187     | 2    |
| 34   | Seal            | OR-00054     | 4    |
| 35   | Swivel Union    | RA-00138     | 1    |
| 36   | Thermocouple    | EL-00146-00  | 1    |

**Table 28. Parts List for each model of “R”-Heater**

| Part Number   | Description             | POS. 32  |
|---------------|-------------------------|----------|
| CLH-05002-00C | “R”-Heater 9000 W 400 V | EL-00179 |
| CLH-05002-00D | “R”-Heater 7500 W 400 V | EL-00197 |

## PNEUMATIC COMPONENTS



**Figure 13. Pneumatic Components, Exploded View**

**Table 29. Pneumatic Components, Parts List**

| Ref. | Description                                          | Part Number | Qty. |
|------|------------------------------------------------------|-------------|------|
| 1    | Air Manifold                                         | MQ-05012    | 1    |
| 2    | Air Connection Support for Gun with magnetic switch  | MQ-02005    | 1    |
|      | Air Connection Support for Gun with Timer (Optional) | MQ-05020    | 1    |
| 3    | Air Filter with Pressure Regulator                   | NE-00050    | 1    |
| 4    | Screw                                                | TN-00245    | 2    |
| 5    | Fast Socket                                          | RA-00095    | 4    |
|      | Fast Socket for Timer (Optional)                     |             | +2   |
| 6    | Plug                                                 | RA-00120    | 2    |
| 7    | Tube Fitting                                         | RA-00150    | 2    |
|      | Tube Fitting for Timer (Optional)                    |             | +6   |
| 8    | Coupler Plug                                         | RA-00096    | 1    |
| 9    | Swivel Union                                         | RA-00089    | 1    |

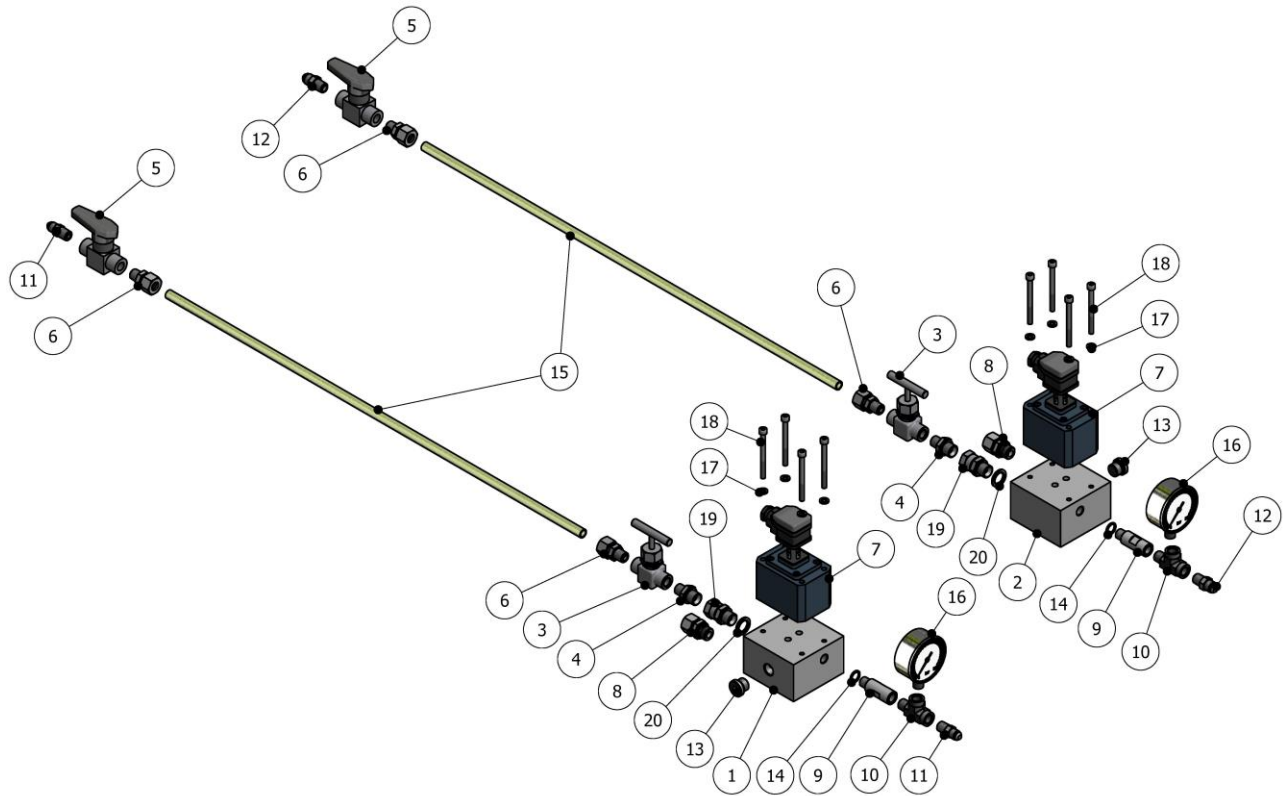


**evolution VR**

**Parts Manual**

| Ref. | Description                                          | Part Number | Qty. |
|------|------------------------------------------------------|-------------|------|
| 10   | Hex Nipple                                           | RA-00090    | 1    |
| 11   | Screw                                                | TN-00090    | 2    |
| 12   | Washer                                               | TN-00028    | 2    |
| 13   | Washer                                               | TN-00119    | 2    |
| 14   | Solenoid Valve with Coil for Timer (Optional)        | NE-00042    | 1    |
| 15   | Screw for Timer (Optional)                           | TN-00148    | 4    |
|      | Screw for Timer + Automatic Recirculation (Optional) | TN-00111    | 4    |
| 16   | Washer                                               | TN-00103    | 4    |
| 17   | Manometer                                            | NE-00033    | 1    |

## MANUAL RECIRCULATION KIT # KT-00054



**Figure 14. Manual Recirculation Kit # KT-00054**

**Table 30. Manual Recirculation Kit, Parts List**

| Ref. | Description         | Part Number | Qty. |
|------|---------------------|-------------|------|
| 1    | A Base Plate        | MQ-05007    | 1    |
| 2    | R Base Plate        | MQ-05008    | 1    |
| 3    | Manual Valve        | RA-00264    | 2    |
| 4    | Hex Nipple          | RA-00160    | 2    |
| 5    | Ball Valve          | RA-00217    | 2    |
| 6    | Male Stud Connector | RA-00033    | 4    |
| 7    | Flow Meter          | EL-00079-01 | 2    |
| 8    | Male Stud Connector | RA-00036    | 2    |
| 9    | Swivel Union        | RA-00100    | 2    |
| 10   | Pipe Tee            | RA-00018    | 2    |



| Ref. | Description           | Part Number  | Qty. |
|------|-----------------------|--------------|------|
| 11   | Hose Nipple           | RA-00146     | 2    |
| 12   | Hose Nipple           | RA-00147     | 2    |
| 13   | Plug                  | RA-00049     | 2    |
| 14   | Seal                  | OR-00054     | 2    |
| 15   | Tube                  | MP-00002 (*) | 2    |
| 16   | Liquid Fill Gauge     | HI-00035     | 2    |
| 17   | Lock Washer           | TN-00025     | 8    |
| 18   | Socket Head Cap Screw | TN-00178     | 8    |
| 19   | Swivel union          | RA-00089     | 2    |
| 20   | Seal                  | OR-00018     | 2    |

**N.B.:**

*Optionally this recirculation kit will be completed up to the tanks with the KT-00038-08.*

*The codes of the marked parts (\*), are referenced to the code of the raw material.*

**Table 31. Flow Meter Model List**

| Ref. | Description                     | Part Number | Qty. |
|------|---------------------------------|-------------|------|
| 7    | Flow Meter Model 1 (Fa. VSE)    | EL-00079    | 2    |
|      | Flow Meter Model 2 (Fa. Kracht) | EL-00079-01 | 2    |

**N.B.:**

*When you need a spare of the flow meter element, you will have to identify which model equips your unit and then request the suitable reference.*

## AUTOMATIC RECIRCULATION KIT # KT-00055

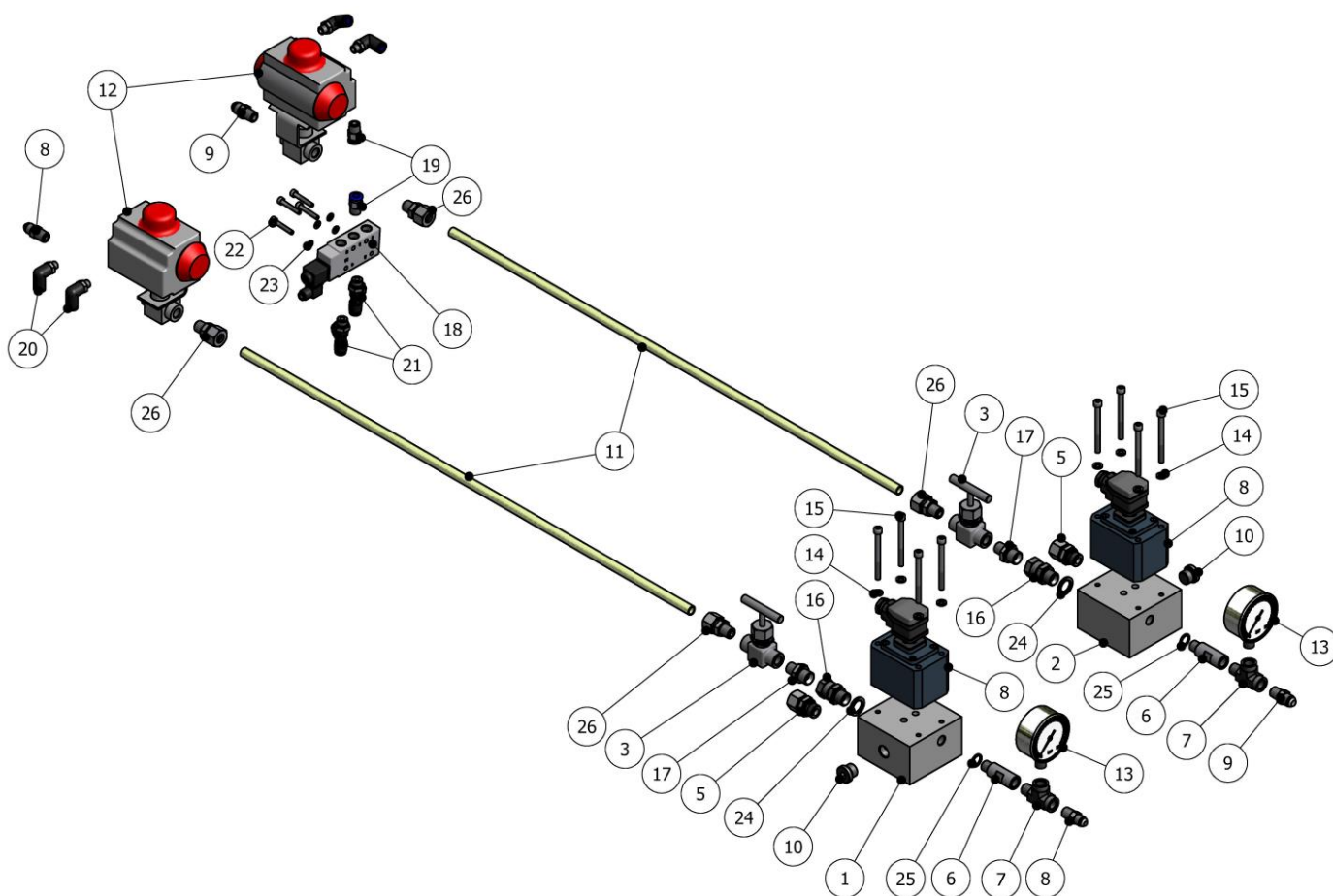


Figure 15. Automatic Recirculation Kit # KT-00055

Table 32. Automatic Recirculation Kit, Parts List

| Ref. | Description         | Part Number | Qty. |
|------|---------------------|-------------|------|
| 1    | A Base Plate        | MQ-05007    | 1    |
| 2    | R Base Plate        | MQ-05008    | 1    |
| 3    | Manual Valve        | RA-00264    | 2    |
| 4    |                     |             |      |
| 5    | Male Stud Connector | RA-00036    | 2    |
| 6    | Swivel Union        | RA-00100    | 2    |
| 7    | Pipe Tee            | RA-00018    | 2    |



