



For additional information or copies of your service manual, please visit us online at:

binks.com/en/library

Or use this QR code with your mobile device:

RF2+



Obey local or municipal regulations for product recycling and disposal.

ABOUT THIS MANUAL

ITS PURPOSE

The purpose of this manual is to help you get the most value from your Ransburg IntelliFlow system. It can help you to determine how to install, operate, maintain, and repair your equipment. It provides information and procedures for routine maintenance and servicing and offers diagnostic and repair procedures to follow when trouble occurs.

ITS CONTENTS

This manual is divided into Chapters, each of which is divided into consecutively numbered Sections.

Chapters will contain text, images, tables, or a combination of them.

Pages with images will have paragraphs and sentences with callout numbers that refer to their respective images, steps, and parts.

Procedures, once described in the text, are not normally repeated. When it is necessary to refer to another Chapter or Section, the reference will be given as Chapter and Section number. Cross references given without the use of the word "Chapter" apply to Sections or paragraphs in the current Chapter.

Chapter 02 Table of Contents.

Chapter 03 EU Declaration of Conformity

Chapter 04 Safety: Safety, hazard, and warning rules.

Chapter 05 Spare Parts: Replacement parts and parts kits.

Chapter 06 Appendix – Kits, Accessories, and Spares: Compiled reference for repair kits, accessories, and spares for the RF2+.

Chapter 07 Manual Change Summary: The revisions and changes made to this manual.

Chapter 08 Warranty: Your equipment's warranty.

WHO SHOULD USE THIS GUIDE

This guide is intended for users with different levels of knowledge and experience with this system:

Installers: The person(s) who will locate and install this equipment.

Users: The person(s) who will learn how to operate this equipment.

Servicers: The person(s) who will service and maintain this equipment.

This guide assumes all persons who will install, use, operate, and service this equipment have some knowledge of the product and its operating system.

For information on the installation of this equipment, refer to RF2+ Installation Manual 77-3165-1.

For information on the operation of this equipment, refer to RF2+ Operation Manual 77-3165-2.

For information on the servicing and repair of this equipment, refer to RF2+ Service Guide 77-3165-3.

For programming information of this equipment, refer to RF2+ Programming Manual 77-3165-5.

MANUAL DISCLAIMER

All current and applicable certifications shown in this manual confirm Binks' adherence to the strict standards met to obtain the required regulatory compliances.

This manual was prepared with the most accurate information current at the time of publishing. Binks does not accept responsibility for errors in, or omissions from, the information contained herein.

Please get in touch with your distributor or Binks Customer Service for additional service information and assistance.

RF2+ RELATED MANUALS & PUBLICATIONS	
Part Number	Description
77-3165-1	RF2+ Installation Manual
77-3165-2	RF2+ Operation Manual
77-3165-3	RF2+ Service Guide
77-3165-5	RF2+ Programming Manual
77-3154	Flow Meter Kit
77-3155	Remote Fluid Panel Kit-Barrier and F.O. Transceiver Box
77-3156	Flow Meter Sensor Battery Replacement Kit
77-3157	Flow Sensor Kit
77-3159	Touchscreen Protector Kit
77-3160	Flush Box Kit
77-3164	Flow Meter Replacement Head Kit
LN-9112-00	Weeping MVR Service Guide
LN-9225-00	Weepless MVR Service Guide

02 TABLE OF CONTENTS

03 EU DECLARATION OF CONFORMITY	1
04 SAFETY	3
04.1 SAFETY PRECAUTIONS	3
04.2 ADDITIONAL SAFETY INFORMATION	10
05 RF2+ SPARE PARTS	11
05.1 TOP LEVEL ASSEMBLY	11
05.2 RF2+ CONFIGURATION TABLES	13
05.3 CONTROLLER TOP LEVEL PART NUMBERING	15
05.4 RF2+ CONTROLLER (TOP LEVEL).....	16
05.4.1 RF2+ ENCLOSURE ASSEMBLY	19
05.4.2 ELECTRONICS PANEL	23
05.4.3 I/O BLOCK ASSEMBLY.....	25
05.4.4 SOLENOID MANIFOLDS.....	27
05.4.5 AIR MANIFOLD ASSEMBLY	29
05.4.6 PRESSURE REGULATOR MODULES	31
05.4.7 FLUID AND CONTROL FRAME ASSEMBLY	33
05.5 RF2+ FLUID PANEL TOP LEVEL PART NUMBERING	35
05.6 RF2+ FLUID PANEL TOP LEVEL ASSEMBLY	36
05.6.1 GEAR FLOW METER FLUID MODULE ASSEMBLY	38
05.6.1.1 FLOW METER (GEAR) 1/2/3	40
5.6.1.1.1 GEAR FLOW METER PARTS	42
05.6.2 CORIOLIS FLOW METER FLUID MODULE ASSEMBLY	44
05.6.2.1 FLOW METER (CORIOLIS).....	46
05.6.3 MVR FLOW REGULATORS (WEEPING).....	48
05.6.4 MVR FLOW REGULATORS (WEEPLESS).....	50
05.6.5 COLOR CHANGE VALVES (CCV) FLOW REGULATORS	52
05.6.6 DR-1 FLOW REGULATOR.....	54
05.6.7 CALIBRATION BLOCK ASSEMBLY	56
05.6.8 DISPENSE PUMP	58
05.6.9 FLUID MIX PANELS.....	60
05.6.9.1 2K LOW PRESSURE FLUSHABLE (-11)	60
05.6.9.2 3K LOW PRESSURE FLUSHABLE STAGED MIXING (-13)	60
05.6.9.3 2K HIGH PRESSURE (-22)	62
05.7 RESIN AND CATALYST STACKS	64
05.7.1 RESIN VALVE STACK WITH AUTOMATIC FLUID PRESSURE REGULATOR	64
05.7.2 RESIN VALVE STACK WITH MANUAL FLUID PRESSURE REGULATOR	66
05.7.3 CATALYST VALVE STACK.....	68
06 APPENDIX – KITS, ACCESSORIES, AND SPARES	71
07 MANUAL REVISIONS	75
08 WARRANTY	77

This page intentionally left blank.

Product Description / Object of Declaration:	IntelliFlow RF2+
This Product is designed for use with:	Solvent & Waterbased Materials
Suitable for use in hazardous area:	
Protection Level:	Not Applicable
Notified Body and/or Nationally Recognized Testing Laboratory details and role:	TUV SUD America Inc, 141 14th St NW, New Brighton, MN 55112 USA. Nos NC721005768.1, NC721003844.1, Cert No. U8 113140 0001 IEC Cert No. DE 3 - 32523
	Low Voltage and EMC Assessment
This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:	Binks US LLC. 3760 Victoria St N Shoreview, MN 55126. USA
Representative authorised to compile the technical file	President @. Binks France SAS 5 Place Pierre Semard, 94130 Nogent sur Marne , Paris, France

EU Declaration of Conformity



This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:

Machinery Directive 2006/42/EC
 EMC Directive 2014/30/EU
 Low Voltage Directive 2014/35/EU
 RoHS Directive 2011/65/EU
 by complying with the following statutory documents and harmonised standards:
 EN 60204-1:2018 Safety of Machinery. Electrical equipment of machines
 BS EN 61000-3-2:2014 Electromagnetic compatibility (EMC) - Limits - Limits for harmonic current emissions
 BS EN 61000-3-3:2013 Electromagnetic compatibility (EMC) - Limits - Limitation for voltage changes, voltage fluctuations, and flicker in public low-voltage supply systems
 EN 61000-6-2:2005/AC:2005 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
 EN 61000-6-4:2007/A1:2011 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments.
 UL 61010-1:2012 Ed.3+R:2019/CSA C22.2#61010-1-12:2012 Ed.3+U1;U2;A1 Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements
 KS C 9610-6-2:2019 EMC Immunity Testing of Industrial Environments
 KS C 9610-6-4:2017 EMC Emission Testing of Industrial Environments
 EN 63000: 2018 Technical documentation for the assessment according to REACH
 IEC 61010-1:2010+AMD1:2016 Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements.
 IEC 61010-2-051:2018 Safety requirements for electrical equipment for measurement, control and laboratory use. Particular requirements for laboratory equipment for mixing and stirring
 FCC 47 CFR Part 15-Radio Frequency Devices, Subpart B – Unintentional Radiators
 ICES-001, Issue 5:2020 Class A Industrial, Scientific, and Medical (ISM) Equipment

Providing all conditions of safe use / installation stated within the product manuals have been complied with and also installed in accordance with any applicable local codes of practice.

Signed for and on behalf of
Binks US LLC:

Document Part No.

EN

F. A. Sutter

15-4-25

Executive President: Engineering and
Operations, Shoreview, MN, 55126.
USA

This page intentionally left blank.

04 SAFETY

04.1 SAFETY PRECAUTIONS

Before the operation, maintenance, or servicing of this Binks system; fully read and understand all technical and safety literature for your product. This manual contains information that is important for you to know and understand.

This information relates to USER SAFETY and the PREVENTION OF EQUIPMENT PROBLEMS.

To help you understand this information, we use recognizable ANSI Z535 and ISO warning boxes and symbols throughout this manual. Please obey these safety sections.

⚠ DANGER

DANGER! Indicates a hazardous situation that, if not avoided, will result in death or severe injury.

⚠ WARNING

WARNING! Indicates a hazardous situation that, if not avoided, could result in death or severe injury.

⚠ CAUTION

Caution! Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury, or equipment damage.

NOTICE

Notice: Indicates information considered important but not hazard related.

SAFETY

Safety: Indicates a type of safety instruction, or a separate panel on a safety placard, where specific safety-related instructions or procedures are described.

Careful study and continued use of this manual will provide a better understanding of the equipment functions and procedures.

This understanding will result in improved operation, efficiency, and longer, trouble-free service with faster and easier troubleshooting. If you need the necessary safety literature for your specific system, contact your local Binks representative or Binks directly.

NOTICE

This manual lists standard specifications and service procedures. Differences can occur between this literature and your equipment.

Differences in local or municipal codes, manufacturer or plant requirements, material delivery requirements, and more can make variations unpreventable. To find these differences, compare this manual to your system installation drawings and other applicable Binks equipment manuals.

⚠ WARNING

The user **MUST** read and be familiar with the Safety Section in this manual and the safety literature therein identified.

Only trained personnel can operate this equipment.

All personnel who operate, clean, or maintain this equipment **MUST** fully read and understand this manual! To operate and service the equipment, follow all **WARNINGS** and safety requirements.

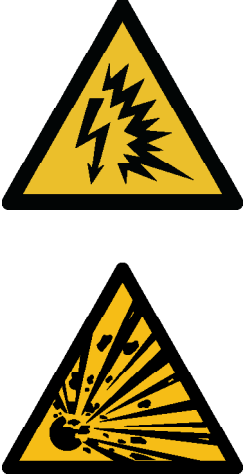
The user must be aware of and adhere to **ALL** local building and fire codes and ordinances, as well as NFPA 33 AND EN 16985 SAFETY STANDARDS, LATEST EDITION, or applicable country safety standards, before the installation, operation, or servicing of this equipment.

⚠ WARNING

The hazards shown on the pages that follow can occur during the normal use of this Binks equipment, but not all listed hazards will be applicable to your product model or equipment.

