



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.

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Chapter 1

Declaration of Incorporation

EC declaration of conformity

according to the EU Machinery Directive 2006/42/EC, Annex II 1. A

Manufacturer

ITW Dynatec
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Person established in the Community authorised to compile the technical file

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Description and identification of the interchangeable equipment

Product / Article	Ultra applicator series
Type	Ultra
Project number	PRJ-2016-05-14-0001
Function	Applying adhesive to the substrate / elastic strand

It is expressly declared that the interchangeable equipment fulfils all relevant provisions of the following EU Directives.

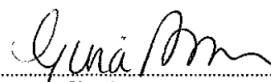
2006/42/EC	(Machinery Directive) Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast) (1)
2014/35/EU	Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits

Reference to the harmonised standards used, as referred to in Article 7 (2)

EN 60204-1:2006-06	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
EN 349:1993 + A1	Safety of machinery - Minimum gaps to avoid crushing of parts of the human body
EN ISO 13850:2008	Safety of machinery - Emergency stop - Principles for design (ISO 13850:2006)
EN ISO 12100:2010-11	Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)

Hendersonville, 22.07.2016

Place, Date

 July 22, 2016
Signature
Gina Powers
General manager

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Chapter 2

Safety Instructions

2.1 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 machine 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.

2.2 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!
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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. Do not use adhesive that is dirty or that may be chemically contaminated. Doing so can cause system clogging and pump damage.
4. 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.
5. Do not operate the hopper or other system components without adhesive for more than 15 minutes if the temperature is 150 degrees C (300 degrees F) or more. To do so will cause charring of the residual adhesive.
6. 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.
7. Never attempt to lift or move the unit when there is molten adhesive in the system.
8. In case of an emergency or exceptional incident, press the emergency stop button in order to stop the unit quickly.
9. Use the unit only as it is intended to.
10. Never let the unit run unattended.
11. Operate the unit only in a faultless and fully functional condition. Check and make sure that all safety devices work in proper form!



Smoking, fire and open flames prohibited! Fire danger!

Make absolutely sure that there is no smoking and no fire being lit in the work area!

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 Use of PUR (Polyurethane) Adhesives

1. 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.
2. Consult with your adhesive manufacturer for specifics about required ventilation.



CAUTION

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 ITW 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 timetable.

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.
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 input power at the source 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 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 3

Description and Technical Specs

3.1 Applicable Safety Regulations

3.1.1 Intended Use

The UltraLink Applicator Platform (Ultra applicator) may be used only to apply suitable materials, e.g. adhesives. 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.

3.1.2 Unintended Use, Examples

The Ultra applicator 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 Ultra applicator may not be used to process the following materials:

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

3.1.3 Residual Risks

In the design of the Ultra applicator, 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 Applicator 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.

3.1.4 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.

3.1.5 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.

3.1.6 Start-up operation

We recommend asking for an ITW Dynatec-service technician for the start-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.

3.2 Description of UltraLink Applicator Platform

3.2.1 Description

ITW Dynatec's UltraLink Applicator Platform (Ultra applicator) is a modular hot melt applicator, designed for precise adhesive deposition at highest line speeds. The same UltraLink applicator can be used for all required application patterns like slot, spray and strand coating with appropriate nozzles. It is available with multi-module configuration for flexible application width setup. The Ultra-module, as a key component, has a universal design that allows using the same module for all required application patterns and nozzles. The stackable Ultra applicators are modular and may be combined to produce segmented applicators. Design is all metric.

The nozzles compatible with UltraLink applicator are:

- Ultra SCS strand coating system, Ultra Stitch (with air support) & Ultra Touch (without air support)
- Ultra HS Elite high-speed spray nozzle
- Ultra HS UFD high-speed nozzle (Omega & Random pattern)
- Ultra HSI high-speed intermittent spray nozzle
- Ultra Slot nozzle

The Ultra applicators are air-operated, single or multi-module hot melt adhesive applicator assemblies with integrated basket filters which prevent particulate matter from obstructing flow through the heads.

The Ultra applicator is heated by replaceable cartridge heating elements, which are controlled by an integrated sensor and electronic control.

Each Ultra applicator model can be configured for ITW Dynatec's DynaControl (DCL), MTX-PT100 or NOR-Ni120 controls.

Eight standard Ultra applicator models supporting up to 12 modules (12-ports), are available, ranging in width from 50mm to 300mm.

Each Ultra applicator features one or more modules mounted to a single service block. Each module is opened and closed by an air operated solenoid valve. Optionally all modules can be controlled with one solenoid valve using one-solenoid-manifold. See Chapter 3.2/ One-Solenoid-Manifold Description and Installation and Chapter 8.20 for drawings.

The heated adhesive supply hose will be connected at the rear or alternatively at the right or left side of the applicator. Adhesive flows from the hose into the service block, through the filter and then to the module. Air pressure (solenoid valve) opens the module (adhesive valve), allowing adhesive to flow through the module's nozzle.

The adhesive pressure in the system is influenced by the following parameters:

- Temperature and viscosity of the adhesive
- Size and speed of the Adhesive Application Unit's (ASU's) pump
- Cross-section and length of the adhesive hoses
- Pressure relief valve should always be adjusted above operating pressure.
- Nozzle type and orifice size.

The adhesive pressure can manually be relieved by using the pressure purge valve mounted at the side of the Applicator.

Optionally wings can be mounted. See Chapter 3.2/ Wing Kit, Description and Installation and Chapter 8.13 for drawings.

3.2.2 Stackable applicator segments

The segments of the Ultra applicator can be stacked together with zero gap as needed and thus, they can be extended to one applicator for all nozzles; only the configuration of the slot nozzle is limited to max. 500mm width. Each segment would still need an own adhesive supply hoses. See point “8.17 Joining Kit for Ultra stacked Applicator” for the appropriate kit.



3.2.3 Nozzles compatible with Ultra applicator

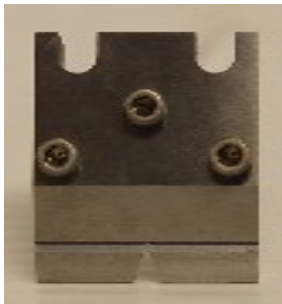
1. Ultra SCS (Strand Coating System).

The Ultra SCS nozzles feature accurate and high efficiency adhesive coating on elastic strands and enable to apply less glue, providing best creep performance, improved contraction forces and softness.

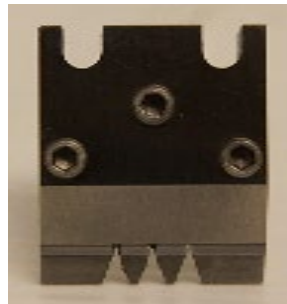
Two different technologies are available to meet multiple application requirements:

ULTRA-Stitch is air supported.

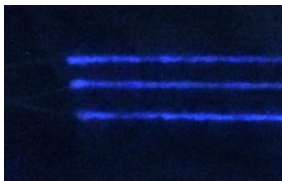
ULTRA-Touch is for applications when process air needs to be avoided.



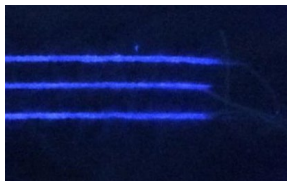
SCS 1 strand



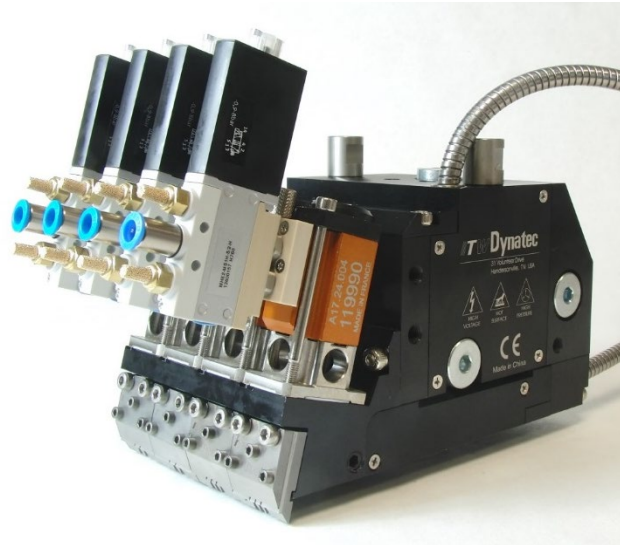
SCS 3 strands



Pattern Start



Pattern Stop



Ultra Applicator with 4 SCS nozzles

Technical Specifications for Ultra SCS:

Strands per nozzle	up to 8 for 25 mm nozzles. Other options available.
Nozzle orifice sizes	0.012 to 0.040 in (0.31 to 1 mm)
Typical adhesive flow	15 to 100 mg/lm/s
Min. Off cycle time	3ms
Min. On cycle time	3ms
Adhesive viscosity range	up to 20,000 mPas (cps)
Operating air pressure range Ultra stitch nozzle	0.3 - 1.7 bar (5-25 psi)*

*Depending on adhesive type and application parameter.

See also point "Advices for Best Creep Values and Performance with a SCS-Nozzle" in chapter "5.2 Start-up operation".

2. Ultra HS Elite high-speed spray nozzle

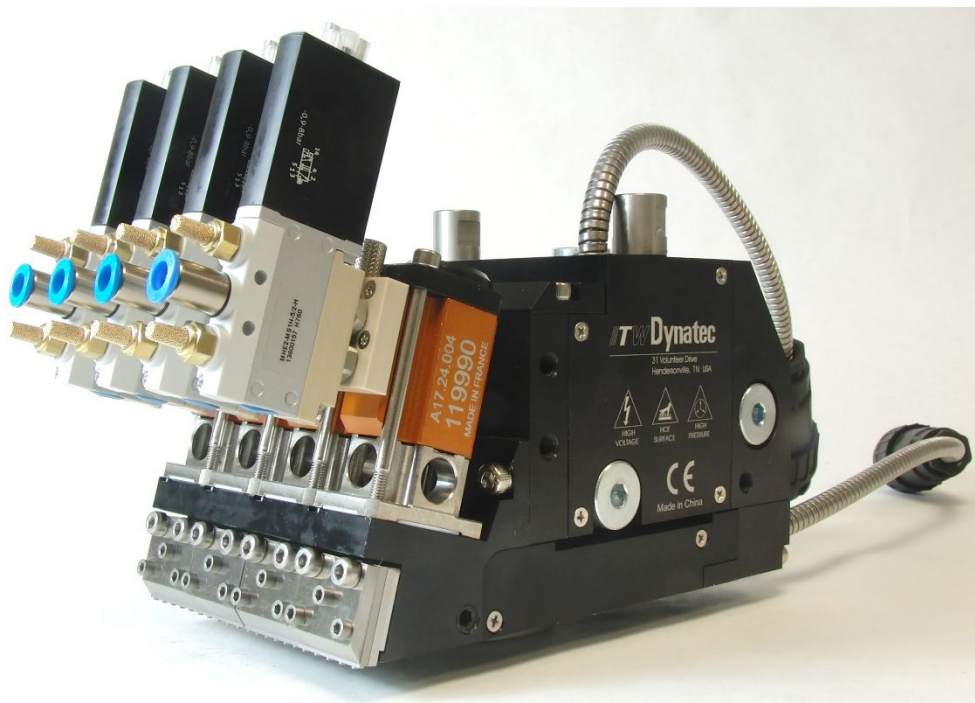
The Ultra HS Elite nozzle offers an improved sprayability of higher viscosity adhesives, less plugging and excellent pattern consistency. With orifices increased in size up to 50% and fewer, thicker plates, flow paths are significantly improved for more even adhesive distribution across the nozzle.



Ultra HS Elite nozzle



Spray Pattern



Ultra Applicator with 4 HS Elite nozzles

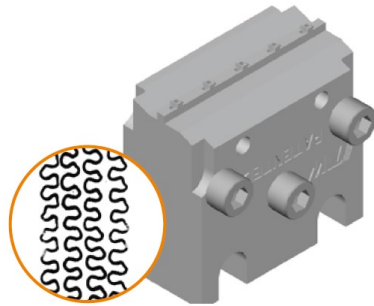
Technical Specifications for Ultra HS Elite:

Active Fluid Streams	1 to 7
Fluid Orifice Size	0.012 to 0.024 in (0.31 to 0.61 mm)
Center-to-Center Spacing	3mm, 4mm, 4.2mm, 5mm and others
Adhesive Viscosity Range	up to 6.000 mPas (cps)
Operating Air Pressure	0.15 to 1.4 bar (2 to 20 psi)*
Recommended distance to substrate	10 - 25 mm
Side edge definition	Within 1 mm
Adhesive Application Width per Nozzle	3 - 25 mm
Typical Adhesive Flow	0.5 - 20 g/min per orifice
Production speed capability	up to 700 m/min

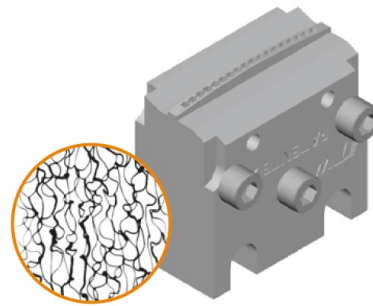
*Depending on adhesive type and application parameter.

3. Ultra HS UFD nozzle (Omega & Random pattern)

Two different high-speed UFD nozzles (Omega and Random) are available to fiberize the adhesive streams and to maintain or improve bond strength. The nozzles feature vast range of coat-weight capabilities and the patterns are not line-speed limited.



Ultra HS UFD Omega nozzle & Spray Pattern



Ultra HS UFD Random nozzle & Spray Pattern

Technical Specifications for Ultra HS UFD:

	Ultra HS UFD Omega	Ultra HS UFD Random
Adhesive Application Width per Nozzle	3 - 25 mm	10 – 30 mm
Recommended distance to substrate	10 - 25 mm	15 – 35 mm
Fluid Orifice Size	0.012 to 0.024 in (0.31 to 0.61 mm)	0.012 to 0.024 in (0.31 to 0.61 mm)
Typical Adhesive Flow	0.5 - 20 g/min per orifice	0.1 - 40 g/min per orifice
Adhesive Viscosity Range	1,000 – 6,000 mPas (cps)	1,000 – 6,000 mPas (cps)
Operating Air Pressure	0.15 to 1.4 bar (2 to 20 psi)*	0.7 to 2.4 bar (10 to 35 psi)*

*Depending on adhesive type and application parameter.

4. Ultra HSI high-speed intermittent spray nozzle

The Ultra HSI nozzle perfectly fits for high-speed intermittent spray applications and provides precise start/stop and side edge definition.

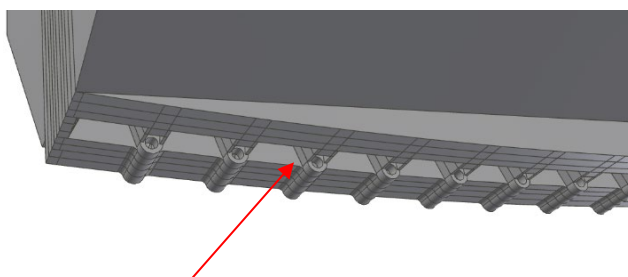
Typically, the HSI nozzle is used for e. g. “positioning glue” and “waistband” applications. Its barrier orifice design features an air knife function for more precise cut-off performance. Requiring a reduced amount of adhesive per product, due to the Ultra™ HSI nozzle’s ability to run shorter intermittent patterns, results in greater line efficiency and improved end product quality.



Ultras HSI nozzle



Spray Pattern



Barrier orifice design with air knife function for perfect cut-off performance.

Technical Specifications for Ultra HS Elite:

Adhesive Viscosity Range	up to 6.000 mPas (cps)
Air pressure range	1 - 3 bar*
Recommended distance to substrate	5 - 7 mm
Side edge definition	Within 1 mm
Start and Stop area Within	3 to 6 mm**
Coating Width per Nozzle	10 -25 mm
Nozzle Orifice Size	0.010" (0.25 mm)

*Depending on adhesive type and application parameter.

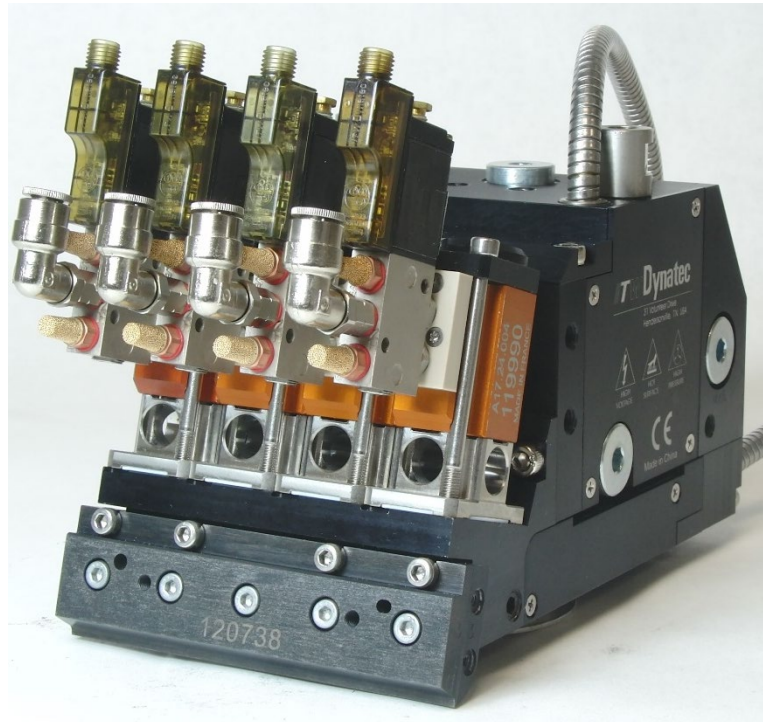
**Depending on line speed and application parameter.

5. Ultra Slot nozzle

The Ultra Slot nozzle is the ideal solution for high-speed intermittent slot applications or applications requiring both continuous & intermittent adhesive patterns, capable of running at higher line speeds up to 700m/min. The slot nozzle features precise adhesive cut-off at highest line speed with optimal cross-web accuracy of $\pm 10\%$.



Ultra Slot Nozzle with Pattern Shim (sample)



Ultra Applicator with a slot nozzle

Technical Specifications for Ultra Slot nozzle:

Minimum off cycle time	3 ms
Minimum on cycle time	3 ms
Coat weight minimum	5 gsm
Cross-web distribution	+/- 10%
Coating Width Range	25 - 300 mm
Adhesive viscosity range	up to 20,000 mPas (cps)

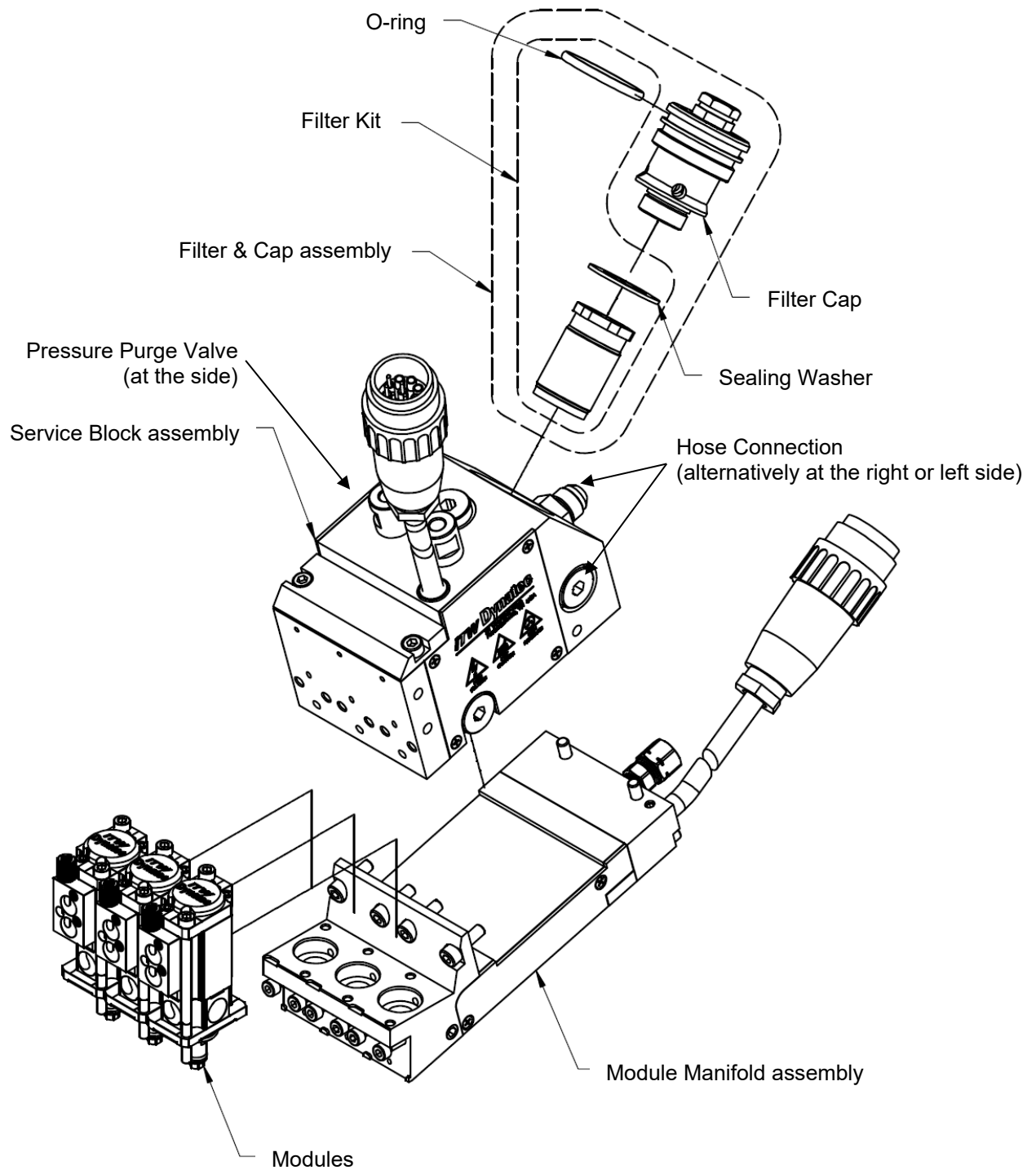


Illustration: Typical parts of ULTRA Applicator

3.2.4 Technical Data

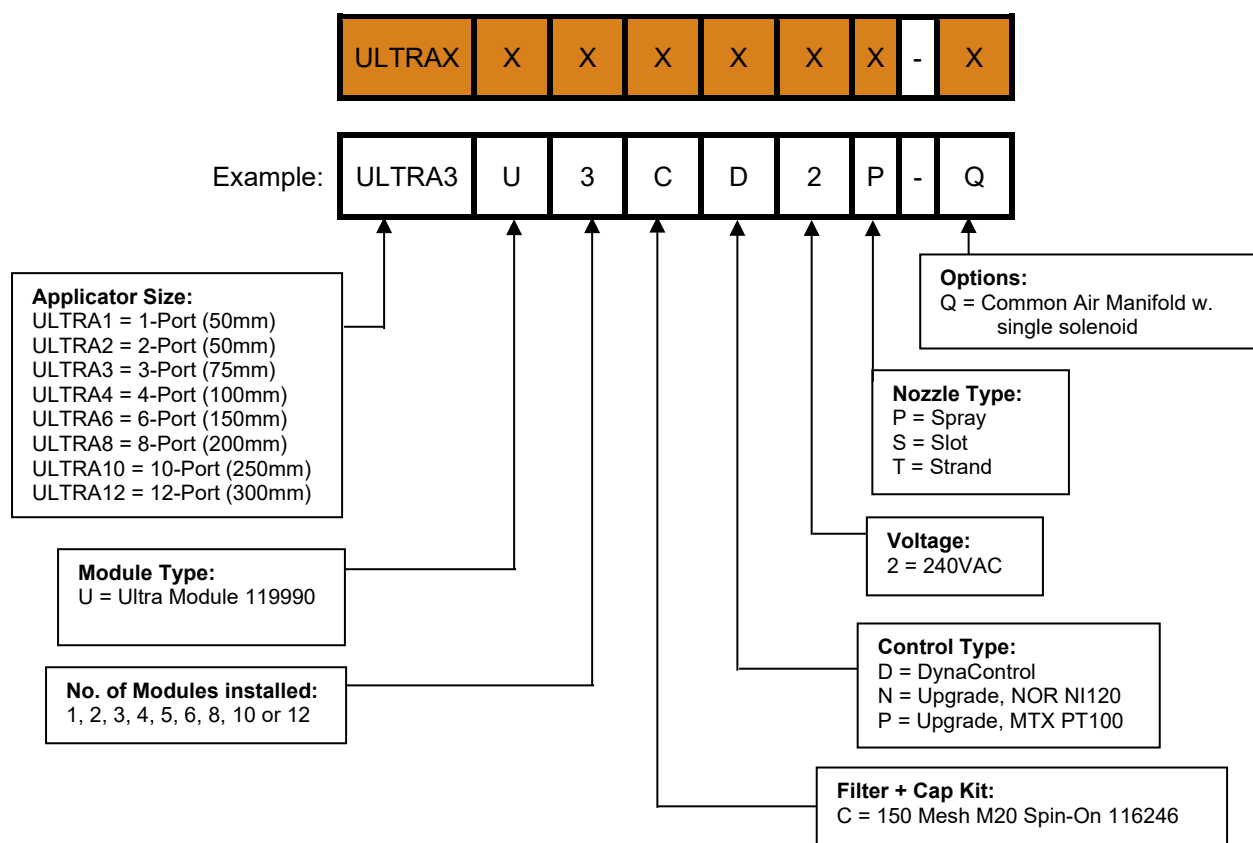
System	1-port	2-port	3-port	4-port	6-port	8-port	10-port	12-port
Number of Modules	1	2	3	4	6	8	10	12
Mounting interface	2 x M8-1.25 *	2 x M8-1.25 *	2 x M8-1.25 *	2 x M8-1.25 * #	4 x M8-1.25 *	4 x M8-1.25 *	4 x M8-1.25 *	4 x M8-1.25 *
Height	With HS Elite, HSI, HS UFD nozzles: 140 mm (5.51 in) With SCS nozzles: 146 mm (5.75 in) With slot nozzles: 149 mm (5.87 in)							
Depth	235 mm (9.25 in)							
Width **	50 mm (1.97 in)	50 mm (1.97 in)	75 mm (2.95 in)	100 mm (3.94 in)	150 mm (5.91 in)	200 mm (7.87 in)	250 mm (9.84 in)	300 mm (11.81 in)
Wattage manifold	450 W	450 W	625 W	800 W	1200 W	1600 W	2000 W	2400 W
Wattage service block	200 W	200 W	400 W	400 W	800 W	800 W	1200 W	1200 W
Weight	2.1 kg	2.2 kg	3.2 kg	4.2 kg	6.1 kg	8.4 kg	9.8 kg	11.2 kg
Supply voltage setup	200 - 240 V, 1 Phase, 50 - 60 Hz							
Operating temperature range	25° to 200°C (77° to 392°F)							
Warm-Up time	15 minutes for cold start, or 5 minutes for module change							
Pneumatic pressure range to solenoid	4.5 – 6 bar (65 - 88 psi)							
Adhesive pressure maximum	68 bar (1000 psi)							
Noise emission	70 dB(A)							
Storage/ shipping temperature	-40° to 70°C (-40° to 158°F)							
Ambient service temperature	-7° to 50°C (20° to 122°F)							

*tapped holes

** The width with Ultra slot nozzle is 10mm wider (5mm per side) than the applicator width.

The 4-port has two mounting options: 2xM8 on the top surface and 4xM8 on the rear surface.

3.2.5 Model Designation Guide



Module Manifold & Service Block Assemblies (refer to Ch.8 for sub-assemblies):

Assembly	ULTRA1	ULTRA2	ULTRA3	ULTRA4	ULTRA6	ULTRA8	ULTRA10	ULTRA12
Module Manifold:	122796	122595	122587	121668	122802	121161	121162	121163
Service Block:	122592	122592	122584	123003	122799	121164	121165	121166

Cable asy for Module Manifold:

Control Version	ULTRA1	ULTRA2	ULTRA3	ULTRA4	ULTRA6	ULTRA8	ULTRA10	ULTRA12
D	103467	103467	103467	103467	112134	112134	112134	112134
N	104528	104528	104528	104528	804719	804719	804719	804719
P	110145	110145	110145	110145	110145	110145	110145	110145

Cable asy for Service Block:

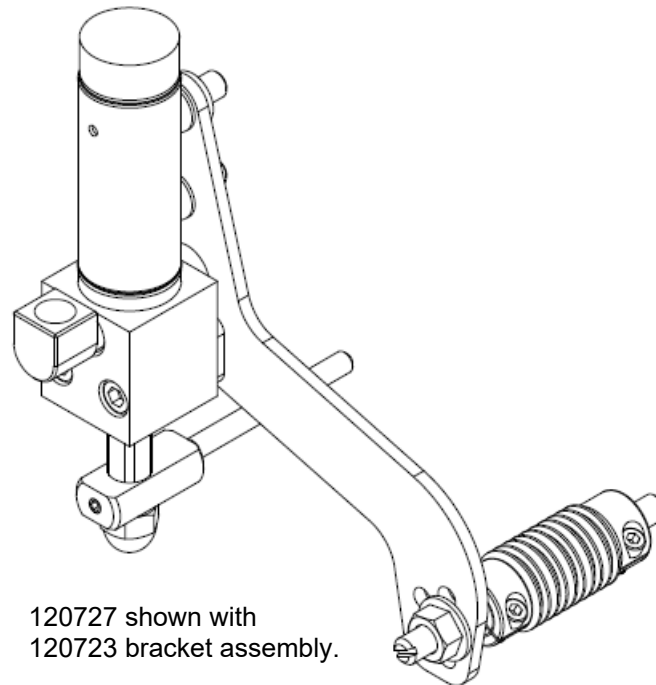
Control Version	ULTRA1	ULTRA2	ULTRA3	ULTRA4	ULTRA6	ULTRA8	ULTRA10	ULTRA12
D	112134	112134	112134	112134	112134	112134	112134	112134
N	804719	804719	804719	804719	804719	804719	804719	804719
P	110143	110143	110143	110143	110143	110143	110143	110143

Cable Options:

- PN 103467 Cable assembly, DCL-PT100, 10" (25 cm) long
- PN 112134 Cable assembly, DCL-PT100, 10" (25 cm) long
- PN 104528 Cable assembly, NOR-Ni120, 21" (53 cm) long
- PN 804719 Cable assembly, NOR-Ni120, 21" (53 cm) long
- PN 110143 Cable assembly, MTX-PT100, 21" (53 cm) long
- PN 110145 Cable assembly, MTX-PT100, 10" (25 cm) long

3.2.6 Roller Guide and Unload Cylinder (optional)

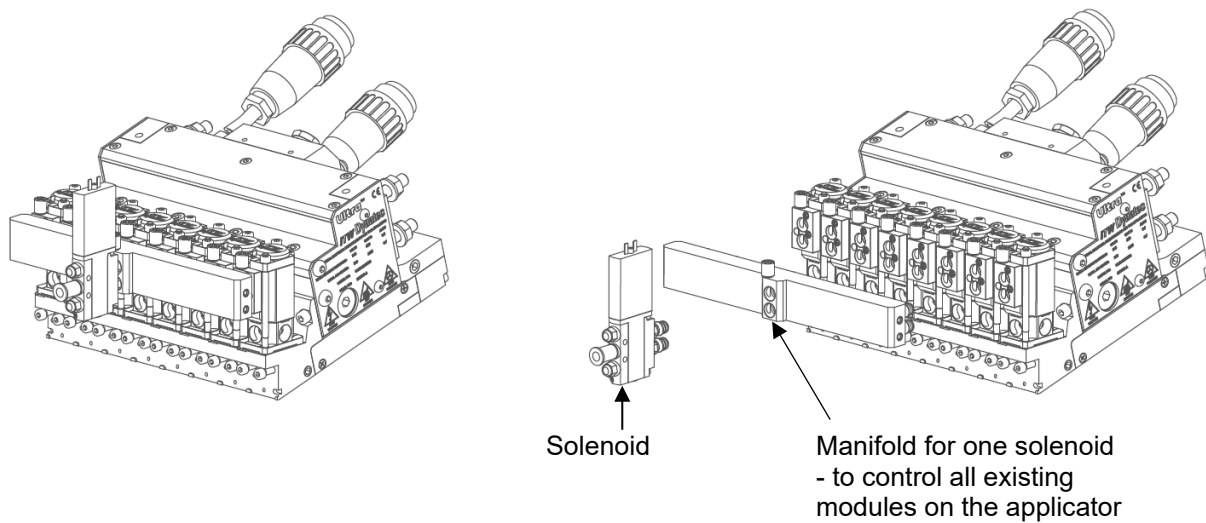
The optional roller guide and unload cylinder will ensure proper position and stabilization of the strands for optimal coating.



120727 shown with
120723 bracket assembly.

Roller Guide and Unload Cylinder (optional)

3.2.7 One-Solenoid-Manifold, Description and Installation



Description:

The optional one-solenoid-manifold allows all of the modules to be controlled with one solenoid valve. This reduces cost and installation complexity for the customer, for those applications that do not require high-speed operation with fully populated solenoid valves. These could be continuous, partially continuous, or slow speed intermittent applications.

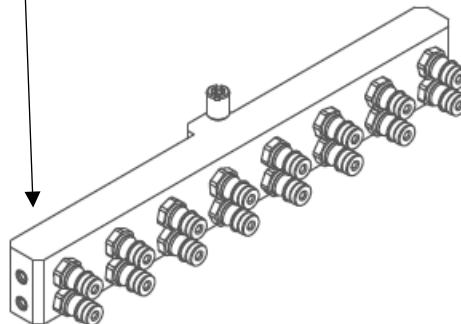
The manifold kits are available in three sizes:

6-Port: PN 123157

8-Port: PN 123158

10-Port: PN 123159

The manifold assembly includes the solenoid pin 113348 and is fully populated with module fittings.



M6 plugs (PN 123156) are available and used in locations where blank modules are required. These must be purchased separately as needed. Each PN 123156 includes two plugs. The existing module fittings and O-rings are removed and replaced by the plugs. The M6 plug includes an O-ring seal.

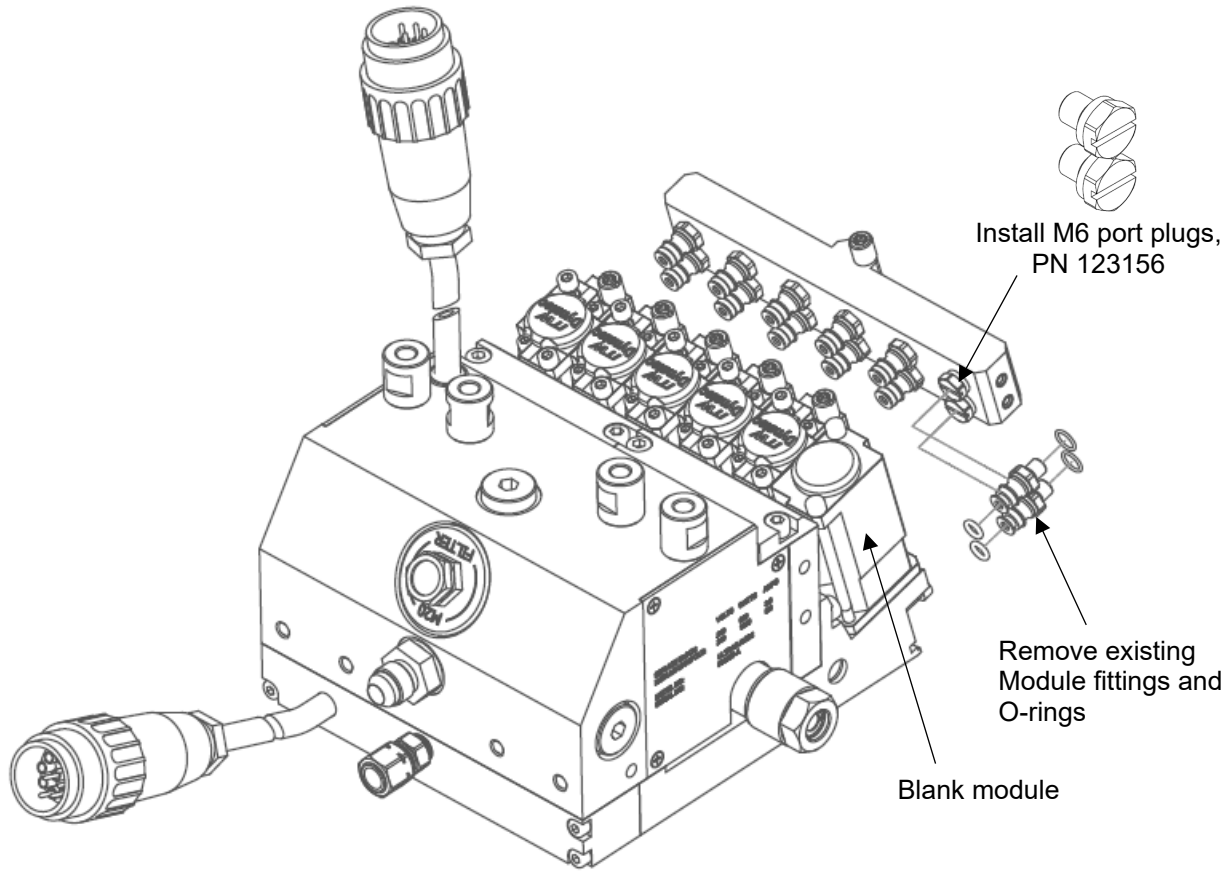


Illustration: Example plug installation in 6-port air-manifold

Installation:



CAUTION

- These manifolds can be installed also on existing applicators.
- This is the general installation process for an existing applicator that is in use.
- The one-solenoid-manifold can be installed on a cold or hot applicator.
- Heed all security advices given in chapters 6.1, 6.2 and 6.3.
- Refer to drawings under Ch.8.

1. Stop all motors.
2. Switch the unit voltage-free and pressureless.
3. Guard the unit against unauthorized restarting.
4. Relieve the adhesive pressure by following the instructions under Chapter 6.3 "Relieving Adhesive Pressure" and using the adhesive pressure purge valve.

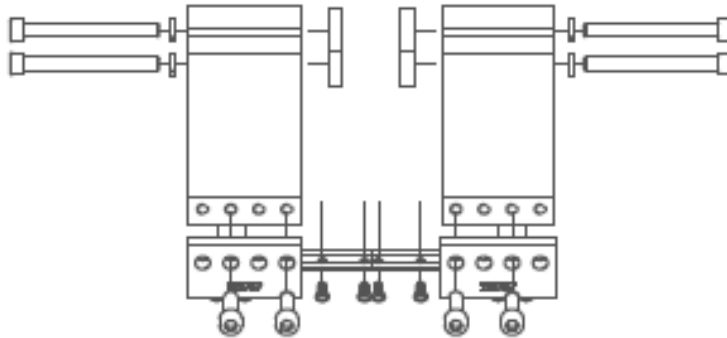
5. Remove air pressure tubing from the solenoids and remove the solenoids. Keep the solenoid retaining pins as they will be needed for the new manifold.
6. For each Ultra module, loosen (do not remove) the two M4 mounting screws 1/2 to 1 turn so that the module can be moved left-to-right slightly.
NOTE: Do not skip this step; O-ring damage may occur.
7. Lubricate the O-rings on the solenoid manifold with the appropriate grease (001U002 or equal) and install the manifold.
8. Install the solenoid retaining pins that were previously removed.
9. Tighten the Ultra module mounting screws, starting on the inside of the applicator and working outward.
10. Install the solenoid on the solenoid manifold.
11. Connect the air pressure tubing to the solenoid.
12. Close the adhesive pressure purge valve.
13. Apply air pressure to the solenoid.

3.2.8 Wing Kit, Description and Installation

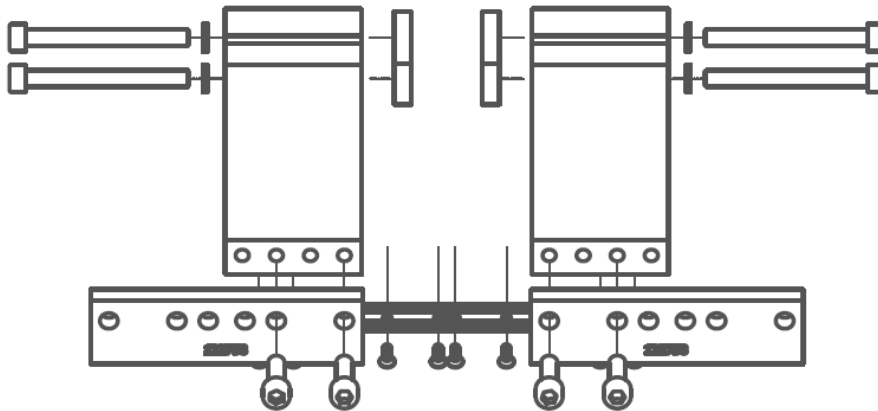
Optionally wings can be mounted on the left and right sides of the applicator to eliminate web-curl on larger substrates. The wings are available in 50, 100 and 150mm.

Required Parts:	Required Tools:
<p>1. <i>Wing Kits (you need 2 kits from each for both sides):</i></p> <ul style="list-style-type: none"> • Wing kit 50mm, single, PN 122962 • Wing kit 100mm, single, PN 122963 • Wing kit 150mm, single, PN 122964 <p>2. <i>Ultra Applicator: All Sizes Fit</i></p>	<p>1. Blue Thread Lock Fluid</p> <p>2. Metric #5 Hex Key</p> <p>3. Torx Drive T10</p>

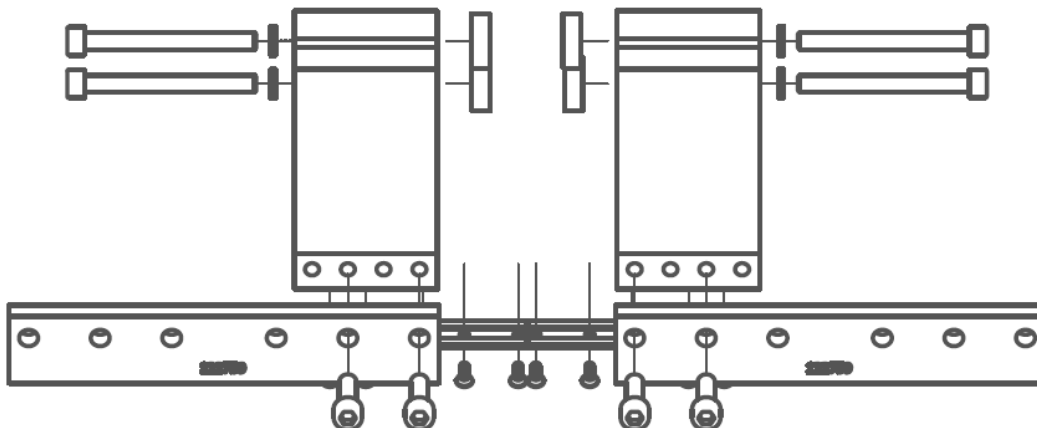
2 Wing kits 50mm left & right sides, PN 122962:



2 Wing kits 100mm left & right sides, PN 122963:



2 Wing kits 150mm left & right sides, PN 122964:



Installation:**CAUTION**

- These wing kits can be installed also on existing applicators.
- This is the general installation process for an existing applicator that is in use.
- The wings can be installed on a cold or hot applicator.
- Heed all security advices given in chapters 6.1, 6.2 and 6.3.
- Refer to drawings under Ch.8.

1. Stop all motors.
2. Switch the unit voltage-free and pressureless.
3. Guard the unit against unauthorized restarting.
4. Relieve the adhesive pressure by following the instructions under Chapter 6.3 "Relieving Adhesive Pressure".
5. Attach **both side brackets** loosely to the applicator on the left and right sides with insulators, lock washers and 2 long M6 screws. See Figure 1 and drawings under Ch.8.

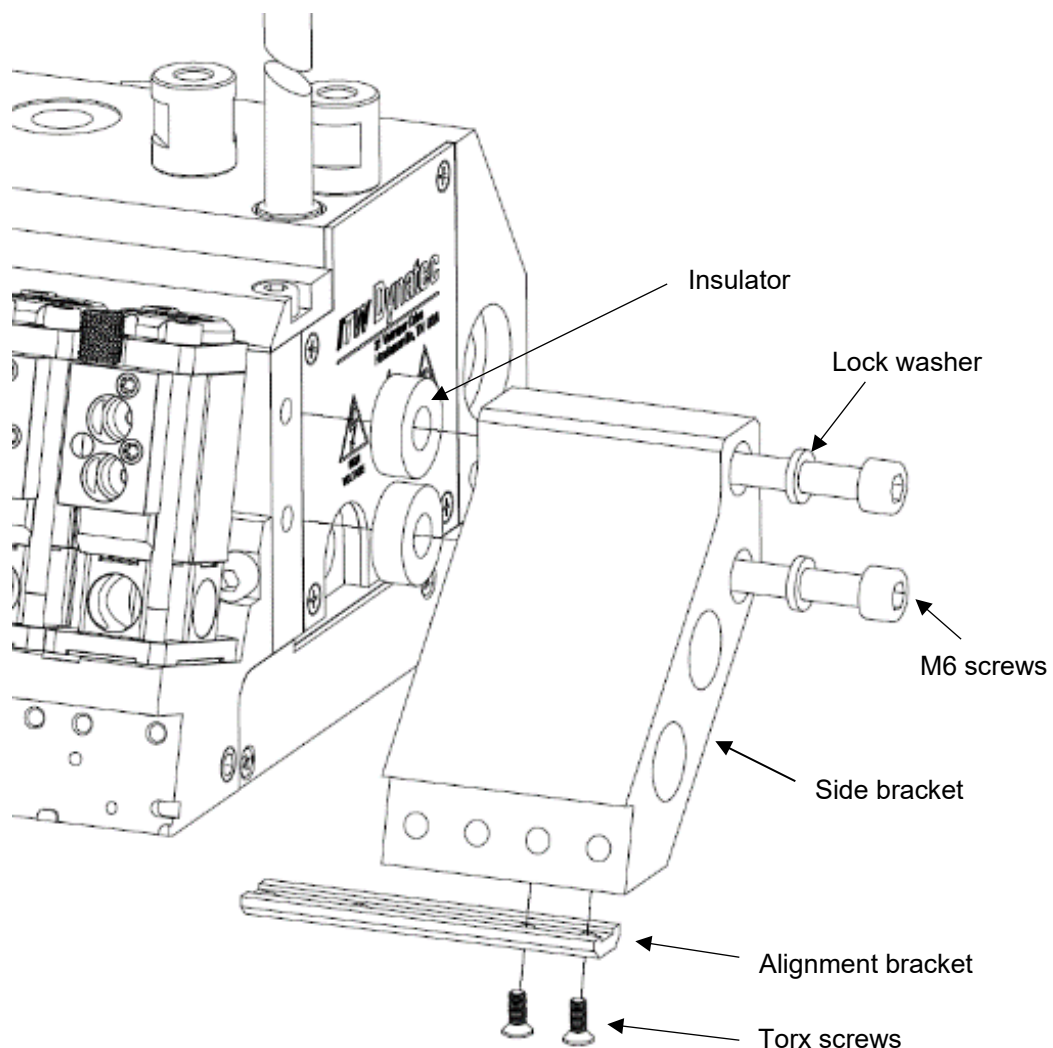
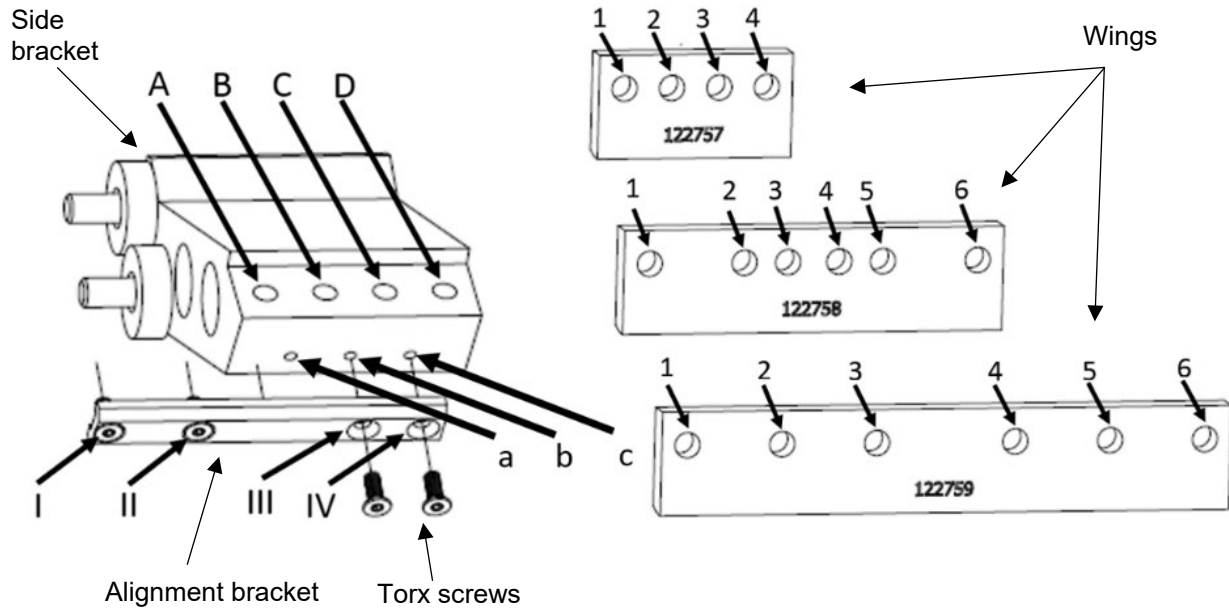


Figure 1 - a right side kit is shown

NOTE: The wing holes to be used vary depending on the wing size. Use the following installing illustration and chart under Figure 2 for the following steps.

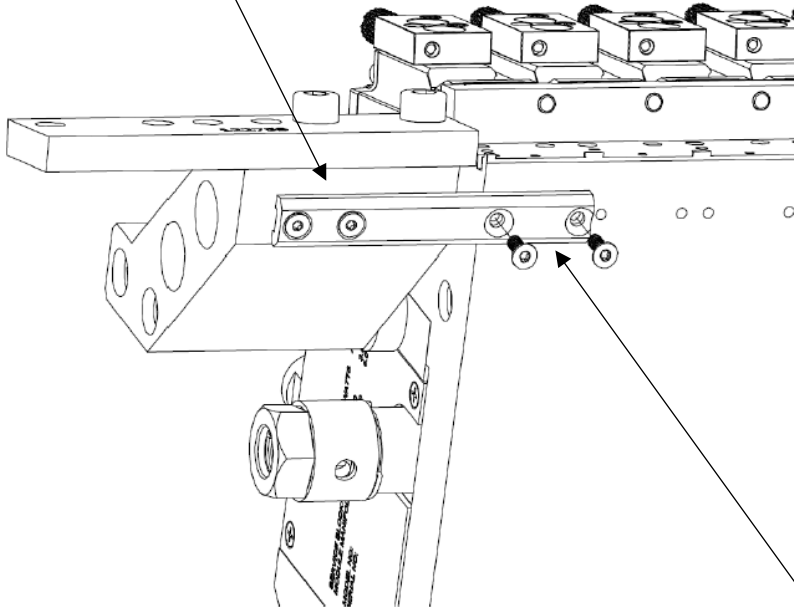


ULTRA				
Left			Right	
50 mm Wing	B	→ 2	A	→ 1
	D	→ 4	C	→ 3
	III	→ b	IV	→ a
	IV	→ c	III	→ b
100 mm Wing	B	→ 5	A	→ 1
	D	→ 6	C	→ 2
	III	→ b	IV	→ a
	IV	→ c	III	→ b
150 mm Wing	B	→ 5	A	→ 1
	D	→ 6	C	→ 2
	III	→ b	IV	→ a
	IV	→ c	III	→ b

Figure 2 - Installing illustration and chart

6. On the Applicator's right and left side:

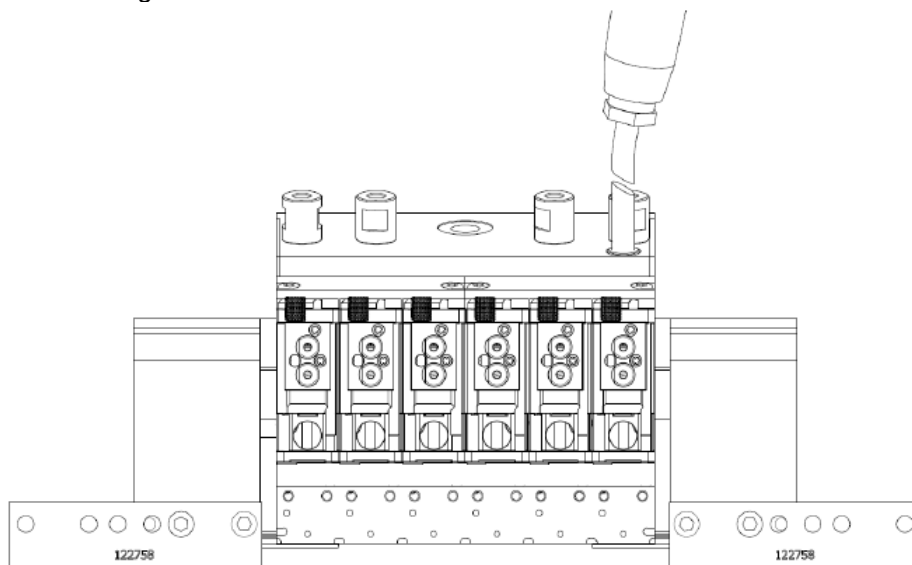
- Apply thread lock fluid on the M3x8mm Torx screws and attach **both alignment brackets to the side brackets** (using the appropriate holes shown in illustration and chart under Figure 2).

*Figure 3 - left side view*

- Apply thread lock fluid on the M3x8mm Torx screws and attach **both alignment brackets to the applicator**.

7. Finish tightening both long M6 screws. See Figure 1.**8. Attach the wing plates using M6 screws on the side brackets on the right and left sides (using the appropriate holes shown in illustration and chart under Figure 2).**

The wings are now installed.

*Figure 4 – Wings installed view*

Chapter 4

Installation



CAUTION

- Before installation, please read this documentation carefully.
- Pay attention to all the installation and connecting advices.
- Heed all safety instructions mentioned in chapter 2.

4.1 Conditions for installation and mounting

Place requirement

Install the ULTRA Applicator in the machine so that the operator is able to work on it from all sides, for e.g. for adjusting, preparing, maintaining, repairing, cleaning, etc. See drawing of the unit for dimensions.

Mounting and alignment

- The complete unit has to be set up on solid, stable and flat ground.
- The alignment in height of the complete system has to be considered.
- The alignment of the machine has to be considered.

Electrical connection

- Necessary electrical connection has to be provided. See electrical schematics.
- Never connect or disconnect plug-and-socket connections under load!

Pneumatic connection



- In any case the air has to be clean and dry! See advice in chapter 4.3 "Quality of compressed air".
- Please heed that units with high air demand may not be used at the same time with the same air supply.



Advices:

- Check all screw connections at the unit and retighten if necessary.
- Lay the cables and heated hoses so that no risk or least possible risk of stumbling occurs.

4.2 Installation



CAUTION

- All work on or with this unit is only permitted for skilled personnel!
- Pay attention to the electrical schematics!
- Clean and dry air and air pressure of 6 bar to the applicator solenoids is required.
- All heating elements have to be mounted and operated secured and according to the valid regulations.



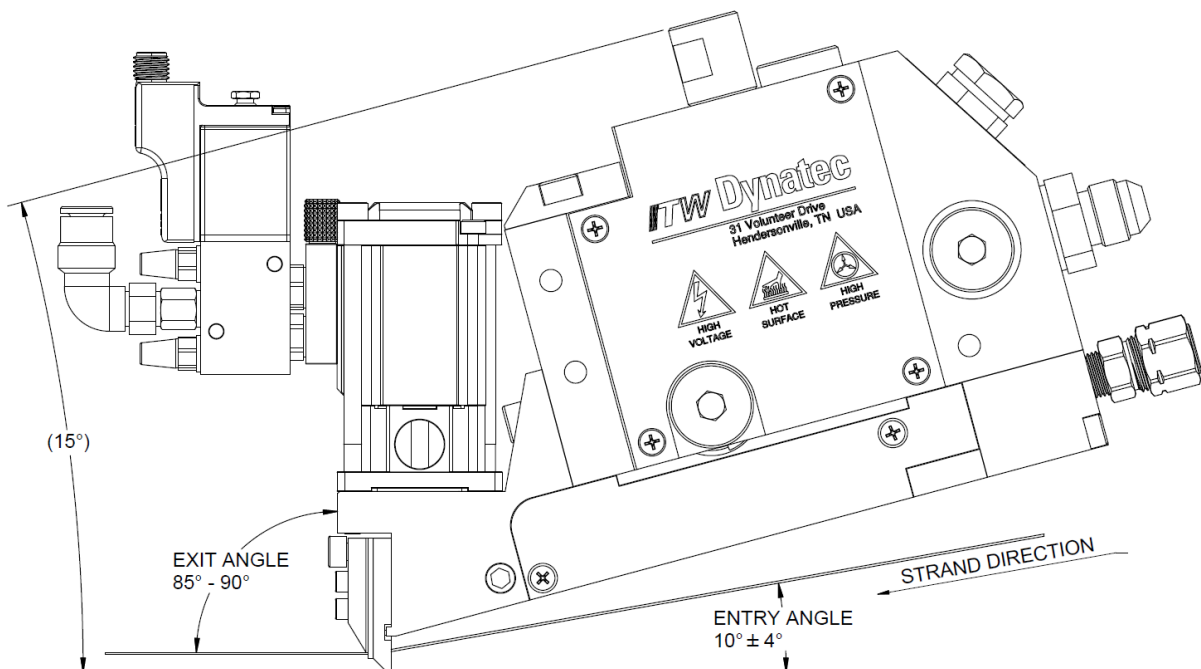
WARNING

- While installing the Applicator, use an appropriate protection device to avoid unintended contact with heated parts and with spilling out Hotmelt. The protection device has to prevent also the operator against not reaching into the adhesive application and against injuring.
- Risk of burns and risk of injury!

Typical installation for an ULTRA Applicator:

1. Install the Applicator on the machine at the foreseen place.

Respect the proper entry and exit angle for the Ultra applicator:



2. Connect main air supply to filter regulator then controlled filtered air to solenoids. Connect all solenoids with air hoses as required.



6 bar (88 psi) air pressure are required.

Reason:

- Lower air pressure causes uneven adhesive application.
- The modules do not switch or switch with delay, resp. open and close again, if the air supply is uneven.
- Only permanent pressure and sufficient volume flow leads to reproducible application accuracy regarding position and amount.

- Interconnect the Melter and the Applicator with the required heated hoses.



Heed the following for the installation of the heated hoses:

- Heated hoses may be damaged by overheating, if they are laid faulty.
- The heated hoses may not be stacked one on the other!
- The heated hoses may not be pressed together and / or bound.
- Put the hoses separated next to each other!
- The connections for supply resp. return hoses may not be mixed up.
- It is essential that the hoses will be laid without twisting!
- Heated hoses may not be fastened with binders or similar.
- Heated hoses may not be laid on a sharp edge.
- When using a balancer, a hose support with a radius of 400mm has to be mounted.
- **Reason:** The sensor cables and heating cables within the hoses can be damaged. As they cannot be repaired the hose would have to be changed completely.
- Refer to the hose manual.

- Connect all cables of the equipment components according to the electrical schematics (e.g. Melter, Control Cabinet, Controller, Applicator, etc.).

The Applicator's incoming electrical power and temperature control is supplied through the flexible cable exiting at the adhesive supply hose cuff or through an extension cable from the Melter.

- Interconnect the components with the foreseen Profibus (or EtherNet, etc.) interface cables (if applicable).

4.3 Quality of compressed Air



CAUTION

- In any case, the air has to be clean and dry!
- The min. requirement for compressed air supply to solenoids to control automatic Applicators is ISO 8573-1:2010 class 2:4:3. We recommend installing the ITW Dynatec's Air Control Kit PN 100055 (see Appendix).

Compressed air quality classes according to ISO 8573-1:2010 class 2:4:3:

ISO 8573-1: 2010	Solid particles				Water		Oil
Class	Maximum number of particles per m ³			Mass concentration mg/m ³	Vapor pressure dew point °C	Liquid g/m ³	Total oil content (liquid, aerosol and mist) mg/m ³
	0.1-0.5 µm	0.5-1 µm	1-5 µm				
0	As stipulated by the equipment user, stricter requirements than class 1.						
1	≤ 20,000	≤ 400	≤ 10	-	≤ -70	-	0.01
2	≤ 400,000	≤ 6,000	≤ 100	-	≤ -40	-	0.1
3	-	≤ 90,000	≤ 1,000	-	≤ -20	-	1
4	-	-	≤ 10,000	-	≤ +3	-	5
5	-	-	≤ 100,000	-	≤ +7	-	-
6	-	-	-	≤ 5	≤ +10	-	-
7	-	-	-	5-10	-	≤ 0.5	-
8	-	-	-	-	-	0.5 - 5	-
9	-	-	-	-	-	5 - 10	-
X	-	-	-	> 10	-	> 10	> 10

Chapter 5

Start-up Operation, Daily Operation

5.1 Advices for the start-up operation



WARNING

Start with set-up operation not until

- the functioning of the unit is known, and
- the unit installation for start-up operation has been done according to the details given in the previous chapter. That means all unit components are operable.

Read the documentation thoroughly to avoid breakdowns caused by faulty handling.

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

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



Heed all safety instructions mentioned in chapter 2.

Allow only skilled expert staff to do the start-up operation!

Always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothing when working on or with the unit. Risk of burns and risk of injury!



Risk of electric shocks! Risk of injury, Mortal danger!



The unit components are getting very hot during operation! Risk of burns!



The adhesive is very hot and pressurized! Risk of burns and risk of injury! At working temperature, molten adhesive could cause heavy burns. Let spilled out adhesive cool down first, before removing it!



CAUTION

During operating the unit, heed the following:

- Heed all safety instructions mentioned in chapter 2.
- Install an appropriate protection device to avoid unintended contact with heated parts and with spilling out Hotmelt. The protection device has to prevent also the operator against not reaching into the adhesive application and against injuring.
- Set the working temperatures strictly within the temperature range given by the adhesive manufacturer. Do not exceed this temperature range.

- Switch the unit off during longer production breaks.
- Switch the unit to standby during shorter production breaks.
- Avoid voltage fluctuation.
- The air supply has to be clean and dry.
- In case of an emergency or exceptional incident, press the emergency stop button in order to stop the unit quickly.

**CAUTION**

The unit is ready for operation, when

- all temperatures are within the tolerances,
- all motors are switched on.



Risk of stumbling on cables and heated hoses!



Keep your hands away from running parts of the unit (pumps, motors, rolls or others).

5.2 Start-up operation, in general

This is a generic start-up and purging process.

1. Check the complete unit and the traverse paths for safety. Fix visible damages immediately.
2. Before switching the unit on, make sure that the starting unit could hurt no one!
3. Remove all material or other things not needed for the production from the workspace of the unit!
4. Check and make sure that all safety devices are working in proper form!
5. To turn the main power on, turn all main switches of the components to "ON".
6. Set the temperatures in the controller.

Heed following advices:

- The maximum operating temperature range is 25° to 200°C (77° to 392°F).
- Use only adhesives recommended by the adhesive manufacturer! Before changing from one type of adhesive to another (even within the same product line of one manufacturer), the unit has to be cleaned respectively purged to avoid possible chemical reactions.
- Set the temperatures of the particular heating zones in the controller according to the adhesive that is in use. Always keep the temperature range given by the adhesive manufacturer. Wrong temperature settings could cause the burning of the adhesive within the system and unsatisfactory adhesion.
- Keep the adhesive tank always closed, so that through the open tank cap no dirt particles at all (foil residues, dust, etc.) could get into the adhesive system.
The consequences of dirt would be:
 - breakdowns
 - higher contamination of the adhesive filter,
 - the adhesive film formation will be disabled,
 - the adhesive film contains those dirt particles,
 - the adhesive film tends to tear open.
- Before starting the production, keep the required heat-up phase of the adhesive respectively of the Melter, so that sufficient adhesive can be molten and supplied to the Applicator.



CAUTION

The unit is ready for operation, when


- all temperatures are within the tolerances, and
- the adhesive in the tank of Melter is molten completely.

Switch on the motors/pumps only if the adhesive is completely molten!

Untimely start of the motors could cause the following risks:

- The pumps are not sufficiently supplied with adhesive and they intake air. The air causes foam formation within the adhesive system and reactions with PUR adhesives.
- The pumps run dry and may block.
- Solid adhesive could block the intake port. The pumps and motors may overheat and even be destroyed.


7. Adjust the adhesive pressure by the pressure regulator (if applicable).


	<p>CAUTION! RISK OF BURNS AND INJURY!</p> <ul style="list-style-type: none"> • The unit operates with very high temperatures and high adhesive pressure. • Hot adhesive comes out of the Applicator! • Always wear heat-resistant protective gloves and safety goggles! Molten adhesives at operating temperature could cause heavy burns. • Do not touch the hot surfaces or parts without wearing heat-resistant protective gloves!
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8. Put a heat-resistant adhesive container (e.g. paperboard) under the nozzle to catch the adhesive.

Following instructions will depend on the customer production line control configuration with a PLC, utilizing an operator control station near the Applicator.

9. Start the motors/pumps of the Melter.
10. Switch on the controller to manual mode.
11. Switch on (activate) the module solenoids to purge adhesive through the nozzle.
12. Inspect the adhesive coat.
13. Switch off (deactivate) the module solenoids.
14. Clean the nozzle from adhesive residuals.
15. Remove the heat resistant container (paperboard).
16. Switch the controller to automatic mode.
17. Set the unit parameters respectively check if they are set correct.
18. Thread the strands or material webs (if applicable).

	<p>WARNING</p> <p>Make sure, that the rolls (if applicable) are free from adhesive residuals or other contaminations before threading the material web!</p> <p>Avoid collision! In case of a collision with the rolls several parts of the coating station and of the Applicator can be destroyed!</p> <p>Make sure unconditionally, that there is no mechanical contact possible between the Applicator and the rolls.</p>
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	<p>The basic requirement for proper coating is a tight guidance of the material web.</p> <p>Varying material tension may cause wrinkles within the material web.</p> <p>Keep your hands, head, etc. away from running rolls! Limbs may be drawn in. Risk of crushing!</p>
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19. Start the unit line (web material). Make sure that the material web runs even.
20. Activate the module solenoids for the adhesive application. Adhesive will be applied!

21. Production is running.

Daily operation:



Purge the Applicator before every start of production respectively of a shift by allowing the adhesive flows out until it is satisfactory.

Then switch off the adhesive and clean the nozzle from adhesive.

Bring the Applicator in work position and continue production.

5.2.1 Advices for Best Creep Values and Performance with a SCS-Nozzle

1. Perform a cup-test, to be sure to use the right amount of adhesive.
Here the suggested steps to perform a cup-test:
 - a. Obtain two heat resistant containers that are large enough to hold the adhesive output of several minutes of running time at full machine speed.
 - b. Place one heat-resistant container under the nozzle.
 - c. For Ultra Stitch, make sure the process air is turned on. If it is not possible to perform the cup test with process air due to safety restrictions, the Ultra Stitch nozzle should be removed for the test.
 - d. Start the applicator and operate at normal cycle rate corresponding to full machine speed.
 - e. Record the empty weight of the second heat-resistant container. Using a stop watch, collect the adhesive output in the empty container for two minutes.
 - f. Measure and record the weight of the collected adhesive. Compare to expected values and make adjustments as needed.
2. Check pressure valve for proper function and control of not having glue recirculation. The cup test should cover this.
3. Ultra Stitch only: Check air pressure for correct adjustment; 1-1.3 bar are required.
4. Check for the correct lycra angle.
See drawing 120474 in manual.
5. Make sure strand angle is set to 5 degrees lower than air manifold.
See drawing 120474 in manual.
6. Check nip point distance.
Our recommendation is that applicator be installed as close to nip as possible. Ultimately this distance is dependent on machine constraints and somewhat out of our control.
7. Check adhesive viscosity at the operating temperature and ensure that it is between 5000 and 9000 cps.
8. When running a very high stretch and low viscosity adhesive it is also important to make sure you are very close to the nip point after the coating, like 75 to 100mm. May need to have additional nip pressure to insure mechanical bonding with the adhesive.
9. Carefully check the results of the creep. Check where the elastic slip (start, end, or the entire stretch). If the creep is happening everywhere the glue weight is too low with the low viscosity adhesive. If it is in specific areas consistently then closer to nip and additional pressure should help as the nip pressure is too low and is bouncing.

5.3 Switching the unit off



CAUTION! RISK OF BURNS AND INJURY!

- Parts of the unit can be hot long after switching off.
- Always wear heat-resistant protective gloves and safety goggles! Molten adhesives at operating temperature could cause heavy burns.
- Do not touch the hot surfaces or parts without wearing heat-resistant protective gloves!



Do not switch off the controller and the main switch, if the unit has to be operated by weekly timer.

Effect following steps for switching the unit off:

1. Switch all pumps respectively motors off.
2. Switch the main switch off!

Removing dirt:



Remove dirt from all unit components immediately.

Wooden scrapers, lint-free cloth with thinner or cleaner may only be used for cleaning.

Metallic scrapers or other tools made from steel, like knife or blades, may not be used under any circumstances.

Chapter 6

Maintenance and Repair Notes

6.1 Security advices for maintenance and repair



Heed all security advices given in chapter 2.

Use only original parts from ITW Dynatec, otherwise ITW Dynatec's warranty is void!

Maintenance and repair work is only permitted for skilled personnel!

Always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothing that cover all vulnerable parts of the body while working on the heated unit! Risk of injury or heavy burns!

High Voltage! Risk of injury and mortal danger!

- All electrical connections must be made by qualified electrical personnel.
- Care must be taken to assure proper grounding prior to any disassembly.
- Lockout and tag the electrical sources as required.
- Make sure there is no electrical power on the leads you will be connecting.
- When covers are removed, high voltage sources create an electrocution hazard.
- Wear appropriate safety equipment when working with high voltage sources.

Parts and surfaces of the unit get very hot. High temperatures! Risk of heavy burns!

High adhesive temperature and adhesive pressure! Risk of injury or heavy burns!

Always assume that the system is under pressure, proceed with caution.

Keep a cool-pack, or bucket of clean water near the work area.

Place a heat-resistant catchment container/underlay under the components. Hot adhesive may come out.

CAUTION: At working temperature, molten adhesive could cause heavy burns. Let spilled out adhesive cool down first, before removing it!

CAUTION: Use only lint-free cleaning cloth and suitable cleaner for cleaning! Do not damage surfaces! Do not scratch above them with sharp-edged tools, otherwise the components will get leaky and inoperable!

All maintenance and repair work has to be done at working temperature, except as noted otherwise. Else there is a risk of damaging the unit components!

Before any service work disconnect the external power supply and switch the unit voltage-free:

1. Switch off the main switch and the controller.
2. Disconnect the power supply respectively remove the plug / cable.
3. Guard the unit against unauthorized restarting!

Before any service work the adhesive pressure must be relieved throughout the system. Switch the unit pressureless:

1. Disconnect the pressure air supply.
2. Turn the pressure regulator to zero bar, if necessary. Wait approximately 1 minute until the pressure is relieved.
3. Open the pressure purge valve manually until the pressure is relieved.

6.2 Re-Assembly Procedures and General Cautions

Unless noted, component re-assembly is simply the reverse sequence of the disassembly procedures. However, the following “cautions” should be followed (whenever they apply) for proper re-assembly:



CAUTION

In general, all O-RINGS AND SEALS must be replaced whenever hot-melt equipment is re-assembled. All new O-rings must be lubricated with O-ring lube (PN N07588).

SOME FITTINGS used for adhesive on hot melt equipment have straight threads and O-ring seals. Use of thread sealant is not necessary with these parts, but the O-ring seals should be clean and lubricated. Tighten straight-threaded parts and fittings until their shoulders are firmly seated. Excessive torque may damage straight-threaded parts and the use of power wrenches is not recommended.

HOT-MELT RESIDUE must be cleaned from parts before they are re-assembled, particularly from threaded parts. As a precaution against adhesive residue preventing proper re-assembly, threaded parts must always be re-tightened at operating temperature.

6.3 Relieving Adhesive Pressure



WARNING

Heed all security advices given in chapter 6.1.



Maintenance and repair work is only permitted for skilled personnel!

Always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothing that cover all vulnerable parts of the body while working on the heated unit! Risk of injury or severe burns!

Components and adhesive are hot. Take every precaution to prevent the material and hot surfaces from contacting the skin.



During the purging procedure, hot adhesive can come out of the Applicator under high pressure. Wear safety glasses, gloves and protective clothing.


Many maintenance and troubleshooting procedures potentially expose the maintenance technician to dangerous hot adhesive, which is under pressure. Follow this procedure to release the adhesive pressure in the Applicator before performing such maintenance.

1. The Applicator should be at operating temperature.
2. Turn the ASU's pump/ motor OFF.
3. Place a heat-resistant catchment container/underlay under the Applicator.
4. Slowly loosen (do not remove) the purge screw of the pressure purge valve manually with a 5mm hex key until the pressure is relieved. Then, tighten the purge screw. Be sure to stand clear since hot adhesive under pressure will flow out of the Applicator.

Or, open the solenoid by pushing the purge button.

Or, turn the pressure regulator to zero bar, if necessary. Wait approximately 1 minute until the pressure is relieved.

6.4 Replacement of Spin-On Filter

	<p>WARNING</p> <p>Heed all security advices given in chapter 6.1.</p> <p>Maintenance and repair work is only permitted for skilled personnel!</p> <p>Always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothing that cover all vulnerable parts of the body while working on the heated unit! Risk of injury or severe burns!</p> <p>Components and adhesive are hot. Take every precaution to prevent the material and hot surfaces from contacting the skin.</p> <p>During the purging procedure, hot adhesive can come out of the Applicator under high pressure. Wear safety glasses, gloves and protective clothing.</p>
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Refer to the drawing in Chapter 8 for more information.

1. Stop all motors.
2. Switch the unit voltage-free and pressureless.
3. Guard the unit against unauthorized restarting.
4. Place a heat-resistant catchment container/underlay under the Applicator. Hot adhesive may come out!
5. Relieve the adhesive pressure by following the instructions under Chapter 6.3 "Relieving Adhesive Pressure".
6. Unscrew and remove the filter cap.
7. Unscrew the filter from the filter cap.
8. Remove and discard the old sealing washer and O-ring.
9. Make sure the mating surface of the filter cap is clean.
10. Install a new sealing washer, filter and O-ring. Torque the filter to 40-50 in-lbs (4.5 – 5.5 Nm) on the cap.
11. Apply a coat of anti-seize to the threads of the filter cap.
12. Re-install the filter and the filter cap. Tighten the filter cap until it is seated firmly, taking care not to cut the O-ring.
13. Close the pressure bleed (purge) valve, return the equipment to service and check for leaks.
14. If leaking, it might be necessary to replace the filter cap's O-ring.

After finishing the maintenance or repair works:

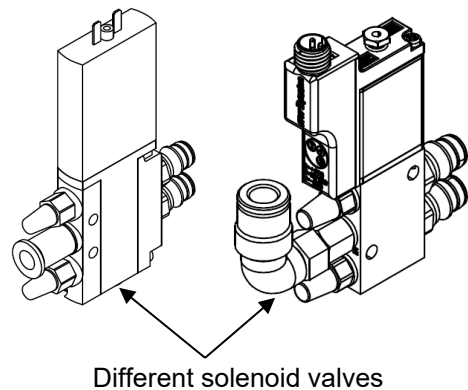
- Remove all materials and tools used during the repair or maintenance from the workspace of the unit.
- Connect the voltage supply and the compressed air supply. Heat the unit up. Wait until all temperatures are within the tolerances and the adhesive in the tank is molten completely.
- Continue production.