| Ref. | Description                                         | Part Number  | Qty. |
|------|-----------------------------------------------------|--------------|------|
| 8    | Flow Meter                                          | See Table 31 | 1    |
| 8    | Hose Nipple                                         | RA-00146     | 2    |
| 9    | Hose Nipple                                         | RA-00147     | 2    |
| 10   | Plug                                                | RA-00049     | 2    |
| 11   | Tube                                                | MP-00002 (*) | 2    |
| 12   | Ball Valve Threaded Connection & Pneumatic Actuator | NE-00023     | 2    |
| 13   | Liquid Fill Gauge                                   | HI-00035     | 2    |
| 14   | Lock Washer                                         | TN-00025     | 8    |
| 15   | Socket Head Cap Screw                               | TN-00178     | 8    |
| 16   | Swivel Union                                        | RA-00089     | 2    |
| 17   | Hex Nipple                                          | RA-00160     | 2    |
| 18   | Solenoid Valve with Coil                            | NE-00042     | 1    |
| 19   | Tube Fitting                                        | RA-00150     | 2    |
| 20   | Push-in L-Fitting                                   | RA-00248     | 4    |
| 21   | Push-in T-Fitting                                   | RA-00249     | 2    |
| 22   | Screw                                               | TN-00148     | 4    |
|      | Screw for Recirculation + Timer                     | TN-00111     | 4    |
| 23   | Washer                                              | TN-00103     | 4    |
| 24   | Seal                                                | OR-00018     | 2    |
| 25   | Seal                                                | OR-00054     | 2    |
| 26   | Male Stud Connector                                 | RA-00033     | 4    |

**N.B.:**

*Optionally this recirculation kit will be completed up to the tanks with the KT-00038-08.*

*The codes of the marked parts (\*), are referenced to the code of the raw material.*

## MANUAL RECIRCULATION KIT WITHOUT FLOW METERS # KT-00056

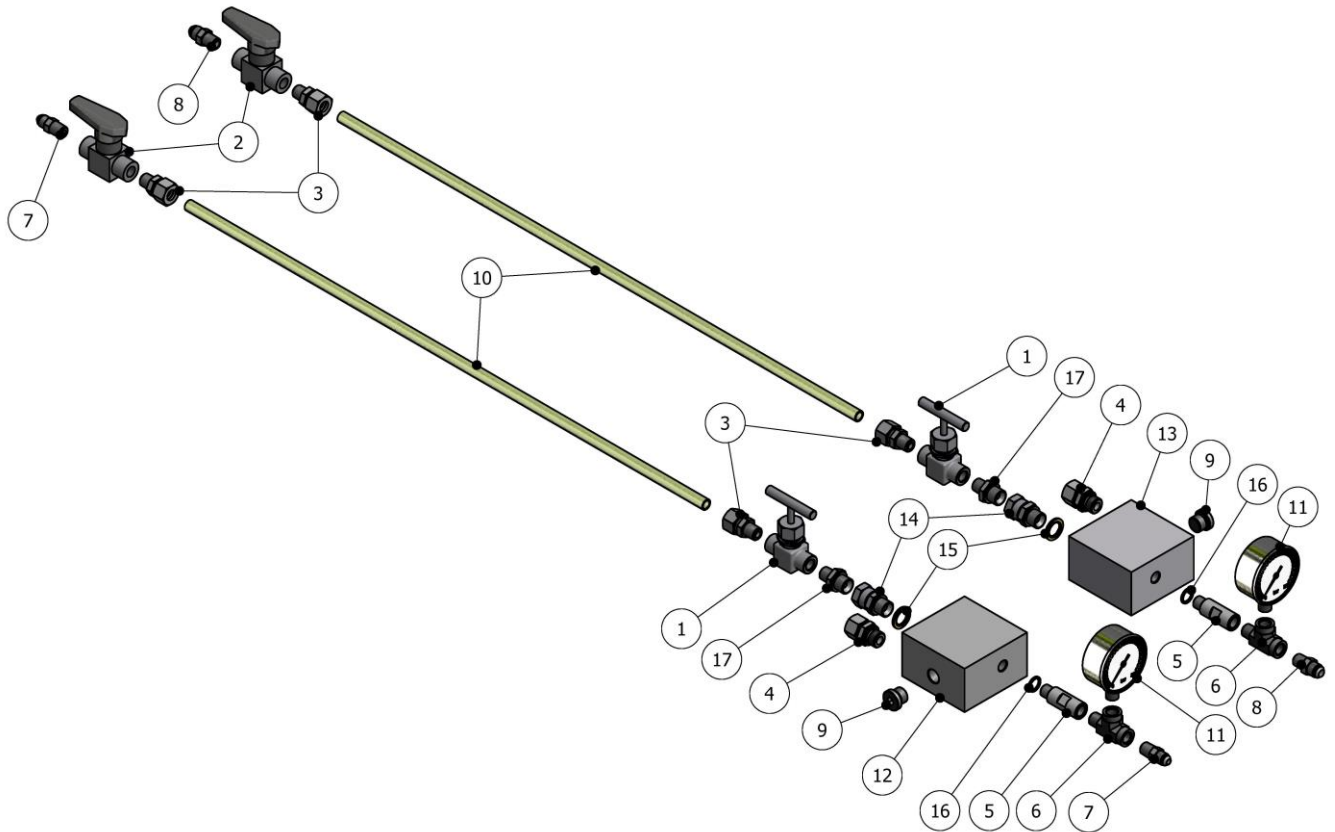


Figure 16. Manual Recirculation Kit Without Flow Meters # KT-00054

Table 33. Manual Recirculation Kit Without Flow Meters, Parts List

| Ref. | Description         | Part Number | Qty. |
|------|---------------------|-------------|------|
| 1    | Manual Valve        | RA-00264    | 2    |
| 2    | Ball Valve          | RA-00217    | 2    |
| 3    | Male Stud Connector | RA-00033    | 4    |
| 4    | Male Stud Connector | RA-00036    | 2    |
| 5    | Swivel Union        | RA-00100    | 2    |
| 6    | Pipe Tee            | RA-00018    | 2    |
| 7    | Hose Nipple         | RA-00146    | 2    |
| 8    | Hose Nipple         | RA-00147    | 2    |



| Ref. | Description                         | Part Number  | Qty. |
|------|-------------------------------------|--------------|------|
| 9    | Plug                                | RA-00049     | 2    |
| 10   | Tube                                | MP-00002 (*) | 2    |
| 11   | Liquid Fill Gauge                   | HI-00035     | 2    |
| 12   | Base Plate without Flow Meter (ISO) | MQ-05015     | 1    |
| 13   | Base Plate without Flow Meter (POL) | MQ-05016     | 1    |
| 14   | Swivel Union                        | RA-00089     | 2    |
| 15   | Seal                                | OR-00018     | 2    |
| 16   | Seal                                | OR-00054     | 2    |
| 17   | Hex Nipple                          | RA-00160     | 2    |

**N.B.:**

*Optionally this recirculation kit will be completed up to the tanks with the KT-00038-08.*

*The codes of the marked parts (\*), are referenced to the code of the raw material.*

## GENERIC RECIRCULATION KIT # KT-00038-08 (OPTIONAL)

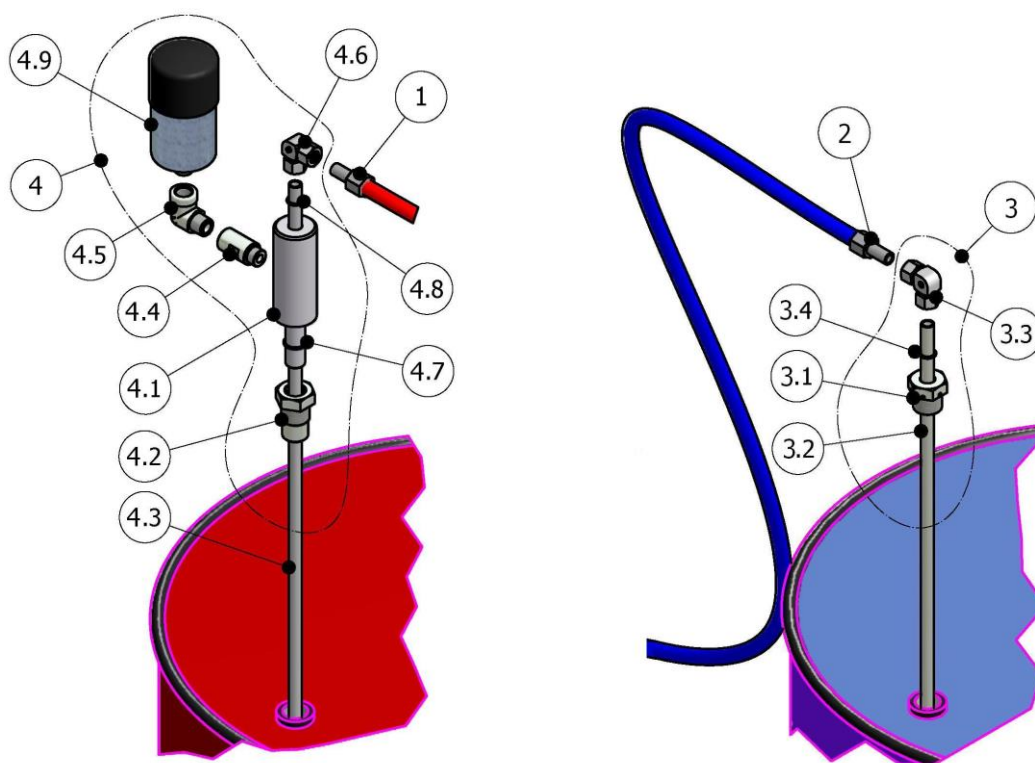


Figure 17. Generic Recirculation Kit Ref. KT-00038-08 (optional)

Table 34. Generic Recirculation Kit, Parts List

| item. | Description                             | Part Number | Qty.  |
|-------|-----------------------------------------|-------------|-------|
| 1     | A-Hose 3 mts                            | MA-00050-01 | 1     |
| 2     | R-Hose 3 mts                            | MA-00050-00 | 1     |
| 3     | Assy. Connection to Tank without Filter | MQ-05010-00 | 1     |
| 3.1   | Connection Tank                         | MQ-05009-A  | 1 (#) |
| 3.2   | Pipe                                    | HI-00075    | 1 (#) |
| 3.3   | Elbow for Pipe                          | RA-00200    | 1 (#) |
| 3.4   | O-Ring                                  | OR-00011    | 1 (#) |

*It continues on the next page.*



*It continues of the previous page*

| item | Description                          | Part Number | Qty.  |
|------|--------------------------------------|-------------|-------|
| 4    | Assy. Connection to Tank with Filter | MQ-05009-00 | 1     |
| 4.1  | Body Connection                      | MQ-05010    | 1 (*) |
| 4.2  | Connection Tank                      | MQ-05009    | 1 (*) |
| 4.3  | Pipe                                 | HI-00075    | 1 (*) |
| 4.4  | Extension                            | RA.00256    | 1 (*) |
| 4.5  | Elbow                                | RA-00257    | 1 (*) |
| 4.6  | Elbow for Pipe                       | RA-00200    | 1 (*) |
| 4.7  | O-Ring                               | OR-00055    | 2 (*) |
| 4.8  | O-Ring                               | OR-00011    | 1 (*) |
| 4.9  | Deshumidifier Filter                 | NE-00045    | 1 (*) |