Repairs may only be performed by personnel authorized by Binks.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Areas  	Fire Hazards Improper or unsatisfactory operation and maintenance procedures will cause a fire hazard. If the safety interlocks are disabled during operation, protection against accidental arcing is shut off and can cause a fire or explosion. Frequent Power Supply or Controller shutdown identifies a problem in the system. For this occurrence, a correction will be necessary	Fire extinguishing equipment must be present in the spray area. Periodically run a test to make sure the equipment stays usable. Keep spray areas clean to prevent the build-up of combustible residues. Do not smoke in the spray area. The high voltage supplied to the atomizer must be turned off before the equipment is cleaned, flushed or maintained. Spray booth ventilation must be kept at the rates as set by NFPA-33, OSHA, country, local, and municipal codes. If flammable or combustible solvents are used to clean the equipment, ventilate the area. Prevent electrostatic arcing. Maintain spark-safe work distance between the parts that get coated and the applicator. A span of one inch for every 10KV of the output voltage is necessary. Do an equipment test only in areas free of combustible material. The test may necessitate the high voltage to be on, but only as instructed. Non-factory replacement parts or unauthorized equipment modifications can cause a fire or injury. The key switch bypass is used only during setup operation. Do no production work with disabled safety interlocks. Set up and operate the paint procedure and equipment under NFPA-33, NEC, OSHA, local, municipal, country, and European Health and Safety Norms.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Areas 	Explosion Hazard Improper or unsatisfactory operation and maintenance procedures will cause a fire or explosion hazard. If the safety interlocks are disabled during operation, protection against accidental arcing is shut off and can cause a fire or explosion. Frequent Power Supply or Controller shutdown identifies a problem in the system. For this occurrence, a correction will be necessary.	Prevent electrostatic arcing. Maintain spark-safe work distance between the parts that get coated and the applicator. A span of one inch for every 10KV of output voltage is necessary. Unless specifically approved for use in hazardous locations, put all electrical equipment outside of Class I or II, Division 1 or 2 hazardous areas in accordance with NFPA-33, or outside of Zone 2 or Zone 22 in accordance with EN standards. If equipped, set the current overload sensitivity as described in the related section of the equipment manual. If incorrectly set, the current overload sensitivity for protection against accidental arcing is turned off and can cause a fire or explosion. Frequent power supply shutdown indicates a problem in the system, which requires correction. Always turn off the control panel power before the system is flushed, cleaned, or servicing the spray system equipment. Make sure no objects are within the spark-safe work distance before the high voltage is turned on. The control panel must interlock with the ventilation system and conveyor in accordance with NFPA-33, EN 50176. Fire extinguishing equipment must be present in the spray area. Periodically run a test to make sure the equipment stays usable. Do an equipment test only in areas free of combustible material.
General Use and Maintenance 	Improper or unsatisfactory operation and maintenance procedures will cause a fire hazard. Personnel must be correctly trained in the operation and maintenance of this equipment.	Train all personnel in accordance with the requirements of NFPA-33, EN 60079-0. Before equipment operation, personnel must read and understand these instructions and safety precautions. Obey appropriate local, municipal, state, and national codes governing ventilation, fire protection, operation maintenance, and housekeeping. Reference OSHA, NFPA-33, EN Norms, and your insurance company requirements.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Area High Voltage Equipment    	Electrical Discharge This equipment contains a high-voltage device that can cause an electrostatic induction on ungrounded objects. This electrical charge is capable of igniting coating materials. Insufficient ground will cause a spark hazard. A spark can ignite many coating materials and cause a fire or explosion.	Operators in the spray area and the parts to be sprayed must be sufficiently grounded. All conductive objects inside the spray area must be grounded. Hold the parts that get sprayed on conveyors or hangers that are correctly grounded. The resistance between the parts and the earth-ground must not be more than 1 MΩ. Refer to: NFPA-33. Before the equipment is operated, ground all operators. They cannot wear rubber-soled insulated shoes. Wear ground straps on wrists or legs for sufficient ground contact. Operators must not wear or carry ungrounded metal objects. When used, operators must make complete contact with the applicator handle and electrostatic gun. Use conductive gloves or gloves with the palm section cut out. Operators must wear grounded footwear. NOTE: REFER TO NFPA-33 OR SPECIFIC COUNTRY SAFETY CODES FOR GUIDANCE TO CORRECTLY GROUND THE OPERATOR. Except for objects needed for the high-voltage process, all electrically conductive objects in the spray area are to be grounded. Supply a grounded conductive floor in the spray area. Always turn off the applicator voltage before the system is flushed, cleaned, or when servicing the spray system equipment. Unless specifically approved for use in hazardous locations, put all electrical equipment outside of Class I or II, Division 1 or 2 hazardous areas in accordance with NFPA-33, or outside of Zone 2 or Zone 22 in accordance with EN standards. Do not install an applicator into a fluid system if the solvent supply is ungrounded. Do not touch an energized applicator electrode.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Areas 	Toxic Fluid or Fumes Toxic fluids or fumes can cause severe injury or death if splashed in the eyes or on the skin, or if inhaled or swallowed.	Read the Safety Data Sheet (SDS) for instructions to know and understand how to handle the specific hazards of the fluids used, and the effects of long-term exposure. During the spray, clean, or servicing of equipment, or when in the work area, keep the work area fully ventilated. Always wear personal protective equipment (PPE) when in the work area or during equipment operation. Refer to the Personal Protective Equipment warnings in this manual. Store hazardous fluid in approved containers and refer to local, municipal, state, and national codes governing the disposal of hazardous fluids.
Spray Area and Equipment Use 	High-pressure fluid sprayed from the gun, hose fittings, or ruptured/damaged components can pierce the skin. While this injury can appear as cut skin, this is a severe injury that can result in the amputation of the affected area.	Do not point or operate the spray gun at the body part of a person. Do not put your hand or fingers over the gun fluid nozzle or fittings in the hose or Proportioner. Do not try to stop or deflect leaks with your hand, glove, body, or shop rag. Do not “blowback” fluid, as the equipment is not an air spray system. Relieve pressure in the supply hoses and other equipment before the equipment is inspected, cleaned, or serviced. Use the lowest possible pressure to recirculate, purge, or troubleshoot the equipment. Examine the hoses, couplings, and fittings every day. Service or immediately replace parts that leak, are worn, or are damaged. Replace high-pressure hose sections. They cannot be recoupled or serviced.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Equipment and Fluids 	Skin and Clothing Burns Equipment surfaces and fluids can become very hot during operation.	Do not touch hot fluid or equipment during operation. Do not let clothing touch the equipment during operation or immediately after the equipment is stopped. Let the equipment fully cool before the examination or servicing of the component.
Pressurized Aluminum Parts    	The use of certain solvents and chemicals can cause equipment damage and severe personal injury.	Do not use 1,1,1-trichloroethane, methylene chloride or other halogenated hydrocarbon solvents or fluids that contain such solvents. These solvents can cause a severe chemical reaction and equipment rupture that results in equipment and property damage, serious bodily injury, or death.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Areas 	Do Not Touch The effect of paint flow rates and formulations on the quality of atomization can cause the turbines to rotate at high speeds.	Do not use a rag or gloved hand against the bell edge to stop or slow down a bell during rotation. Do not try to clean the bell edge during rotation.

⚠ CAUTION

Only operate the equipment after you have read this section.

04.2 ADDITIONAL SAFETY INFORMATION

The IntelliFlow has an emergency stop (E-Stop) pushbutton on the main operator panel. During an emergency, all operations for the IntelliFlow will halt when the E-Stop is engaged. The operator must disengage the E-Stop and reset the system to recover from this state.

Observe all local or municipal safety measures and wear approved protective equipment when servicing this equipment. Clean all spilled chemicals and materials and do all work in a clean and organized environment to prevent personal injury and equipment damage.

⚠ DANGER

To prevent injury or electrocution while the system is under power, do not contact, disconnect, or manipulate electrical connections or devices. The main disconnect on the right side of the controller can be locked out. Follow the proper Lockout–Tagout (LOTO) procedures for internal controller electrical work.

Only qualified electrical personnel can perform the work if diagnosis and troubleshooting are not possible during working conditions.

⚠ WARNING

To prevent possible chemical spillage when personnel are not on site, air and fluid supplies for the equipment must be disabled when the equipment idles for an extended period, such as an end-of-day shutdown.

NOTICE

During the initial commission of the equipment and at periodic times throughout equipment life, visually examine all fluid fittings for leaks.

Periodically, it is necessary to visually examine all pieces of this equipment for signs of noticeable degradation due to chemicals or other conditions in the equipment's environment.

SAFETY

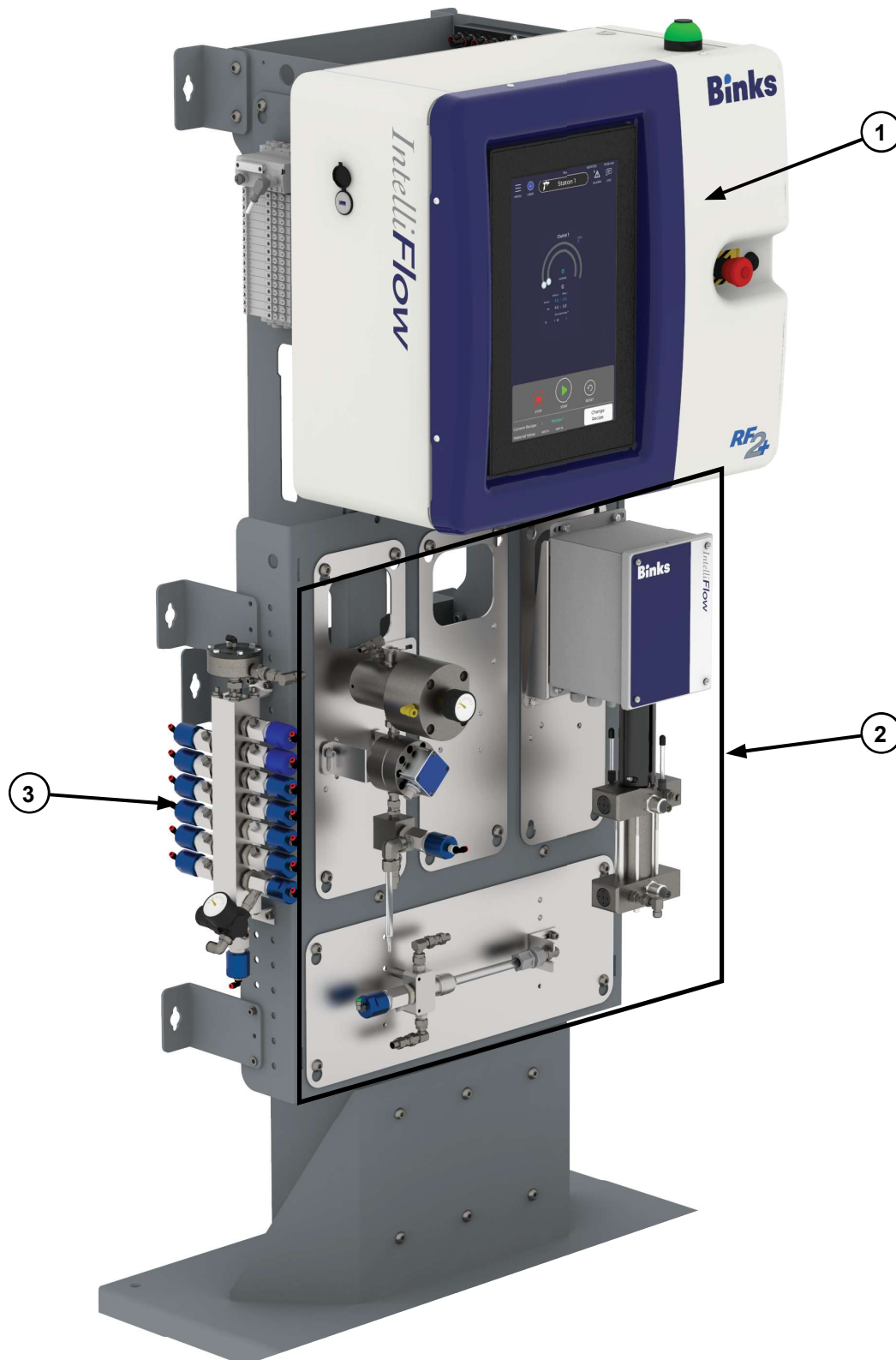
Obey local or municipal regulations that require installed fire suppression for equipment operation.

If the operation of this equipment, sensors, switches, or other ancillary equipment occurs in the presence of flammable gases and vapors, connect this equipment through intrinsic-safe or Zener barriers. Classify them as a 'simple apparatus' or approve them for use in these areas.

05 RF2+ SPARE PARTS

The following chapter contains component views and spare parts tables for RF2+ assemblies and sub-assemblies.

