



Adhesive Application Solutions | ISO 9001 certified

STEP-DOWN TRANSFORMER GROUPS for Dynamelt Simplicity 400/480 VAC

SERVICE MANUAL, #50-30, Rev.1.26

English - Original instructions

- PN 150183 Transformer Group 480 VAC, Simplicity 4/8KG
- PN 150190 Transformer Group 480 VAC, Simplicity 16KG

- PN 150232 Transformer Group 400 VAC, Simplicity 4/8KG
- PN 150233 Transformer Group 400 VAC, Simplicity 16KG

Information about this manual



Read all instructions before operating this equipment!

It is the customer's responsibility to have all operators and service personnel read and understand this information. Contact your ITW Dynatec customer service representative for additional copies.



NOTICE:

Please be sure to include the serial number of your application system each time you order replacement parts and/or supplies. This will enable us to send you the correct items that you need.

NOTICE: Most common screws, nuts and washers called out in the manual are not for sale and they can be obtained locally at your hardware Store. Specialty fasteners are available by contacting ITW Dynatec's Customer Service.

ITW Dynatec Service Parts and Technical Service:

AMERICAS

ITW Dynatec
31 Volunteer Drive
Hendersonville, TN 37075
USA
Tel. +1.615.824.3634
info@itwdynatec.com
service@itwdynatec.com

EUROPE, MIDDLE EAST & AFRICA

ITW Dynatec
Industriestrasse 28
40822 Mettmann
Germany
Tel. +49.2104.915.0
info@itwdynatec.de
service@itwdynatec.de

ASIA PACIFIC

ITW Dynatec
No. 2, Anzhi Street
SIP, Suzhou, 215122
China
Tel. +86.512.6289.0620
info@itwdynatec.cn
service@itwdynatec.cn

ITW Dynatec
Tsukimura Building 5th Floor
26-11, Nishikamata 7-chome
Ota-ku, Tokyo 144-0051,
Japan
Tel. +81.3.5703.5501
info@itwdynatec.co.jp
service@itwdynatec.co.jp

Index

Information about this manual	2
Index	3
Chapter 1 Safety Instructions.....	5
1.1 General Considerations.....	5
1.2 Warning Labels	5
2.3 Safety Symbols in this Manual	6
2.4 Safe Installation and Operation	7
2.5 Explosion/ Fire Hazard	7
2.6 Choice of Adhesive	8
2.7 Eye Protection & Protective Clothing	8
2.8 Electrical	9
2.9 Lockout/ Tagout.....	9
2.10 High Temperatures.....	9
2.11 High Pressure.....	10
2.12 Protective Covers	10
2.13 Servicing, maintenance	11
2.14 Secure transport.....	11
2.15 Treatment for Burns from Hot Melt Adhesives	12
2.16 Measures in case of fire	12
2.17 Keep attention to environmental protection standards.....	13
Chapter 2 Description, Specifications & Installation.....	15
2.1 Applicable Safety Regulations	15
2.1.1 Intended Use	15
2.1.2 Unintended Use, Examples	15
2.1.3 Residual Risks	15
2.1.4 Technical changes	17
2.1.5 Using foreign components	17
2.1.6 Setting-up operation	17
2.2 Description	18
2.3 Transformer Sizing	18
2.4 Specifications	19
2.4.1 Dimensions	20
2.5 Mounting.....	21
2.6 Installation	21
2.7 Wattage/ Current for Simplicity with Transformer Base	23
Chapter 3 Service	25
3.1 Fuse Replacement	25
3.2 Transformer Replacement.....	25
3.3 Recommended Spare Parts List	26
Chapter 4 Drawings, Bill of Materials & Wiring Schematics	27
4.1 Transformer Groups, Simplicity.....	28
4.2 Grid Group, Simplicity DCL PN 150240 & NOR PN 150241	29
4.3 Schematics, Transformer Assy, 400/480 V, Simplicity, PN 150238J	30
Manual Revisions	31

Chapter 1

Safety Instructions

1.1 General Considerations



- **All operators and service personnel must read and understand this manual before operating or servicing equipment.**
- **All maintenance and service on this equipment must be performed by trained technicians.**



Read and adhere to the manual!

1. Read and follow these instructions.
Failure to do this could result in severe personal injury or death.
2. Keep the binding rules for accident prevention valid for your country and the place of installation. Also keep the approved qualified technical rules for safety-conscious and professional work.
3. Additional safety instructions and/ or symbols are located throughout this manual. They serve to warn maintenance personnel and operators about potentially hazardous situations.
4. Inspect the equipment for unsafe conditions daily and replace all worn or defective parts.
5. Keep work area uncluttered and well lit. Remove all material or things not needed for the production from the workspace of the equipment!
6. All covers and guards must be in place before operating this equipment.
7. Subject to technical modifications without notice!
8. To ensure proper operation of the equipment, use specified electrical and/ or air supply sources.
9. Do not attempt to alter the design of the equipment unless written approval is received from ITW Dynatec.
10. Keep all manuals readily accessible at all times and refer to it often for the best performance from your equipment.

1.2 Warning Labels

1. Read and obey all of the warning labels, signs and caution statements on the equipment.
2. Do not remove or deface any of the warning labels, signs and caution statements on the equipment.
3. Replace any warning labels, signs and caution statements which have been removed or defaced. Replacements are available from ITW Dynatec.

2.3 Safety Symbols in this Manual

Mandatory signs

	General mandatory sign		Wear foot guard!
	Read and adhere to the documentation!		Wear protective gloves!
	Switch the unit voltage-free before working! Main switch OFF!		Wear protective clothing!
	Wear headgear, protective goggles and ear protection!		

Warning signs

NOTE: The dangers and risks exist if the corresponding instructions are not heeded and the precautionary measures are not taken!

	Caution, danger spot! This sign points to possible dangers for life and physical condition or to possible risks for machine and material or to possible risks for environment. The word “DANGER” in addition with this points to possible dangers of life The words “WARNING” and “CAUTION” in addition with this sign point to possible risks of injury. The word “ADVICE” in addition with this sign points to possible risks for machine, material or environment.		Danger, high voltage! This sign points to possible dangers for life and physical condition caused by electricity. Risk of injury, mortal danger!
			Caution, hot surface! This sign points to possible risks of burns. Risk of Burns!
			Caution, high pressure! This sign points to possible risks of injury caused by high pressure. Risk of injury!
			Caution, rotating rolls! This sign points to possible risks of injury caused by inrunning nip (at rolls). Risk of injury!

Prohibition signs

	Fire danger! Smoking prohibited!		Fire danger! Fire and open flames prohibited!
---	--	--	---

2.4 Safe Installation and Operation



Read and adhere to the manual!