6.5 Replacement of the Solenoid Valve

	<p>WARNING</p> <p>Heed all security advices given in chapter 6.1.</p> <p>Maintenance and repair work is only permitted for skilled personnel!</p> <p>Always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothing that cover all vulnerable parts of the body while working on the heated unit! Risk of injury or severe burns!</p> <p>Components and adhesive are hot. Take every precaution to prevent the material and hot surfaces from contacting the skin.</p> <p>During the purging procedure, hot adhesive can come out of the Applicator under high pressure. Wear safety glasses, gloves and protective clothing.</p>
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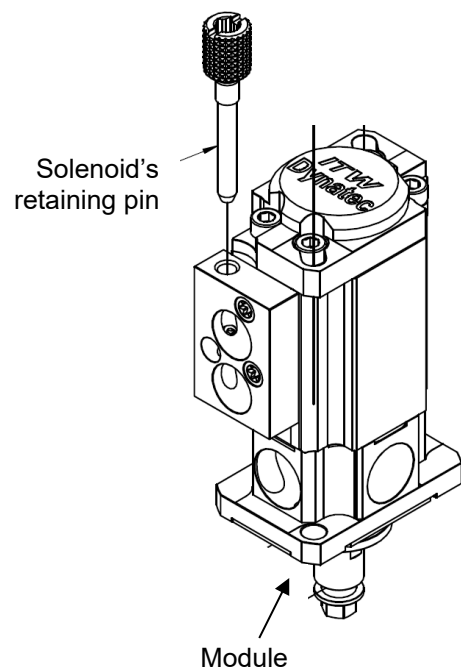
Refer to the drawing in Chapter 8 for more information.

1. Stop all motors.
2. Switch the unit voltage-free and pressureless.
3. Guard the unit against unauthorized restarting.
4. Depressurize the air supply to solenoid valve to 0 bar!
5. Remove the electrical connector and the pneumatic hose from the solenoid valve.
6. Loosen the solenoid's retaining pin, pull out the solenoid valve and replace it.
7. Mount the new solenoid valve in reverse order and attach it to the module.




After finishing the maintenance or repair works:

- Remove all materials and tools used during the repair or maintenance from the workspace of the unit.
- Connect the voltage supply and the compressed air supply. Heat the unit up. Wait until all temperatures are within the tolerances and the adhesive in the tank is molten completely.
- Continue production.



6.6 Replacement of the Module

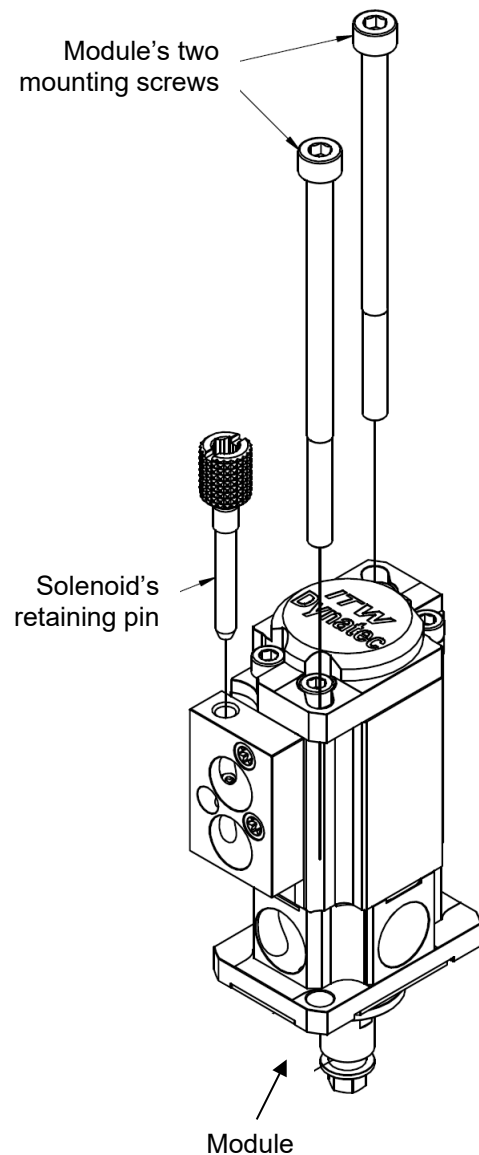
	<p>WARNING</p> <p>Heed all security advices given in chapter 6.1.</p> <p>Maintenance and repair work is only permitted for skilled personnel!</p> <p>Always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothing that cover all vulnerable parts of the body while working on the heated unit! Risk of injury or severe burns!</p> <p>Components and adhesive are hot. Take every precaution to prevent the material and hot surfaces from contacting the skin.</p> <p>During the purging procedure, hot adhesive can come out of the Applicator under high pressure. Wear safety glasses, gloves and protective clothing.</p>
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Refer to the drawing in Chapter 8 for more information.


1. Stop all motors.
2. Switch the unit voltage-free and pressureless.
3. Guard the unit against unauthorized restarting.
4. Place a heat-resistant catchment container/underlay under the Applicator. Hot adhesive may come out!
5. Relieve the adhesive pressure by following the instructions under Chapter 6.3 "Relieving Adhesive Pressure".
6. Remove the electrical connector and the pneumatic hose from the solenoid valve.
7. Loosen the solenoid's retaining pin and pull out the solenoid valve. See Chapter 6.5 Replacement of the Solenoid Valve.
8. Loosen the two mounting screws from the module and remove the module from the manifold.
9. Mount the new module in reverse order and attach it to the manifold with a torque of 20-25 in./lbs (2.3-2.8 Nm).

After finishing the maintenance or repair works:

- Remove all materials and tools used during the repair or maintenance from the workspace of the unit.
- Connect the voltage supply and the compressed air supply. Heat the unit up. Wait until all temperatures are within the tolerances and the adhesive in the tank is molten completely.
- Continue production.



6.7 Replacement of the SCS Nozzle or Spray Nozzle

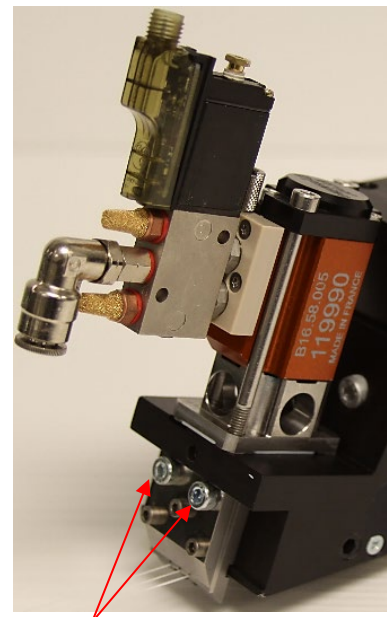
	<p>WARNING</p> <p>Heed all security advices given in chapter 6.1.</p> <p>Maintenance and repair work is only permitted for skilled personnel!</p> <p>Always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothing that cover all vulnerable parts of the body while working on the heated unit! Risk of injury or severe burns!</p> <p>Components and adhesive are hot. Take every precaution to prevent the material and hot surfaces from contacting the skin.</p> <p>During the purging procedure, hot adhesive can come out of the Applicator under high pressure. Wear safety glasses, gloves and protective clothing.</p>
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Refer to the drawing in Chapter 8 for more information.

Occasionally nozzles can become clogged with char, residue or other foreign material. This can result in the decrease or even stoppage of glue flow. Use following procedure to change nozzles:

The nozzle must be at operating temperature when cleaned.

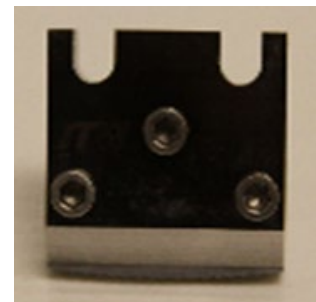
1. Stop all motors.
2. Switch the unit voltage-free and pressureless.
3. Guard the unit against unauthorized restarting.
4. Place a heat-resistant catchment container/underlay under the Applicator. Hot adhesive may come out!
5. Relieve the adhesive pressure by following the instructions under Chapter 6.3 "Relieving Adhesive Pressure".
6. Remove the nozzle from the module by loosening its two mounting screws.
7. Mount the nozzle in reverse order and attach it to the module with a torque of 20-25 in./lbs (2.3-2.8 Nm).




Nozzle's two mounting screws

After finishing the maintenance or repair works:

- Remove all materials and tools used during the repair or maintenance from the workspace of the unit.
- Connect the voltage supply and the compressed air supply. Heat the unit up. Wait until all temperatures are within the tolerances and the adhesive in the tank is molten completely.
- Continue production.




6.8 Cleaning the Spray Nozzle

	<p>WARNING</p> <p>Heed all security advices given in chapter 6.1.</p> <p>Maintenance and repair work is only permitted for skilled personnel!</p> <p>Always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothing that cover all vulnerable parts of the body while working on the heated unit! Risk of injury or severe burns!</p> <p>Components and adhesive are hot. Take every precaution to prevent the material and hot surfaces from contacting the skin.</p> <p>During the purging procedure, hot adhesive can come out of the Applicator under high pressure. Wear safety glasses, gloves and protective clothing.</p>
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Refer to the drawing in Chapter 8 for more information.

Occasionally nozzles can become clogged with char, residue or other foreign material. This can result in the decrease or even stoppage of glue flow. In this case the nozzle must be cleaned in a High Temperature Oven or it must be replaced.

	<p>CAUTION</p> <p>DO NOT DISASSEMBLE the nozzle for cleaning! This can damage the nozzle plates and this will void the guarantee!</p> <p>DO NOT USE alloy brushes made from steel stainless, brass or copper for nozzle cleaning; they could seriously damage the nozzle!</p>
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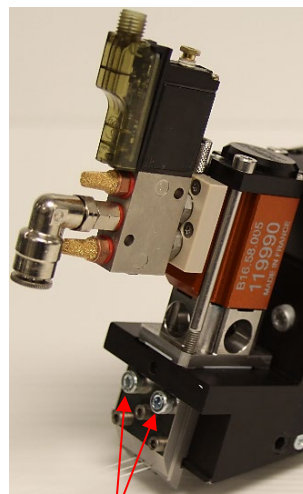
Cleaning of the nozzle in a High Temperature Oven (Furnace)

A Nozzle Cleaning Oven (Furnace) (PN 80.80000.103) is available from ITW Dynatec. Nozzles will be “baked” in the oven for approximately four to six hours at 750-800 °F (400-425°C); the residual adhesive in the nozzles turns to ash/dust that can be blown with compressed air. Complete cleaning instructions are provided with the oven.

Replacement of the nozzle

The nozzle must be at operating temperature when replaced.

1. Stop all motors.
2. Switch the unit voltage-free and pressureless.
3. Guard the unit against unauthorized restarting.
4. Place a heat-resistant catchment container/underlay under the Applicator. Hot adhesive may come out!
5. Relieve the adhesive pressure by following the instructions under Chapter 6.3 “Relieving Adhesive Pressure”.




Nozzle's two mounting screws

6. Remove the nozzle from the module by loosening its two mounting screws.
7. Mount the nozzle in reverse order and attach it to the module.

After finishing the maintenance or repair works:

- Remove all materials and tools used during the repair or maintenance from the workspace of the unit.
- Connect the voltage supply and the compressed air supply. Heat the unit up. Wait until all temperatures are within the tolerances and the adhesive in the tank is molten completely.
- Continue production.

6.9 Replacement of the Slot Nozzle

	<p>WARNING</p> <p>Heed all security advices given in chapter 6.1.</p> <p>Maintenance and repair work is only permitted for skilled personnel!</p> <p>Always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothing that cover all vulnerable parts of the body while working on the heated unit! Risk of injury or severe burns!</p> <p>Components and adhesive are hot. Take every precaution to prevent the material and hot surfaces from contacting the skin.</p> <p>During the purging procedure, hot adhesive can come out of the Applicator under high pressure. Wear safety glasses, gloves and protective clothing.</p>
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Refer to the drawing in Chapter 8 for more information.

Occasionally nozzles can become clogged with char, residue or other foreign material. This can result in the decrease or even stoppage of glue flow. Use following general procedure to change a nozzle:

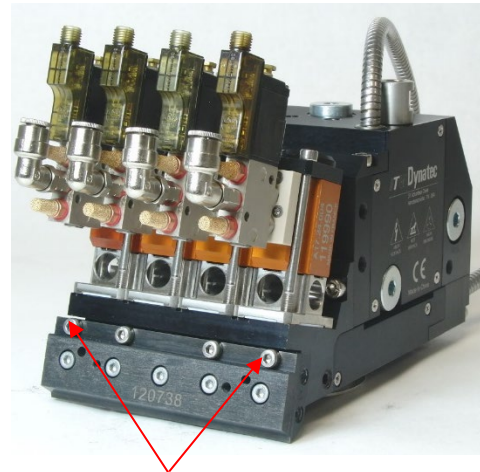
The nozzle must be at operating temperature when replaced or cleaned.

1. Stop all motors.
2. Switch the unit voltage-free and pressureless.
3. Guard the unit against unauthorized restarting.
4. Place a heat-resistant catchment container/underlay under the Applicator. Hot adhesive may come out!
5. Relieve the adhesive pressure by following the instructions under Chapter 6.3 "Relieving Adhesive Pressure".
6. Remove the nozzle from the module by loosening its mounting screws.

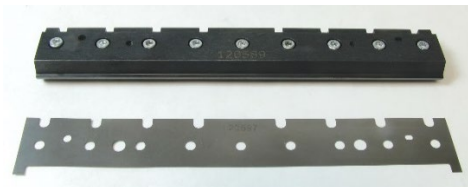


ADVICE:

When disengaging the last screw secure the slot nozzle against falling down. During dismounting/mounting, take care that the slot nozzle or outlet lip does not get damaged at all; otherwise it will not be possible to produce proper coating!



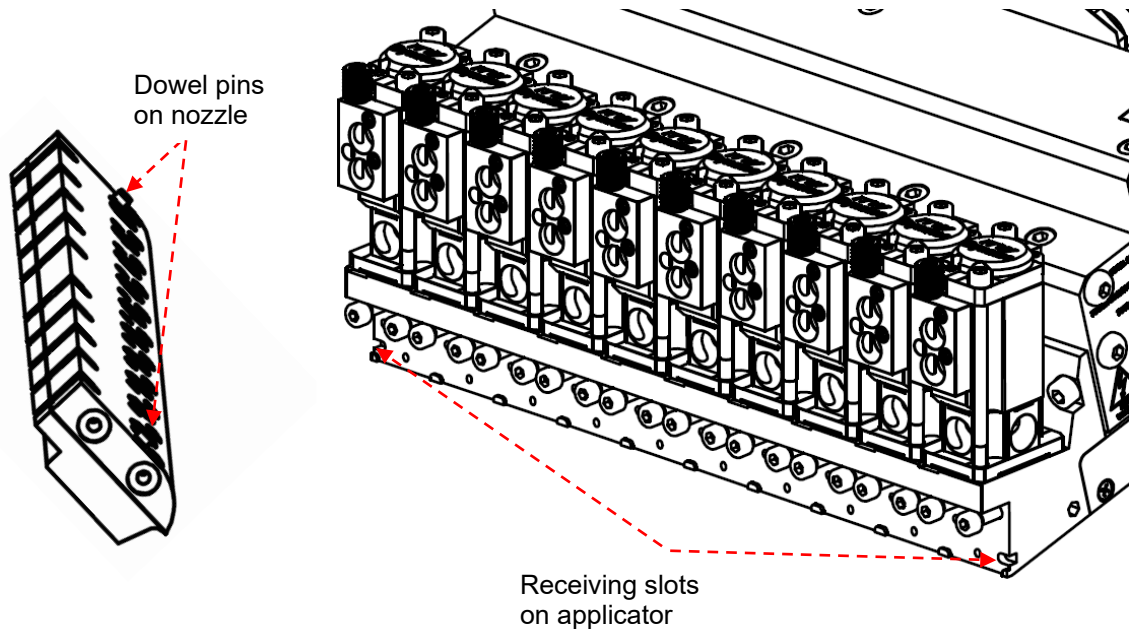
Nozzle's mounting screws



Nozzle with shim

7. Mount a new slot nozzle on the Applicator:

- Make sure that the two dowel pins on the nozzle engage the receiving slots on the applicator. If the pins are not engaged properly, the O-rings will not seal, and the nozzle will leak.




- Because the slot nozzle is cooled down when cleaning, the length of the slot nozzle has changed slightly.
- When installing, take care that the middle screws of the fastening screws are attached first and tightened lightly. After waiting of approx. 10min. (heating-up time of the slot nozzle and corresponding expansion) attach the remaining screws and tighten lightly.
- Only when the slot nozzle is thoroughly tempered, tighten the screws from inside outward with a tightening torque of 20-25 in./lbs (2.3-2.8 Nm).

After finishing the maintenance or repair works:

- Remove all materials and tools used during the repair or maintenance from the workspace of the unit.
- Connect the voltage supply and the compressed air supply. Heat the unit up. Wait until all temperatures are within the tolerances and the adhesive in the tank is molten completely.
- Continue production.

6.10 Cleaning the Slot Nozzle Inside and Change the Shim



WARNING

Heed all security advices given in chapter 6.1.

Maintenance and repair work is only permitted for skilled personnel!

Always wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothing that cover all vulnerable parts of the body while working on the heated unit! Risk of injury or severe burns!

Components and adhesive are hot. Take every precaution to prevent the material and hot surfaces from contacting the skin.

During the purging procedure, hot adhesive can come out of the Applicator under high pressure. Wear safety glasses, gloves and protective clothing.

MAINTENANCE: Clean the slot nozzle inside as required; e.g. once a week.

Refer to the drawing in Chapter 8 for more information.

Occasionally nozzles can become clogged with char, residue or other foreign material. This can result in the decrease or even stoppage of glue flow.

Use following general procedure to clean a nozzle or to replace a pattern shim:

The nozzle must be at operating temperature when replaced or cleaned.

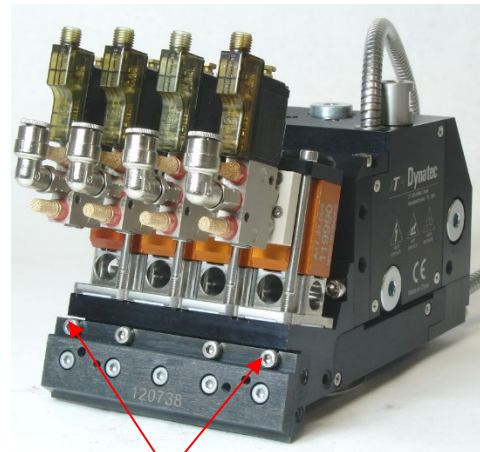
1. Stop all motors.
2. Switch the unit voltage-free and pressureless.
3. Guard the unit against unauthorized restarting.
4. Place a heat-resistant catchment container/underlay under the Applicator. Hot adhesive may come out!
5. Relieve the adhesive pressure by following the instructions under Chapter 6.3 "Relieving Adhesive Pressure".
6. Remove the nozzle from the module by loosening its mounting screws.



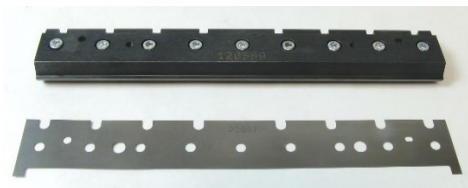
ADVICE:

When disengaging the last screw secure the slot nozzle against falling down. During dismounting/mounting, take care that the slot nozzle or outlet lip get not be damaged at all; otherwise it will be no more possible to produce a coating film!

7. Take out the slot nozzle completely and lay it on a wooden table.



Nozzle's mounting screws



Nozzle with shim

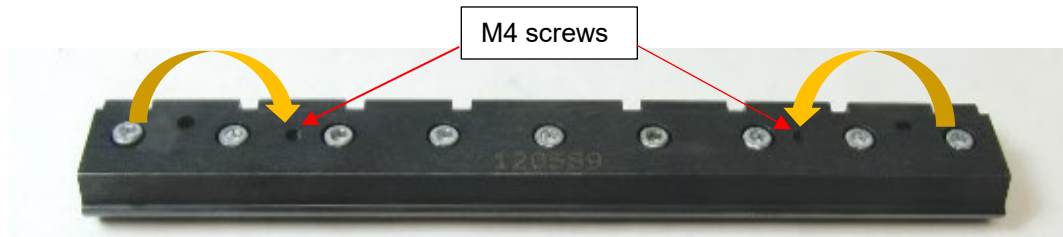
8. Remove all fastening screws which hold both parts of the slot nozzle together.



9. The slot nozzle consists of two parts, which should be taken apart.

Separate the 2-parts of slot nozzle:

Two of the fastening screws can be used to help disassemble the nozzles. The front plate has two M4 holes (see below). Two fastening screws can be threaded into these holes to separate the front and rear die plates. After separating both parts, remove both screws.



10. Remove and clean the pattern shim; this lies loosely in the slot nozzle.



NOTE:

Note the mounting direction of the shim, as it must be assembled in the same mounting direction.

11. Clean the slot nozzle inside and outside.

Clean only with a wooden scraper or cloth with thinner or cleaner.



CAUTION: Do not damage the slot nozzle with sharp-edged or metallic objects or tools. Otherwise it will be no more possible to produce a coating film!

12. Put both parts of the slot nozzle with longitudinal sides (not on the outlet lips) on a flat surface. This assures that the shim is flush with the outlet lips.

13. Place the cleaned or new shim between both parts of the slot nozzle.



NOTE: When inserting the shim pay attention to the mounting direction.

14. Tighten both parts of the slot nozzle with fastening screws.

Pay attention that the shim is flush with the outlet lips.

15. Install the slot nozzle on the Applicator:

Because the slot nozzle is cooled down when cleaning, the length of the slot nozzle has changed slightly.

When installing, take care that the middle screws of the fastening screws are attached first and tightened lightly. After waiting of approx. 10min. (heating-up time of the slot nozzle and corresponding expansion) attach the remaining screws and tighten lightly.

Only when the slot nozzle is thoroughly tempered, tighten the screws from inside outward with a tightening torque of 20-25 in./lbs (2.3-2.8 Nm).

After finishing the maintenance or repair works:

- Remove all materials and tools used during the repair or maintenance from the workspace of the unit.
- Connect the voltage supply and the compressed air supply. Heat the unit up. Wait until all temperatures are within the tolerances and the adhesive in the tank is molten completely.
- Continue production.

6.11 Maintenance plan



CAUTION

- Heed all security advices given in chapter 6.1.
- Use only original parts from ITW Dynatec, otherwise ITW Dynatec's warranty is void!
- Please use only the indicated lubricants and keep the prescribed maintenance intervals. Consider in addition the enclosed regulations of manufactures (if applicable).
- Punctual and conscientious maintenance of the unit secures not only a trouble-free function, but prevents also for expensive repair costs.
- After maintenance work, remove all materials and tools used during the repair or maintenance from the workspace of the unit.
- Place a heat-resistant catchment container/underlay under the components. Hot adhesive may come out.
- Use only lint-free cleaning cloth and suitable cleaner for cleaning! Do not damage surfaces! Do not scratch above them with sharp-edged tools, otherwise the components will get leaky and inoperable!

Maintenance plan:

Operating time/ frequency	Inspection point / maintenance notes
Continuous	<ul style="list-style-type: none"> • Remove dropped out adhesive and scrap adhesive and search for the cause of that, eliminate the cause.
Once a day	<ul style="list-style-type: none"> • Clean the Applicator and components from dirt.
Once a week	<ul style="list-style-type: none"> • Check filters for clogging and replace if necessary. • Check modules on Applicator if leaky and replace if necessary. • Check nozzles for wearing or clogging and clean or replace if necessary. • Clean the inside of the slot nozzle as required • Check adhesive supply hose connection and tighten if loose. • Check air supply connections for leaks and tighten if loose or replace if necessary. • Check the solenoid valves for proper function and replace it if necessary.
Every 3 months	<ul style="list-style-type: none"> • Due to temperature differences a loosening of threads (threaded connections) is possible. Check all parts with threads, all screw fittings and fasteners for tightness and tighten them if necessary. • Inspect air preheater cable assembly wire insulation for hardening, cracking, or other signs of thermal wear. Replace if necessary.
Once a year	<ul style="list-style-type: none"> • Clean the Applicator. • Complete check-up for wearing.
Every two years	<ul style="list-style-type: none"> • Complete maintenance.

Chapter 7

Troubleshooting

7.1 Troubleshooting In General



ADVICES:

Please re-read all security advices given in chapter 2 before troubleshooting. All troubleshooting or repair procedures must be performed by qualified, trained technicians.

The temperatures measured on the outer surface may deviate significantly from the temperatures set and displayed. This can lead to a false conclusion (e.g. defective heating). Such a difference is normal and depends also largely on the materials used.

In general: If failure occurs, check first:

- Check all the electrical and pneumatic connections.
- Verify that the main power switch of the unit is ON.
- Verify that the pump is functioning and the Applicator has the required air pressure.
- Verify that the temperature controller is in operation and that the setpoints are correct for the Melter, Heated Hoses, Applicator and all other components connected to the unit.
- Check to see if all components are heating properly.

7.2 Resistance Tables, Temperature sensors

Temperature sensor PT 100 Ohms
Control option: DCL

Temperature °F	°C	Resistance in Ohms
32	0	100
50	10	104
68	20	108
86	30	112
104	40	116
122	50	119
140	60	123
158	70	127
176	80	131
194	90	135
212	100	139
230	110	142
248	120	146
268	130	150
284	140	154
302	150	157
320	160	161
338	170	164
356	180	168
374	190	172
392	200	176
410	210	180
428	220	183

Temperature sensor Ni 120 Ohms
Control option: NOR

Temperature °F	°C	Resistance in Ohms
32	0	120
50	10	127
68	20	135
86	30	142
104	40	150
122	50	158
140	60	166
158	70	174
176	80	183
194	90	192
212	100	201
230	110	210
248	120	219
268	130	229
284	140	239
302	150	249
320	160	259
338	170	270
356	180	284
374	190	292
392	200	303
410	210	315
428	220	328

7.3 Troubleshooting Guide ULTRA Applicator

Problem	Possible Cause	Solution
Module does not open.	<ol style="list-style-type: none"> 1. Temperature adjustment of head is too low. 2. Solenoid defective. 3. Low or no air pressure to solenoid valve. 	<ol style="list-style-type: none"> 1. Check temperature adjustment. 2. Push the solenoid's manual button. If it opens, the problem is electrical. Check and/or replace the solenoid. 3. Correct problem and reapply air pressure to solenoid valve.
No adhesive flowing out of module.	<ol style="list-style-type: none"> 1. Nozzle is clogged. 2. Filter element is dirty. 3. Module seals (O-rings) are defective. 4. ASU's hopper is empty. 5. Adhesive is too cold. 6. Solenoid valve is not opening. 	<ol style="list-style-type: none"> 1. Clean or replace nozzle. 2. Replace filter, see instructions in Ch. Maintenance. 3. Check module O-rings, see instructions in Ch. Maintenance. 4. Re-fill hopper. 5. Adjust temperature, see ASU manual. 6. Check solenoid valve.
Hot melt is coming out of the module's "weep" holes.	<ol style="list-style-type: none"> 1. Module seals are damaged. 	<ol style="list-style-type: none"> 1. Replace module, see instructions in Ch. Maintenance.
Applicator does not reach operating temperature	<ol style="list-style-type: none"> 1. Applicator temperature set point is too low. 2. Heater cartridge defective. 3. Temperature sensor defective. 	<ol style="list-style-type: none"> 1. Change setpoint, see ASU manual. 2. Check/ replace heater cartridge, see instructions in Ch. Maintenance. 3. Check/ replace sensor, see instructions in Ch. Maintenance.
Applicator is too hot	<ol style="list-style-type: none"> 1. Applicator temperature setpoint is too high. 2. Temperature sensor defective. 	<ol style="list-style-type: none"> 1. Change setpoint, see ASU manual. 2. Check/ replace sensor, see instructions in Ch. Maintenance.
Air escapes from module	<ol style="list-style-type: none"> 1. Piston O-ring defective. 2. O-rings located on solenoid valve connected to module are defective. 	<ol style="list-style-type: none"> 1. Replace O-ring, see instructions in Ch. Maintenance. 2. Remove solenoid from module (see instructions in Ch. Maintenance) and replace O-rings.
Application pattern is erratic	<ol style="list-style-type: none"> 1. Adhesive pressure is too low. 2. Adjust pattern controller. 	<ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> a. <i>For units without speed control</i>: increase adhesive pressure at ASU. b. <i>For units with speed control (tach follower)</i>: adjust pump speed control. 2. See pattern controller manual for proper adjustment.

Chapter 8

Drawings & Bills of Materials



WARNING

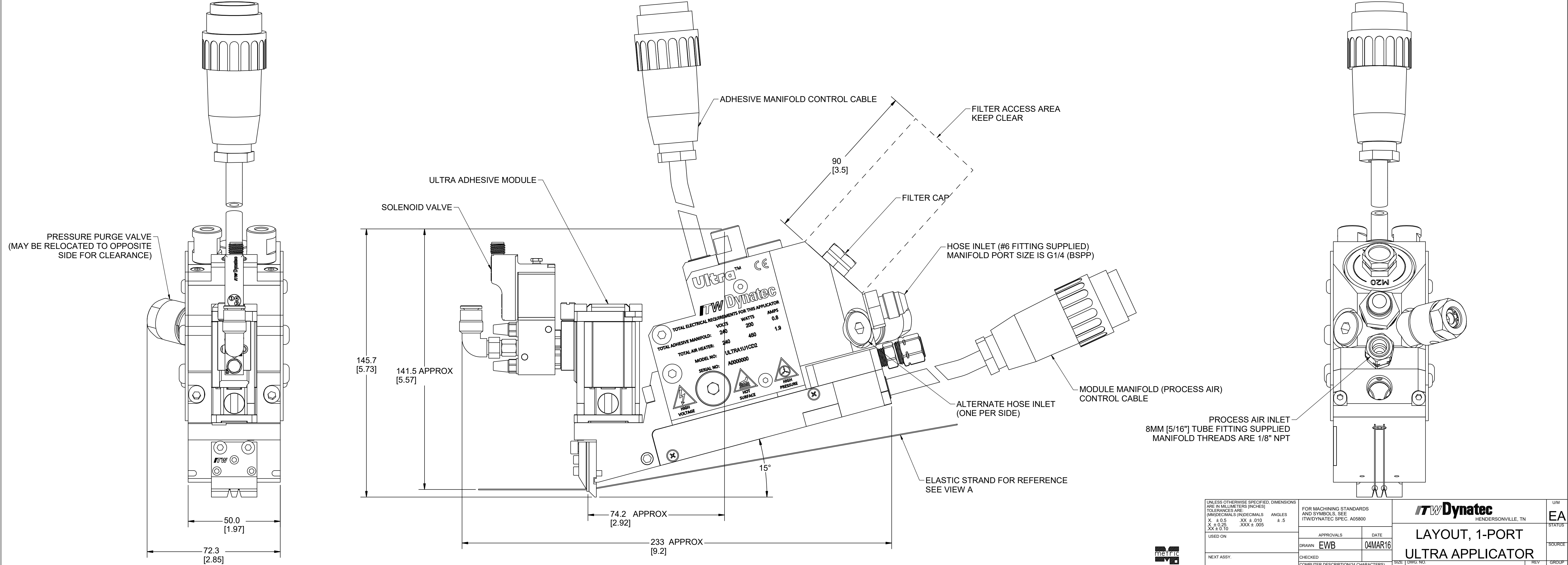
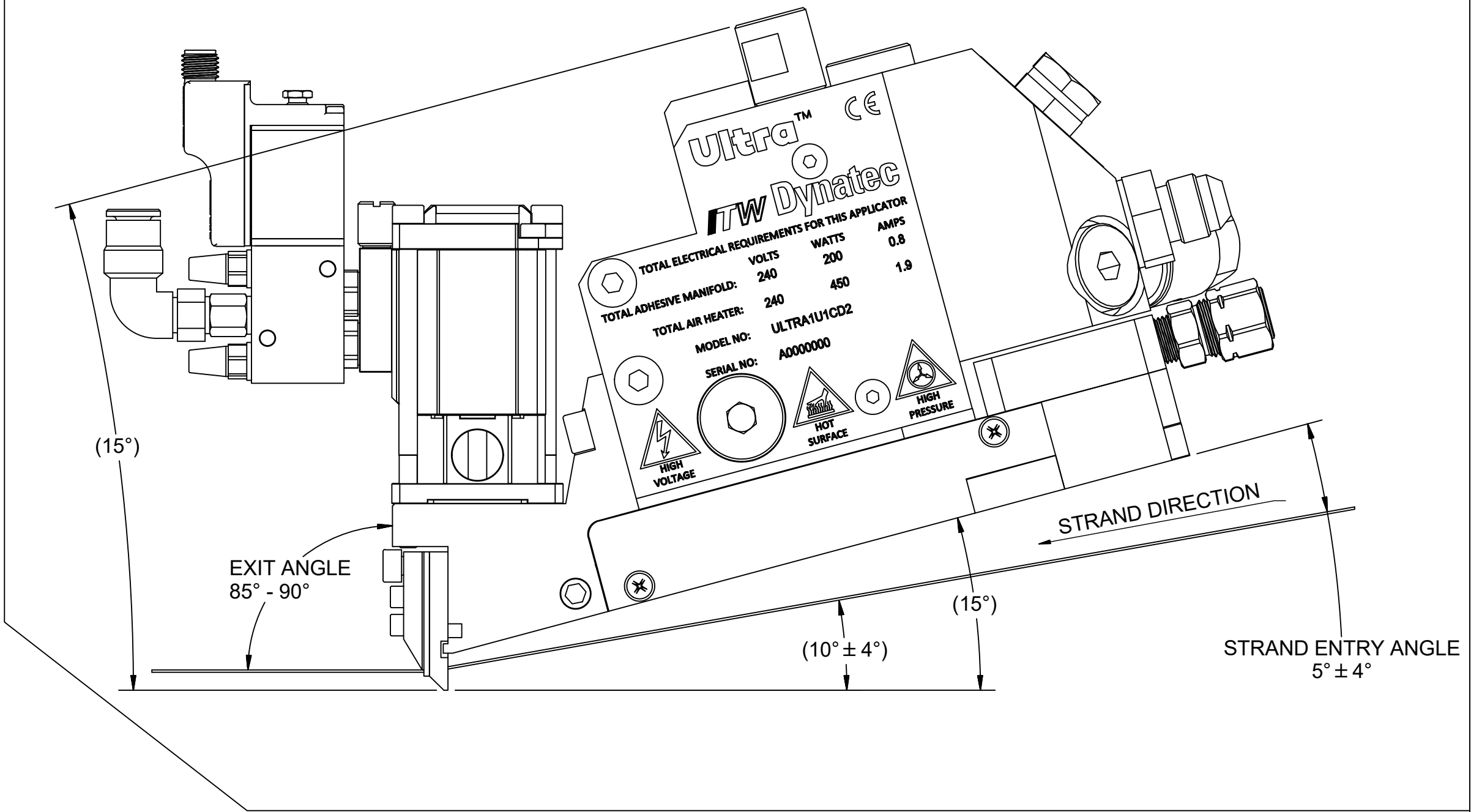
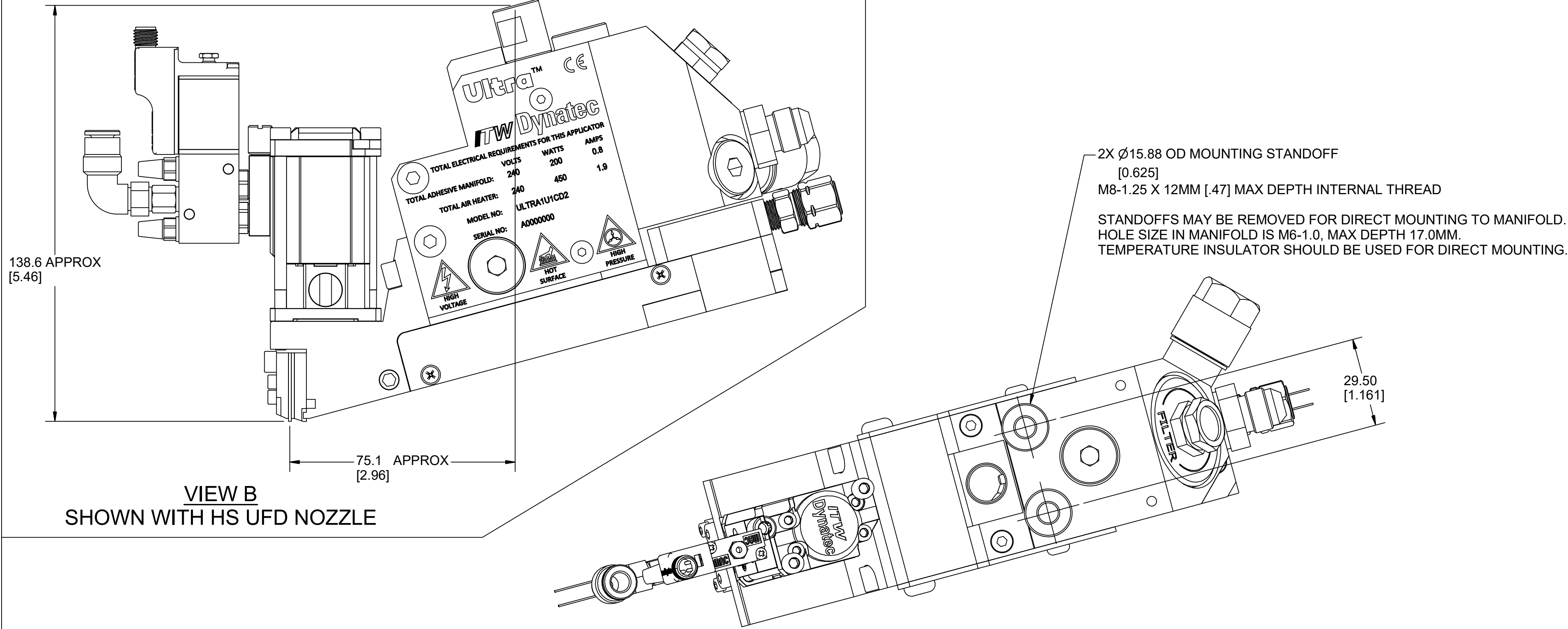
All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect equipment's operation and can result in personal injury.

This chapter contains the component illustrations (exploded-view drawings) for each assembly. These drawings are useful for finding part numbers as well as for use when maintaining or repairing the equipment.

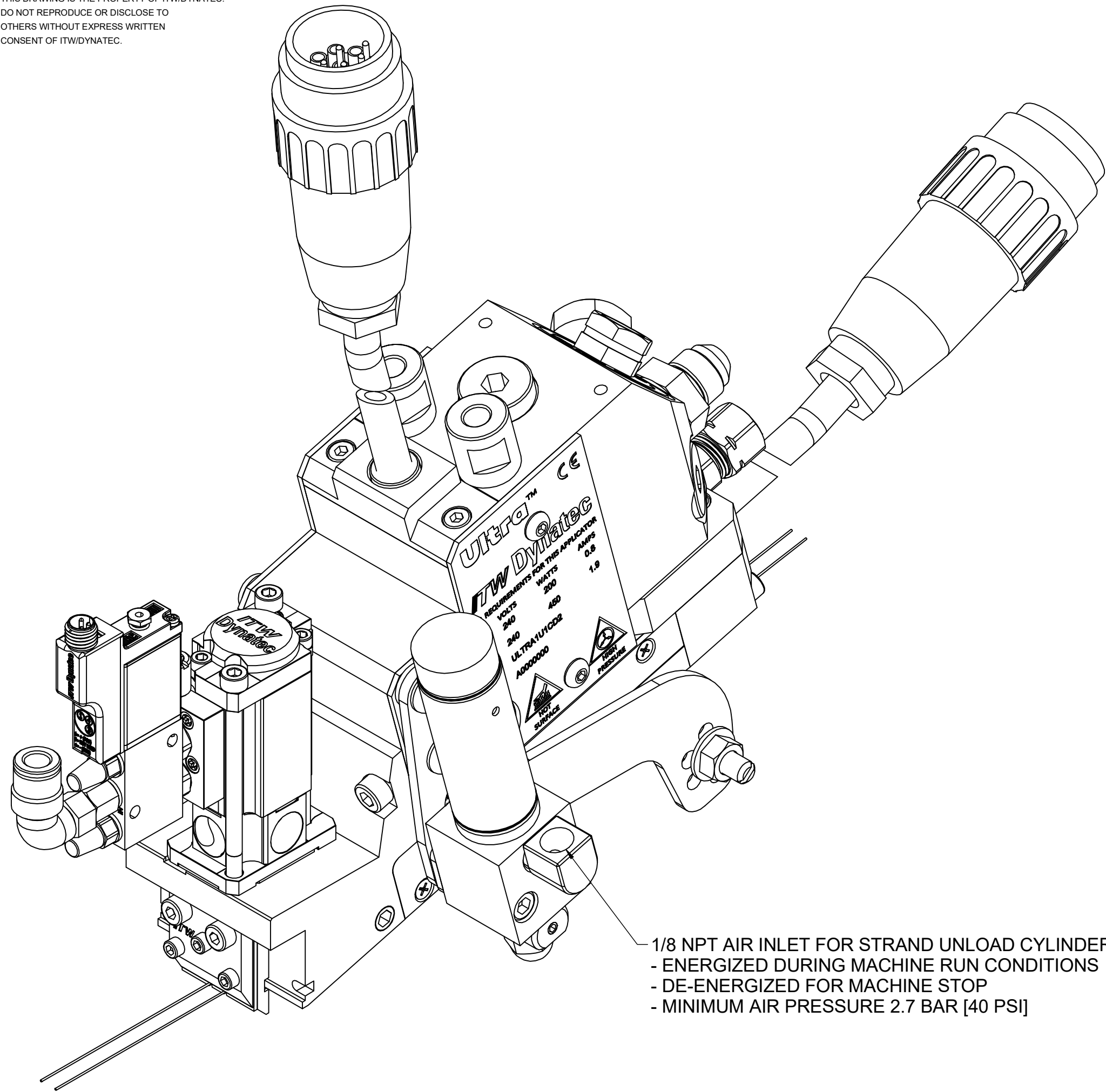
Note: Most common screws, nuts and washers called out in the manual are not for sale and they can be obtained locally at your hardware Store. Specialty fasteners are available by contacting ITW Dynatec's Customer Service.

8.1 1-Port ULTRALINK Applicator, Layout, PN 120474

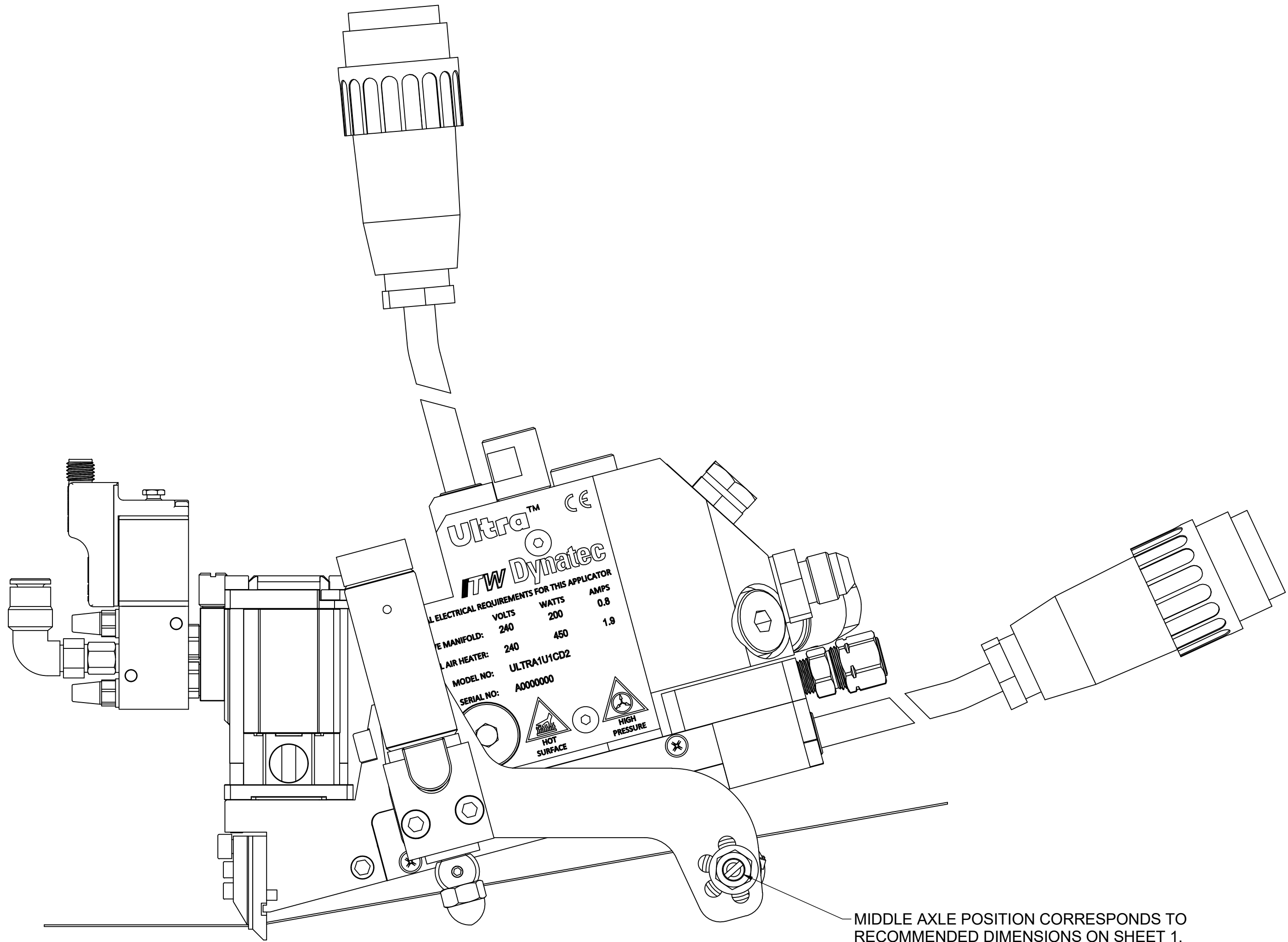
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C468	B	ADD SHEET 2	16JAN17	EWB	
18026	C	SHT 1: REVISE STRAND ANGLES; ADD SHEET 3	27FEB18	EWB	
ECN667	D	REVISE DRAWING VIEWS FOR STACKABLE DESIGN	07OCT19	EWB	



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (MM)DECIMALS (INCHES) DECIMALS X ± 0.5 .XX ± 0.10 X ± 0.25 .XX ± 0.05 XX ± 0.10 .XXX ± 0.05		FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC. A05800		UM
USED ON		APPROVALS		DATE
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		D		120474
		SCALE		1:1
		CAD DRAWING		SHEET
		1 OF 3		

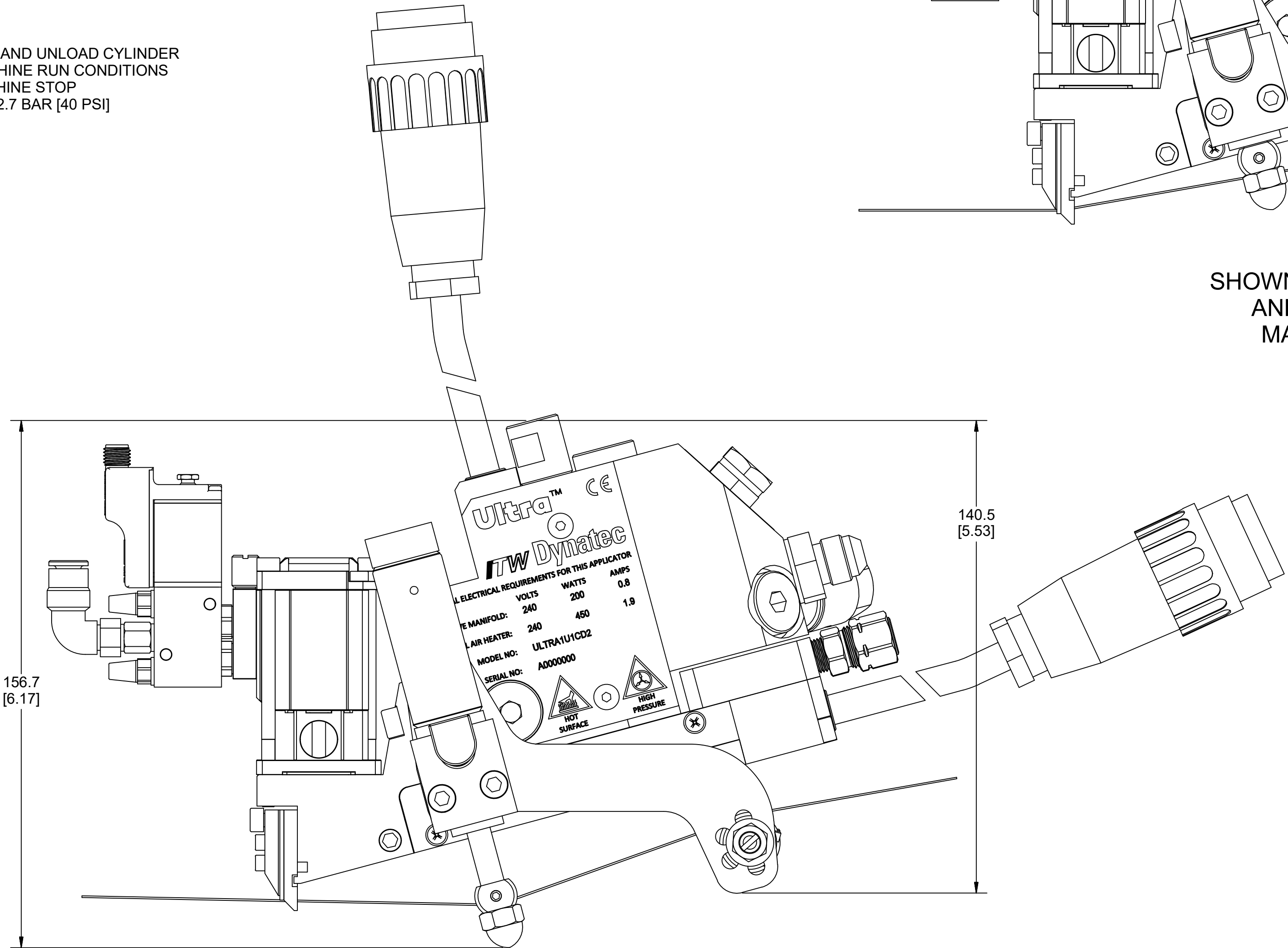


1/8 NPT AIR INLET FOR STRAND UNLOAD CYLINDER
- ENERGIZED DURING MACHINE RUN CONDITIONS
- DE-ENERGIZED FOR MACHINE STOP
- MINIMUM AIR PRESSURE 2.7 BAR [40 PSI]



MIDDLE AXLE POSITION CORRESPONDS TO
RECOMMENDED DIMENSIONS ON SHEET 1.

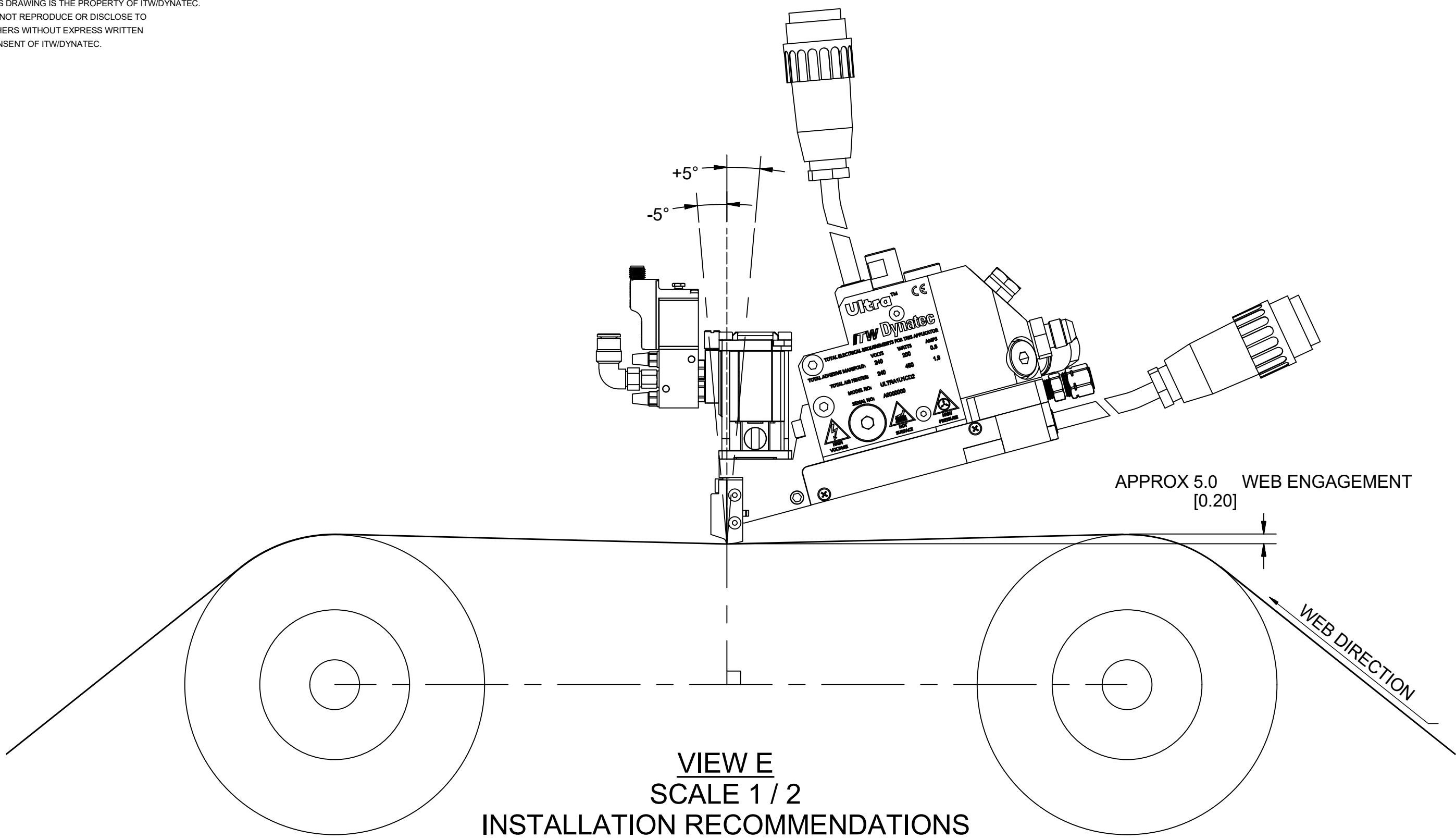
VIEW C
SHOWN WITH OPTIONAL STRAND GUIDE
AND STRAND UNLOAD CYLINDER
MACHINE RUNNING CONDITION



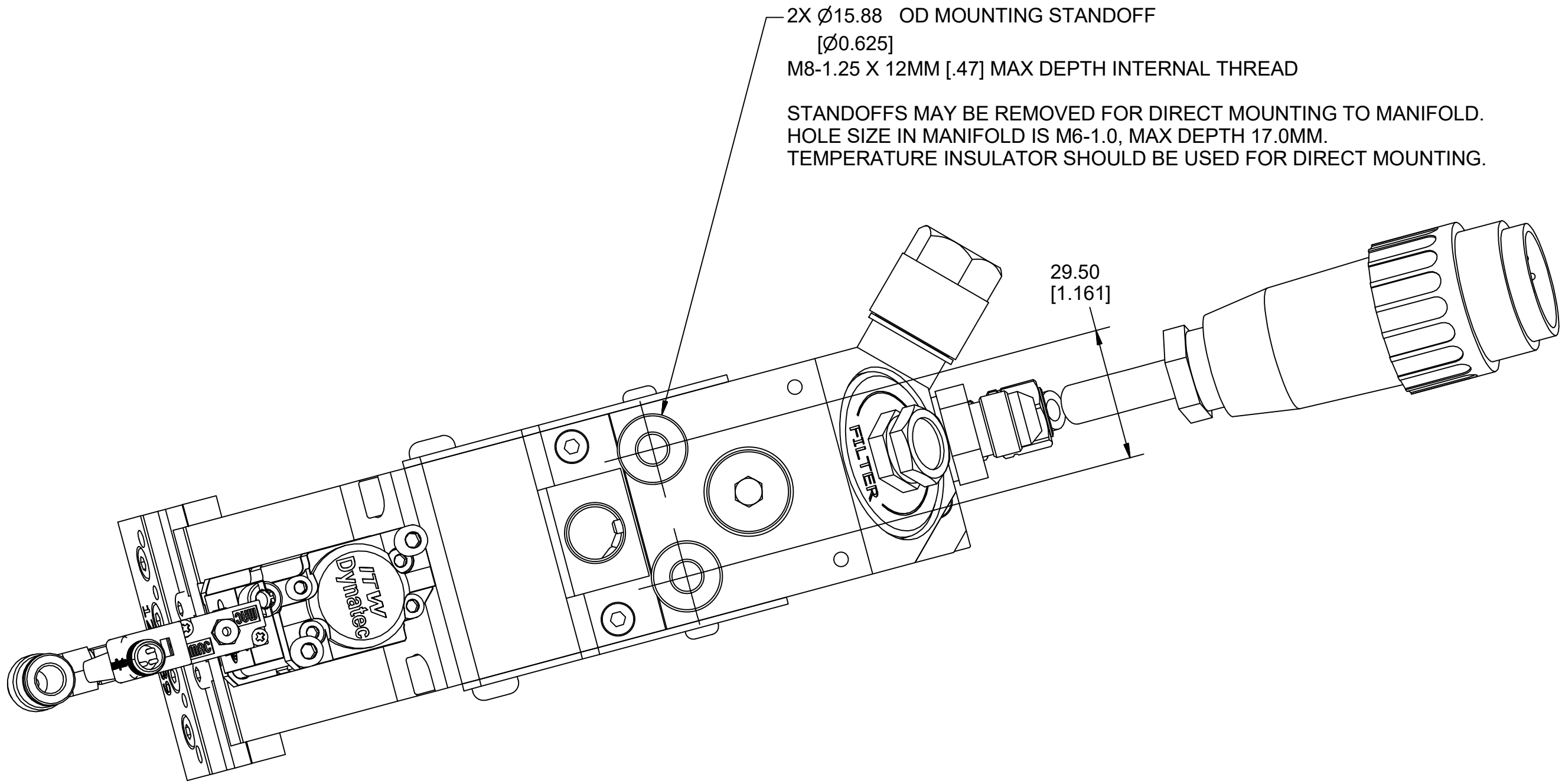
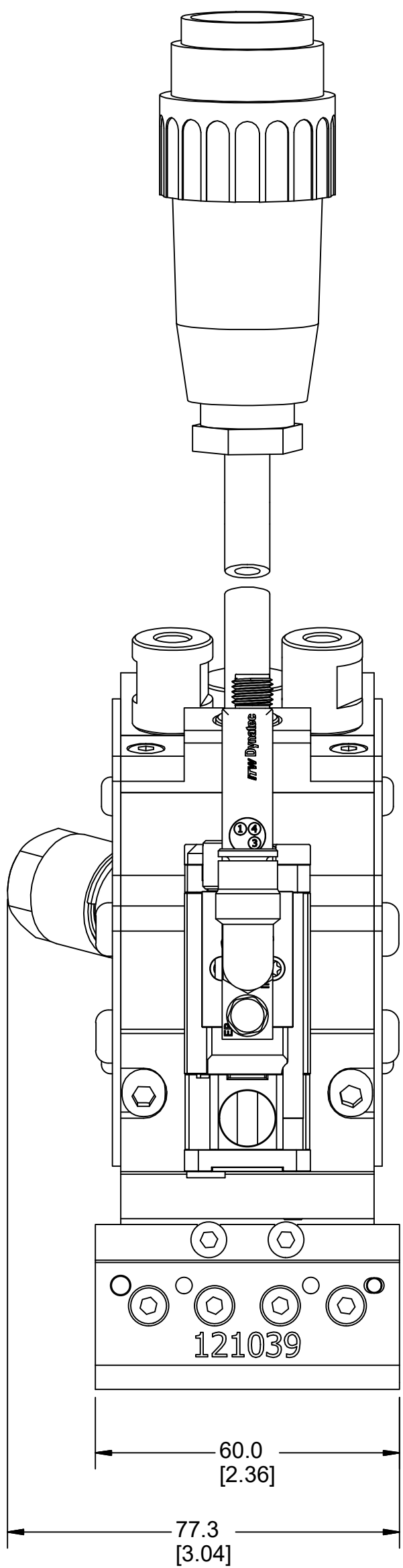
VIEW D
SHOWN WITH OPTIONAL STRAND GUIDE
AND STRAND UNLOAD CYLINDER
MACHINE STOP CONDITION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (MM)DECIMALS (IN)DECIMALS ANGLES		FOR MACHINING STANDARDS AND SYMBOLS, SEE ITWDYNATEC SPEC: A05800		U/M
X ± 0.5 XX ± 0.25 XXX ± 0.10	XX ± 0.10 XXX ± .005	± .5		EA
USED ON	APPROVALS	DATE	LAYOUT, 1-PORT ULTRA APPLICATOR	
DRAWN	EWB	04MAR16		
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DO NOT SCALE DRAWING	SCALE 1:1	CAD DRAWING	SHEET 2 OF 3	GROUP

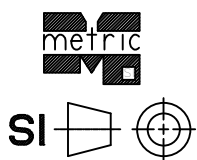
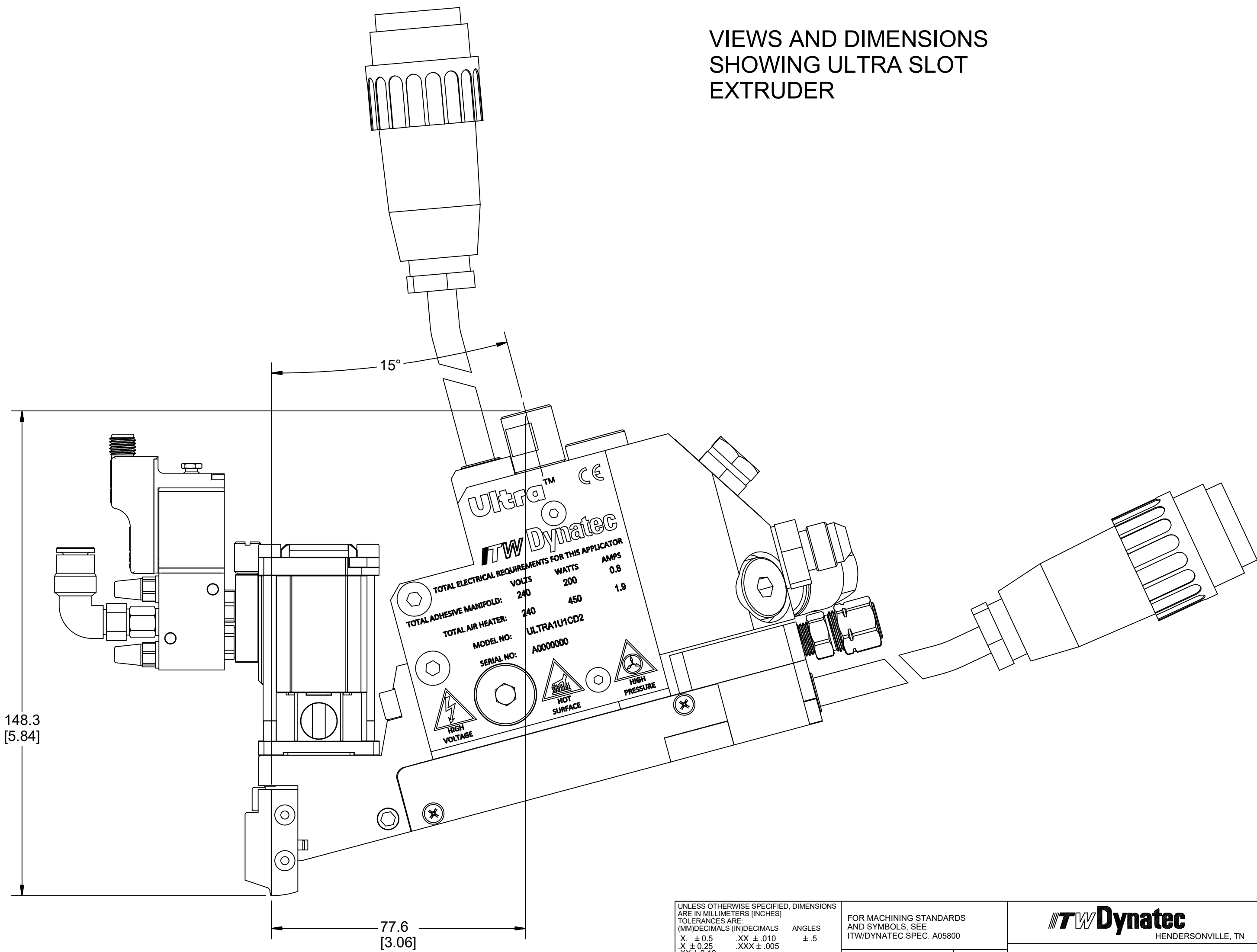




VIEW E
SCALE 1 / 2
INSTALLATION RECOMMENDATIONS
WITH ULTRA SLOT EXTRUDER



VIEWS AND DIMENSIONS
SHOWING ULTRA SLOT
EXTRUDER



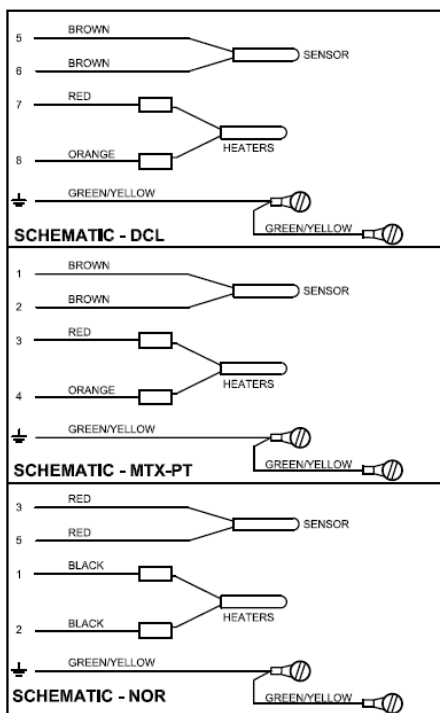
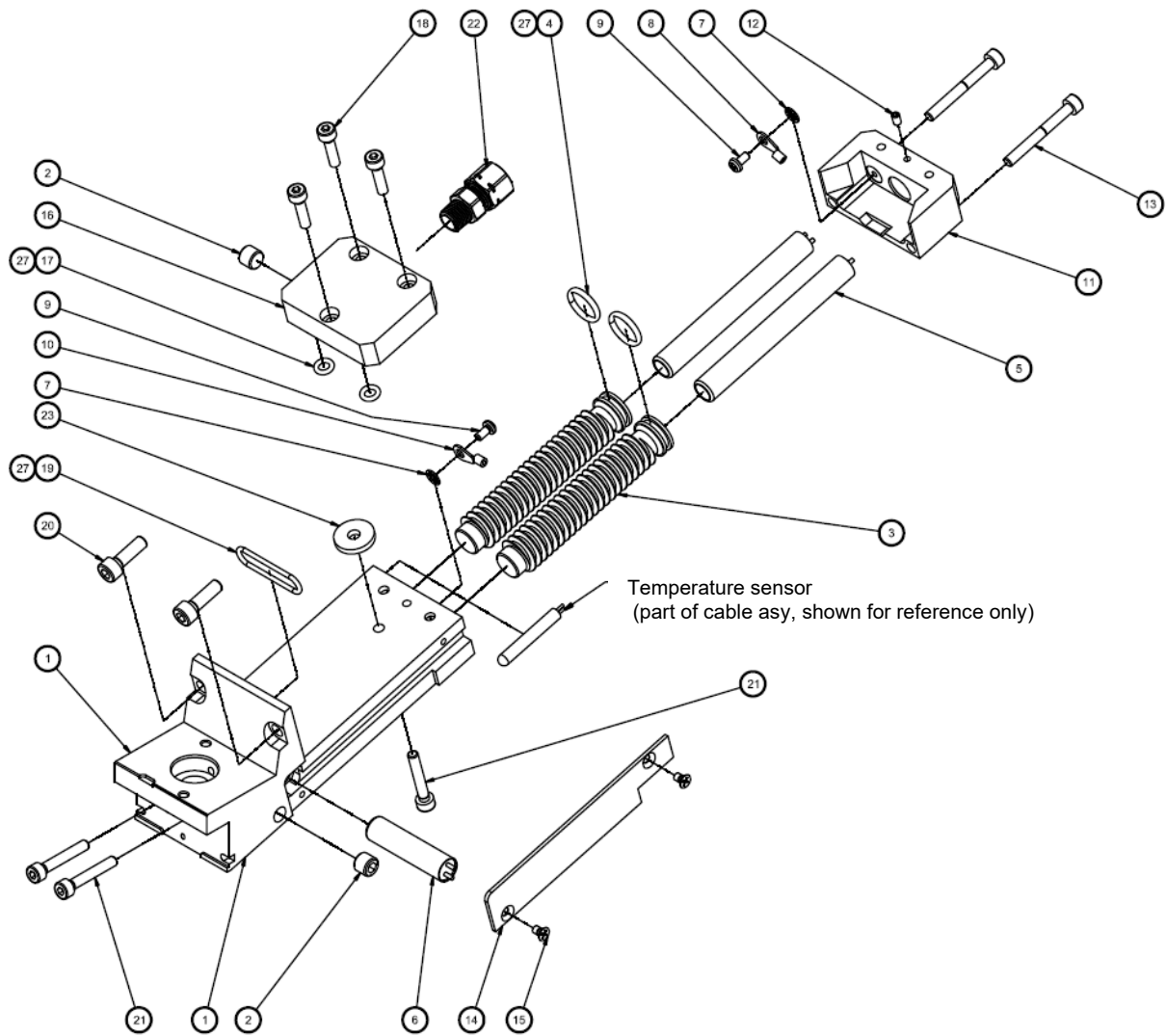
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (MM)DECIMALS (IN)DECIMALS ANGLES X ± 0.5 XX ± 0.10 ± 5 X ± 0.25 .XXX ± .005		FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC: A05800		ITW Dynatec HENDERSONVILLE, TN		U/M
USED ON		APPROVALS		DATE		EA
NEXT ASSY.		DRAWN EWB		04MAR16		STATUS
DO NOT SCALE DRAWING		CHECKED		COMPUTER DESCRIPTION(24 CHARACTERS)		SOURCE
		SIZE DWG NO.		REV		GROUP
		D 120474		D		
SCALE 1:1		CAD DRAWING		SHEET 3 OF 3		

8.1.1 Module-Manifold Assembly, 1-Port, Ultra stackable, PN 122796

Item No.	Part Number	Description	Quantity
1	122797	Module manifold 1-port, Ultra stackable	1
2	N01124	Fitting, plug 1/16-27 NPT	2
3	119988	Spiral tube 85mm	2
4	N00181	O-ring 017	2
5	119989	Heater cartridge Ø10x80mm, 150W, 240V	2
6	106444	Heater cartridge Ø10x40mm, 150W, 240V	1
7	078C088	Lock washer #4	2
8	048G016	Terminal, ring, #6	1
9	101627	Screw M3x6mm	2
10	N07430	Terminal, ring, #6	1
11	122597	Wire cover, rear	1
12	103470	Screw M3x5mm	1
13	101692	Screw M4x35mm	2
14	121122	Wire cover, side	1
15	106239	Screw M3x5mm	2
16	122598	Air manifold	1
17	N00175	O-ring 008	2
18	106328	Screw M4x16mm	3
19	N00187	O-ring 020	1
20	119015	Screw M5x16mm	2
21	100908	Screw M4x25mm	3
22	120109	Fitting, connector, 5/16 tube x 1/8 NPT	1
23	803579	Spacer	1
24	048J271	Tubing, heat-shrink, PTFE, ID 0.15"	0.2ft
25	N01756	Terminal, parallel, 16-14 GA	2
26	N06989	Wire, NPC/PTFE, 18GA, 1000V, green/yellow	0.5ft
27	001U002	Lubricant, silicone, DOW112	A/R*

A/R* = As required.

NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.



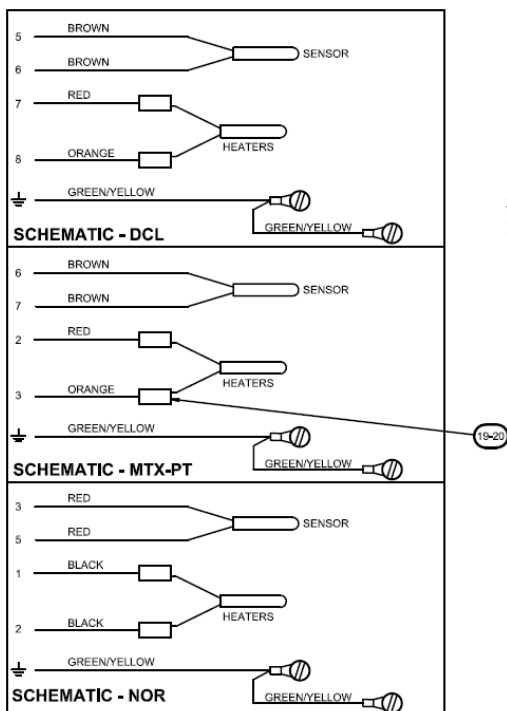
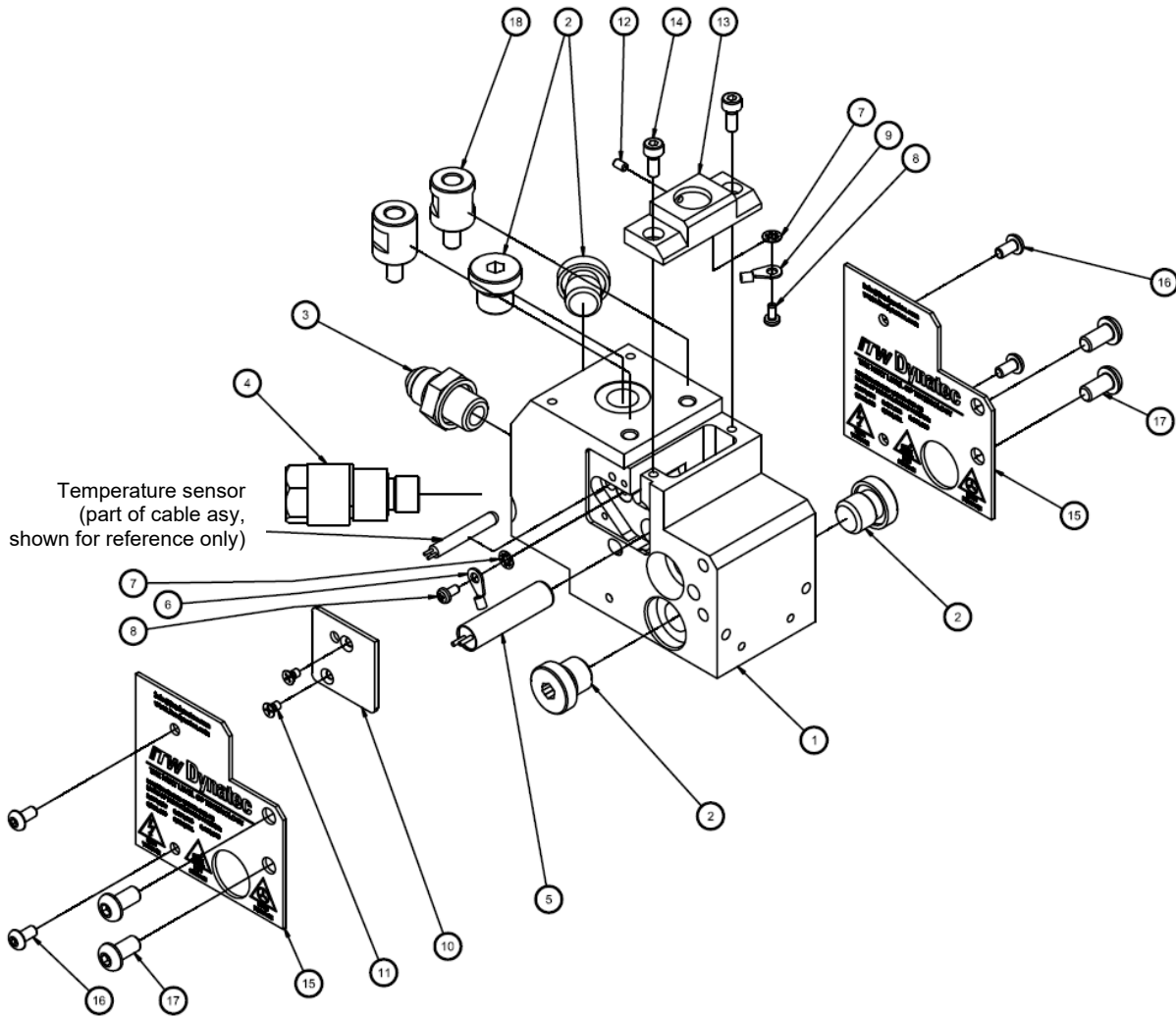
Schematics are for reference only.
Final connections are at next assembly.