05.1 TOP LEVEL ASSEMBLY



RF2+ CONTROLLER TOP LEVEL ASSEMBLY

Item	Part Number	Description	Section(s)
1	310-CPXX-XXXX	RF2+ CONTROLLER	05.4
2	310-FXX-XXX-XXX-XXX	FLUID PANEL(S)	05.5-05.6
3	310-650X-XXXX	RESIN AND CATALYST STACK(S)	05.7

05.2 RF2+ CONFIGURATION TABLES

STANDARD 2K AUTOMATIC CONFIGURATIONS (RF2P-LA2-XX-XX-S/C)									
Part Number	Description	RF2P-LA2-01-01-S Quantity	-RF2P-LA2-01-01-C Quantity	RF2P-LA2-04-01-S Quantity	RF2P-LA2-04-01-C Quantity	RF2P-LA2-07-02-S Quantity	RF2P-LA2-07-02-C Quantity	-RF2P-LA2-12-04-S Quantity	RF2P-LA2-12-04-C Quantity
310-FA11-113-112-000	RF2 FLUID PANEL, LP, 2K, AUTO (2K FLUSHABLE) [GEAR/#3 WEEPLESS, GEAR/#2 WEEPLESS, NONE]	1	–	1	–	1	–	1	–
310-FA11-113-122-000	RF2 FLUID PANEL, LP, 2K, AUTO (2K FLUSHABLE) [GEAR/#3 WEEPLESS, GEAR/#2 WEEPING, NONE]	–	1	–	1	–	1	–	1
310-CP10-2001	ETHERNET/IP, NO WIRELESS COMMS, 2 BANK VTEM, 0 PD PUMPS, 1 SOLENOID BANK, AUTOMATIC	1	1	1	1	1	1	1	1
310-6501-0311	3-VALVE RESIN STACK, LP AIR PUSH, AUTO REGULATOR	1	1	–	–	–	–	–	–
310-6501-0611	6-VALVE RESIN STACK, LP AIR PUSH, AUTO REGULATOR	–	–	1	1	–	–	–	–
310-6501-0911	9-VALVE RESIN STACK, LP AIR PUSH, AUTO REGULATOR	–	–	–	–	1	1	–	–
310-6501-1411	14-VALVE RESIN STACK, LP AIR PUSH, AUTO REGULATOR	–	–	–	–	–	–	1	1
310-6502-0201	2-VALVE CATALYST STACK, NO AIR PUSH, AUTO REGULATOR	1	1	1	1	–	–	–	–
310-6502-0301	3-VALVE CATALYST STACK, NO AIR PUSH, AUTO REGULATOR	–	–	–	–	1	1	–	–
310-6502-0501	5-VALVE CATALYST STACK, NO AIR PUSH, AUTO REGULATOR	–	–	–	–	–	–	1	1

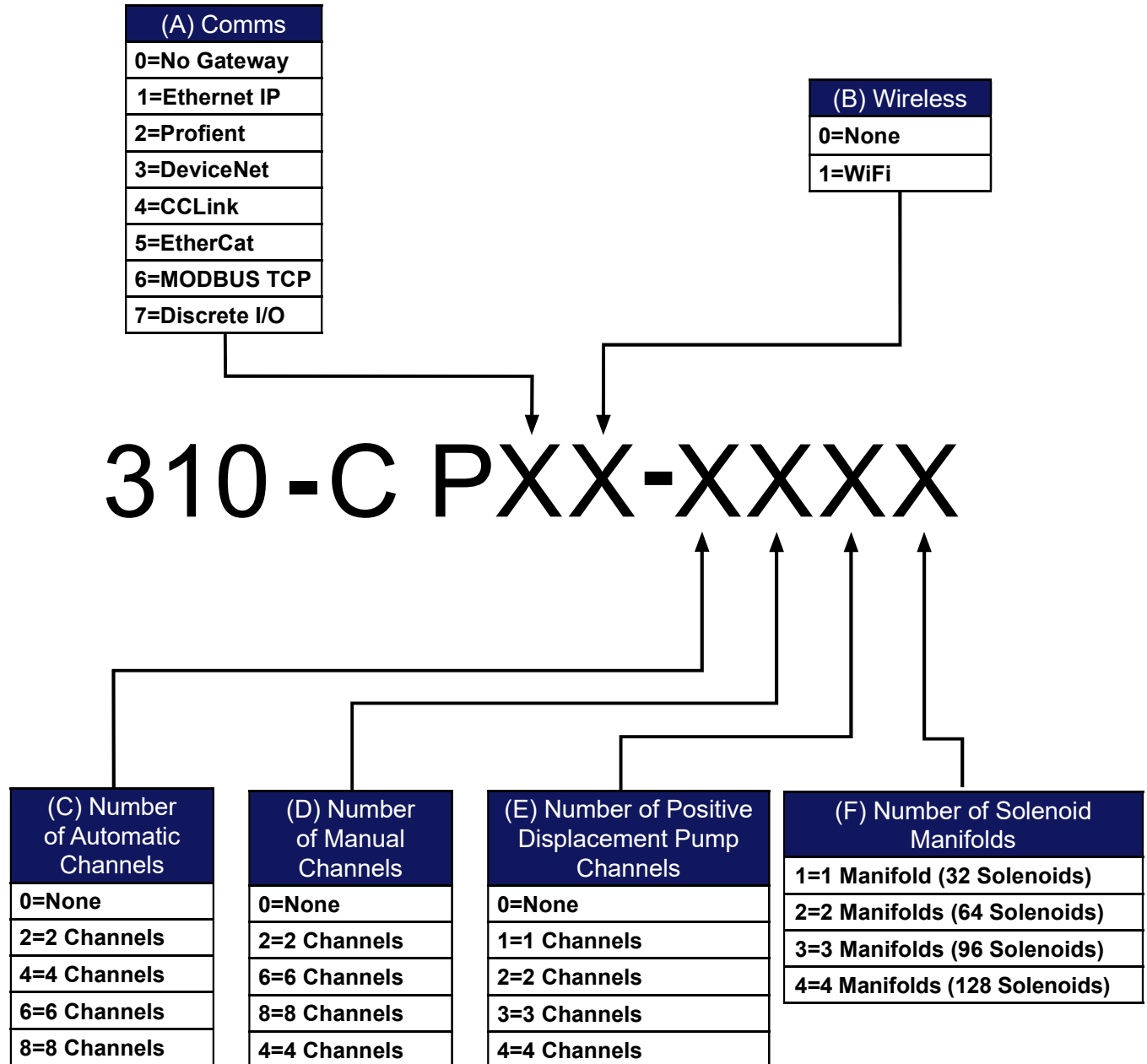
STANDARD 2K MANUAL CONFIGURATIONS (RF2P-LM2-XX-XX-S)

Part Number	Description	RF2P-LM2-01-01-S Quantity	RF2P-LM2-04-01-S Quantity	RF2P-LM2-07-02-S Quantity	RF2P-LM2-12-04-S Quantity
310-FM11-100-160-000	RF2 FLUID PANEL, LP, 2K, MANUAL (2K FLUSHABLE) [GEAR/NONE, GEAR/LP PULSE CCV, NONE]	1	1	1	1
310-CP10-0201	ETHERNET/IP, NO WIRELESS COMMS, 0 VTEMS, 0 PD PUMPS, 1 SOLENOID BANK, MANUAL	1	1	1	1
310-6501-0312	3-VALVE RESIN STACK, LP AIR PUSH, MANUAL REGULATOR	1	–	–	–
310-6501-0612	6-VALVE RESIN STACK, LP AIR PUSH, MANUAL REGULATOR	–	1	–	–
310-6501-0912	9-VALVE RESIN STACK, LP AIR PUSH, MANUAL REGULATOR	–	–	1	–
310-6501-1412	14-VALVE RESIN STACK, LP AIR PUSH, MANUAL REGULATOR	–	–	–	1
310-6502-0200	2-VALVE CATALYST STACK, NO AIR PUSH, NO REGULATOR	1	1	–	–
310-6502-0300	3-VALVE CATALYST STACK, NO AIR PUSH, NO REGULATOR	–	–	1	–
310-6502-0500	5-VALVE CATALYST STACK, NO AIR PUSH, NO REGULATOR	–	–	–	1
310-3905-SS	AIR CUTOFF KIT, 2 GUNS, STD	1	1	1	1

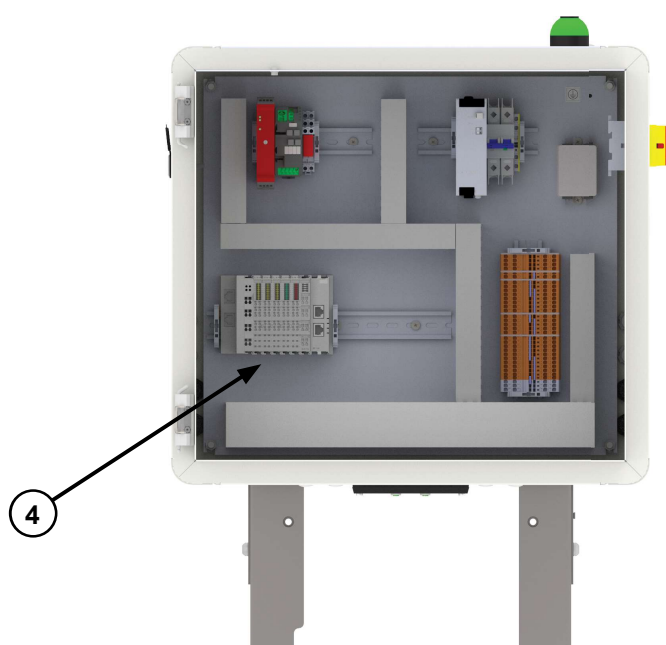
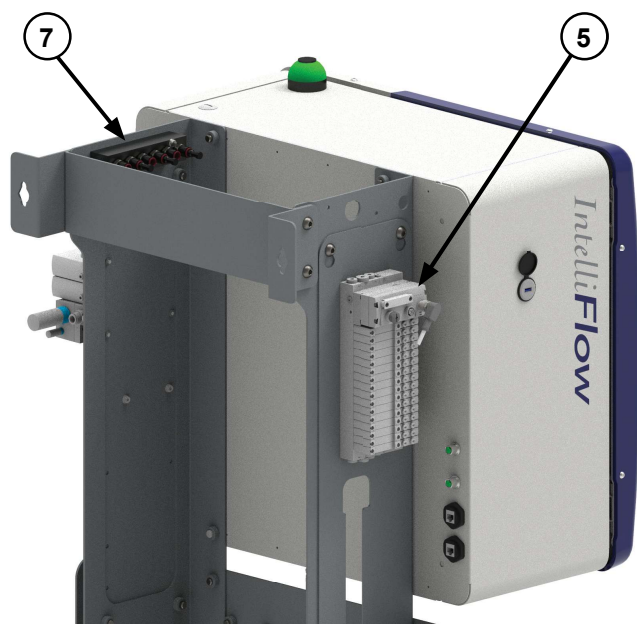
STANDARD MP 2K AUTO/MANUAL CONFIGURATIONS (RF2P-M[A/M]2-XX-XX-S)

Part Number	Description	RF2P-MA2-01-01-S Quantity	RF2P-MM2-01-01-S Quantity
310-FM22-100-160-000	RF2 FLUID PANEL, MP, 2K, MANUAL (2K NON-FLUSHABLE) [GEAR/NONE, GEAR/MP PULSE CCV, NONE]	–	1
310-FA22-113-112-000	RF2 FLUID PANEL, MP, 2K, AUTO (2K NON-FLUSHABLE) [GEAR/#3 WEEPLESS, GEAR/#2 WEEPLESS, NONE]	1	–
310-CP10-2001	ETHERNET/IP, NO WIRELESS COMMS, 2 BANK VTEM, 0 PD PUMPS, 1 SOLENOID BANK, AUTOMATIC	1	–
310-CP10-0201	ETHERNET/IP, NO WIRELESS COMMS, 0 VTEMS, 0 PD PUMPS, 1 SOLENOID BANK, MANUAL	–	1
101-3069	GAUGE - 3000#	–	1
84-420	HIGH PRESSURE FLUID REGULATOR	–	1
310-3905-SS	AIR CUTOFF KIT, 2 GUNS, STD	–	1