1. Read this manual before applying electrical power to the equipment. Equipment may be damaged by incorrect electrical connections.
2. To avoid possible failure of hoses, make sure all hoses are routed to avoid kinking, tight radius turns (8" or less) and abrasive contact. Hot-melt hoses should not have prolonged contact with heat-absorbing surfaces such as cold floors or metal troughs. These heat-absorbing surfaces can alter adhesive flow and cause incorrect calibration. Hoses should never be covered with materials that prevent heat dissipation, such as insulation or sheathing. Hoses should be spaced apart from each other, not making direct contact.
3. Hoses and cables can present a trip hazard around the machinery. Provide hose/ cable management infrastructure whenever possible.
4. Do not use adhesive that is dirty or that may be chemically contaminated. Doing so can cause system clogging and pump damage.
5. When adhesive hand-held applicators or other movable applicators are used, never point them at yourself or at any other person. Never leave a hand-held applicator's trigger unlocked when not actually in use.
6. Do not operate the hopper or other system components without adhesive for more than 15 minutes if the temperature is 150° C (300° F) or more. To do so will cause charring of the residual adhesive.
7. Never activate the heads, hand-held applicators and/ or other application devices until the adhesive's temperature is within the operating range. Severe damage could result to internal parts and seals.
8. Always install the equipment on a flat surface. Never attempt to lift or move the unit when there is molten adhesive in the system.
9. Promptly wipe up fluid spills to avoid potential slips or falls.
10. In case of an emergency or exceptional incident, press the emergency stop button in order to stop the unit quickly.
11. Use the unit only as it is intended to.
12. Never let the unit run unattended.
13. Operate the unit only in a faultless and fully functional condition. Check and make sure that all safety devices work in proper form!

2.5 Explosion/ Fire Hazard

1. Never operate this unit in an explosive environment.
2. Use cleaning compounds recommended by ITW Dynatec or your adhesive supplier only.
3. Flash points of cleaning compounds vary according to their composition, so consult with your supplier to determine the maximum heating temperatures and safety precautions.

2.6 Choice of Adhesive



DANGER! HARMFUL FUMES!

Substance(s) being processed (e.g., melted, pumped, applied) by ITW equipment is at the discretion of the user and beyond ITW Dynatec's control. Any health effects or other safety-related concerns arising from the melting of those particular substances (e.g., hazardous fumes) is the responsibility of the user to identify and mitigate.

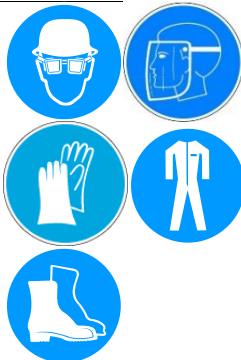
Use of PUR (Polyurethane) Adhesives:

PUR adhesives emit fumes (MDI and TDI) that can be dangerous to anyone exposed to them. These fumes cannot be detected by the sense of smell. ITW Dynatec strongly recommends that a power-vented exhaust hood or system be installed over any PUR system.

Consult with your adhesive manufacturer for specifics about required ventilation. See also the following Special Considerations When Using Reactive HMPUR Adhesives.

Because of the nature of PUR adhesives to strongly bond in the presence of moisture, care must be taken to prevent them from curing inside Dynatec equipment. If PUR adhesive solidifies in a unit, the unit must be replaced. Always purge old PUR adhesive from the system per your adhesive manufacturer's instructions and time table. **ALLOWING PUR ADHESIVE TO CURE IN A UNIT OR ITS COMPONENTS VOIDS ITW DYNATEC'S WARRANTY.**

2.7 Eye Protection & Protective Clothing



WARNING

Eye Protection & Protective Clothing Required

1. It is very important that you **PROTECT YOUR EYES** when working around hot melt adhesive equipment!
2. Wear a face shield conforming to ANSI Z87.1 or safety glasses with side shields which conform to ANSI Z87.1 or EN166.
3. Failure to wear a face shield or safety glasses could result in severe eye injury.
4. It is important to protect yourself from potential burns when working around hot melt adhesive equipment.
5. Wear heat-resistant protective gloves and long sleeved, protective clothing to prevent burns that could result from contact with hot material or hot components and to protect against cuts due to potential sharp edges on access panels, doors or lids.
6. Always wear steel reinforced safety shoes.

2.8 Electrical



DANGER HIGH VOLTAGE

1. Dangerous voltages exist at several points in this equipment. To avoid personal injury, do not touch exposed connections and components while input power is on.
2. Disconnect, lockout and tag external electrical power before removing protective panels.
3. A secure connection to a reliable earth ground is essential for safe operation.
4. An electrical disconnect switch with lockout capability must be provided in the line ahead of the unit. Wiring used to supply electrical power should be installed by a qualified electrician.
5. Notify the maintenance personnel immediately, if cables are damaged. Provide for exchanging the defective components immediately.

2.9 Lockout/ Tagout



Switch the unit voltage-free before working! Main switch OFF!

1. Follow OSHA 1910.147 (Lockout/ Tagout Regulation) for equipment's lockout procedures and other important lockout/tagout guidelines.
2. Be familiar with all lockout sources on the equipment.
3. Even after the equipment has been locked out, there may be stored energy in the application system, particularly in the capacitors within the panel box. To ensure that all stored energy is relieved, wait at least one minute after removing power before servicing electrical capacitors.

2.10 High Temperatures



WARNING HOT SURFACE

1. Severe burns can occur if unprotected skin comes in contact with molten adhesive or hot application system parts.
2. Face shields (preferred) or safety glasses (for minimum protection), heat-resistant protective gloves and long-sleeved clothing must be worn whenever working with or around adhesive application systems.

2.11 High Pressure



WARNING HIGH PRESSURE PRESENT

1. To avoid personal injury, do not operate the equipment without all covers, panels and safety guards properly installed.
2. To prevent serious injury from molten adhesive under pressure when servicing the equipment, disengage the pumps and relieve the adhesive system's hydraulic pressure (i.e. trigger the heads, hand-held applicators, and/or other application devices into a waste container) before opening any hydraulic fittings or connections.
3. IMPORTANT NOTE: Even when a system's pressure gauge reads "0" psi, residual pressure and trapped air can remain within it causing hot adhesive and pressure to escape without warning when a filter cap or a hose or hydraulic connection is loosened or removed. For this reason, always wear eye protection and protective clothing.
4. Either of the two High Pressure symbols shown may be used on ITW Dynatec equipment.
5. Keep the given operating pressure.
6. Notify the maintenance personnel immediately, if hoses or components are damaged. Provide for exchanging the defective components immediately.

2.12 Protective Covers



WARNING DO NOT OPERATE WITHOUT GUARDS IN PLACE

1. Keep all guards in place!
2. To avoid personal injury, do not operate the application system without all covers, panels and safety guards properly installed.
3. Never get your extremities and/or objects into the danger area of the unit. Keep your hands away from running parts of the unit (pumps, motors, rolls or others).

2.13 Servicing, maintenance

1. Only trained and qualified personnel are to operate and service this equipment.
2. Before any service work disconnect the external power supply and the pressure air supply!
3. Never service or clean equipment while it is in motion. Shut off the equipment and lock out all power sources (including pneumatic) before attempting any maintenance.
4. Follow the maintenance and service instructions in the manual.
5. Keep the maintenance rates given in this documentation!
6. Any defects in the equipment that impact safe operation have to be repaired immediately.
7. Check screws that have been loosened during the repair or maintenance, if they are tight again.
8. Replace the air hoses in preventive maintenance regularly, even if they have got no viewable damages! Adhere to the manufacturers' instructions!
9. Never clean control cabinets or other houses of electrical equipment with a jet of water!
10. Adhere to the current safety data sheet of the manufacturer when using hazardous materials (cleaning agents, etc.)!

2.14 Secure transport

1. Examine the entire unit immediately after receipt, if it has been delivered in perfect condition.
2. Let damages in transit certify by the carrier and announce them immediately to the ITW Dynatec.
3. Use only lifting devices that are suitable for the weight and the dimensions of the equipment (see drawing of the equipment).
4. The unit has to be transported upright and horizontally!
5. The unit has to cool down to room temperature before packaged and transported.