Illustration: Module-Manifold Assembly, 1-Port, Ultra stackable, PN 122796

8.1.2 Service Block Assembly, 2-Port (also for 1-Port), Ultra stackable, PN 122592

Item No.	Part Number	Description	Quantity
1	122591	Service block, 2-port, Ultra stackable (also for 1-port)	1
2	101625	Plug G1/4 (BSPP)	4
3	101624	Fitting 1/4 BSPP x #6 JIC male	1
4	107820	Purge valve assembly	1
5	803960	Heater cartridge 10x40mm, 200W, 240V	1
6	N07430	Terminal, ring, #6, 16-22 GA	1
7	078C088	Lock washer #4	2
8	101627	Screw M3x6mm	2
9	048G016	Terminal, ring, #6, 14-18 GA	1
10	121683	Side cover	1
11	106239	Screw M3x5mm	2
12	103470	Screw M3x5mm	1
13	122593	Wire cover	1
14	102446	Screw M4x10mm	2
15	121130	End cover	2
16	107161	Screw M4x8mm	4
17	120719	Screw M6x12mm	4
18	120115	Adapter M6xM8	2
19	N01756	Terminal, parallel, 16-14 GA	2
20	048J271	Heat-shrink tubing, PTFE, 0.15"ID	0.2ft
21	N06989	Wire, NPC/PTFE, 18GA, 1000V, green/yellow	0.2ft

NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.

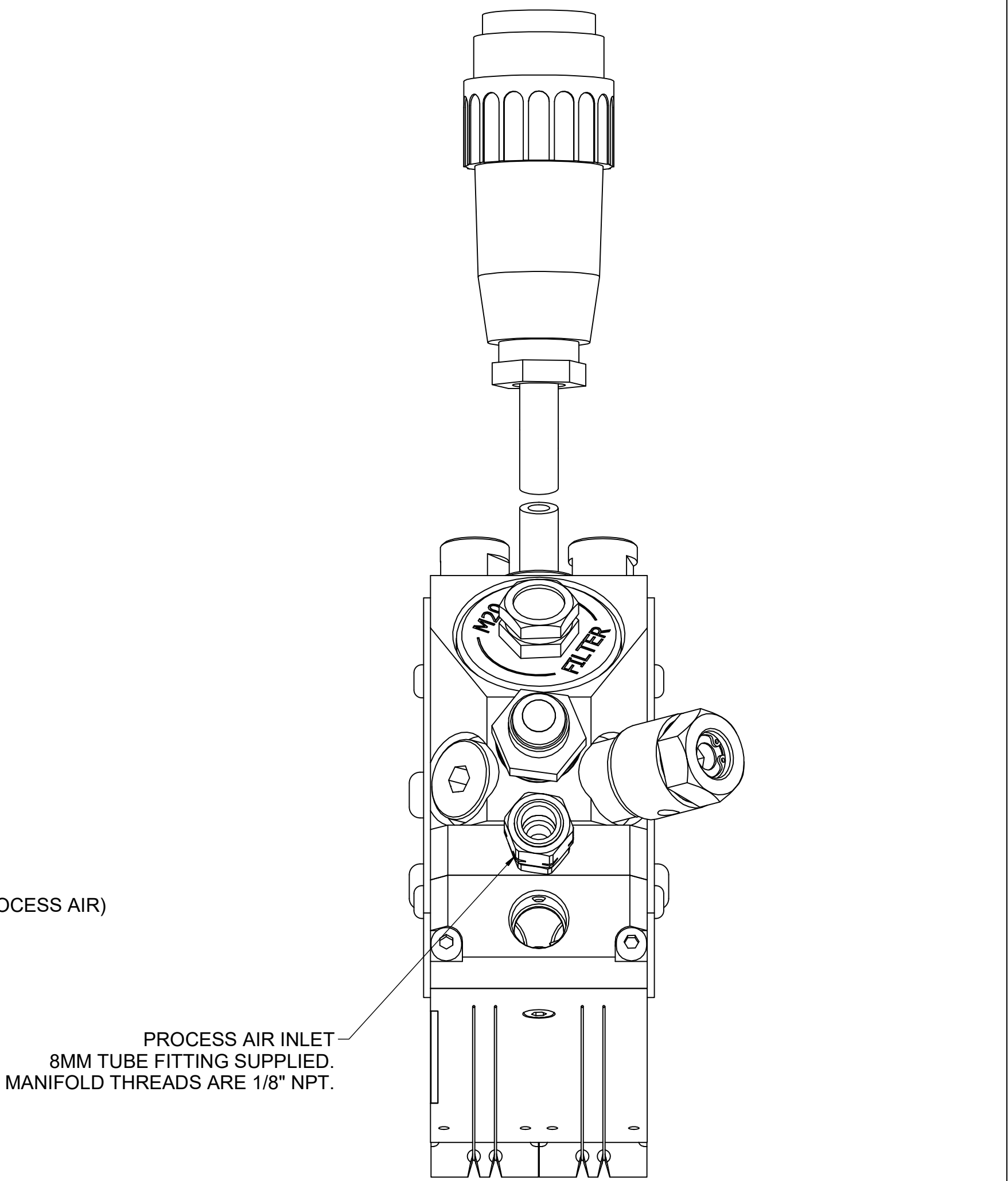
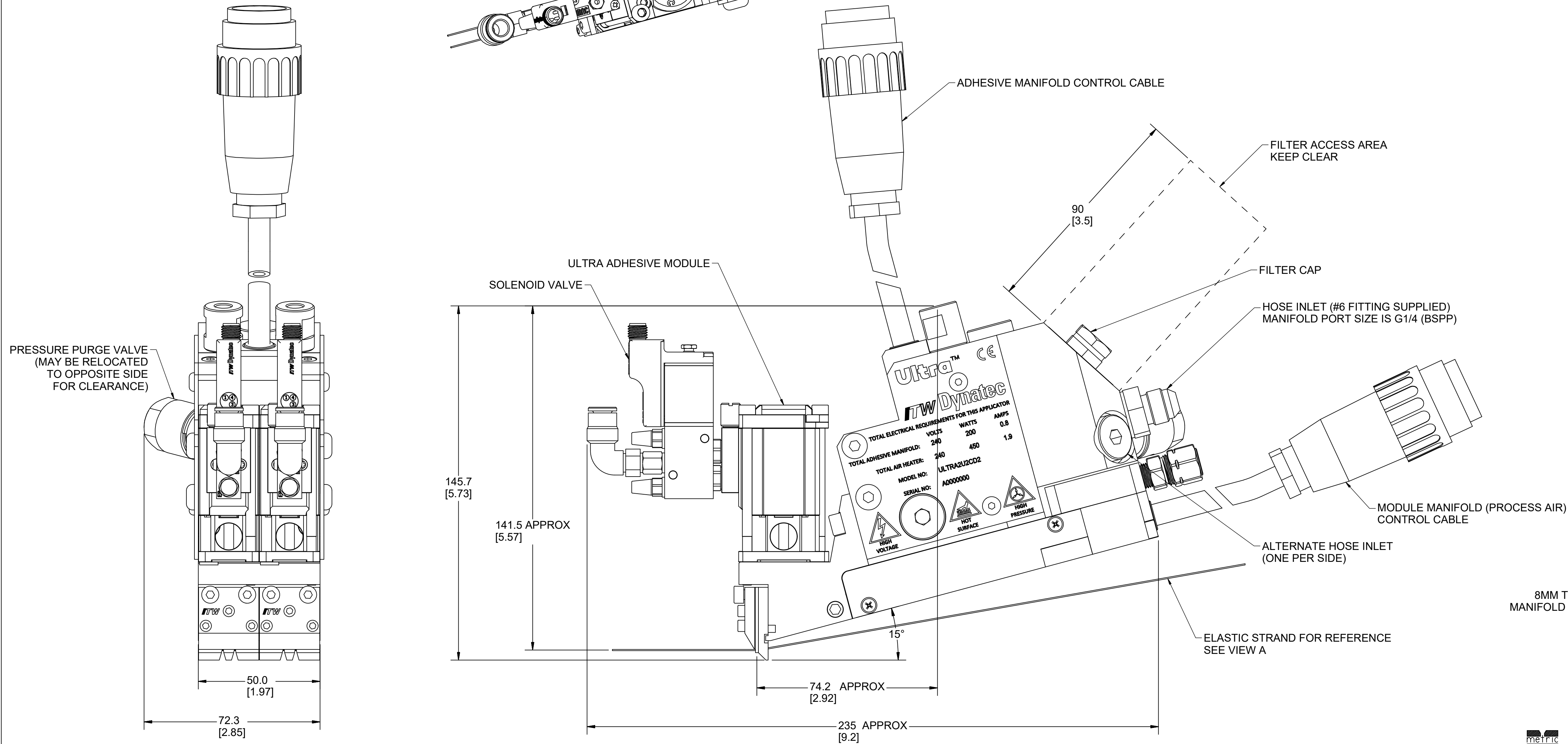
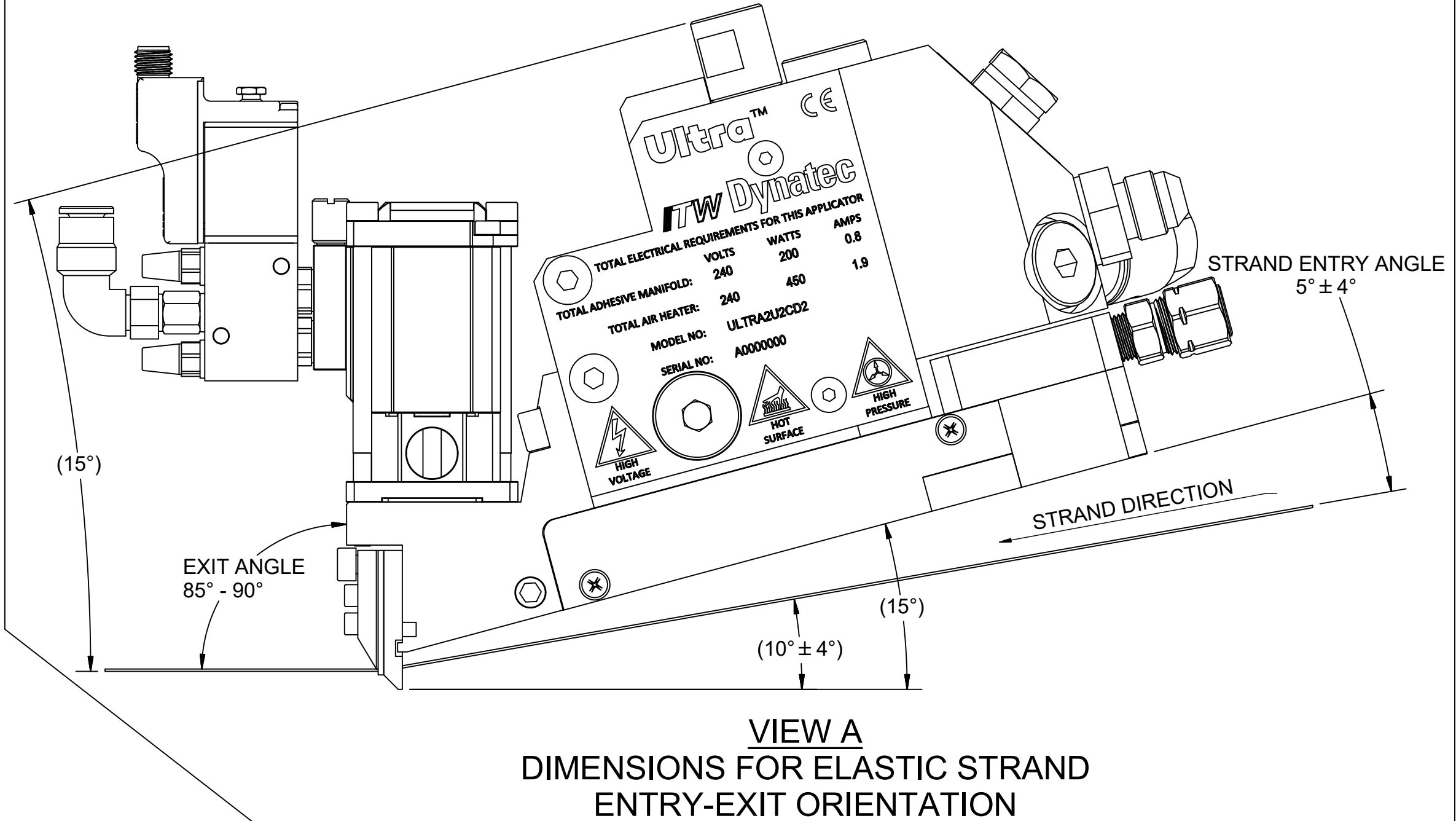
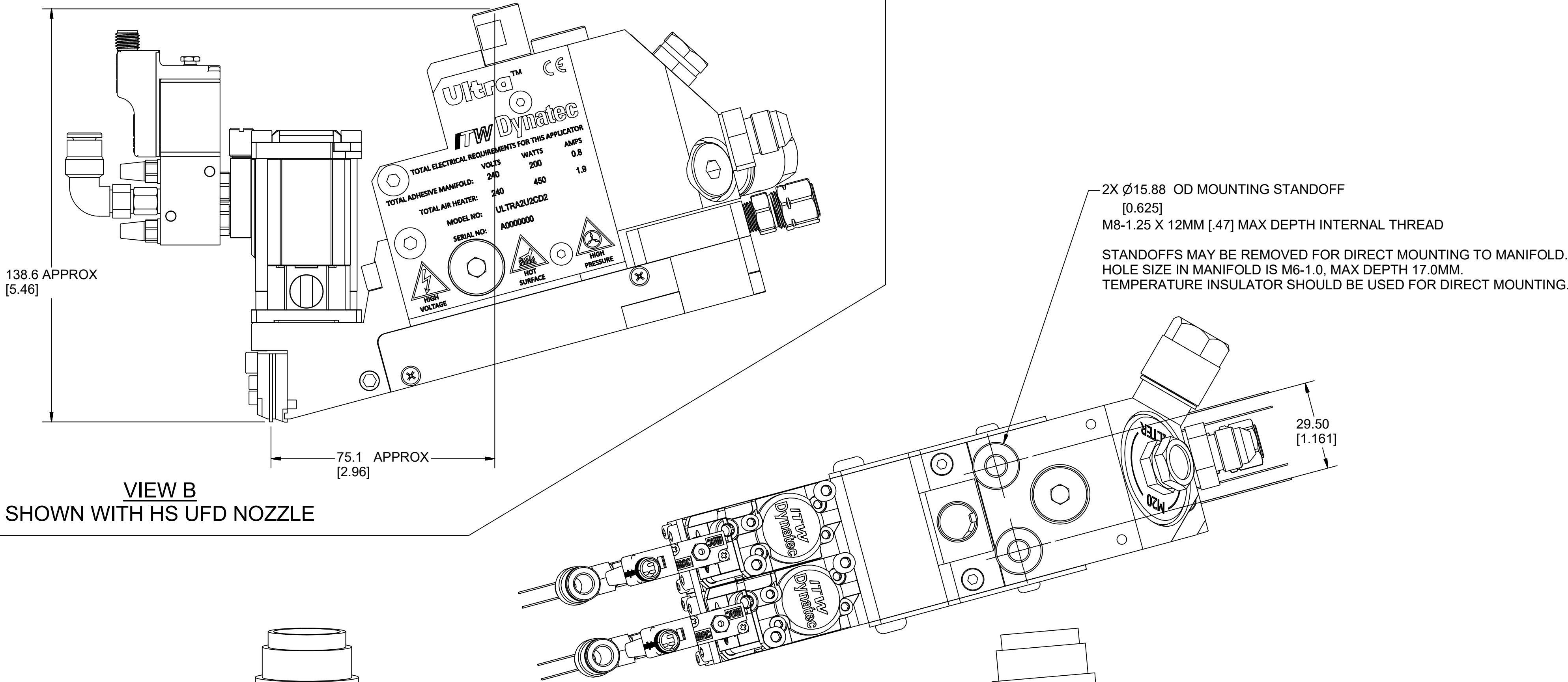


Schematics are for reference only.
Final connections are at next assembly.

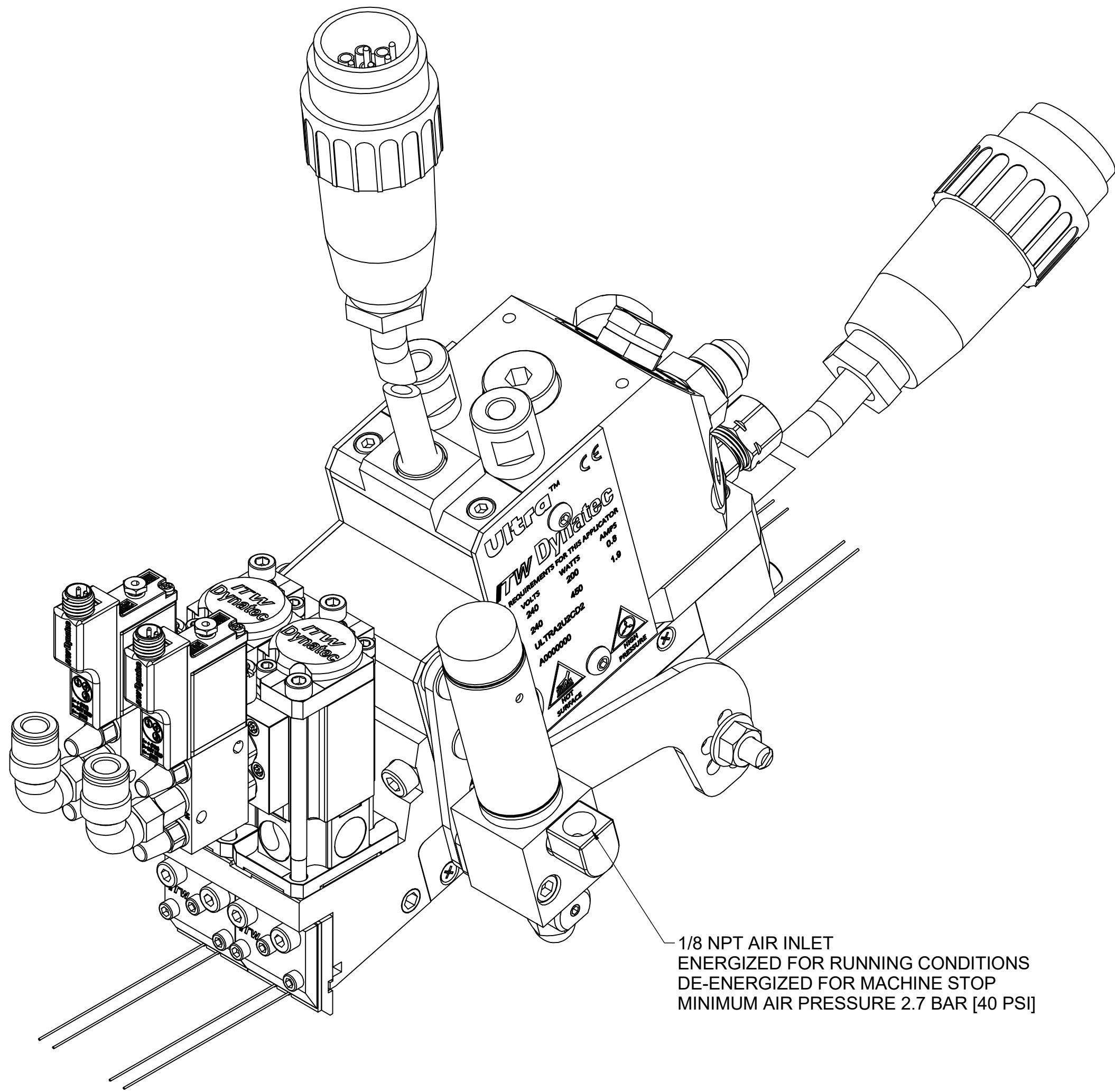
Illustration: Service Block Assembly, 2-Port (also for 1-Port), Ultra stackable, PN 122592

8.2 2-Port ULTRALINK Applicator, Layout, PN 120475

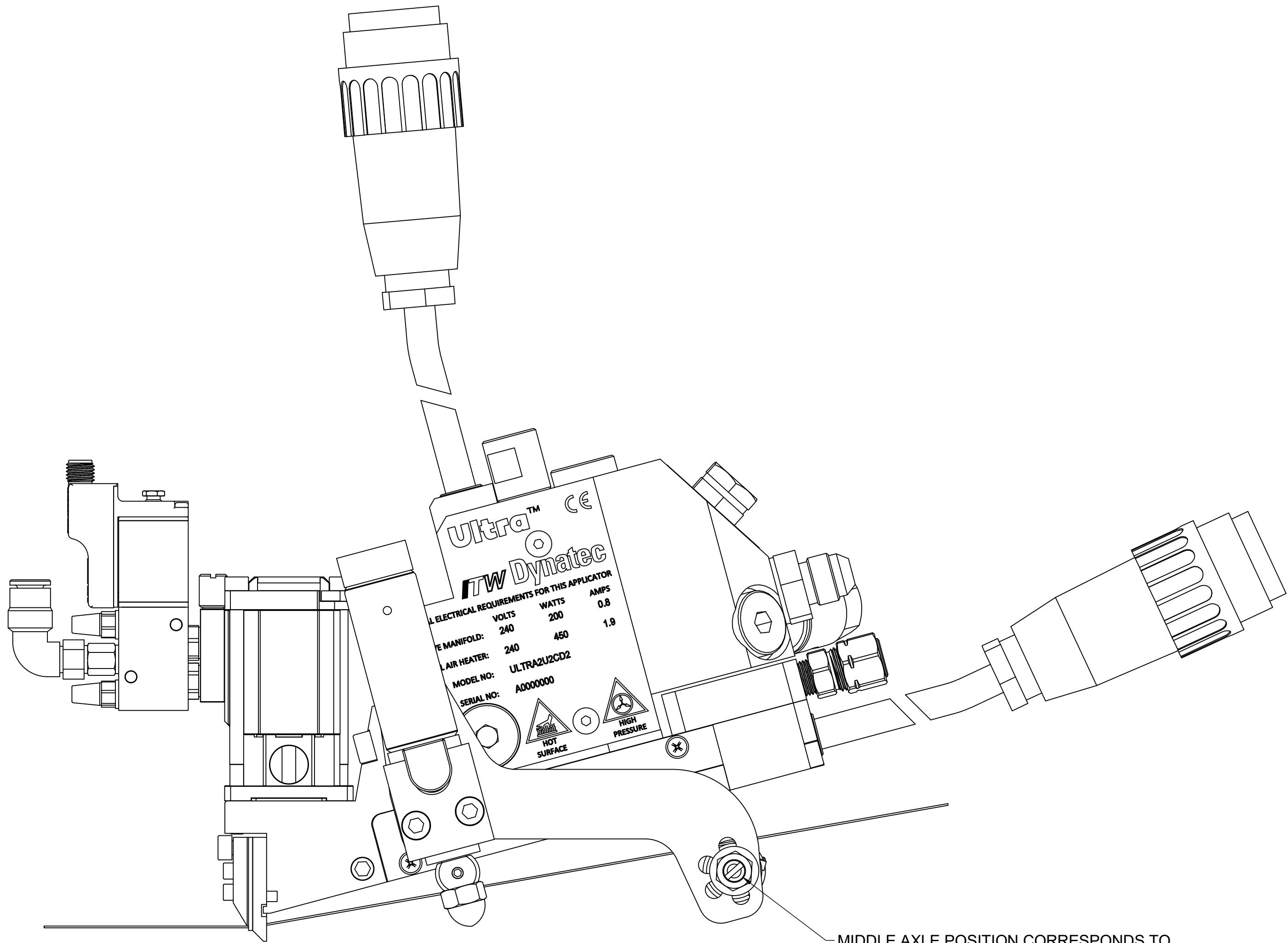
REVISIONS					
REL	REV	DESCRIPTION	DATE	BY	APPROVED
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C468	B	ADD SHEET 2	16JAN17	EWB	
18026	C	SHT 1: REVISE STRAND ANGLES; ADD SHEET 3	27FEB18	EWB	
ECN667	D	REVISE DRAWING VIEWS FOR STACKABLE DESIGN	16OCT19	EWB	



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (MM)DECIMALS (IN)DECIMALS. SEE ITW/DYNATEC SPEC: A05800		FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC: A05800		U/M
X: ±0.5 Y: ±0.25 Z: ±0.10		XX: ±0.010 XXX: ±0.005		EA STATUS
USED ON		APPROVALS		SOURCE
NEXT ASSY:		DRAWN: EWB		REV
DO NOT SCALE DRAWING		DATE: 04MAR16		GROUP
		CHECKED: COMPUTER DESCRIPTION(24 CHARACTERS)		
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		SCALE: 1:1		
		CAD DRAWING		
		SHEET		
		1 OF 3		

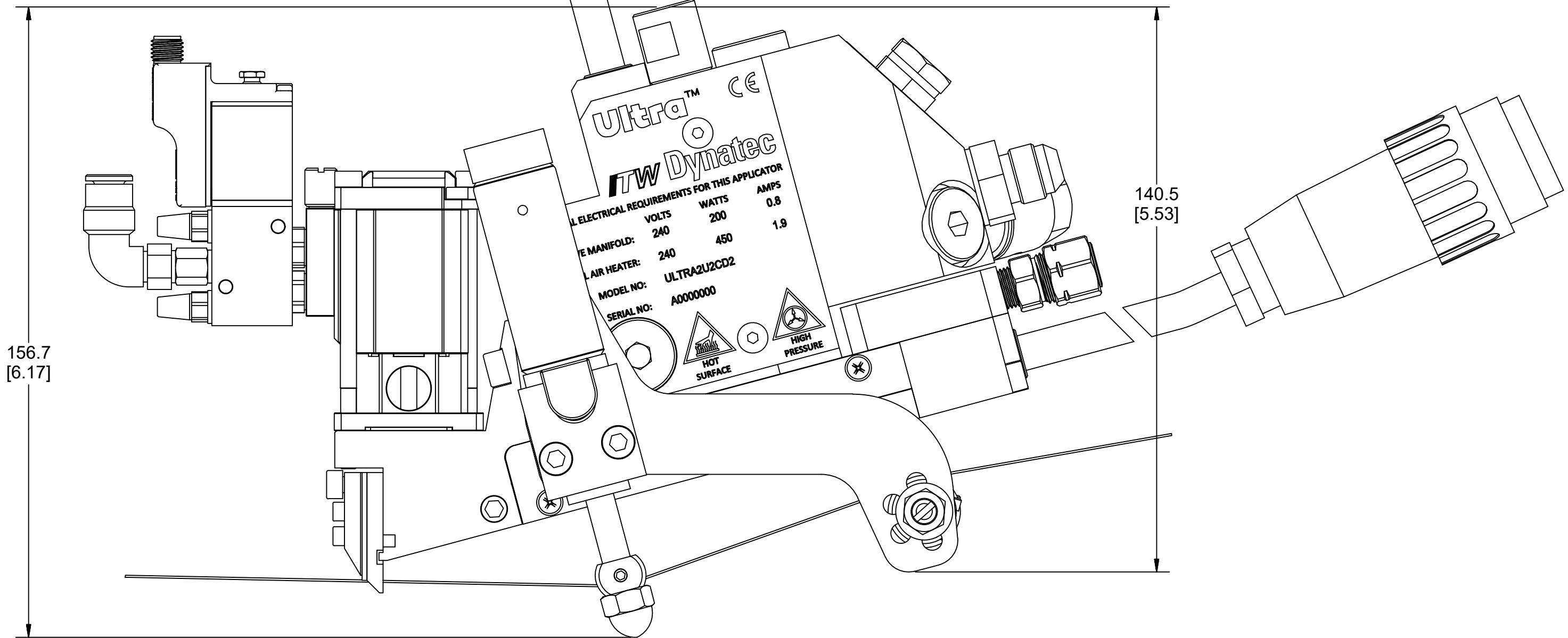


1/8 NPT AIR INLET
ENERGIZED FOR RUNNING CONDITIONS
DE-ENERGIZED FOR MACHINE STOP
MINIMUM AIR PRESSURE 2.7 BAR [40 PSI]



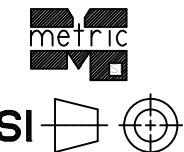
MIDDLE AXLE POSITION CORRESPONDS TO
RECOMMENDED DIMENSIONS ON SHEET 1.

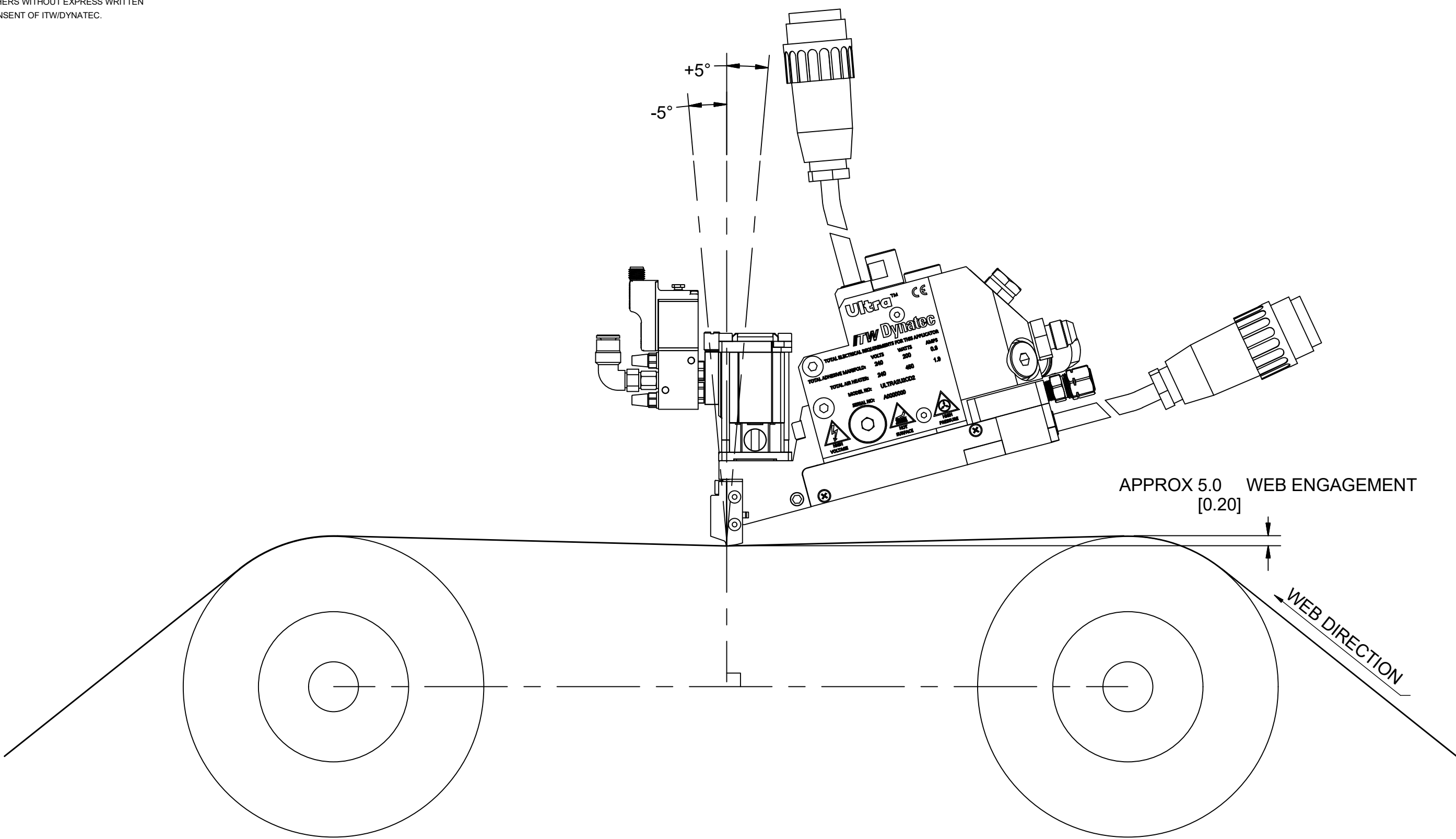
VIEW C
SHOWN WITH OPTIONAL STRAND GUIDE
AND STRAND UNLOAD CYLINDER
MACHINE RUNNING CONDITION



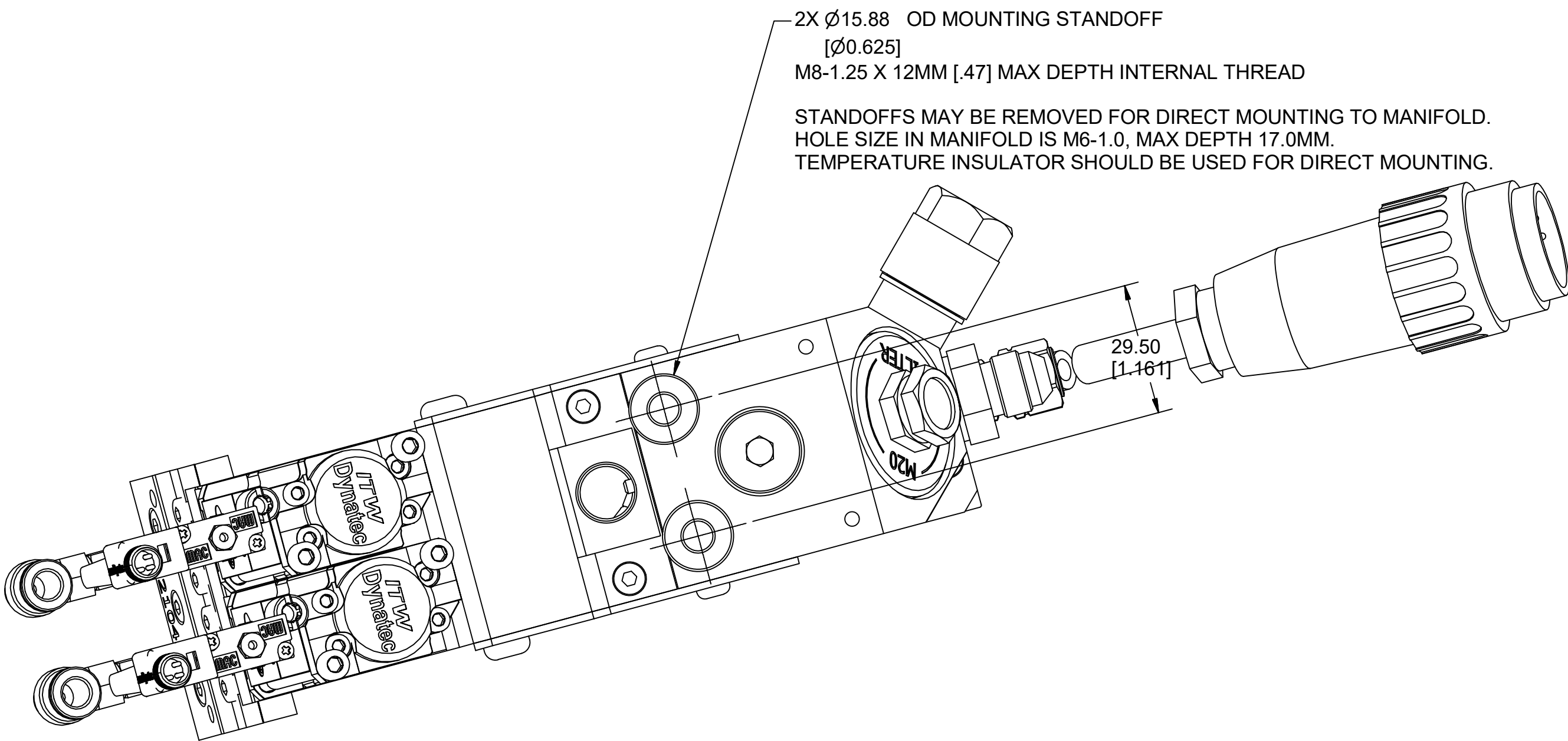
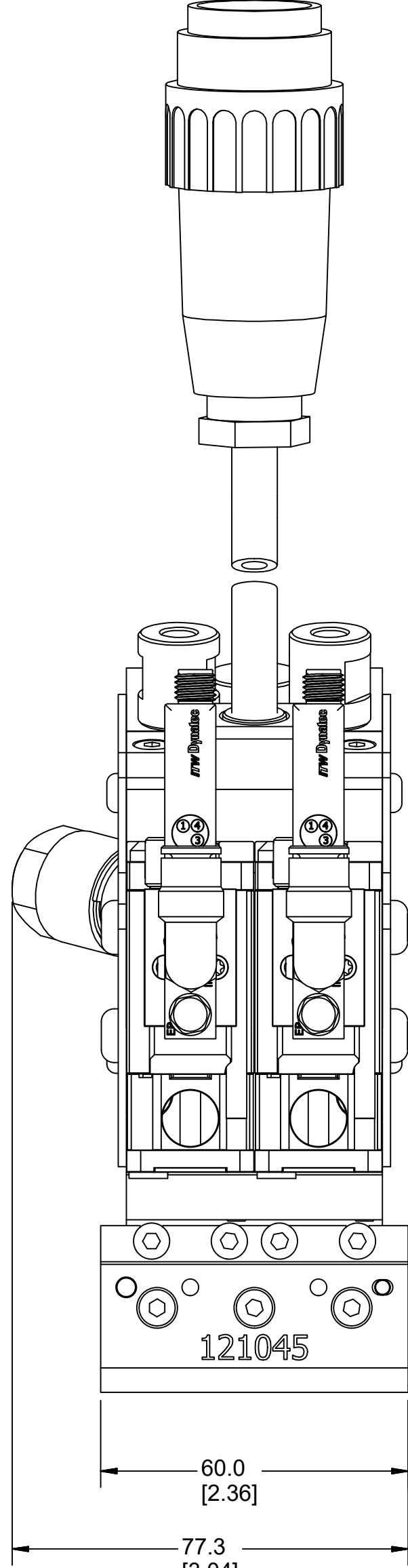
VIEW D
SHOWN WITH OPTIONAL STRAND GUIDE
AND STRAND UNLOAD CYLINDER
MACHINE STOP CONDITION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (NUMERICALS) (DECIMALS) ANGLES X ± 0.5 XX ± 0.10 ± 5 X ± 0.25 XX ± 0.05 XX ± 0.10 XXX ± .005		FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC. A05800		U/M
USED ON		APPROVALS	DATE	EA
NEXT ASSY.		DRAWN EWB	04MAR16	STATUS
DO NOT SCALE DRAWING		CHECKED	COMPUTER DESCRIPTION(24 CHARACTERS)	SOURCE
		SIZE D	DWG. NO. 120475	REV D
		SCALE 1:1	CAD DRAWING	SHEET 2 OF 3

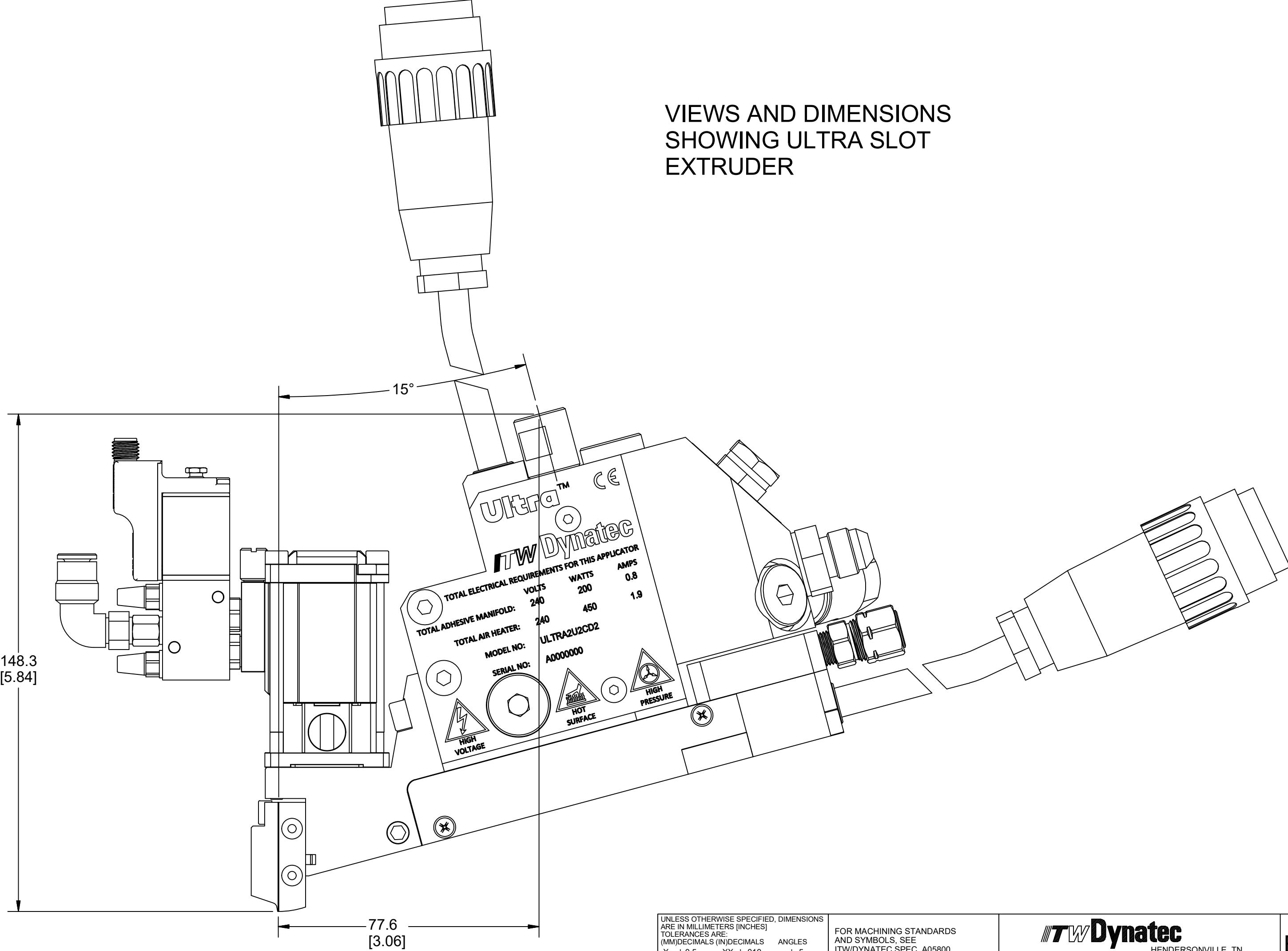




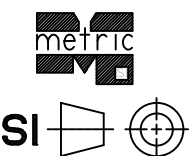
VIEW E
SCALE 1 / 2
INSTALLATION RECOMMENDATIONS
WITH ULTRA SLOT EXTRUDER



VIEWS AND DIMENSIONS
SHOWING ULTRA SLOT
EXTRUDER



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (MM)DECIMALS (INCHES) ANGLES X ± 0.5 XX ± 0.10 ± 5 X ± 0.25 XXX ± 0.05		FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC. A05800		ITW Dynatec HENDERSONVILLE, TN		U/M
DRAWN EWB		DATE 04MAR16		LAYOUT, 2-PORT		EA
CHECKED		COMPUTER DESCRIPTION(24 CHARACTERS)		SIZE DWG. NO. 120475		STATUS
DO NOT SCALE DRAWING		SCALE 1:1		CAD DRAWING		SOURCE
				SHEET 3 OF 3		GROUP

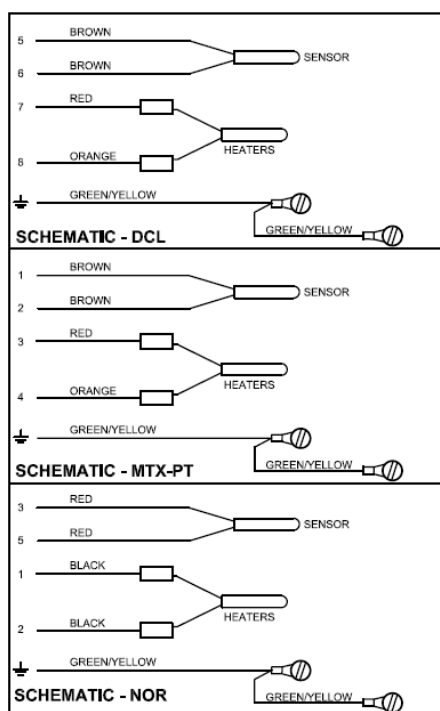
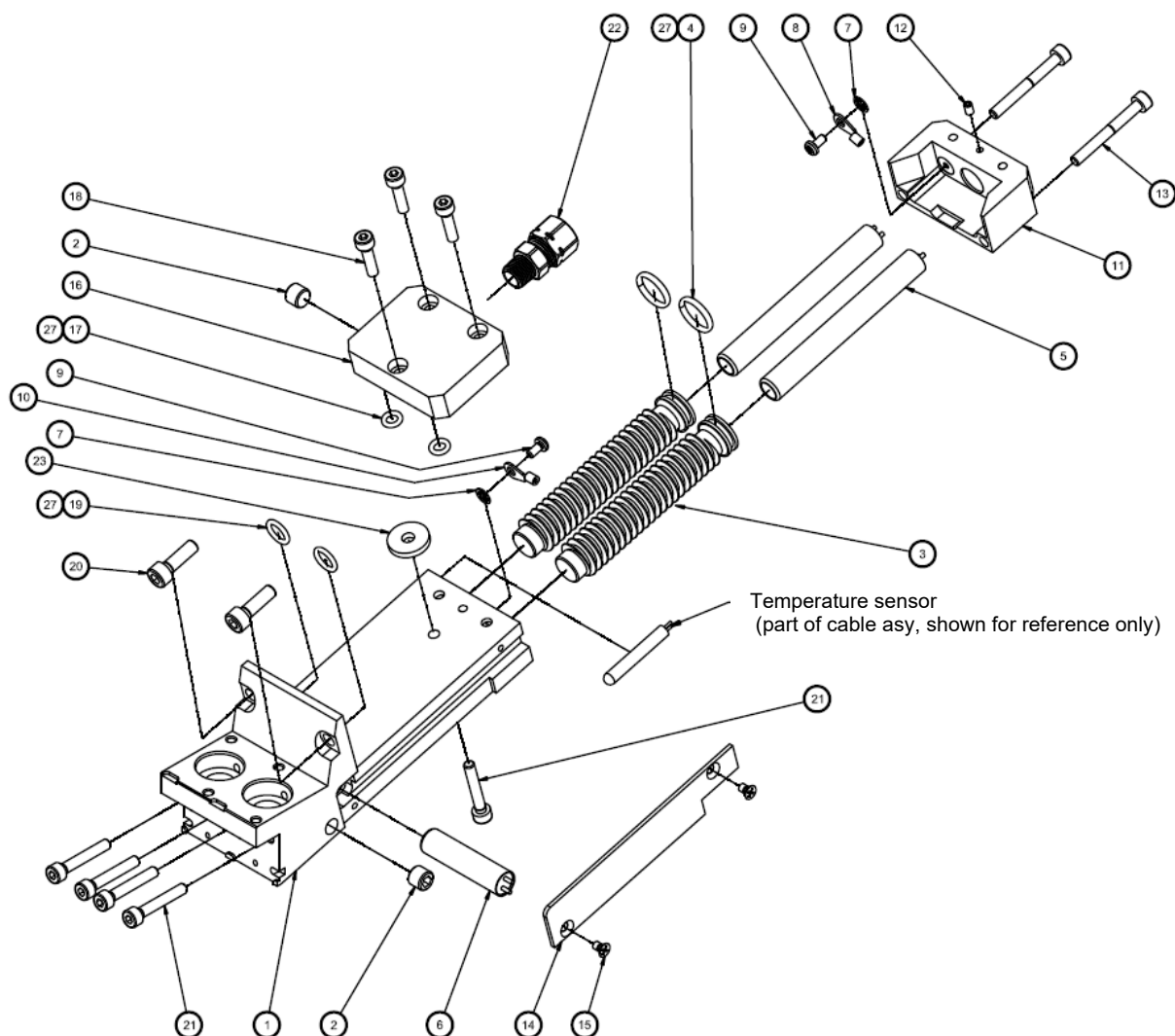


8.2.1 Module-Manifold Assembly, 2-Port, Ultra stackable, PN 122595

Item No.	Part Number	Description	Quantity
1	122596	Module manifold 2-port, Ultra stackable	1
2	N01124	Fitting, plug 1/16-27 NPT	2
3	119988	Spiral tube 85mm	2
4	N00181	O-ring 017	2
5	119989	Heater cartridge Ø10x80mm, 150W, 240V	2
6	106444	Heater cartridge Ø10x40mm, 150W, 240V	1
7	078C088	Lock washer #4	2
8	048G016	Terminal, ring, #6	1
9	101627	Screw M3x6mm	2
10	N07430	Terminal, ring, #6	1
11	122597	Wire cover, rear	1
12	103470	Screw M3x5mm	1
13	101692	Screw M4x35mm	2
14	121122	Wire cover, side	1
15	106239	Screw M3x5mm	2
16	122598	Air manifold	1
17	N00175	O-ring 008	2
18	106328	Screw M4x16mm	3
19	N00187	O-ring 020	2
20	119015	Screw M5x16mm	2
21	100908	Screw M4x25mm	5
22	120109	Fitting, connector, 5/16 tube x 1/8 NPT	1
23	803579	Spacer	1
24	N06989	Wire, NPC/PTFE, 18GA, 1000V, green/yellow	0.2ft
25	N01756	Terminal, parallel, 16-14 GA	2
26	048J271	Tubing, heat-shrink, PTFE, ID 0.15"	0.2ft
27	001U002	Lubricant, silicone, DOW112	A/R*

A/R* = As required.

NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.



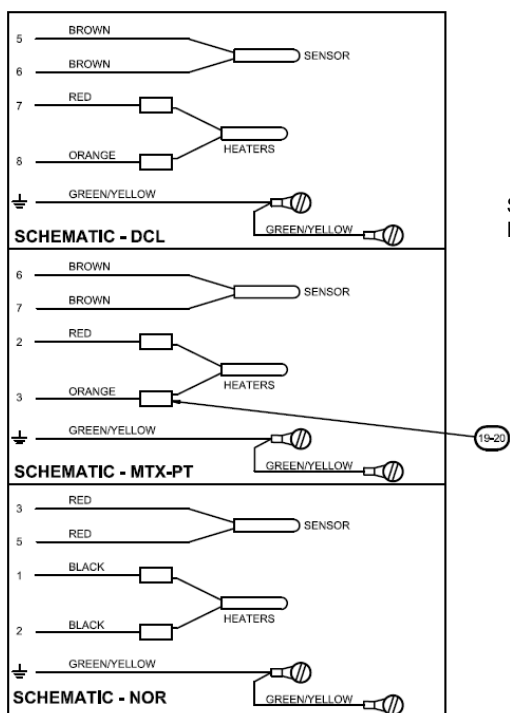
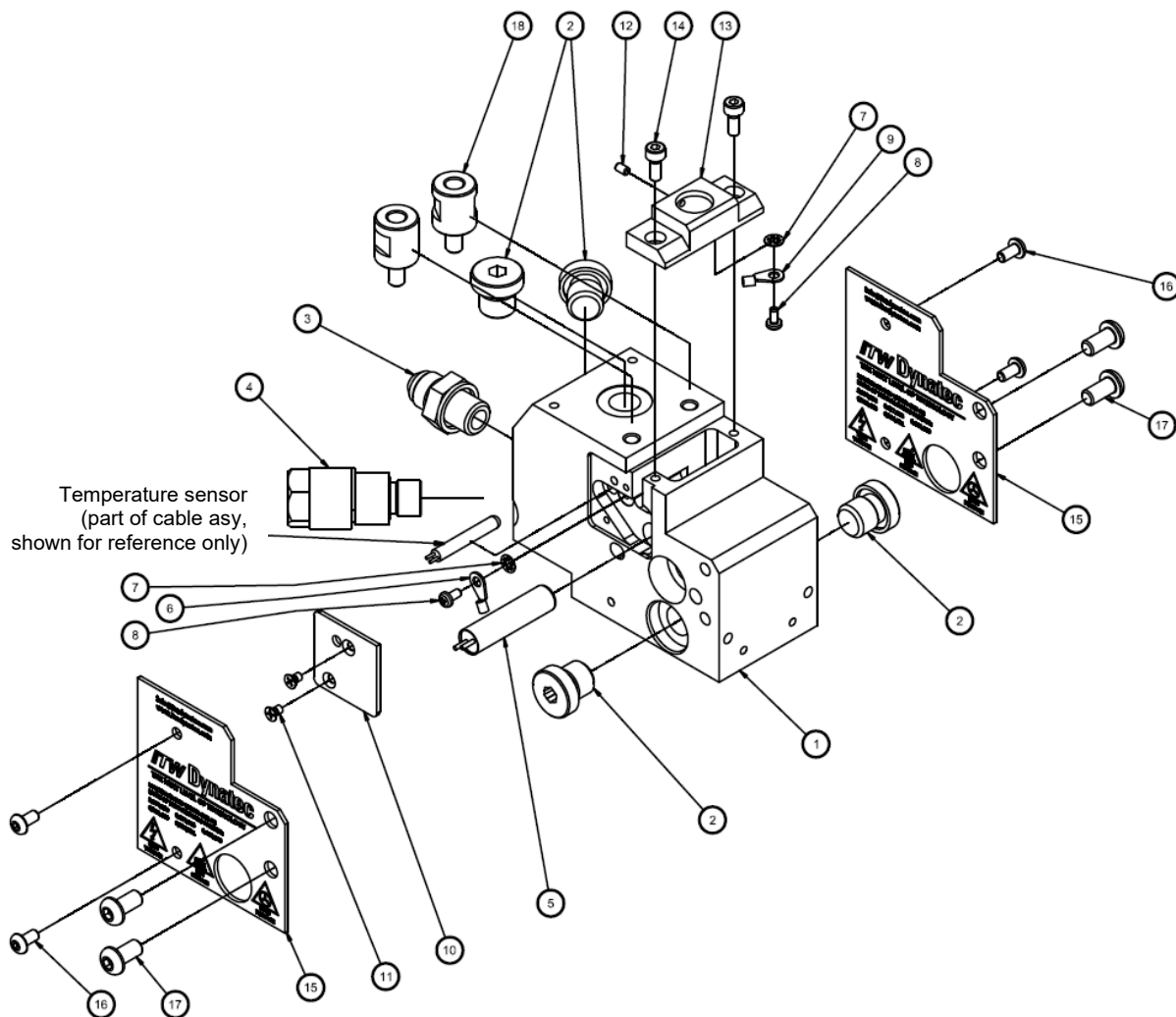
Schematics are for reference only.
Final connections are at next assembly.

Illustration: Module-Manifold Assembly, 2-Port, Ultra stackable, PN 122595

8.2.2 Service Block Assembly, 2-Port, Ultra stackable, PN 122592

Item No.	Part Number	Description	Quantity
1	122591	Service block, 2-port, Ultra stackable (also for 1-port)	1
2	101625	Plug G1/4 (BSPP)	4
3	101624	Fitting 1/4 BSPP x #6 JIC male	1
4	107820	Purge valve assembly	1
5	803960	Heater cartridge 10x40mm, 200W, 240V	1
6	N07430	Terminal, ring, #6, 16-22 GA	1
7	078C088	Lock washer #4	2
8	101627	Screw M3x6mm	2
9	048G016	Terminal, ring, #6, 14-18 GA	1
10	121683	Side cover	1
11	106239	Screw M3x5mm	2
12	103470	Screw M3x5mm	1
13	122593	Wire cover	1
14	102446	Screw M4x10mm	2
15	121130	End cover	2
16	107161	Screw M4x8mm	4
17	120719	Screw M6x12mm	4
18	120115	Adapter M6xM8	2
19	N01756	Terminal, parallel, 16-14 GA	2
20	048J271	Heat-shrink tubing, PTFE, 0.15"ID	0.2ft
21	N06989	Wire, NPC/PTFE, 18GA, 1000V, green/yellow	0.2ft

NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.

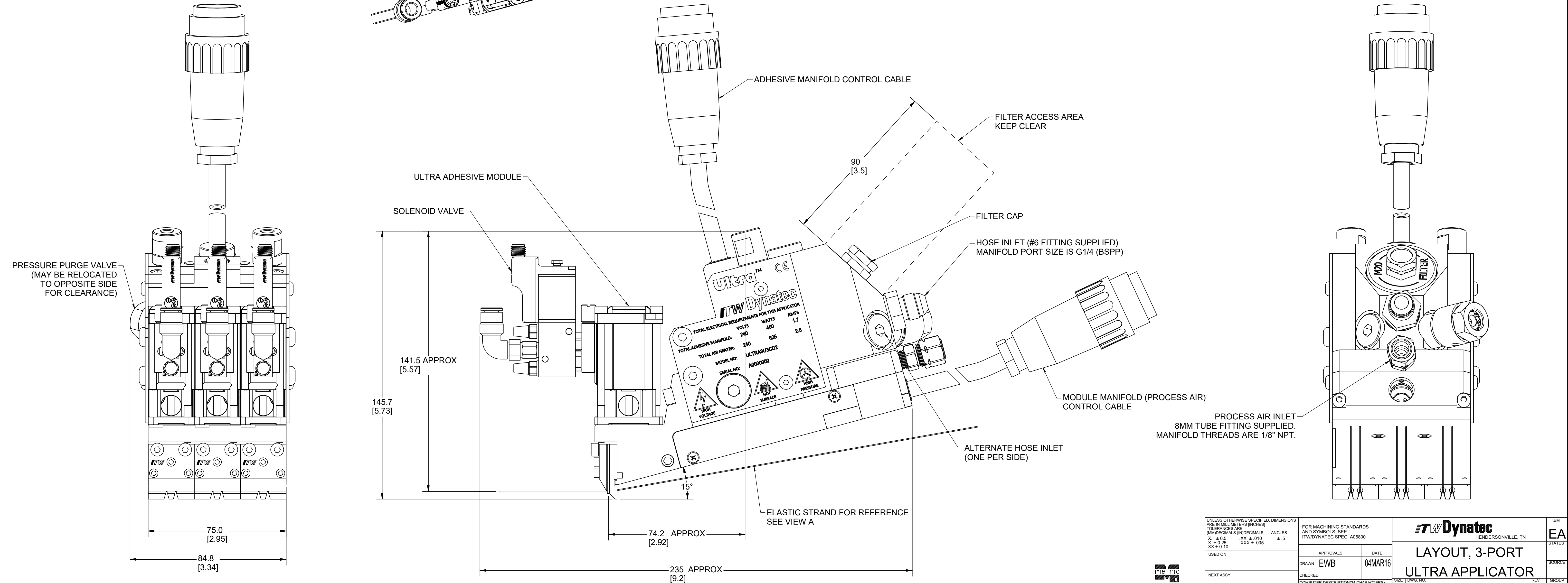
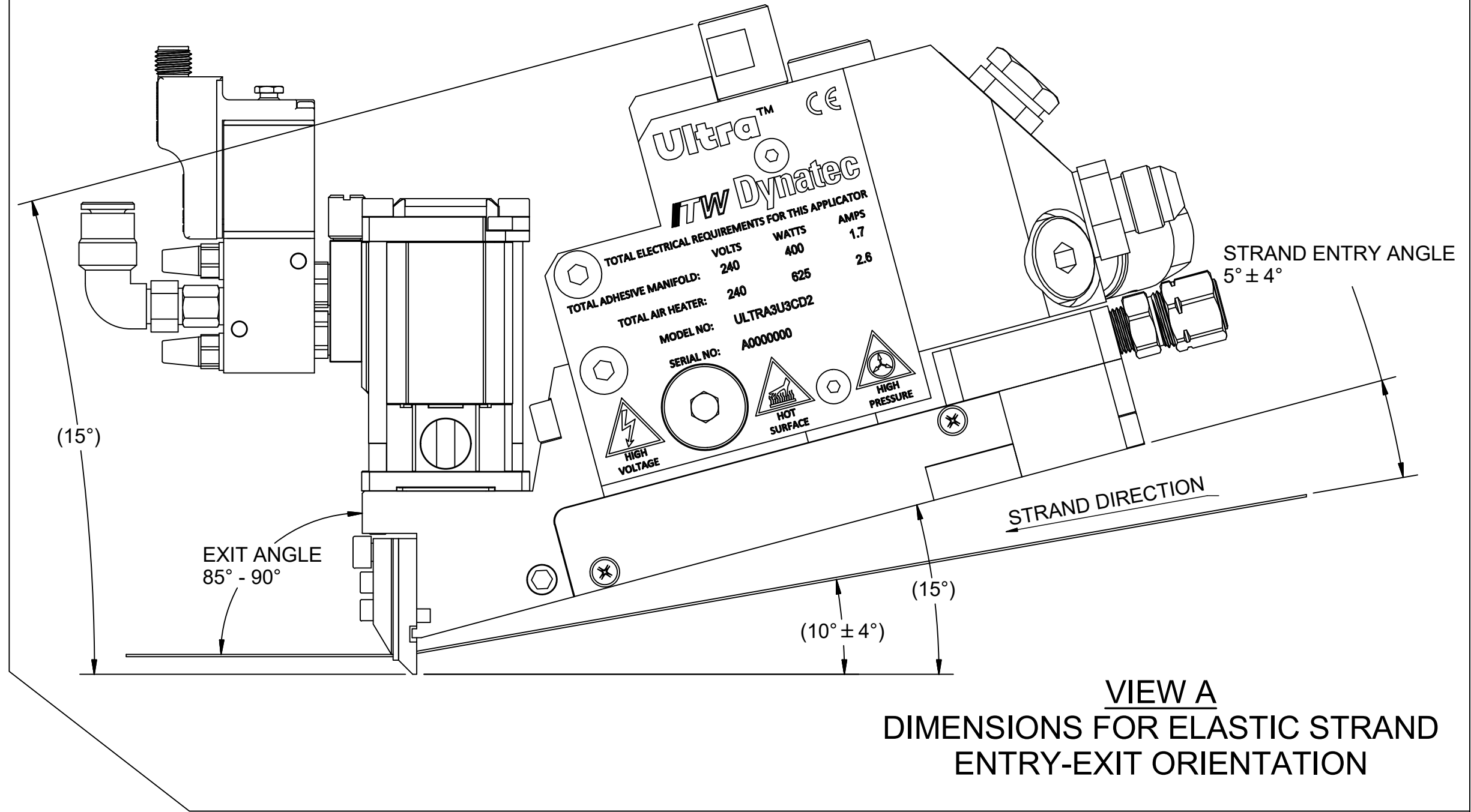
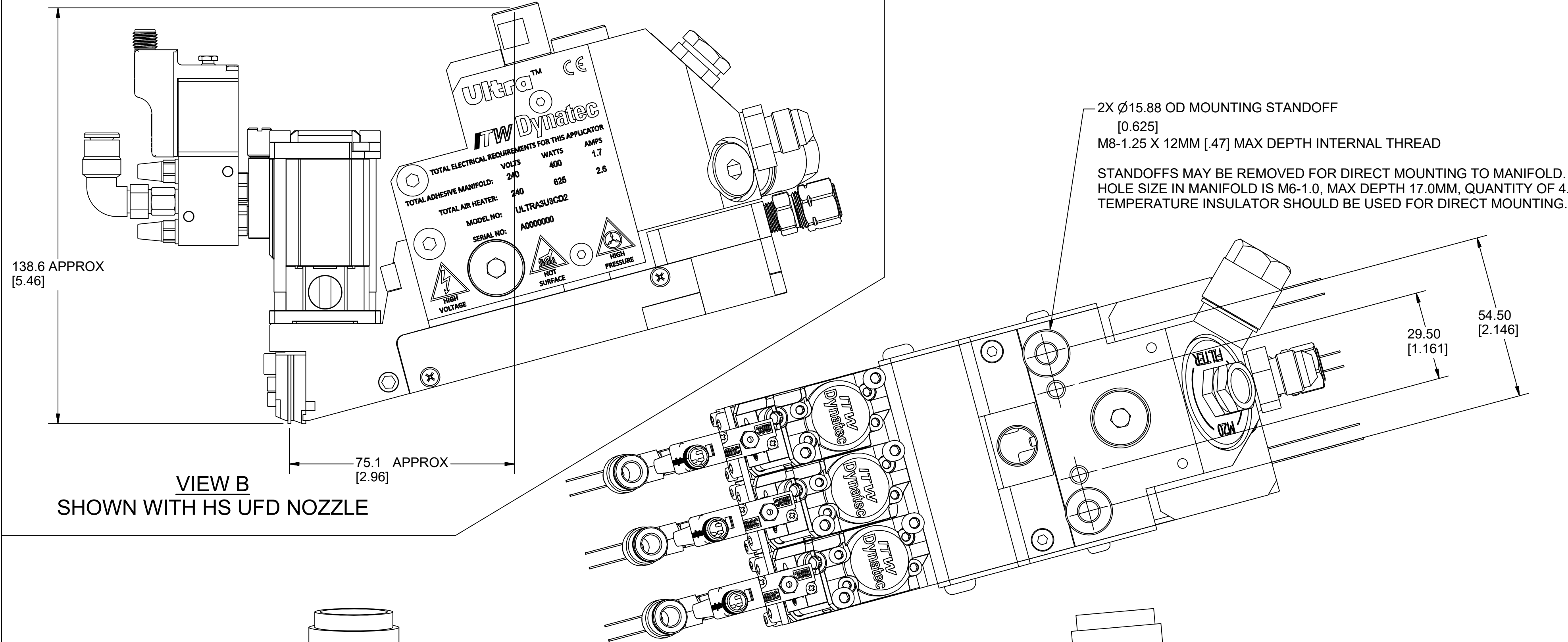


Schematics are for reference only.
Final connections are at next assembly.

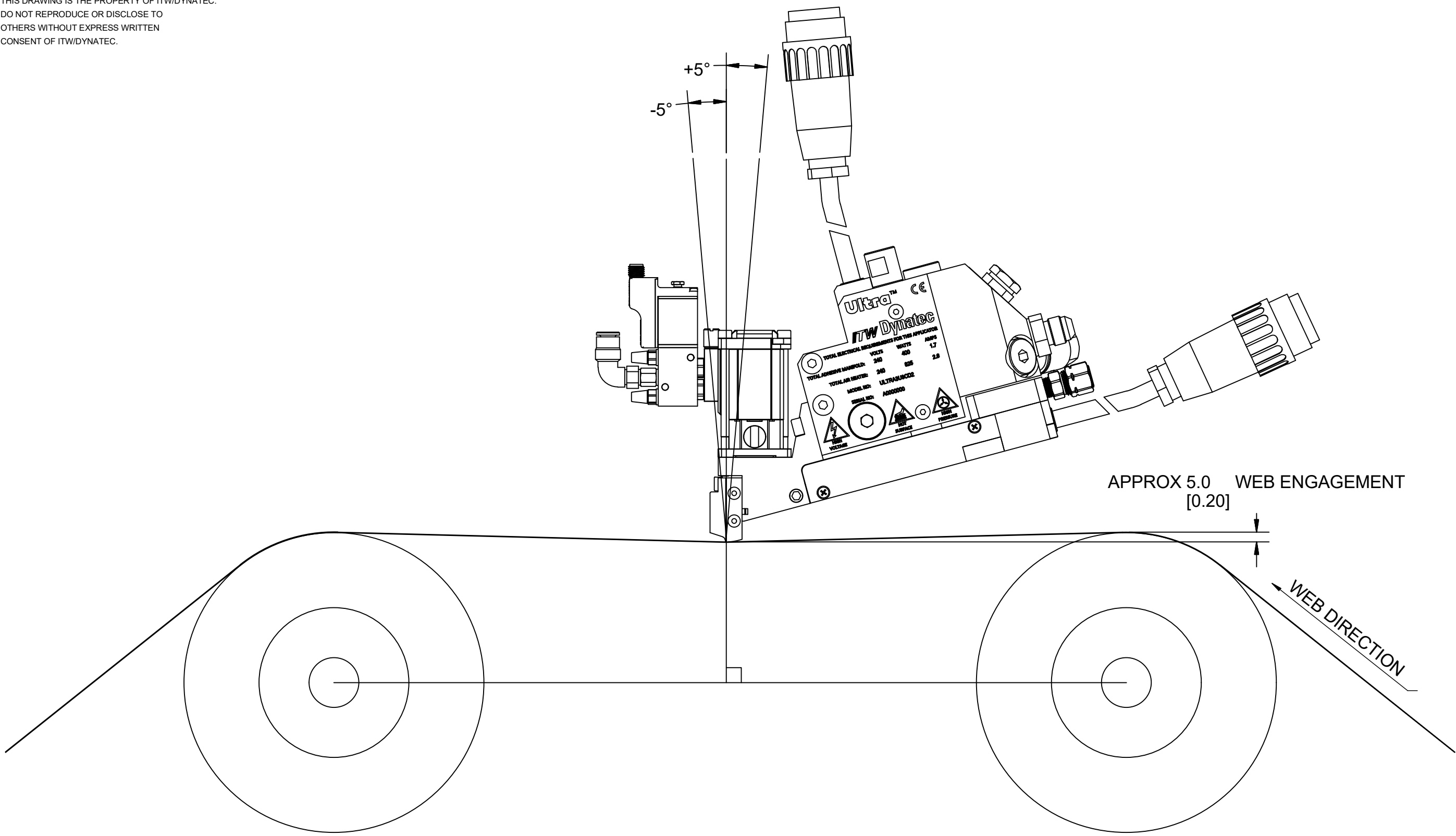
Illustration: Service Block Assembly, 2-Port (also for 1-Port), Ultra stackable, PN 122592

8.3 3-Port ULTRALINK Applicator, Layout, PN 120476

		REVISIONS				
REL	REV	DESCRIPTION	DATE	BY	APPROVED	
P1301	A	ORIGINAL RELEASE	04MAR16	EWB		
18026	B	SHT 1: REVISE STRAND ANGLES; ADD SHEET 2	28FEB18	EWB		
ECN667	C	REVISE DRAWING VIEWS FOR STACKABLE DESIGN	21OCT19	EWB		

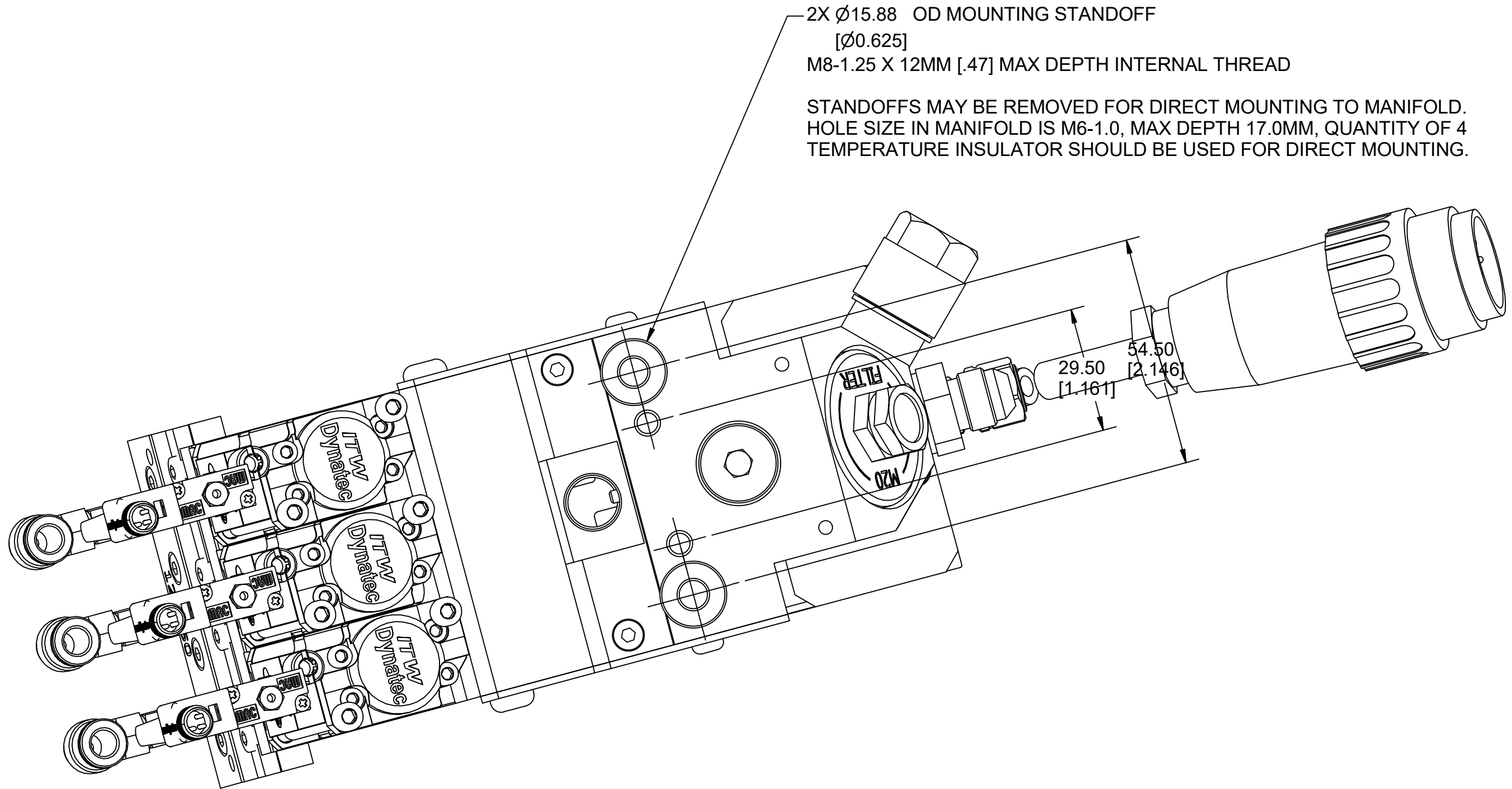
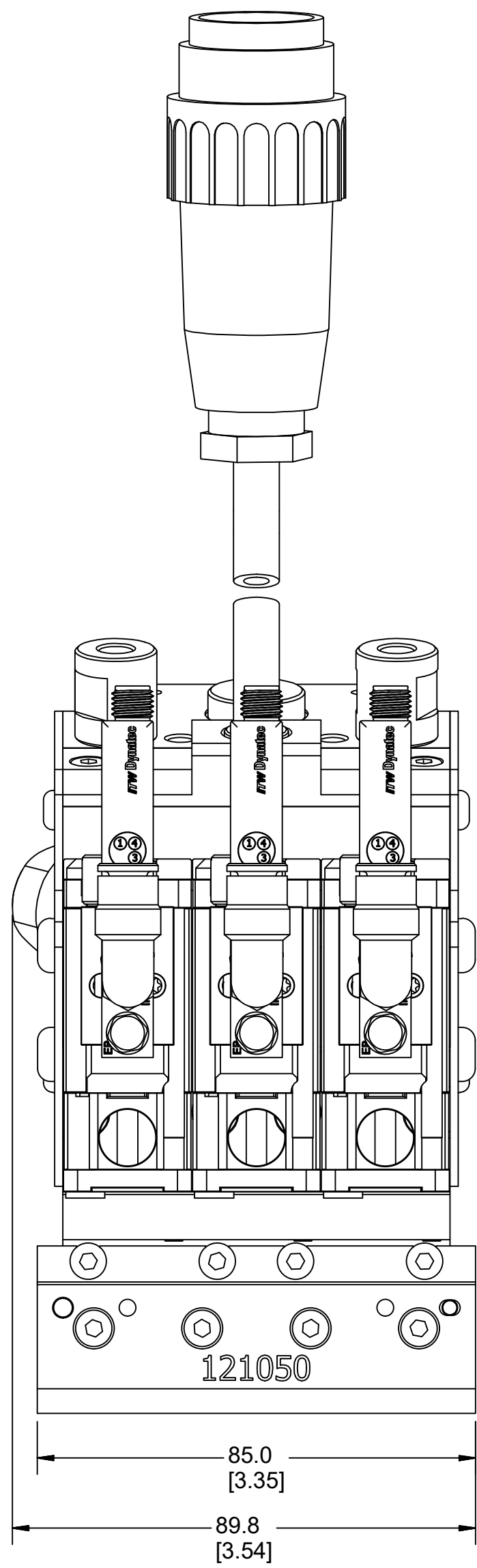


UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: DIMENSIONS (IN DECIMALS) ANGLES X ± 0.5 .XX ± 0.10 ± 5 X ± 0.25 .XX ± 0.05 XX ± 0.10 .XXX ± 0.05		FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC: A05800		U/M
USED ON		APPROVALS DATE		EA
NEXT ASSY:		DRAWN EWB	04MAR16	STATUS
DO NOT SCALE DRAWING		CHECKED	COMPUTER DESCRIPTION(24 CHARACTERS)	SOURCE
		SIZE DWG NO.	120476	REV
		SCALE 1:1	CAD DRAWING	GROUP
		SHEET 1 OF 2		



VIEW C
SCALE 1/2
INSTALLATION RECOMMENDATIONS
WITH ULTRA SLOT EXTRUDER

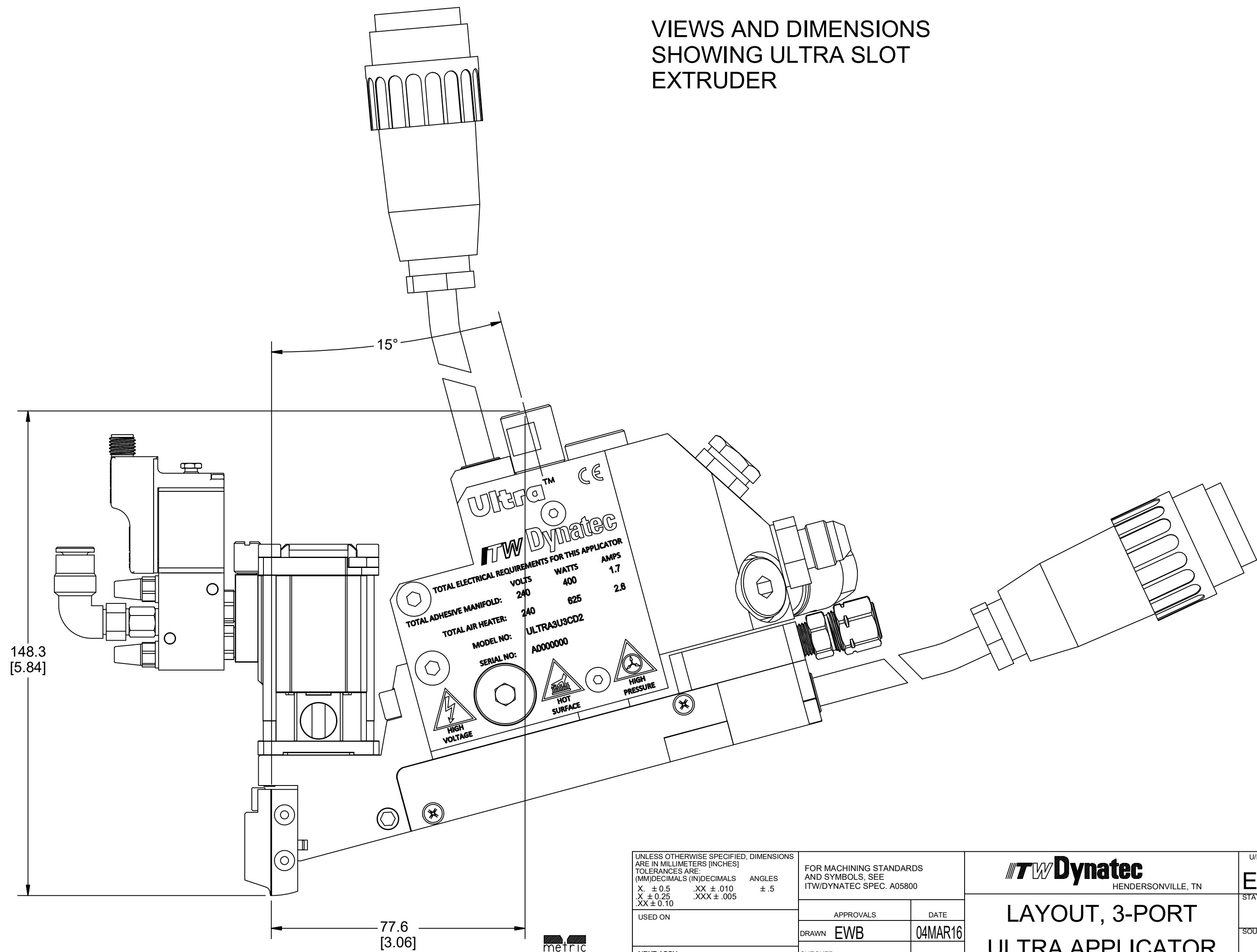
APPROX 5.0 WEB ENGAGEMENT
[0.20]



2X Ø15.88 OD MOUNTING STANDOFF
[Ø0.625]
M8-1.25 X 12MM [.47] MAX DEPTH INTERNAL THREAD

STANDOFFS MAY BE REMOVED FOR DIRECT MOUNTING TO MANIFOLD.
HOLE SIZE IN MANIFOLD IS M6-1.0, MAX DEPTH 17.0MM, QUANTITY OF 4
TEMPERATURE INSULATOR SHOULD BE USED FOR DIRECT MOUNTING.