05.3 CONTROLLER TOP LEVEL PART NUMBERING



05.4 RF2+ CONTROLLER (TOP LEVEL)



RF2+ CONTROLLER TOP-LEVEL 310-CP(AB)-(CDEF)

Item	Part Number	Description	Quantity
1	SEE TABLE A	COMMUNICATIONS (NOT SHOWN)	1
2	SEE TABLE B	WIRELESS (NOT SHOWN)	
3	SEE TABLE C	MOUNTED VTEM PANEL ASSEMBLY W/CPX/ECAT (XVALVE)	
4	SEE TABLE CDE	RF2+ ELECTRONICS PANEL ASSEMBLY (XCH/XPD)	
5	SEE TABLE F	MOUNTED VTUG PANEL ASSEMBLY W/ECAT (XXSOL)	
6	–	RF2+ ENCLOSURE ASSEMBLY	
7	310-3900	AIR MANIFOLD ASSEMBLY	
8	–	FLUID AND CONTROL FRAME ASSEMBLY	

TABLE A: WIRED COMMUNICATIONS

Column A Code	Part Number	Description	Quantity
0B	–	–	–
1B	310-4142	ETHERNET/IP	1
2B	310-4143	PROFINET	1
3B	310-4144	DEVICENET	1
4B	310-4145	CC-LINK	1
5B	310-4146	ETHERCAT	1
6B	310-4164	MODBUS TCP	1
7B	310-4930	DISCRETE I/O MODULE	1

TABLE B: WIRELESS COMMUNICATIONS

Column B Code	Part Number	Description	Quantity
A0	–	–	–
A1	310-6171	WIFI MODULE + ANTENNA KIT	1

TABLE C: AUTOMATIC CHANNELS

Column C Code	Part Number	Description	Quantity
0DE	–	–	–
2DE	310-6940-01	MOUNTED VTEM PANEL ASSEMBLY W/CPX/ECAT (2VALVE)	1
4DE	310-6940-02	MOUNTED VTEM PANEL ASSEMBLY W/CPX/ECAT (4VALVE)	1
6DE	310-6940-03	MOUNTED VTEM PANEL ASSEMBLY W/CPX/ECAT (6VALVE)	1
800	310-6940-04	MOUNTED VTEM PANEL ASSEMBLY W/CPX/ECAT (8VALVE)	1

TABLE CDE: ELECTRONICS PANEL

CDE Digits	Part Number	Description
020, 200	–	RF2+ ELECTRONICS PANEL ASSEMBLY (2CH/0PD)
040, 400, 220	–	RF2+ ELECTRONICS PANEL ASSEMBLY (4CH/0PD)
023, 043, 203, 223, 403	–	RF2+ ELECTRONICS PANEL ASSEMBLY (4CH/3PD)
024, 044, 204, 224, 404	–	RF2+ ELECTRONICS PANEL ASSEMBLY (4CH/4PD)
060, 600, 240, 420	–	RF2+ ELECTRONICS PANEL ASSEMBLY (6CH/0PD)
021, 041, 061, 201, 221, 241, 401, 421, 601	–	RF2+ ELECTRONICS PANEL ASSEMBLY (6CH/1PD)
022, 042, 062, 202, 222, 242, 402, 422, 602	–	RF2+ ELECTRONICS PANEL ASSEMBLY (6CH/2PD)
701	–	RF2+ ELECTRONICS PANEL ASSEMBLY (7CH/1PD)
080, 800, 620, 260, 440	–	RF2+ ELECTRONICS PANEL ASSEMBLY (8CH/0PD)

TABLE F: SOLENOID MANIFOLDS

Column F Code	Part Number*	Description	Quantity
1	–	MOUNTED VTUG PANEL ASSEMBLY W/ECAT (32SOL)	1
2	–	MOUNTED VTUG PANEL ASSEMBLY W/ECAT (64SOL)	1
3	–	MOUNTED VTUG PANEL ASSEMBLY W/ECAT (96SOL)	1
4	–	MOUNTED VTUG PANEL ASSEMBLY W/ECAT (128SOL)	1

*Reference Appendix for orderable part numbers.

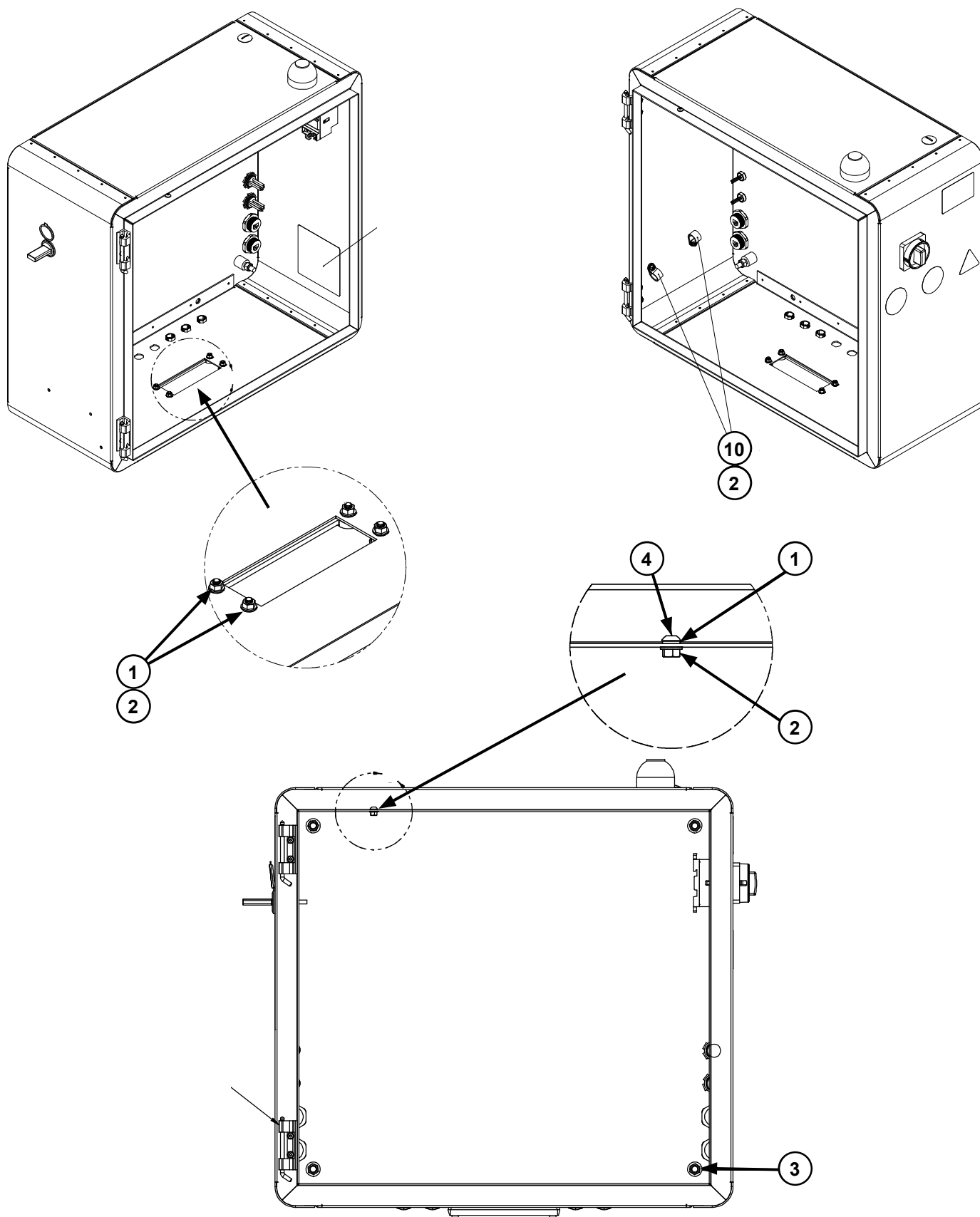
05.4.1 RF2+ ENCLOSURE ASSEMBLY



RF2+ ENCLOSURE ASSEMBLY

Item	Part Number	Description	Quantity
5	20-7069	PLUG PG13	1
6	20-7070	LOCKING NUT PG13	1
11	–	SHCS M5 X 0.8MM, 20MM LONG, LOW PROFILE	4
12	240-5159	ROTARY DISCONNECT	1
13	240-5160	7 COLOR STACK LIGHT WITH AUDIBLE ALARM	1
14	240-5252	CABLE ENTRY PLATE	1
20	–	USB WATERPROOF COVER	1
21	–	CABLE, USB, PANEL MOUNT, 1M	1
22	–	ETHERNET BULKHEAD, RJ45 FEMALE	4
23	–	CONNECTOR, BULKHEAD, M12, 5PIN	2
24	–	BULKHEAD CONNECTOR, 7/8" 5 POLE	2
25	–	CONTROL ENCLOSURE	1
27	–	ENCLOSURE DOOR ASSEMBLY	1
28	–	.625"-.550" HOLE PLUG	6
30	–	FERRITE EMI TOROID 12.2OD X 7	2

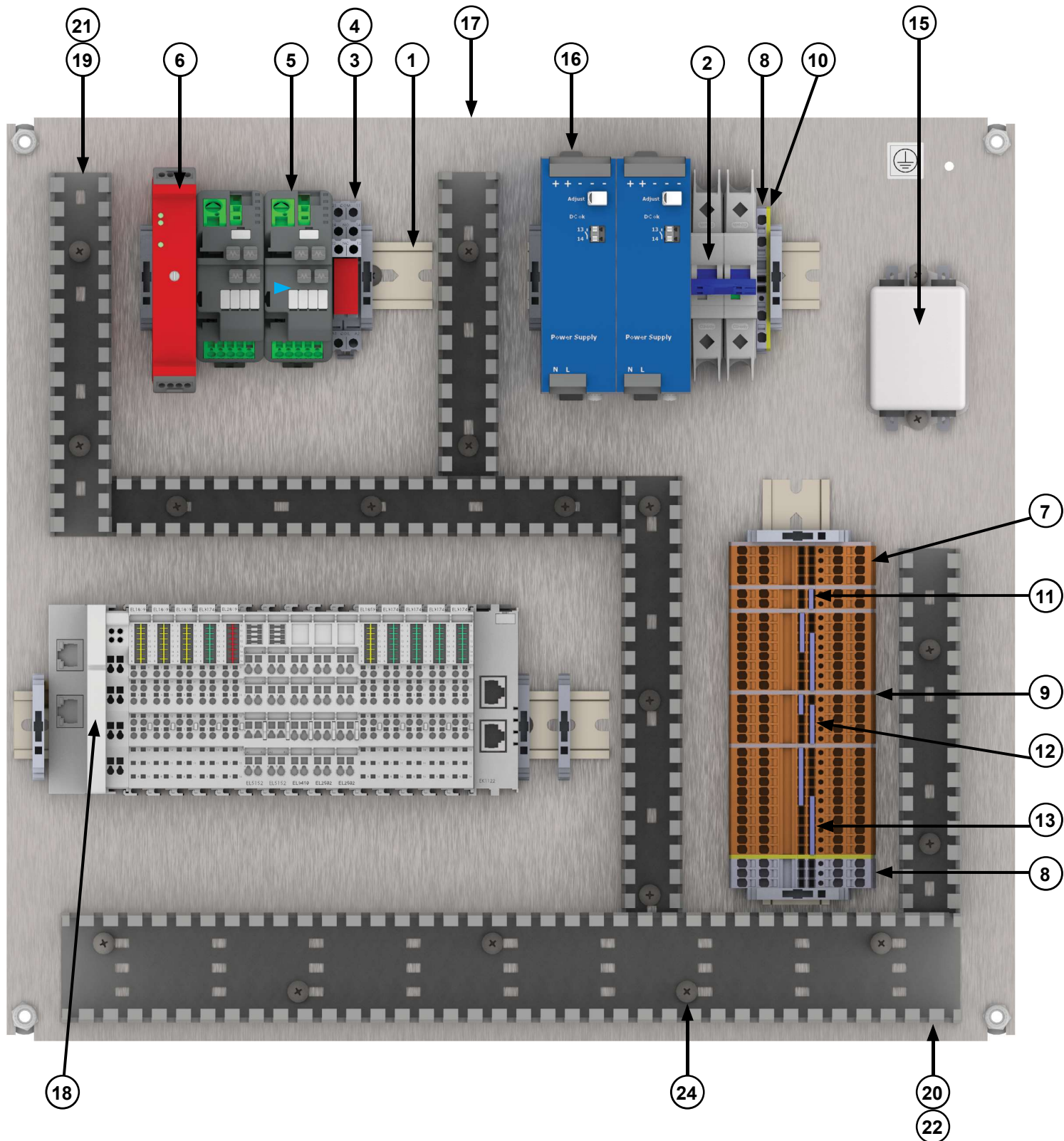
05.4.1 RF2+ ENCLOSURE ASSEMBLY (CONTINUED)