2.15 Treatment for Burns from Hot Melt Adhesives

Measures after being burned:

1. Burns caused by hot melt adhesive must be treated at a burn center. Provide the burn center's staff a copy of the adhesive's M.S.D.S. to expedite treatment.
2. Cool burnt parts immediately!
3. Do not remove adhesive forcibly from the skin!
4. Care should be used when working with hot melt adhesives in the molten state. Because they rapidly solidify, they present a unique hazard. Even when first solidified, they are still hot and can cause severe burns.
5. When working near a hot melt application system, always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothes that cover all vulnerable parts of the body.
6. Always have first-aid information and supplies available.
7. Call a physician and/or an emergency medical technician immediately. Let the burns medicate by a medic immediately.

2.16 Measures in case of fire

1. Please heed that not covered hot parts of the engine and molten hot melt may cause heavy burns. Risk of burns!
2. Work very carefully with molten hot melt. Keep in mind, that already jelled hot melt can be very hot, too.
3. When working near a hot melt application system, always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothes that cover all vulnerable parts of the body!

Measures in case of fire:

Wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothes that cover all vulnerable parts of the body.

Firefighting - burning hot melt:

Please keep attention to the safety data sheet given by the adhesive manufacturer.



EXTINGUISH FIRE

Appropriate extinguishing agents:

Foam extinguisher, Dry powder, Spray, Carbon dioxide (CO₂), Dry sand.

For safety reasons not appropriate extinguishing agents: None.

Firefighting - burning electrical equipment:

Appropriate extinguishing agents:

Carbon dioxide (CO₂), Dry powder.

2.17 Keep attention to environmental protection standards



1. When working on or with the unit, the legal obligations for waste avoidance and the duly recycling / disposals have to be fulfilled.
2. Keep attention, that during installations, repairs or maintenance matters hazardous to water, like adhesive / adhesive scrap, lubricating grease or oil, hydraulic oil, coolant and cleaner containing solvent do not pollute the ground or get into the canalization!
3. These matters have to be caught, kept, transported and disposed in appropriate reservoirs!
4. Dispose these matters according to the international, national and regional regulations.

Chapter 2

Description, Specifications & Installation

2.1 Applicable Safety Regulations

2.1.1 Intended Use

The transformer groups may be used only to step down incoming 400 VAC or 480 VAC 3-phase delta electrical service so that a Dynamelt Simplicity Adhesive Supply Unit can operate at 240 VAC. When in doubt, seek permission from ITW Dynatec.



If the unit is not used in accordance with this regulation, a safe operation cannot be guaranteed.

The operator - and not ITW Dynatec - is liable for all personal injury or property damages resulting from unintended use!



Intended use includes, that you

- read this documentation,
- heed all given warnings and safety instructions, and
- do all maintenance within the given maintenance rates.

Any other use is considered to be unintended.

2.1.2 Unintended Use, Examples

The transformer groups may not be used under the following conditions:

- In defective condition.
- In a potentially explosive atmosphere.
- With unsuitable operating/processing materials.
- When the values stated under Specifications are not complied with.

The transformer groups may not be used to process the following materials:

- Toxic, explosive and easily flammable materials.
- Erosive and corrosive materials.
- Food products.

2.1.3 Residual Risks

In the design of the transformer groups, every measure was taken to protect personnel from potential danger. However, some residual risks cannot be avoided.

Personnel should be aware of the following:



- Risk of burns from hot material.
- Risk of burns from hot components.
- Risk of burns when conducting maintenance and repair work for which the system must be heated up.
- Risk of burns when attaching and removing heated hoses.
- Material fumes can be hazardous. Avoid inhalation. If necessary, exhaust material vapors and/or provide sufficient ventilation of the location of the system.
- Risk of pinching parts of the body at running parts of the unit (pumps, motors, rolls or others).
- The safety valves may malfunction due to hardened or charred material.

2.1.4 Technical changes

Any kind of technical changes having impact to the security or the operational liability of the system should only be done by written agreement of ITW Dynatec. Suchlike changes made without given a corresponding written agreement will lead to immediate exclusion of liability granted by ITW Dynatec for all direct and indirect subsequent damages.

2.1.5 Using foreign components

ITW Dynatec takes no responsibility for consequential damages caused by using foreign components or controllers that have not been provided or installed by ITW Dynatec.

ITW Dynatec does not guarantee that foreign components or controllers used by the operating company are compatible to the ITW Dynatec-system.

2.1.6 Setting-up operation

We recommend asking for an ITW Dynatec-service technician for the setting-up operation, to ensure a functioning system. Let yourself and the people working with or working on the system be introduced to the system on this occasion.

ITW Dynatec takes no responsibility for damages or faults caused by any untrained personal.

2.2 Description

ITW Dynatec's 400/ 480 VAC transformer groups step down incoming 400 VAC or 480 VAC 3-phase delta electrical service so that a Dynamelt Simplicity Adhesive Supply Unit can operate at 240 VAC. This voltage powers the ASU's electronics, the AC pump/ motor and drive, manifold heater and all head and hose temperature zones.

The incoming 400 VAC or 480 VAC service is routed through a 3-pole, 63A, 600 VAC switch and into a transformer. Incoming power is split off inside the transformer box. 400/480 VAC is routed back to the ASU through a fuse block into a DC-controlled solid state relay and is used to power the ASU's hopper elements. The 240 VAC transformer output power is routed through fuse blocks and into the mains connector on the ASU power board.

The ITW Dynatec step-down transformer groups are intended for either 400 VAC 3-phase delta connection without neutral or 480 VAC 3-phase delta connection without neutral. They should not be used in wash-down environments or in explosive atmospheres.

2.3 Transformer Sizing

The same transformer is been used for 2-, 4- and 6-hoses/ heads configurations. The transformer is sized to deliver a maximum 6000W to all heads and hoses.

2.4 Specifications

Environmental:

Storage/ shipping temperature	-40°C to 70°C (-40°F to 158°F)
Ambient service temperature	-7°C to 40°C (20°F to 104°F)

Physical:

Dimensions	see dimensional layouts on following pages
Number of heads/ hoses	2, 4 or 6

Electrical:

Adhesive Supply Unit switch	600 VAC/ 3ph/ 25 A
One transformer	6 KVA auto-transformer
Primary taps	480/400/common
Secondary taps	240/common
Rated for	100% duty cycle
Operation.....	50 or 60 Hz

Total system wattage capacity for Simplicity 4KG and 8KG:

2-hose system	5200W @ 480VAC / 4740W @ 400VAC
4-hose system	7500W @ 480VAC / 7040W @ 400VAC
6-hose system	7500W @ 480VAC / 7040W @ 400VAV
Hopper wattage:.....	1500W operating @ 480VAC
.....	1040W operating @ 400VAC

Total system wattage capacity for Simplicity 16KG:

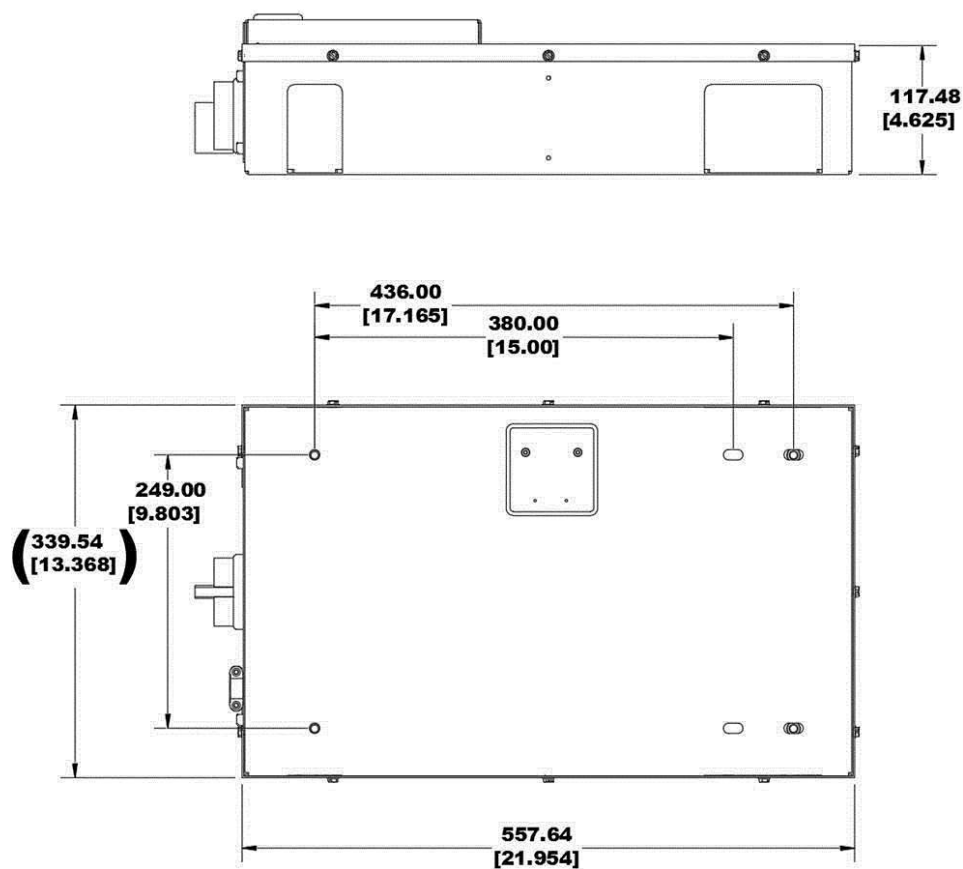
2-hose system	6200W @ 480VAC / 5440W @ 400VAC
4-hose system	8500W @ 480VAC / 7740W @ 400VAC
6-hose system	8500W @ 480VAC / 7740W @ 400VAV
Hopper wattage:.....	2500W operating @ 480VAC
.....	1740W operating @ 400VAC

Fuses:

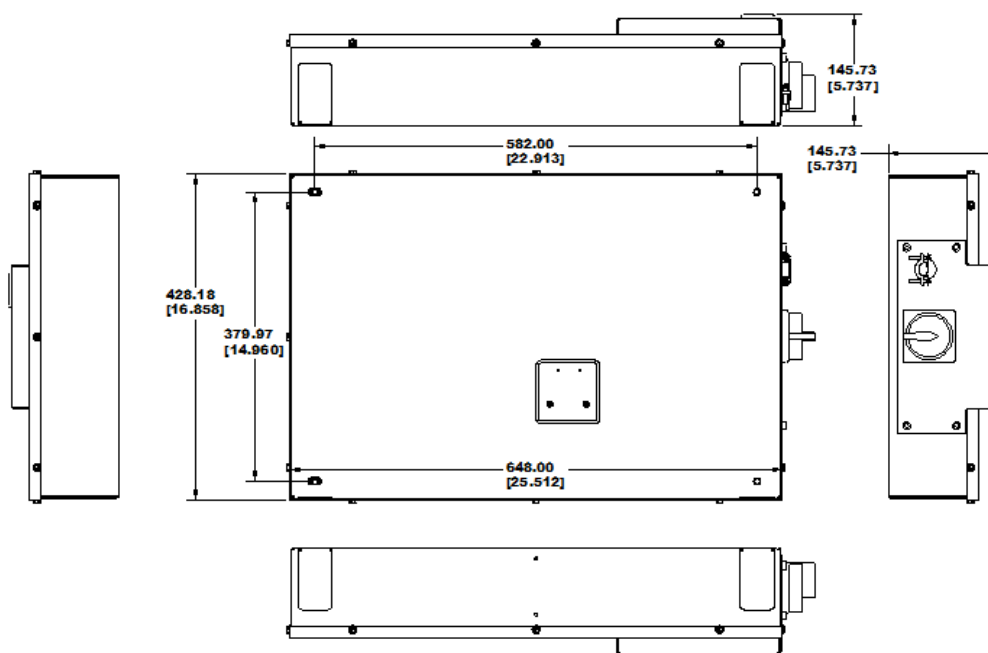
All systems	3x 15A, 600VAC LPCC fuses
	1x 30A, 600VAC LPCC fuse

2.4.1 Dimensions

Dimensions of the transformer for 4- and 8-KG units:



Dimensions of the transformer for 16-KG unit:



Dimensions are expressed as "mm (inch)"

2.5 Mounting



WARNING

Customer must supply an over-current protection device (for example: a circuit breaker or a disconnect) upstream of the Adhesive Supply Unit (ASU).

Transformer box can be mounted underneath the ASU by bolting to its base frame.

2.6 Installation

Make sure that the incoming line power to the ASU is disconnected and locked out.

Turn OFF the ASU's main power switch.