**N.B.:**

**(\*) Parts included in item 4**

**(#) Parts included in item 3**

***This Optional kit, connects the recirculation from the rear side of the machine up to the tanks of product and it complements itself with the kits KT-00054/55 and 56.***

## TRANSFER PUMPS SUPPORT (OPTIONAL)

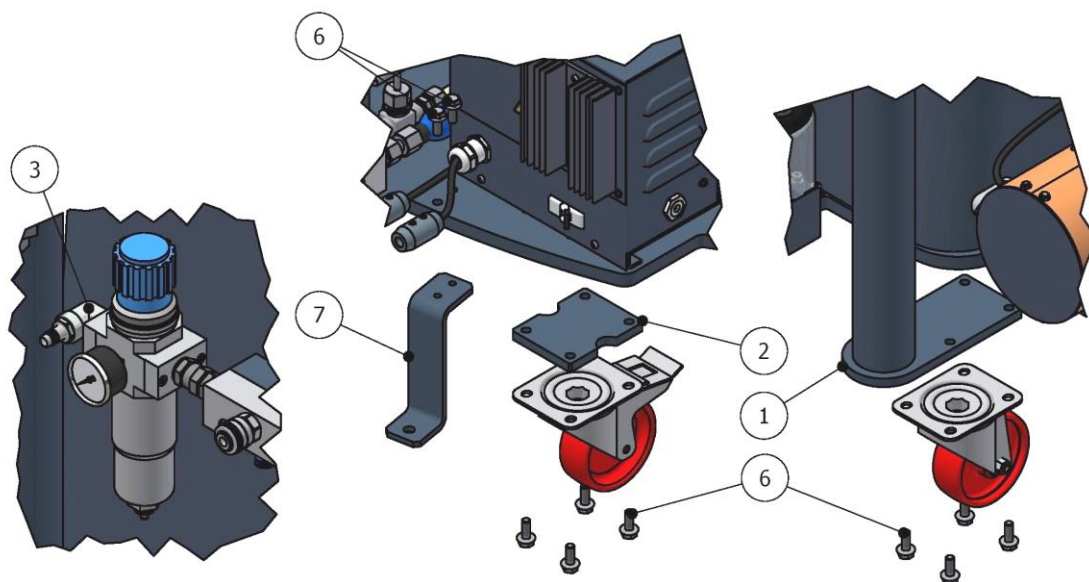
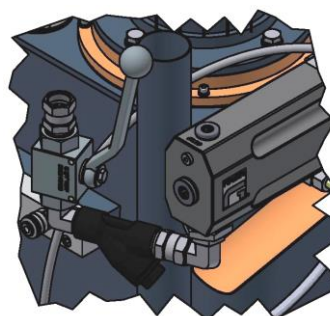


Figure 18. Transfer Pumps Support (optional)

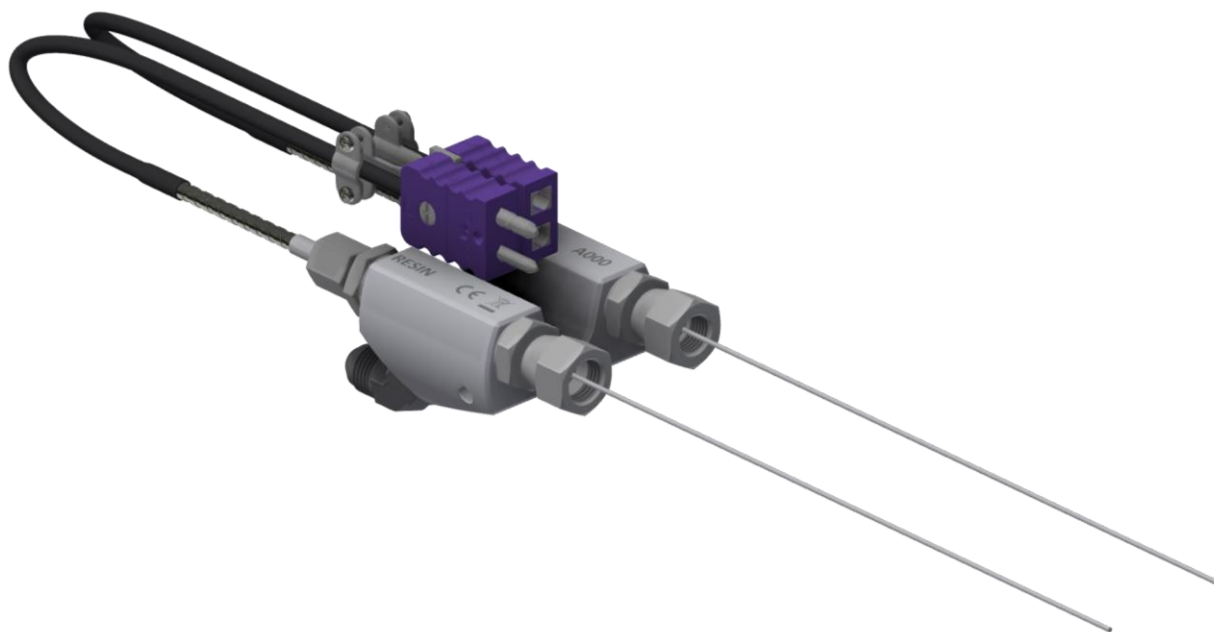
Table 35. Transfer Pumps Support; Parts List (optional)

| Ref. | Description                             | Part Number | Qty. |
|------|-----------------------------------------|-------------|------|
| 1    | Transfer Pumps Support                  | MQ-01015-00 | 2    |
|      | Plug                                    | RA-00013    | 2    |
| 2    | Supplement Plate                        | MQ-01015-03 | 2    |
| 3    | Elbow                                   | RA-00257    | 1    |
| 4    |                                         |             |      |
| 5    |                                         |             |      |
| 6    | Hex Head Flange Screw                   | TN-00507    | 20   |
| 7    | "Z" Bracket with Transfer Pumps Bracket | MQ-02014    | 2    |

**Note:** When transfer pump supports are fixed to the machine, the connectors in the product inlets must be re-orientated towards the corresponding proportioning pumps, as shown in the image.



## HOSES THERMOCOUPLES DETAIL



*Figure 19. Hoses Temperature Probe Detail*

*Table 36. Hoses Temperature Probe, Parts List*

| Ref.  | Description                                    | Part Number | Qty. |
|-------|------------------------------------------------|-------------|------|
|       | Double Temperature Probe Block Assy            | EL-00052-11 | 1    |
| 1 (*) | ISO Temperature Probe Assy. (female connector) | EL-00051-13 | 1    |
| 2 (*) | POL Temperature Probe Assy. (male connector)   | EL-00052-13 | 1    |

*(\*) ISO probe assembly and the POL probe assembly include one fitting with its corresponding biconical ring*

## Electrical Schematic Diagram 3PE~400V 50/60Hz

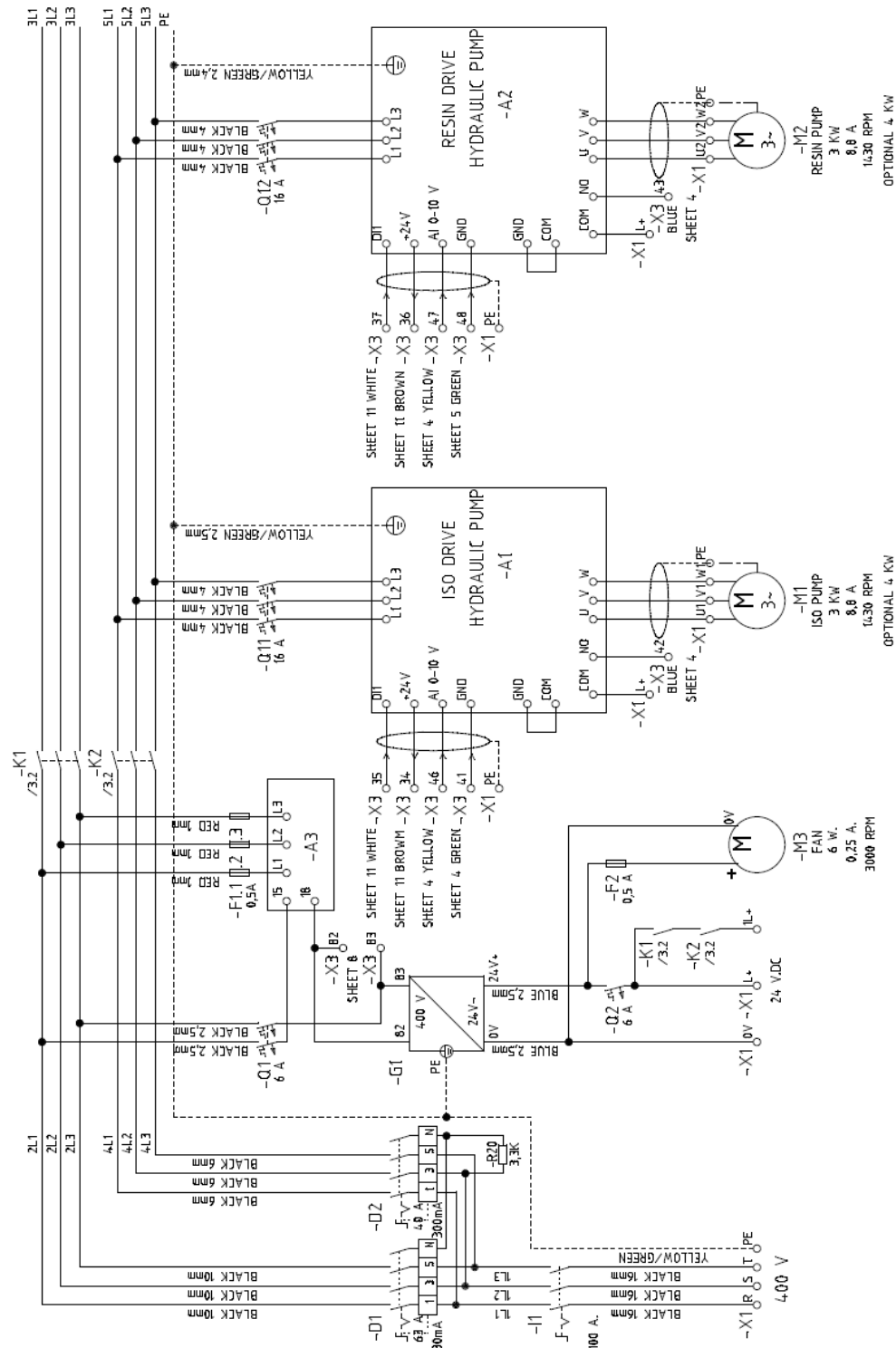


Figure 20. Electrical Schematic Diagram 3PE~400V 50/60Hz (Sheet 1 de 12)