VIEWS AND DIMENSIONS
SHOWING ULTRA SLOT
EXTRUDER



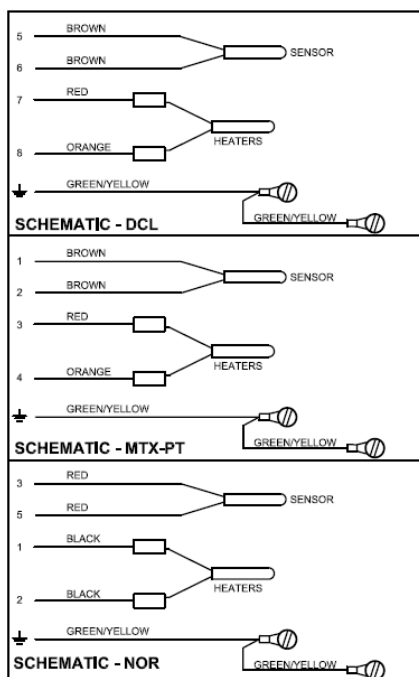
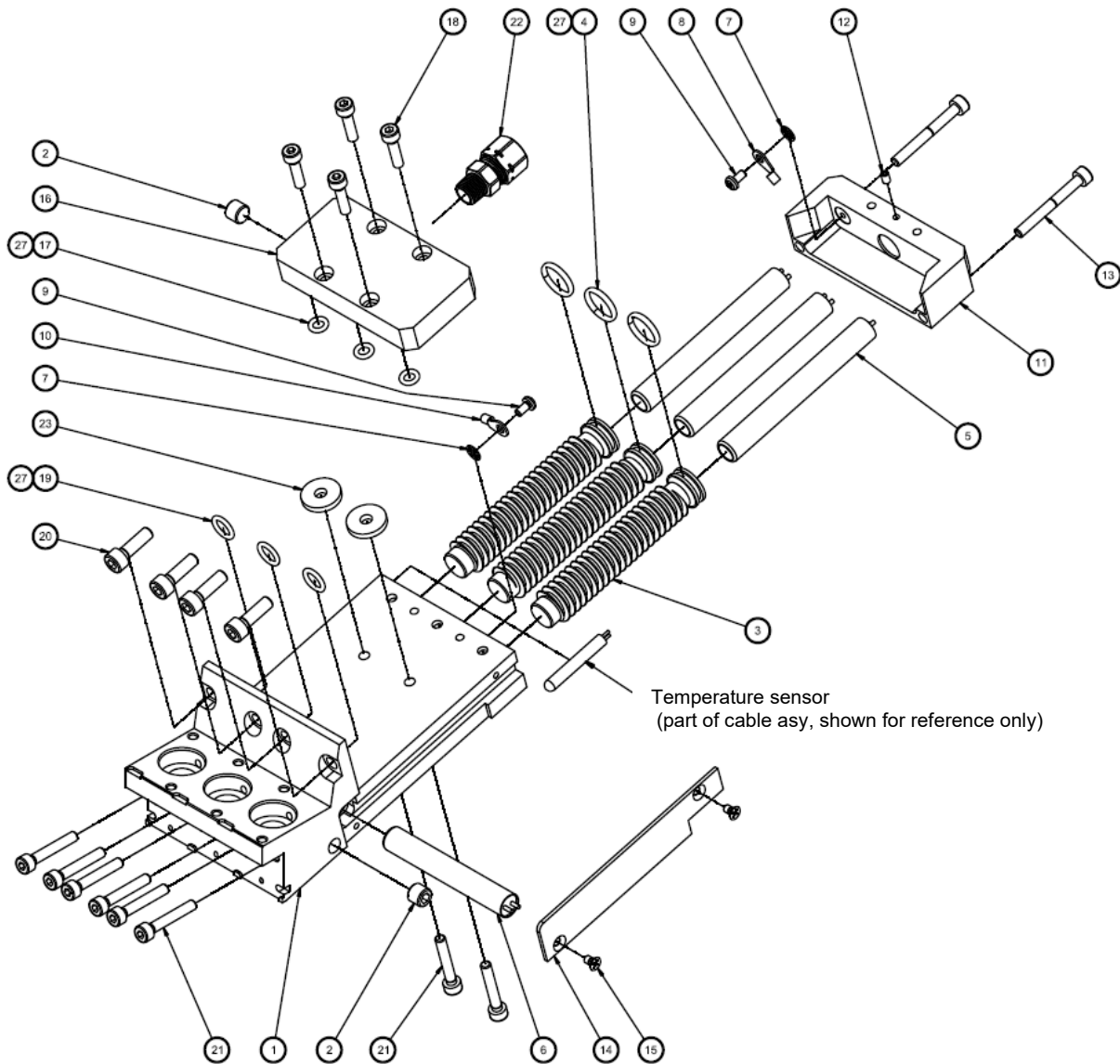
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (MM)DECIMALS (IN)DECIMALS ANGLES X ± 0.5 XX ± 0.10 ± 5 X ± 0.25 XXX ± .005		FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC: A05800		U/M
DRAWN EWB		DATE 04MAR16		EA
CHECKED		COMPUTER DESCRIPTION(24 CHARACTERS)		SOURCE
DO NOT SCALE DRAWING		SIZE DWG NO. 120476		REV C
SCALE 1:1		CAD DRAWING		SHEET 2 OF 2

8.3.1 Module-Manifold Assembly, 3-Port, Ultra stackable, PN 122587

Item No.	Part Number	Description	Quantity
1	122588	Module manifold 3-port, Ultra stackable	1
2	N01124	Fitting, plug 1/16-27 NPT	2
3	119988	Spiral tube 85mm	3
4	N00181	O-ring 017	3
5	119989	Heater cartridge Ø10x80mm, 150W, 240V	3
6	106548	Heater cartridge Ø10x65mm, 175W, 240V	1
7	078C088	Lock washer #4	2
8	048G016	Terminal, ring, #6	1
9	101627	Screw M3x6mm	2
10	N07430	Terminal, ring, #6	1
11	122589	Wire cover, rear	1
12	103470	Screw M3x5mm	1
13	101692	Screw M4x35mm	2
14	121122	Wire cover, side	1
15	106239	Screw M3x5mm	2
16	122590	Air manifold	1
17	N00175	O-ring 008	3
18	106328	Screw M4x16mm	4
19	N00178	O-ring 011	3
20	119015	Screw M5x16mm	4
21	100908	Screw M4x25mm	8
22	120109	Fitting, connector, 5/16 tube x 1/8 NPT	1
23	803579	Spacer	2
24	A48J164	Tubing, heat-shrink, PTFE, ID 0.19"	0.2ft
25	N01756	Terminal, parallel, 16-14 GA	2
26	N06989	Wire, NPC/PTFE, 18GA, 1000V, green/yellow	0.5ft
27	001U002	Lubricant, silicone, DOW112	A/R*

A/R* = As required.

NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.



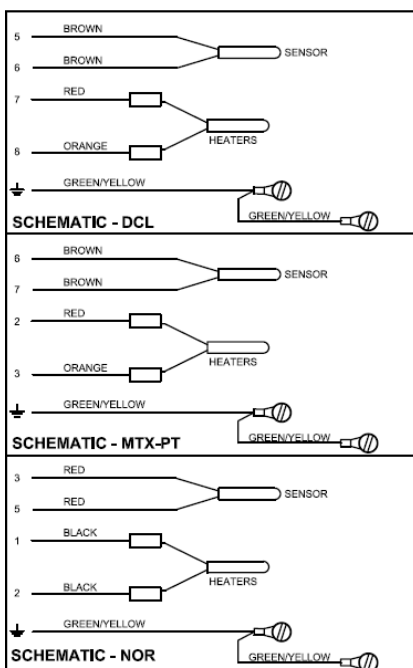
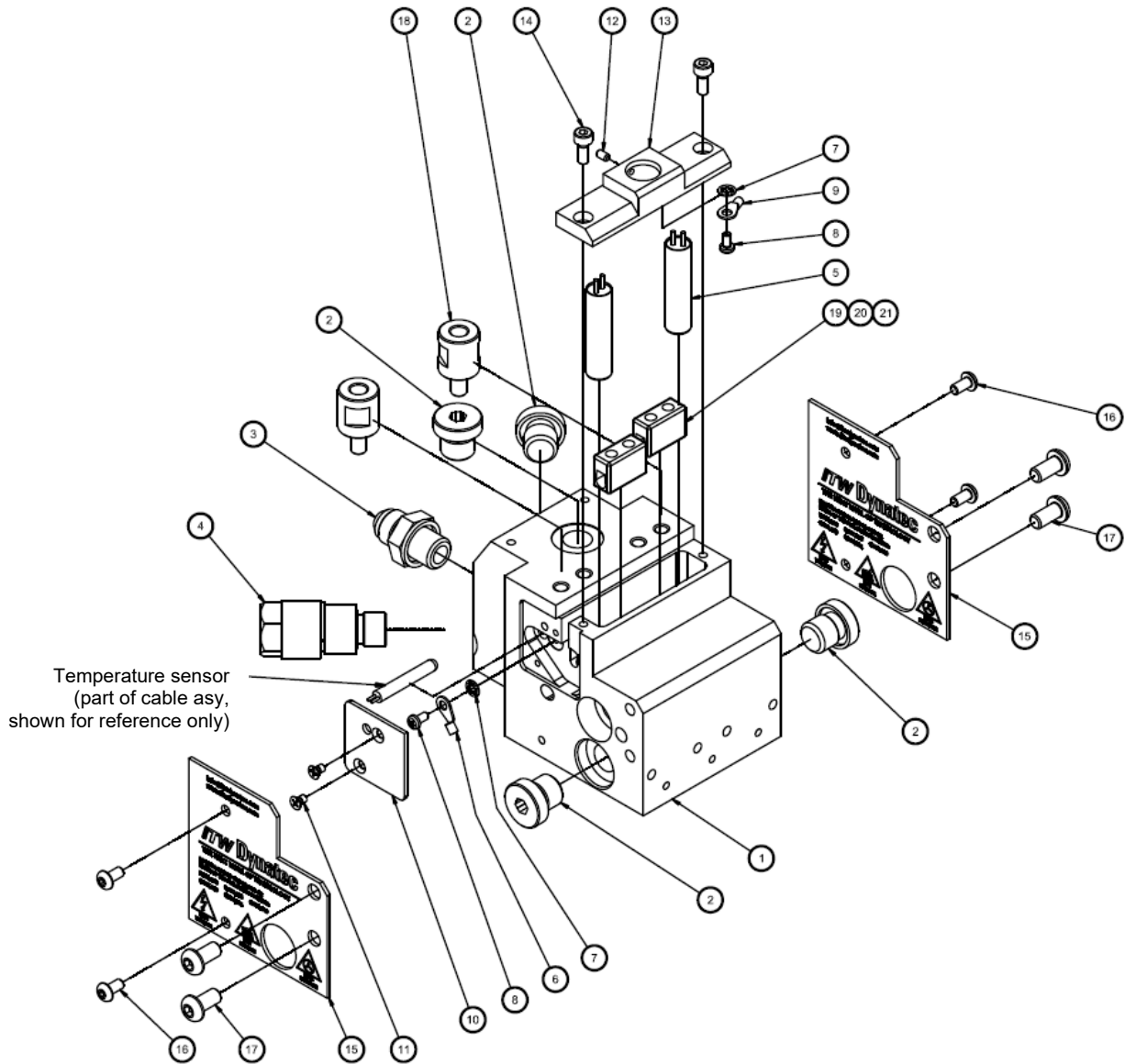
Schematics are for reference only.
Final connections are at next assembly.

Illustration: Module-Manifold Assembly, 3-Port, Ultra stackable, PN 122587

8.3.2 Service Block Assembly, 3-Port, Ultra stackable, PN 122584

Item No.	Part Number	Description	Quantity
1	122583	Service block, 3-port, Ultra stackable	1
2	101625	Plug G1/4 (BSPP)	4
3	101624	Fitting 1/4 BSPP x #6 JIC male	1
4	107820	Purge valve assembly	1
5	803960	Heater cartridge 10x40mm, 200W, 240V	2
6	N07430	Terminal, ring, #6, 16-22 GA	1
7	078C088	Lock washer #4	2
8	101627	Screw M3x6mm	2
9	048G016	Terminal, ring, #6, 14-18 GA	1
10	121683	Side cover	1
11	106239	Screw M3x5mm	2
12	103470	Screw M3x5mm	1
13	122585	Wire cover	1
14	102446	Screw M4x10mm	2
15	121130	End cover	2
16	107161	Screw M4x8mm	4
17	120719	Screw M6x12mm	4
18	120115	Adapter M6xM8	2
19	N07541	Terminal block, ceramic, 2-pole	2
20	104227	Ferrule 18 AWG	1
21	104229	Ferrule 14 AWG	1
22	N06989	Wire, NPC/PTFE, 18GA, 1000V, green/yellow	0.5ft

NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.

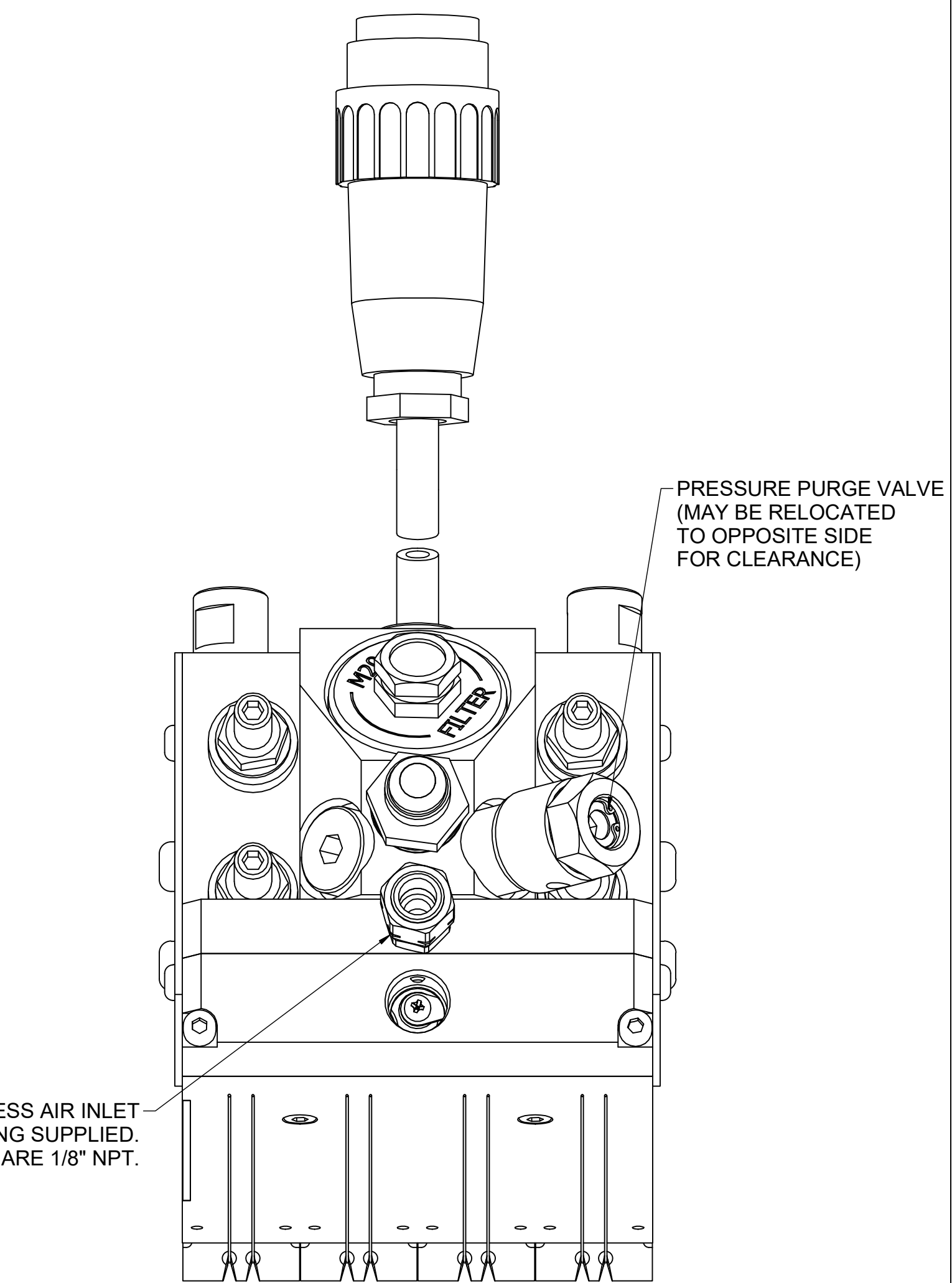
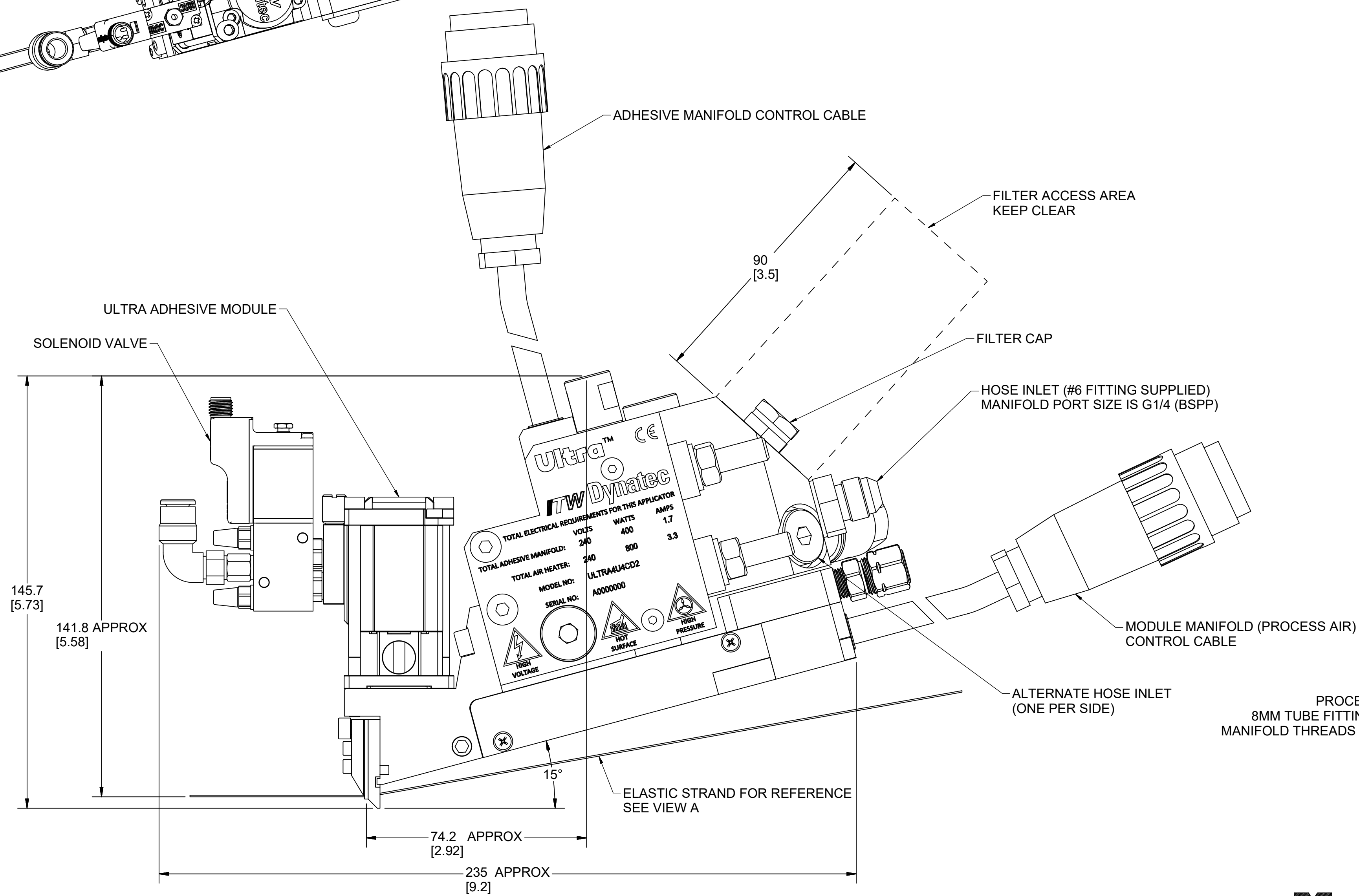
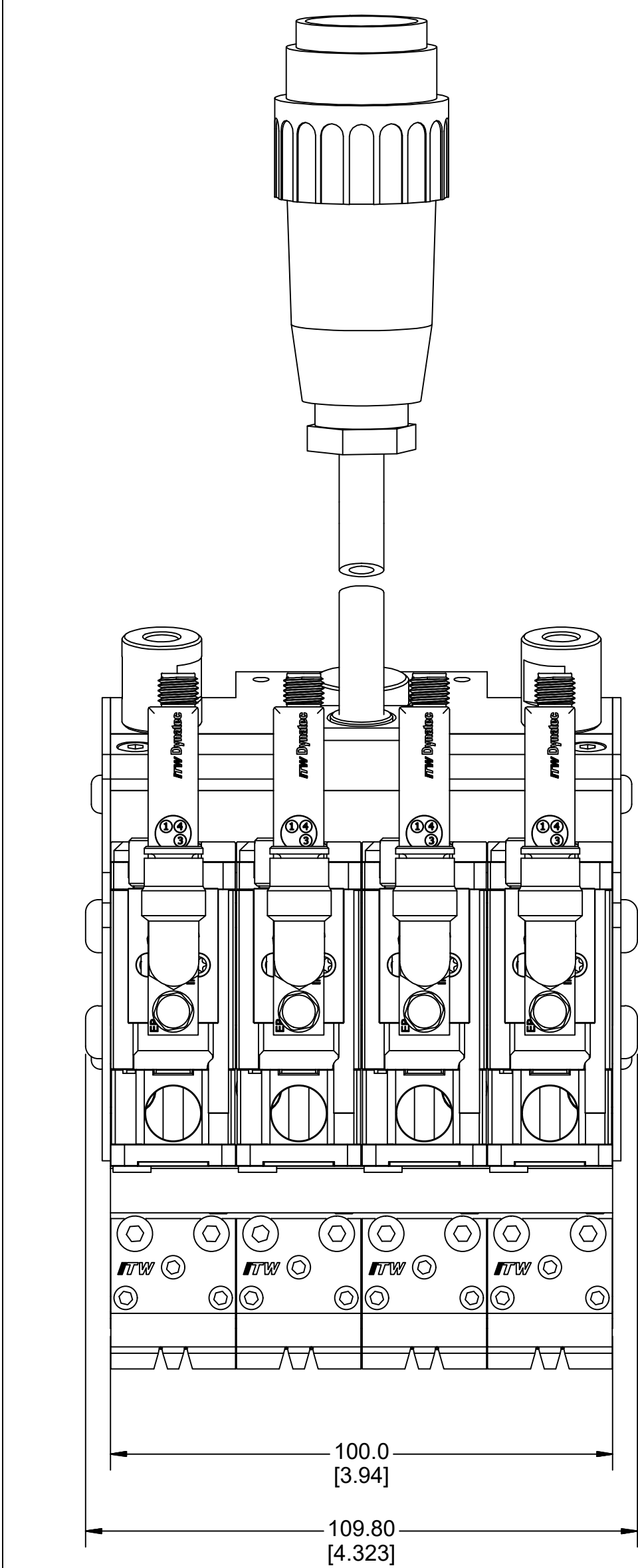
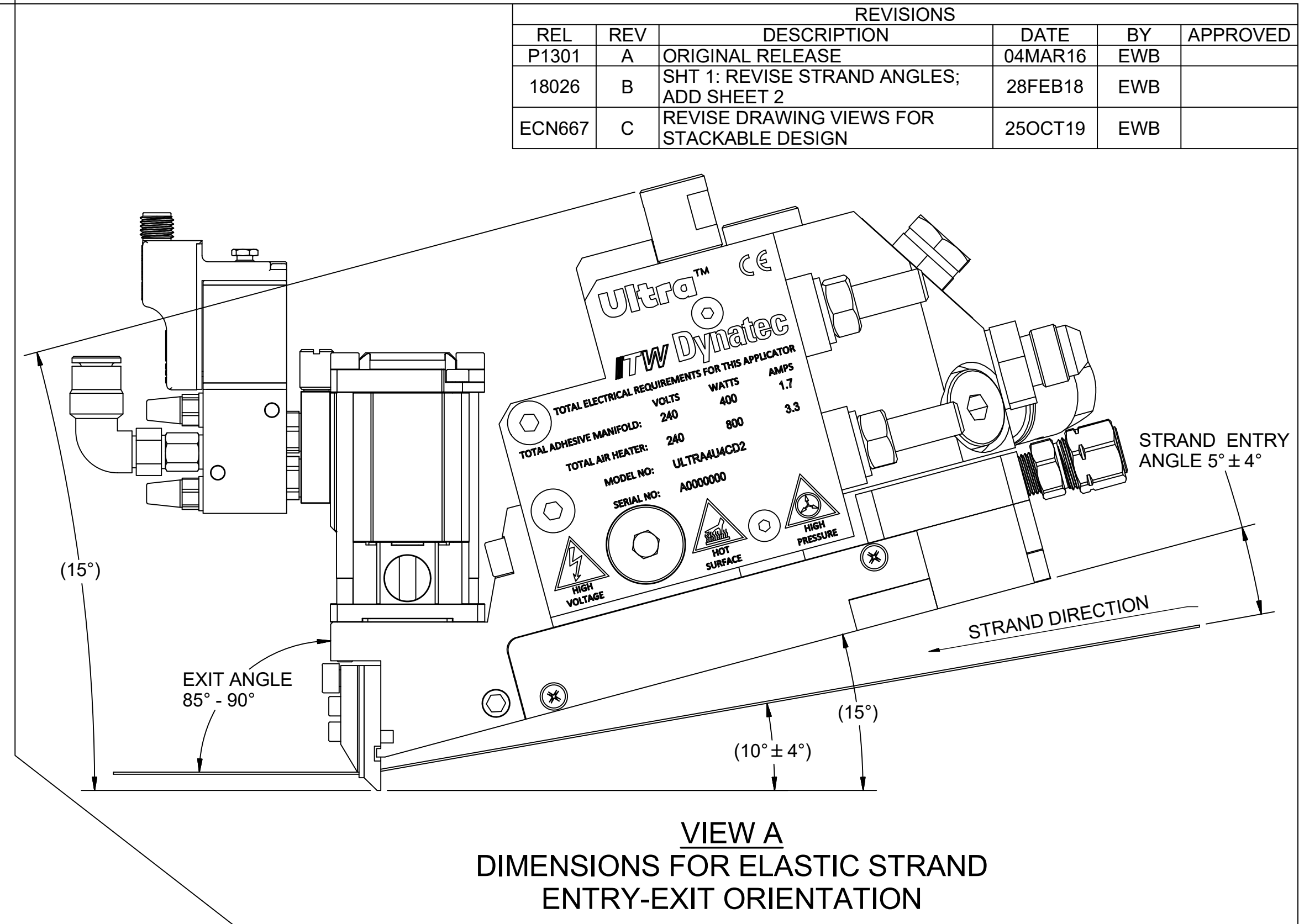
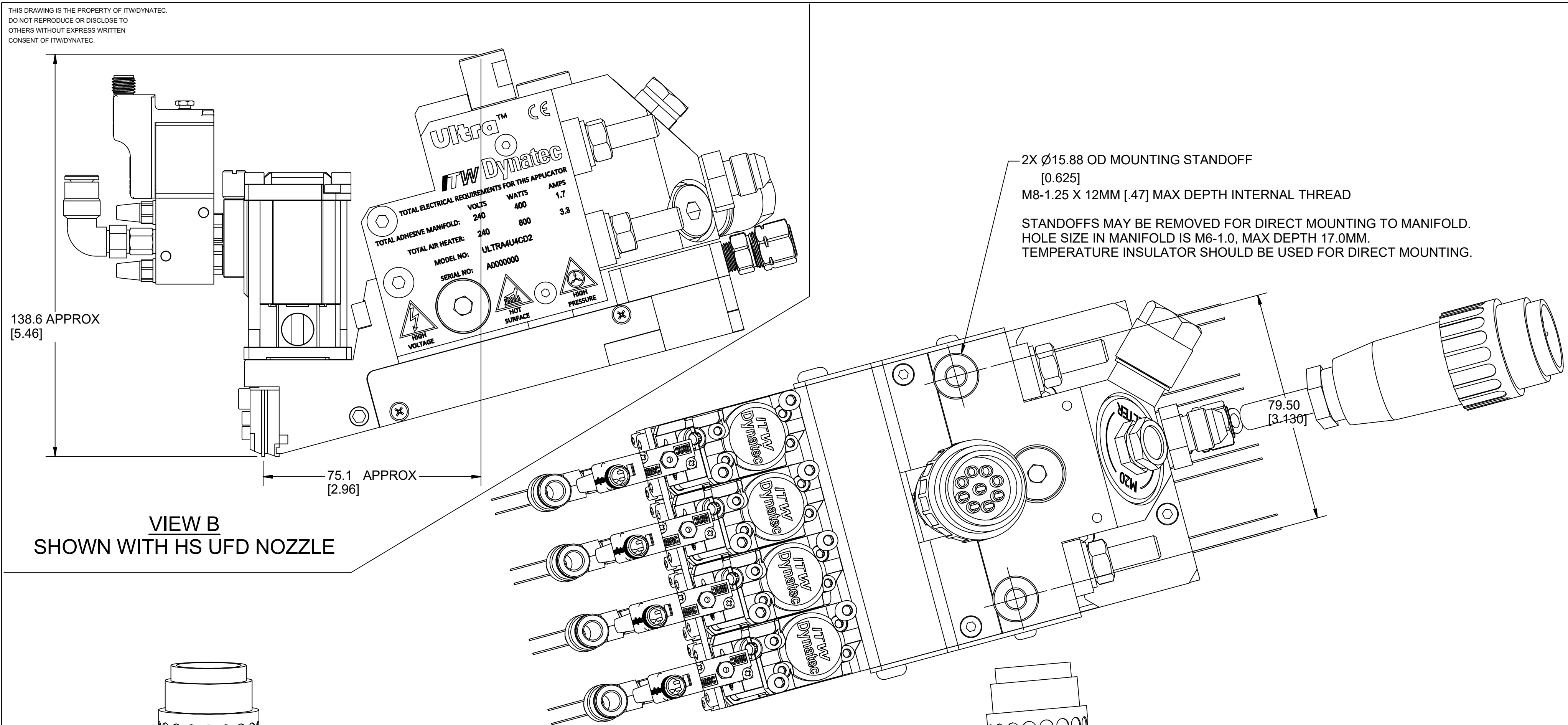



Schematics are for reference only.
Final connections are at next assembly.

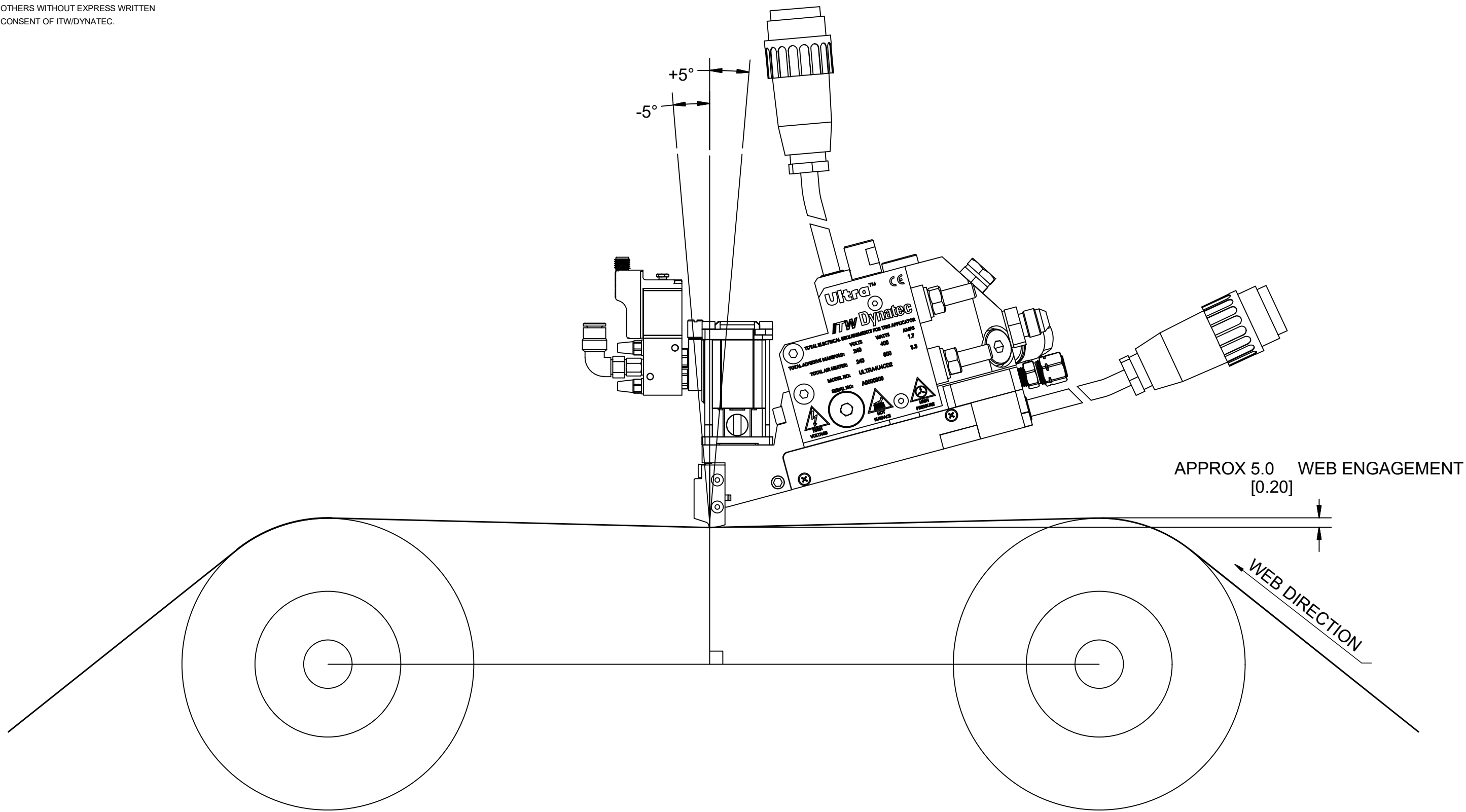
Illustration: Service Block Assembly, 3-Port, Ultra stackable, PN 122584

8.4 4-Port ULTRALINK Applicator, Layout, PN 120477

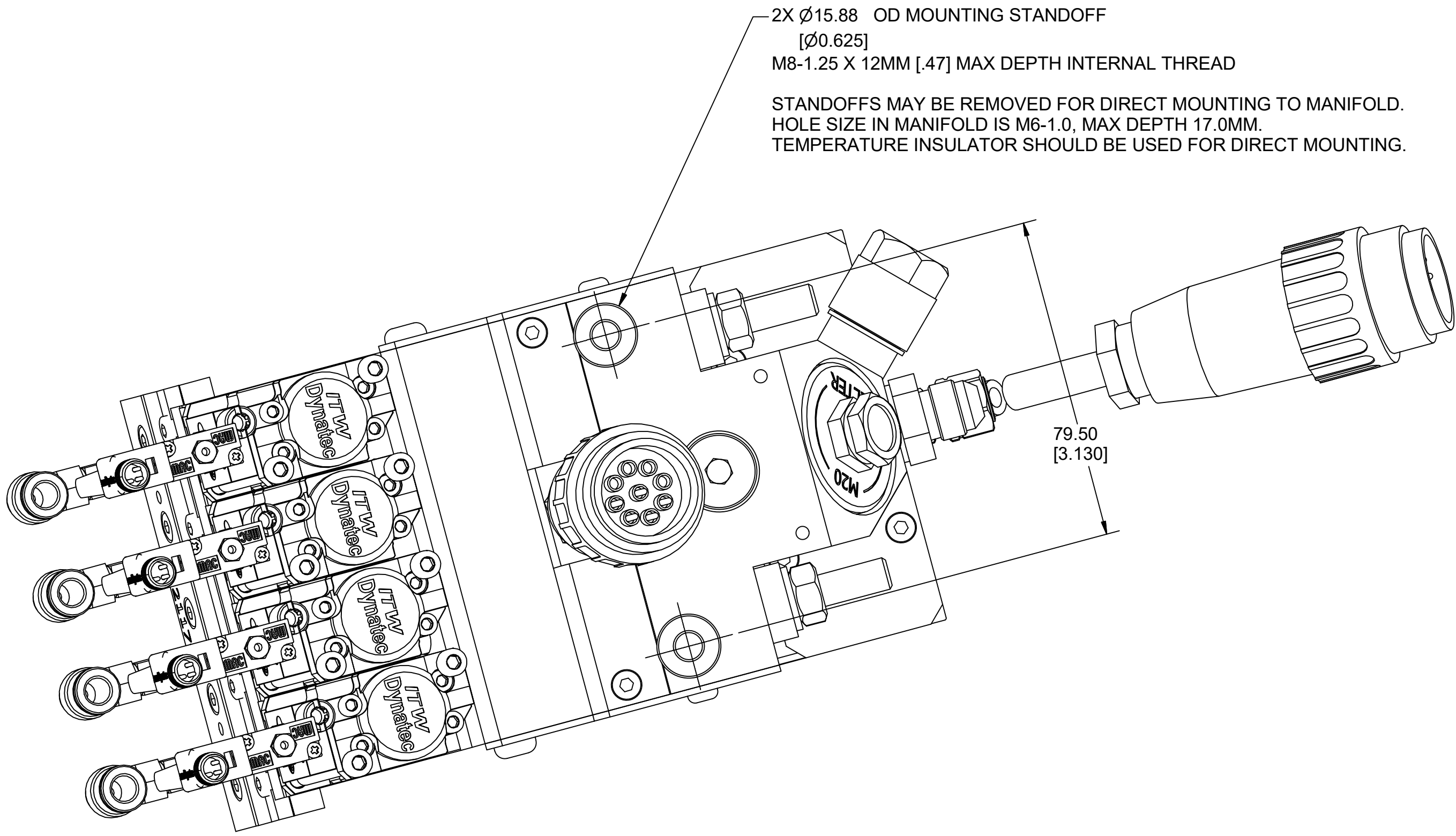
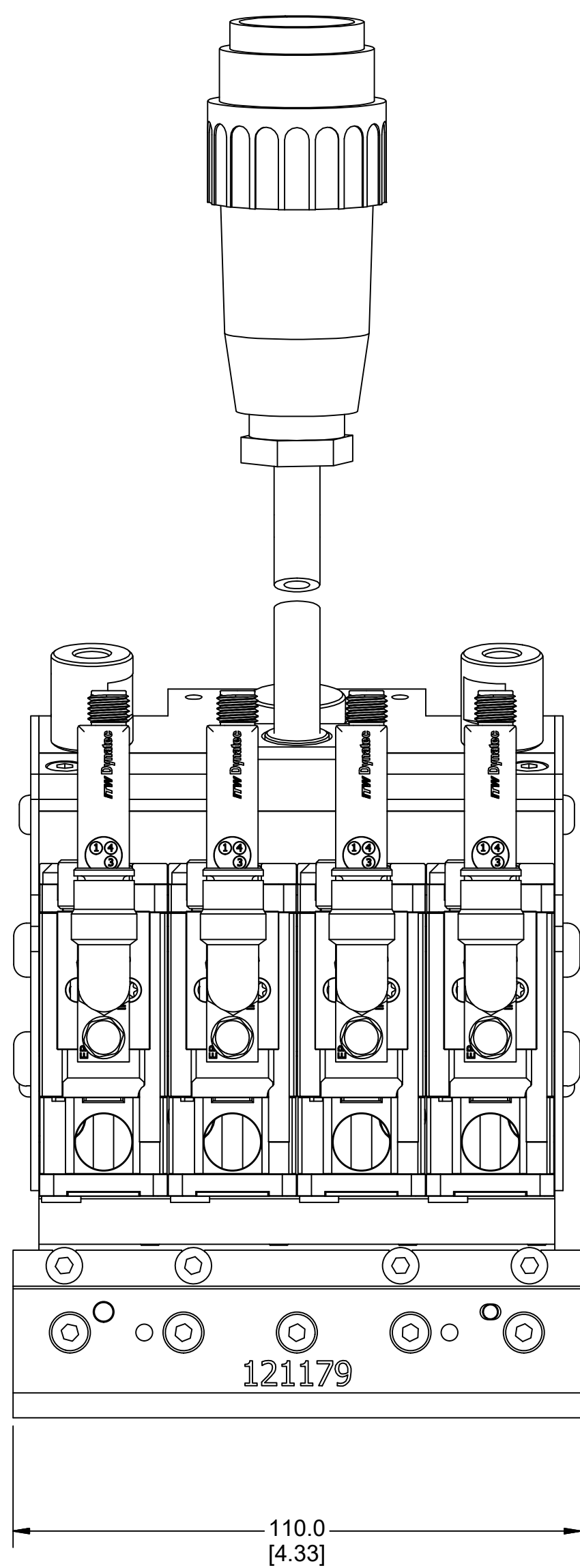
REVISIONS					
REL	REV	DESCRIPTION	DATE	BY	APPROVED
P1301	A	ORIGINAL RELEASE	04MAR16	EWB	
18026	B	SHT 1: REVISE STRAND ANGLES; ADD SHEET 2	28FEB18	EWB	
ECN667	C	REVISE DRAWING VIEWS FOR STACKABLE DESIGN	25OCT19	EWB	



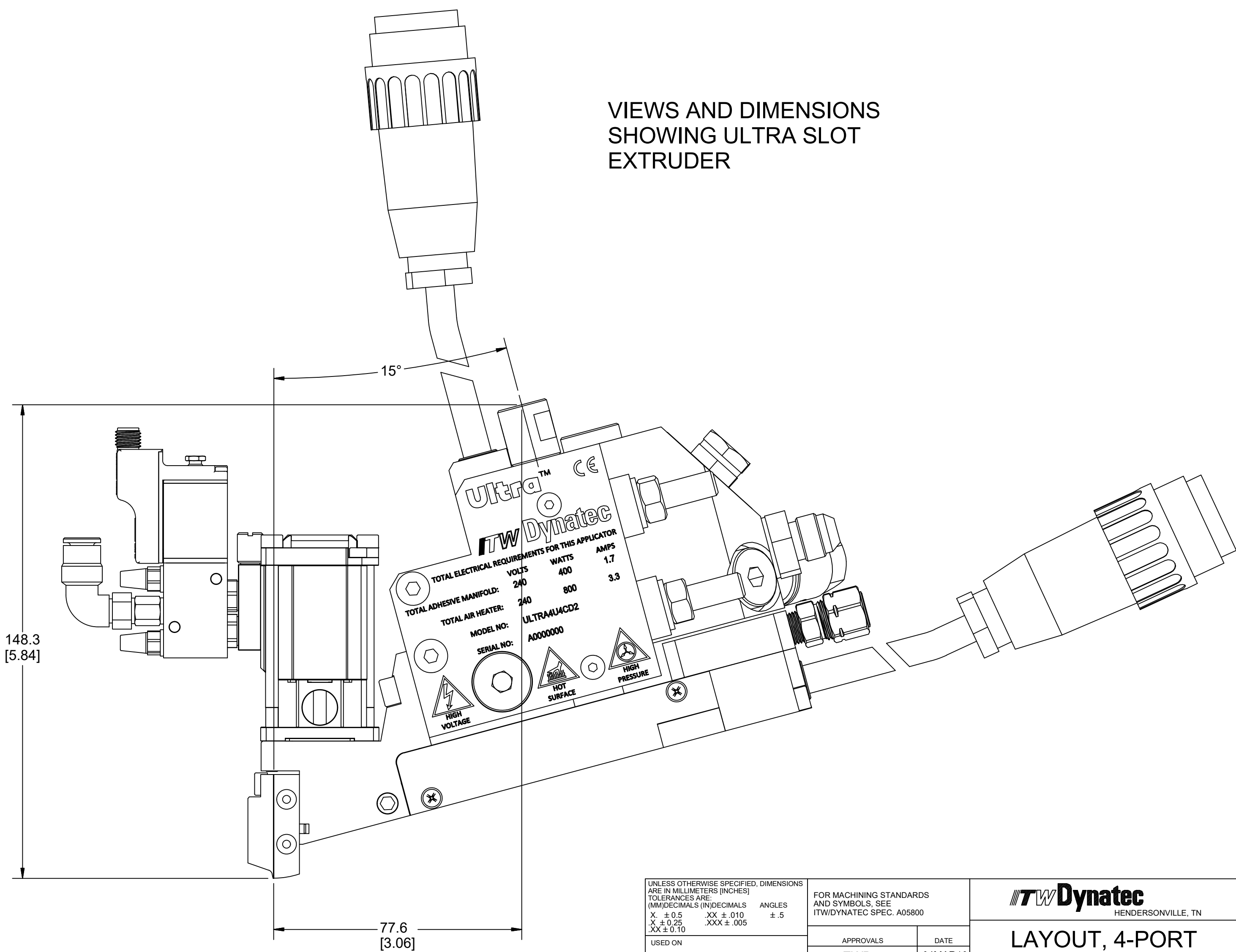
<div>UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES) TOLERANCES ARE: ANGLES ± 5 X ± 0.5 XX ± 0.10 X ± 0.25 XXX ± 0.05 XX ± 0.10</div>		<div>FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC. A05800</div>		<div> HENDERSONVILLE, TN</div>		<div>U/M STATUS SOURCE</div>
<div>USED ON</div>		<div>APPROVALS DATE</div>		<div>LAYOUT, 4-PORT ULTRA APPLICATOR</div>		<div>GROUP</div>
<div>DRAWN EWB QAMAR16</div>		<div>CHECKED</div>				
<div>DO NOT SCALE DRAWING</div>		<div>COMPUTER DESCRIPTION(24 CHARACTERS)</div>				
<div>SCALE: 1:1</div>		<div>SIZE: D U/W: NO. 120477 REV. C</div>		<div>CAD DRAWING</div>		<div>SHEET 1 OF 2</div>



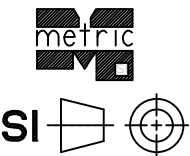
VIEW E
INSTALLATION RECOMMENDATIONS
WITH ULTRA SLOT EXTRUDER



**VIEWS AND DIMENSIONS
SHOWING ULTRA SLOT
EXTRUDER**



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (MM)DECIMALS (INCHES)DECIMALS ANGLES X ± 0.5 XX ± 0.10 ± 5 X ± 0.25 XXX ± .005				FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC. A05800				ITW Dynatec HENDERSONVILLE, TN		U/M
APPROVALS				DATE		04MAR16		EA		STATUS
DRAWN EWB				CHECKED		COMPUTER DESCRIPTION(24 CHARACTERS)		D 120477		C
NEXT ASSY.				SCALE		N/A CAD DRAWING		SHEET		2 OF 2
DO NOT SCALE DRAWING				SIZE		D 120477		C		GROUP



8.4.1 Module-Manifold Assembly, 4-Port, Ultra stackable, PN 121668

Item No.	Part Number	Description	Quantity
1	121669	Module manifold 4-port, Ultra stackable	1
2	N01124	Fitting, plug 1/16-27 NPT	2
3	119988	Spiral tube 85mm	4
4	N00181	O-ring 017	4
5	119989	Heater cartridge Ø10x80mm, 150W, 240V	4
6	106325	Heater cartridge Ø10x90mm, 200W, 240V	1
7	078C088	Lock washer #4	2
8	N07430	Terminal, ring, #6	1
9	048G016	Terminal, ring, #6	1
10	101627	Screw M3x6mm	2
11	121670	Wire cover, rear	1
12	103470	Screw M3x5mm	1
13	101692	Screw M4x35mm	2
14	121122	Wire cover, side	1
15	106239	Screw M3x5mm	2
16	121671	Air manifold	1
17	N00175	O-ring 008	4
18	106328	Screw M4x16mm	4
19	N00178	O-ring 011	4
20	119015	Screw M5x16mm	4
21	100908	Screw M4x25mm	10
22	803579	Spacer	2
23	120109	Fitting, connector, 5/16 tube x 1/8 NPT	1
24	N06989	Wire, NPC/PTFE, 18GA, 1000V, green/yellow	0.5ft
25	N01756	Terminal, parallel, 16-14 GA	2
26	A48J164	Tubing, heat-shrink, PTFE, ID 0.19"	0.2ft
27	001U002	Lubricant, silicone, DOW112	A/R*

A/R* = As required.

NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.

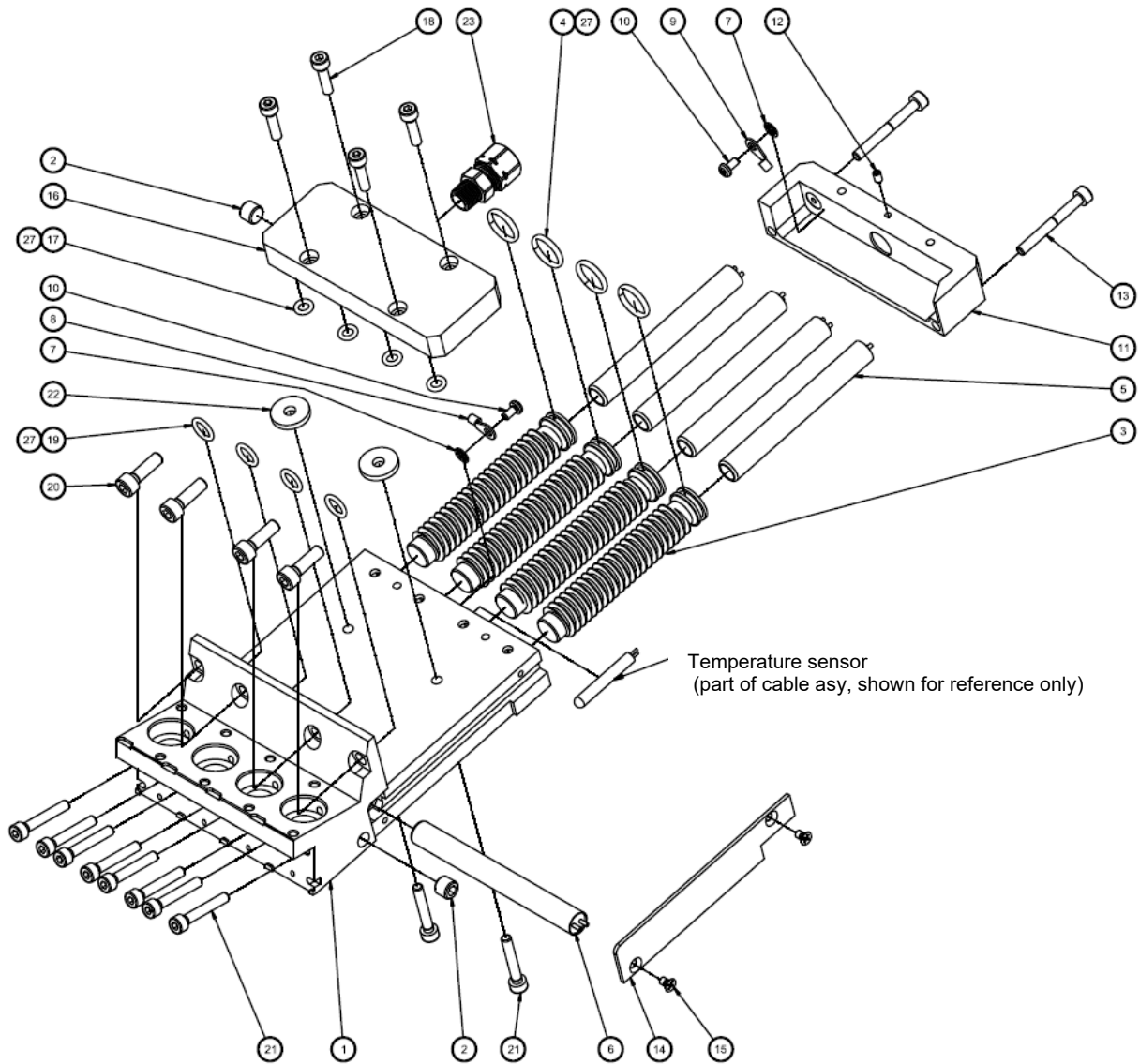
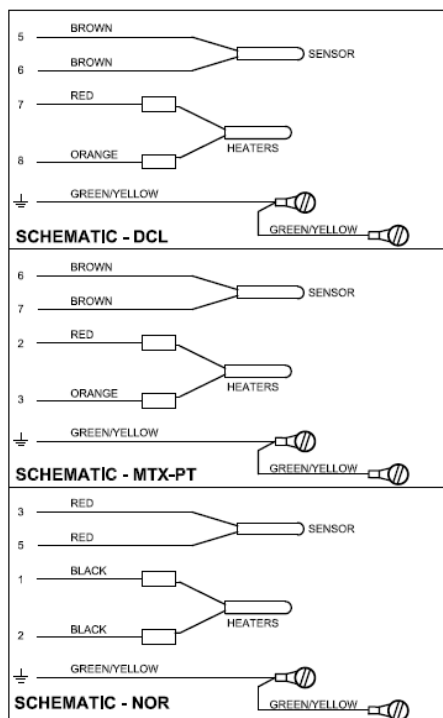
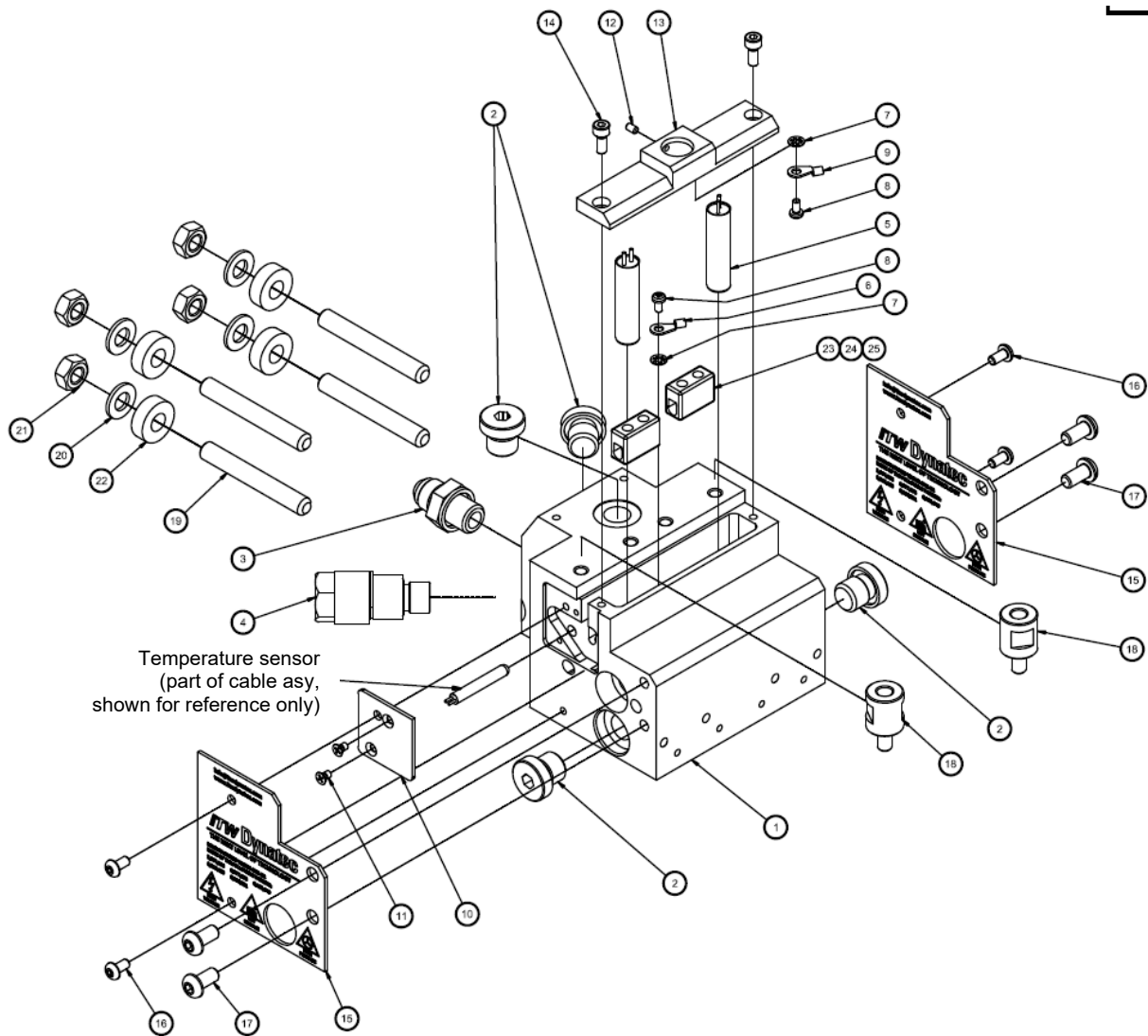


Illustration: Module-Manifold Assembly, 4-Port, Ultra stackable, PN 121668

8.4.2 Service Block Assembly, 4-Port, Ultra stackable, PN 123003

Item No.	Part Number	Description	Quantity
1	123002	Service block, 4-port, Ultra stackable	1
2	101625	Plug G1/4 (BSPP)	4
3	101624	Fitting 1/4 BSPP x #6 JIC male	1
4	107820	Purge valve assembly	1
5	803960	Heater cartridge 10x40mm, 200W, 240V	2
6	N07430	Terminal, ring, #6, 16-22 GA	1
7	078C088	Lock washer #4	2
8	101627	Screw M3x6mm	2
9	048G016	Terminal, ring, #6, 14-18 GA	1
10	121683	Side cover	1
11	106239	Screw M3x5mm	2
12	103470	Screw M3x5mm	1
13	121665	Wire cover	1
14	102446	Screw M4x10mm	2
15	121130	End cover	2
16	107161	Screw M4x8mm	4
17	120719	Screw M6x12mm	4
18	120115	Adapter M6xM8	2
19	107536	Screw M8x60mm	4
20	106321	Flat washer M8	4
21	105060	Hex nut M8	4
22	L00006	Insulator 5/16" ID x 3/4" OD x 1/4" thick	4
23	N07541	Terminal block, ceramic, 2-pole	2
24	104227	Ferrule 18 AWG	2
25	104229	Ferrule 14 AWG	2
26	N06989	Wire, NPC/PTFE, 18GA, 1000V, green/yellow	0.5ft

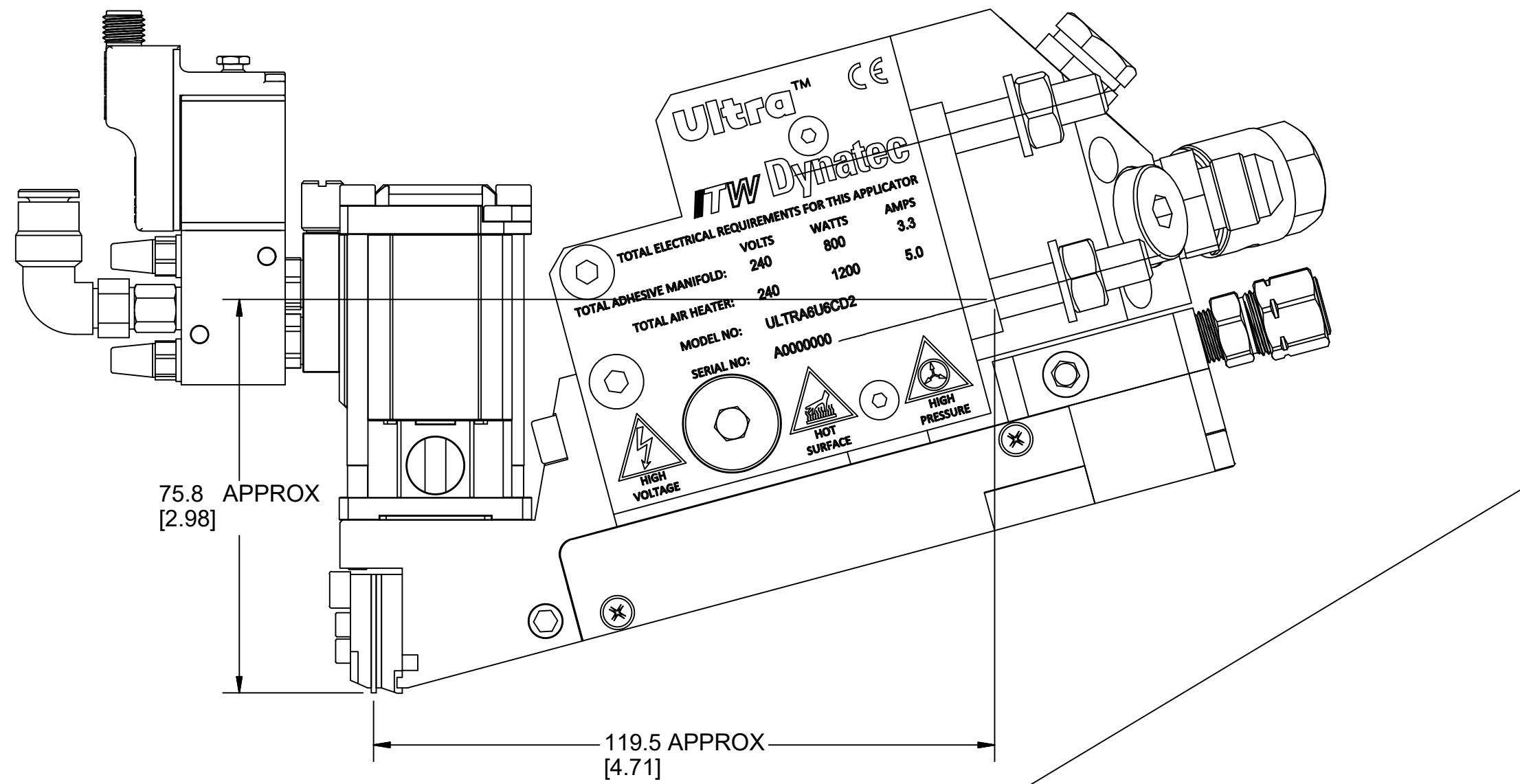
NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.



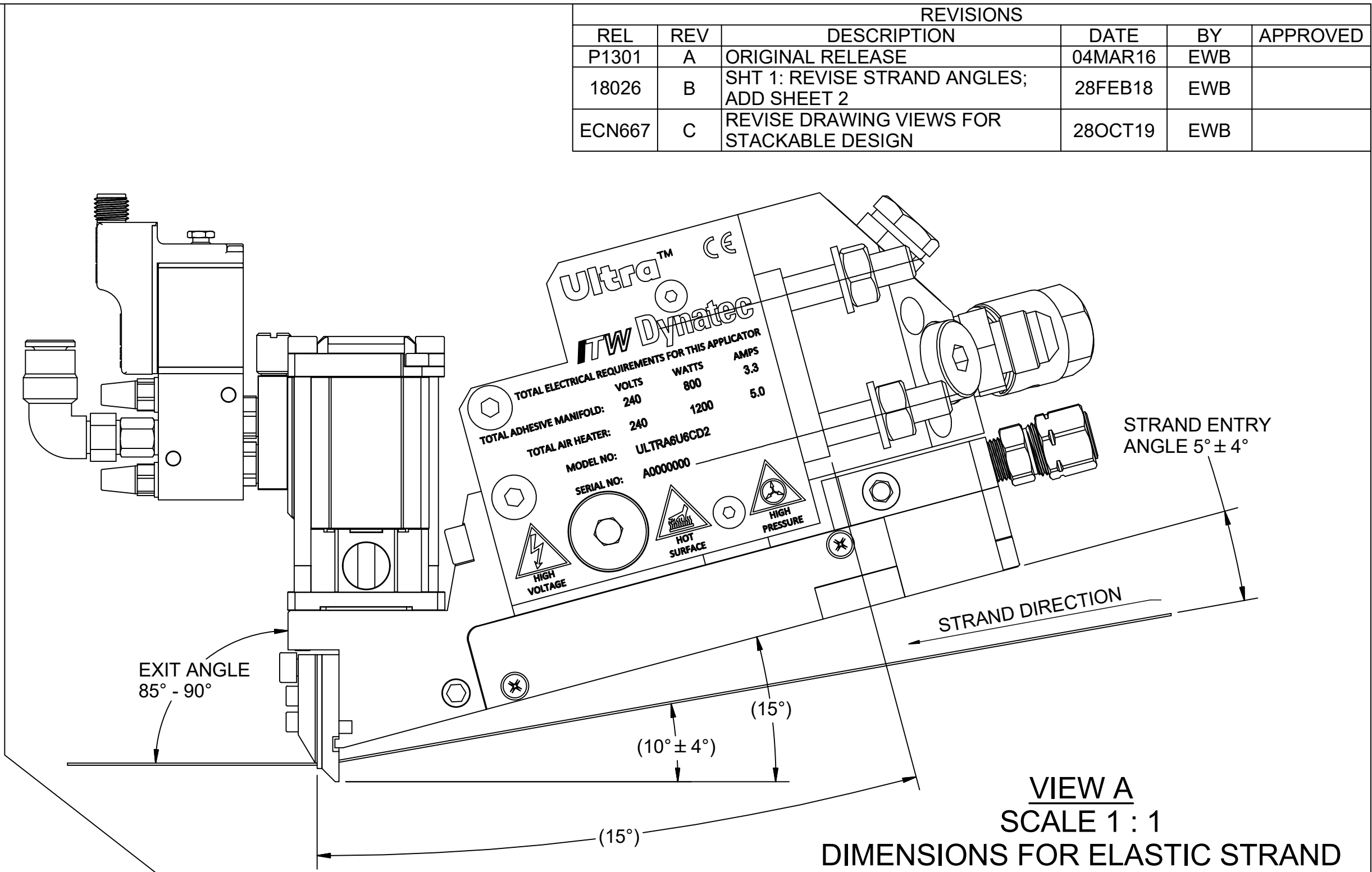
Schematics are for reference only.
Final connections are at next assembly.