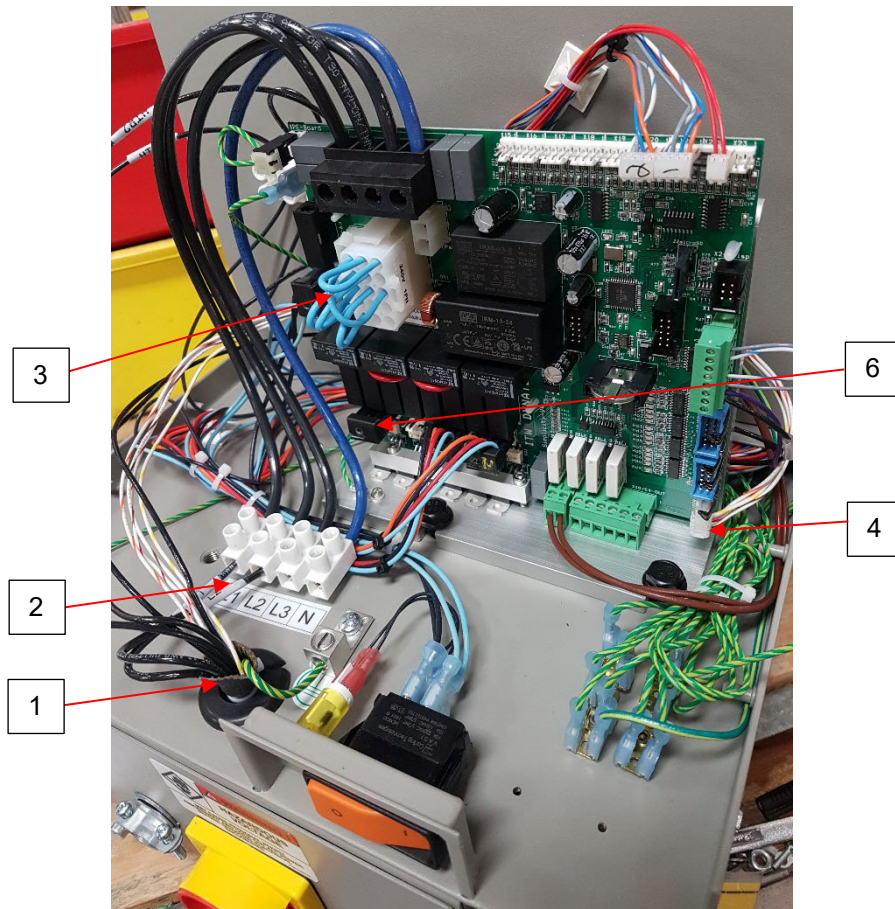


DANGER HIGH VOLTAGE

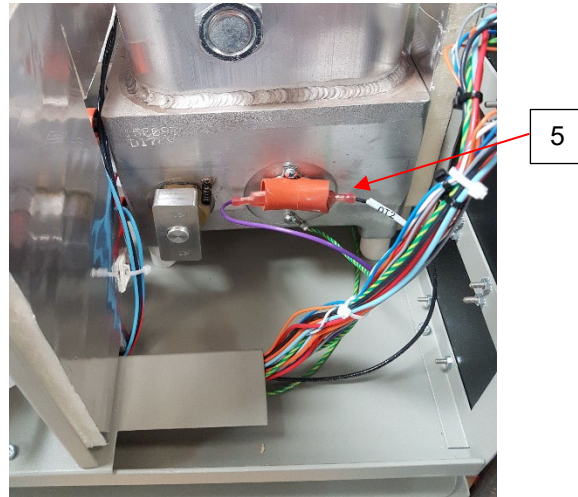
Disconnect and lock out input power to the application system before starting any installation procedures. Make sure there is no electrical power on the leads you will be connecting.

Refer to the schematics.

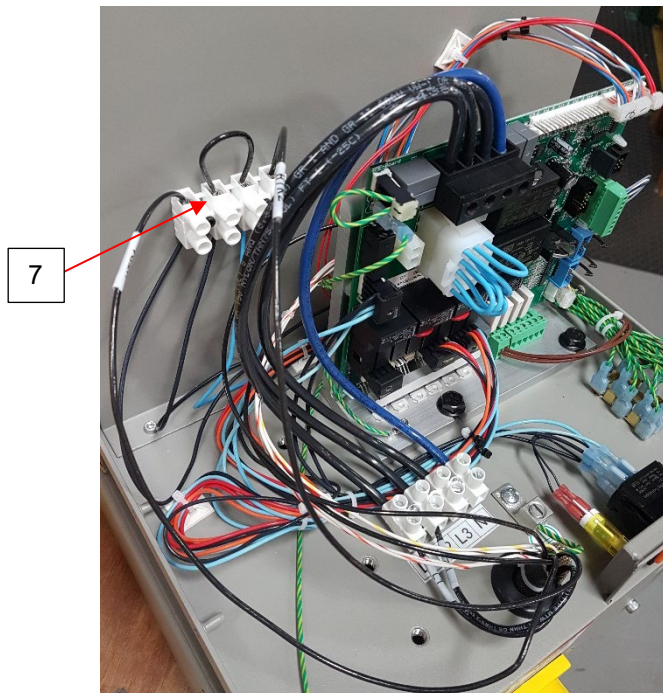
1. Loosen the latch screws on the top and bottom of the ASU's electrical cabinet access door and open the unit.
2. Run the power cable (1) through the wireway into the unit, using either the supplied strain relief or a customer-supplied sealtite conduit.



3. Bolt the transformer to the ASU.
4. Connect L1 & L2 of the 400/480VAC supply (2) to the L1 & L2 connections on the main terminal block.
5. Install blue voltage configuration plug 240VAC 1ph (3).
6. Connect SSR plug on main PCB (4).
7. Connect the over temp OT1 to main PCB and OT2 to over temp switch on hopper (5).



8. Remove the existing hopper wire harness from terminal block and main PCB. Cap off hopper plug on PCB (6).
9. Connect heater connector HTR1 and HTR2 to terminal block. Jump the middle 2 ports of the terminal block (7).



10. Connect all grounds.
11. Close the ASU and turn ON.

2.7 Wattage/ Current for Simplicity with Transformer Base

ASU/ Voltage	Category	2 Hoses	4 Hoses	6 Hoses
Simplicity 4/8KG @ 480VAC	Maximum Current:	10 A	12.5 A	12.5 A
	Total System Wattage:	5200 W	7500 W	7500 W
	Wattage available for Hoses/Heads together:	3700 W	1&2: 3700 W 3&4: 3700 W Together: 6000W	1&2: 3700 W 3&4: 3700 W 5&6: 3700 W Together: 6000W
Simplicity 4/8KG @ 400VAC	Maximum Current:	9 A	13.7 A	13.7 A
	Total System Wattage:	4740 W	7040 W	7040 W
	Wattage available for Hoses/Heads together:	3700 W	1&2: 3700 W 3&4: 3700 W Together: 6000W	1&2: 3700 W 3&4: 3700 W 5&6: 3700 W Together: 6000W
Simplicity 16KG @ 480VAC	Maximum Current:	11.5 A	16 A	16 A
	Total System Wattage:	6200 W	8500 W	8500 W
	Wattage available for Hoses/Heads together:	3700 W	1&2: 3700 W 3&4: 3700 W Together: 6000W	1&2: 3700 W 3&4: 3700 W 5&6: 3700 W Together: 6000W
Simplicity 16KG @ 400VAC	Maximum Current:	10.5 A	15 A	15 A
	Total System Wattage:	5440 W	7740 W	7740 W
	Wattage available for Hoses/Heads together:	3700 W	1&2: 3700 W 3&4: 3700 W Together: 6000W	1&2: 3700 W 3&4: 3700 W 5&6: 3700 W Together: 6000W

Chapter 3

Service



CAUTION

Re-read Chapter 1 “Safety Precautions” before performing any service or maintenance procedures. All service or maintenance procedures must be performed by qualified, trained technicians.

3.1 Fuse Replacement

Disconnect 400/480VAC circuit breaker. Lockout and tag circuit breaker and plug.

Turn OFF the ASU's main power switch. Verify that power to the ASU is disconnected.



DANGER HIGH VOLTAGE

Disconnect and lock out input power to the application system before starting any installation procedures. Make sure there is no electrical power on the leads you will be connecting.

1. Remove the front fuse access panel.
2. Locate the failed fuse by checking continuity with a multi-meter.
3. Replace fuse.

3.2 Transformer Replacement

1. Drain all adhesive from the ASU's hopper.
2. Turn ASU power off and allow unit to cool.
3. Disconnect 400/480VAC circuit breaker. Lockout and tag circuit breaker and plug.
4. Verify that power to the ASU is disconnected.



DANGER HIGH VOLTAGE

Disconnect and lock out input power to the application system before starting any installation procedures. Make sure there is no electrical power on the leads you will be connecting.

5. Remove transformer box from ASU:
 - a. Remove all 13 thread-forming screws from lid of the box.
 - b. Lay the entire ASU on its side.
 - c. Remove the bolts attaching the transformer box from the machine's frame.

6. Separate the lid from the transformer box.
7. Remove the failed transformer:
 - a. Test transformer to find failure by checking continuity (with a multi-meter) across primary and secondary coils. Refer to schematic in Ch. 4.
 - b. Note and record the location of all wiring before removing transformer.
 - c. Disconnect and remove wiring to failed transformer.
 - d. Install new transformer.
 - e. Re-connect wiring and re-assemble case to ASU.

3.3 Recommended Spare Parts List

Part Number	Description	Quantity
815897	Solid State Relay Dual, 480VAC, 40A, DC IN	1
804535	Fuse 15A LPCC	3
804534	Fuse 30A LPCC	1

Chapter 4

Drawings, Bill of Materials & Wiring Schematics



WARNING

All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect equipment's operation and can result in personal injury.