RF2+ ENCLOSURE ASSEMBLY

Item	Part Number	Description	Quantity
1	–	FLAT WASHER, M5, 18-8	5
2	–	SERRATED FLANGE LOCKNUT, M5X0.8, 18-8	8
3	–	SERRATED FLANGE LOCKNUT, M8	4
4	–	BHCS, M5X0.8, 8MM LG, 18-8	1
10	–	LOOP CLAMP, 5/8" ID, NYLON	2

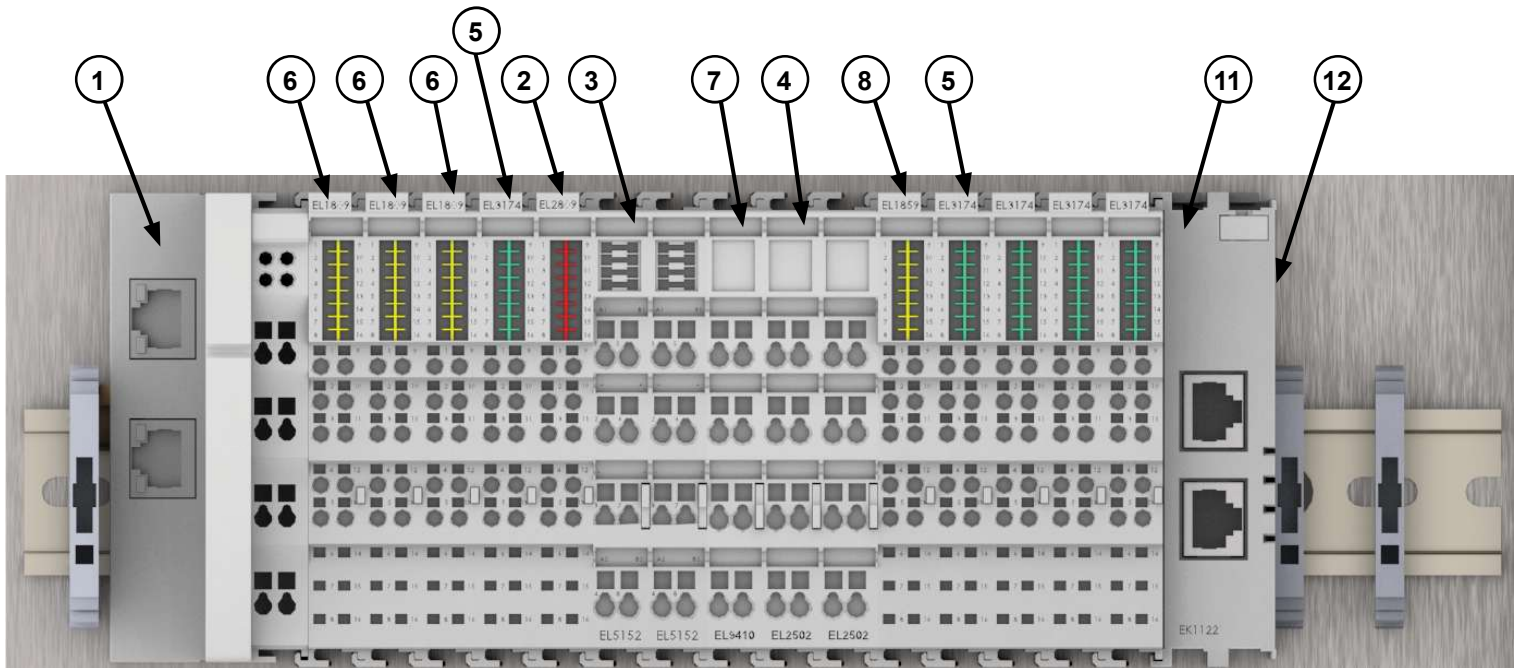
05.4.2 ELECTRONICS PANEL 310-CPAB-CDEF



RF2+ ELECTRONICS PANEL ASSEMBLY (PART NUMBER 310-6200-XX*)			
Item	Part Number	Description	Quantity
1	–	DIN RAIL	32.35"
2	240-5176	CIRCUIT BREAKER, 5 AMP	1
3	–	8 PIN SOCKET	1
4	240-5185	SAFETY RELAY	1
5	310-4104	ELECTRONIC CIRCUIT PROTECTION	X
6	310-4116	A/B GUARDMASTER SAFETY RELAY	1
7	–	A/B PUSH TB, 2.5, GRY	30
8	–	A/B TB, 2.5, GROUND	4
9	–	A/B TERMINAL BLOCK END, GRY	5
10	–	A/B TERMINAL BLOCK END, YLW	1
11	–	JUMPER 2 POLE	3
12	–	JUMPER 4 POLE	2
13	–	JUMPER 6 POLE	3
15	310-4126	LINE FILTER, 6A, 2STAGE	1
16	310-6147	POWER SUPPLY, 24VDC, 240W, 10A	X
17	–	ELECTRONICS BACK PANEL	1
18	310-6210-XX*	IO BLOCK ASSEMBLY (SECTION 05.4.3)	1
19	–	PANDUIT COVER GRAY 1.00" WIDE	40.75"
20	–	PANDUIT COVER 2 INCH GRAY	18.5"
21	–	PANDUIT 1" X 4" GRAY	40.75"
22	–	PANDUIT 2" X 4" GRAY	18.5"
24	–	M5-.8X10 PHILLIP SCREWS	29

*The top level configuration number of 310-6200-XX is dependent on and mirrors what configuration 310-6210-XX is used. If the IO Block assembly channel configuration is -20 then 310-6200-XX will be 310-6200-20. These are configuration part numbers only, not orderable part numbers.

05.4.3 I/O BLOCK ASSEMBLY



I/O BLOCK ASSEMBLY CHANNEL CONFIGURATIONS

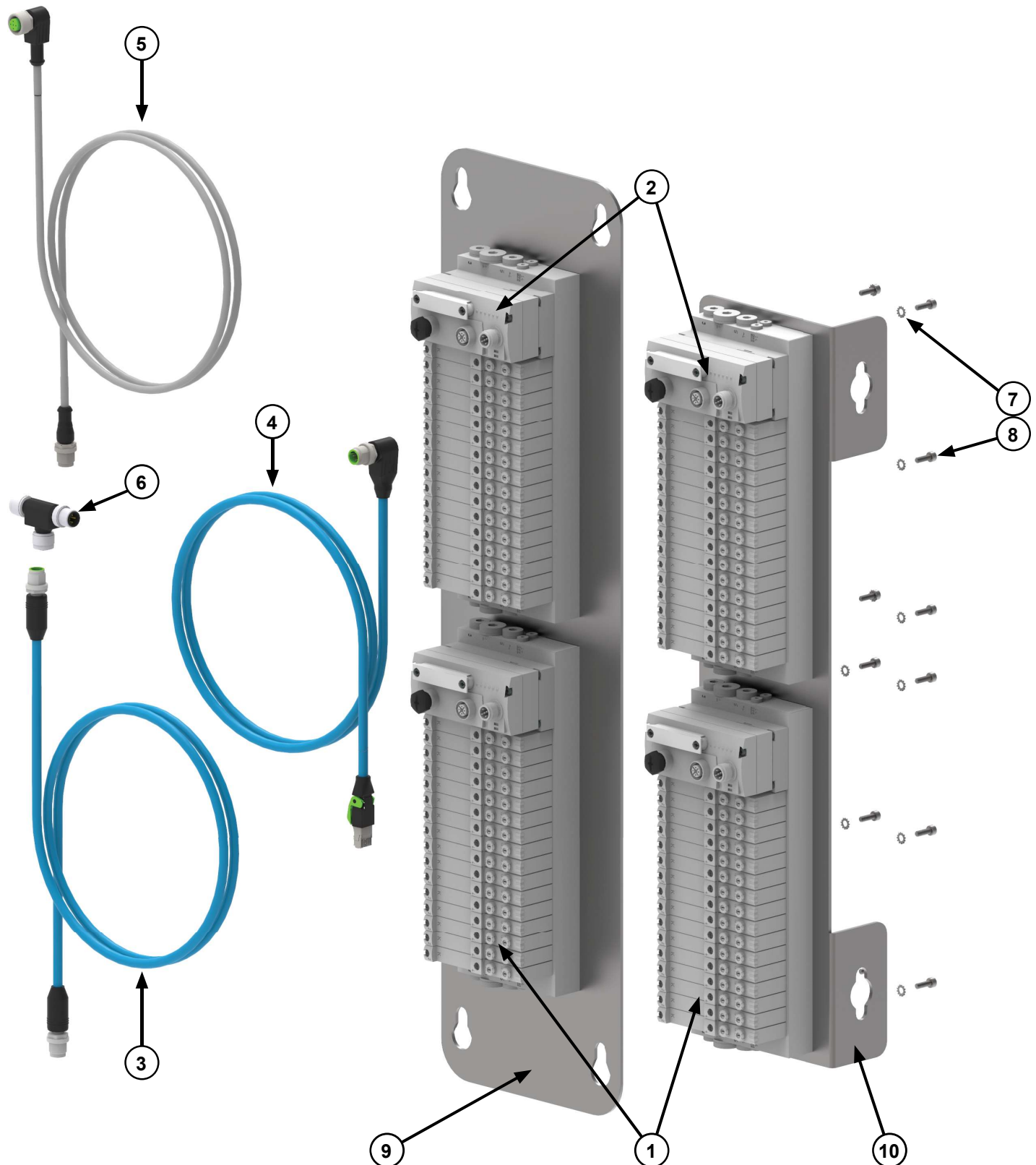
310-6210-XX	Designated Automatic Channels	Designated Dispense Pump Channels	Total Channels Available
-44	4	4	8
-43	4	3	7
-62	4	2	6
-61	6	1	7
-71	7	1	8
-80	8	0	8
-60	6	0	6
-40	4	0	4
-20	2	0	2

I/O BLOCK ASSEMBLY (PART NUMBER 310-6210-XX*)

Item	Part Number	Description	-44 Quan- tity	-43 Quan- tity	-62 Quan- tity	-61 Quan- tity	-71 Quan- tity	-80 Quan- tity	-60 Quan- tity	-40 Quan- tity	-20 Quan- tity
1	—	ECAT COUPLER	1	1	1	1	1	1	1	1	1
2	—	16 CHANNEL OUTPUT	1	1	1	1	1	1	1	1	1
3	—	2 CHANNEL INC ENC	2	2	3	3	4	4	3	2	1
4	—	1 PWM	2	2	1	1	1	—	—	—	—
5	—	4 CHANNEL ANALOG INPUT	5	4	3	2	2	1	1	1	1
6	—	ECAT 16CH DIGI IN 24VDC 3MS	3	3	3	3	3	3	3	3	3
7	—	ECAT PSU	1	1	1	1	1	—	—	—	—
8	—	ECAT DIGI COMBI 8DI 8DO	1	1	1	1	1	—	—	—	—
9	—	FERRITE EMI (NOT SHOWN)	4	4	6	6	7	8	6	4	2
10	—	BULKHEAD, M12, 5PIN (NOT SHOWN)	4	4	6	6	7	8	6	4	2
11	—	ETHERCAT EXT MOD	1	1	1	1	1	1	1	1	1
12	—	BUS END CAP	1	1	1	1	1	1	1	1	1
13	—	FERRITE, HINGED, (NOT SHOWN)	4	3	2	—	—	—	—	—	—

*These are configuration part numbers only, not orderable part numbers.