Illustration: Service Block Assembly, 4-Port, Ultra stackable, PN 123003

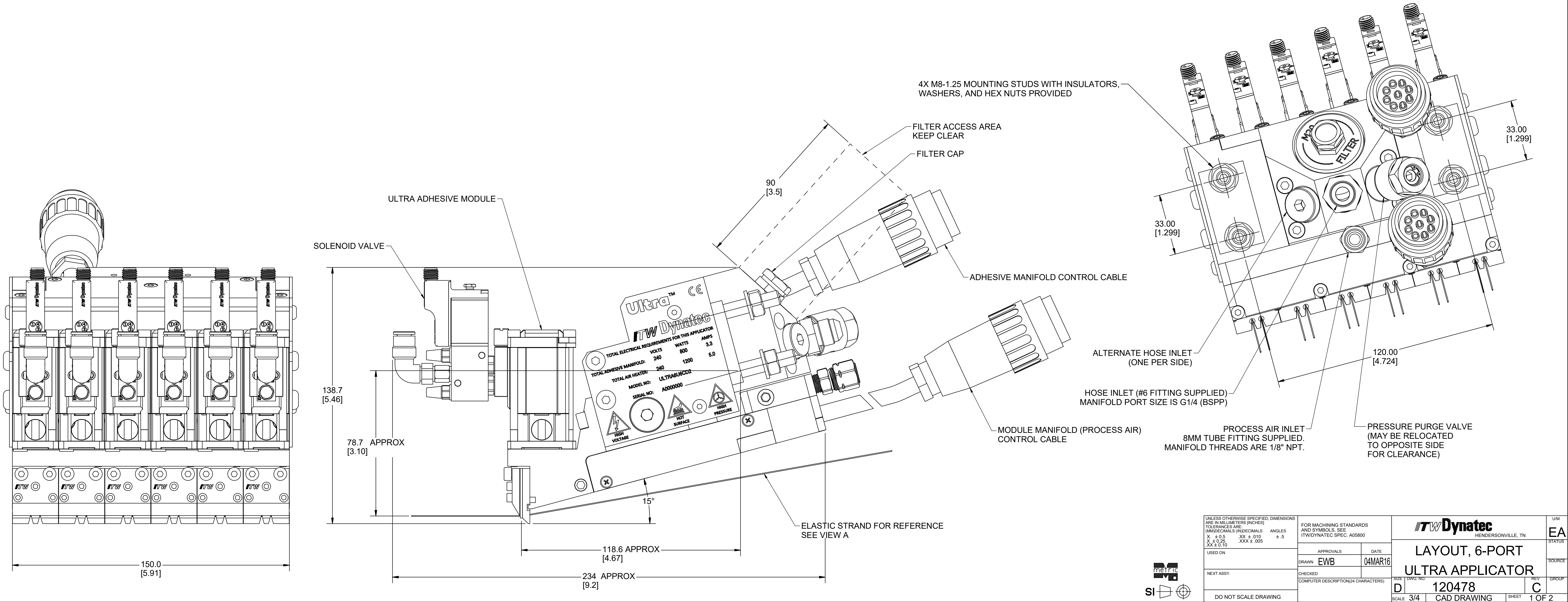
8.5 6-Port ULTRALINK Applicator, Layout, PN 120478



VIEW B, SCALE 1:1
SHOWN WITH HS UFD NOZZLE



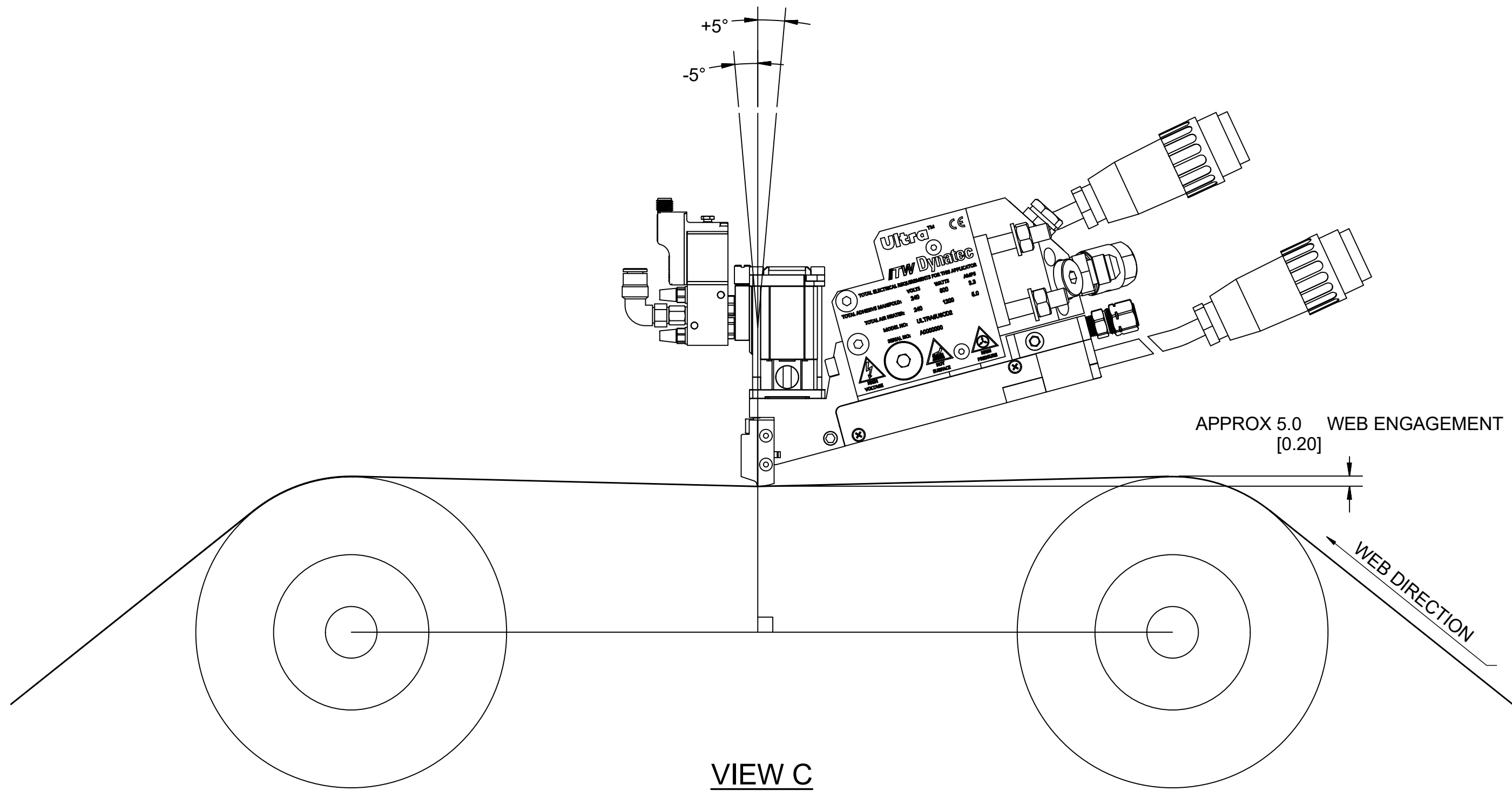
VIEW A
SCALE 1 : 1
DIMENSIONS FOR ELASTIC STRAND
ENTRY-EXIT ORIENTATION



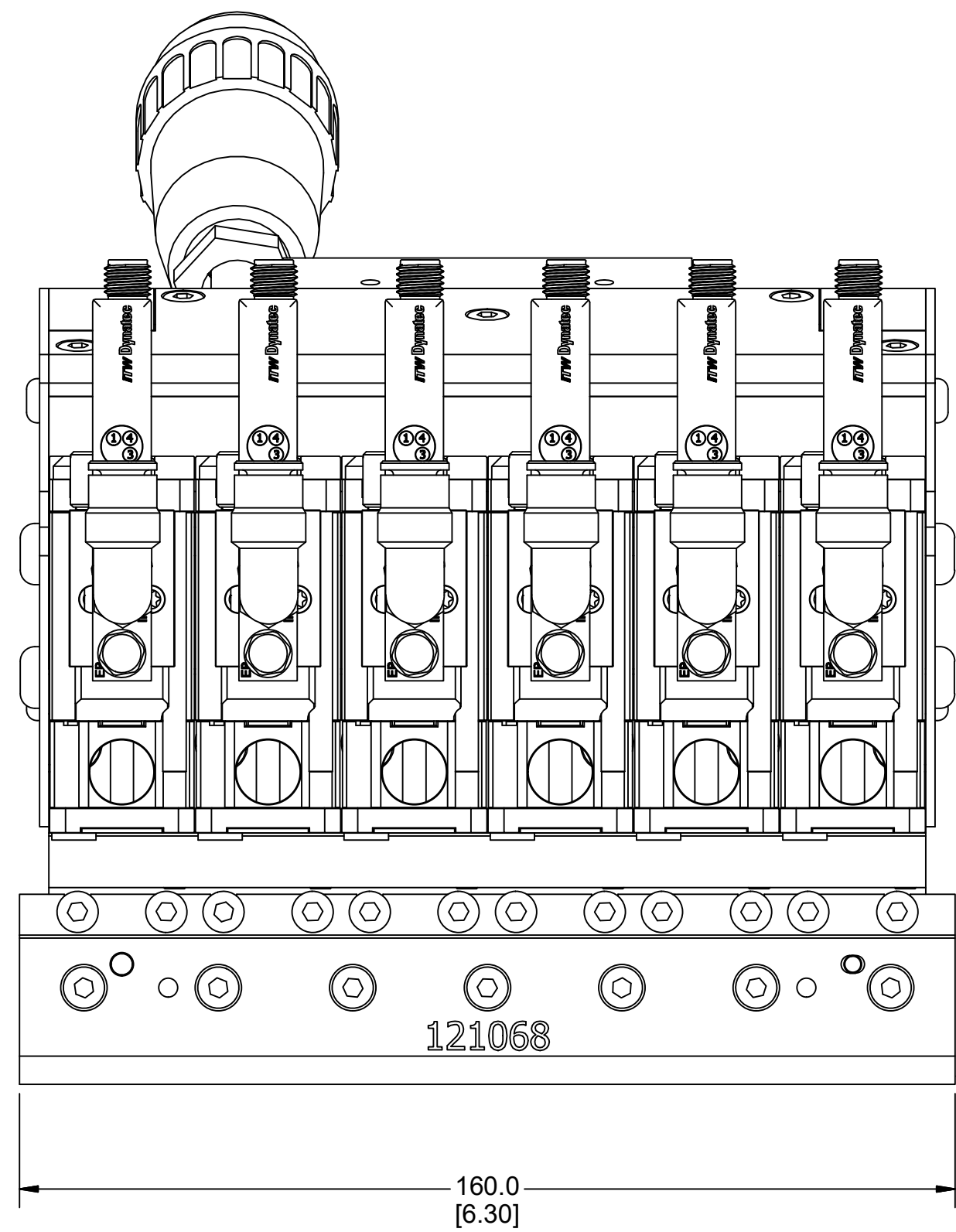
REVISIONS					BY	APPROVED
REL	REV	DESCRIPTION	DATE			
P1301	A	ORIGINAL RELEASE	04MAR16		EWB	
18026	B	SHT 1: REVISE STRAND ANGLES; ADD SHEET 2	28FEB18		EWB	
ECN667	C	REVISE DRAWING VIEWS FOR STACKABLE DESIGN	28OCT19		EWB	

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: DIMENSIONS IN DECIMALS ANGLES X ± 0.5 XX ± 0.10 XXX ± 0.05 X ± 0.25 XX ± 0.10 XXX ± 0.05		FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC. A05800		U/M	
USED ON		APPROVALS		DATE	
NEXT ASSY.		DRAWN		04MAR16	
DO NOT SCALE DRAWING		CHECKED		COMPUTER DESCRIPTION(24 CHARACTERS)	
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		SCALE		3/4	
		CAD DRAWING		SHEET	
				1 OF 2	

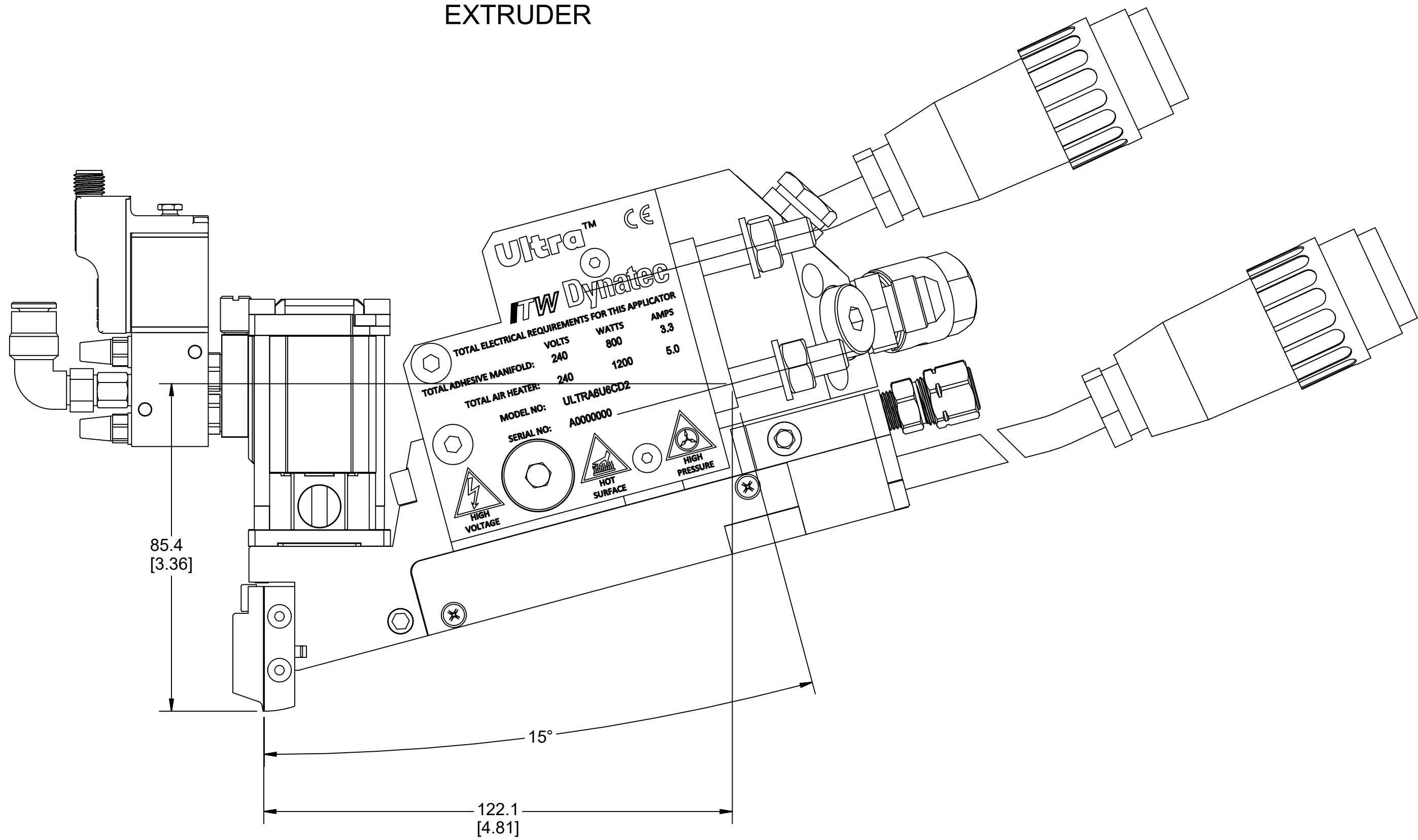
ITW Dynatec HENDERSONVILLE, TN		U/M
LAYOUT, 6-PORT ULTRA APPLICATOR		EA
SOURCE		STATUS
REV		GROUP
C		



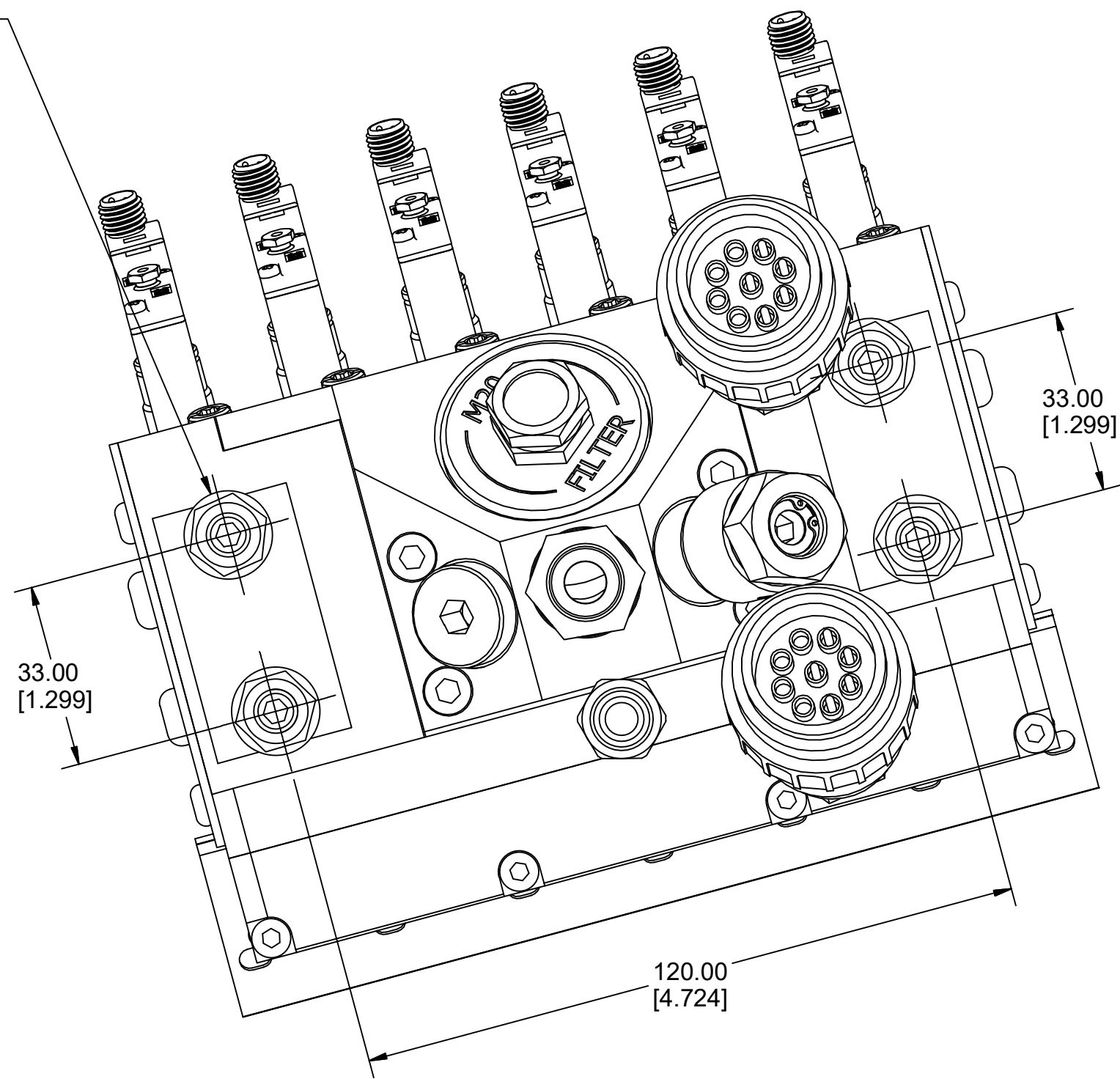
VIEW C
SCALE 1/2
INSTALLATION RECOMMENDATIONS
WITH ULTRA SLOT EXTRUDER



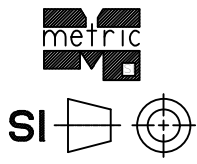
VIEWS AND DIMENSIONS
SHOWING ULTRA SLOT
EXTRUDER



4X M8-1.25 MOUNTING STUDS WITH
WASHERS AND HEX NUTS PROVIDED



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: DIMENSIONS (IN DECIMALS) X ± 0.5 XX ± 0.25 XXX ± 0.10		FOR MACHINING STANDARDS AND SYMBOLS, SEE ITW/DYNATEC SPEC: A05800		U/M
DRAWN EWB		DATE 04MAR16		EA
NEXT ASSY:		CHECKED		STATUS
DO NOT SCALE DRAWING		COMPUTER DESCRIPTION(24 CHARACTERS)		SOURCE
SCALE 1:1		CAD DRAWING		REV C
SHEET 2 OF 2		GROUP		

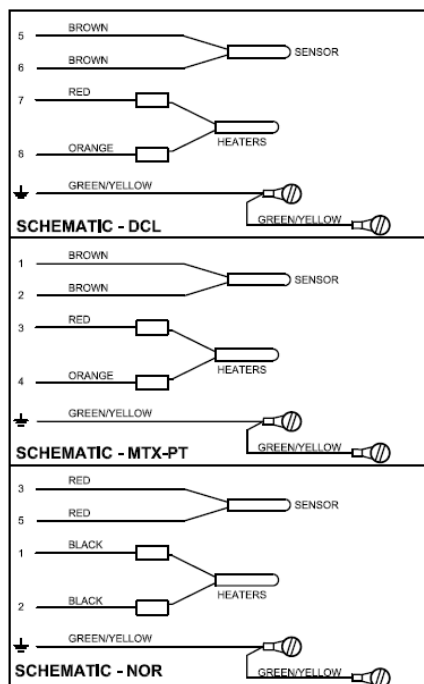
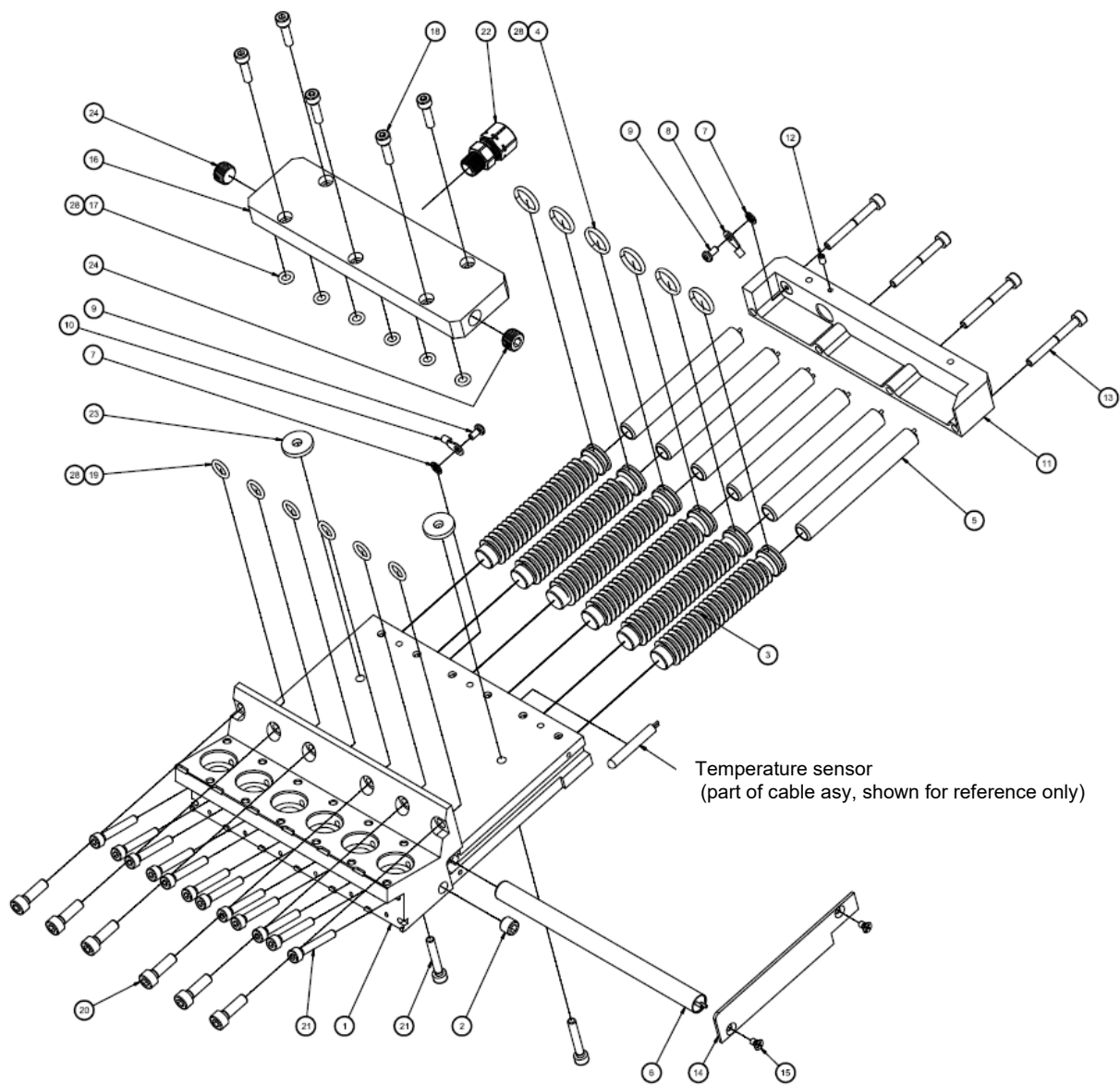


8.5.1 Module-Manifold Assembly, 6-Port, Ultra stackable, PN 122802

Item No.	Part Number	Description	Quantity
1	122803	Module manifold 4-port, Ultra stackable	1
2	N01124	Fitting, plug 1/16-27 NPT	1
3	119988	Spiral tube 85mm	6
4	N00181	O-ring 017	6
5	119989	Heater cartridge Ø10x80mm, 150W, 240V	6
6	106715	Heater cartridge Ø10x140mm, 300W, 240V	1
7	078C088	Lock washer #4	2
8	048G016	Terminal, ring, #6	1
9	101627	Screw M3x6mm	2
10	N07430	Terminal, ring, #6	1
11	122804	Wire cover, rear	1
12	103470	Screw M3x5mm	1
13	101692	Screw M4x35mm	4
14	121122	Wire cover, side	1
15	106239	Screw M3x5mm	2
16	122805	Air manifold	1
17	N00175	O-ring 008	6
18	106328	Screw M4x16mm	5
19	N00178	O-ring 011	6
20	119015	Screw M5x16mm	6
21	100908	Screw M4x25mm	14
22	120109	Fitting, connector, 5/16 tube x 1/8 NPT	1
23	803579	Spacer	2
24	N00753	Plug, flush pipe, 1/8 NPT	2
25	A48J164	Tubing, heat-shrink, PTFE, ID 0.19"	0.2ft
26	N01756	Terminal, parallel, 16-14 GA	2
27	N06989	Wire, NPC/PTFE, 18GA, 1000V, green/yellow	0.5ft
28	001U002	Lubricant, silicone, DOW112	A/R*

A/R* = As required.

NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.



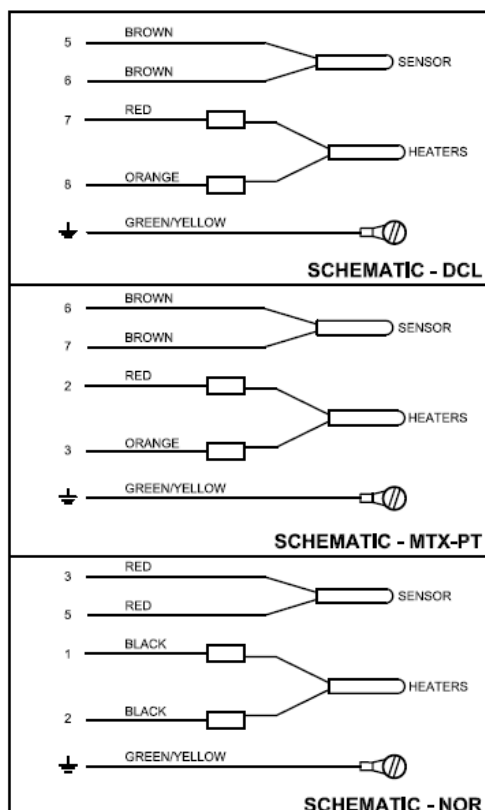
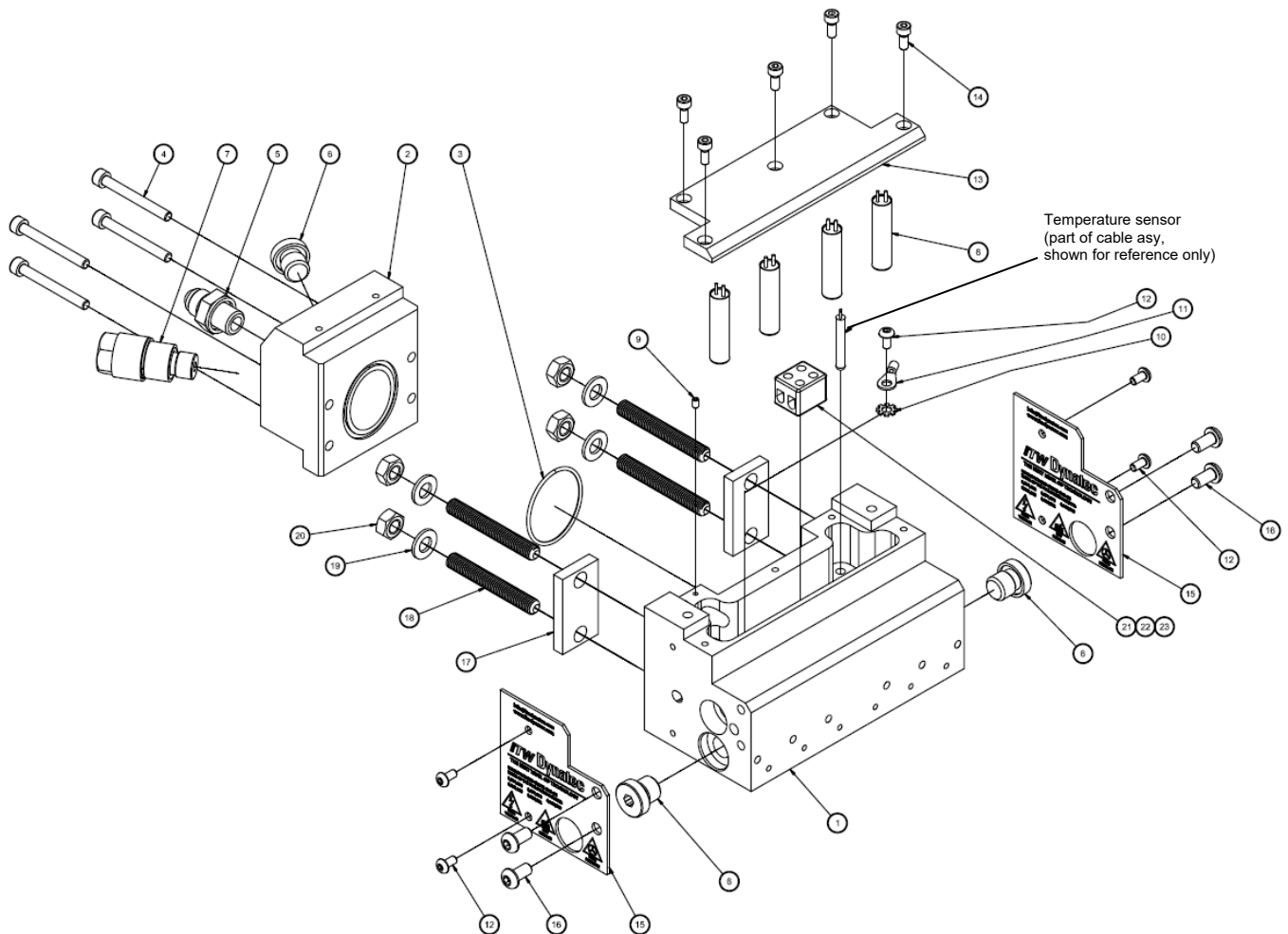
Temperature sensor
(part of cable asy, shown for reference only)

Illustration: Module-Manifold Assembly, 6-Port, Ultra stackable, PN 122802

8.5.2 Service Block Assembly, 6-Port, Ultra stackable, PN 122799

Item No.	Part Number	Description	Quantity
1	122798	Service block, 6-port, Ultra stackable	1
2	120774	Filter manifold, single, angled	1
3	N06160	O-ring 029	1
4	121275	Screw M5x45mm	4
5	101624	Fitting 1/4 BSPP x #6 JIC male	1
6	101625	Plug G1/4 (BSPP)	3
7	107820	Purge valve assembly	1
8	803960	Heater cartridge 10x40mm, 200W, 240V	4
9	103470	Screw M3x5mm	1
10	N04302	Lock washer #10	1
11	N04268	Terminal, ring, 22-16 GA	1
12	107161	Screw M4x8mm	5
13	122800	Wire cover	1
14	102446	Screw M4x10mm	5
15	121130	End cover	2
16	120719	Screw M6x12mm	4
17	804466	Insulator	2
18	107536	Screw M8x60mm	4
19	106321	Flat washer M8	4
20	105060	Hex nut M8	4
21	107881	Terminal block, ceramic, 2-pole	1
22	104227	Ferrule 18 AWG	2
23	104229	Ferrule 14 AWG	2

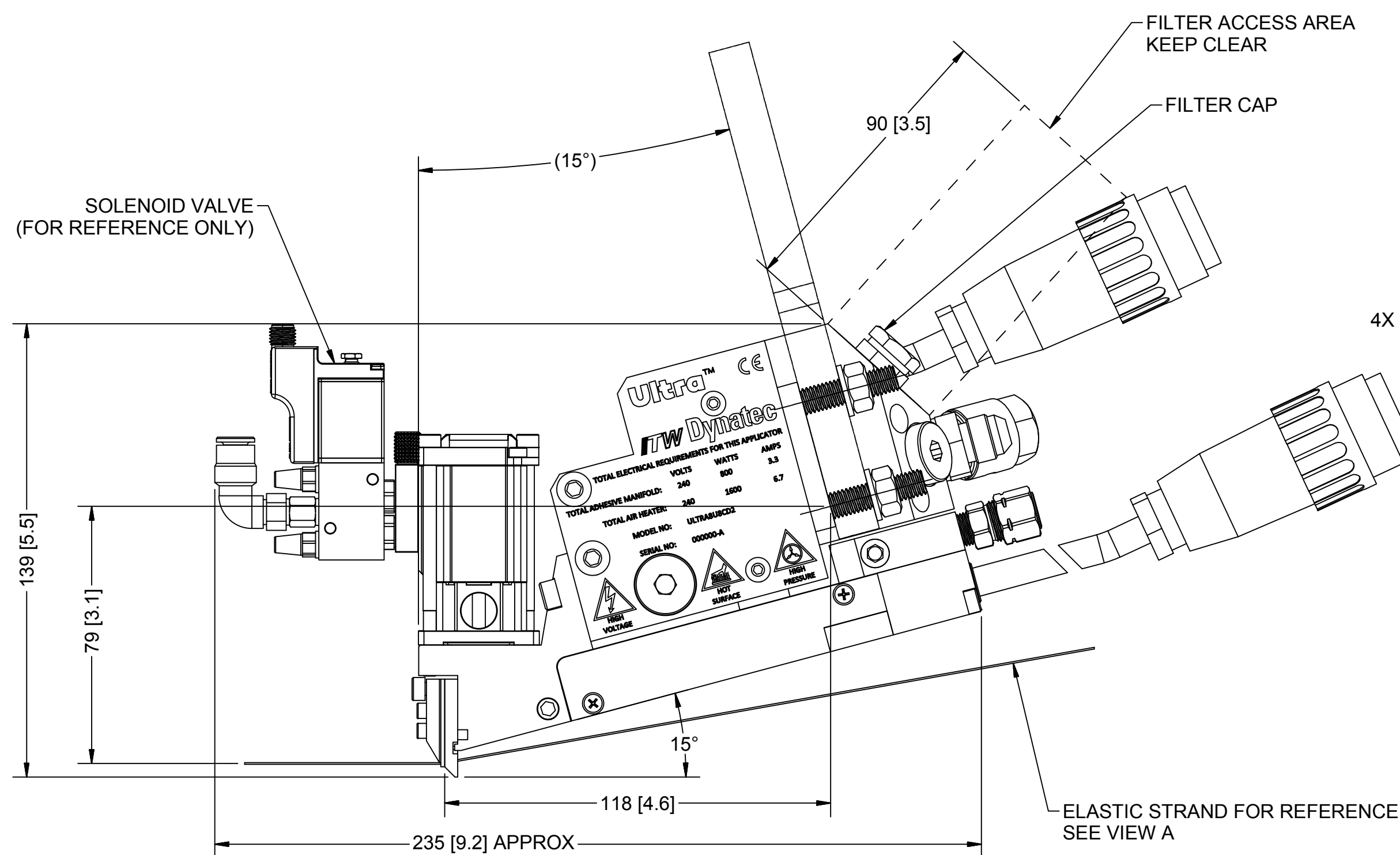
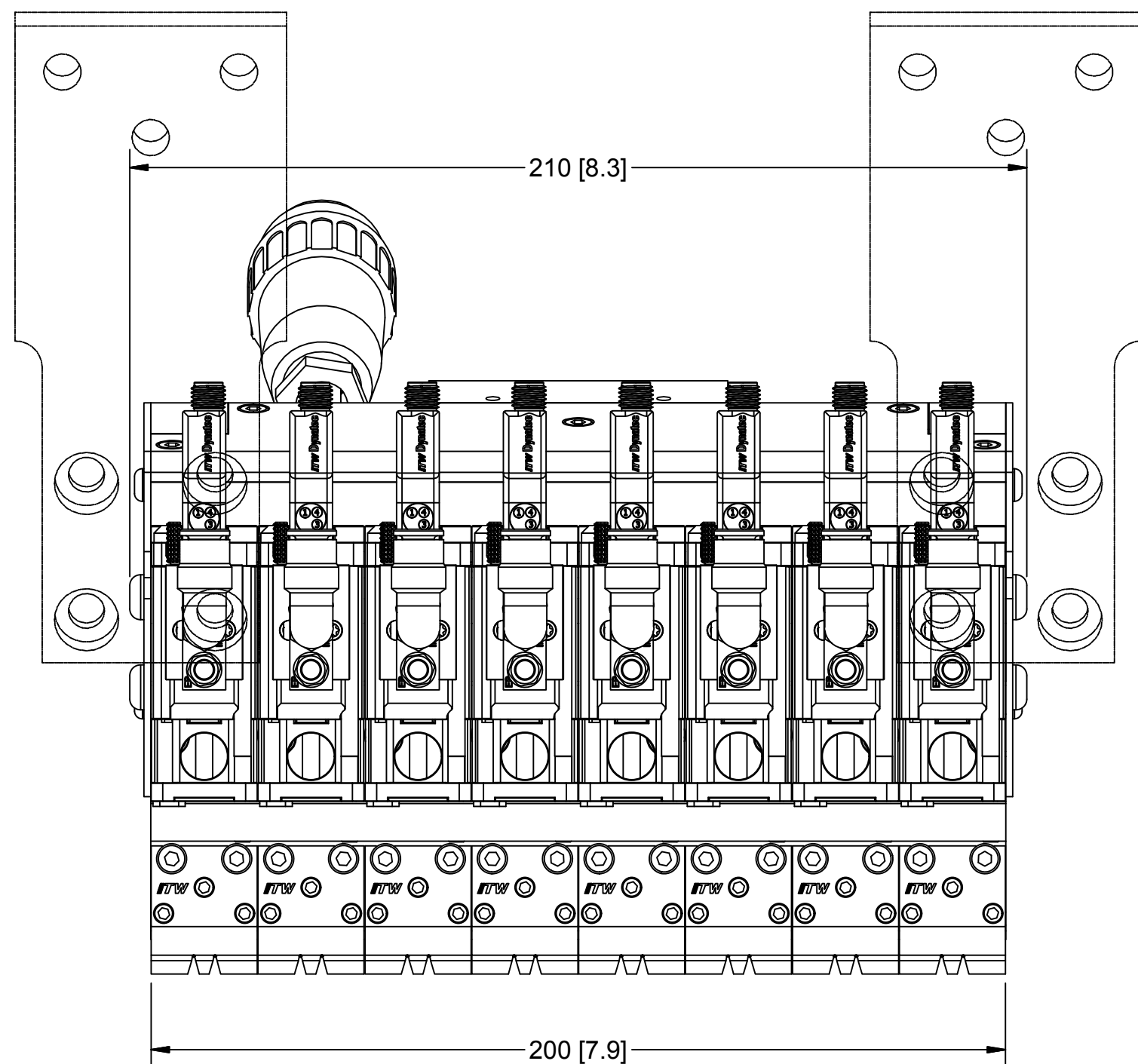
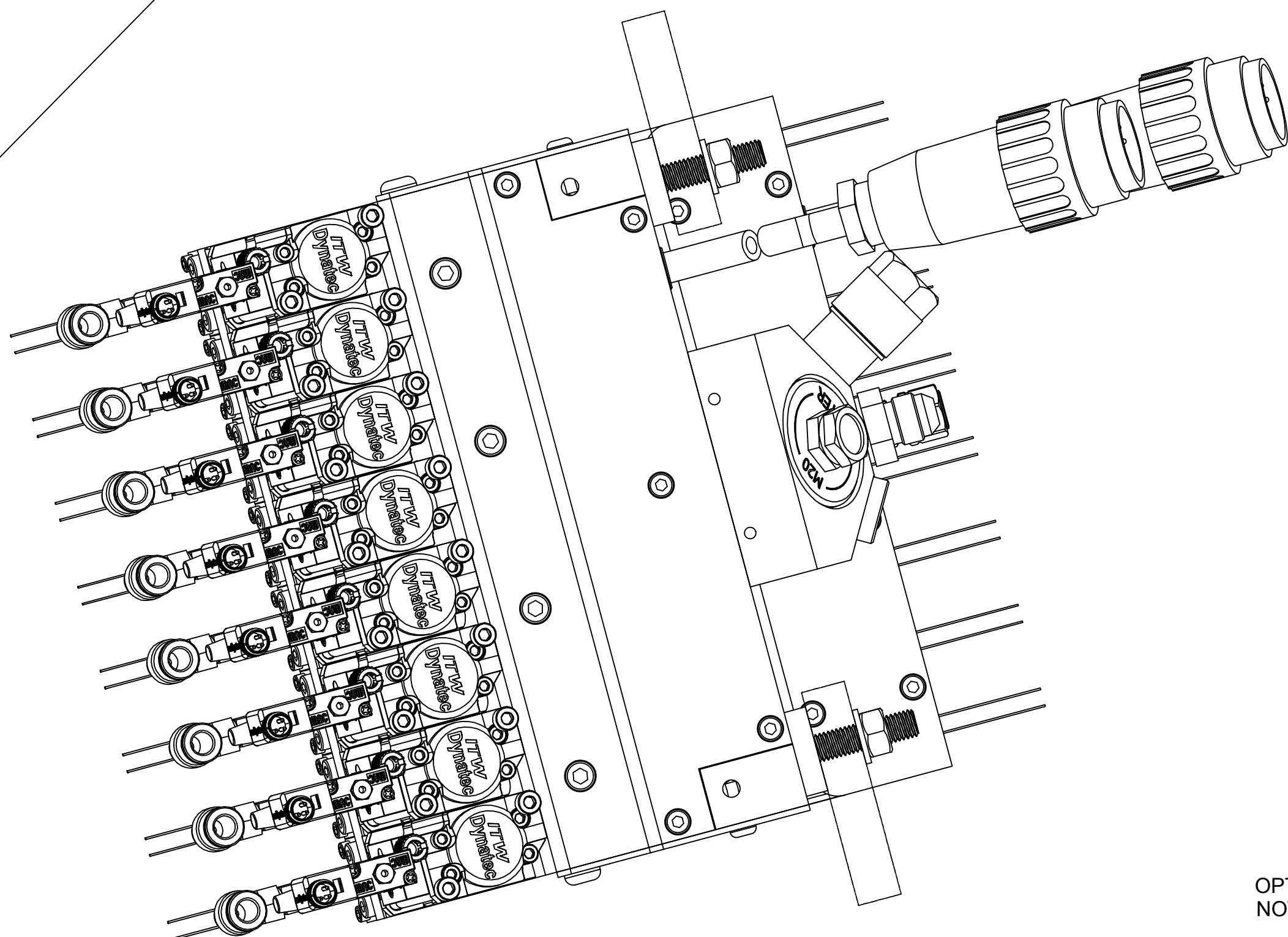
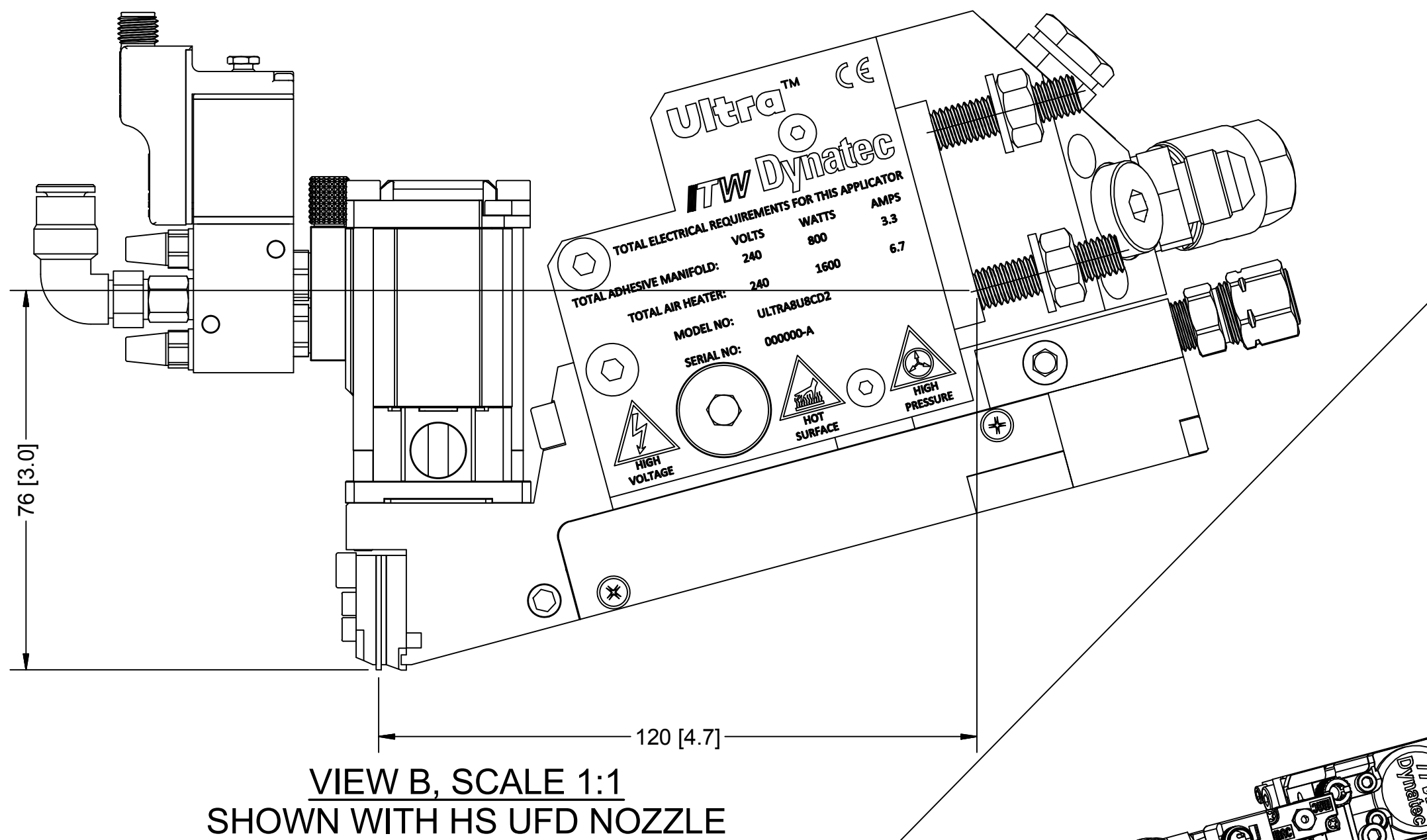
NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.



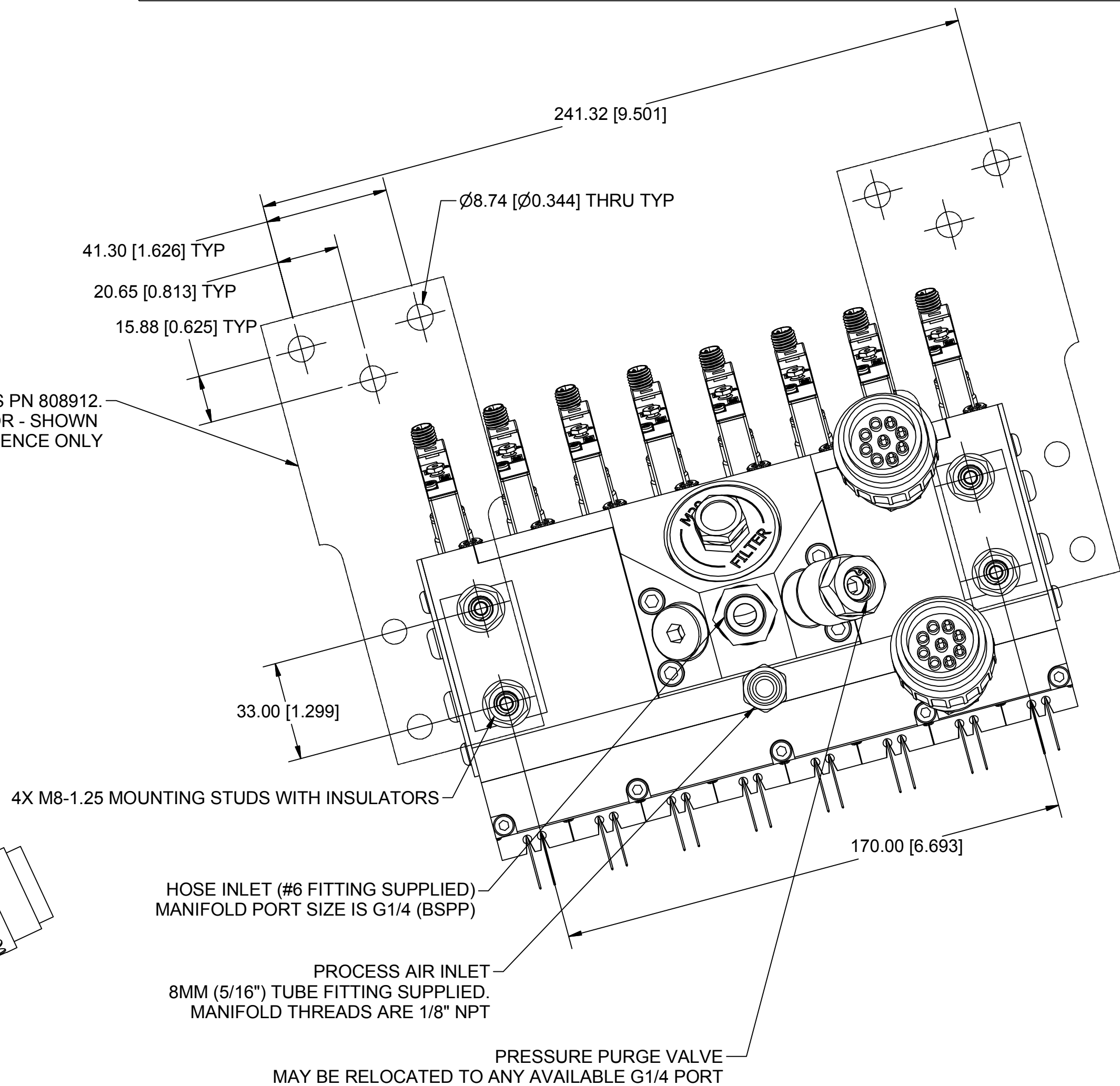
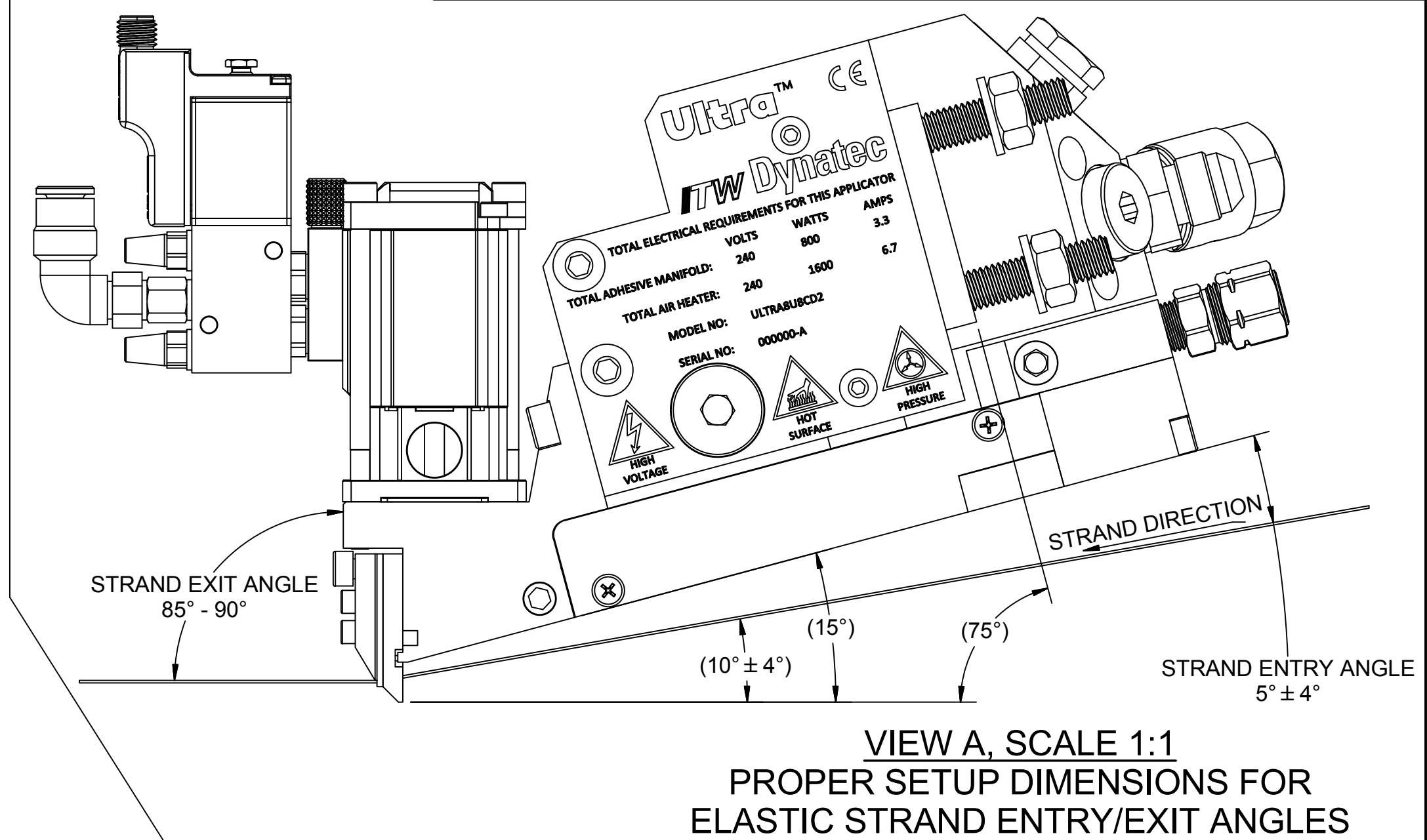
Schematics are for reference only.
Final connections are at next assembly.


Illustration: Service Block Assembly, 6-Port, Ultra stackable, PN 122799

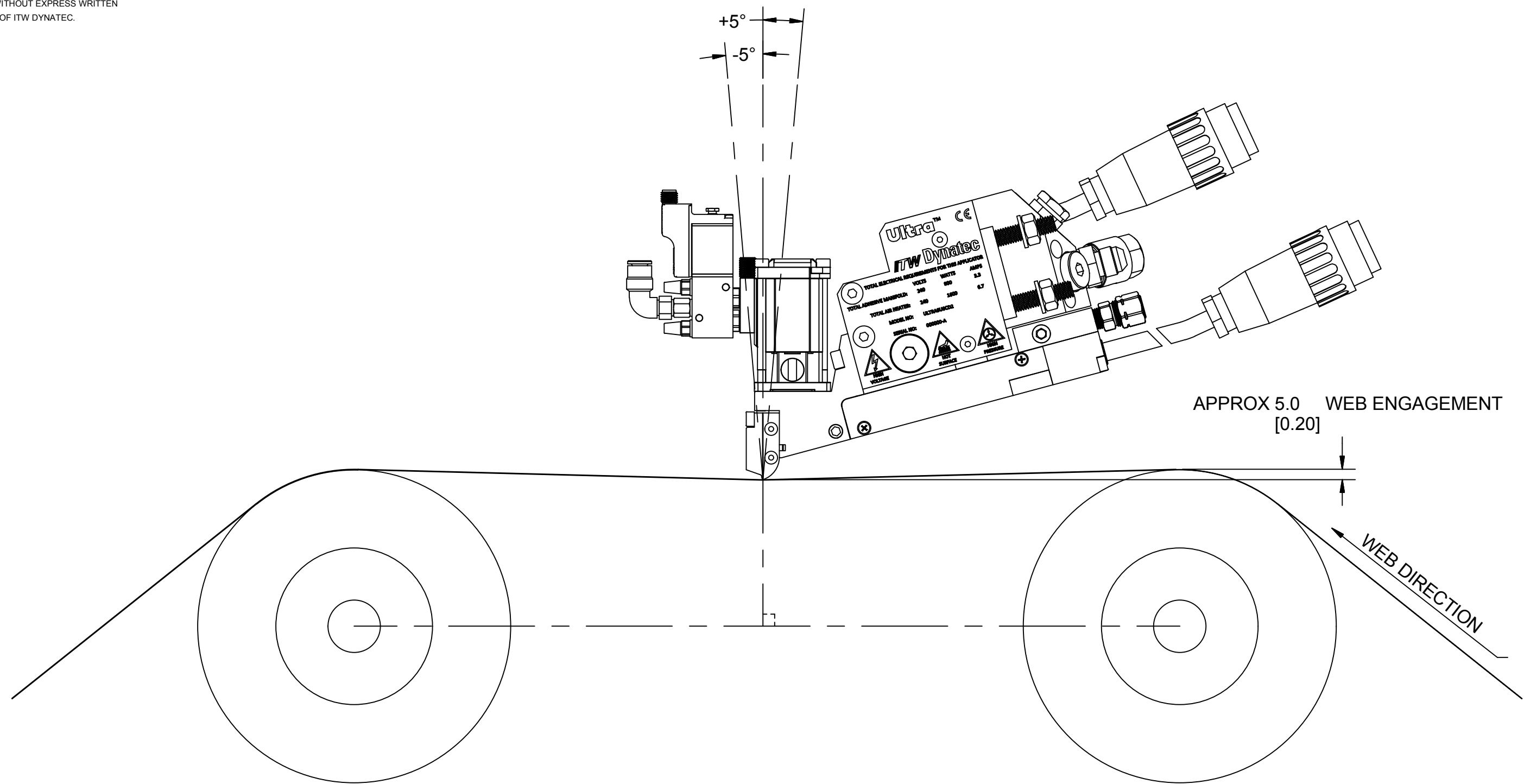
8.6 8-Port ULTRALINK Applicator, Layout, PN 121158



REVISIONS				
ORDER/CCR/ECR	REV	DESCRIPTION	DATE	BY
1602	A	ORIGINAL RELEASE	17MAY17	EWB
E17061	B	REVISE FILTER BLOCK VIEWS	13SEP17	EWB
18026	C	SHT 1: REVISE STRAND ANGLES; ADD SHEET 2	28FEB18	EWB

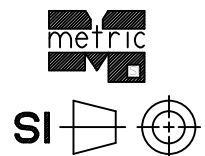
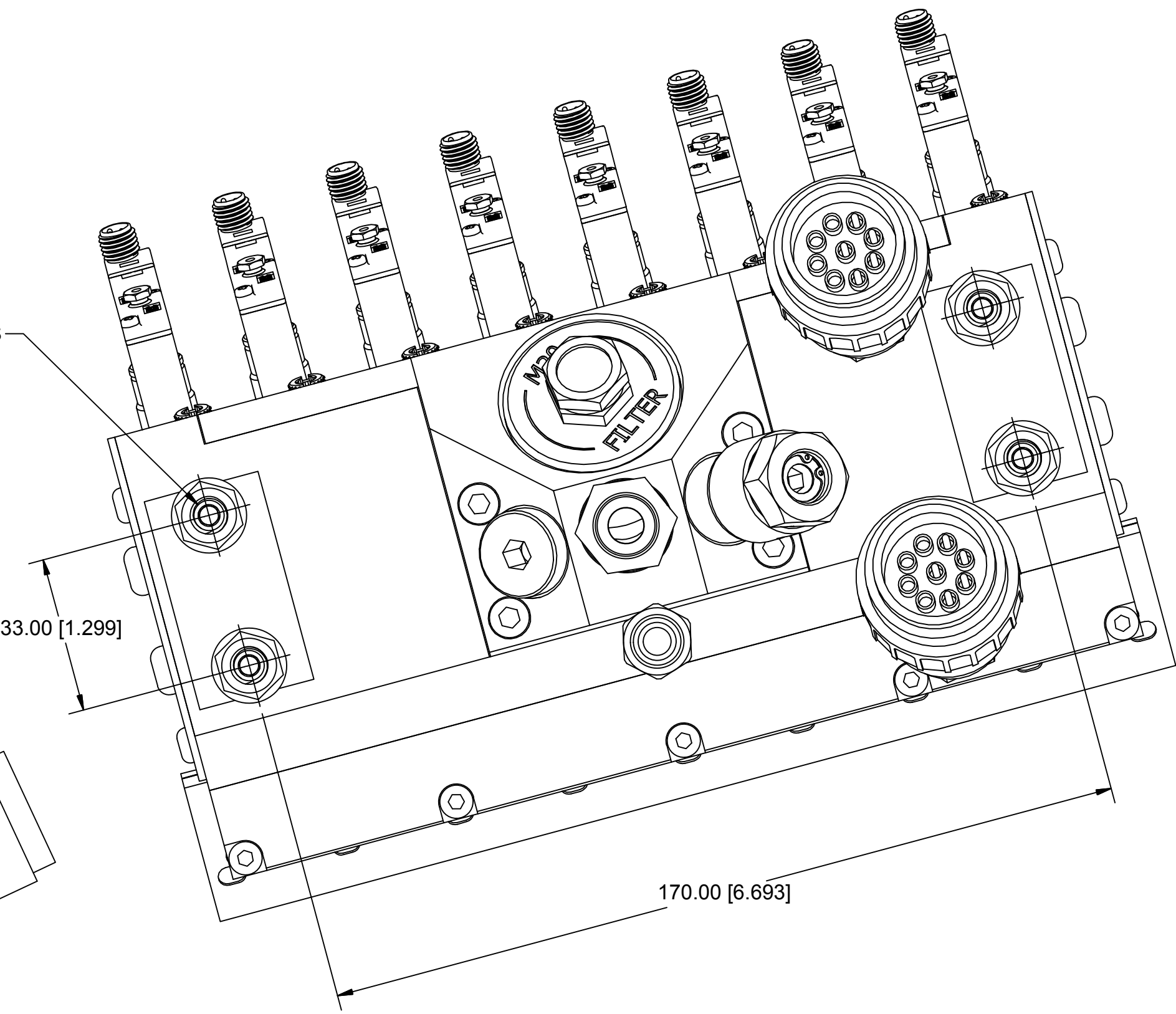
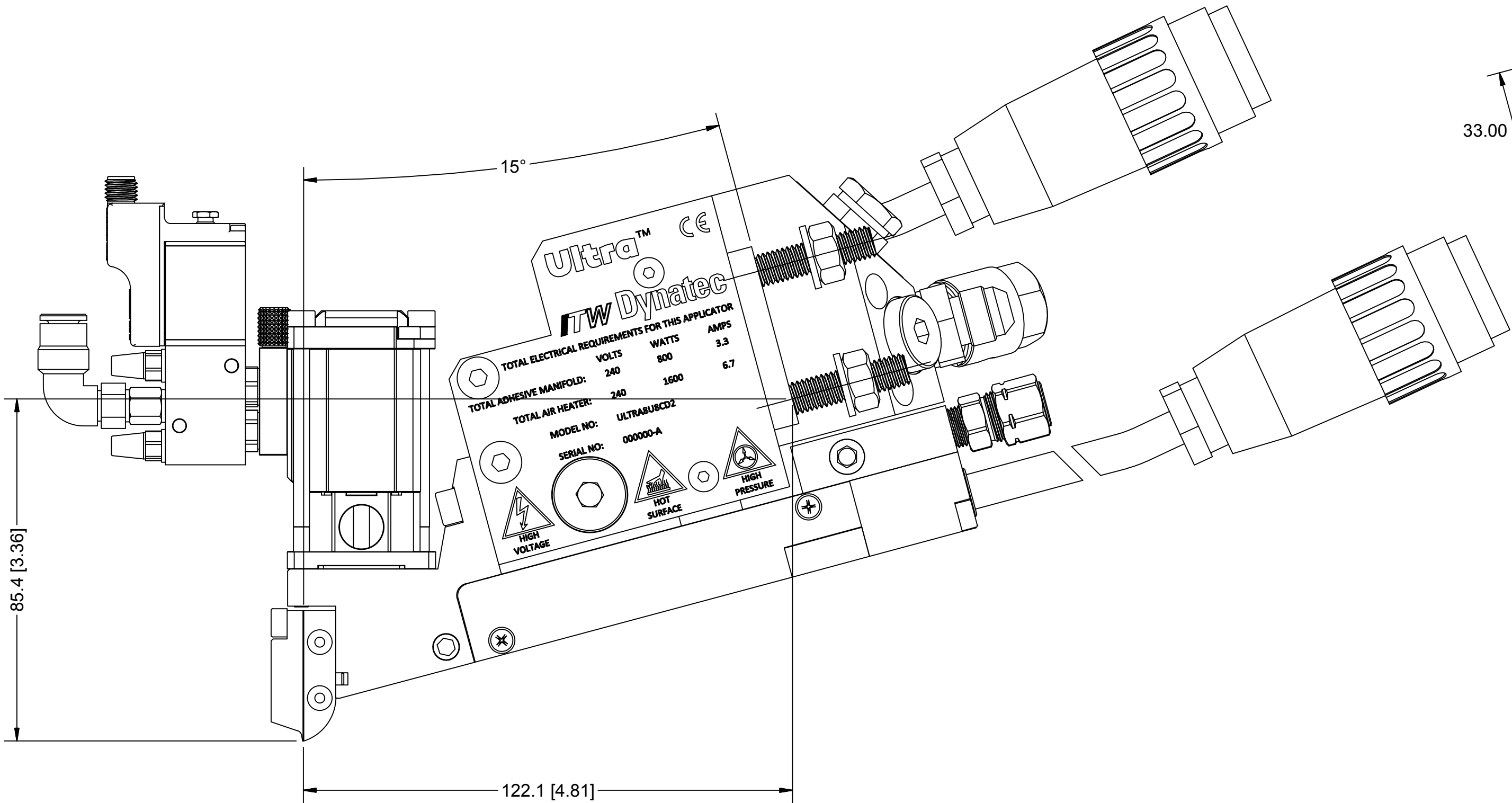
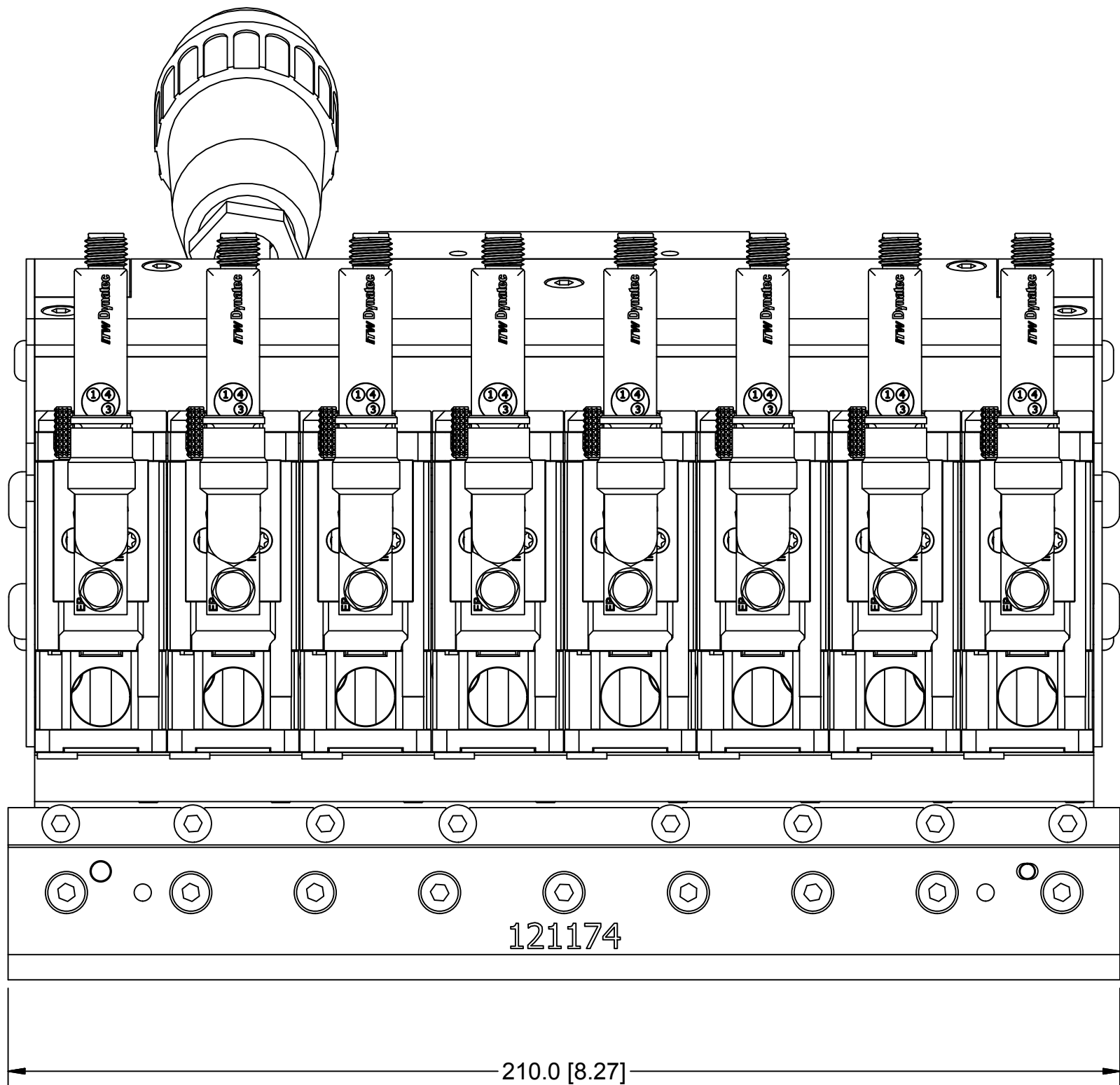


UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES (MILLIMETERS) (INCHES) TOLERANCES ARE: ANGLES FINISHES (RUGED/CALS) ANGLES X ± 0.05 X ± 0.020 ± 5 X ± 0.25 XX ± 0.10 XXX ± 0.10 XXXX ± 0.004		GD&T PER ASME/ANSI Y14.5-2009				HENDERSONVILLE, TN	
USED ON		APPROVALS		DATE		LAYOUT, 8-PORT ULTRA APPLICATOR, CTRICA	
SIMILAR PART TO		DRAWN		EWB		17MAY17	
NEXT ASSY		CHECKED		COMPUTER DESCRIPTION (24 CHARACTERS)		SIZE D DWG. NO. 121158 REV C	
		DRAWN AT SCALE		3/4		SHEET 1 OF 2	



VIEW C
SCALE 1 / 2
INSTALLATION RECOMMENDATIONS
WITH ULTRA SLOT EXTRUDER

VIEWS AND DIMENSIONS SHOWING
ULTRA SLOT EXTRUDER



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (MM/DECIMALS) (IN/DECIMALS) ANGLES X ± 0.5 X ± 0.20 ± .5 XX ± 0.25 XX ± .010 XXX ± 0.10 XXX ± 0.004		
USED ON		
SIMILAR PART TO		
NEXT ASSY		

GD&T PER ASME/ANSI Y14.5-2009	
APPROVALS	DATE
DRAWN EWB	17MAY17
CHECKED	
COMPUTER DESCRIPTION (24 CHARACTERS)	

ITW Dynatec HENDERSONVILLE, TN	
LAYOUT, 8-PORT ULTRA APPLICATOR, METRIC	
SIZE D	REV C
DWG. NO. 121158	
DRAWN AT SCALE 1 : 1	SHEET 2 OF 2

8.6.1 Module-Manifold Assembly, 8-Port, Ultra stackable, PN 121161

Item No.	Part Number	Description	Quantity
1	121144	Module manifold 8-port	1
2	N01124	Fitting, plug 1/16-27 NPT	2
3	119988	Spiral tube 85mm	8
4	N00181	O-ring 017	8
5	119989	Heater cartridge 10x80mm, 150W, 240V	8
6	078C088	Lock washer	2
7	N07430	Terminal ring #6	1
8	101627	Screw M3x6mm	2
9	120751	Wire cover, rear	1
10	103470	Screw M3x5mm	1
11	119664	Heater cartridge, 10x190mm, 400W, 240V	1
12	048G016	Terminal ring #6	1
13	101692	Screw M4x35mm	5
14	121122	Wire cover, side	1
15	106239	Screw M3x5mm	2
16	120754	Air manifold	1
17	N00175	O-ring -008	8
18	106328	Screw M4x16mm	8
19	N00753	Plug, flush-pipe, 1/8NPT	2
20	120109	Fitting, connector, 5/16 tube x 1/8 NPT	1
21	N00178	O-ring -011	8
22	803579	Spacer	4
23	100908	Screw M4x25mm	20
24	119015	Screw M5x16mm	8
25	*	Cable assembly	1

* NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.

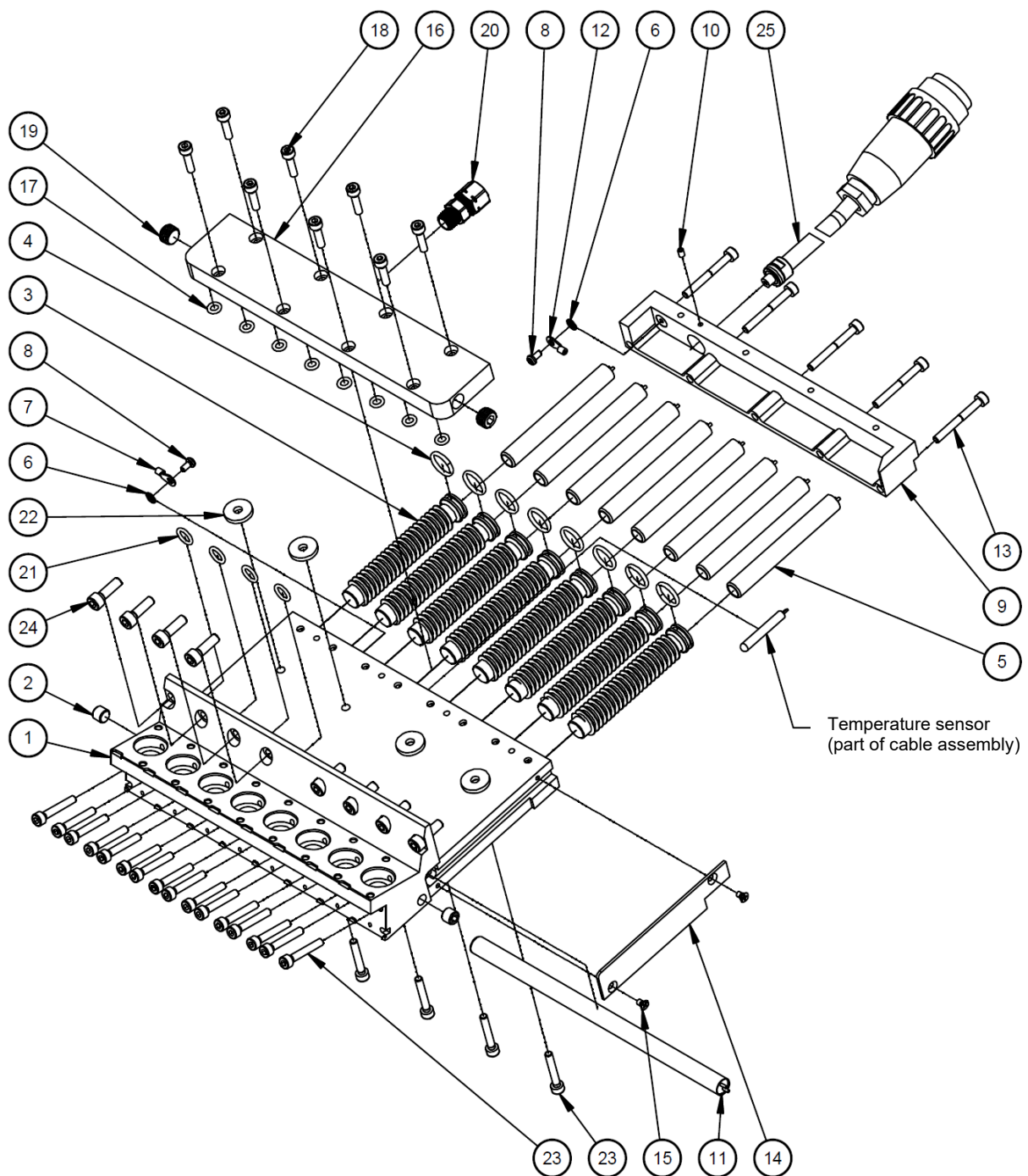


Illustration: Module-Manifold Assembly, 8-Port, Ultra stackable, PN 121161

8.6.2 Service Block Assembly, 8-Port, Ultra stackable, PN 121164

Item No.	Part Number	Description	Quantity
1	121141	Service block, 8-port	1
2	120774	Filter manifold, single	1
3	N06160	O-ring 029	1
4	121275	Screw M5x45 mm	4
5	101624	Fitting 1/4BSPP x #6 JIC male	1
6	101625	Plug, G1/4 BSPP	3
7	107820	Purge valve assembly	1
8	803960	Heater cartridge 10x40mm, 200W, 240V	4
9	103470	Screw M3x5mm	1
10	N04302	Lock washer #10	1
11	N04268	Terminal, ring, 22-16	1
12	107161	Screw M4x8mm	5
13	121142	Wire Cover	1
14	102446	Screw M4x10mm	5
15	121143	Cover, solenoid	1
16	116876	Screw M5x12mm	4
17	121130	End cover	2
18	120719	Screw M6x12mm	4
19	804466	Insulator	2
20	107536	Screw M8x60mm	4
21	106321	Flat washer M8	4
22	105060	Hex nut M8	4
23	*	Cable assembly	1

* NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.