This chapter contains the component illustrations (exploded-view drawings) for the assemblies of the ITW Dynamelt SR Step-Down Transformer Groups. These drawings are useful for finding part numbers as well as for use when maintaining or repairing the equipment.

Note: Most common nuts, bolts and fasteners can be obtained locally at your hardware store. Specialty fasteners are available by contacting ITW Dynatec's Customer Service.

4.1 Transformer Groups, Simplicity

4 Transformer Groups are available:

- 150183 Transformer group, 480V, 4/8KG, Rev.K
- 150190 Transformer group, 480V, 16KG, Rev.K
- 150232 Transformer group, 400V, 4/8KG, Rev.K
- 150233 Transformer group, 400V, 16KG, Rev.K

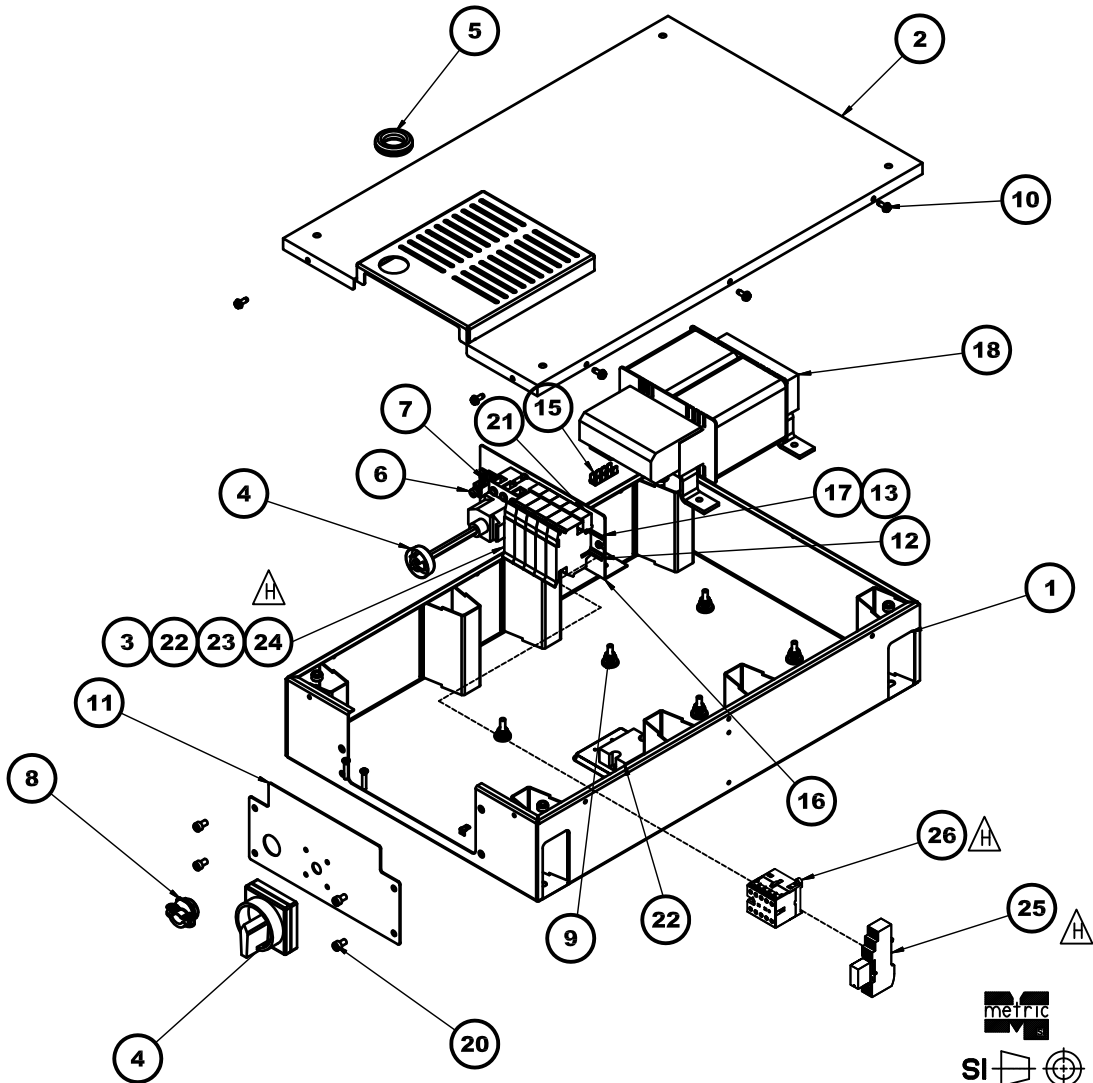
THIS DRAWING IS THE PROPERTY OF ITW/DYNATEC.
DO NOT REPRODUCE OR DISCLOSE TO
OTHERS WITHOUT EXPRESS WRITTEN
CONSENT OF ITW/DYNATEC.



164
[6.459]
ENSURE HOLE SPACING
WHEN CUTTING ITEM 12

FAMILY CONFIGURATIONS					
CONFIG #	P/N	DESCRIPTION	ITEM 1	ITEM 2	
01	150183	XFMR GRP,4/8KG, 480VAC	150181	150182	
02	150190	XFMR GRP,16KG, 480 VAC	150188	150189	
03	150232	XFORMER GRP,4/8KG,400V	150181	150182	
04	150233	XFORMER GRP,16KG,400V	150188	150189	

REVISIONS				
REV	DATE	DESCRIPTION	REF DOC	BY
A	08.22.16	ORIGINAL RELEASE		JC
B	10.11.16	19 WAS 115849; 20 QTY. WAS 6		JC
C	03.09.17	ADD PN 150232, 150233		JC
D	09.15.17	ADD PN 825500		BFQ
E	10.09.17	ADD 815897	E17072	NK
F	04.12.18	REMOVED 825501		DLR
G	11.06.18	ADD FUSES TO BOM	18041	BFQ
H	10MAY19	ADDED ITEMS 25-29; ADDED ITEM 24 BALLOON; REFORMATTED PARTS LIST, FAMILY TABLE, & REV BLOCK	ECN 326	ALM
J	10.17.19	ITEM 5 WAS 115828	ECR657	PK
K	05.26.21	CHANGE QTY OF ITEM 6	21-1594	JJB