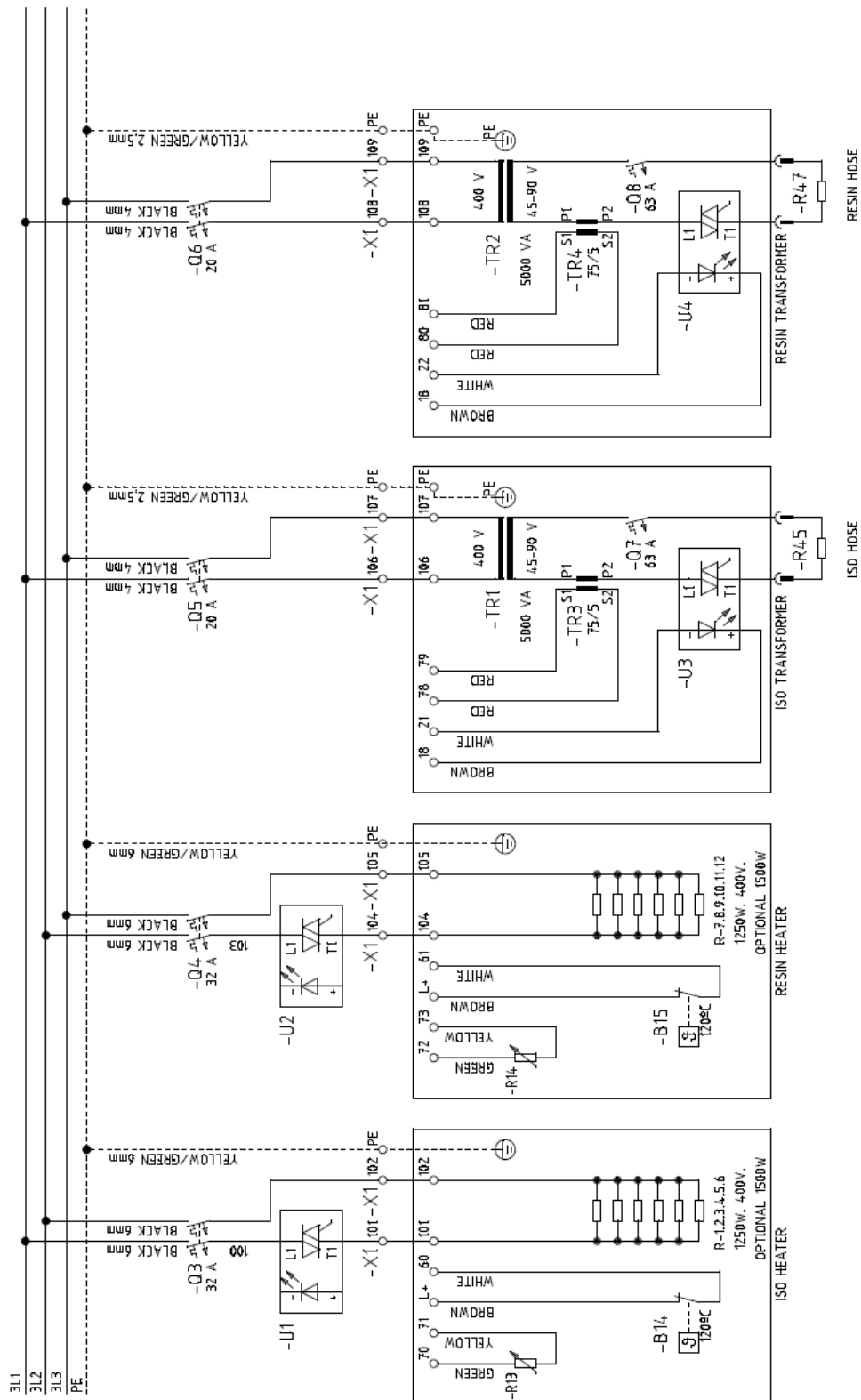


Figure 21. Electrical Schematic Diagram 3PE~400V 50/60Hz (Sheet 2 de 12)

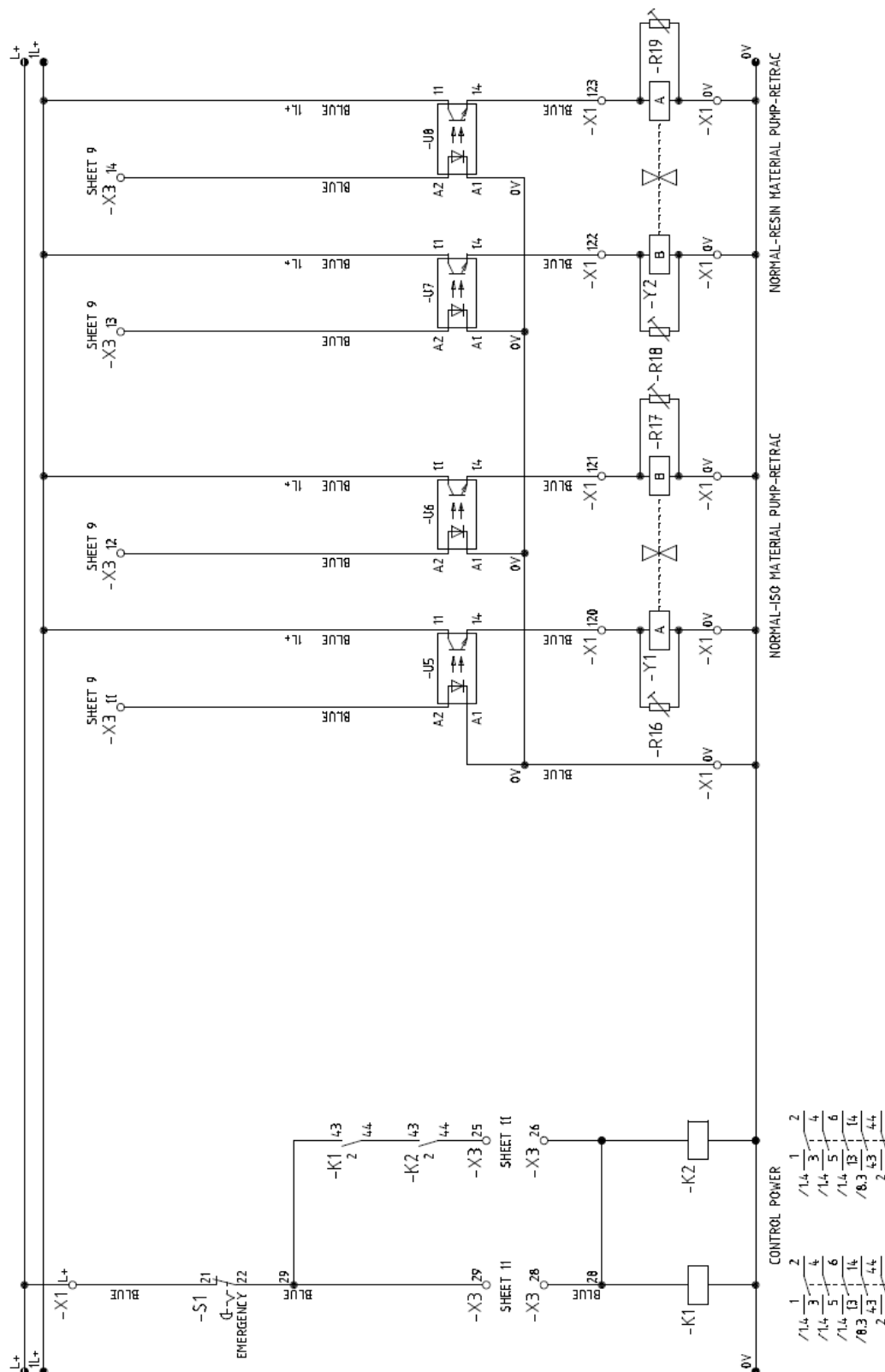


Figure 22. Electrical Schematic Diagram 3PE~400V 50/60Hz (Sheet 3 de 12)

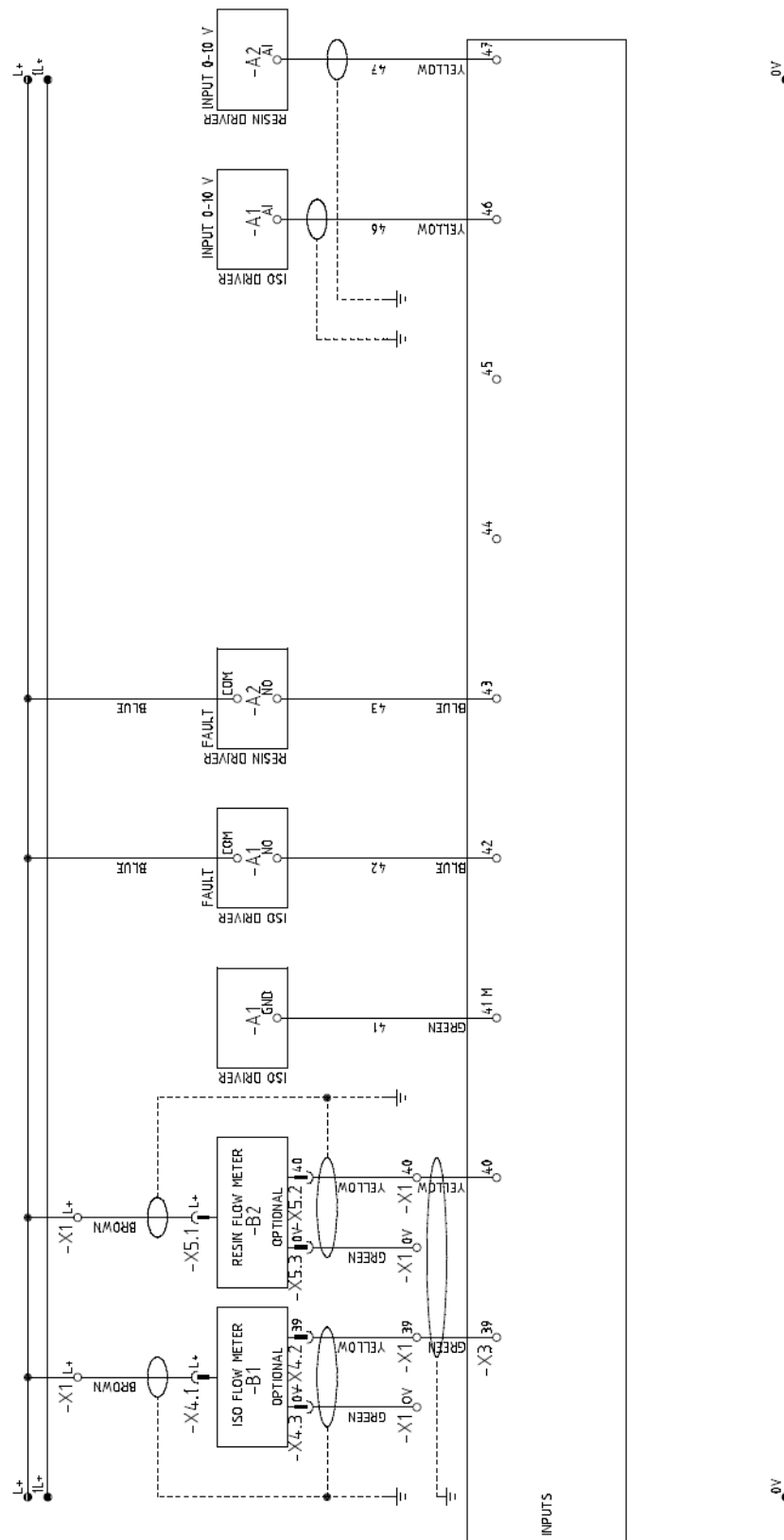


Figure 23. Electrical Schematic Diagram 3PE~400V 50/60Hz (Sheet 4 de 12)