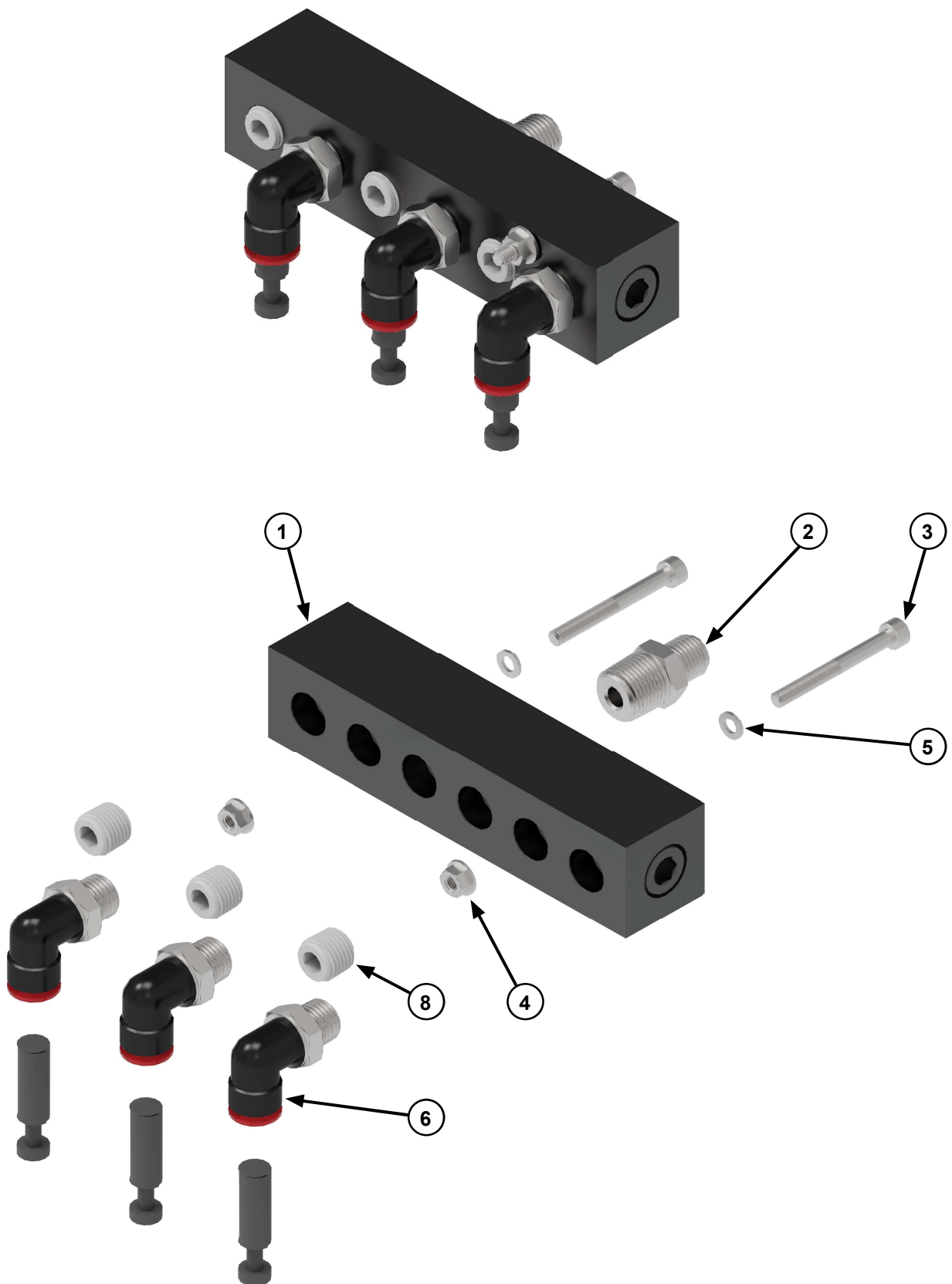
05.4.4 SOLENOID MANIFOLDS 310-CPAB-CDEF



SOLENOID MANIFOLDS (VTUG PANEL)

Item	Part Number	Description	Quantity			
			F=1	F=2	F=3	F=4
–	–	–				
1	310-3920	VALVE MANIFOLD 32 SOLENOID BANK	1	2	3	4
2	310-6921	VTUG BUS NODE W/ECAT	1	2	3	4
3	310-4133	CABLE, CAT 5E, M12, 1M	–	1	2	3
4	310-4136	CABLE, ETHERNET, RJ45-90DEG M1	1	1	1	1
5	310-4148	CABLE, M12, 5 PIN, 0.3M, 90°	1	2	3	4
6	310-4195	TEE, M12 5 PIN	–	–	1	2
7	–	TOOTH WASHER, M4, 18-8	6	12	18	24
8	–	SHCS, M4, 12MM, 18-8	6	12	18	24
9	310-2800	SOLENOID MOUNTING PANEL	1	1	1	1
10	310-2812	VTUG WALL MOUNTING BRACKET	–	–	1	1

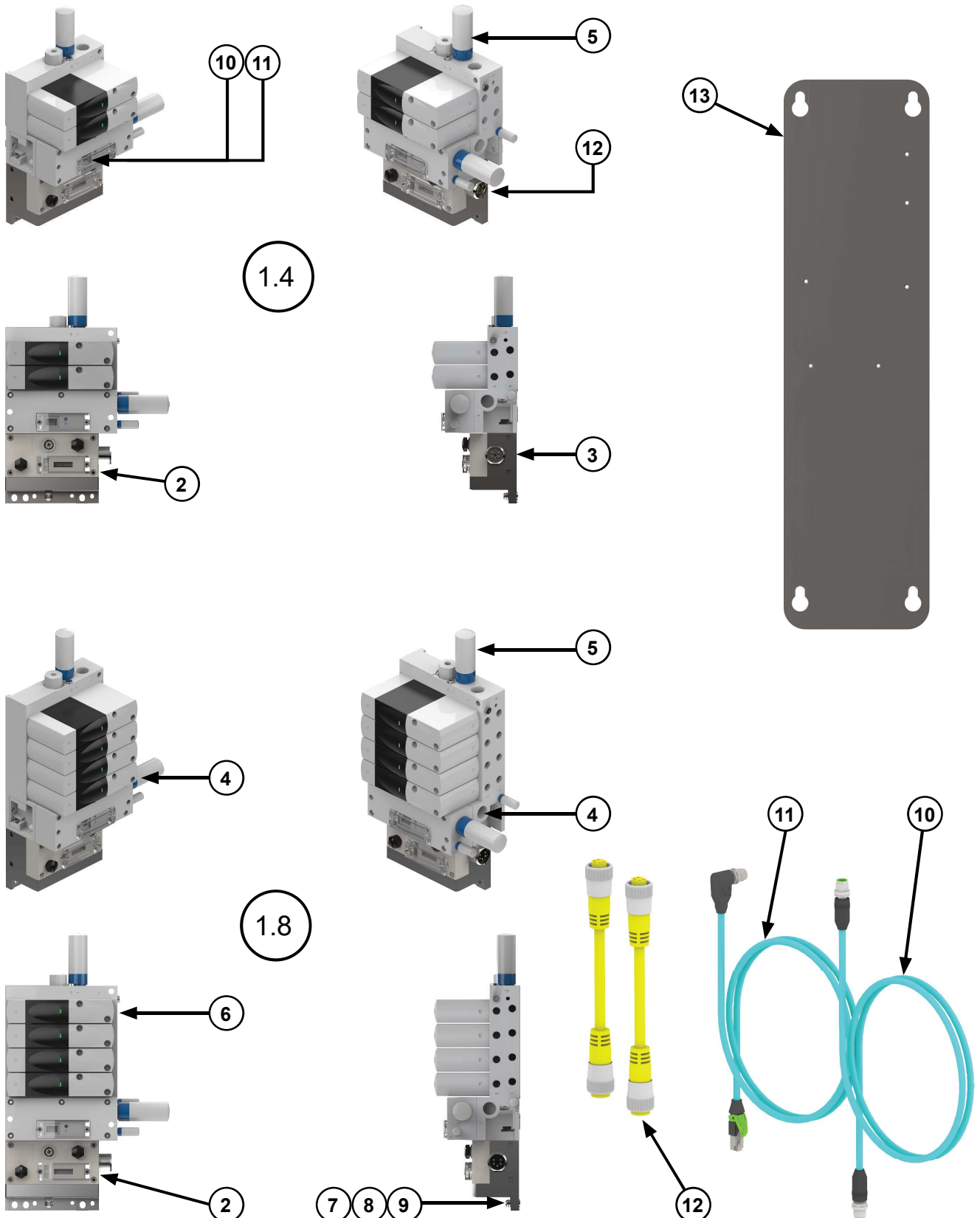
05.4.5 AIR MANIFOLD ASSEMBLY



AIR MANIFOLD ASSEMBLY (PART NUMBER 310-3900)

Item	Part Number	Description	Quantity
1	–	AIR MANIFOLD	1
2	–	3/8" NPT (M) X 1/4" NPS (M)	1
3	–	SHCS, M5X0.8, 45MM LG, 18-8	2
4	–	SERRATED FLANGE LOCKNUT, M5X0.8, 18-8	2
5	–	FLAT WASHER, M5, 18-8	2
6	–	MALE ELBOW 3/8 TUBE X 1/4NPT	3
7	–	MAX AIR CAUTION LABEL (NOT SHOWN)	1
8	–	PIPE PLUG, 1/4"	3

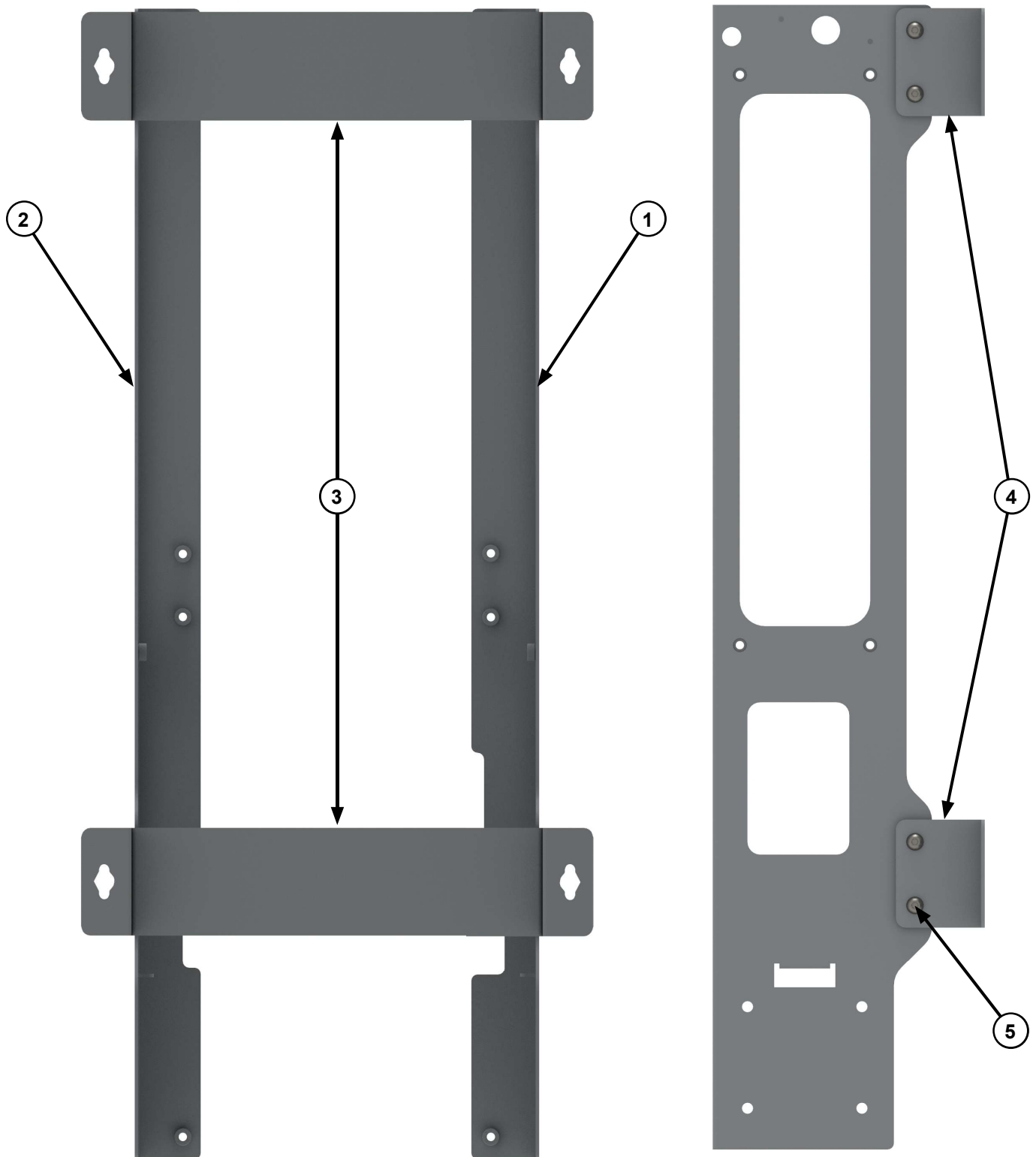
05.4.6 PRESSURE REGULATOR MODULES 310-CPAB-CDEF