29	150238	—	—	WIRE DIAGRAM,XFORMER,SIMPLICITY
28	122708	1	EA	CBL ASSY, XFORMER CTRL, SIMPLI
27	117108	1	EA	CBL ASSY,V6-SSR-CTL,HOP
26	122703	1	EA	CONTACTOR, 480V, 20A, 240VAC COIL
25	821247	1	EA	RELAY,DPDT,24VDC
24	804536	3	EA	FUSE,20A,LP-CC,1.5X.4IN
23	804534	1	EA	FUSE,30A,LP-CC,1.5X.4IN
22	815897	1	EA	SSR,DUAL,480V40A
21	103663	1	EA	TERM BLK,#6,GRD,RAIL MTG
20	821782	4	EA	SCR,SHC,M6-1,X10,ZP
19	825500	1	EA	HARNESS,DUAL SSR,4 FT
18	150187	1	EA	XFORMER,6KW,400/480,AUTO
17	680159	2	EA	SCR,PPH,M4x8,W/IN T WSHR
16	150185	1	EA	MOUNT,ANGLE,XFMR
15	111677	1	EA	TERM,BD MNT,.25 TAB X 8
14	102446	2	EA	SCR,SHC,M4-0.70X10,ZP
13	107391	2	EA	NUT,M4-0.7,W/L'WSHR
12	048F104	.625	FT	RAIL,TERM MOUNT,H32
11	150186	1	EA	COVER,FUSE ACCESS
10	078A164	11	EA	SCR,HWH,10-24X1/2,TYPE F
9	107390	6	EA	NUT,M6-1.0,W/L'WSHR
8	105199	1	EA	CONN,CBL,3/4 STR
7	107208	1	EA	SCR,PH PNHD,M5X0.8X8,ZN
6	105562	2	EA	LUG,GRND,14 AWG-2/0 STR
5	113952	1	EA	GROMMET,RBR,1"ID
4	115823	1	EA	SW,3 POLE,63A,DISC
3	048I126	4	EA	FUSE HOLD .40X1.5 DISC.
2	SEE TABLE	1	EA	TRANSFORMER LID
1	SEE TABLE	1	EA	TRANSFORMER CASE
ITEM	PART NUMBER	QTY	U/M	DESCRIPTION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS
ARE IN MILLIMETERS (INCHES)
TOLERANCES ARE:
(MM)DECIMALS (IN)DECIMALS ANGLES
X .0,5 .XX .010 .5
.X .0,25 .XXX .005

USED ON
NEXT ASSY.
PARENT
DO NOT SCALE DRAWING

FOR MACHINING STANDARDS
AND SYMBOLS, SEE
ITW/DYNATEC SPEC. A05800

APPROVALS
DRAWN DLR
CHECKED
COMPUTER DESCRIPTION(24 CHARACTERS)

DATE
04.12.18

HENDERSONVILLE, TN

TRANSFORMER GRP

480/400V

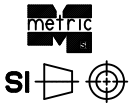
SIZE DWG. NO.
D 150183

REV GROUP
K

SCALE 1:3

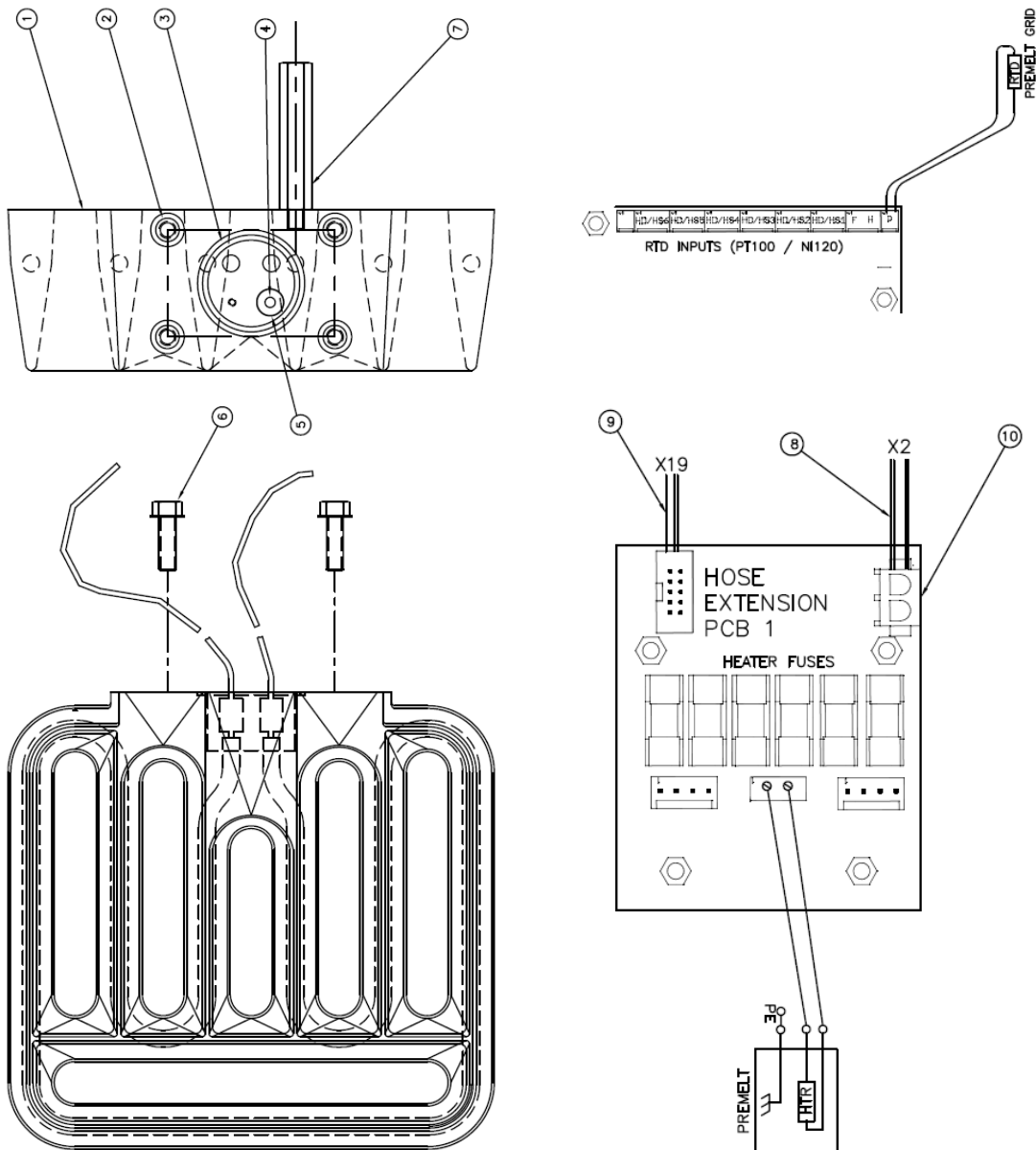
CAD DRAWING

SHEET 1 OF 1



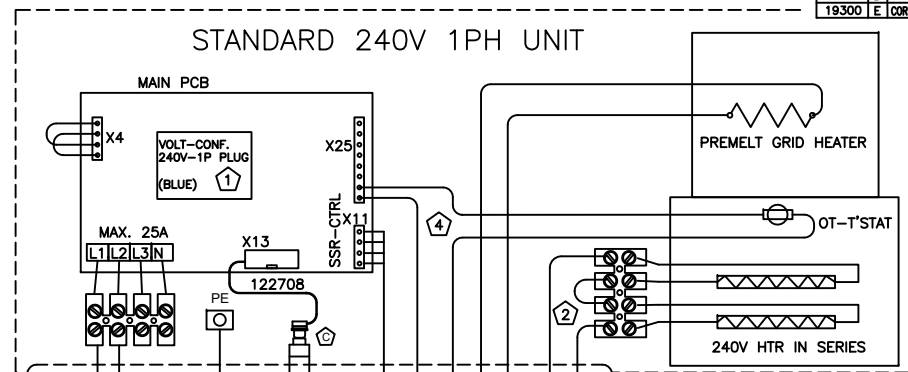
4.2 Grid Group, Simplicity DCL PN 150240 & NOR PN 150241

Item No.	Part Number	Description	Quantity
1	104802	Grid	1
2	N00181	O-ring 014	4
3	N00192	O-ring 032	1
4	106174	Sensor adaptor	1
5	150217	Sensor RTD – included in PN 150240 (DCL)	1
	150218	Sensor RTD – included in PN 150241 (NOR)	1
6	108297	Screw M8x20mm	4
7	107525	Support, lower grid	1
8	150124	Cable asy, V6-LC CTRL-AUX	1
9	150123	Cable asy, V6-LC PWR-AUX	1
10	150149	PCB asy, Aux Power	1