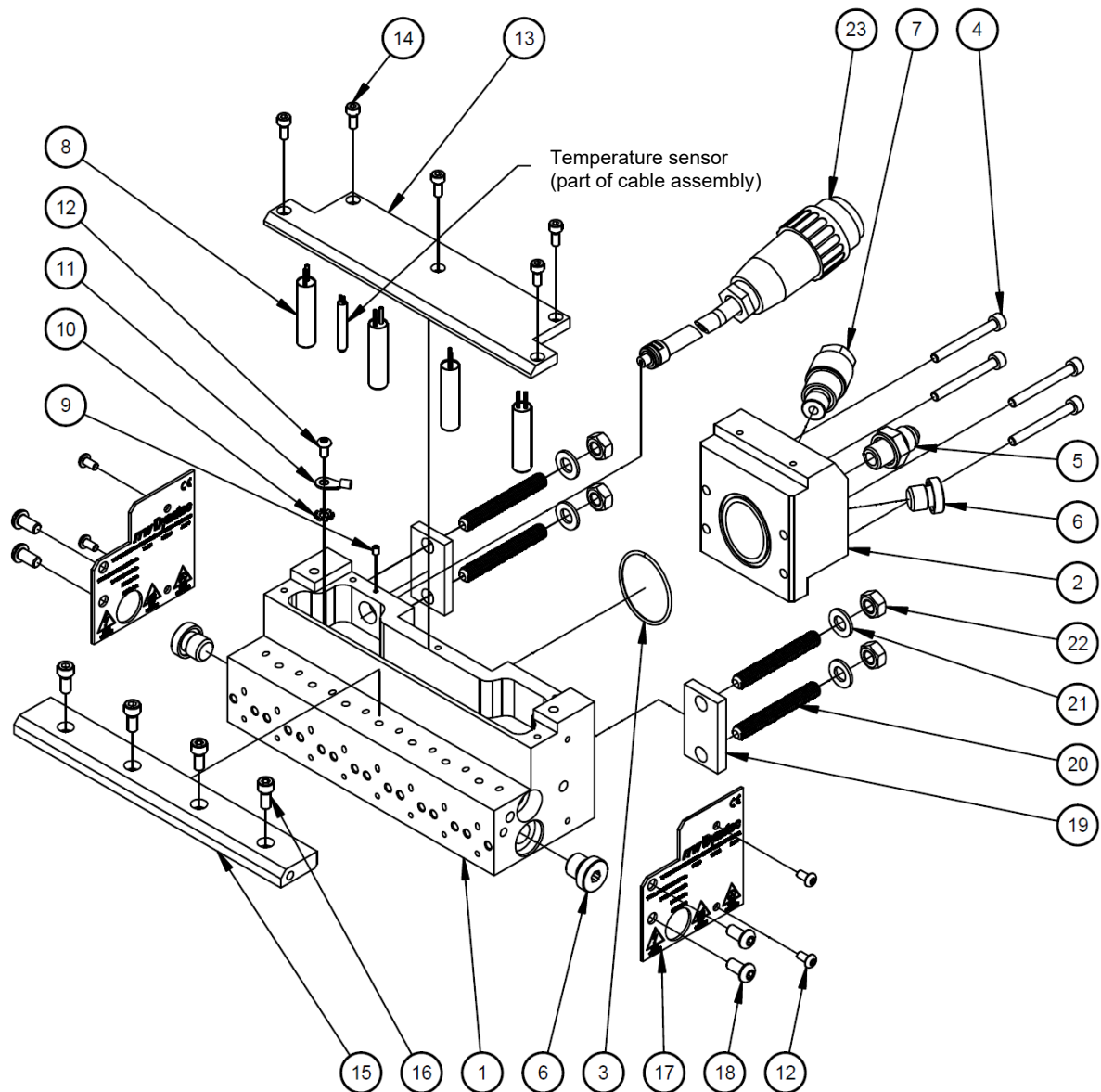
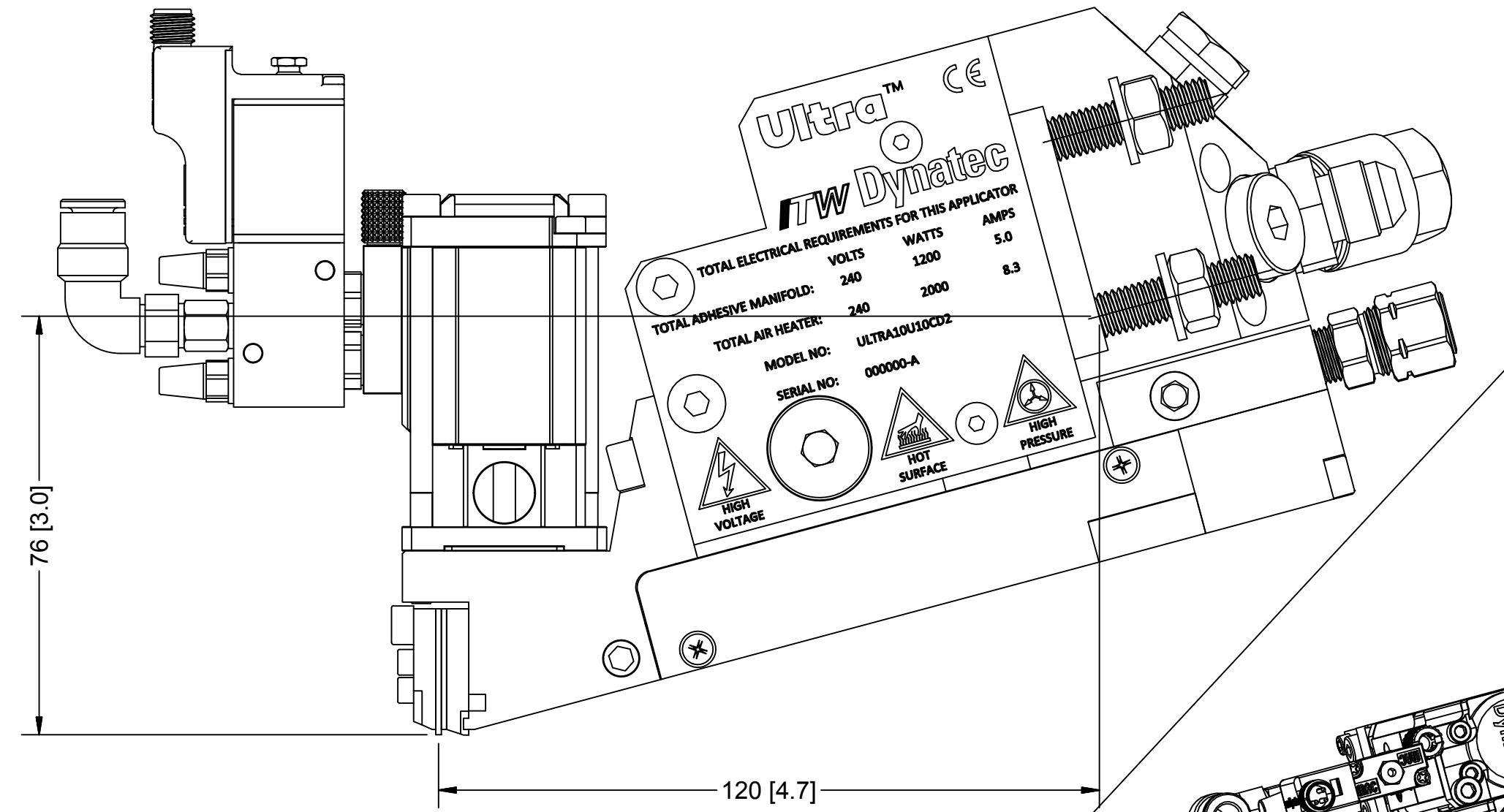
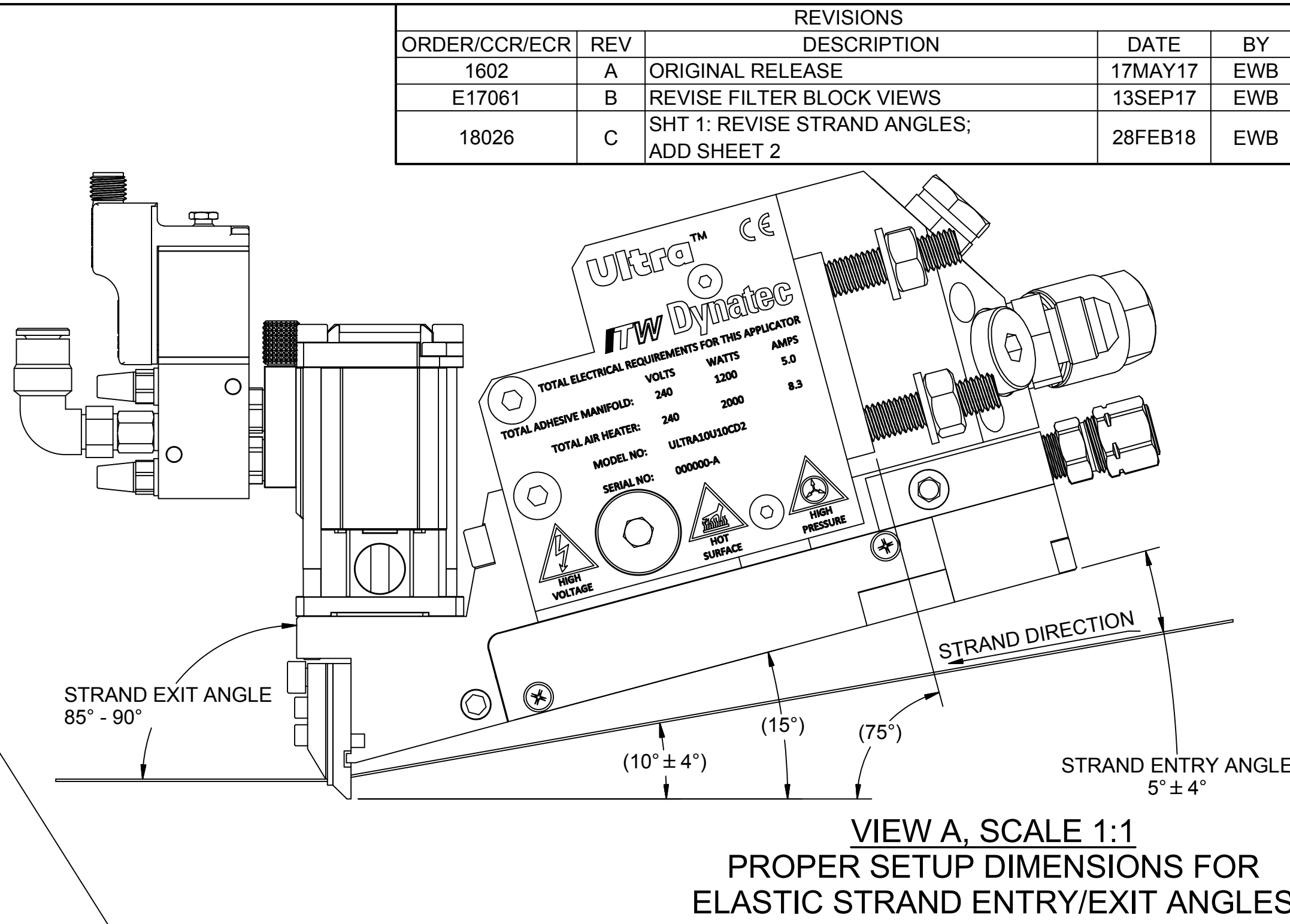
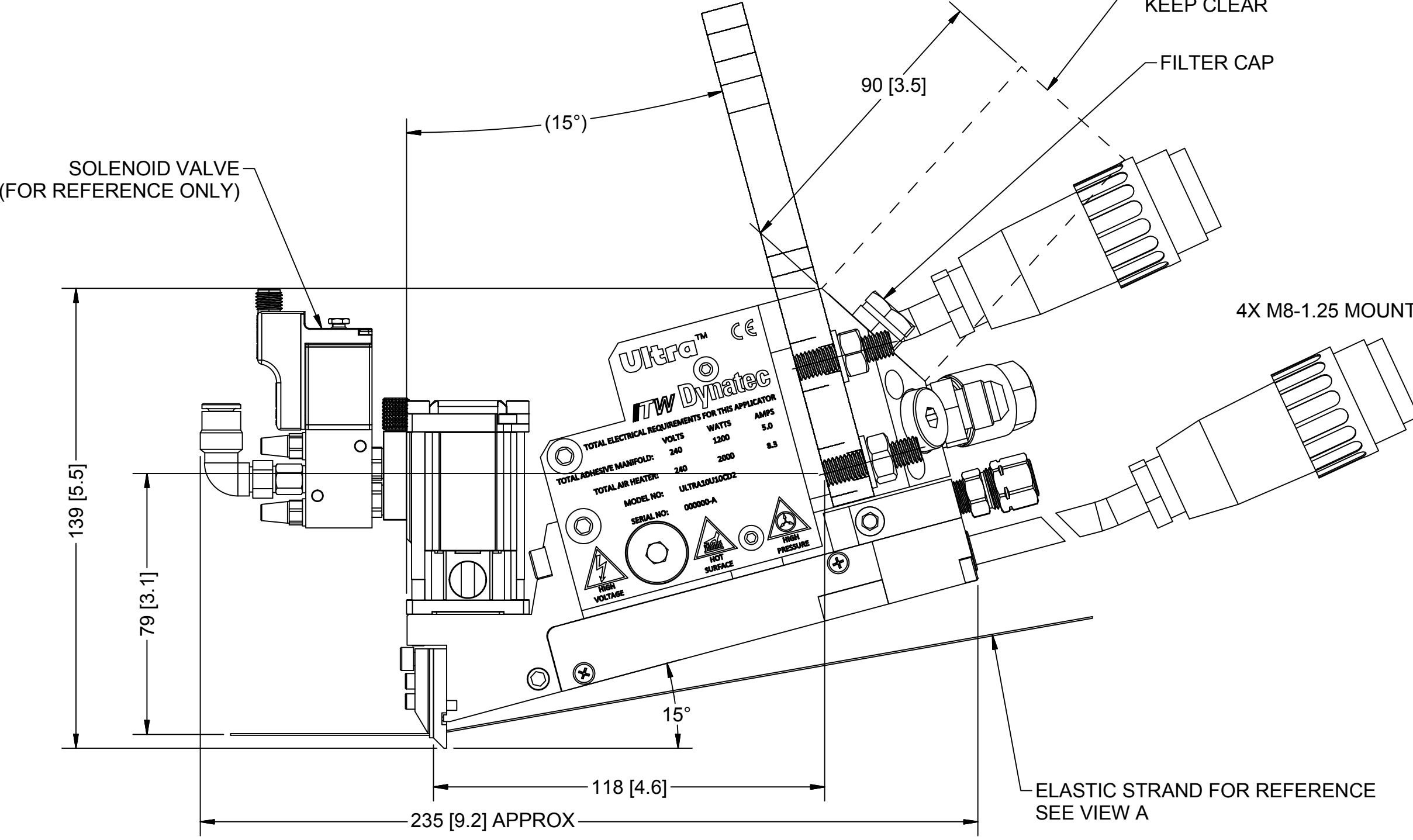
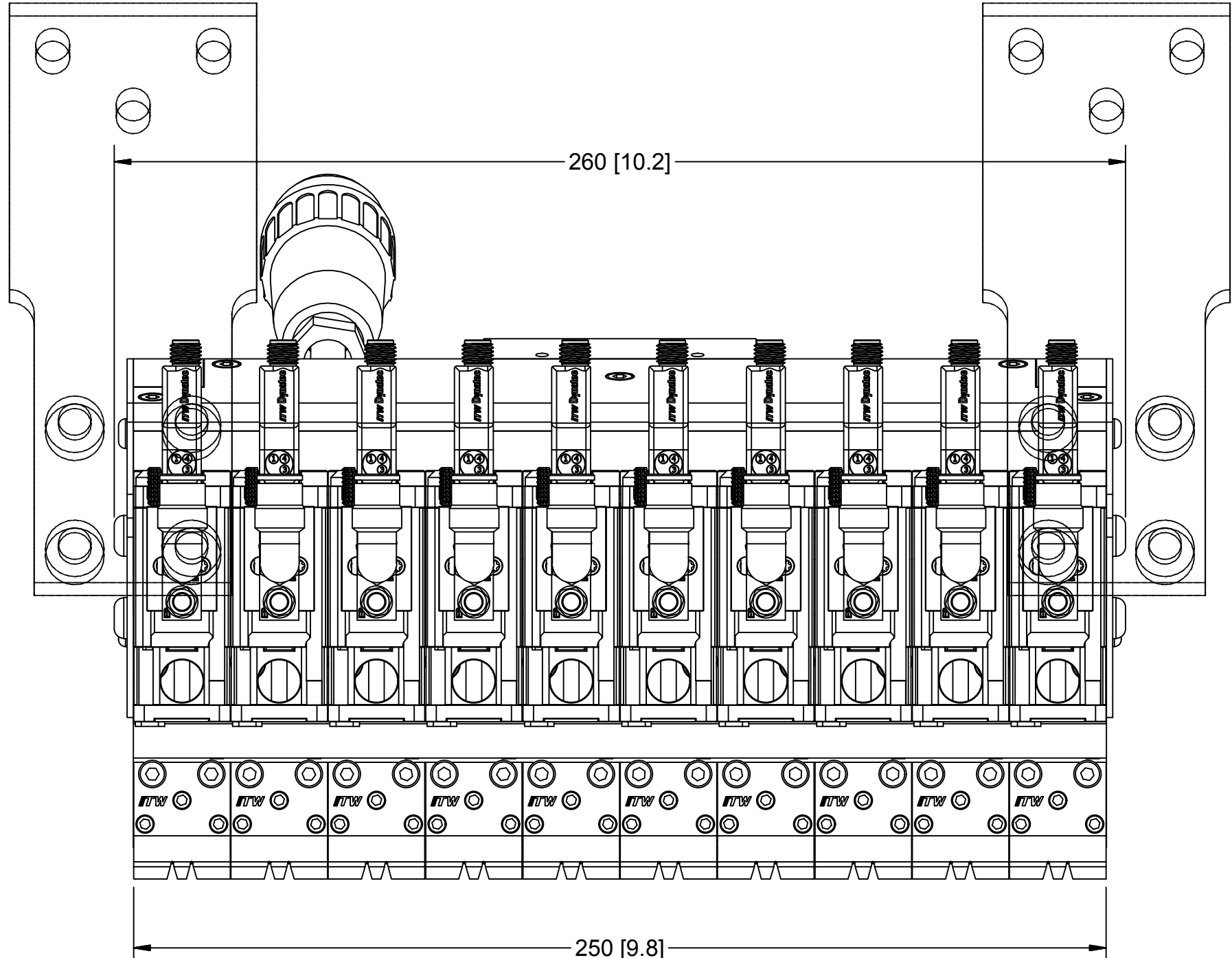
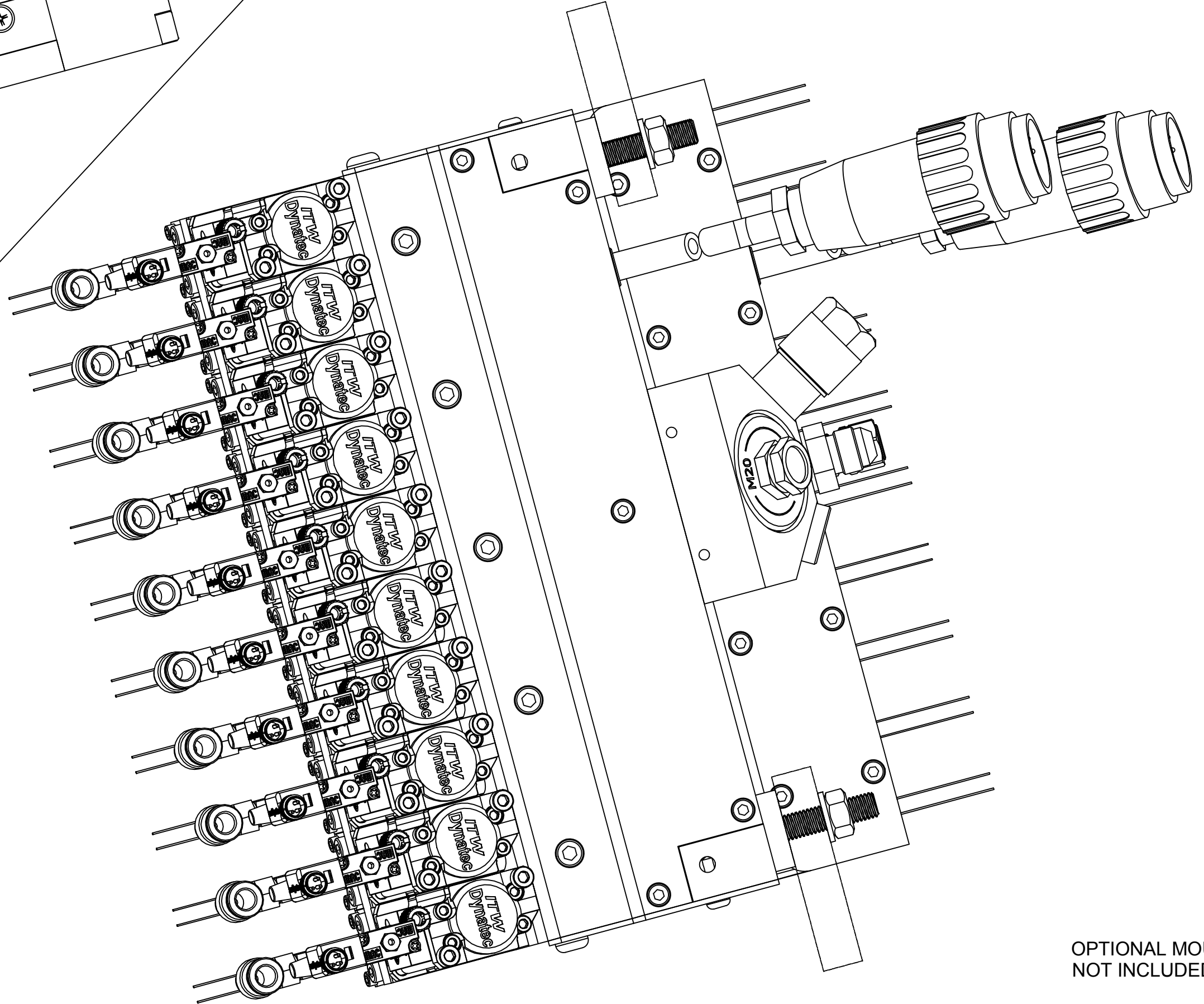


Illustration: Service Block Assembly, 8-Port, Ultra stackable, PN 121164

8.7 10-Port ULTRALINK Applicator, Layout, PN 121159



VIEW B, SCALE 1:1
SHOWN WITH HS UFD NOZZLE




VIEW A, SCALE 1:1
PROPER SETUP DIMENSIONS FOR
ELASTIC STRAND ENTRY/EXIT ANGLES

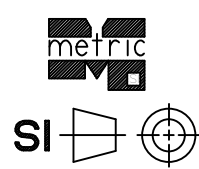
HOSE INLET (#6 FITTING SUPPLIED)
MANIFOLD PORT SIZE IS G1/4 (BSPP)

PROCESS AIR INLET
8MM (5/16") TUBE FITTING SUPPLIED.
MANIFOLD THREADS ARE 1/8" NPT

PRESSURE PURGE VALVE
MAY BE RELOCATED TO ANY AVAILABLE G1/4 PORT

REVISIONS				
ORDER/CCR/ECR	REV	DESCRIPTION	DATE	BY
1602	A	ORIGINAL RELEASE	17MAY17	EWB
E17061	B	REVISE FILTER BLOCK VIEWS	13SEP17	EWB
18026	C	SHT 1: REVISE STRAND ANGLES; ADD SHEET 2	28FEB18	EWB

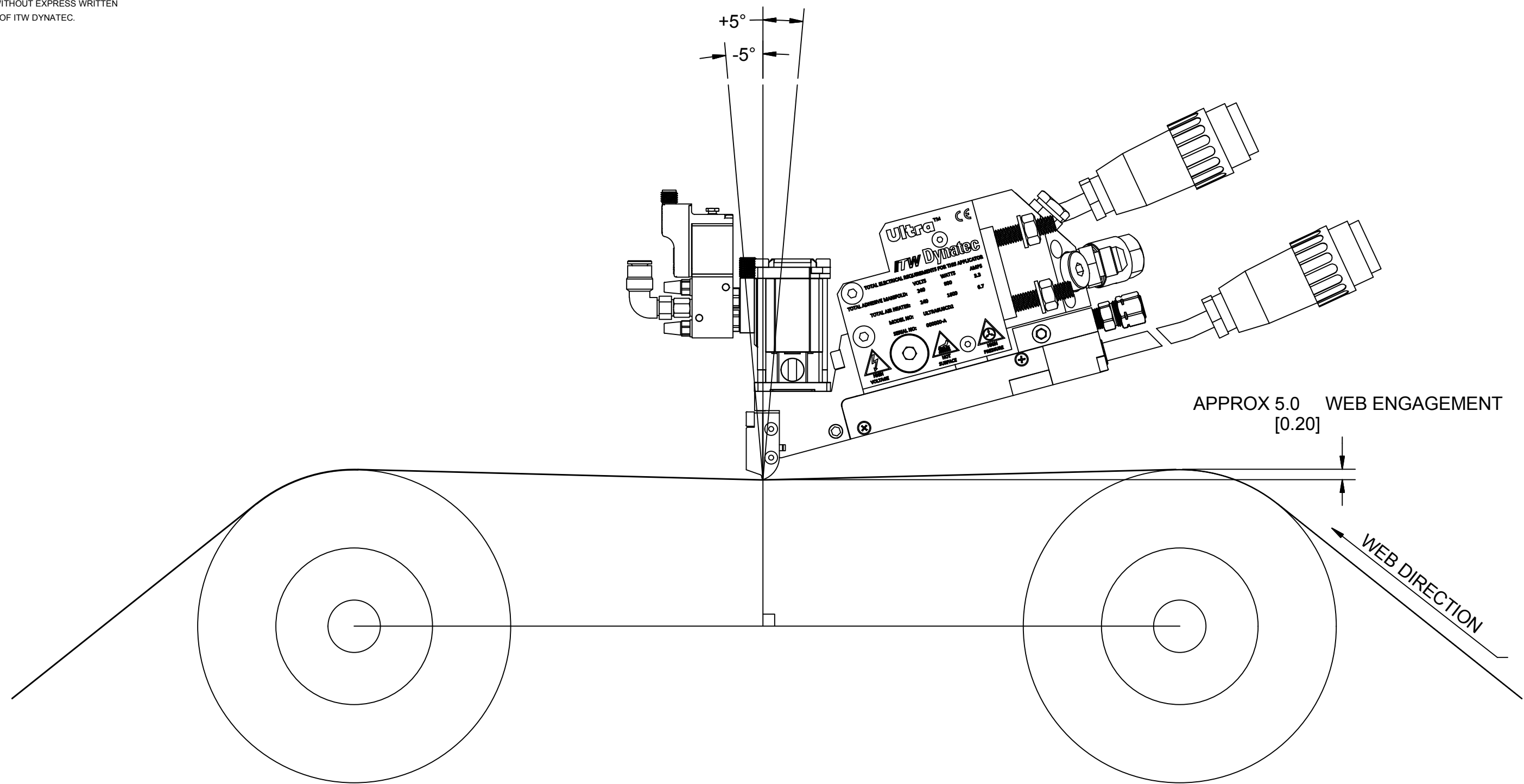
<div>UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (UN)DECIMALS (IN)DECIMALS ANGLES X ± 0.5 X ± 0.20 ± 5 X ± 0.25 XX ± 0.10 XX ± 0.10 XXX ± 0.004</div> <div>USED ON</div> <div>SIMILAR PART TO</div> <div>NEXT ASSY</div>	GD&T PER ASME/ANSI Y14.5-2009		<div> Dynatec</div> <div>HENDERSONVILLE, TN</div> <div>LAYOUT, 10-PORT ULTRA</div> <div>APPLICATOR, METRIC</div>		
	APPROVALS				DATE
	DRAWN				17MAY17
	EWB				
	CHECKED				
COMPUTER DESCRIPTION (24 CHARACTERS)		SIZE		DWG. NO.	REV
		D		121159	C
		DRAWN AT SCALE		3/4	SHEET 1 OF 2



ITW Dynatec
HENDERSONVILLE, TN

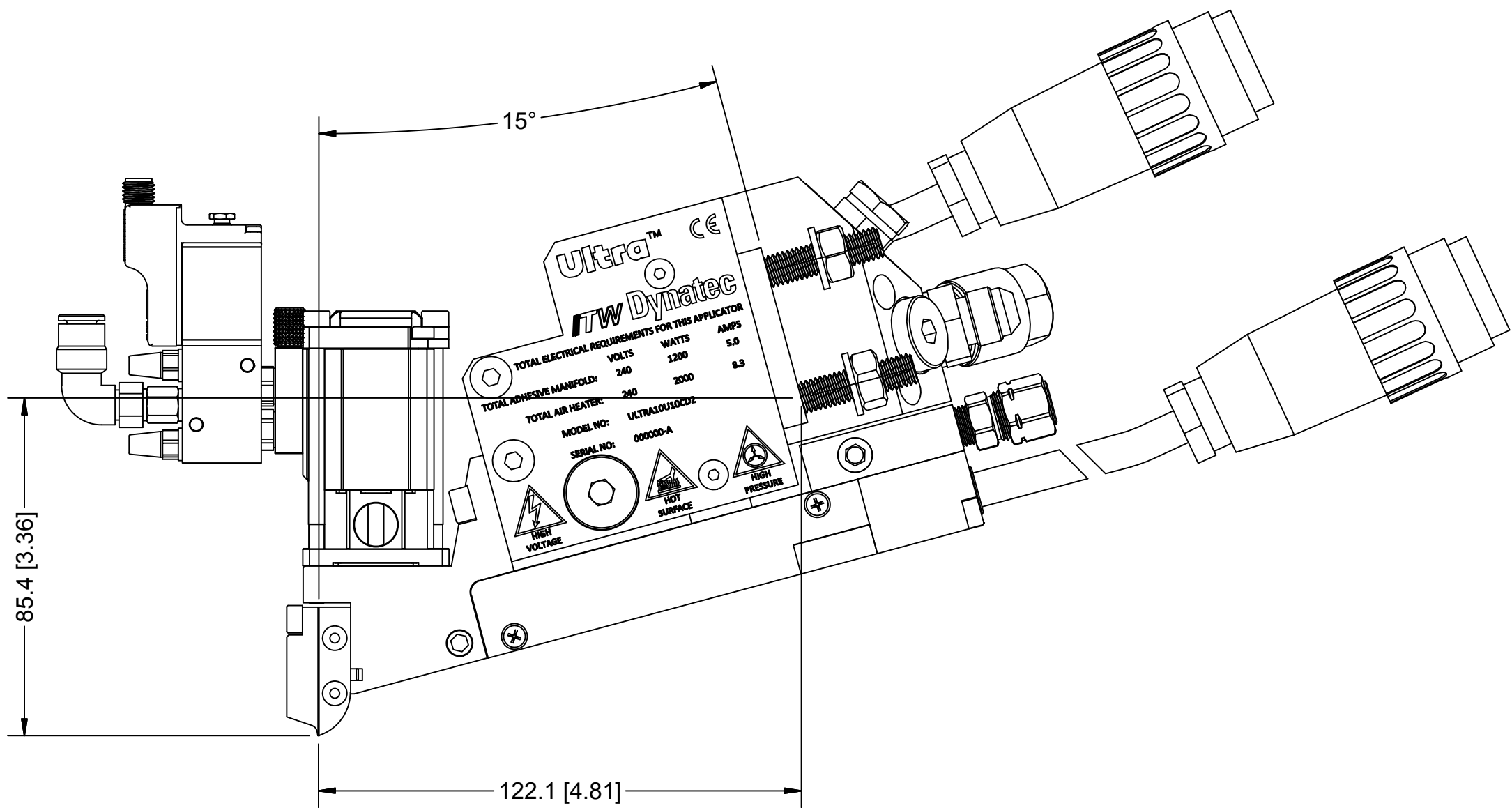
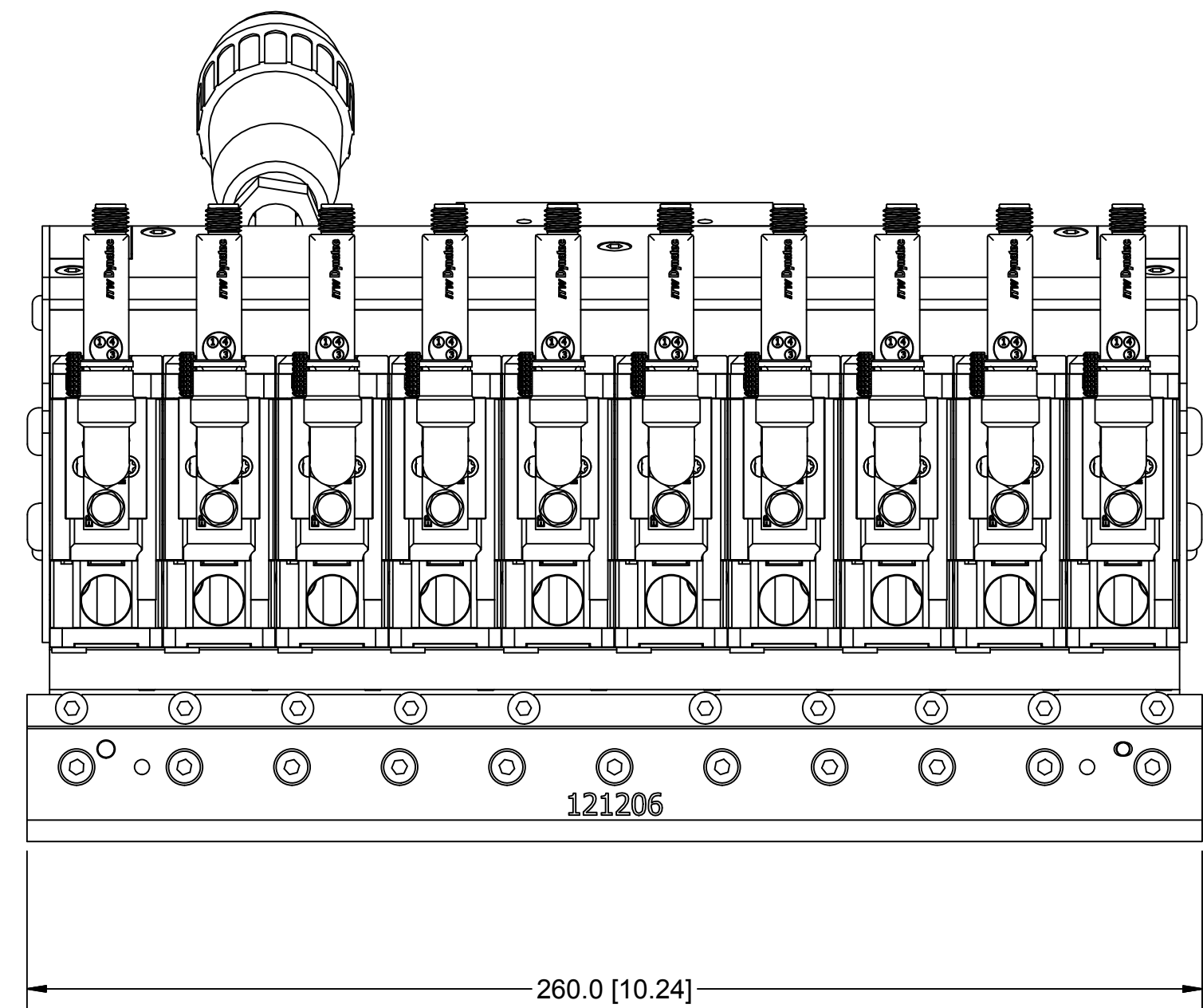
LAYOUT, 10-PORT ULTRA
APPLICATOR, METRIC

REV
C

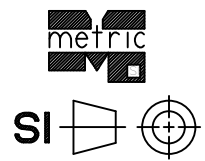
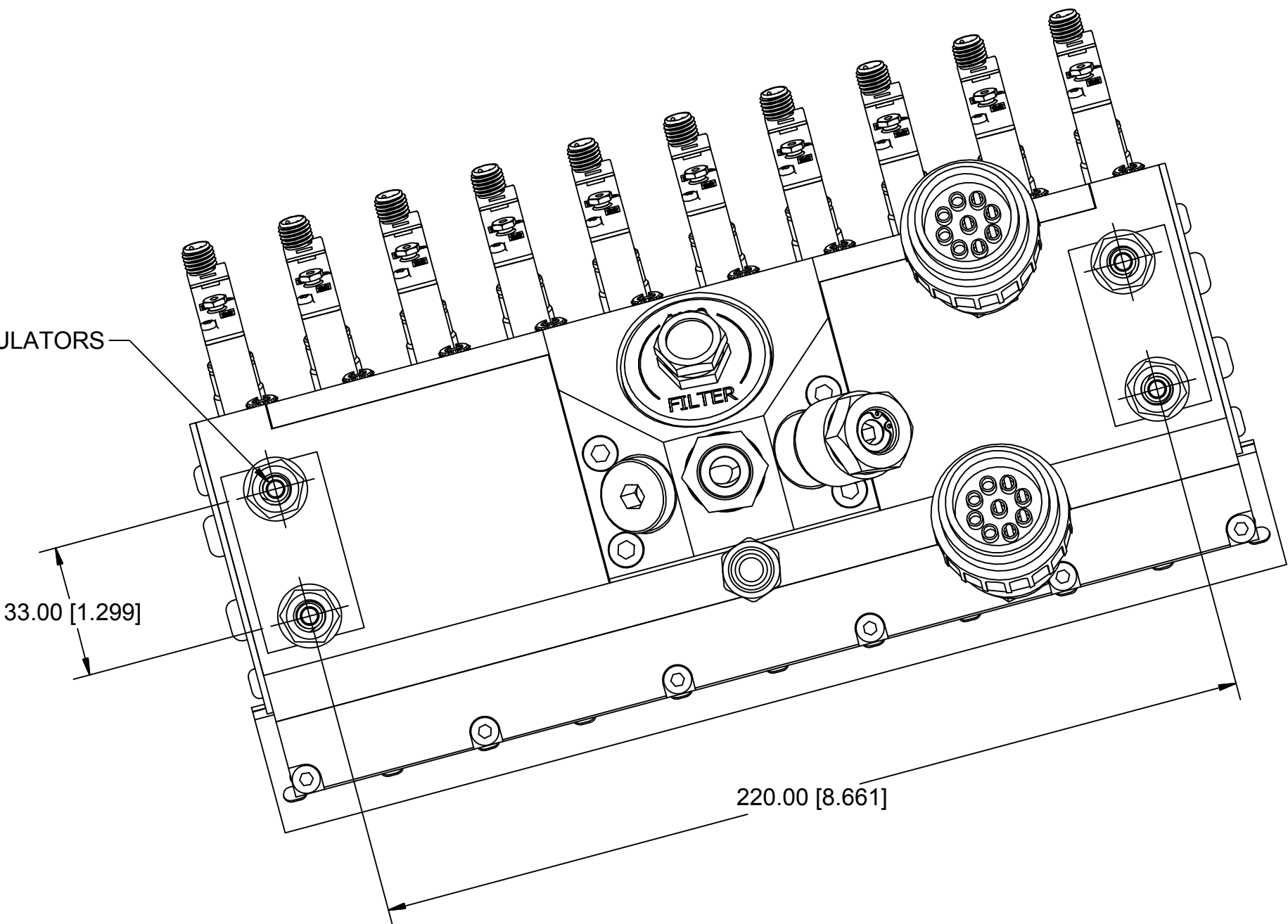



VIEW C
SCALE 1 / 2
INSTALLATION RECOMMENDATIONS
WITH ULTRA SLOT EXTRUDER

VIEWS AND DIMENSIONS SHOWING
ULTRA SLOT EXTRUDER



4X M8-1.25 MOUNTING STUDS WITH INSULATORS



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES) TOLERANCES ARE: (MM/DECIMALS) (IN/DECIMALS) ANGLES X ± 0.5 X ± 0.20 ± .5 X ± 0.25 XX ± .010 XXX ± 0.004		GD&T PER ASME/ANSI Y14.5-2009		 HENDERSONVILLE, TN		
APPROVALS		DATE				
DRAWN EWB		17MAY17		LAYOUT, 10-PORT ULTRA APPLICATOR, METRIC		
USED ON		CHECKED				
SIMILAR PART TO		COMPUTER DESCRIPTION (24 CHARACTERS)				
NEXT ASSY		SIZE D		DWG. NO. 121159		REV C
		DRAWN AT SCALE 3/4		SHEET 2 OF 2		

8.7.1 Module-Manifold Assembly, 10-Port, Ultra stackable, PN 121162

Item No.	Part Number	Description	Quantity
1	121134	Module manifold 10-port	1
2	N01124	Fitting, plug 1/16-27 NPT	2
3	119988	Spiral tube 85mm	10
4	N00181	O-ring 017	10
5	119989	Heater cartridge 10x80mm, 150W, 240V	10
6	078C088	Lock washer	2
7	N07430	Terminal ring #6	1
8	101627	Screw M3x6mm	2
9	120752	Wire cover, rear	1
10	103470	Screw M3x5mm	1
11	120820	Heater cartridge, 10x235mm, 500W, 240V	1
12	048G016	Terminal ring #6	1
13	101692	Screw M4x35mm	6
14	121122	Wire cover, side	1
15	106239	Screw M3x5mm	2
16	120755	Air manifold	1
17	N00175	O-ring -008	10
18	106328	Screw M4x16mm	9
19	N00753	Plug, flush-pipe, 1/8NPT	2
20	120109	Fitting, connector, 5/16 tube x 1/8 NPT	1
21	N00178	O-ring -011	10
22	803579	Spacer	4
23	100908	Screw M4x25mm	24
24	119015	Screw M5x16mm	10
25	*	Cable assembly	1

* NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.

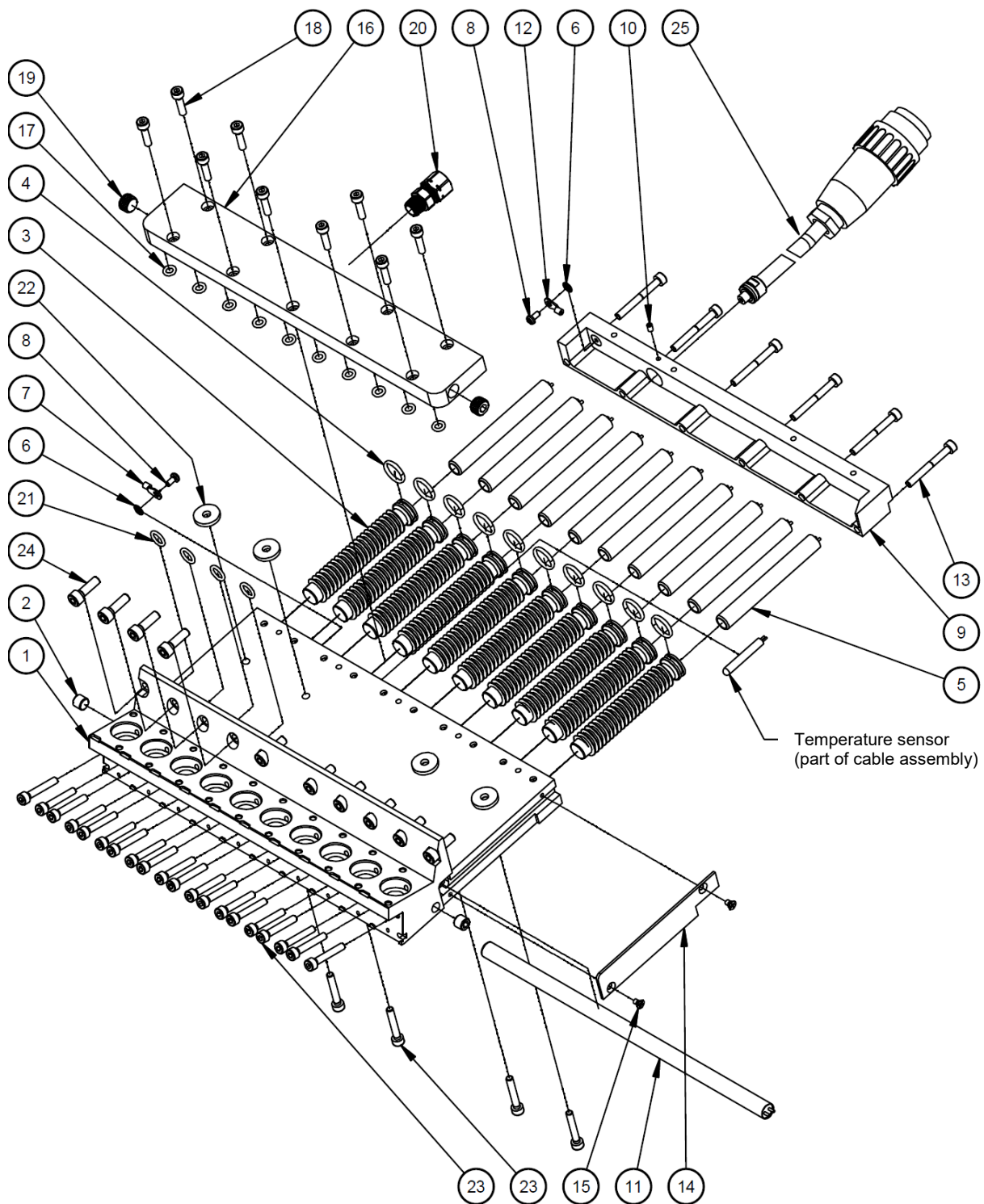


Illustration: Module-Manifold Assembly, 10-Port, Ultra stackable, PN 121162

8.7.2 Service Block Assembly, 10-Port, Ultra stackable, PN 121165

Item No.	Part Number	Description	Quantity
1	121131	Service block, 10-port	1
2	120774	Filter manifold, single	1
3	N06160	O-ring 029	1
4	121275	Screw M5x45 mm	4
5	101624	Fitting 1/4BSPP x #6 JIC male	1
6	101625	Plug, G1/4 BSPP	3
7	107820	Purge valve assembly	1
8	803960	Heater cartridge 10x40mm, 200W, 240V	6
9	103470	Screw M3x5mm	1
10	N04302	Lock washer #10	1
11	N04268	Terminal, ring, 22-16	1
12	107161	Screw M4x8mm	5
13	121132	Wire Cover	1
14	102446	Screw M4x10mm	5
15	121133	Cover, solenoid	1
16	116876	Screw M5x12mm	5
17	121130	End cover	2
18	120719	Screw M6x12mm	4
19	804466	Insulator	2
20	107536	Screw M8x60mm	4
21	106321	Flat washer M8	4
22	105060	Hex nut M8	4
23	*	Cable assembly	1

* NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.

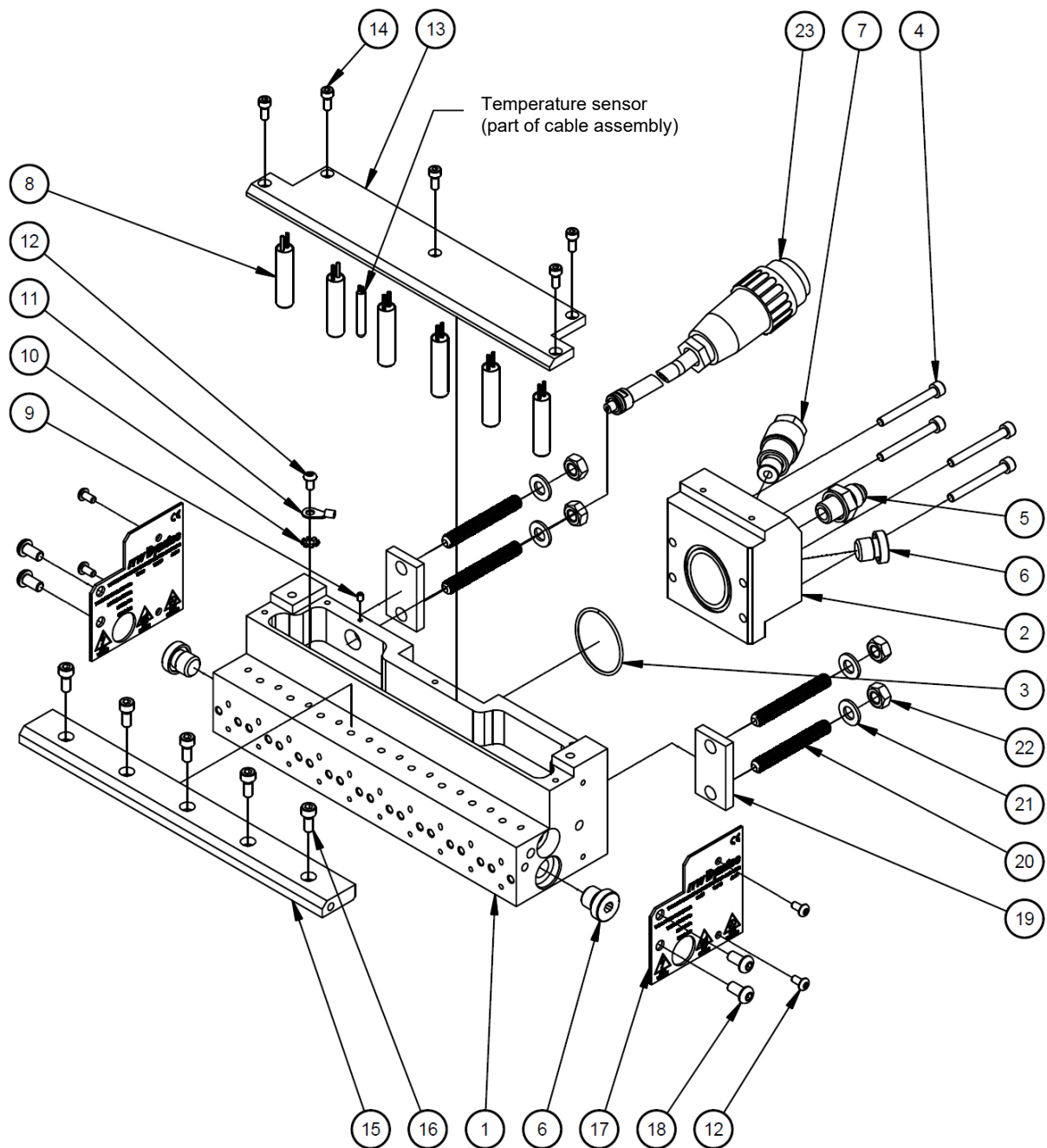
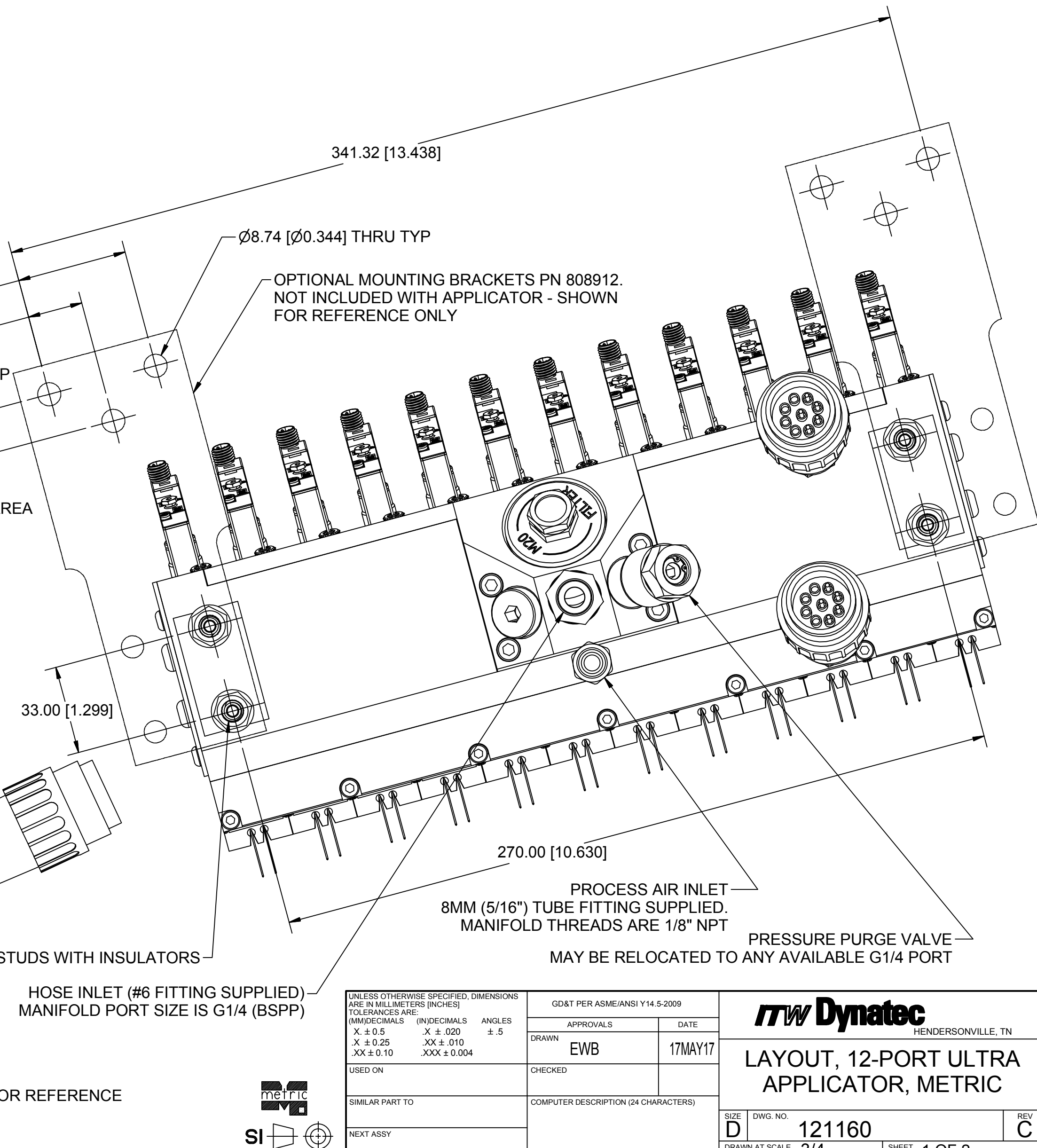
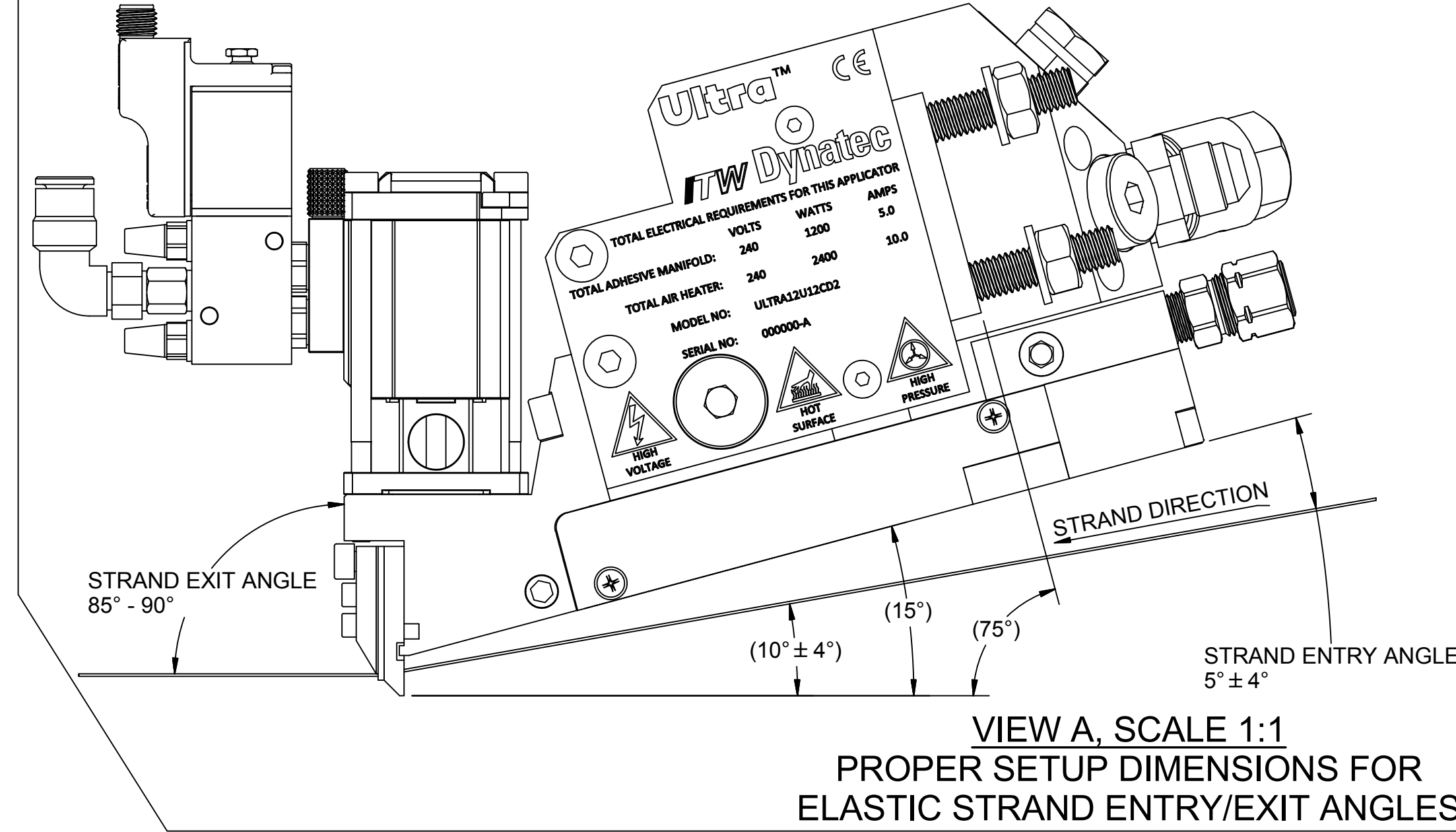
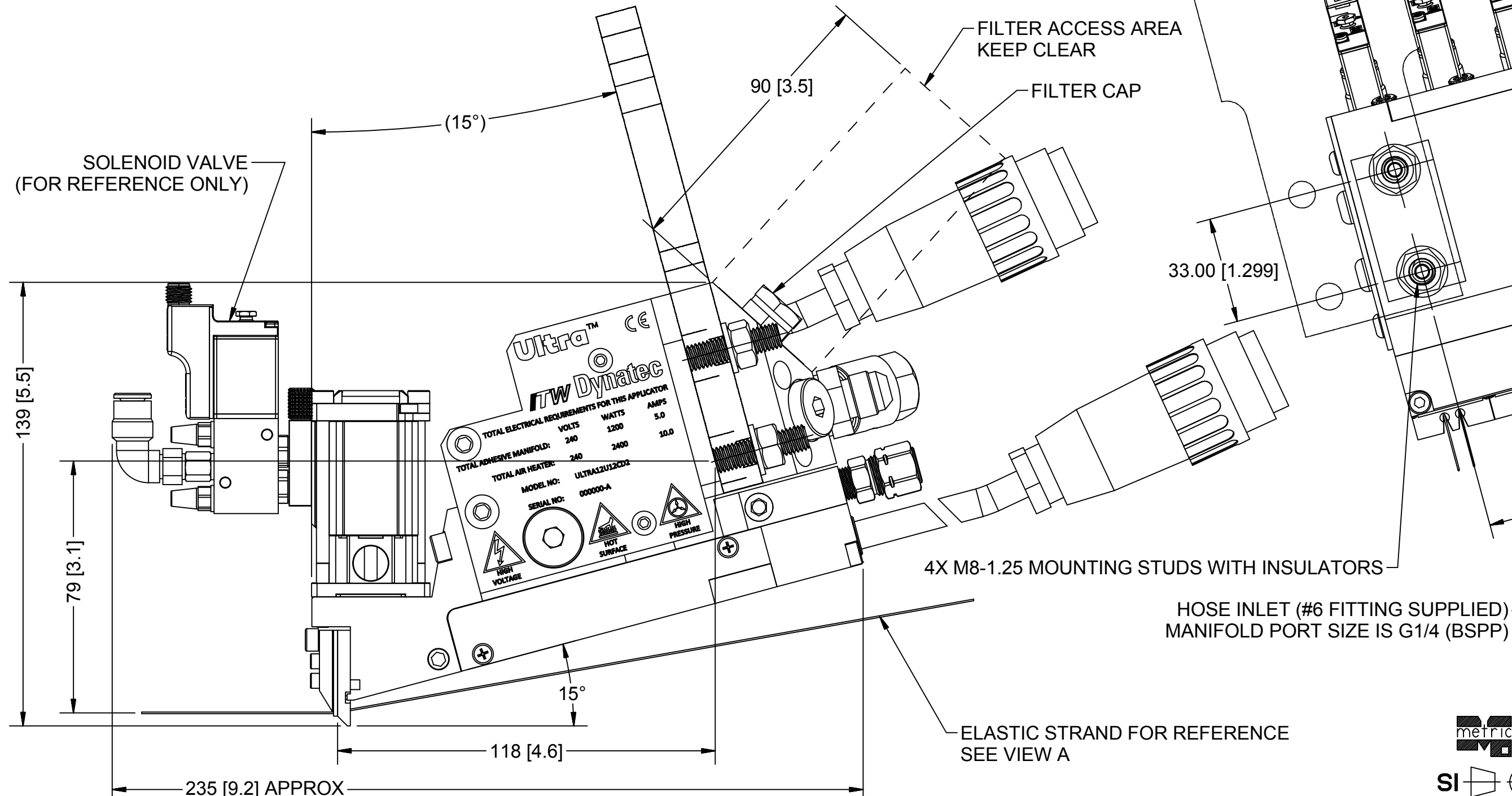
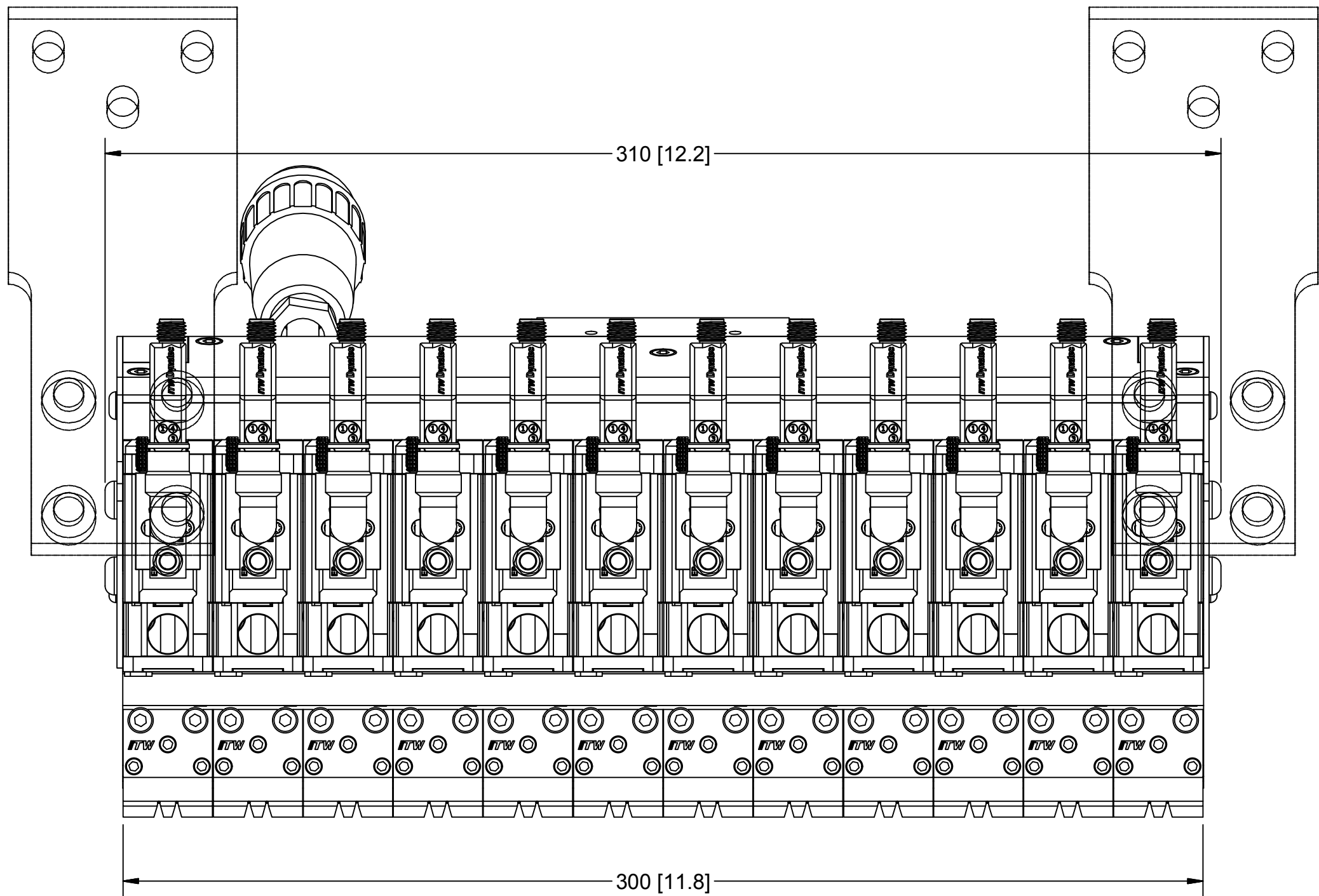
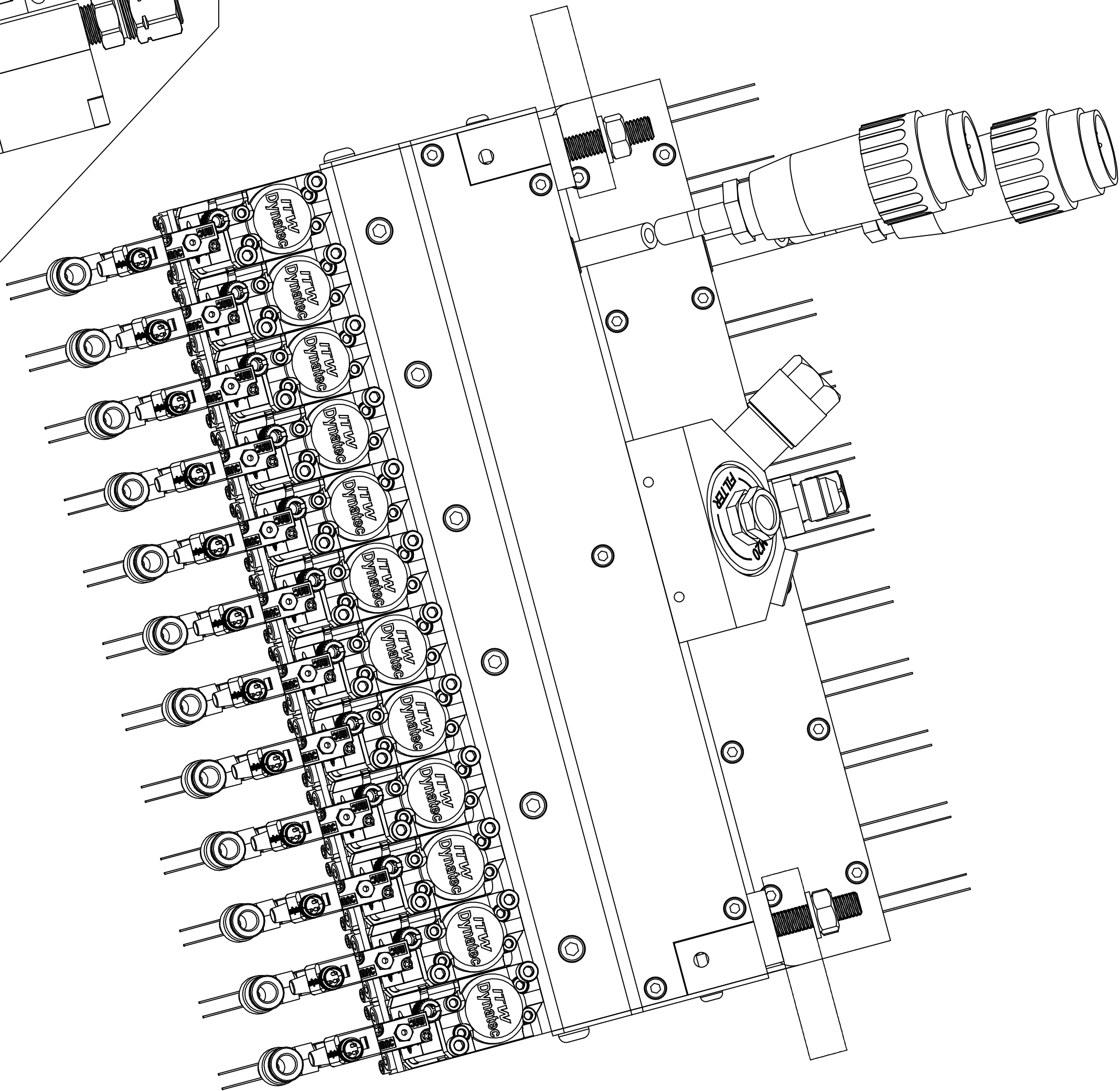
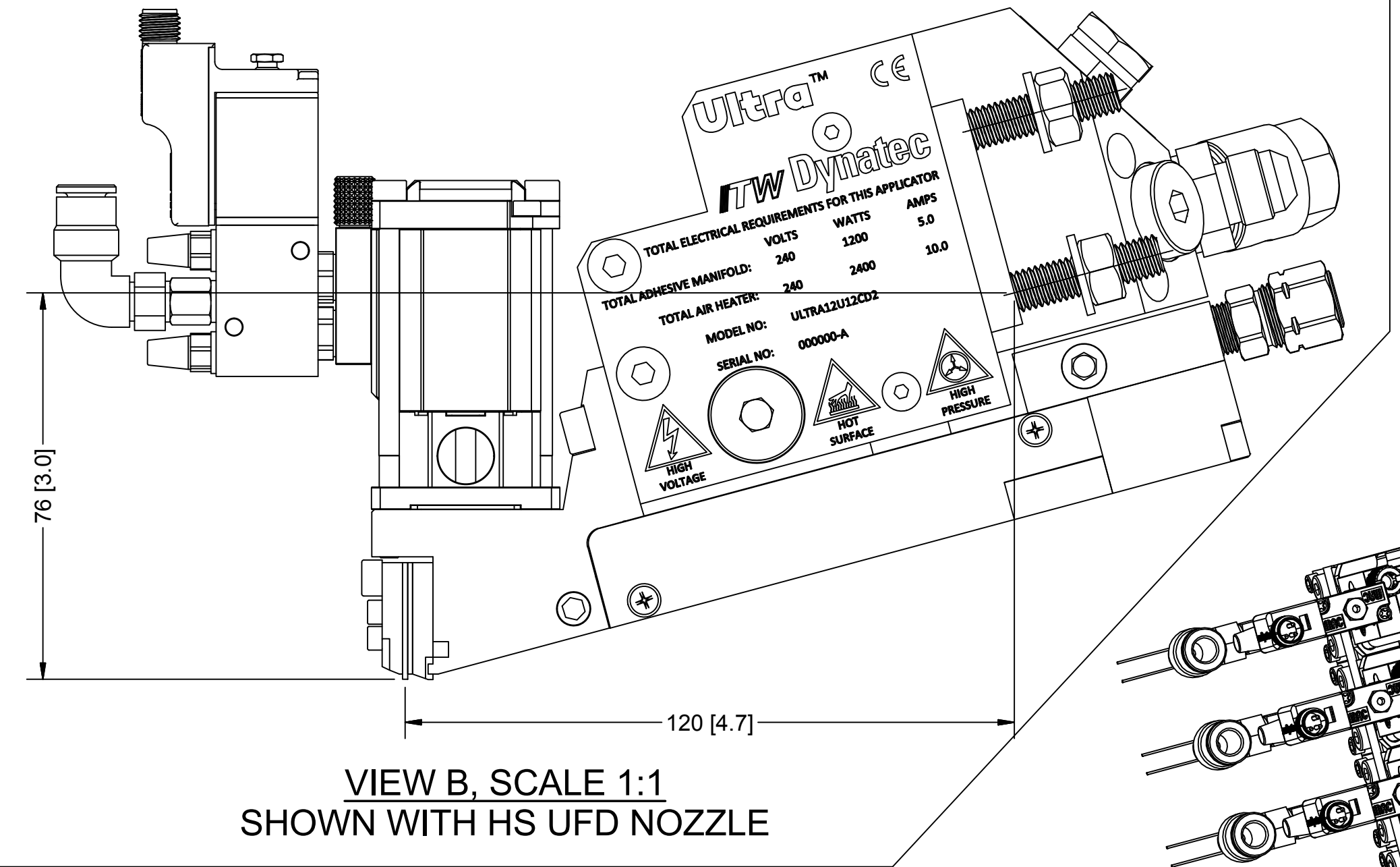


Illustration: Service Block Assembly, 10-Port, Ultra stackable, PN 121165

8.8 12-Port ULTRALINK Applicator, Layout, PN 121160

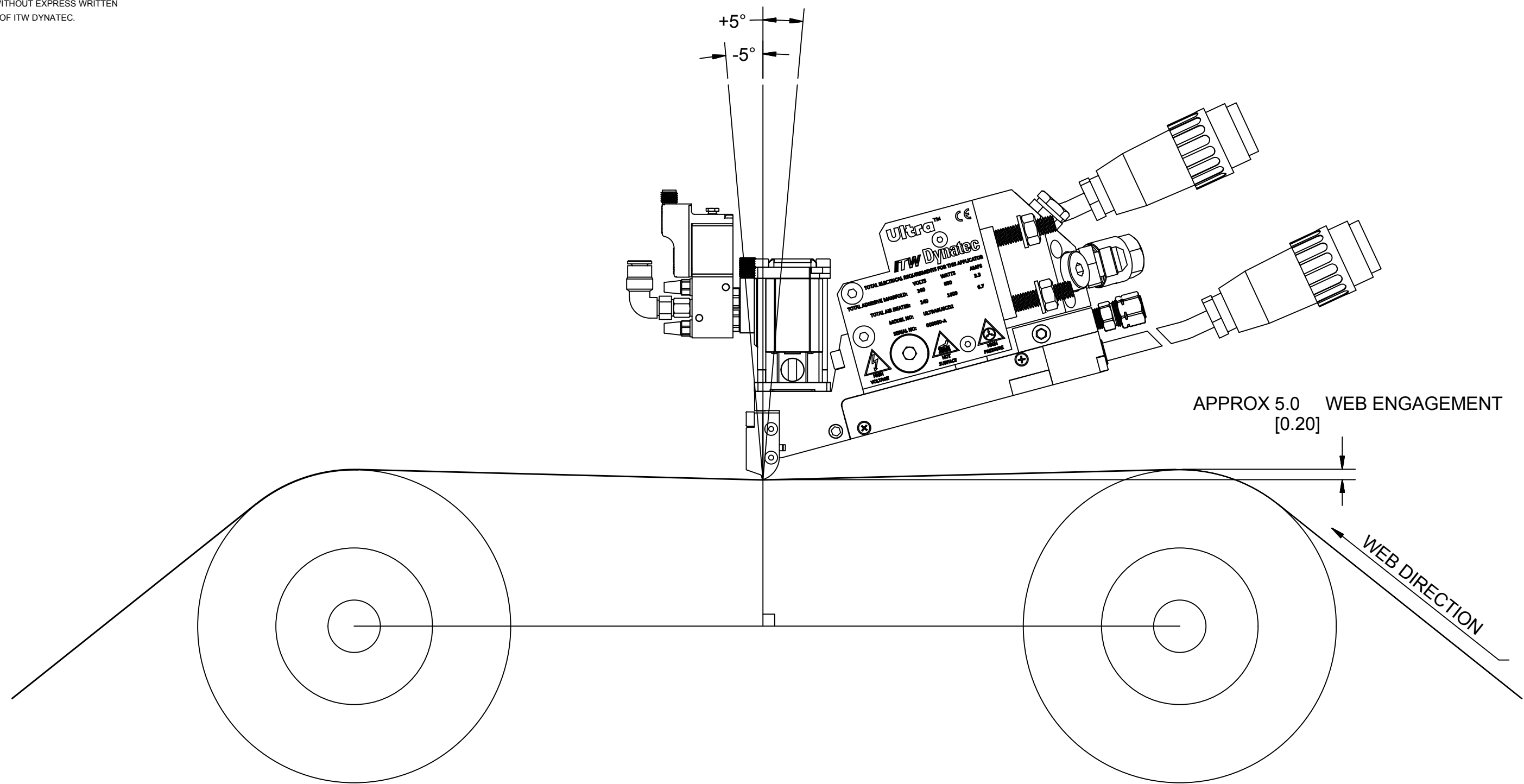


ORDER/CCR/ECR	REV	REVISIONS		
		DESCRIPTION	DATE	BY
1602	A	ORIGINAL RELEASE	17MAY17	EWB
E17061	B	REVISE FILTER BLOCK VIEWS	13SEP17	EWB
18026	C	SHT 1: REVISE STRAND ANGLES; ADD SHEET 2	28FEB18	EWB

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES). TOLERANCES ARE: (UNIDIRECTIONAL) UNIDIRECTIONAL ANGLES X ± 0.5 X ± 0.20 ± 5 X ± 0.25 XX ± 0.10 XX ± 0.10 XXX ± 0.004		GD&T PER ASME/ANSI Y14.5-2009		DRAWN EWB 17MAY17	
USED ON		CHECKED		COMPUTER DESCRIPTION (24 CHARACTERS)	
SIMILAR PART TO		NEXT ASSY		SIZE DWG NO. 121160	
				DRAWN AT SCALE 3/4	
				SHEET 1 OF 2	

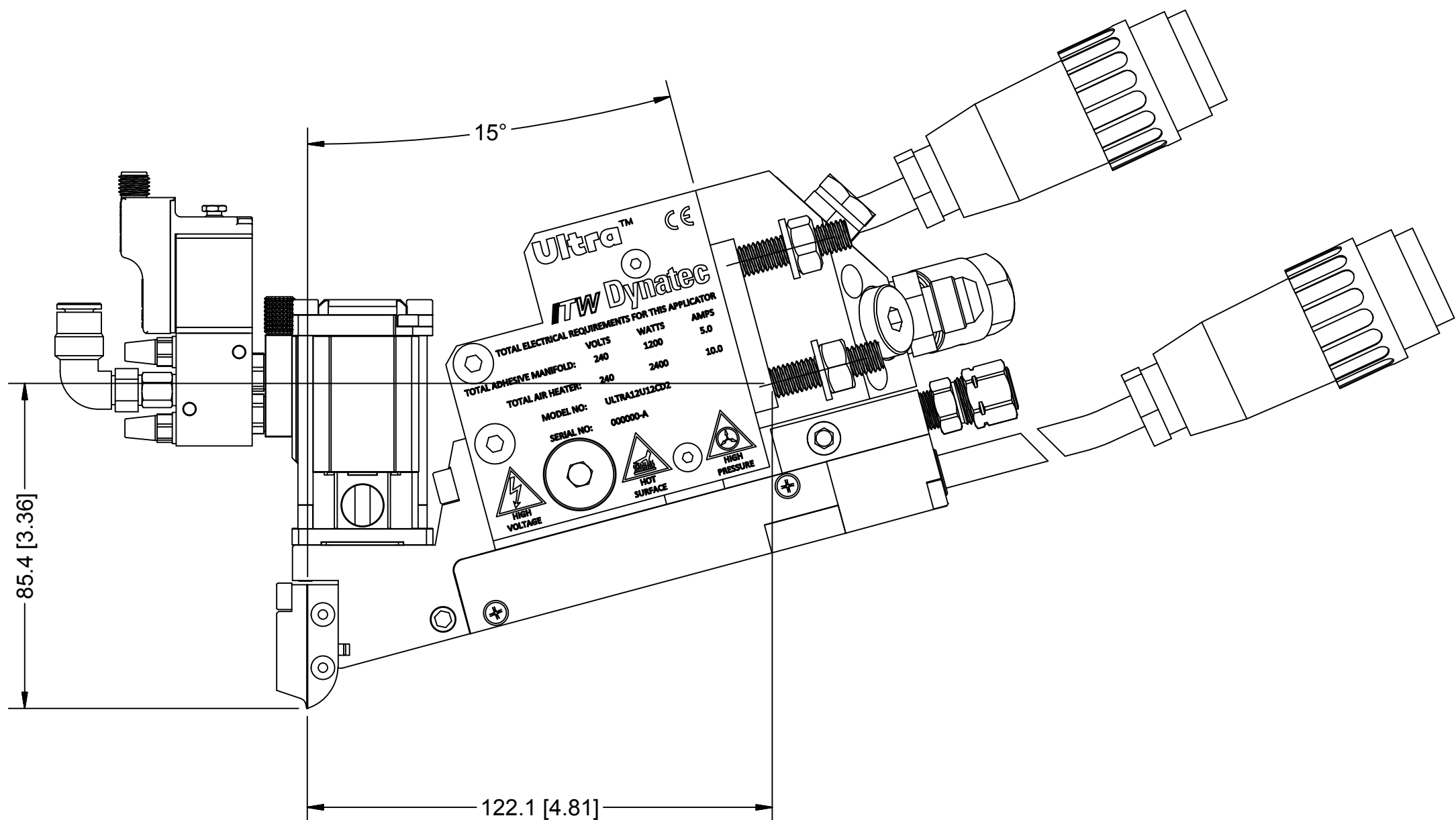
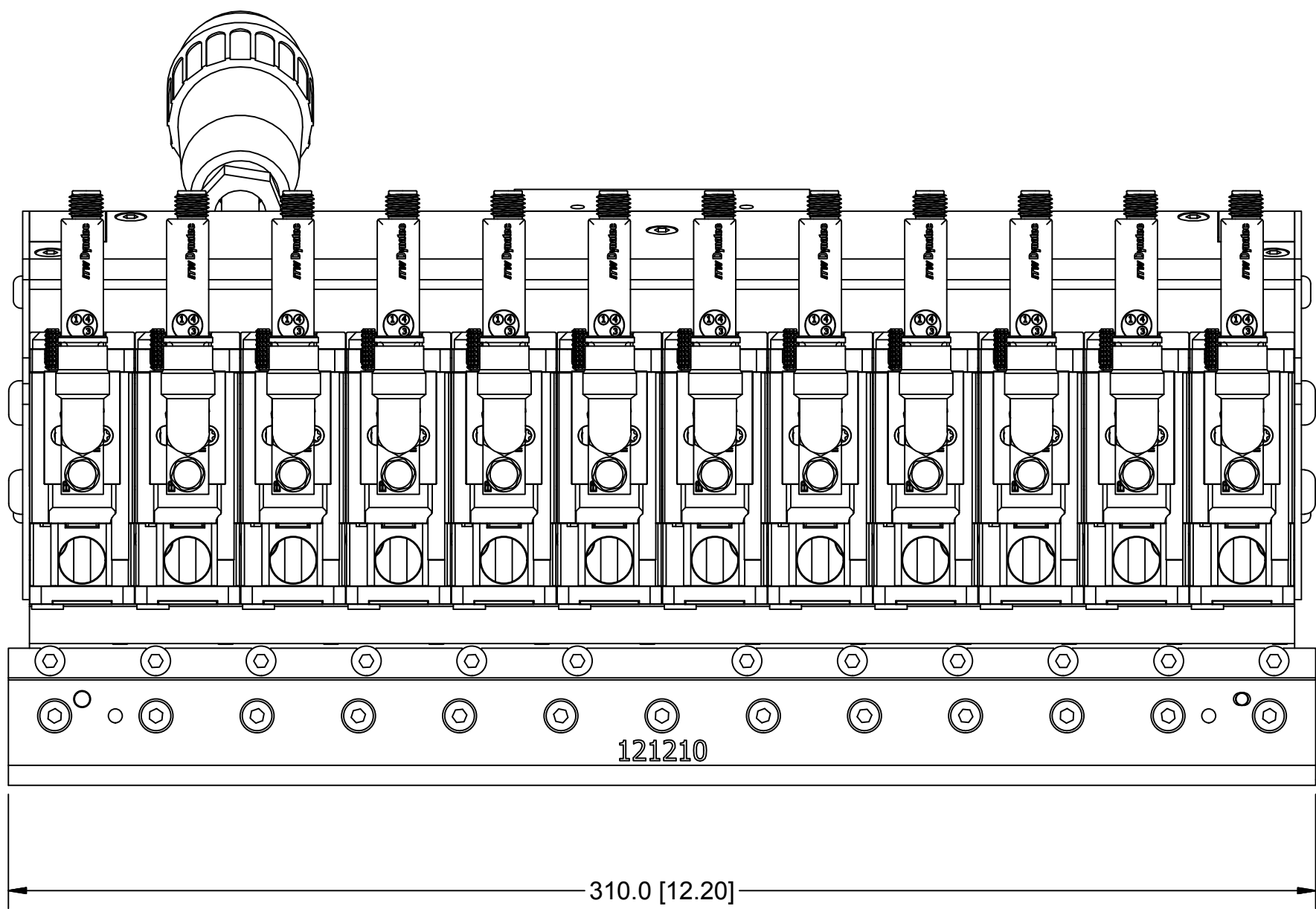
ITW Dynatec
HENDERSONVILLE, TN

**LAYOUT, 12-PORT ULTRA
APPLICATOR, METRIC**

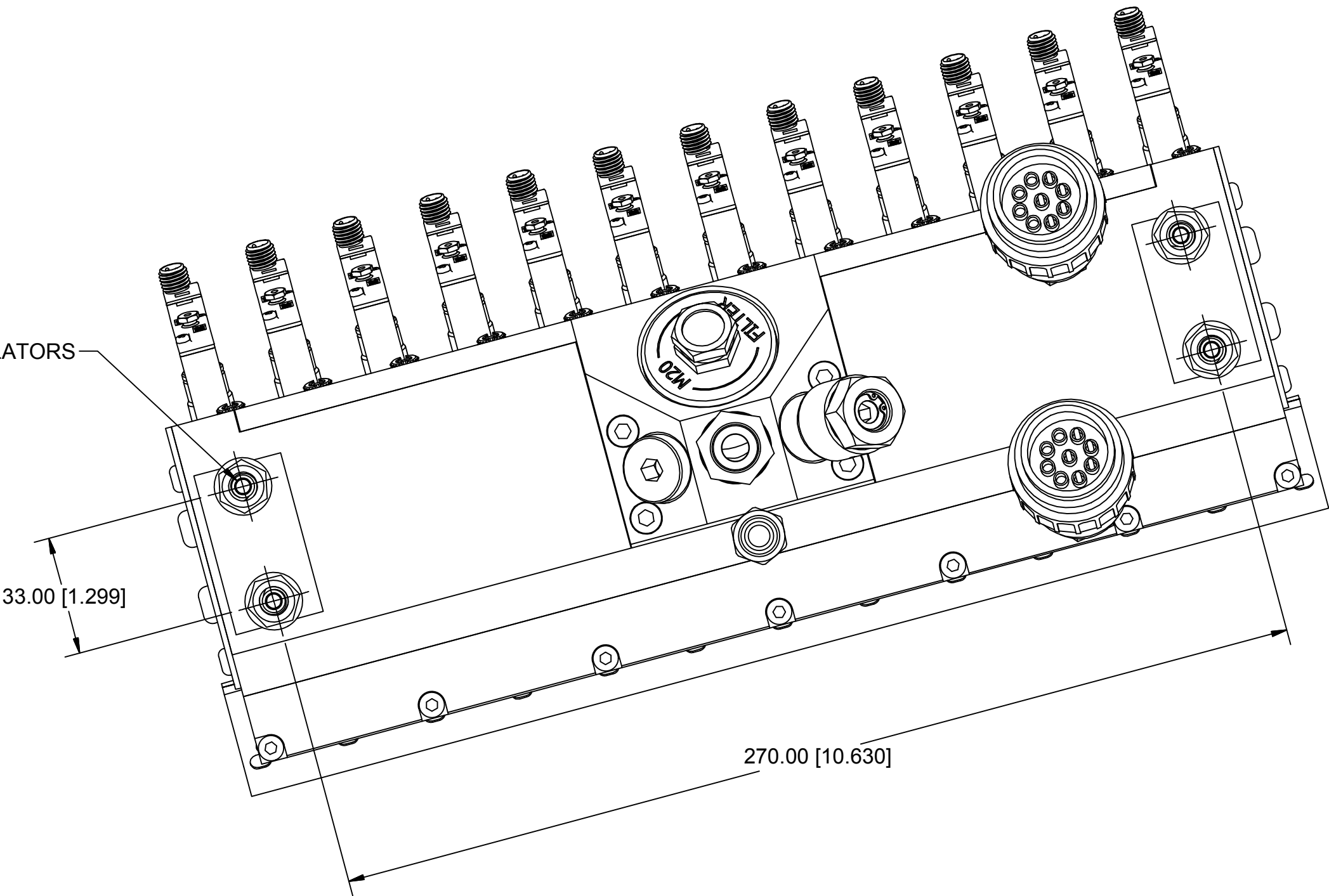


VIEW C
SCALE 1 / 2
INSTALLATION RECOMMENDATIONS
WITH ULTRA SLOT EXTRUDER

VIEWS AND DIMENSIONS SHOWING
ULTRA SLOT EXTRUDER



4X M8-1.25 MOUNTING STUDS WITH INSULATORS



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS (INCHES) TOLERANCES ARE: (DIMENSIONS) (IN/DECIMALS) ANGLES X ± 0.5 X ± 0.20 ± .5 X ± 0.25 XX ± .010 XX ± 0.10 XXX ± 0.004		
USED ON		
SIMILAR PART TO		
NEXT ASSY		

GD&T PER ASME/ANSI Y14.5-2009	
APPROVALS	DATE
DRAWN EWB	17MAY17
CHECKED	
COMPUTER DESCRIPTION (24 CHARACTERS)	

ITW Dynatec HENDERSONVILLE, TN	
LAYOUT, 12-PORT ULTRA APPLICATOR, METRIC	
SIZE D	REV C
DWG. NO. 121160	
DRAWN AT SCALE 3/4	SHEET 2 OF 2

8.8.1 Module-Manifold Assembly, 12-Port, Ultra stackable, PN 121163

Item No.	Part Number	Description	Quantity
1	121121	Module manifold 12-port	1
2	N01124	Fitting, plug 1/16-27 NPT	2
3	119988	Spiral tube 85mm	12
4	N00181	O-ring 017	12
5	119989	Heater cartridge 10x80mm, 150W, 240V	12
6	078C088	Lock washer	2
7	N07430	Terminal ring #6	1
8	101627	Screw M3x6mm	2
9	120753	Wire cover, rear	1
10	103470	Screw M3x5mm	1
11	120775	Heater cartridge, 10x285mm, 600W, 240V	1
12	048G016	Terminal ring #6	1
13	101692	Screw M4x35mm	7
14	121122	Wire cover, side	1
15	106239	Screw M3x5mm	2
16	120756	Air manifold	1
17	N00175	O-ring -008	12
18	106328	Screw M4x16mm	12
19	N00753	Plug, flush-pipe, 1/8NPT	2
20	120109	Fitting, connector, 5/16 tube x 1/8 NPT	1
21	N00178	O-ring -011	12
22	803579	Spacer	6
23	100908	Screw M4x25mm	30
24	119015	Screw M5x16mm	12
25	*	Cable assembly	1

* NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.