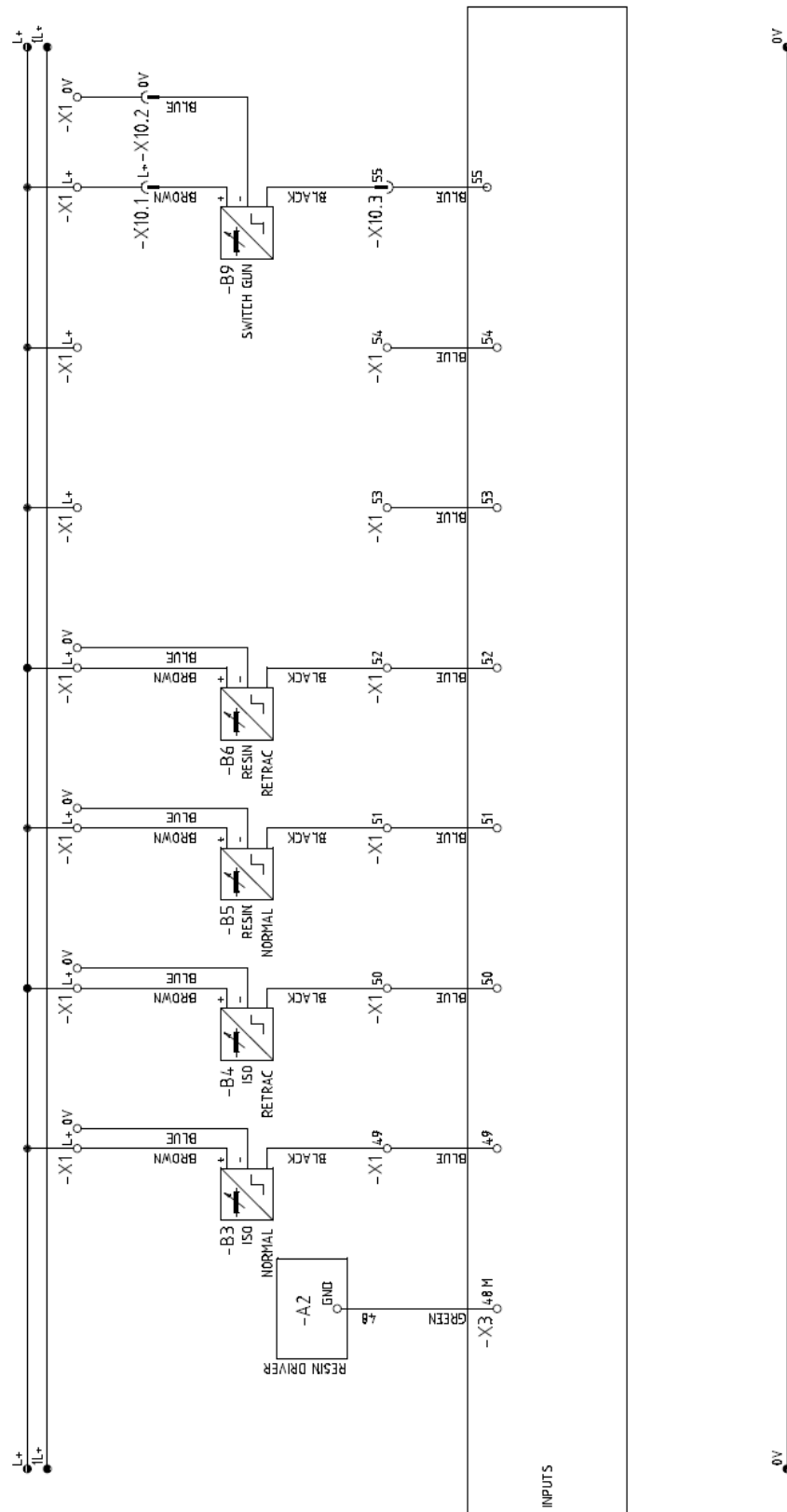


Figure 24. Electrical Schematic Diagram 3PE~400V 50/60Hz (Sheet 5 de 12)

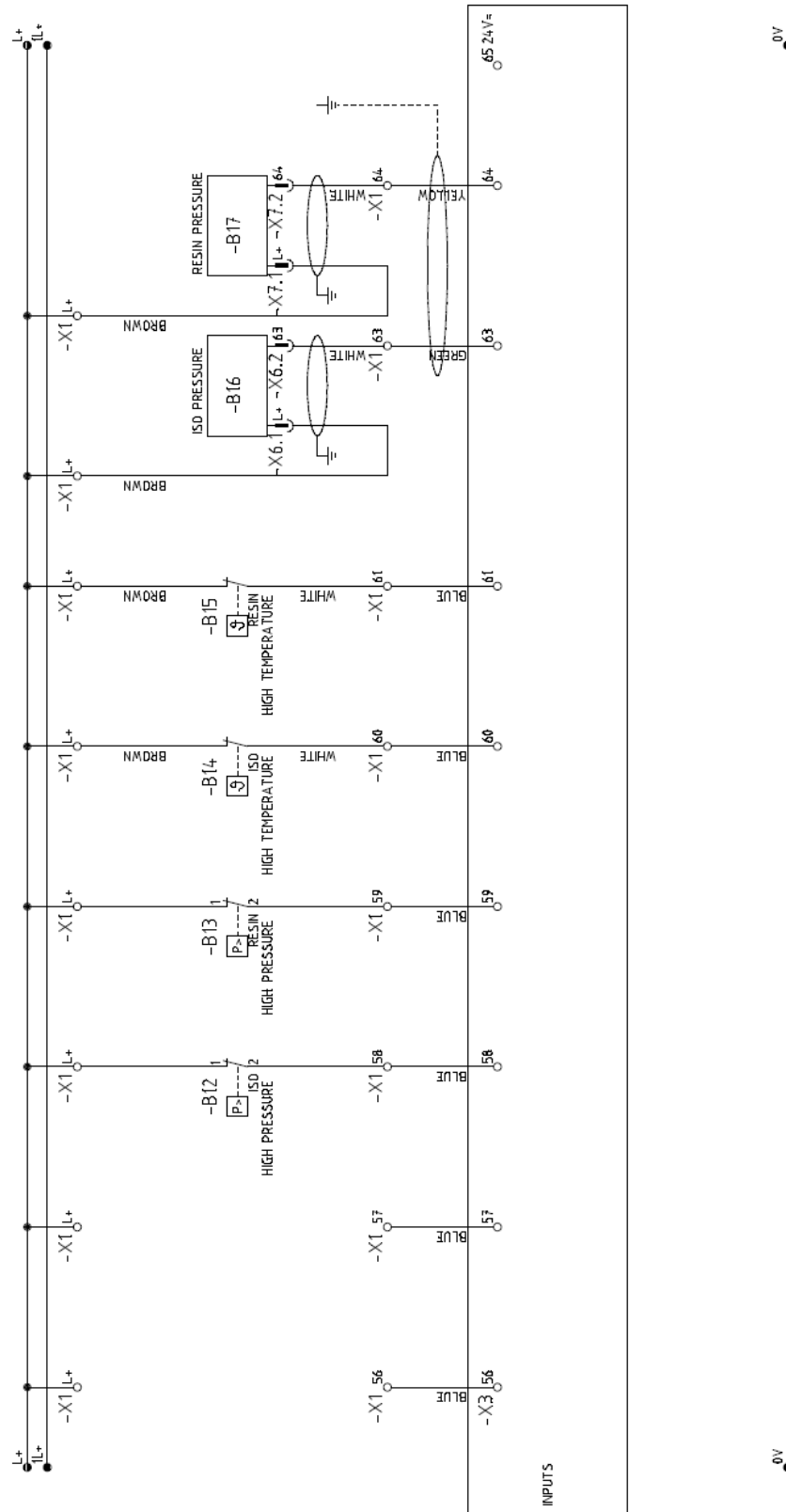


Figure 25. Electrical Schematic Diagram 3PE~400V 50/60Hz (Sheet 6 de 12)

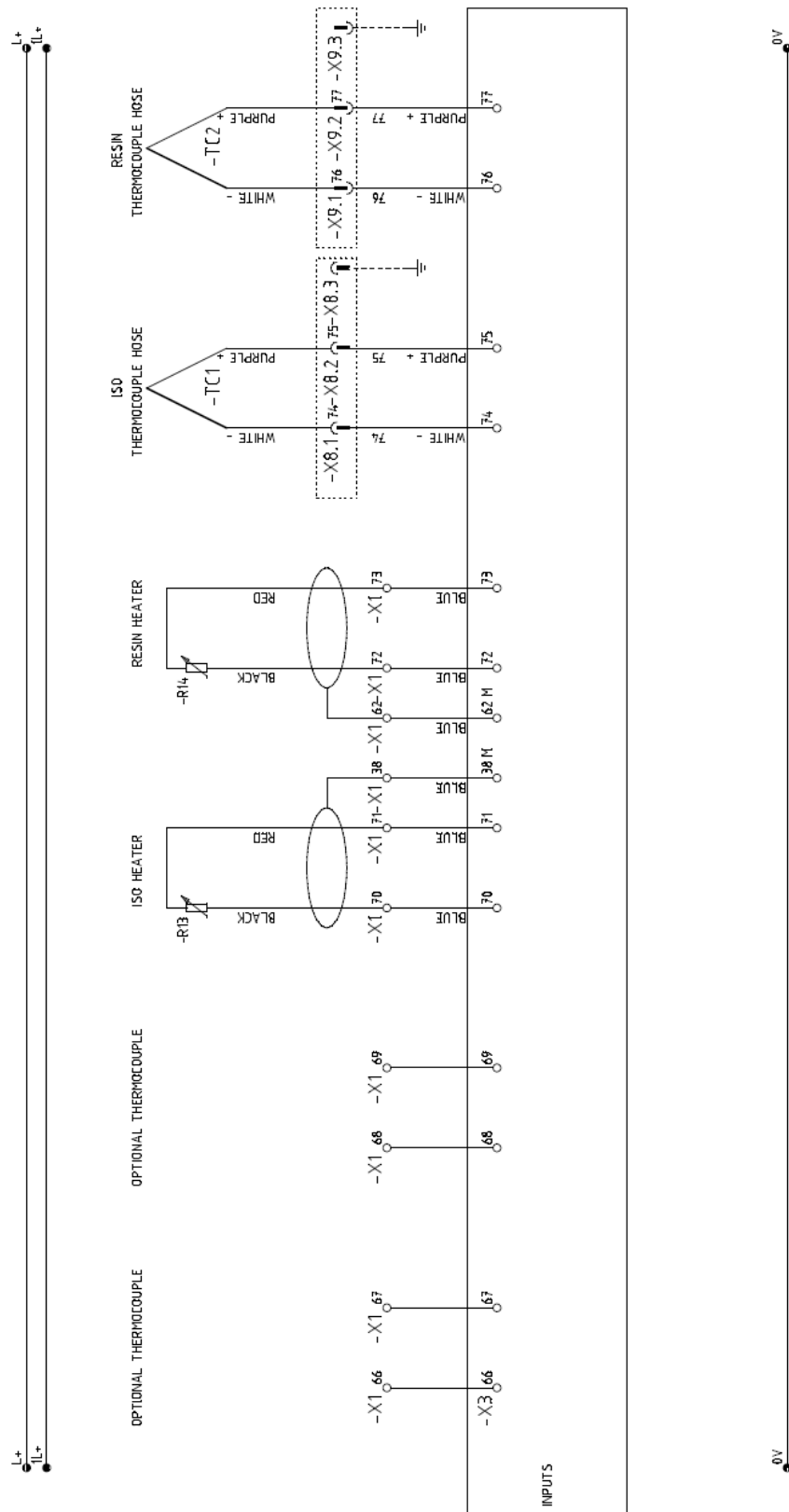


Figure 26. Electrical Schematic Diagram 3PE~400V 50/60Hz (Sheet 7 de 12)