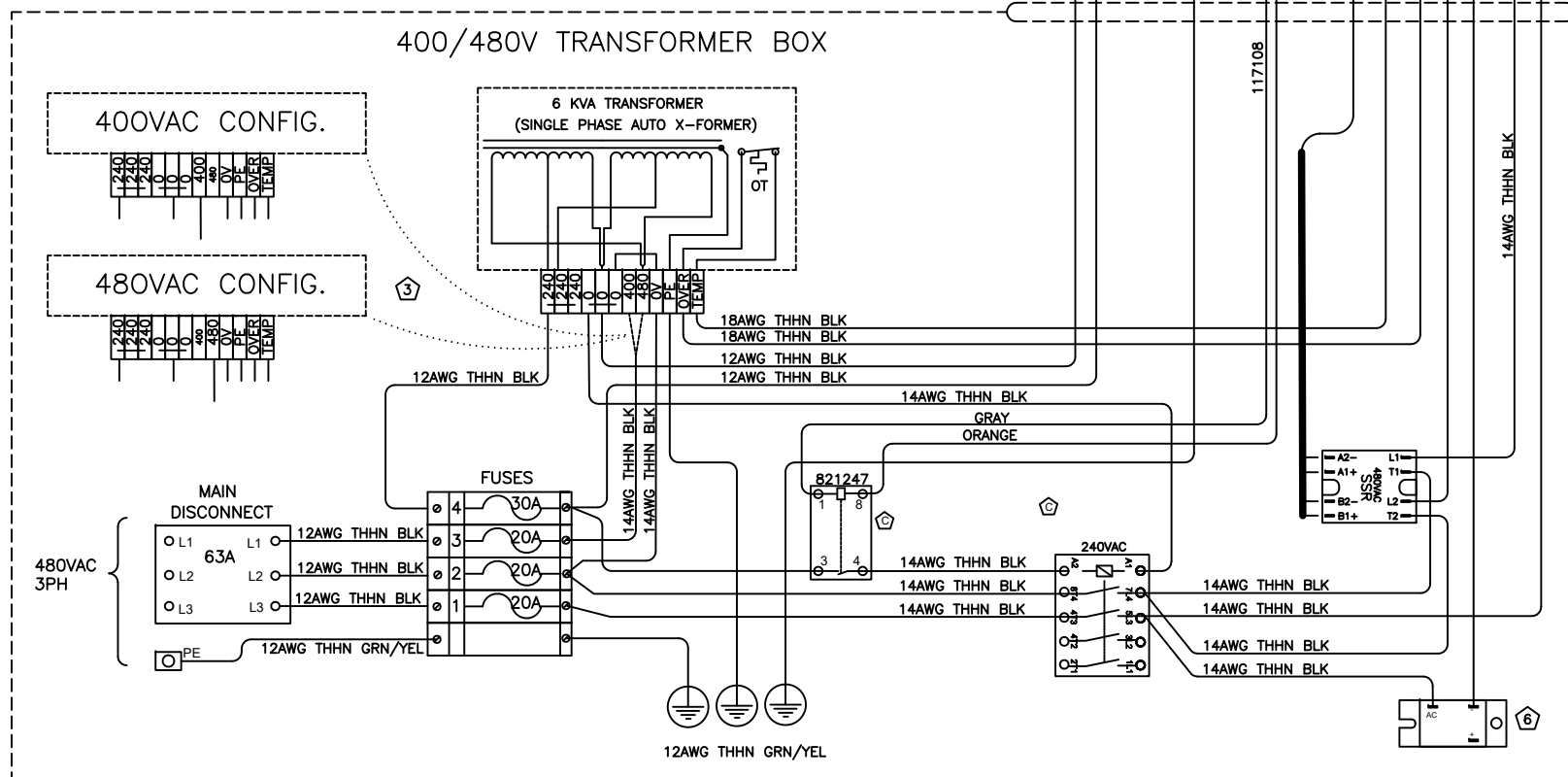


4.3 Schematics, Transformer Assy, 400/480 V, Simplicity, PN 150238J

STANDARD 240V 1PH UNIT



400/480V TRANSFORMER BOX



- 1 MAKE SURE THAT THE ASU IS CONFIGURED FOR 240V SINGLE PHASE (BLUE PLUG)
- 2 HOPPER HEATER WIRES NEED TO BE REWIRED IN SERIES
- 3 SELECT 400V OR 480V BY CHANGING THE TRANSFORMER TAP (SEE DIAGRAM LEFT SIDE)
- 4 WIRE TRANSFORMER'S THERMOSTAT IN SERIES WITH HOPPER'S THERMOSTAT
- 5 RED AND BLACK WIRES FROM 117108 ARE NOT USED
- 6 DIODE WIRING FOR PREMELT GRID OPTION ONLY

		REFERENCE PARTS LIST		U/M 1/1	
DRAWING NO. 150238 QUANTITY 1 MATERIAL 304 SS FINISH 304 SS WEIGHT 0.25		FOR MACHINING STANDARDS STOKES & CO. FIN/UNFINED SPEC. A0800			
APPROVED DATE		APPROVAL DATE		WIRING DIAGRAM, XFMR ASSY, SIMPLICITY	
USED ON PART NAME		COMPUTER DESCRIPTIONS (CHANGING) WIRE DIAG, SIMPLICITY		150238 1-1 CAD JAWAYS FIRST OK	
DO NOT SCALE DRAWING		WIRE DIAG, SIMPLICITY		150238 1-1 CAD JAWAYS FIRST OK	

Manual Revisions

Revision	Page/Chapter	Description
Rev.10.18	Ch.4	Update Schematics, Transformer Assy, 400/480 V, Simplicity, PN 150238C
Rev.12.18	Ch.4	Update Schematics, Transformer Assy, 400/480 V, Simplicity, PN 150238D
Rev.3.19	Ch.4	Update Schematics, Transformer Assy, 400/480 V, Simplicity, PN 150238E
Rev.1.20	Ch.4	Update Transformer group 480/400V, PN 150183J
Rev.6.21	Ch.4	Update Transformer group 480/400V, PN 150183K and schematics 150238F.
Rev.4.24	P.1	Manual language added.
Rev.11.25	Ch.4.3	Schematics 150238I updated.
Rev.1.26	Ch.4.3	Schematics 150238J updated.

ITW Dynatec Service Parts and Technical Service:

AMERICAS	EUROPE, MIDDLE EAST & AFRICA	ASIA PACIFIC
ITW Dynatec 31 Volunteer Drive Hendersonville, TN 37075 USA Tel. +1.615.824.3634 info@itwdynatec.com service@itwdynatec.com	ITW Dynatec Industriestrasse 28 40822 Mettmann Germany Tel. +49.2104.915.0 info@itwdynatec.de service@itwdynatec.de	ITW Dynatec No. 2, Anzhi Street SIP, Suzhou, 215122 China Tel. +86.512.6289.0620 info@itwdynatec.cn service@itwdynatec.cn ITW Dynatec Tsukimura Building 5th Floor 26-11, Nishikamata 7-chome Ota-ku, Tokyo 144-0051, Japan Tel. +81.3.5703.5501 info@itwdynatec.co.jp service@itwdynatec.co.jp