PRESSURE REGULATOR MODULES (PART NUMBER 310-6940-XX)

Item	Part Number	Description	Column C (-2) Quantity	Column C (-4) Quantity	Column C (-6) Quantity	Column C (-8) Quantity
1.4	310-6910	PRESSURE MANIFOLD ASSEMBLY, 4 REGULATORS	1	–	1	–
1.8	310-6911	PRESSURE MANIFOLD ASSEMBLY, 8 REGULATORS	–	1	1	2
2	–	COMM MODULE, FOR VTEM REGULATORS	incl. w/ manifold	incl. w/ manifold	incl. w/ manifold	incl. w/ manifold
3	–	PNEUMATIC MUFFLER (W/310-3911)	incl. w/ manifold	incl. w/ manifold	incl. w/ manifold	incl. w/ manifold
4	–	G3/8 - 3/8" TUBE VTEM INLET	1	1	2	2
5	–	G1/8 - 1/4" TUBE VTEM to MVR	2	2	3	3
6	–	G1/8 - 4 MM TUBE VTEM to HGB	16	16	32	32
7	–	VTUG MOUNTING BOLTS	6	6	12	12
8	–	VTUG MOUNTING WASHERS	6	6	12	12
9	–	VTUG MOUNTING TOOTHED WASHERS	6	6	12	12
10	310-4133	CABLE, CAT 5E, M12, 1M	–	–	1	1
11	310-4136	CBL, ETHERNET, RJ45-M12-90, 1M	1	1	1	1
12	310-4140	CBL, MINI (7/8"), 5P, 2M, F-M	1	1	2	2
13	–	VTEM MOUNTING BRACKET	1	1	1	1

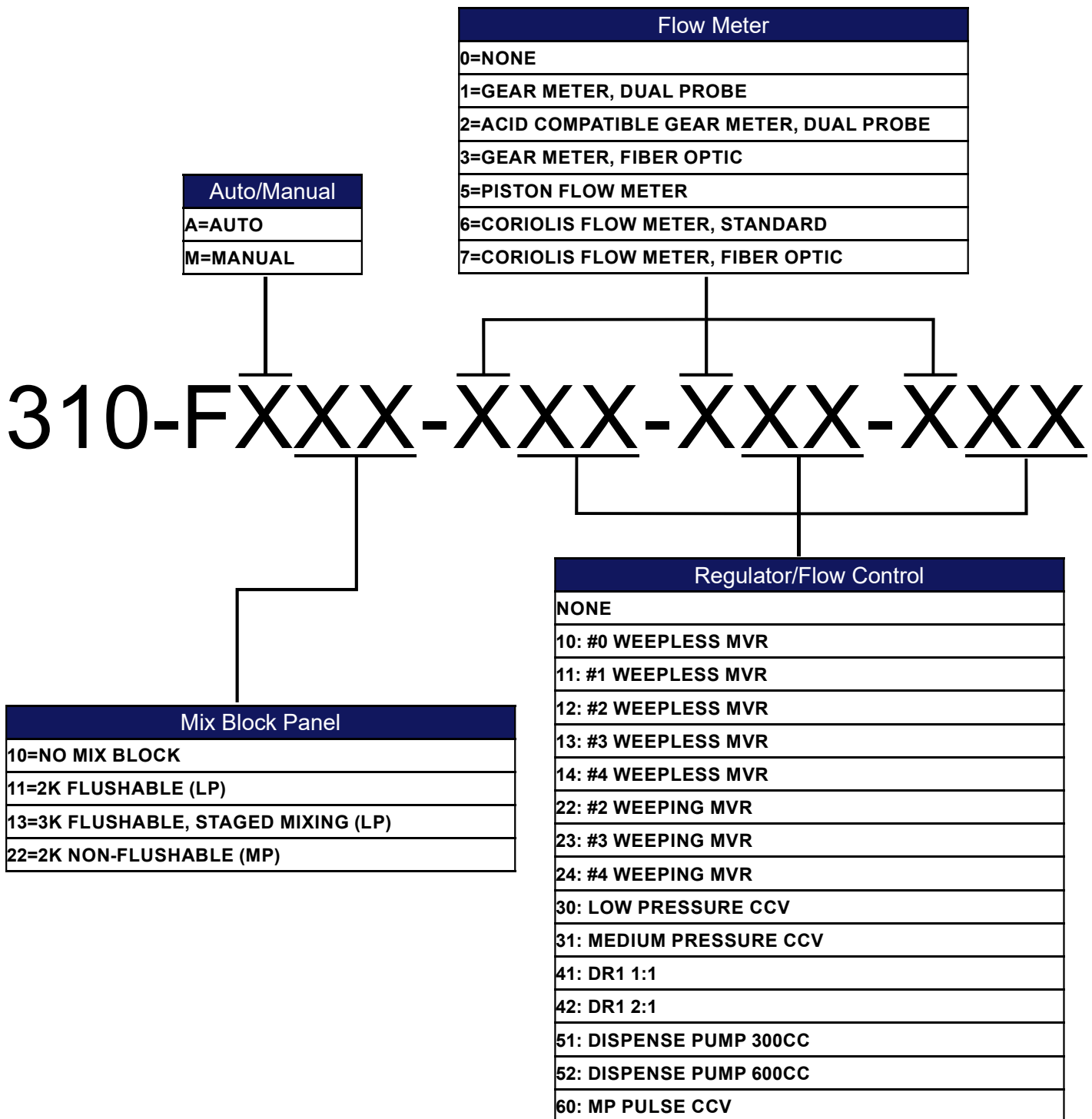
05.4.7 FLUID AND CONTROL FRAME ASSEMBLY



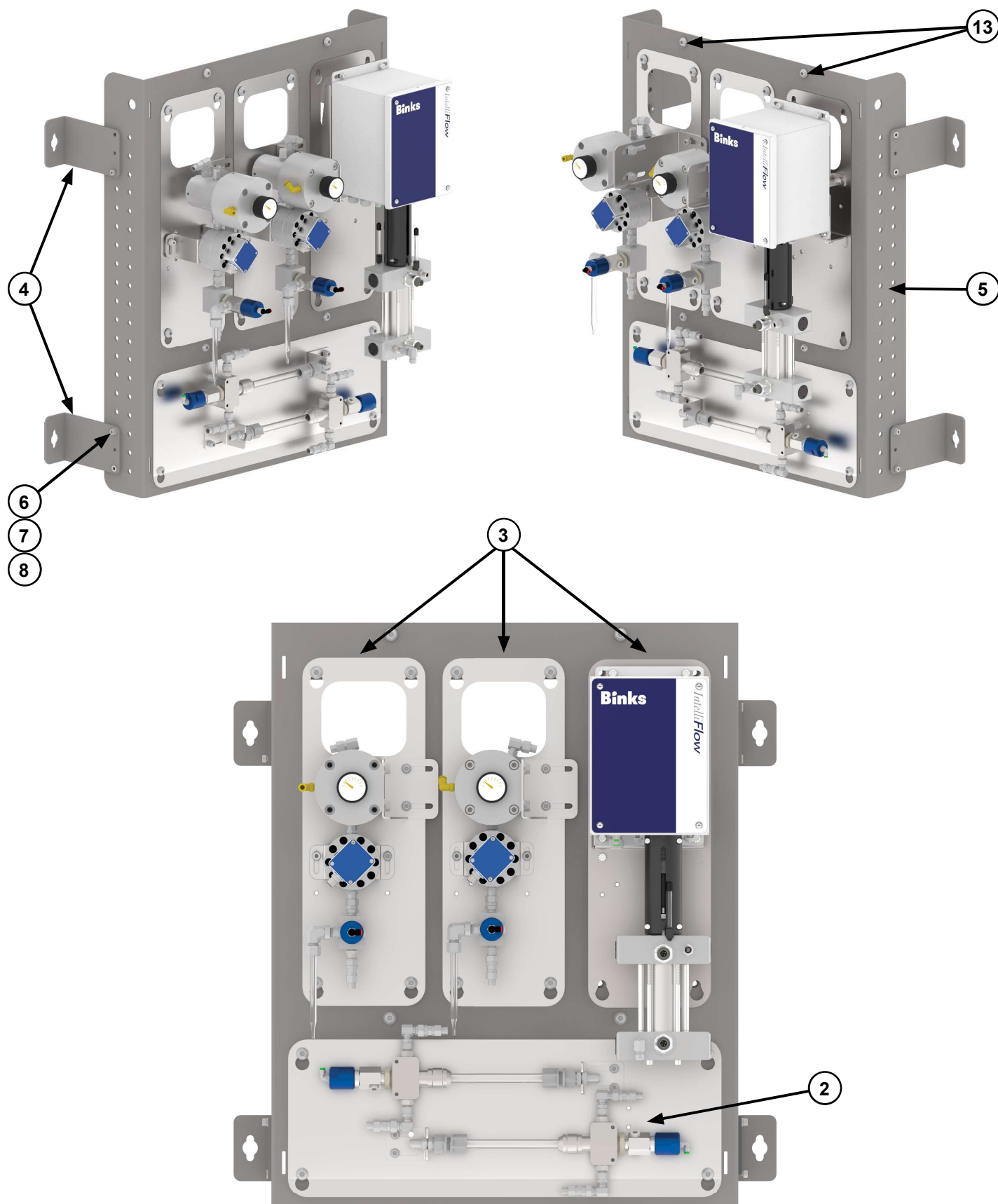
FLUID AND CONTROL FRAME ASSEMBLY

Item	Part Number	Description	Quantity
1	–	CONTROL MOUNTING FRAME MEMBER 1	1
2	–	CONTROL MOUNTING FRAME MEMBER 2	1
3	–	FRAME BRACE	2
4	–	WALL MOUNTING BRACKET	4
5	–	BUTTON HEAD HEX DRIVE - M10X1	24

05.5 RF2+ FLUID PANEL TOP LEVEL PART NUMBERING



05.6 RF2+ FLUID PANEL TOP LEVEL ASSEMBLY



RF2+ FLUID PANEL TOP LEVEL ASSEMBLY (PART NUMBER 310-FXXX-XXX-XXX-XXX)

Item	Part Number	Description	Quantity
1	310-802X*	IN-BOOTH FLUID PANEL KIT, X CHL FIBER (NOT SHOWN)	X
2	310-3800-XX	MIX BLOCK SUB-ASSEMBLY	1
3	310-3300-XXX	FLUID MODULE ASSEMBLY	0-3
4	—	FLUID FRAME WALL BRACKET	4
5	—	FLUID FRAME	1
6	—	SERRATED FLANG LOCKNUT, M6X1M	8
7	—	FLAT WASHER, M6, 18-8	8
8	—	SHCS M6X1, 16MM LG, 18-8	8
9	SEE TABLE	HOSES/PLUMBING (NOT SHOWN)	—
10	—	COVER, FLUID PANEL (NOT SHOWN)	1
12	—	PNEUMATIC TUBING KIT (NOT SHOWN)	1
13	—	BUTTON HEAD HEX DRIVE-M10X1.5	16

FLUID PANEL HOSES				NUMBER OF FLUID CHANNELS		
	Part Number	Description	Unit of Measurement	1	2	3
Low Pressure	1414-SS-T	1/4" NPS(F) HOSE END	EA	0	4	8
	FEP-0604	1/4" ID FEP HOSE	IN	0	30	60
Medium Pressure	PDHC-04-KK-024	HP 1/4" HOSE, 24" LG	EA	0	2	4

*For configurations that include fiber optic flow meters in fluid module assemblies (310-3300-3XX / 310-3300-7XX), the fiber optic interface box kit (310-8022) is required to support up to two modules. For configurations with three fiber optic modules, the 3-channel fiber optic interface box kit (310-8023) is required.