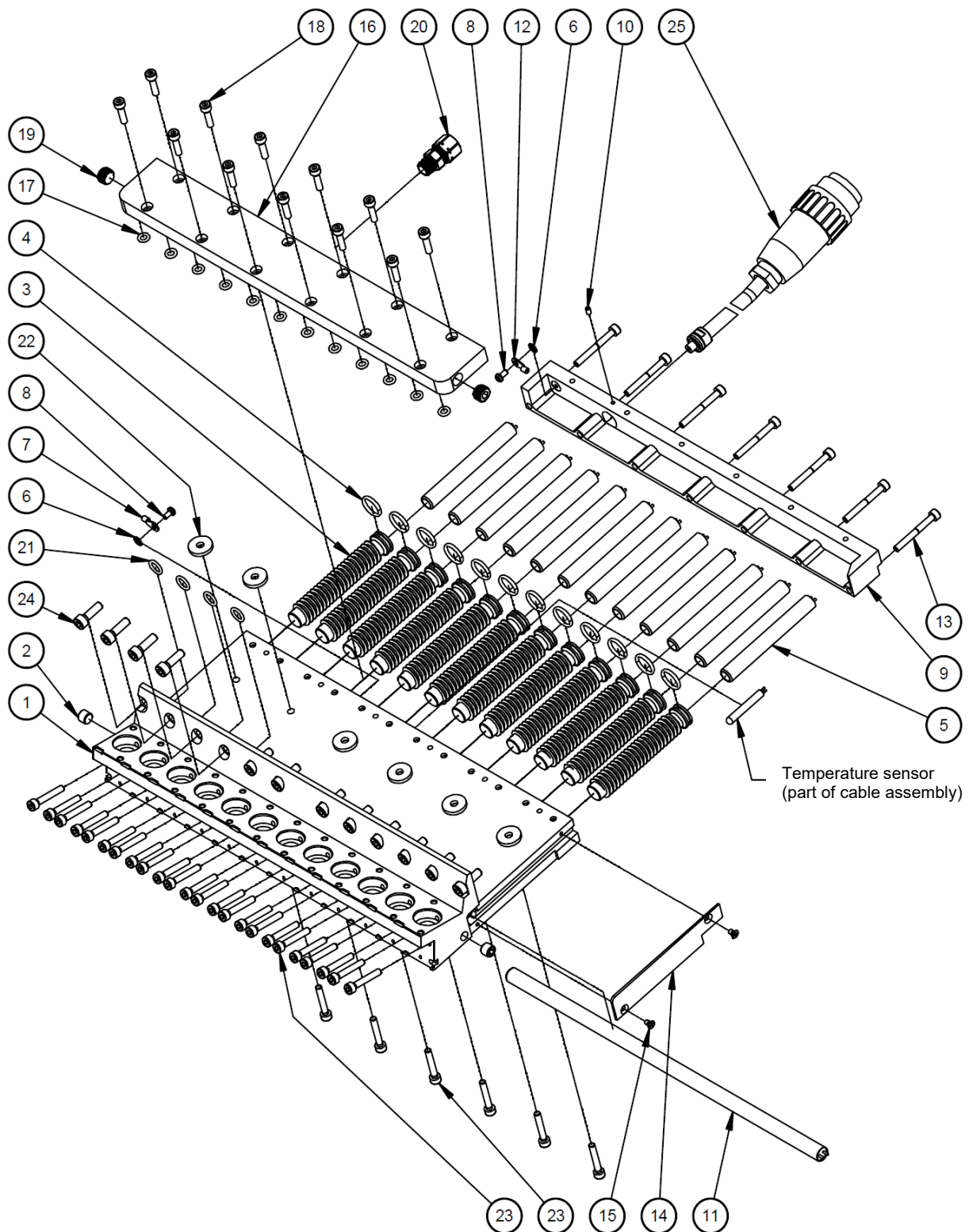


Illustration: Module-Manifold Assembly, 12-Port, Ultra stackable, PN 121163

8.8.2 Service Block Assembly, 12-Port, Ultra stackable, PN 121166

Item No.	Part Number	Description	Quantity
1	121118	Service block, 12-port	1
2	120774	Filter manifold, single	1
3	N06160	O-ring 029	1
4	121275	Screw M5x45 mm	4
5	101624	Fitting 1/4BSPP x #6 JIC male	1
6	101625	Plug, G1/4 BSPP	3
7	107820	Purge valve assembly	1
8	803960	Heater cartridge 10x40mm, 200W, 240V	6
9	103470	Screw M3x5mm	1
10	N04302	Lock washer #10	1
11	N04268	Terminal, ring, 22-16	1
12	107161	Screw M4x8mm	5
13	121119	Wire Cover	1
14	102446	Screw M4x10mm	5
15	121120	Cover, solenoid	1
16	116876	Screw M5x12mm	6
17	121130	End cover	2
18	120719	Screw M6x12mm	4
19	804466	Insulator	2
20	107536	Screw M8x60mm	4
21	106321	Flat washer M8	4
22	105060	Hex nut M8	4
23	*	Cable assembly	1

* NOTE: Cable asy depends on the model and it is not included in that assembly PN. Refer to Model Designation Guide under Ch.3.2.

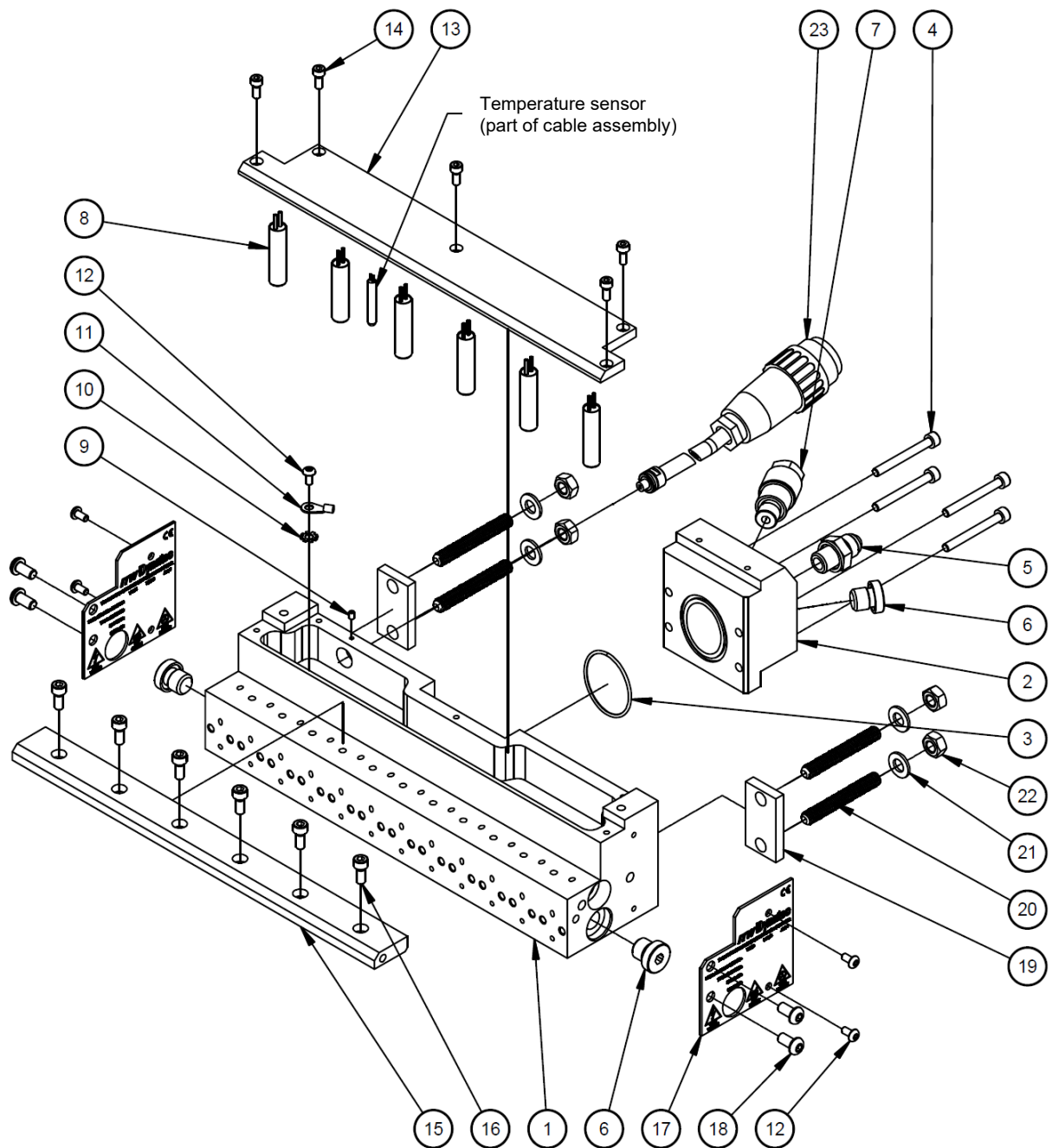


Illustration: Service Block Assembly, 12-Port, Ultra stackable, PN 121166

8.9 Standard Slot Nozzles

8.9.1 Slot Nozzle 50mm, 1-port, 25 mm pattern, PN 121039

Item No.	Part number	Description	Quantity
1	121040	Nozzle, entry plate, 50mm, 1-port, 25mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121055	Shim 50mm, 1-port, 25mm pattern	1
5	121041	Nozzle, exit plate, 50mm, 1-port	1
6	102446	Screw M4x10mm	4
7	N00174	O-ring 007	1
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

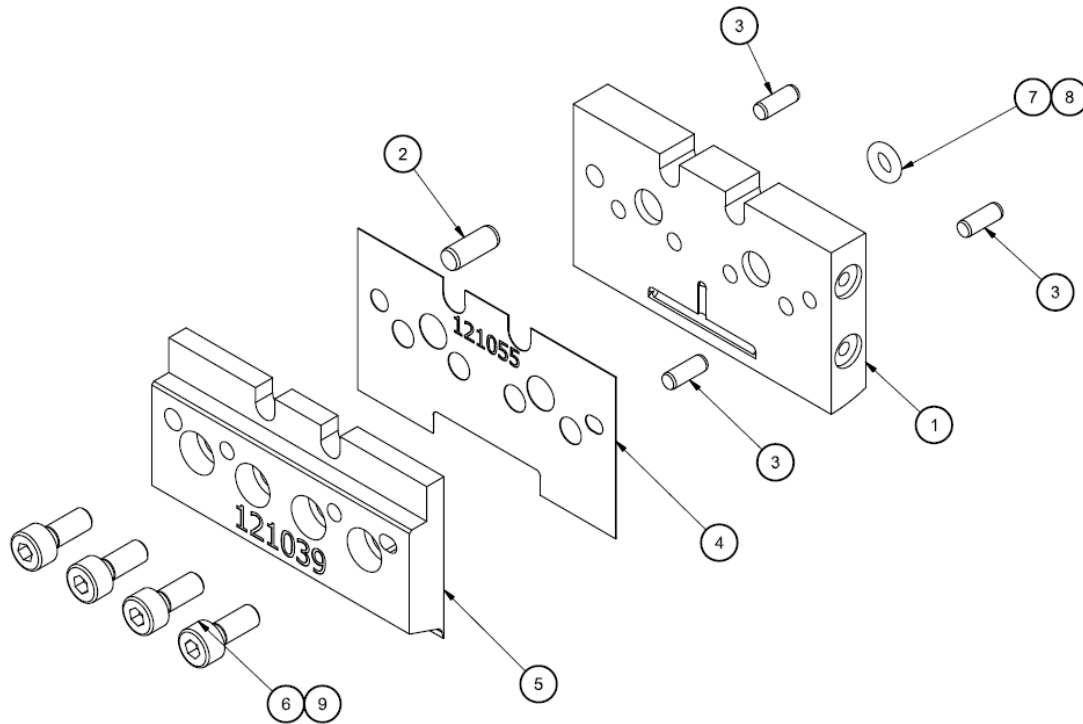


Illustration: Slot Nozzle 50mm, 1-port, 25 mm pattern, PN 121039

8.9.2 Slot Nozzle 50mm, 1-port, 50 mm pattern, PN 825862

Item No.	Part number	Description	Quantity
1	825864	Nozzle, entry plate, 50mm, 1-port, 50mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	825865	Shim 50mm, 1-port, 50mm pattern	1
5	121041	Nozzle, exit plate, 50mm, 1-port	1
6	102446	Screw M4x10mm	4
7	N00174	O-ring 007	1
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

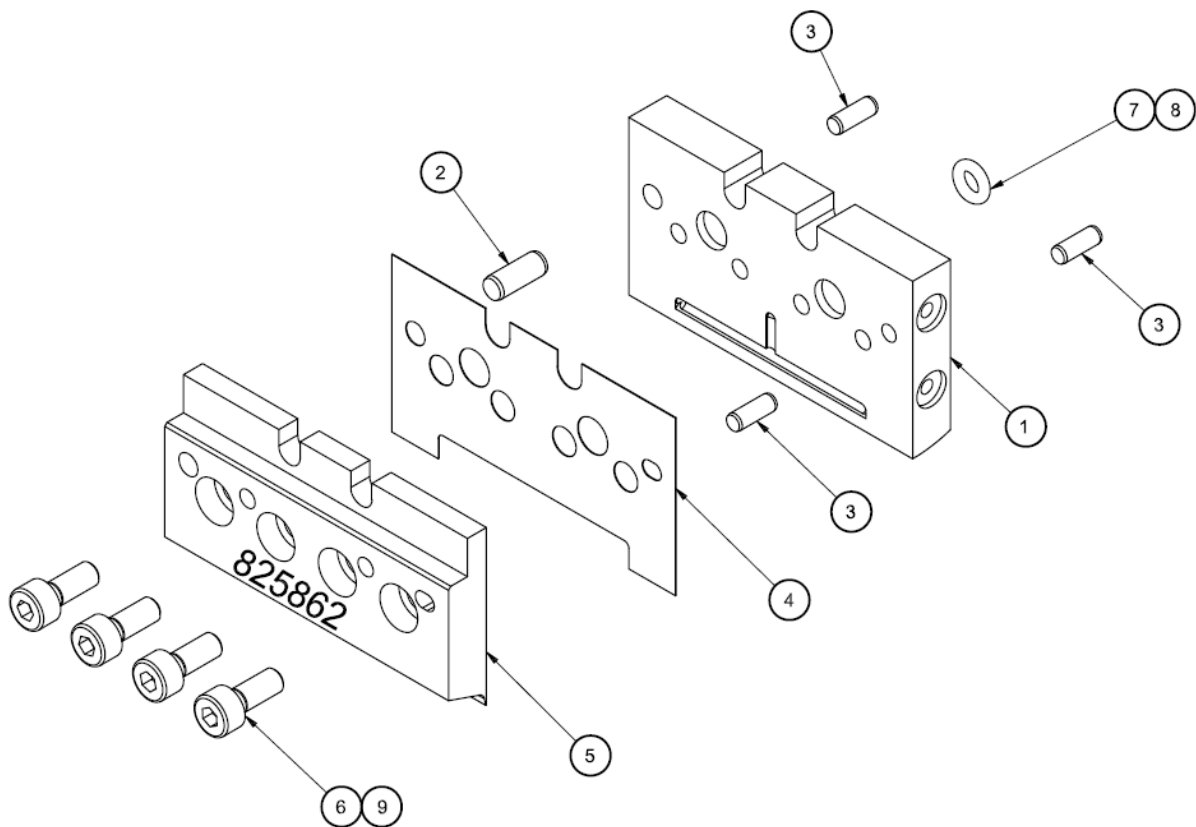
$$A/R^* = \text{As required.}$$


Illustration: Slot Nozzle 50mm, 1-port, 50 mm pattern, PN 825862

8.9.3 Slot Nozzle 50mm, 2-port, 50 mm pattern, PN 121042

Item No.	Part number	Description	Quantity
1	121043	Nozzle, entry plate, 50mm, 2-port	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121056	Shim 50mm, 2-port, 50mm pattern	1
5	121044	Nozzle, exit plate, 50mm, 2-port	1
6	102446	Screw M4x10mm	3
7	N00174	O-ring 007	2
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

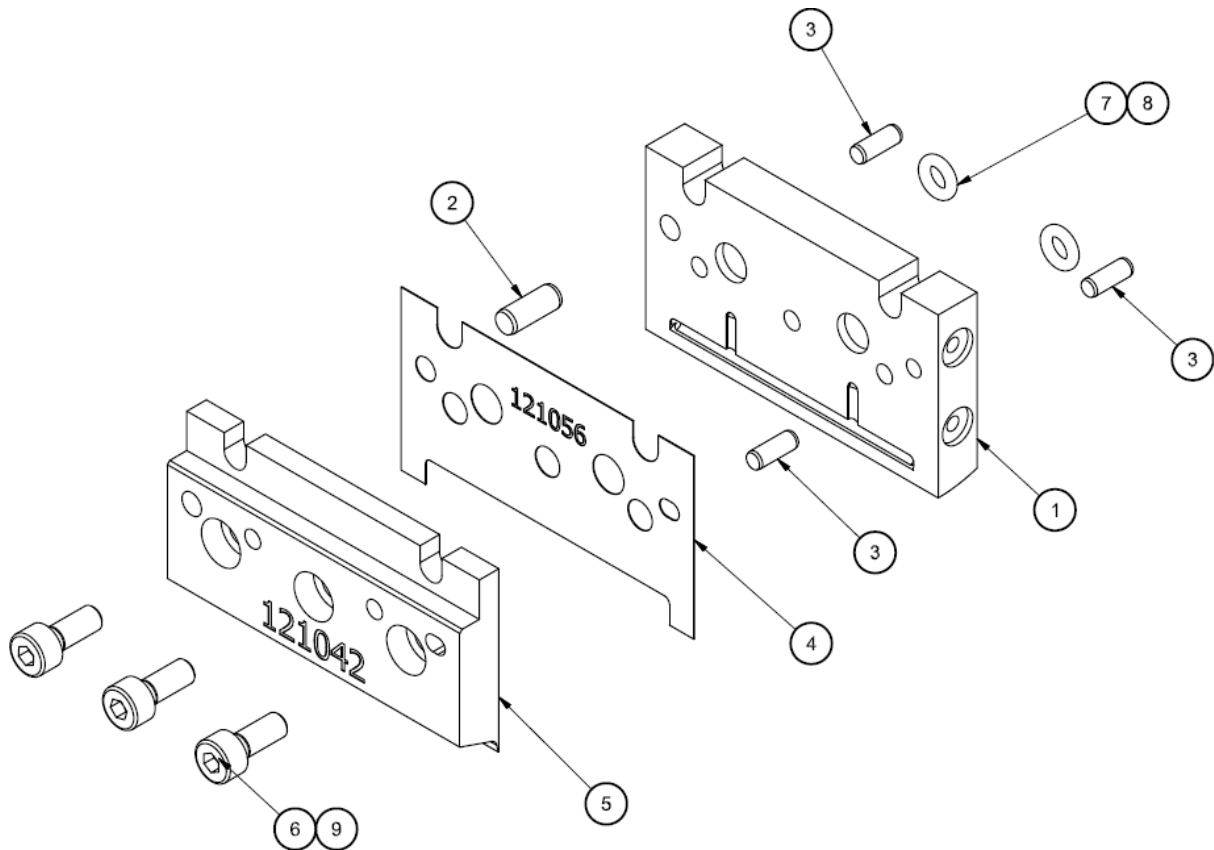
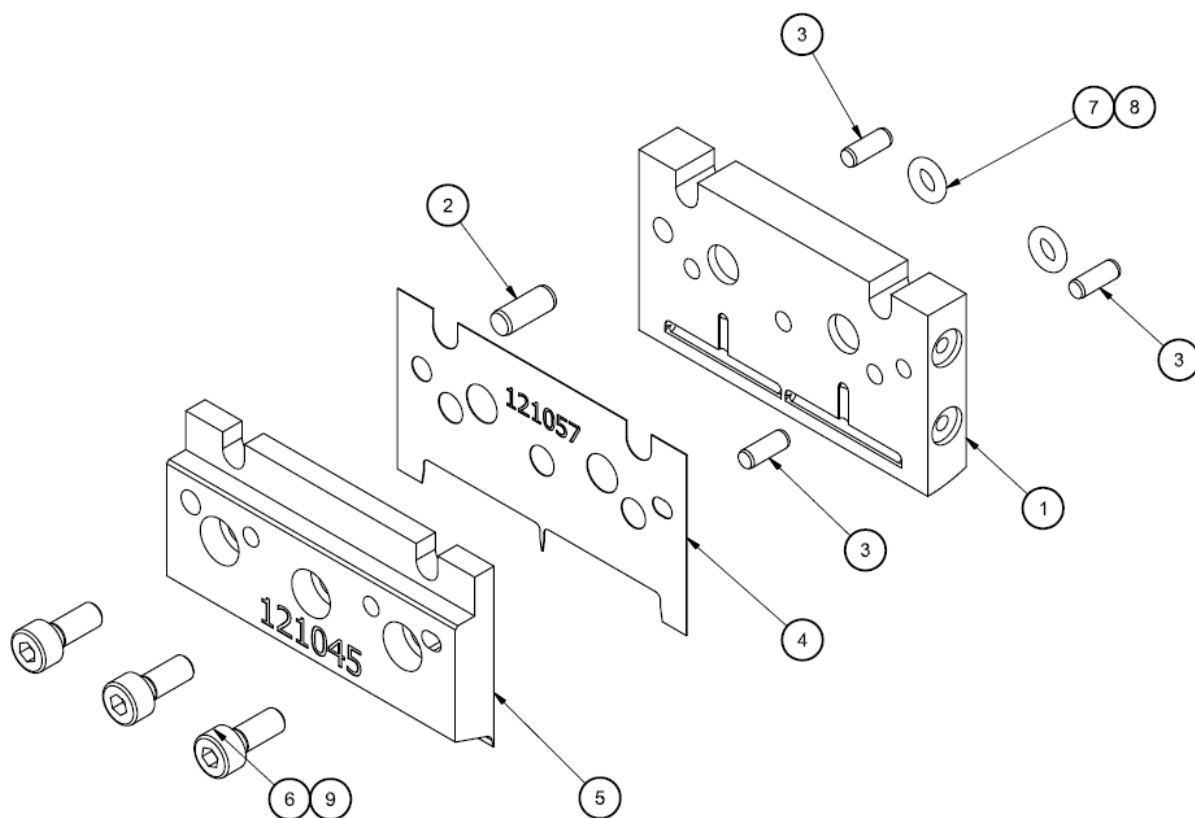


Illustration: Slot Nozzle 50mm, 2-port, 50 mm pattern, PN 121042

8.9.4 Slot Nozzle 50mm, 2-port, 2x25 mm pattern, PN 121045

Item No.	Part number	Description	Quantity
1	121046	Nozzle, entry plate, 50mm, 2-port, 2x25mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121057	Shim 50mm, 2-port, 2x25mm pattern	1
5	121044	Nozzle, exit plate, 50mm, 2-port	1
6	102446	Screw M4x10mm	3
7	N00174	O-ring 007	2
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

*Illustration: Slot Nozzle 50mm, 2-port, 2x25 mm pattern, PN 121045*

8.9.5 Slot Nozzle 75mm, 3-port, 75 mm pattern, PN 121047

Item No.	Part number	Description	Quantity
1	121048	Nozzle, entry plate, 75mm, 3-port, 75mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121058	Shim 75mm, 3-port	1
5	121049	Nozzle, exit plate, 75mm, 3-port	1
6	102446	Screw M4x10mm	4
7	N00174	O-ring 007	3
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

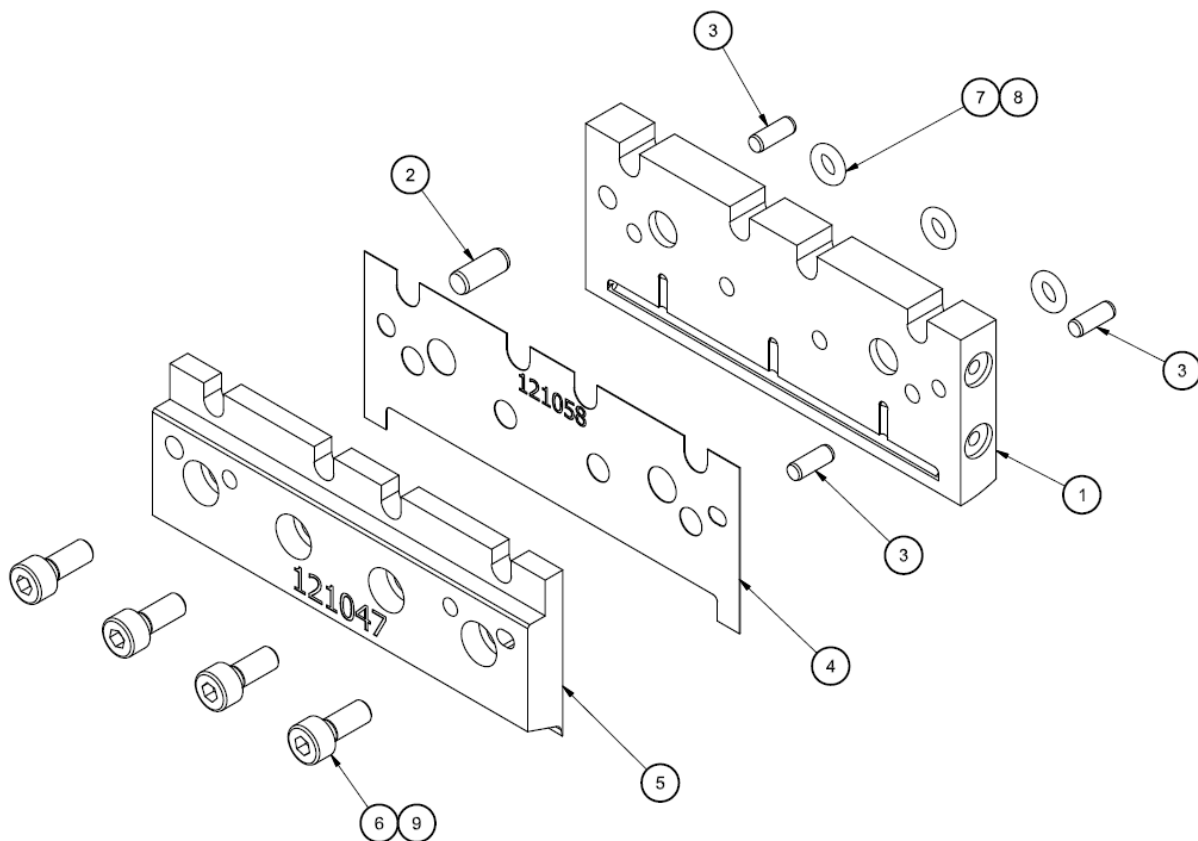
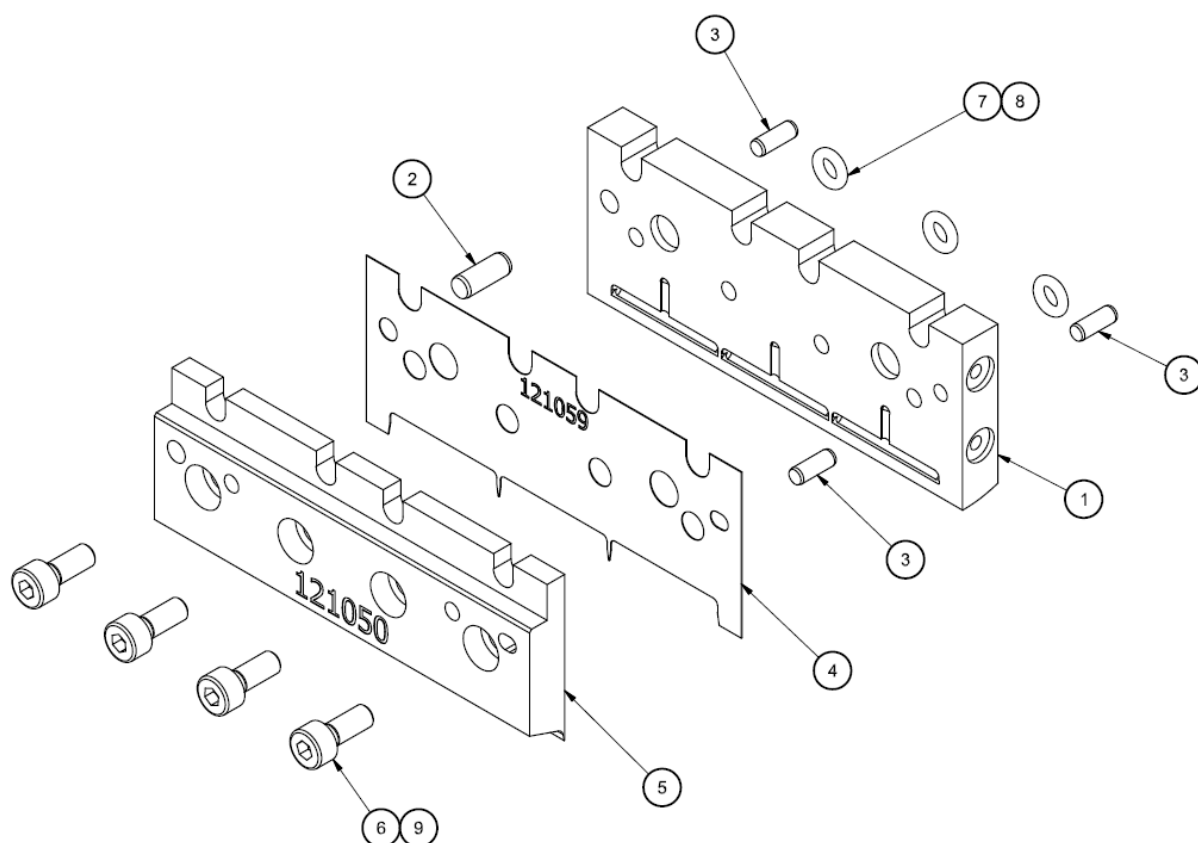


Illustration: Slot Nozzle 75mm, 3-port, 75 mm pattern, PN 121047

8.9.6 Slot Nozzle 75mm, 3-port, 3x25 mm pattern, PN 121050

Item No.	Part number	Description	Quantity
1	121051	Nozzle, entry plate, 75mm, 3-port, 3x25mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121059	Shim 75mm, 3-port, 3x25mm pattern	1
5	121049	Nozzle, exit plate, 75mm, 3-port	1
6	102446	Screw M4x10mm	4
7	N00174	O-ring 007	3
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

*Illustration: Slot Nozzle 75mm, 3-port, 3x25 mm pattern, PN 121050*

8.9.7 Slot Nozzle 100mm, 4-port, 100 mm pattern, PN 121177

Item No.	Part number	Description	Quantity
1	121178	Nozzle, entry plate, 100mm, 4-port, 100mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121061	Shim 100mm, 4-port	1
5	120744	Nozzle, exit plate, 100mm, 4-port	1
6	102446	Screw M4x10mm	5
7	N00174	O-ring 007	4
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

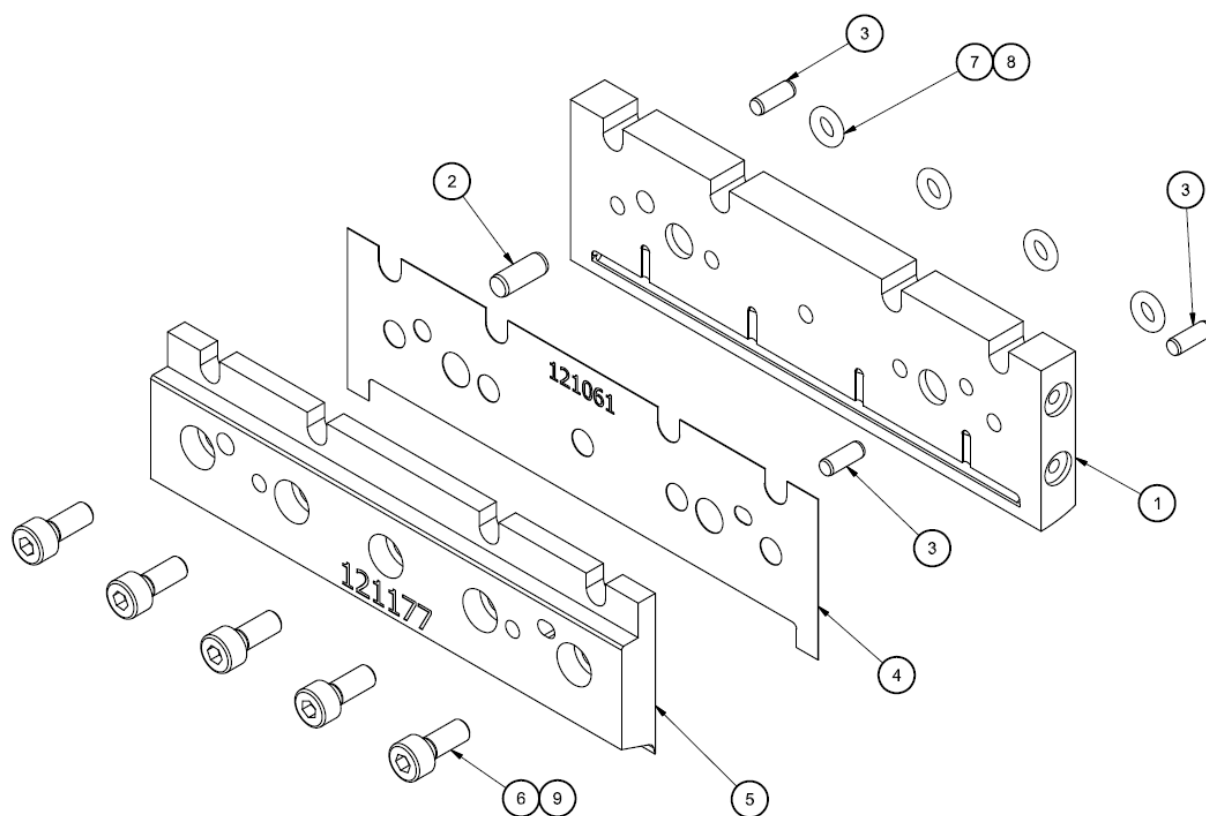
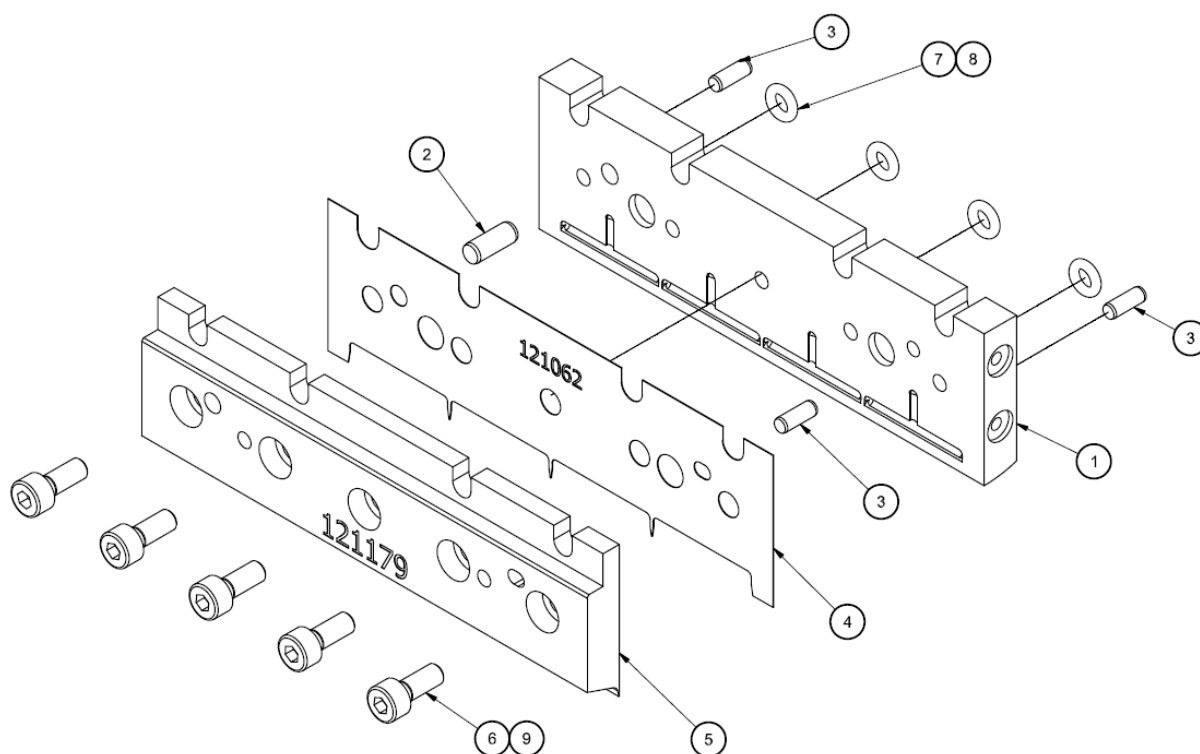


Illustration: Slot Nozzle 100mm, 4-port, 100 mm pattern, PN 121177

8.9.8 Slot Nozzle 100mm, 4-port, 4x25 mm pattern, PN 121179

Item No.	Part number	Description	Quantity
1	121180	Nozzle, entry plate, 100mm, 4-port, 4x25mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121062	Shim 100mm, 4-port, 4x25mm	1
5	120744	Nozzle, exit plate, 100mm, 4-port	1
6	102446	Screw M4x10mm	5
7	N00174	O-ring 007	4
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

*Illustration: Slot Nozzle 100 mm, 4-port, 4x25 mm pattern, PN 121179*

8.9.9 Slot Nozzle 150mm, 6-port, 150mm pattern, PN 121063

Item No.	Part number	Description	Quantity
1	121064	Nozzle, entry plate, 150mm, 6-port, 150mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121067	Shim 150mm, 6-port	1
5	121065	Nozzle, exit plate, 150mm, 6-port	1
6	102446	Screw M4x10mm	7
7	N00174	O-ring 007	6
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

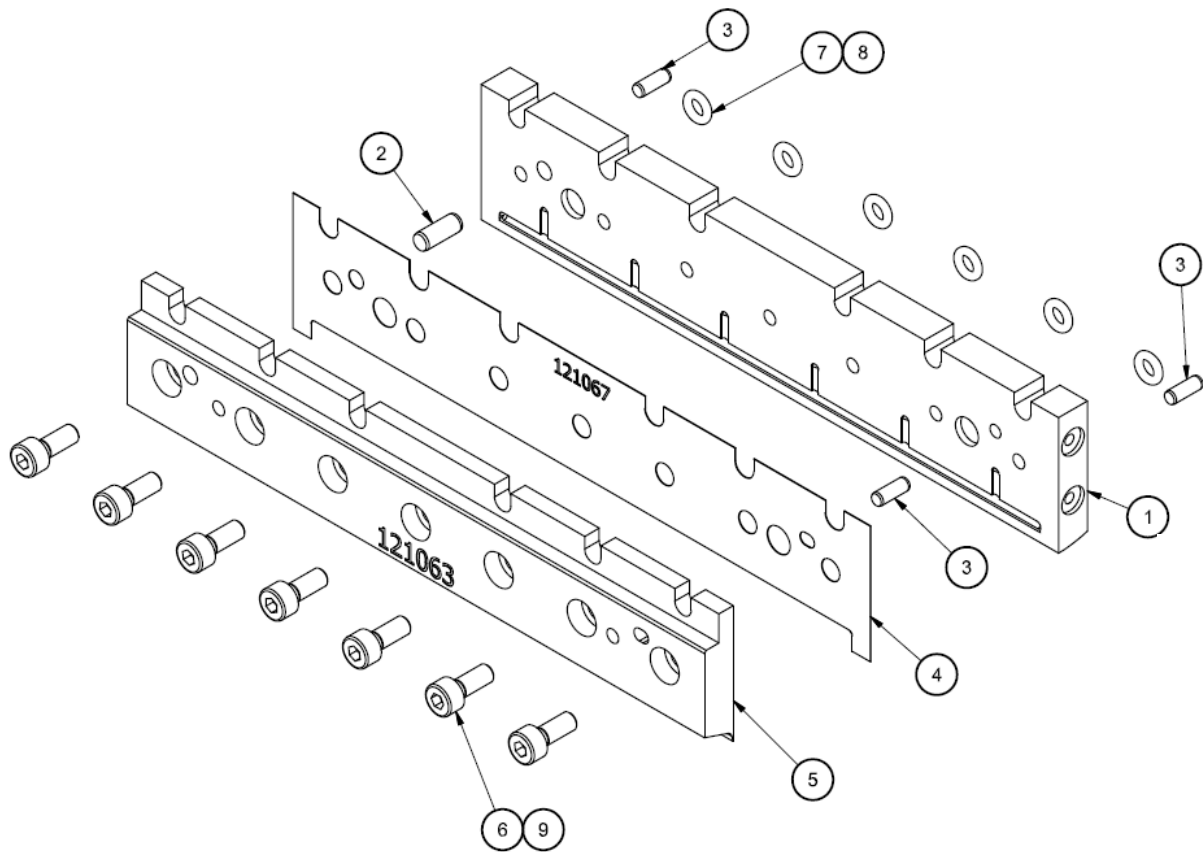
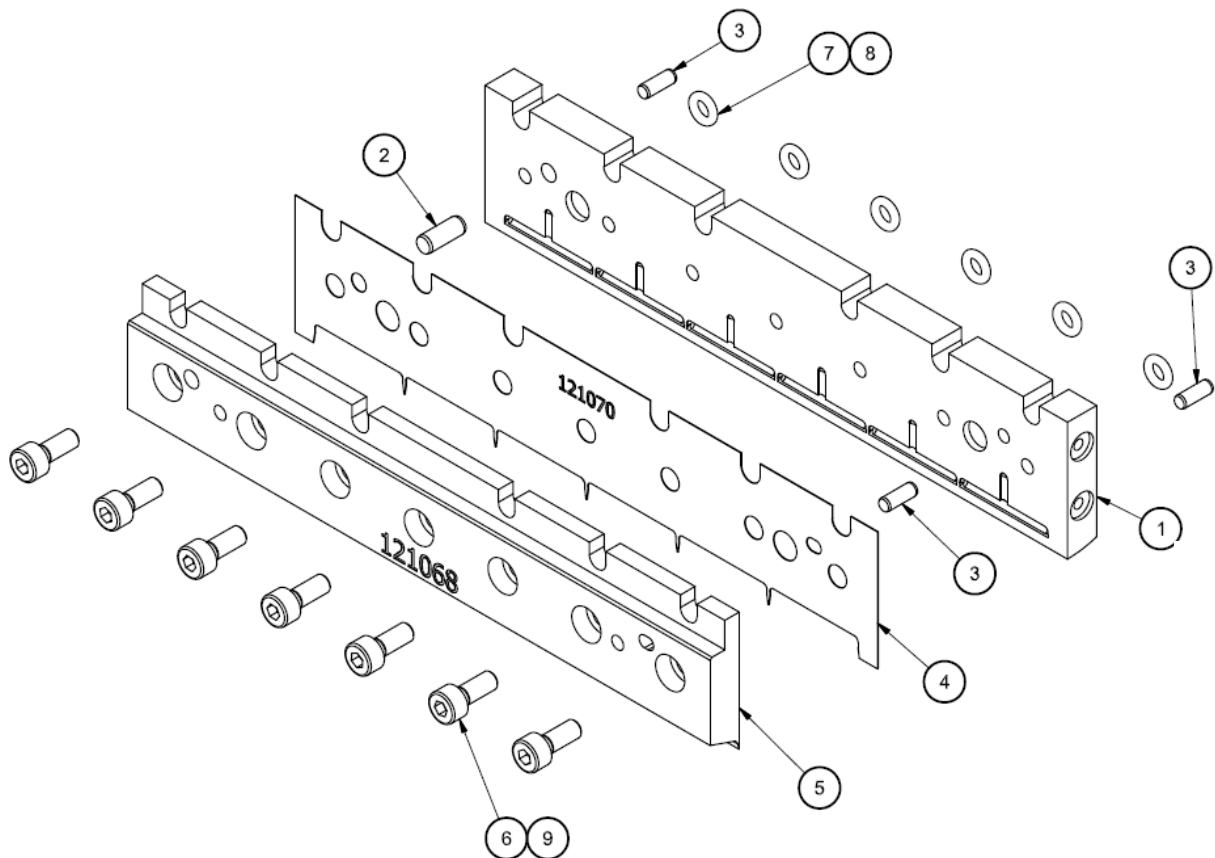


Illustration: Slot Nozzle 150mm, 6-port, 150 mm pattern, PN 121063

8.9.10 Slot Nozzle 150mm, 6-port, 6x25mm pattern, PN 121068

Item No.	Part number	Description	Quantity
1	121069	Nozzle, entry plate, 150mm, 6-port, 6x25mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121070	Shim 150mm, 6-port, 6x25mm	1
5	121065	Nozzle, exit plate, 150mm, 6-port	1
6	102446	Screw M4x10mm	7
7	N00174	O-ring 007	6
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

*Illustration: Slot Nozzle 150 mm, 6-port, 6x25mm pattern, PN 121068*

8.9.11 Slot Nozzle 200mm, 8-port, 200 mm pattern, PN 121169

Item No.	Part number	Description	Quantity
1	121170	Nozzle, entry plate, 200mm, 8-port, 200mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121173	Shim 200mm, 8-port, 200mm	1
5	121171	Nozzle, exit plate, 200mm, 8-port	1
6	102446	Screw M4x10mm	9
7	N00174	O-ring 007	8
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

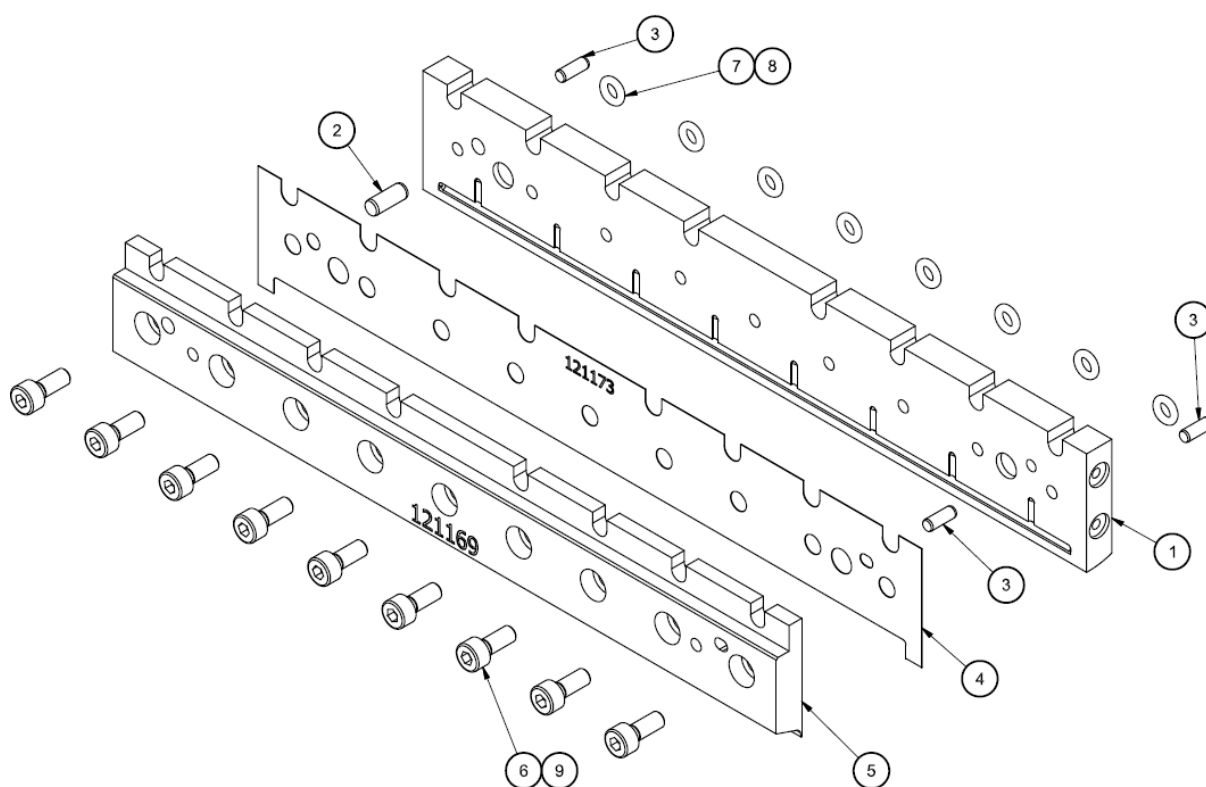
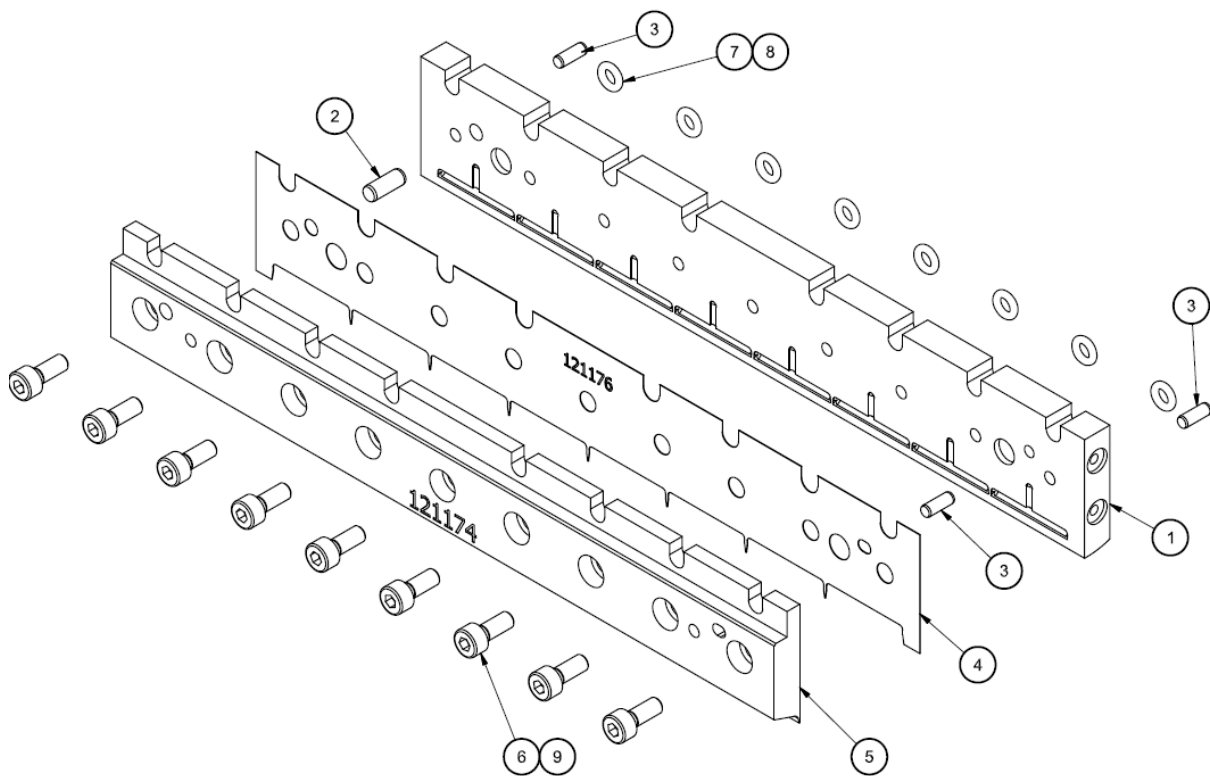


Illustration: Slot Nozzle 200 mm, 8-port, 200mm pattern, PN 121169

8.9.12 Slot Nozzle 200 mm, 8-port, 8x25 mm pattern, PN 121174

Item No.	Part number	Description	Quantity
1	121175	Nozzle, entry plate, 200mm, 8-port, 8x25mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121176	Shim 200mm, 8-port, 200mm, 8x25mm pattern	1
5	121171	Nozzle, exit plate, 200mm, 8-port	1
6	102446	Screw M4x10mm	9
7	N00174	O-ring 007	8
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

*Illustration: Slot Nozzle 200 mm, 8-port, 8x25 mm pattern, PN 121174*

8.9.13 Slot Nozzle 250mm, 10-port, 5x50mm pattern, PN 121206

Item No.	Part number	Description	Quantity
1	121202	Nozzle, entry plate, 250mm, 10-port, 5x50mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121204	Shim 250mm, 10-port, 5x50mm pattern	1
5	121203	Nozzle, exit plate, 250mm, 10-port	1
6	102446	Screw M4x10mm	11
7	N00174	O-ring 007	10
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

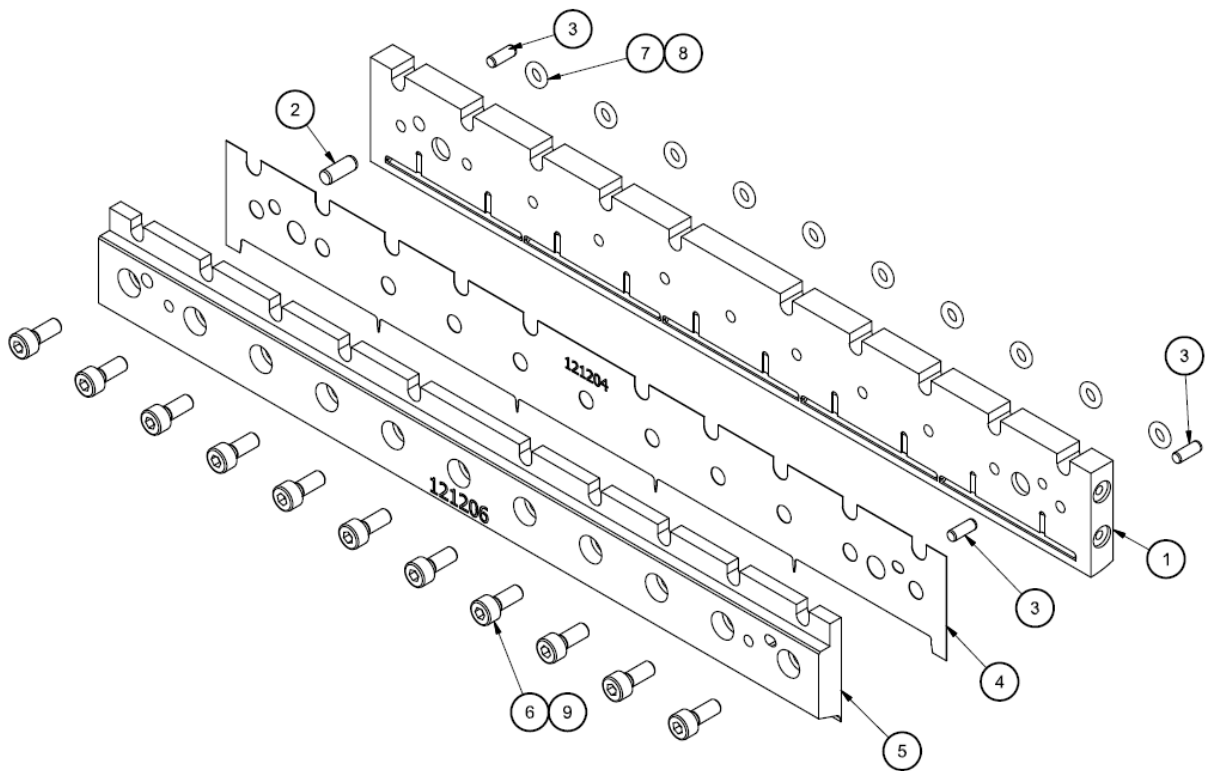
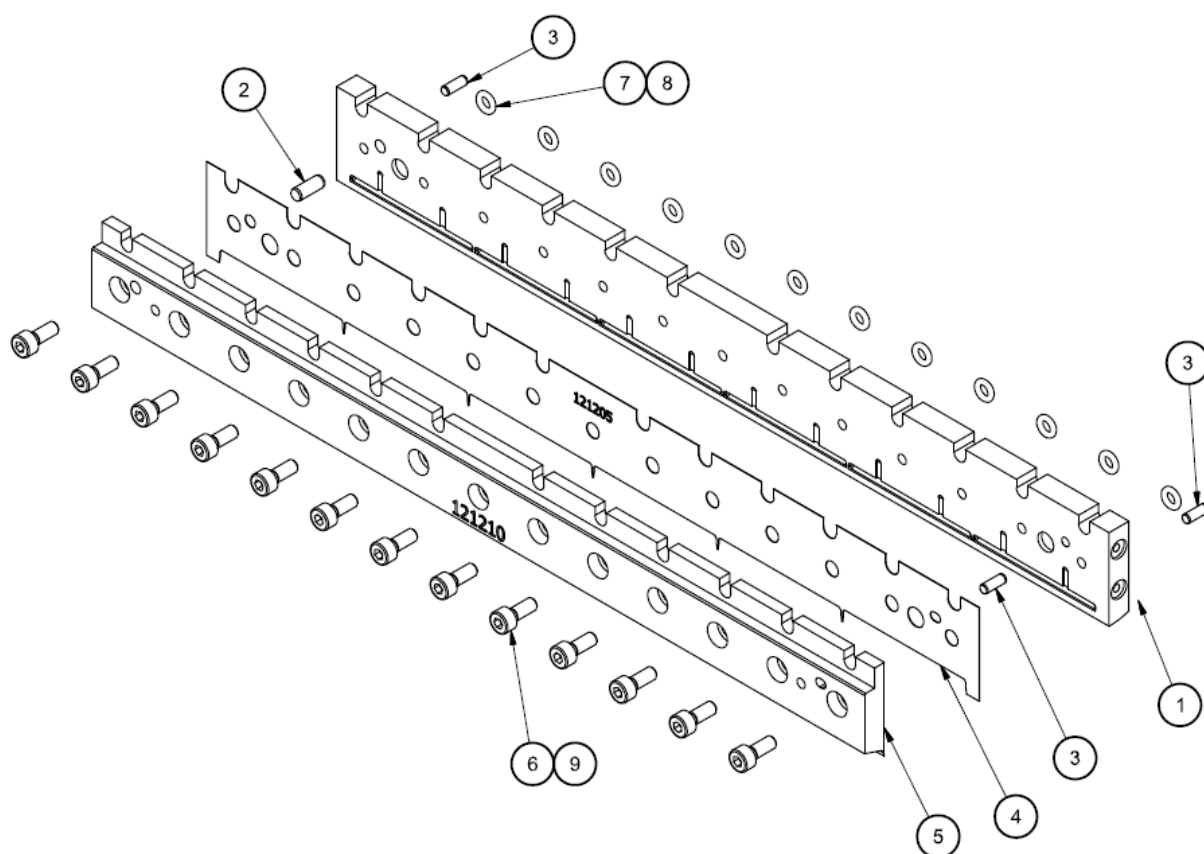


Illustration: Slot Nozzle 250mm, 10-port, 5x50mm pattern, PN 121206

8.9.14 Slot Nozzle 300mm, 12-port, 6x50mm pattern, PN 121210

Item No.	Part number	Description	Quantity
1	121209	Nozzle, entry plate, 300mm, 12-port, 6x50mm pattern	1
2	112282	Dowel pin, M4x10mm	1
3	822543	Dowel pin, M3x8mm	3
4	121205	Shim 300mm, 12-port, 6x50mm pattern	1
5	121208	Nozzle, exit plate, 300mm, 12-port	1
6	102446	Screw M4x10mm	13
7	N00174	O-ring 007	12
8	001U002	Silicone lubricant DOW 112	A/R*
9	107324	Anti-seize compound high-temp	A/R*

A/R* = As required.

*Illustration: Slot Nozzle 300mm, 12-port, 6x50mm pattern, PN 121210*

8.10 Standard HS Elite Omega Nozzles

Part Number	Description	No. of Orifices	Orifice Spacing mm	Orifice Size mm
120918	HS Elite Omega - Full Nozzle	5	5	19x20
121000	HS Elite Omega - 4/5LH*	4	5	19x20
121001	HS Elite Omega - 4/5RH*	4	5	19x20
121002	HS Elite Omega - 3/5LH*	3	5	19x20
121003	HS Elite Omega - 3/5RH*	3	5	19x20
121004	HS Elite Omega - 2/5LH*	2	5	19x20
121005	HS Elite Omega - 2/5RH*	2	5	19x20
121006	HS Elite Omega - 1/5LH*	1	5	19x20
121007	HS Elite Omega - 1/5RH*	1	5	19x20
121480	HS Elite Omega - Full Nozzle	3	8.4	19x20
120832	HS Elite Omega - Full Nozzle	6	4.2	16x16
121077	HS Elite Omega - 5/6LH*	5	4.2	16x16
121078	HS Elite Omega - 5/6RH*	5	4.2	16x16
121079	HS Elite Omega - 4/6LH*	4	4.2	16x16
121080	HS Elite Omega - 4/6RH*	4	4.2	16x16
121081	HS Elite Omega - 3/6LH*	3	4.2	16x16
121082	HS Elite Omega - 3/6RH*	3	4.2	16x16
121083	HS Elite Omega - 2/6LH*	2	4.2	16x16
121084	HS Elite Omega - 2/6RH*	2	4.2	16x16
121085	HS Elite Omega - 1/6LH*	1	4.2	16x16
121086	HS Elite Omega - 1/6RH*	1	4.2	16x16
120845	HS Elite Omega - Full Nozzle	5	5	16x16
121023	HS Elite Omega - 4/5LH*	4	5	16x16
121024	HS Elite Omega - 4/5RH*	4	5	16x16
121025	HS Elite Omega - 3/5LH*	3	5	16x16
121026	HS Elite Omega - 3/5RH*	3	5	16x16
121027	HS Elite Omega - 2/5LH*	2	5	16x16
121028	HS Elite Omega - 2/5RH*	2	5	16x16
121029	HS Elite Omega - 1/5LH*	1	5	16x16
121030	HS Elite Omega - 1/5RH*	1	5	16x16

*RH = Right hand. / LH = Left hand.

Continue on next page. ->

Part Number	Description	No. of Orifices	Orifice Spacing mm	Orifice Size mm
121329	HS Elite Omega - Full Nozzle	3	9	16x16
121330	HS Elite Omega - 2/3LH*	2	9	16x16
121331	HS Elite Omega - 2/3RH*	2	9	16x16
121332	HS Elite Omega - 1/3LH*	1	9	16x16
121333	HS Elite Omega - 1/3RH*	1	9	16x16
121018	HS Elite Omega - Full Nozzle	2	5	16x16
120944	HS Elite Omega - Full Nozzle	3	4	16x16
120949	HS Elite Omega - Full Nozzle	3	5	16x16
121282	HS Elite Omega - Full Nozzle	3	3	16x16
120913	HS Elite Omega - Full Nozzle	5	5	12x12
121315	HS Elite Omega - 4/5LH*	4	5	12x12
121316	HS Elite Omega - 4/5RH*	4	5	12x12
121317	HS Elite Omega - 3/5LH*	3	5	12x12
121318	HS Elite Omega - 3/5RH*	3	5	12x12
121319	HS Elite Omega - 2/5LH*	2	5	12x12
121320	HS Elite Omega - 2/5RH*	2	5	12x12
121321	HS Elite Omega - 1/5LH*	1	5	12x12
121322	HS Elite Omega - 1/5RH*	1	5	12x12
121013	HS Elite Omega - Full Nozzle	6	4.2	12x12
121301	HS Elite Omega - 5/6LH*	5	4.2	12x12
121302	HS Elite Omega - 5/6RH*	5	4.2	12x12
121303	HS Elite Omega - 4/6LH*	4	4.2	12x12
121304	HS Elite Omega - 4/6RH*	4	4.2	12x12
121305	HS Elite Omega - 3/6LH*	3	4.2	12x12
121306	HS Elite Omega - 3/6RH*	3	4.2	12x12
121307	HS Elite Omega - 2/6LH*	2	4.2	12x12
121308	HS Elite Omega - 2/6RH*	2	4.2	12x12
121309	HS Elite Omega - 1/6LH*	1	4.2	12x12
121310	HS Elite Omega - 1/6RH*	1	4.2	12x12
121291	HS Elite Omega - Full Nozzle	2	4	12x12
121286	HS Elite Omega - Full Nozzle	2	5	12x12
121295	HS Elite Omega - Full Nozzle	3	4	12x12

*RH = Right hand. / LH = Left hand.

8.11 Standard HSI Nozzles

Part Number	Description	Orifice Size	No. of Orifices	Orifice Spacing mm
119852	HSI Full Nozzle	-	17	Random
119854	HSI 1/2LH*	-	9	Random
119855	HSI 1/2RH*	-	9	Random

*RH = Right hand. / LH = Left hand.

8.12 Standard ULTRA SCS Nozzles

Part Number	Description	Type	No. of Orifices	Orifice Spacing mm
119789	Ultra SCS	Stitch	1	-
120521	Ultra SCS	Stitch	2	3
120522	Ultra SCS	Touch	2	3
120529	Ultra SCS	Stitch	2	4
120530	Ultra SCS	Touch	2	4
119639	Ultra SCS	Stitch	2	5
119748	Ultra SCS	Touch	2	5
120852	Ultra SCS	Stitch	2	10
120537	Ultra SCS	Stitch	3	3
120538	Ultra SCS	Touch	3	3
119362	Ultra SCS	Stitch	3	4
119746	Ultra SCS	Touch	3	4
120472	Ultra SCS	Stitch	3	5
120473	Ultra SCS	Touch	3	5
120880	Ultra SCS	Stitch	3	8.4
119699	Ultra SCS	Stitch	4	5
121353	Ultra SCS	Stitch	4	6.35
121354	Ultra SCS	Touch	4	6.35
120894	Ultra SCS	Stitch	5	5

8.13 Wing Kits (optional)

8.13.1 Wing assembly, 25mm, PN 120593

2 wings are needed for both sides.