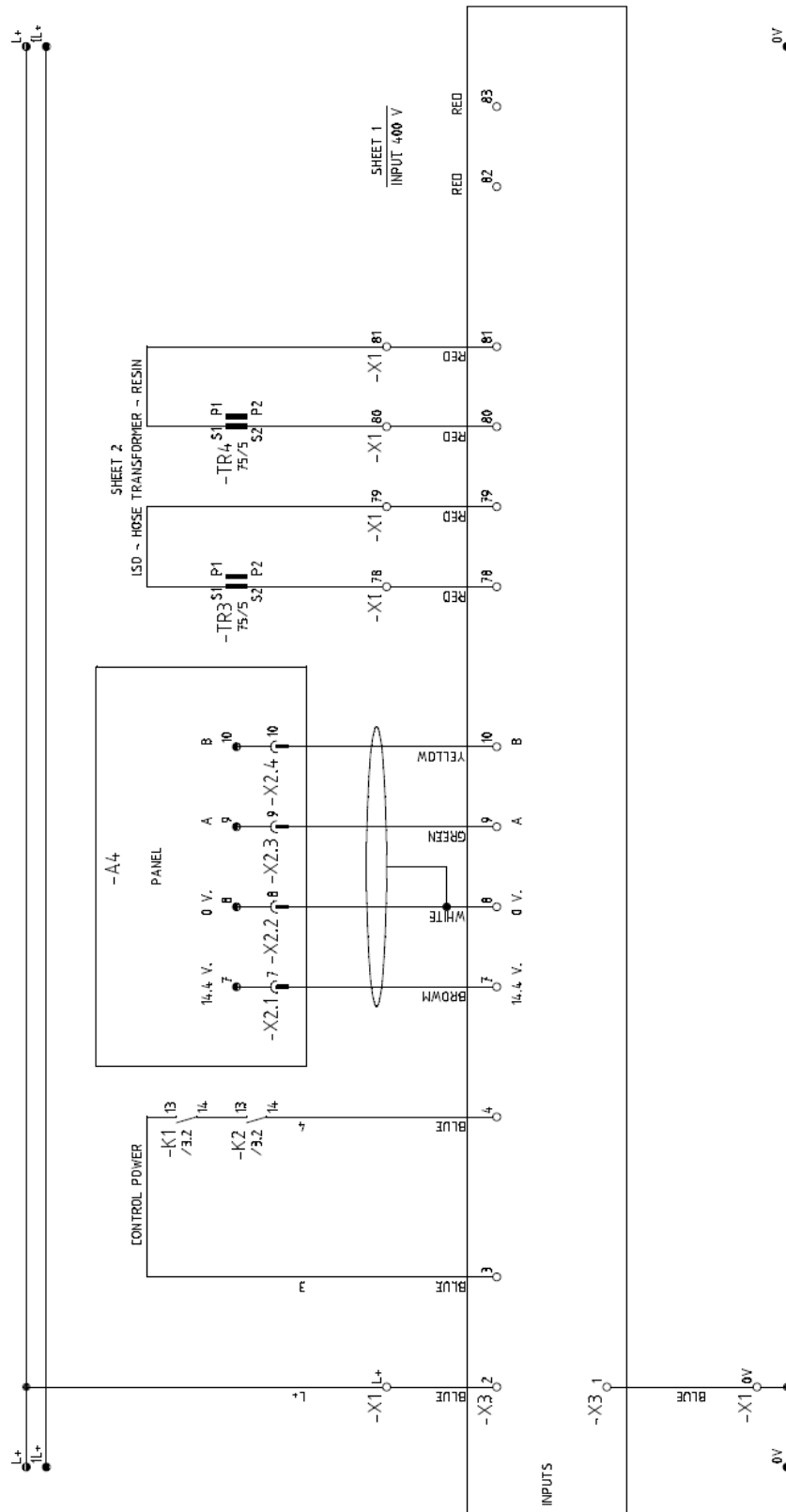
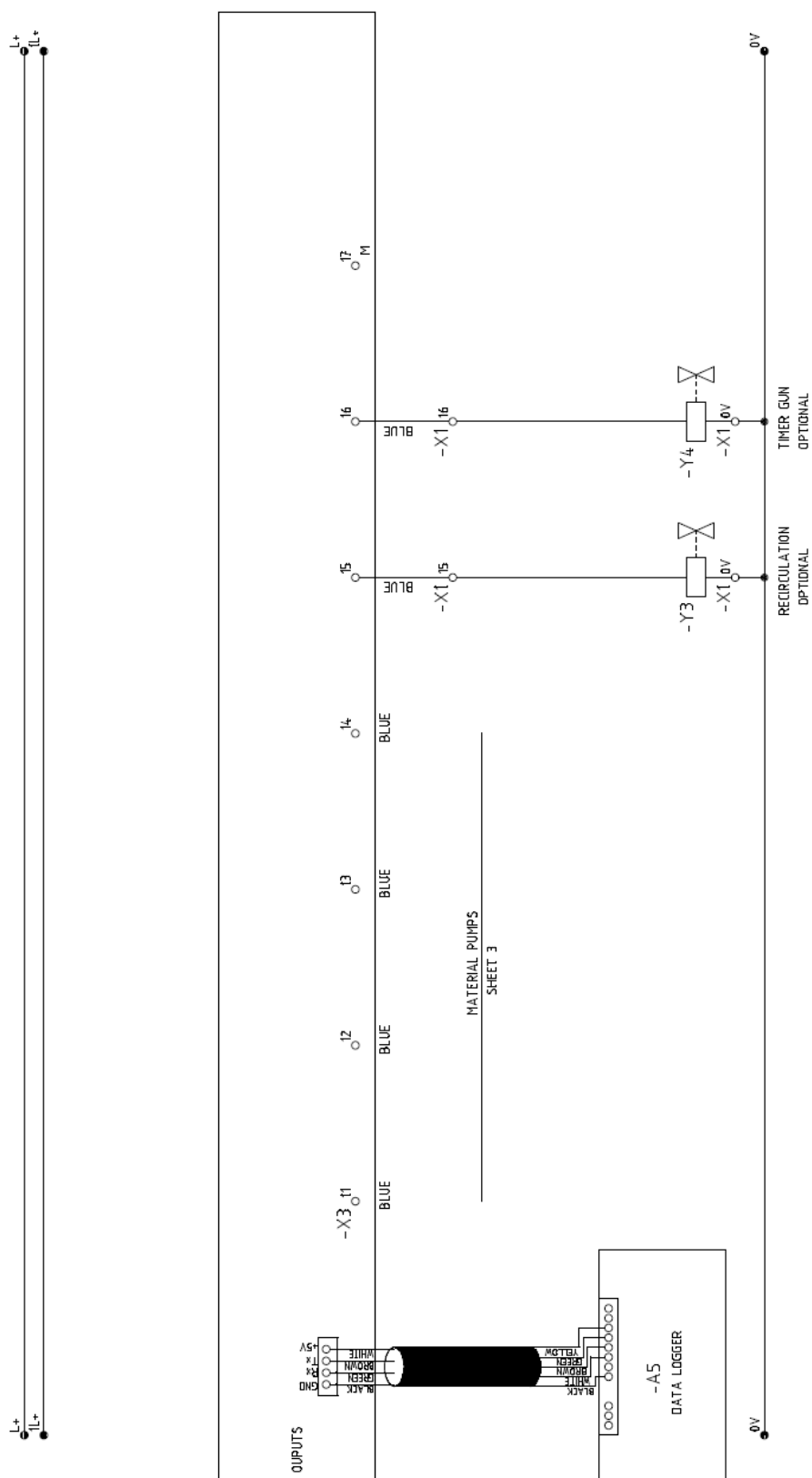


Figure 27. Electrical Schematic Diagram 3PE~400V 50/60Hz (Sheet 8 de 12)



**Figure 28. Electrical Schematic Diagram 3PE~400V 50/60Hz (Sheet 9 de 12)**

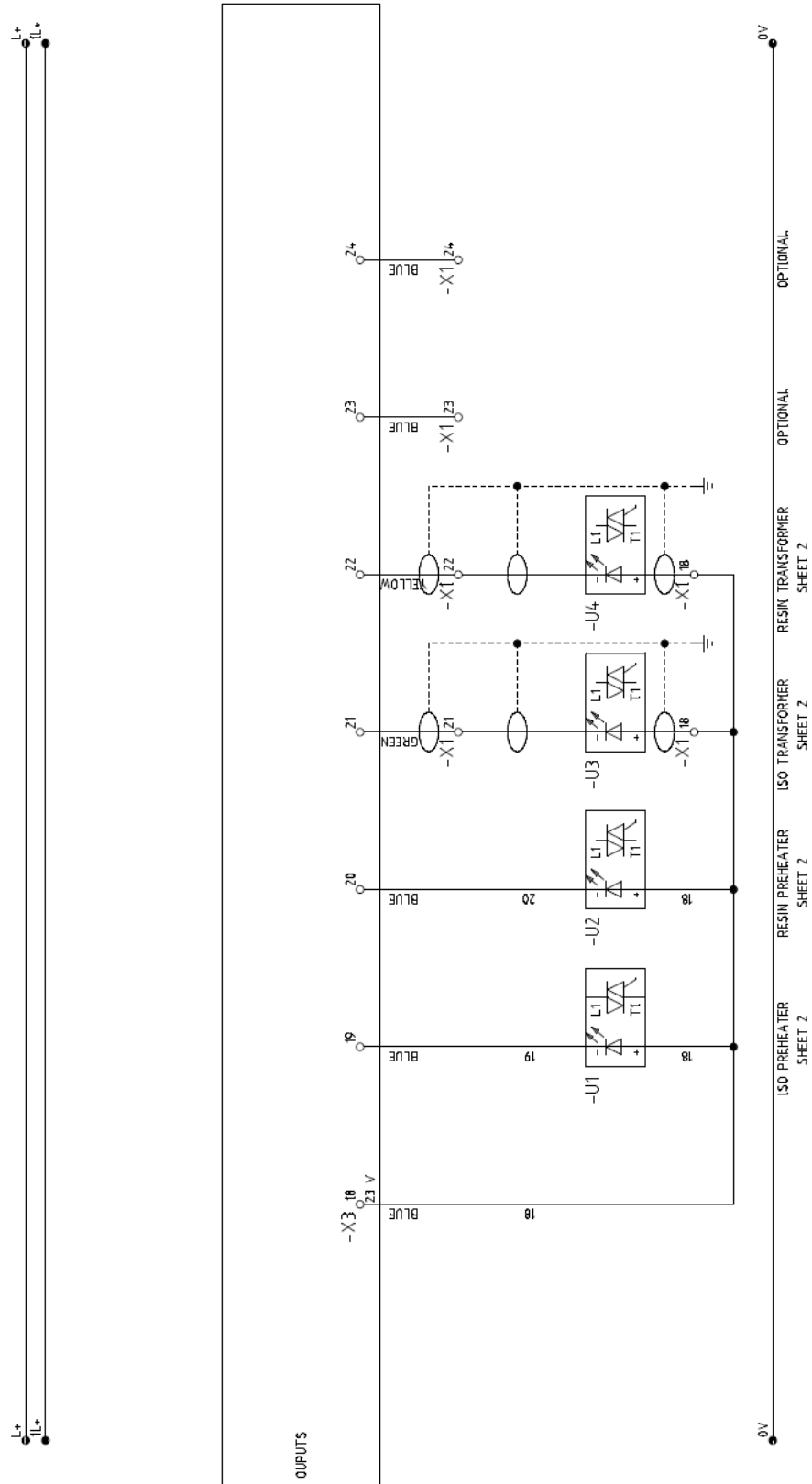
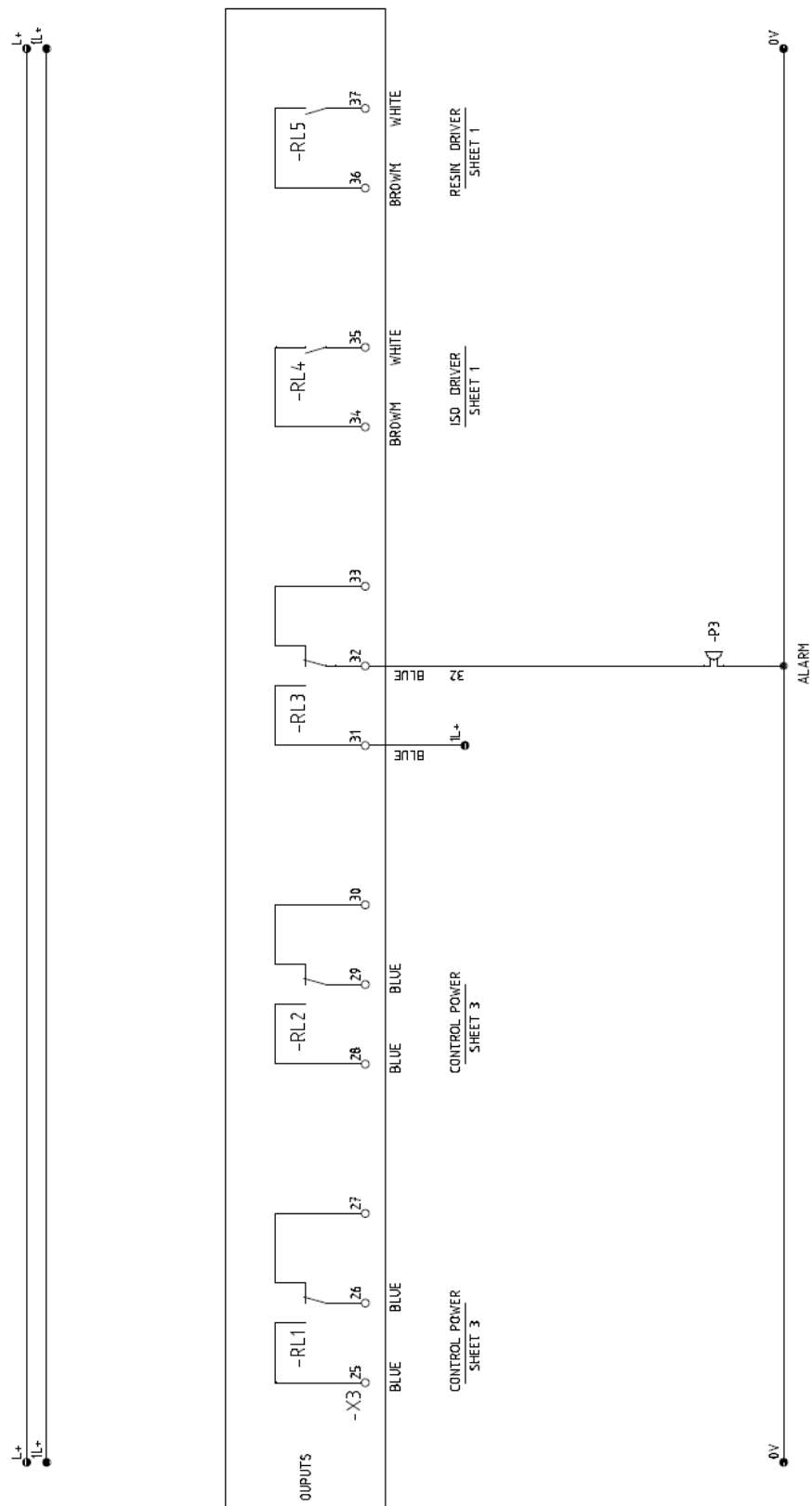