Item No.	Part Number	Description	Quantity
1	120594	Wing 25mm	1
2	120595	Spacer M3 ceramic	2
3	810031	Screw M3x30mm	2

Note: Wing is reversible for left or right mounting.

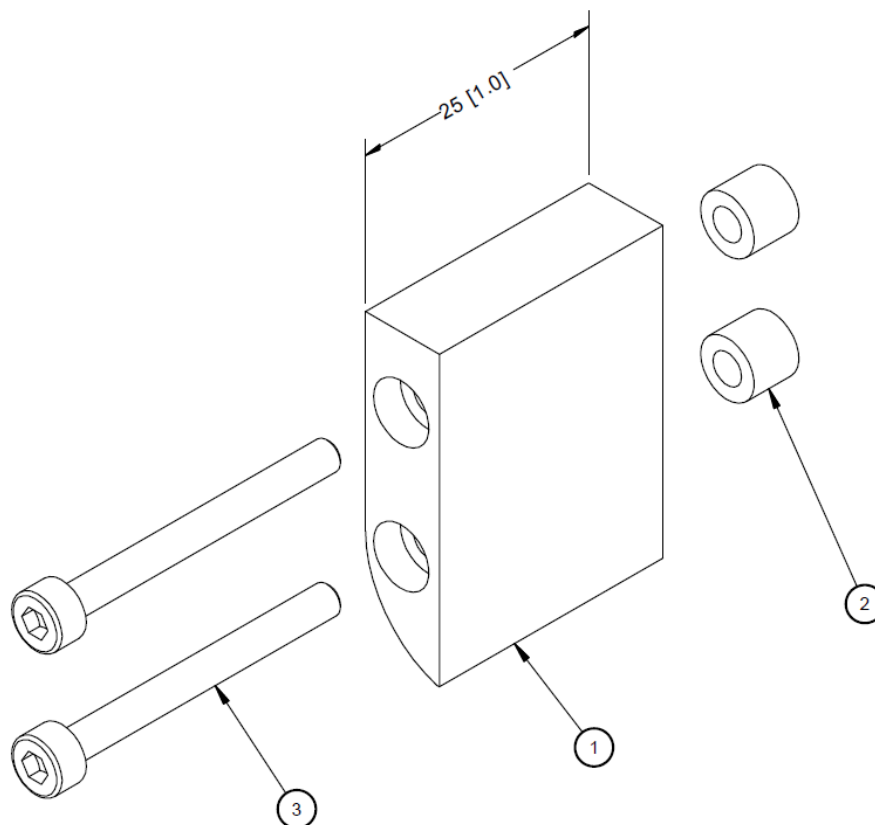
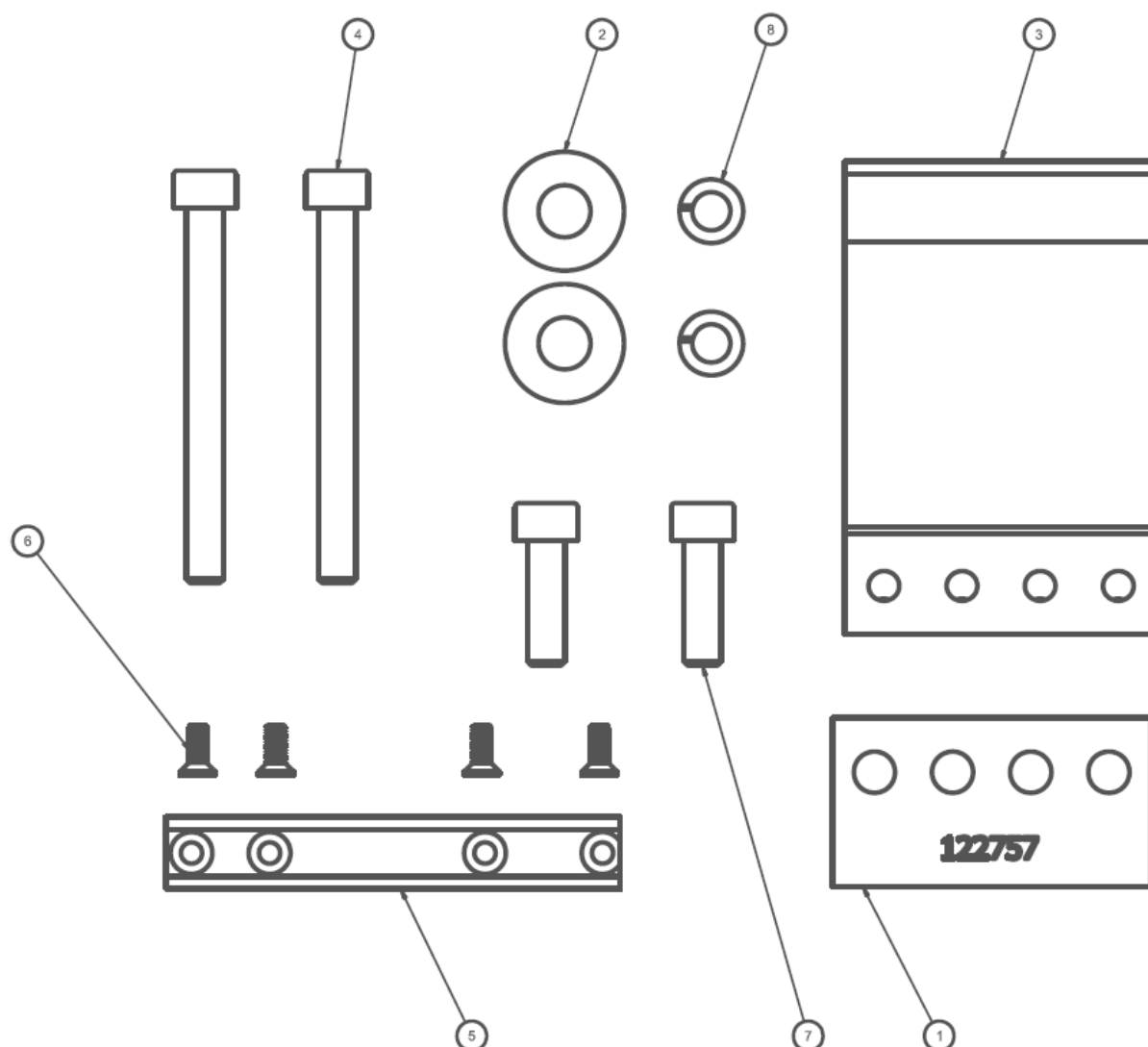


Illustration: Wing assembly, 25mm, PN 120593

8.13.2 Wing Kit, 50mm, PN 122962 (optional)

2 kits are needed for both sides.

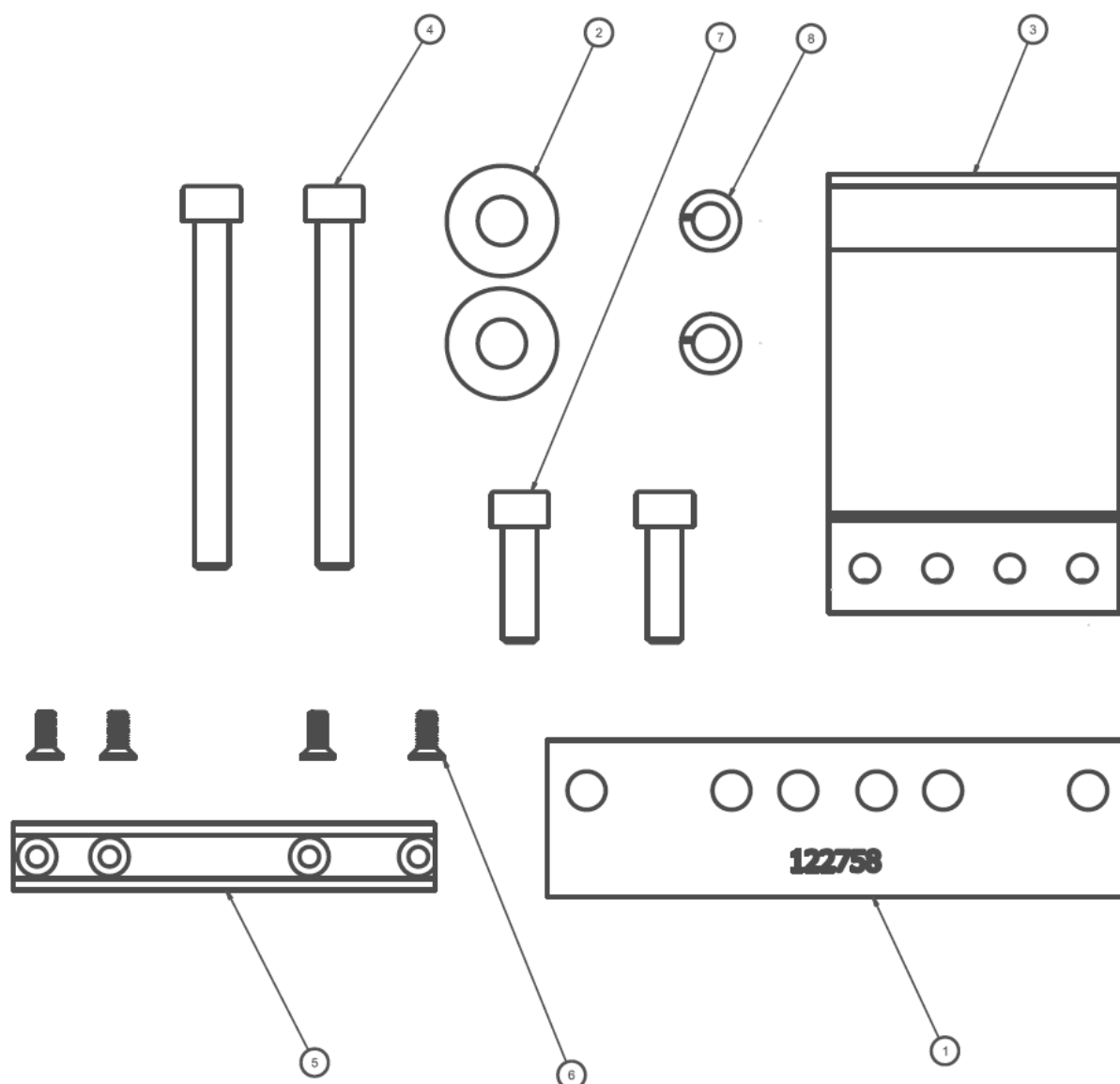
Item No.	Part Number	Description	Quantity
1	122757	Wing 50mm	1
2	L00006	Insulating spacer .25	2
3	122754	Side bracket	1
4	102602	Screw M6x60mm	2
5	122755	Alignment bracket	1
6	122996	Screw M3x8mm	4
7	808349	Screw M6x20mm	2
8	117042	Lock washer M6	2



8.13.3 Wing Kit, 100mm, PN 122963 (optional)

2 kits are needed for both sides.

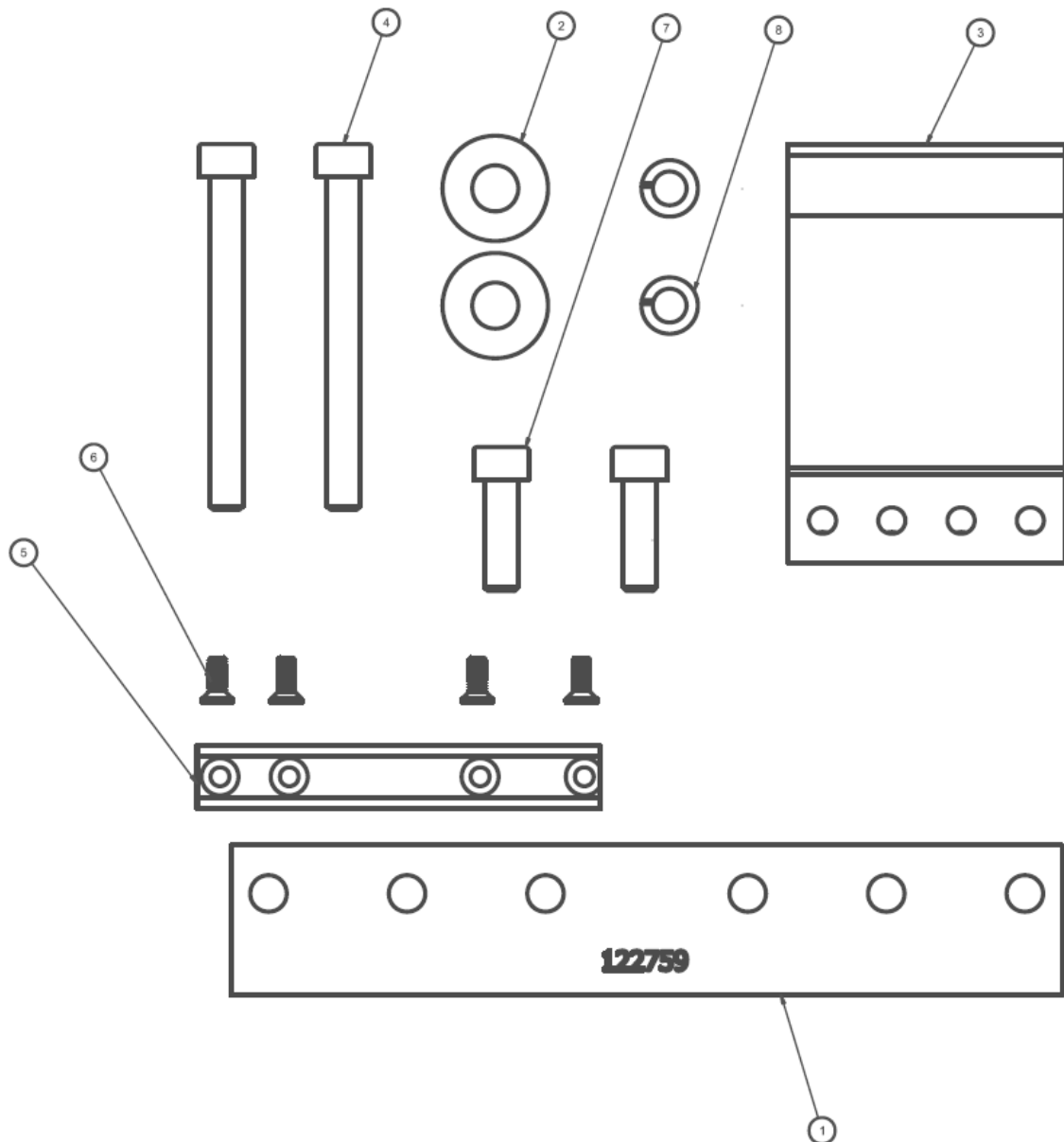
Item No.	Part Number	Description	Quantity
1	122758	Wing 100mm	1
2	L00006	Insulating spacer .25	2
3	122754	Side bracket	1
4	102602	Screw M6x60mm	2
5	122755	Alignment bracket	1
6	122996	Screw M3x8mm	4
7	808349	Screw M6x20mm	2
8	117042	Lock washer M6	2



8.13.4 Wing Kit, 150mm, PN 122964 (optional)

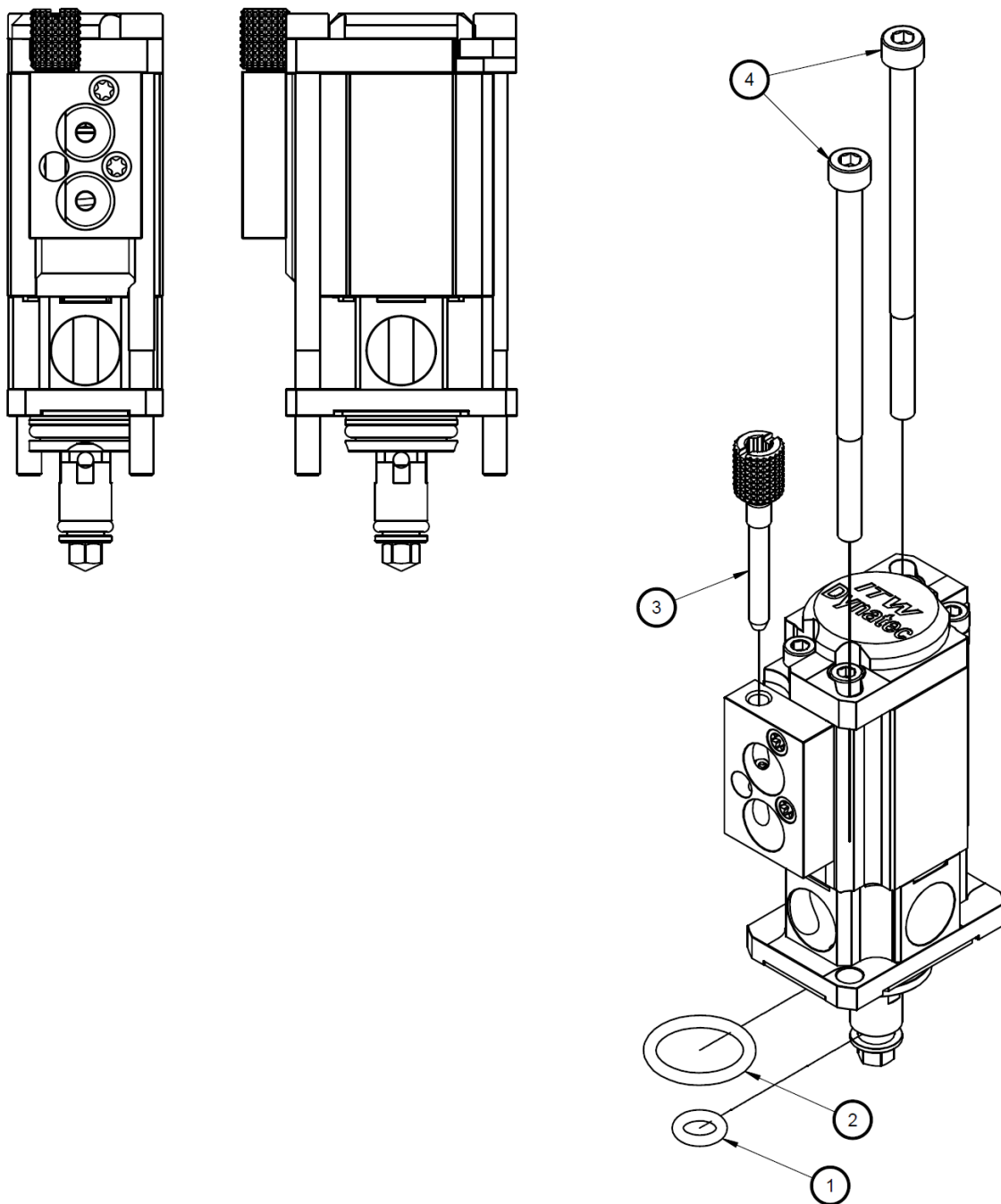
2 kits are needed for both sides.

Item No.	Part Number	Description	Quantity
1	122759	Wing 150mm	1
2	L00006	Insulating spacer .25	2
3	122754	Side bracket	1
4	102602	Screw M6x60mm	2
5	122755	Alignment bracket	1
6	122996	Screw M3x8mm	4
7	808349	Screw M6x20mm	2
8	117042	Lock washer M6	2



8.14 Modules

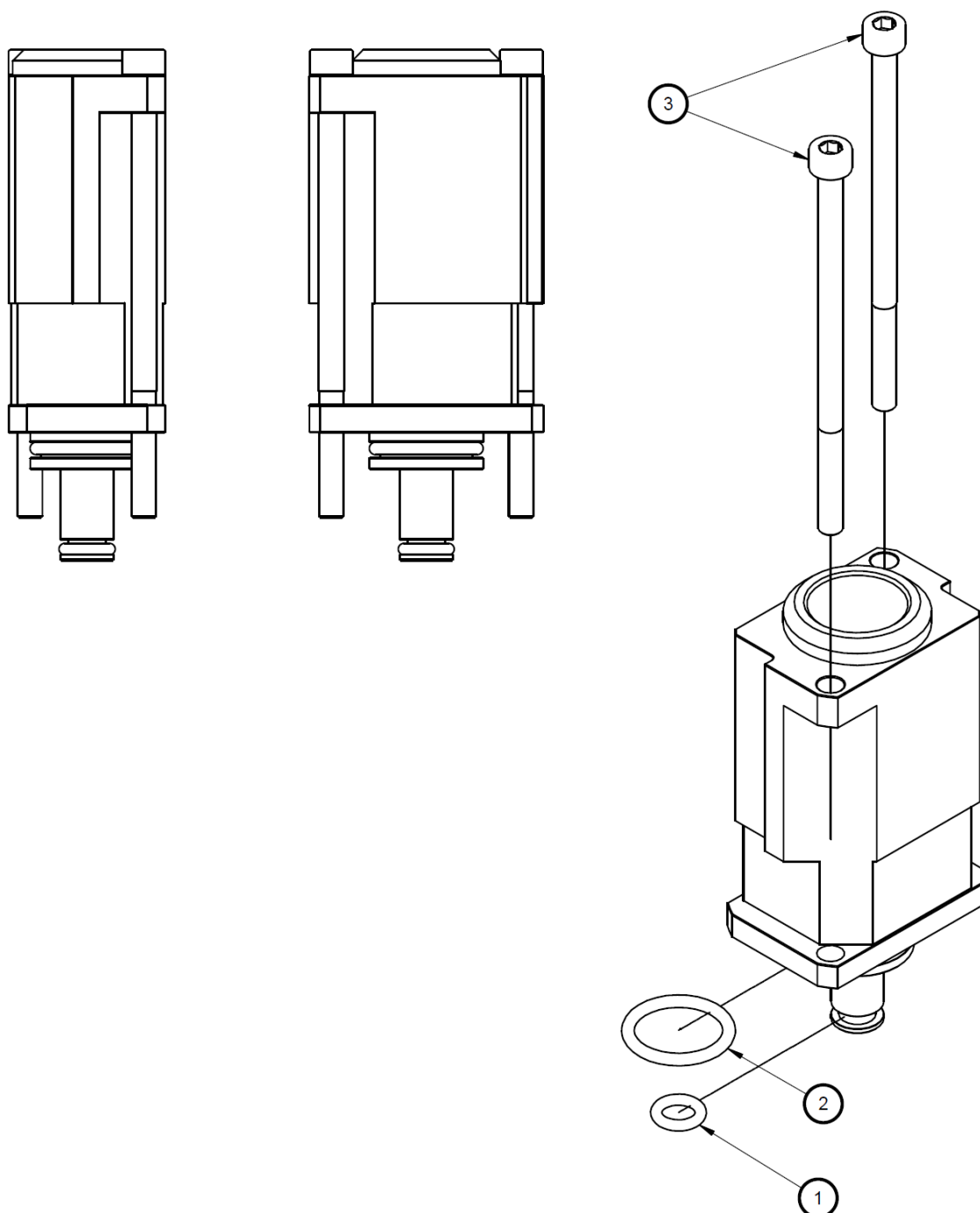
8.14.1 ULTRA Module, PN 119990



Serviceable Components:

Item No.	Part Number	Description	Quantity
1	N00176	O-ring 2-009	1
2	808269	O-ring 14x2mm	1
3	113348	Pin, solenoid retaining, M4	1
4	8401	Screw M4x70mm	2

8.14.2 Blank Module, PN 120108

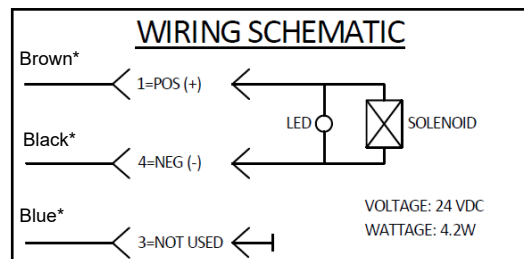
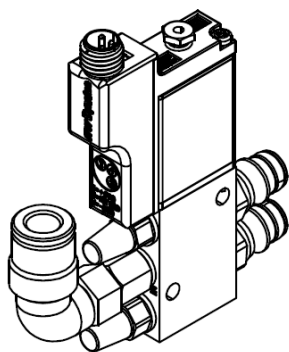


Serviceable Components:

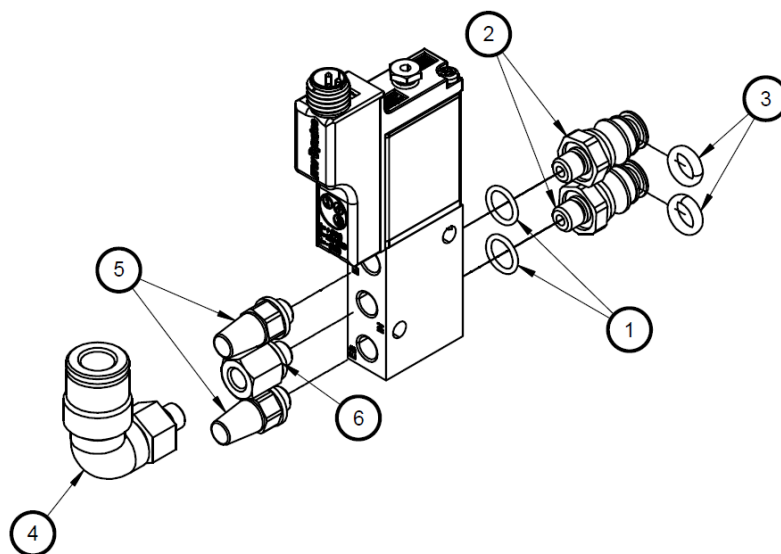
Item No.	Part Number	Description	Quantity
1	N00176	O-ring 2-009	1
2	808269	O-ring 14x2mm	1
3	8401	Screw M4x70mm	2

8.15 Solenoid valves

8.15.1 Solenoid valve, MAC44 series, QC



* Note: The colors refer to the cables listed in the below table.



Item No.	Part Number	Description	Quantity
1	119270	O-ring 1x6mm ID,	2
2	119268	Fitting, QC SOL, M5x0.8mm	2
3	N00175	O-ring -008	2
4	See tabulation *	Fitting, swivel elbow	1
5	117077	Muffler M5	2
6	119625	Adapter M5	1

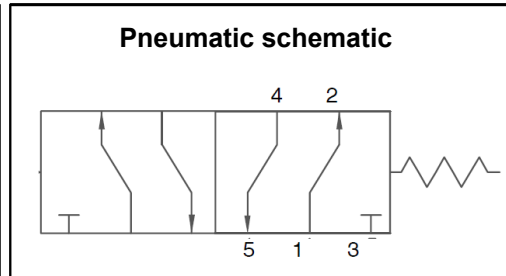
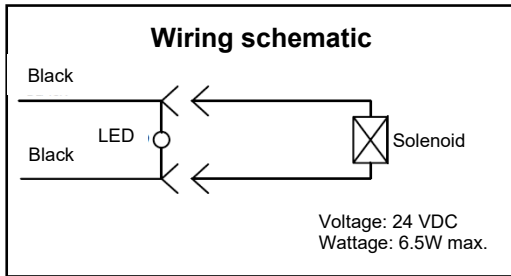
*** Part no. Tabulation:**

Solenoid Assembly	Item 4	Inlet tubing size (OD)
120116	819975	6mm
119784	115438	1/4"

Available Control Cables:

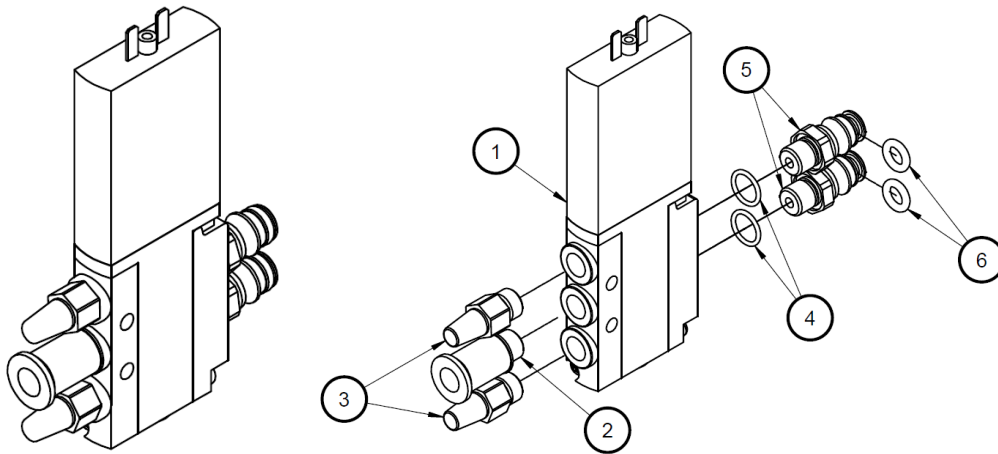
Cable PN	Control Type
117532	Cable, 3m length, with flying leads
118507	Extension Cable, 3m length, connector each end
150110	Cable, 10m length, with flying leads

8.15.2 Solenoid, Festo, QC



Connections:

Port 1 = Inlet
Port 2 = Close side of module
Port 3 = Exhaust
Port 4 = Open side of module
Port 5 = Exhaust



Item No.	Part Number	Description	Quantity
1	113350	Pneumatic solenoid valve 4-way, Festo	1
2	See tabulation *	Push-in Fitting, M7	1
3	118390	Silencer, bronze, M7	2
4	119731	O-ring, 1x7mm ID,	2
5	113351	Fitting, QC SOL, M7x1mm	2
6	N00175	O-ring -008	2

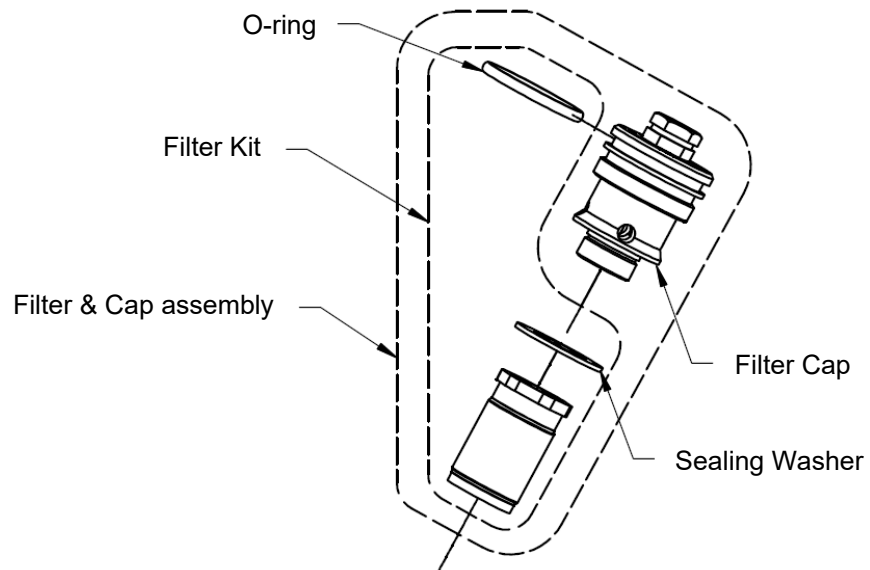
*** Part no. Tabulation:**

Solenoid Assembly	Item 2	Inlet tubing size (OD)
115055	113362	6mm
115056	113363	1/4"

Available Control Cables:

Cable Part Number	Control Type
113361	Cable, 2.5m length, with flying leads
114557	Cable, 10m length, with flying leads

8.16 Filter

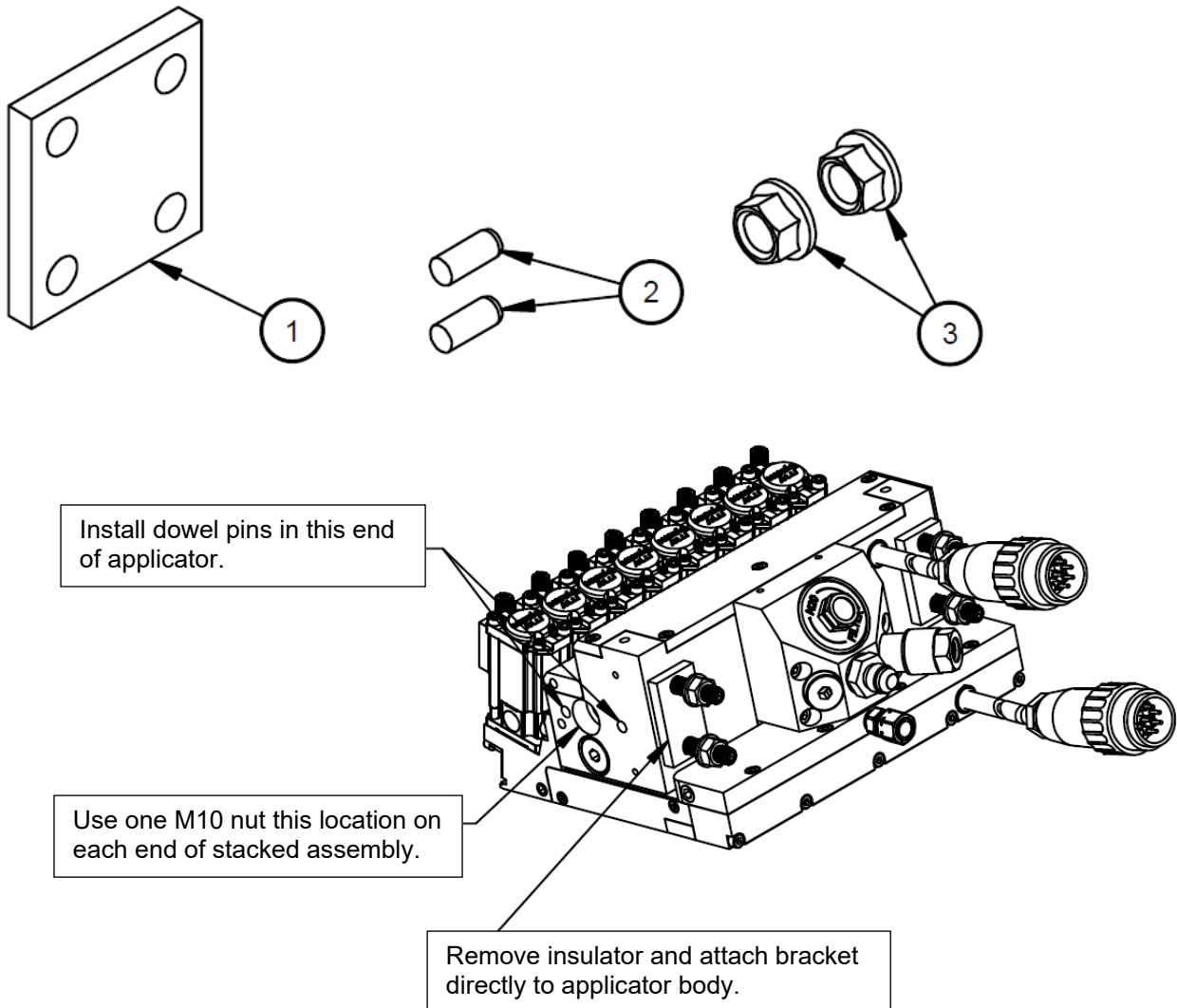


Filter Part Number Chart:

Filter Code	Filter & Cap Assembly	Filter Kit	Sealing Washer	O-Ring
C (150 Mesh)	116246	116245	116243	N03812

8.17 Joining Kit for Ultra stacked Applicator, PN 121215 (optional)

Item No.	Part Number	Description	Quantity
1	121213	Bracket	1
2	121214	Dowel pin M6x16mm	2
3	104158	Hex nut M10	2
4	804377	Threaded rod M10x1.5	See notes



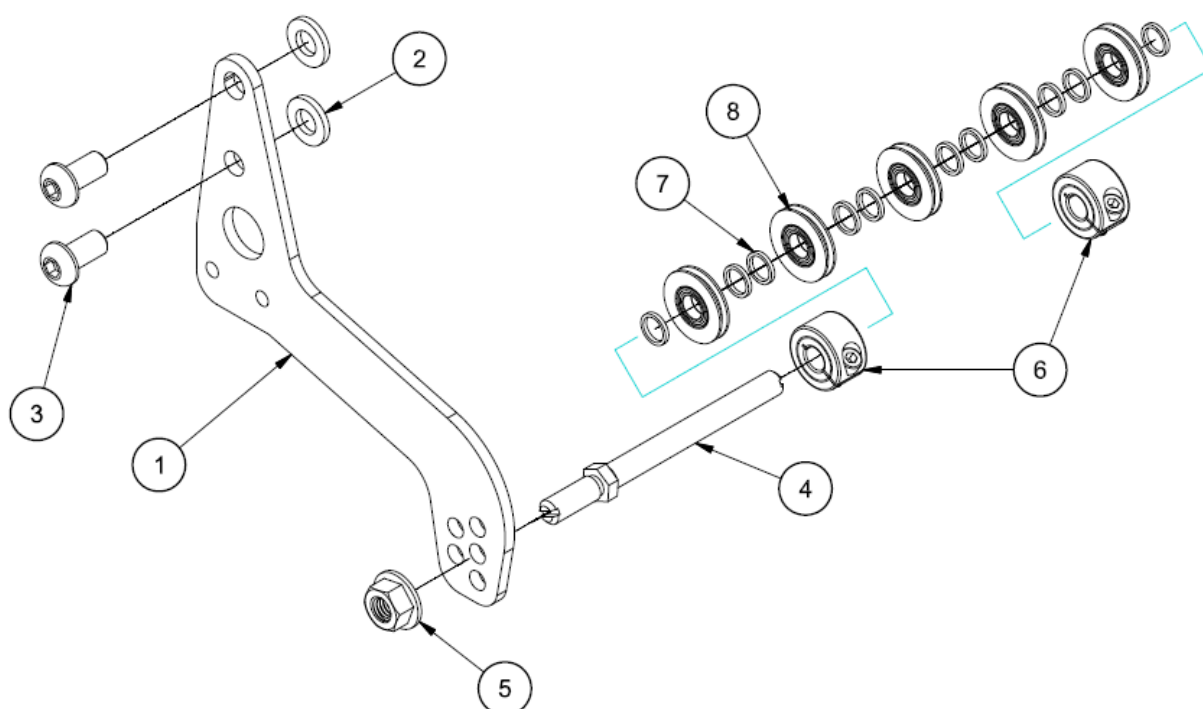
Notes:

1. Use one 121215 kit for each stacked Ultra applicator joint (# kits required = # segments less one).
2. Install dowels into applicator end as shown.
3. Remove insulators and attach bracket directly to applicator.
4. M10 nuts are used to secure M10 threaded rod (supplied separately) at each end of stacked applicator. Only two nuts are required for each stacked applicator.
5. For M10 rod length, use the total stacked applicator length less 3mm.

Illustration: Joining Kit for Ultra stacked Applicator, PN 121215

8.18 Roller and Bracket Assembly, PN 120723 (optional)

Item No.	Part Number	Description	Quantity
1	120717	Bracket	1
2	114175	Flat washer M6	2
3	120719	Screw M6x12mm	2
4	120718	Roller shaft	1
5	120720	Flange nut M6	1
6	120721	Shaft collar 6mm	2
7	120722	Flat washer .25x.31x.04 brass	10
8	120586	Strand roller assembly, 3mm wide, 6mm ID	5

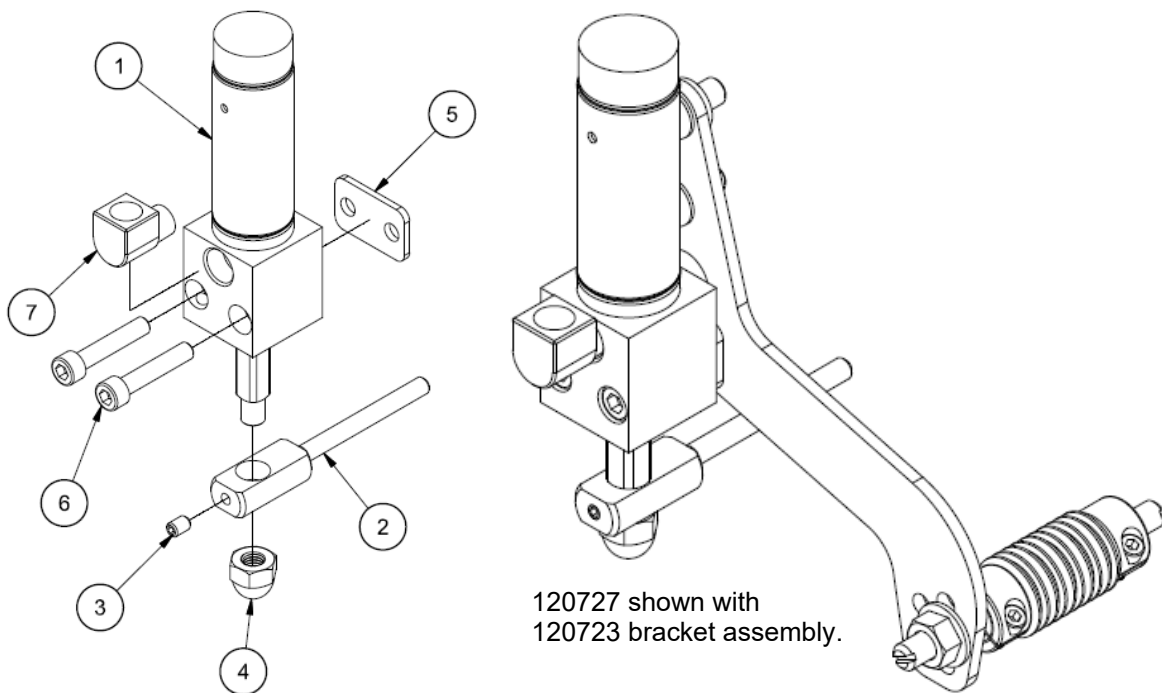
**Notes:**

1. Bracket may be located for installation on either side of the Ultra applicator, but the M6 washers must always be placed between the bracket and applicator, not under the M6 screw heads.
2. Start with axle in middle position and adjust up or down as necessary.
3. Each roller is 3mm wide, and each brass spacer adds 1mm. Adjust as necessary for the application.

Illustration: Roller and Bracket Assembly, PN 120723

8.19 Strand Unload Cylinder Assembly, PN 120727 (optional)

Item No.	Part Number	Description	Quantity
1	120724	Pneumatic cylinder, single, 3/4 bore x 5/8 stroke	1
2	120587	Pin	1
3	106156	Screw M4x6mm	1
4	120726	Hex nut, acorn lock, 1/4-28UNF	1
5	120725	Spacer	1
6	808054	Screw #10-32x1"	2
7	072X098	Fitting, street elbow, 1/8" NPT	1



Notes:

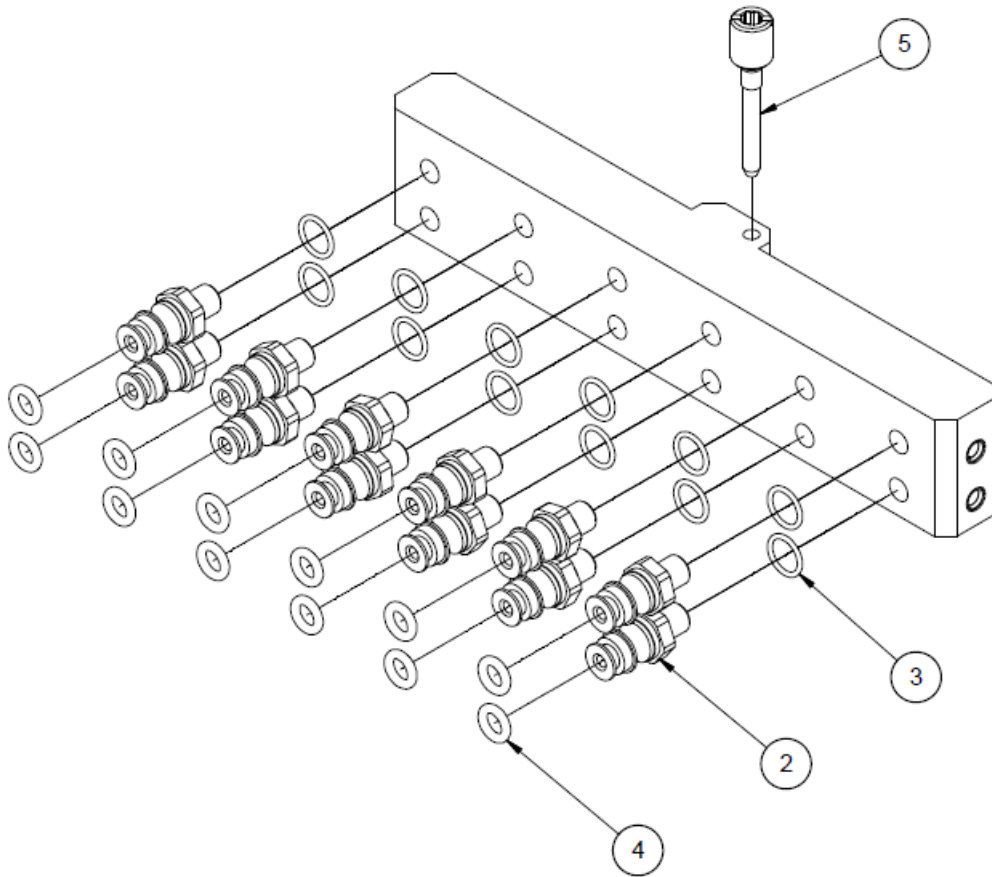
1. This cylinder assembly requires 120723 bracket assembly for mounting and proper operation. See view above.
2. Cylinder is single-acting and normally extended (unload position). Apply air pressure to retract rod for run condition.
3. Minimum 1.7 bar (25psi) air pressure required.

Illustration: Strand Unload Cylinder Assembly, PN 120727

8.20 One-Solenoid-Manifold Kits (optional)

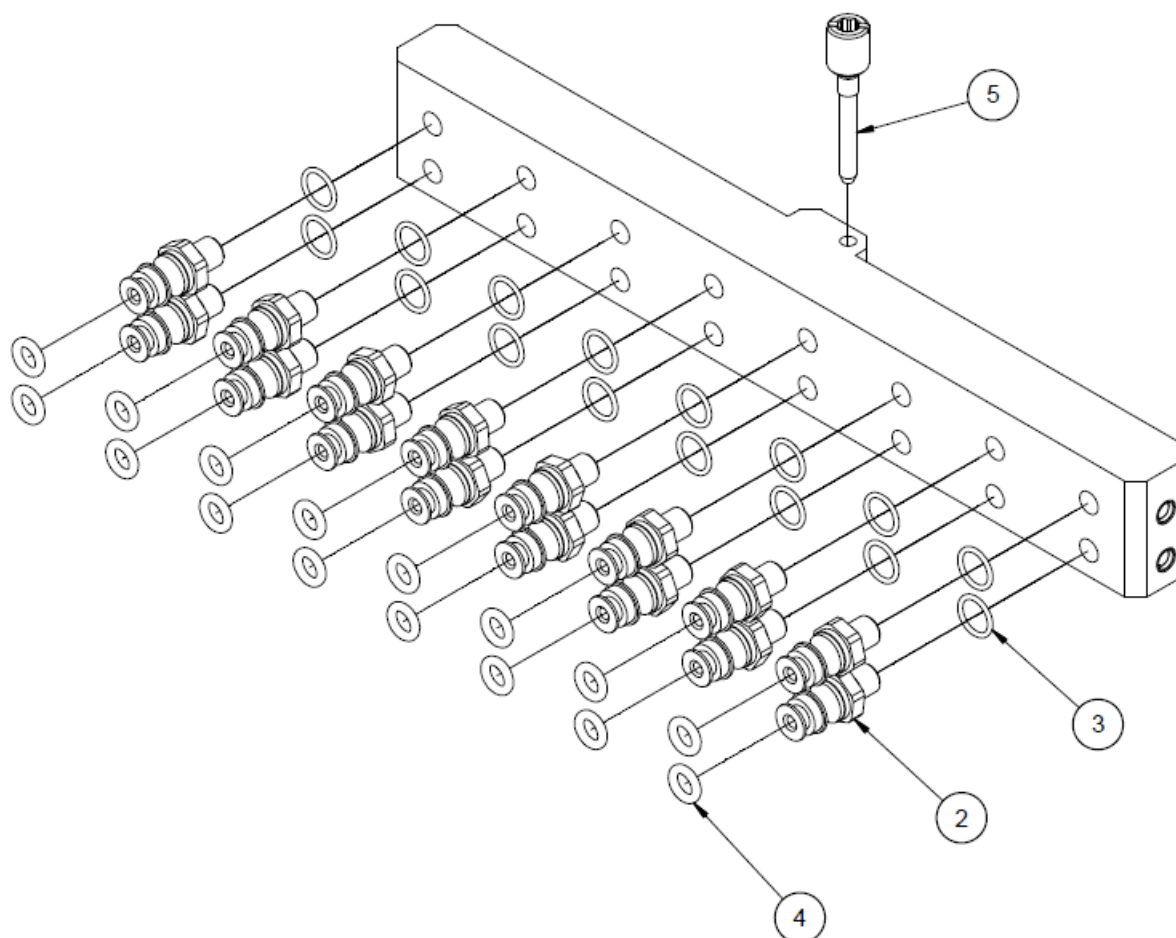
8.20.1 One-Solenoid-Manifold 6-port Kit, PN 123157

Item No.	Part Number	Description	Quantity
2	122905	Fitting M6x1mm	12
3	119731	O-ring 7mmIDx1mm	12
4	N00175	O-ring 2-008	12
5	113348	Solenoid retaining pin M4	1



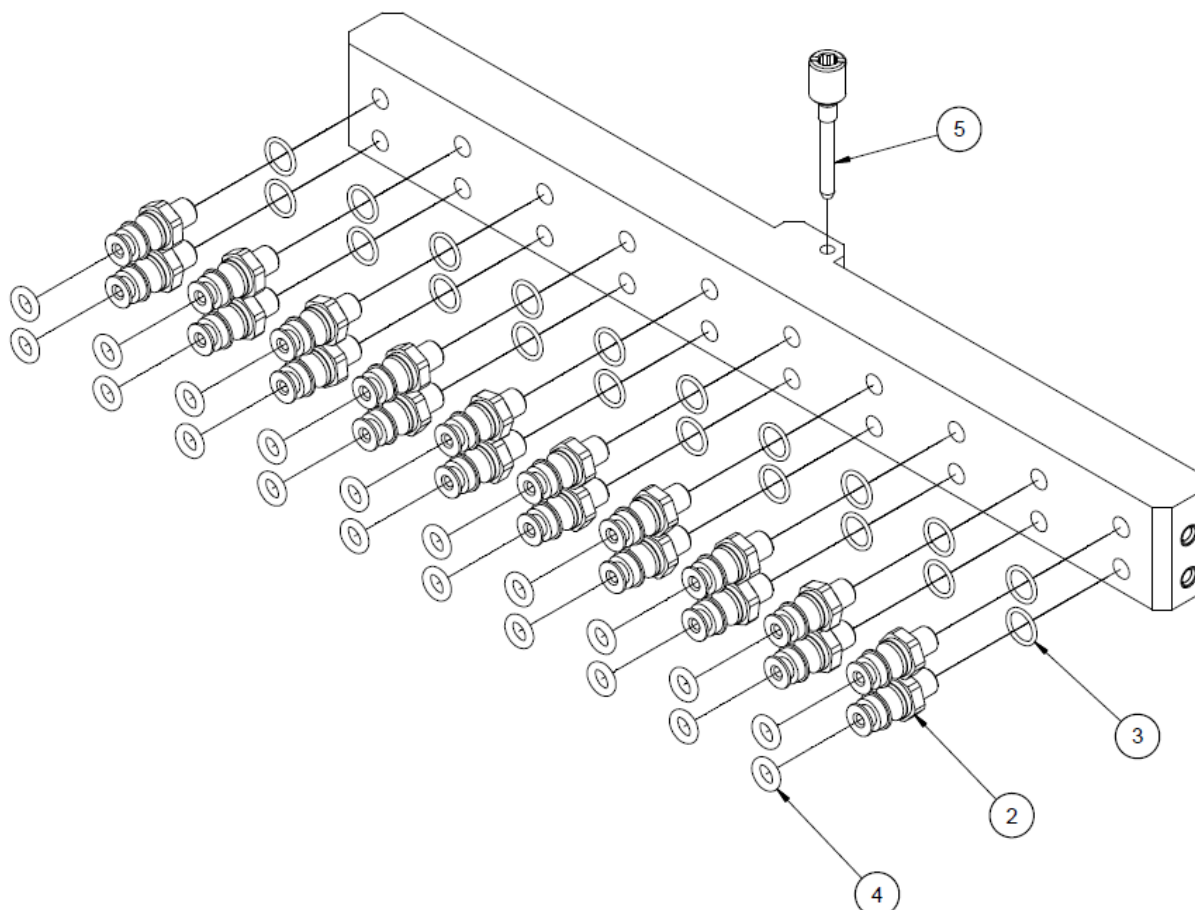
8.20.2 One-Solenoid-Manifold 8-port Kit, PN 123158

Item No.	Part Number	Description	Quantity
2	122905	Fitting M6x1mm	16
3	119731	O-ring 7mmIDx1mm	16
4	N00175	O-ring 2-008	16
5	113348	Solenoid retaining pin M4	1



8.20.3 One-Solenoid-Manifold 10-port Kit, PN 123159

Item No.	Part Number	Description	Quantity
2	122905	Fitting M6x1mm	20
3	119731	O-ring 7mmIDx1mm	20
4	N00175	O-ring 2-008	20
5	113348	Solenoid retaining pin M4	1



Chapter 9

Recommended Spare Parts

9.1 1-Port ULTRALINK Applicator, Layout, PN 120474

9.1.1 Module-Manifold Assembly, 1-Port, Ultra stackable, PN 122796

Item No.	Part Number	Description	Quantity
4	N00181	O-ring 017	2
5	119989	Heater cartridge Ø10x80mm, 150W, 240V	2
6	106444	Heater cartridge Ø10x40mm, 150W, 240V	1
17	N00175	O-ring 008	2
19	N00187	O-ring 020	1

9.1.2 Service Block Assembly, 2-Port (also for 1-Port), Ultra stackable, PN 122592

Item No.	Part Number	Description	Quantity
5	803960	Heater cartridge 10x40mm, 200W, 240V	1

9.2 2-Port ULTRALINK Applicator, Layout, PN 120475

9.2.1 Module-Manifold Assembly, 2-Port, Ultra stackable, PN 122595

Item No.	Part Number	Description	Quantity
4	N00181	O-ring 017	2
5	119989	Heater cartridge Ø10x80mm, 150W, 240V	2
6	106444	Heater cartridge Ø10x40mm, 150W, 240V	1
17	N00175	O-ring 008	2
19	N00187	O-ring 020	2

9.2.2 Service Block Assembly, 2-Port, Ultra stackable, PN 122592

Item No.	Part Number	Description	Quantity
5	803960	Heater cartridge 10x40mm, 200W, 240V	1

9.3 3-Port ULTRALINK Applicator, Layout, PN 120476

9.3.1 Module-Manifold Assembly, 3-Port, Ultra stackable, PN 122587

Item No.	Part Number	Description	Quantity
4	N00181	O-ring 017	3
5	119989	Heater cartridge Ø10x80mm, 150W, 240V	3
6	106548	Heater cartridge Ø10x65mm, 175W, 240V	1
17	N00175	O-ring 008	3
19	N00178	O-ring 011	3

9.3.2 Service Block Assembly, 3-Port, Ultra stackable, PN 122584

Item No.	Part Number	Description	Quantity
5	803960	Heater cartridge 10x40mm, 200W, 240V	2

9.4 4-Port ULTRALINK Applicator, Layout, PN 120477

9.4.1 Module-Manifold Assembly, 4-Port, Ultra stackable, PN 121668

Item No.	Part Number	Description	Quantity
4	N00181	O-ring 017	4
5	119989	Heater cartridge Ø10x80mm, 150W, 240V	4
6	106325	Heater cartridge Ø10x90mm, 200W, 240V	1
17	N00175	O-ring 008	4
19	N00178	O-ring 011	4

9.4.2 Service Block Assembly, 4-Port, Ultra stackable, PN 123003

Item No.	Part Number	Description	Quantity
5	803960	Heater cartridge 10x40mm, 200W, 240V	2

9.5 6-Port ULTRALINK Applicator, Layout, PN 120478

9.5.1 Module-Manifold Assembly, 6-Port, Ultra stackable, PN 122802

Item No.	Part Number	Description	Quantity
4	N00181	O-ring 017	6
5	119989	Heater cartridge Ø10x80mm, 150W, 240V	6
6	106715	Heater cartridge Ø10x140mm, 300W, 240V	1
17	N00175	O-ring 008	6
19	N00178	O-ring 011	6

9.5.2 Service Block Assembly, 6-Port, Ultra stackable, PN 122799

Item No.	Part Number	Description	Quantity
3	N06160	O-ring 029	1
8	803960	Heater cartridge 10x40mm, 200W, 240V	4

9.6 8-Port ULTRALINK Applicator, Layout, PN 121158

9.6.1 Module-Manifold Assembly, 8-Port, PN 121161

Item No.	Part Number	Description	Quantity
4	N00181	O-ring 017	8
5	119989	Heater cartridge 10x80mm, 150W, 240V	8
11	119664	Heater cartridge, 10x190mm, 400W, 240V	1
17	N00175	O-ring -008	8
21	N00178	O-ring -011	8

9.6.2 Service Block Assembly, 8-Port, PN 121164

Item No.	Part Number	Description	Quantity
3	N06160	O-ring 029	1
8	803960	Heater cartridge 10x40mm, 200W, 240V	4

9.7 10-Port ULTRALINK Applicator, Layout, PN 121159

9.7.1 Module-Manifold Assembly, 10-Port, PN 121162

Item No.	Part Number	Description	Quantity
4	N00181	O-ring 017	10
5	119989	Heater cartridge 10x80mm, 150W, 240V	10
11	120820	Heater cartridge, 10x235mm, 500W, 240V	1
17	N00175	O-ring -008	10
21	N00178	O-ring -011	10

9.7.2 Service Block Assembly, 10-Port, PN 121165

Item No.	Part Number	Description	Quantity
3	N06160	O-ring 029	1
8	803960	Heater cartridge 10x40mm, 200W, 240V	6

9.8 12-Port ULTRALINK Applicator, Layout, PN 121160

9.8.1 Module-Manifold Assembly, 12-Port, PN 121163

Item No.	Part Number	Description	Quantity
4	N00181	O-ring 017	12
5	119989	Heater cartridge 10x80mm, 150W, 240V	12
11	120775	Heater cartridge, 10x285mm, 600W, 240V	1
17	N00175	O-ring -008	12
21	N00178	O-ring -011	12

9.8.2 Service Block Assembly, 12-Port, PN 121166

Item No.	Part Number	Description	Quantity
3	N06160	O-ring 029	1
8	803960	Heater cartridge 10x40mm, 200W, 240V	6

9.9 Standard Slot Nozzles

All **O-rings** and the **shims** are recommended spare parts.
See appropriate drawing under Chapter 8.9 Standard Slot Nozzles.

9.10 Standard Nozzles

All HS Elite, HSI and SCS nozzles are specific to the application. At least 1 nozzle of each type and the best is the nozzle numbers on the applicator are recommended spare parts.

9.11 ULTRA Module, PN 119990

At least 1 module and the best is the module numbers on the Ultra applicator are recommended spare parts.

Serviceable O-rings on each module:

Item No.	Part Number	Description	Quantity
1	N00176	O-ring 2-009	1
2	808269	O-ring 14x12mm	1

9.12 Solenoid valves

- MAC44 series QC, inlet tubing size (OD) 6mm, PN 120116
- MAC44 series QC, inlet tubing size (OD) 1/4", PN 119784
- Festo QC, inlet tubing size (OD) 6mm, PN 115055
- Festo QC, inlet tubing size (OD) 1/4", PN 115056

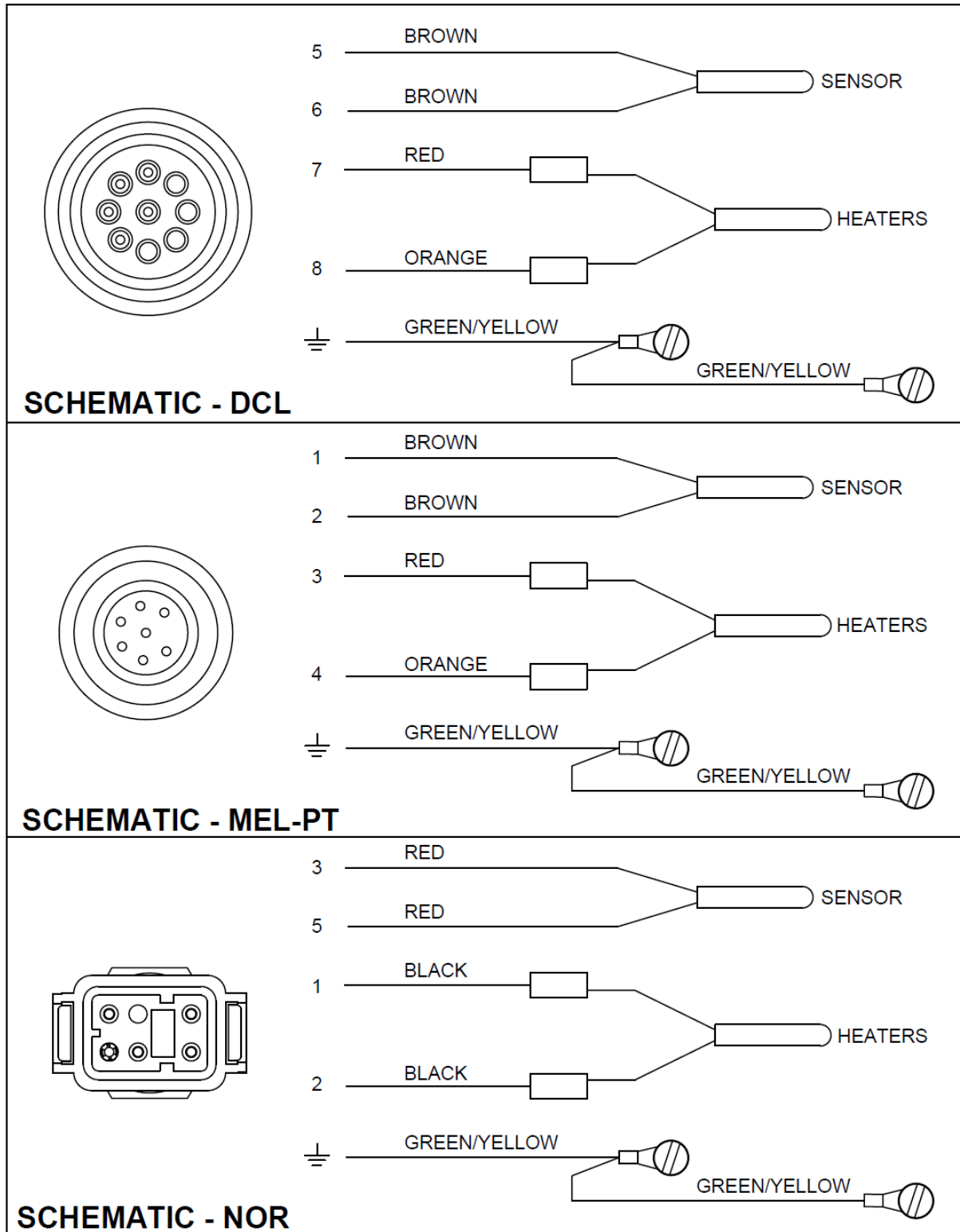
9.13 Filter

Filter Code	Filter & Cap Assembly	Filter Kit	Sealing Washer	O-Ring
C (150 Mesh)	116246	116245	116243	N03812

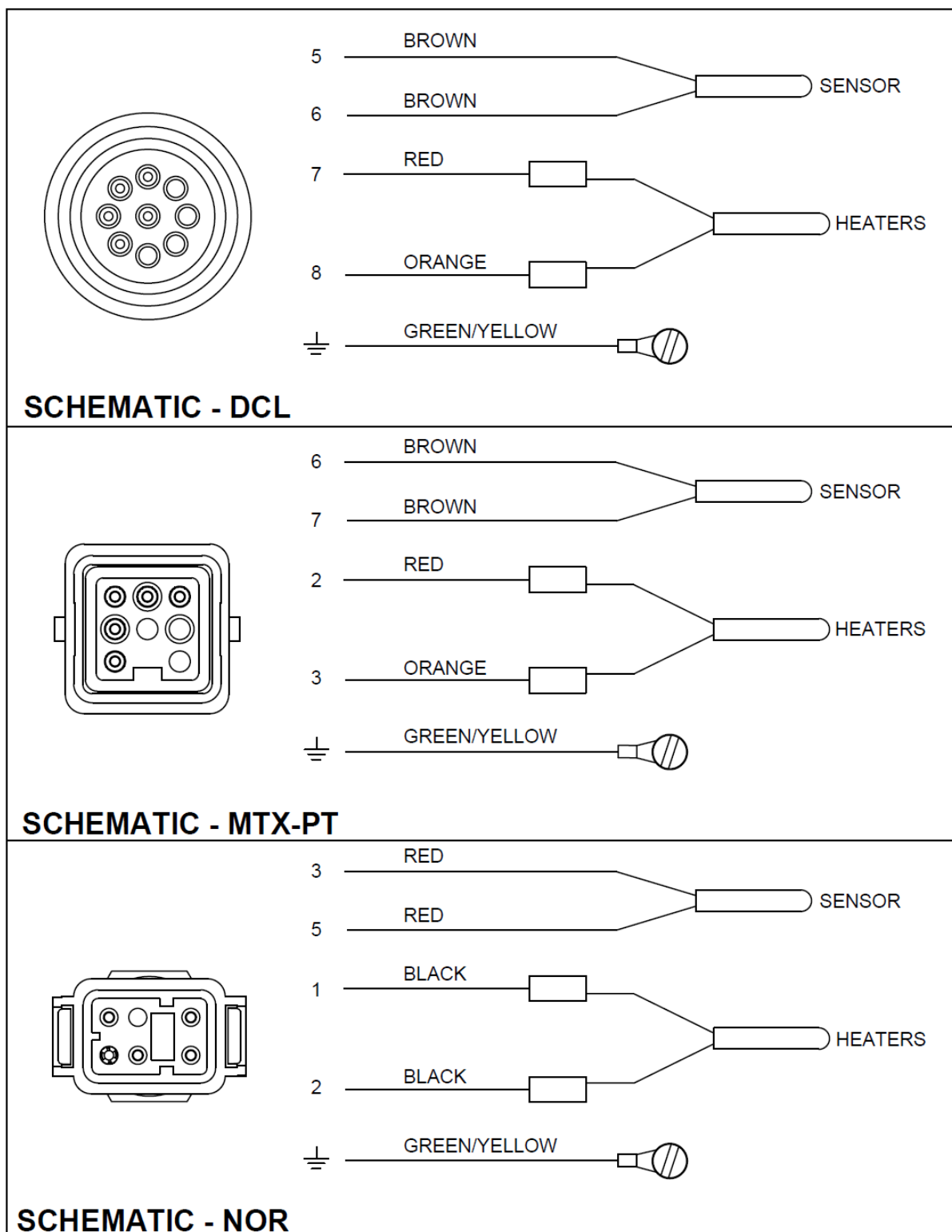
Chapter 10

Schematics

10.1 Schematic Module Manifold



10.2 Schematics Service Block



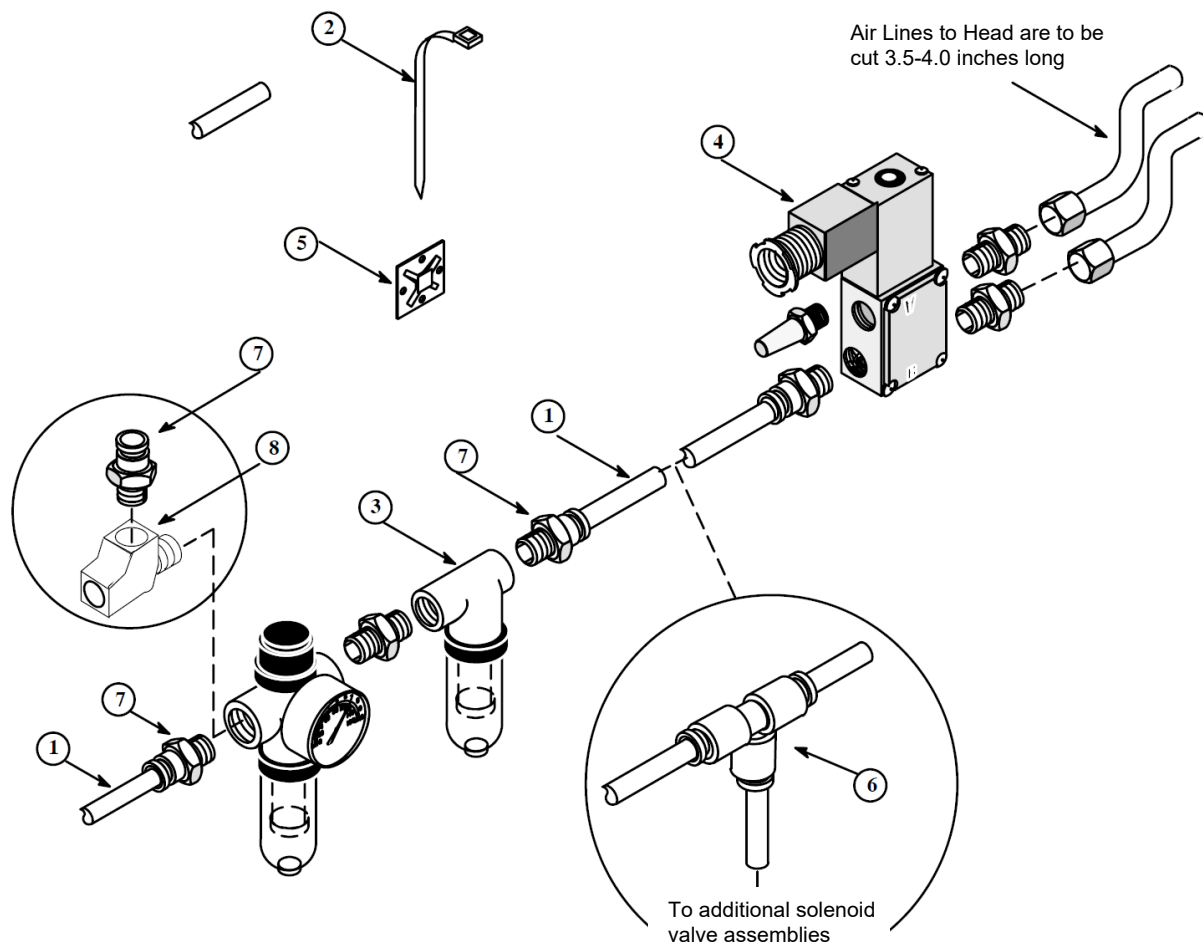
Chapter 11

Appendix

11.1 Air Control Kit PN 100055

Item No.	Part Number	Description	Quantity
1	N06438	Nylon Tubing, .250 Dia.	10'
2	N00318	Cable Tie, .09 x 3.62 Lg	10
3	100380 *	Filter/Regulator Assembly	1
4		Solenoid Valve Assembly	1
5	N04264	Cable Tie Anchor	3
6	N06504	Push-in Union Tee Fitting	1
7	N06430	Male Connect Fitting	3
8	N04531	Fitting, St Tee, 1/4 NPT, Brass	1

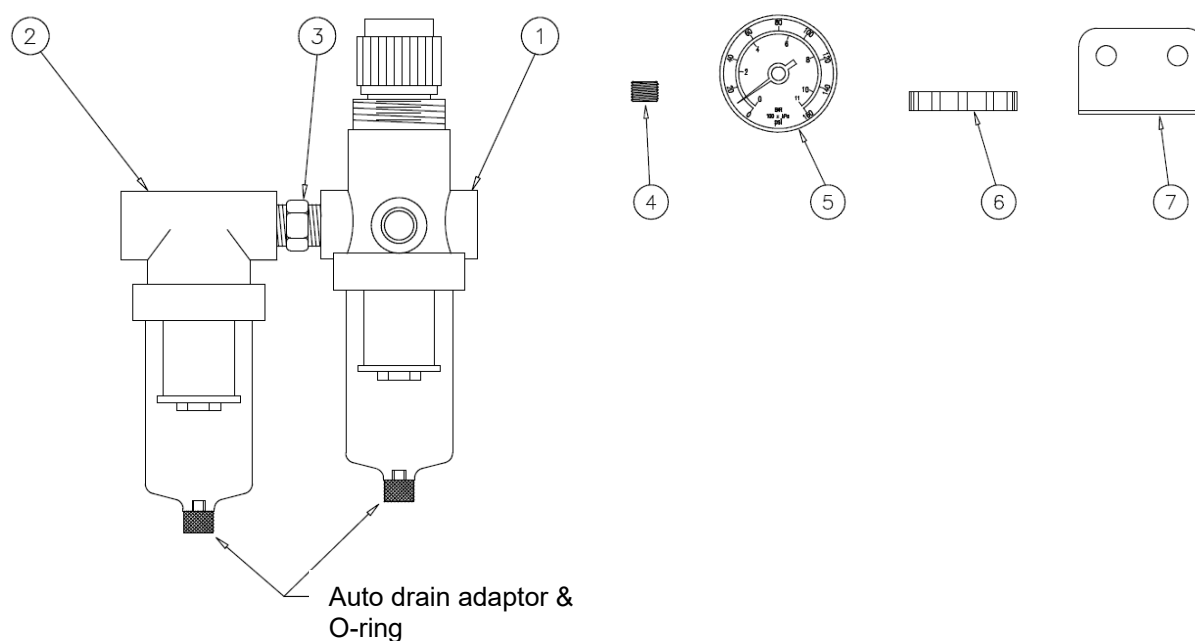
* see next page.



11.2 Filter/Regulator Assembly, PN 100380

Item No.	Part Number	Description	Quantity
1	N02774	Filter/ Regulator 1/4 NPT	1
2	100081	Filter coalescing 1/4 NPT	1
3	072X228	Fitting pipe nipple 1/4 NPT	1
4	-	Plug flush 1/8 NPT	1
5	-	Pressure gauge	1
6	-	Mounting nut	1
7	-	Mounting bracket	1

Notes: Items 4-7 are supplied unassembled and bagged with the filter/ regulator assembly.



Manual Revisions

Revision	Page #	Update description
Rev.3.18	20	New sub-chapter "Stackable applicator segments"
	21	Adhesive viscosity range changed "up to 20,000 cps"
	22	"Spray pattern picture" changed
	25	Adhesive viscosity range changed "up to 20,000 cps"
	27	"Height" dimensions updated and Note to the "Width" added.
	45	Note added: "We recommend heating (or cooking) the nozzle at 425°C (800°F) for 8 hours in an oven."
	47	Advice changed: "During dismounting/mounting, take care that the slot nozzle or outlet lip does not get damaged at all; otherwise it will not be possible to produce proper coating!"
	48	Tightening torque changed to "20-25 in./lbs (2.3-2.8 Nm)."
	50	Tightening torque changed to "20-25 in./lbs (2.3-2.8 Nm)."
	57	Chapter 8 - Following drawings replaced: 120474, 120475, 120476, 120477, 120478, 121158, 121159, 121160 - ULTRA Slot layout added.
	110	New sub-chapters: 8.10, 8.11, 8.12
Rev.8.18		Filter 200-mesh option removed.
		Standard Slot nozzles (Ch.8.9) updated.
Rev.2.20	Ch.3.2&Ch.8	New "All-Ports-Stackable" version.
	Ch.3.2&Ch.8.20	One-solenoid manifolds added.
	Ch.3.2&Ch.8.13	Wing Kits added.
	Ch.3.2&Ch.8.18	New Roller & Bracket asy 120723.
	Ch.3.2&Ch.8.19	New Strand Unload cylinder 120727.
	Ch.8	Ultra layout drawings 120474, 120475, 120476, 120477 and 120478 updated.
Rev.5.20	Ch.6.11	Maintenance note "Inspect cable insulation" added.
Rev.5.21	Ch.3.2	Model Designation Guide updated.
Rev.7.22	Ch.6.8	Cleaning the Spray Nozzle updated. Oven PN 107306+107307 replaced by 80.80000.103.
Rev.5.23	Ch.8.20	One-Solenoid-Manifold 4-port Kit PN 122906 and One-Solenoid-Manifold 12-port Kit PN 122907 removed.
Rev.7.23	P.1	Manual language added.

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