Figure 29. Electrical Schematic Diagram 3PE~400V 50/60Hz (Sheet 10 de 12)



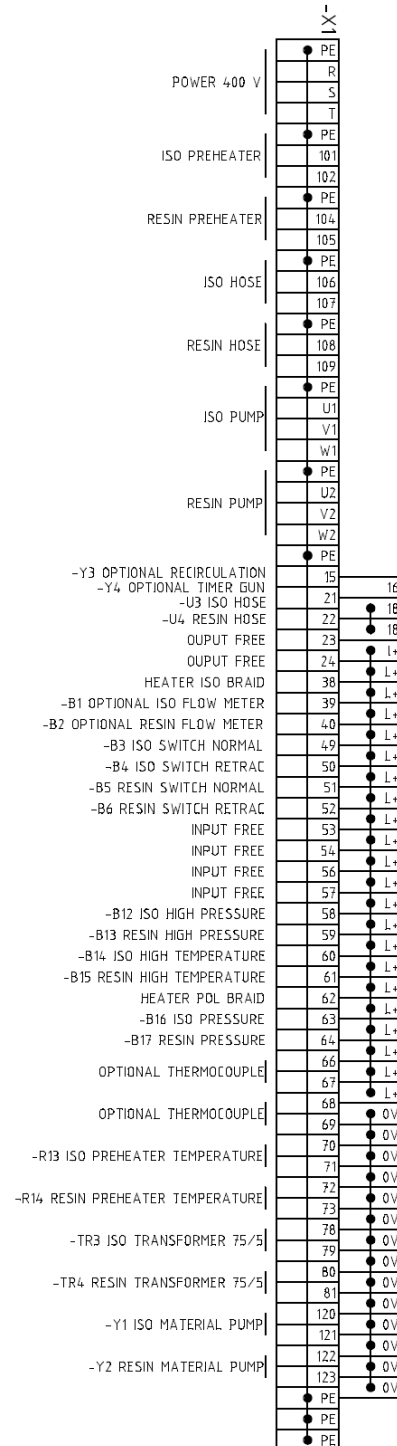
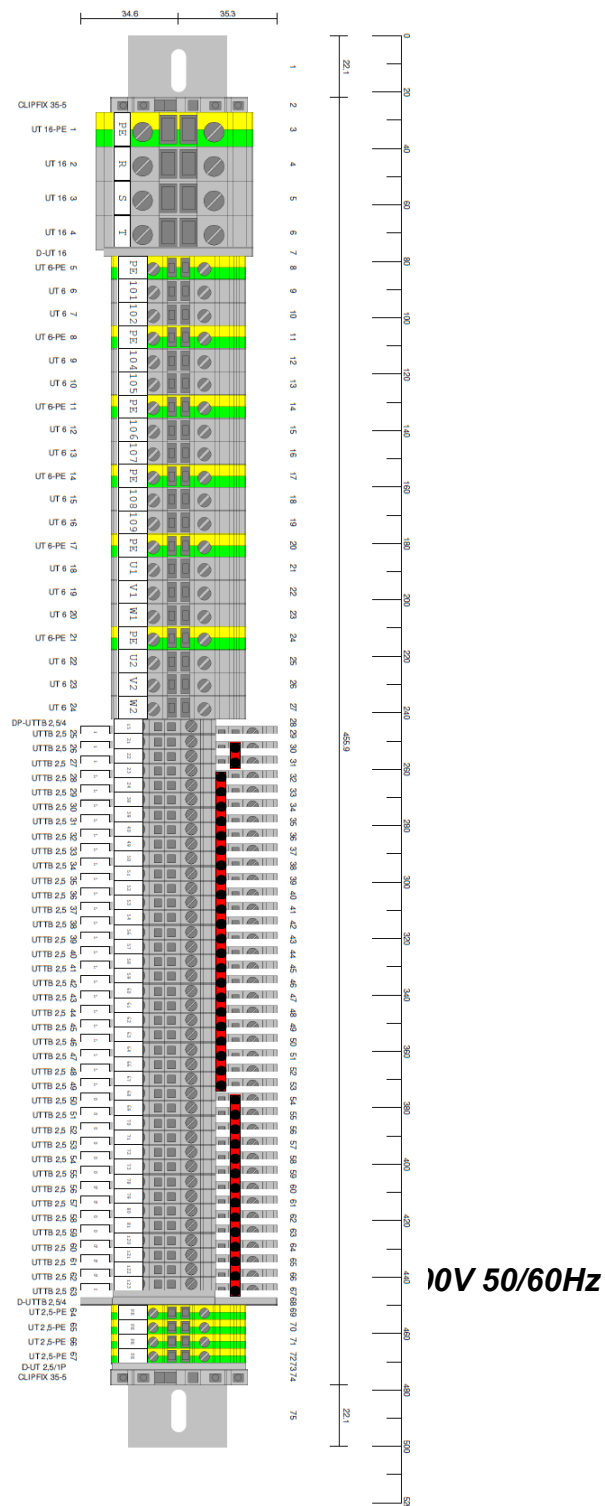
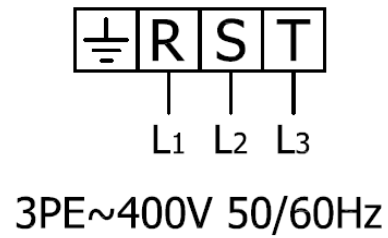


Figure 31. Electrical Sche

'Sheet 12 de 12)



**Figure 32. Electrical**



*Figure 33. Electrical Connection 3PE~400V 50/60Hz*

**Table 37. Electrical Schematic Diagram 3PE~400V 50/60Hz, Parts List**

| Ref.         | Description                      | Part Number | Qty. |
|--------------|----------------------------------|-------------|------|
| K1.2         | CONTACTOR                        | EL-00123-02 | 2    |
| K1.2         | ADDITIONAL CONTACT               | EL-00120-05 | 2    |
|              | EMERGENCY BUTTON                 | EL-00131-00 | 1    |
| A3           | FASE CONTROL                     | EL-00164-00 | 1    |
| U1 U2        | STATIC RELAY                     | EL-00126-03 | 2    |
| I1           | SWITCH 100 A.                    | EL-00107-23 | 1    |
| I1           | CONTROL SWITCH                   | EL-00107-19 | 1    |
| U5.6.7<br>.8 | SOLID RELAY                      | EL-00126-06 | 4    |
| U5.6.7<br>.8 | SOLID RELAY SUPPORT              | EL-00126-07 | 4    |
| P3           | ACUSTIC                          | EL-00130-00 | 1    |
|              | GROUND TERMINAL 6                | EL-00104-08 | 7*   |
|              | GROUND TERMINAL 2,5              | EL-00104-11 | 4*   |
|              | BEIGE TERMINAL 6                 | EL-00104-06 | 14*  |
|              | GROUND TERMINAL 16               | EL-00104-05 | 1*   |
|              | BEIGE TERMINAL 16                | EL-00104-03 | 3*   |
|              | DOUBLE TERMINAL 2,5              | EL-00104-18 | 39*  |
|              | BOLSA SEÑALIZADOR                | EL-00104-19 | 1*   |
|              | END SQUARE                       | EL-00104-17 | 1*   |
|              | SUPPORT 45°                      | EL-00106-01 | 3*   |
|              | UNION PLATE                      | EL-00104-15 | 4*   |
| D1           | DIFFERENTIAL SWITCH 4P 63A 0,03A | EL-00108-04 | 1    |
| D2           | DIFFERENTIAL SWITCH 4P 40A 0,3A  | EL-00108-07 | 1    |
|              | CONNECTION SET 4P-2EL            | EL-00120-08 | 1    |
|              | CONNECTION SET 3P-2EL            | EL-00120-09 | 1    |
| F1.2         | FUSE POINT                       | EL-00104-13 | 4    |
| G1           | SIEMENS SUPPLY 10 A.             | EL-00135-00 | 1    |
|              | MEAN WELL SUPPLY                 | EL-00135-07 |      |
| F1.2         | FUSE                             | EL-00128-00 | 8    |
| Q3 Q4        | CIRCUIT BREAKER 32A              | EL-00115-03 | 2    |
| Q1           | CIRCUIT BREAKER 6A               | EL-00110-04 | 1    |



| Ref.                 | Description                      | Part Number | Qty. |
|----------------------|----------------------------------|-------------|------|
| Q11<br>Q12           | CIRCUIT BREAKER 16A              | EL-00112-02 | 2    |
| Q5 Q6                | CIRCUIT BREAKER 20A              | EL-00113-04 | 2    |
| Q2                   | CIRCUIT BREAKER 6A               | EL-00110-00 | 1    |
| U3 U4                | TRIAC                            | EL-00126-02 | 2    |
| A1 A2                | ABB FREQUENCY CONVERTER          | EL-00134-02 | 2    |
|                      | LENZE FREQUENCY CONVERTER        | EL-00134-08 |      |
|                      | KEYPAD LENZE FREQUENCY CONVERTER | EL-00134-09 | 2    |
|                      | FILTERS                          | EL-00132-00 | 2    |
| M3                   | FAN                              | EL-00133-01 | 1    |
| R20                  | RESISTENCE 3,3 K. ? 6 W.         | EL-00129-01 | 1    |
|                      | CHANNEL                          | EL-00106-04 | 2    |
|                      | PROFIL                           | EL-00106-00 | 2    |
| TR1<br>TR2           | HOSE TRANSFORMER                 | EL-00127-15 | 2    |
| TR3<br>TR4           | INTENSITY TRANSFORMER            | EL-00127-03 | 2    |
| R16.1<br>7.18.1<br>9 | VARISTOR                         | EL-00129-00 | 4    |
| X10                  | BASEBOARD                        | EL-00096-04 | 1    |
| X10                  | CONTACTOR BLOCK                  | EL-00096-05 | 1    |
|                      |                                  |             |      |
|                      |                                  |             |      |
|                      |                                  |             |      |
| B3.4.5<br>.6         | SWITCH                           | EL-00136-03 | 4    |
| B3.4.5<br>.6         | SWITCH WIRE                      | EL-00137-03 | 4    |
|                      | CONNECTOR M12                    | EL-00096-23 | 2**  |
| X1                   | TERMINAL                         | EL-00105-07 | 1    |
|                      | GROUND TERMINAL 2,5              | EL-00104-11 | 2    |
|                      | BEIGE TERMINAL 2,5               | EL-00104-09 | 1    |
|                      | CIRCUIT SPACER Ø4,5              | EL-00094-03 | 7    |
|                      | POWER CIRCUIT                    | EL-00078-03 | 1    |

## HYDRAULIC SCHEMATIC DIAGRAM

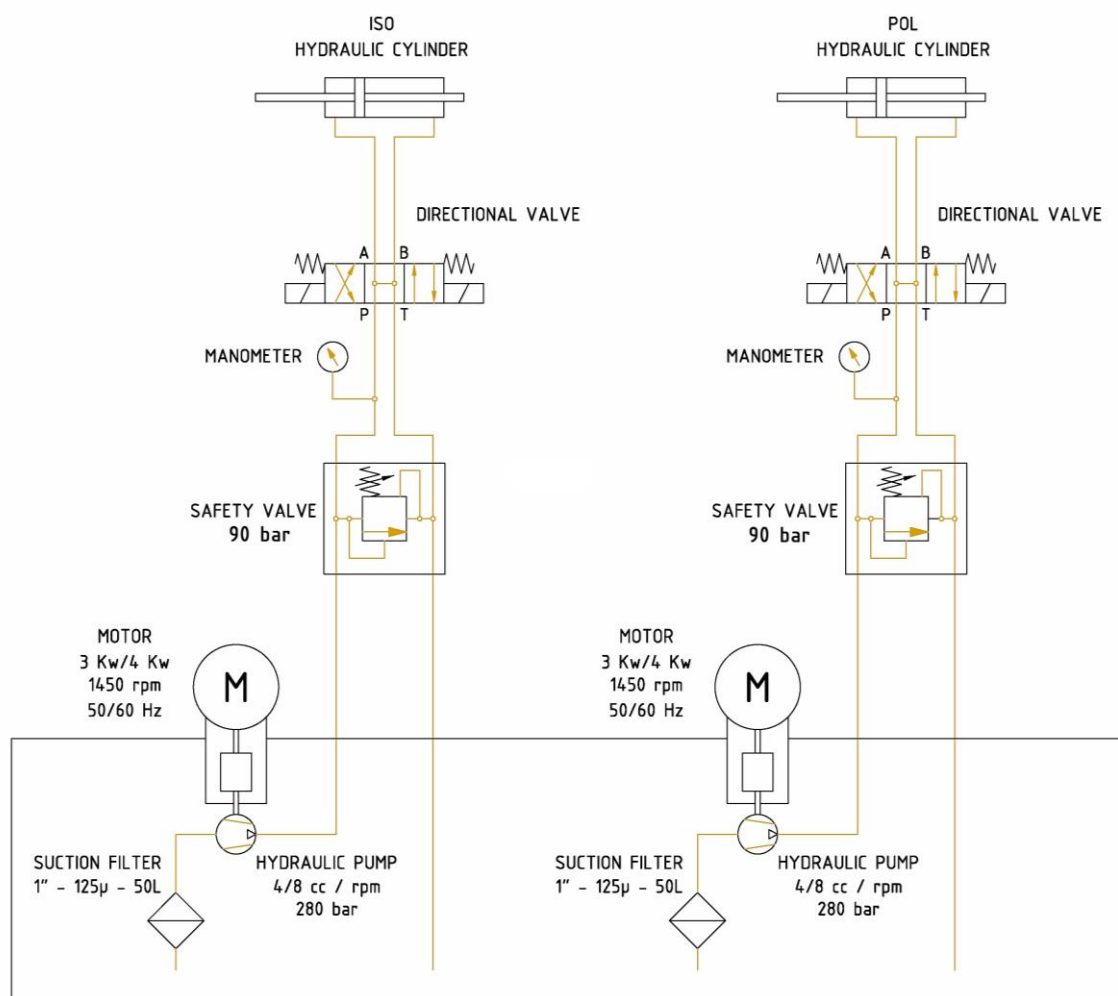


Figure 34. Hydraulic Schematic Diagram evolution VR

## PNEUMATIC SCHEMATIC DIAGRAM

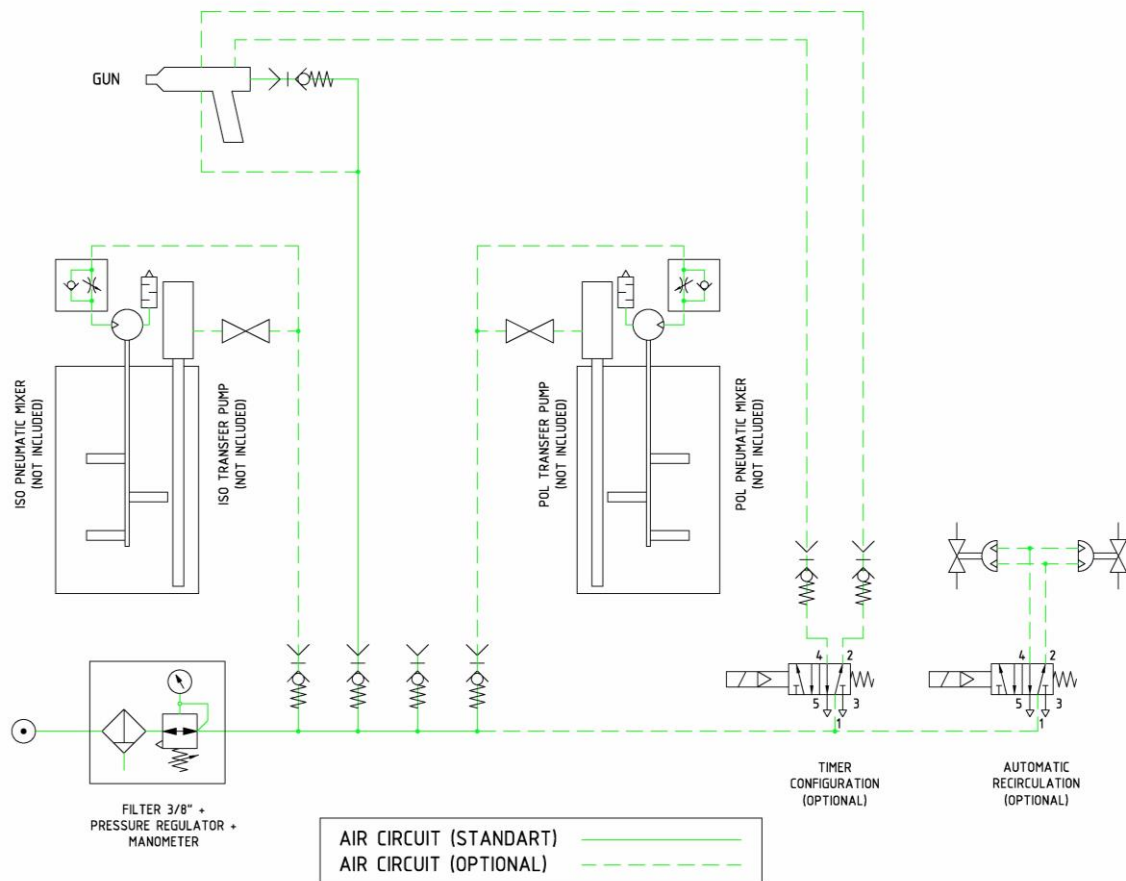


Figure 35. Pneumatic Schematic Diagram evolution VR

## FUNCTIONING SCHEMATIC DIAGRAM

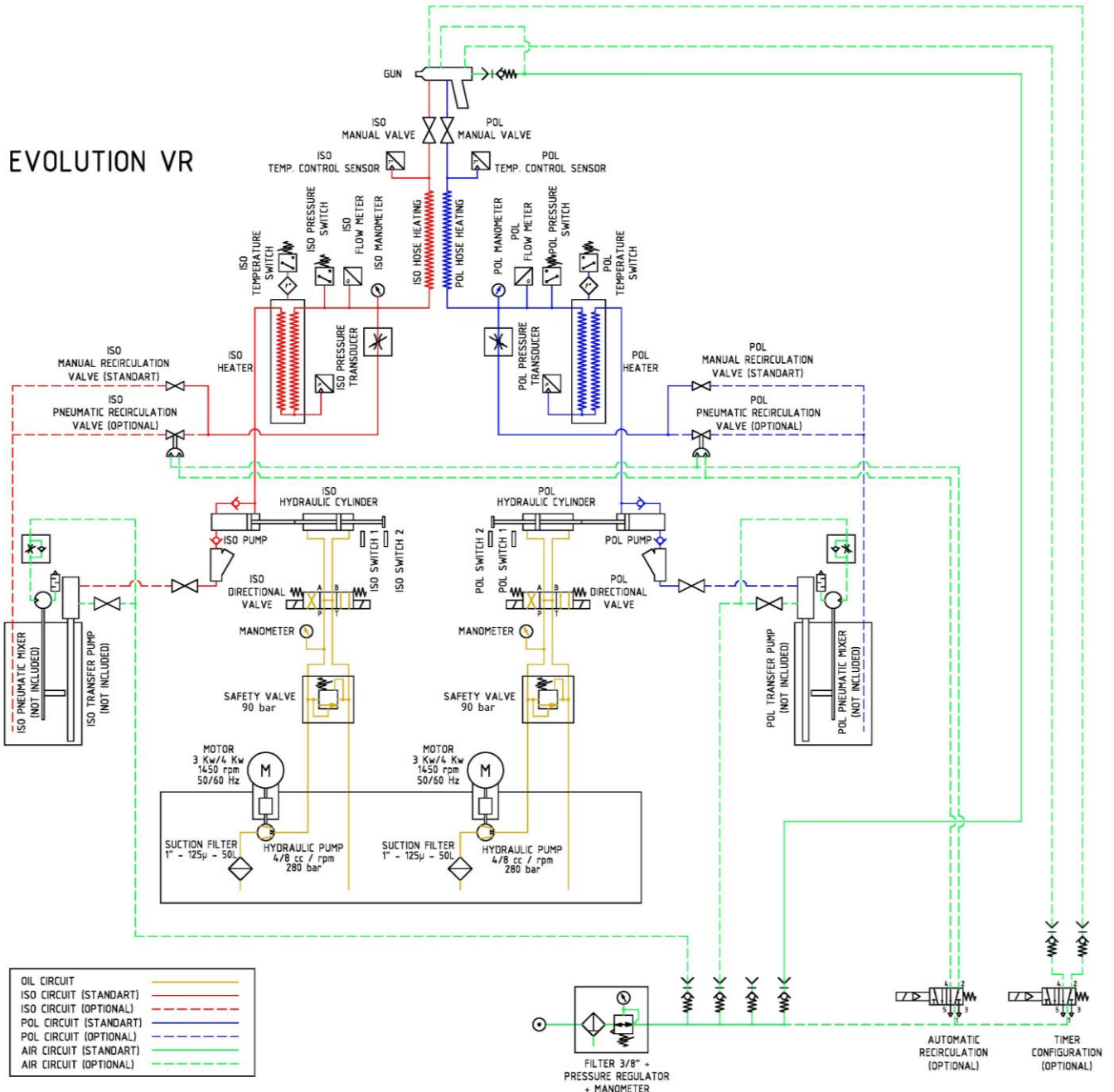


Figure 36. Functioning Schematic Diagram evolution VR



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