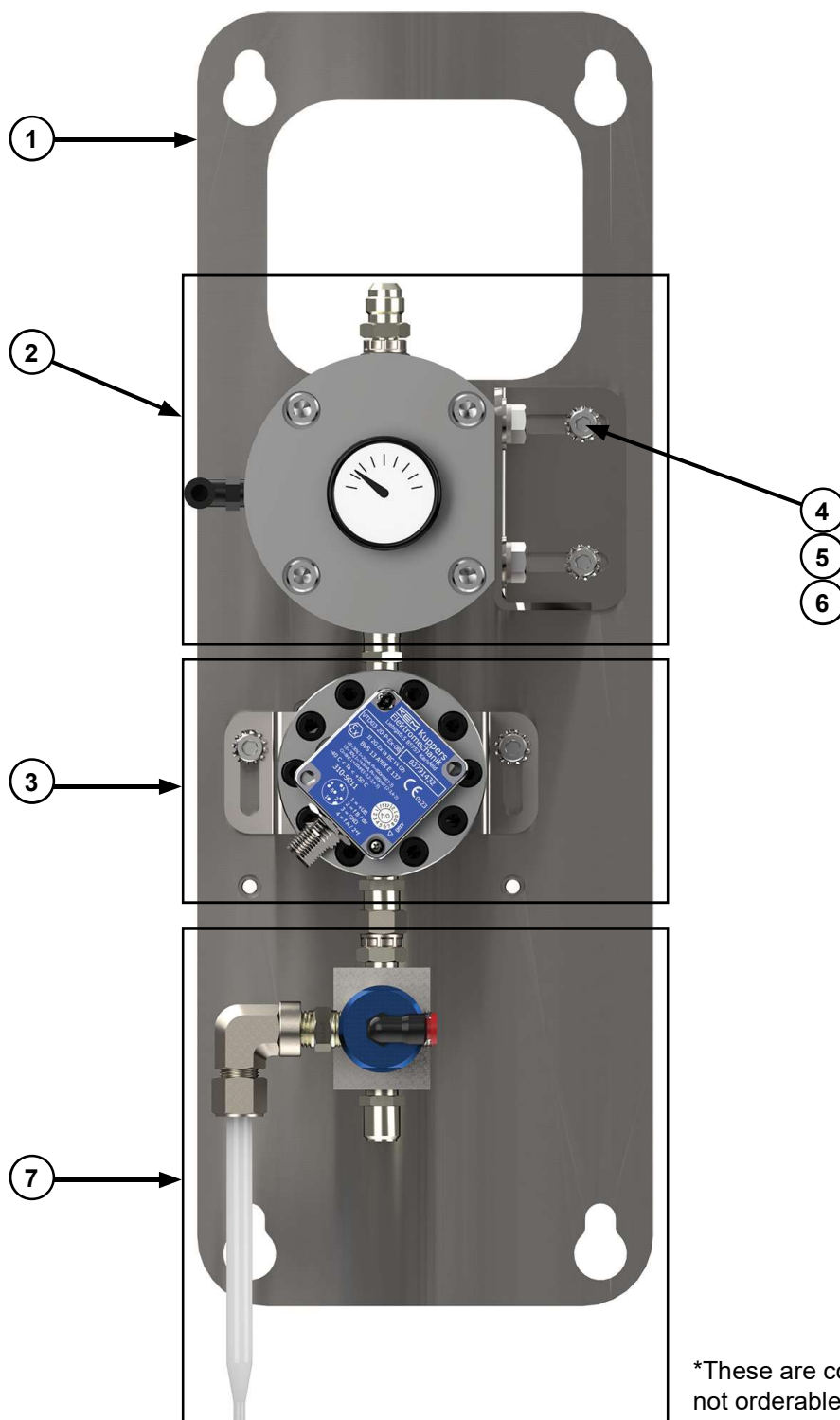
05.6.1 GEAR FLOW METER FLUID MODULE ASSEMBLY

310-3300-(1/2/3)XX-XX*

TABLE "A" DIGIT

TABLE "B" DIGITS

TABLE "C" LETTERS



*These are configuration part numbers only, not orderable part numbers.

FLUID MODULE ASSEMBLY (PART NUMBER 310-3300-(1/2/3)XX-XX)

Item	Part Number	Description	Quantity	310-3300-X(0/3/4/6)X Quantity
1	–	FLUID CONTROL PANEL	1	1
2	SEE TABLE A	FLOW METER, SUB-ASSEMBLY	1	1
3	SEE TABLE B	FLOW CONTROL, SUB-ASSEMBLY	1	1
4	–	SHCS M6X1, 16MM LG, 18-8	4	2
5	–	FLAT WASHER, M6, 18-8	4	2
6	–	TOOTH WASHER, M6, 18-8	4	2
7	SEE TABLE C	CALIBRATION BLOCK ASSEMBLY	1	1

TABLE A: FLOW METER SUB-ASSEMBLY

Digit	Part Number	Description
0	–	–
1	–	GEAR METER - DUAL PROBE
2	–	ACID COMPATIBLE GEAR METER, DUAL PROBE
3	–	GEAR METER - FIBER OPTIC

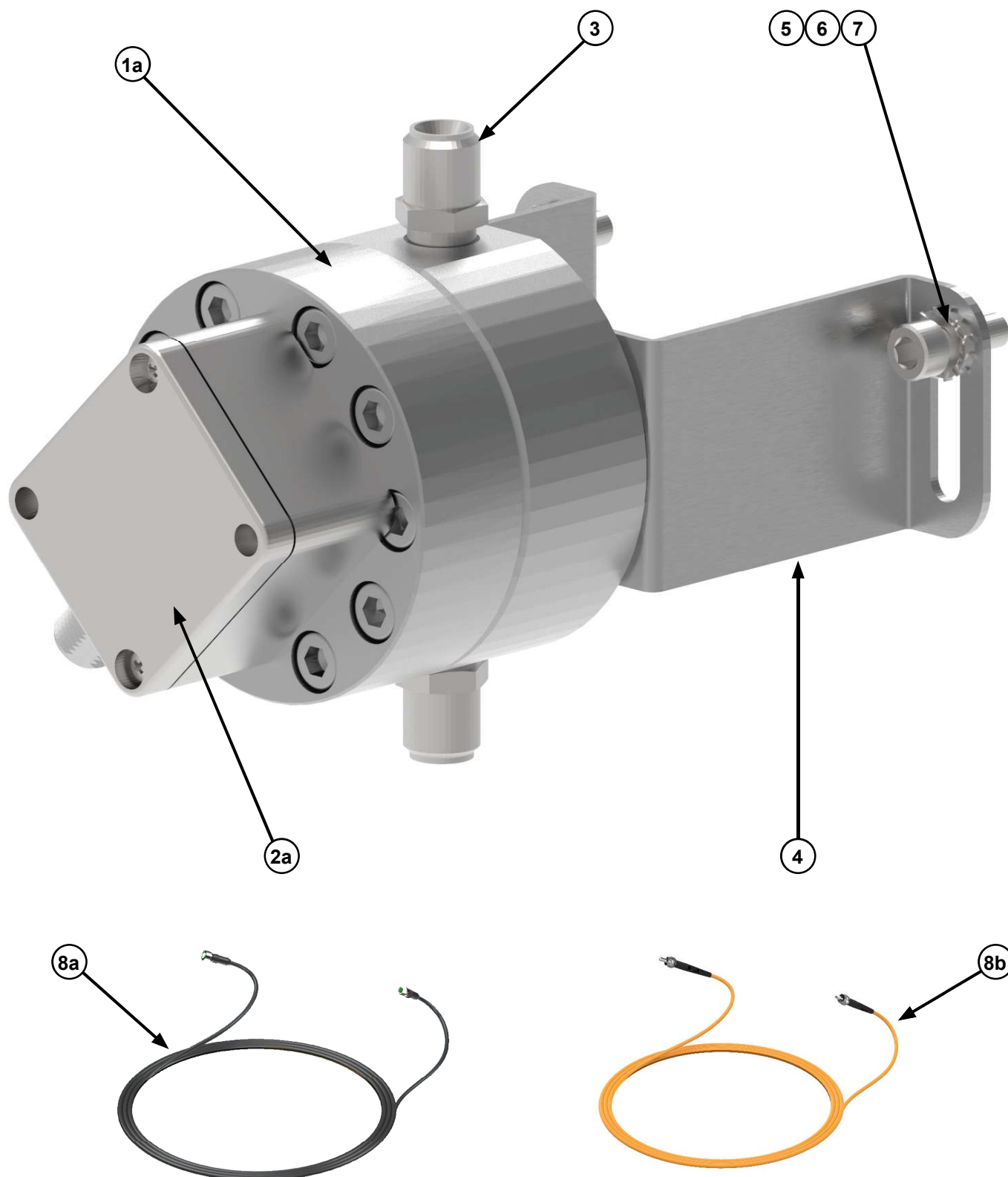
TABLE B: FLOW CONTROL SUB-ASSEMBLY

Digits	Part Number	Description	Low Pressure Only
00	–	–	
12	–	#2 WEEPLESS MVR SUB-ASSEMBLY (STANDARD)	
13	–	#3 WEEPLESS MVR SUB-ASSEMBLY (STANDARD)	
14	–	#4 WEEPLESS MVR SUB-ASSEMBLY (STANDARD)	
22	–	#2 WEEPING MVR SUB-ASSEMBLY (STANDARD)	X
23	–	#3 WEEPING MVR SUB-ASSEMBLY (STANDARD)	X
24	–	#4 WEEPING MVR SUB-ASSEMBLY (STANDARD)	X
30	–	LOW PRESSURE CCV SUB-ASSEMBLY	X
31	–	MEDIUM PRESSURE CCV SUB-ASSEMBLY	
41	–	1:1 DR1 SUB-ASSEMBLY	X
42	–	2:1 DR1 SUB-ASSEMBLY	X
60	–	MP PULSE CCV SUB-ASSEMBLY	

TABLE C: CALIBRATION BLOCK

Letters	Part Number	Description
NONE	310-8000	CALIBRATION BLOCK ASSEMBLY
HP	310-8010	HP, CALIBRATION BLOCK ASSEMBLY

05.6.1.1 FLOW METER (GEAR) 1/2/3



FLUID MODULE: GEAR METER SUB-ASSEMBLIES (PART NUMBER 310-3400-X*)

Item	Part Number	Description	Gear Meter - Dual Probe (-1) Quantity	AC Gear Meter - Dual Probe (-2) Quantity	Gear Meter - Fiber Optic (-3) Quantity
1a	310-9010	FLOW METER BODY [^]	1	—	1
1b	310-9013	FLOW METER BODY, ACID COMPATIBLE [^]	—	1	—
2a	310-9011	DUAL PROBE PICKUP	1	1	—
2b	310-9012	FIBER OPTIC PICKUP	—	—	1
3	4-JIC	FITTING, 1/4NPS(M) X 3/8" AN	2	2	2
4	—	MOUNTING BRACKET	1	1	1
5	—	SHCS, M6X1, 12MM LG, 18-8	2	2	2
6	—	LOCK WASHER, M6, 18-8	2	2	2
7	—	FLAT WASHER, M6, 18-8	2	2	2
8a	SEE TABLE A	CABLE, M12-M12, 5PIN, 1M [†]	1	1	—
8b	SEE TABLE B	CABLE, FIBER OPTIC, 10M [‡]	—	—	1

*These are configuration part numbers only, not orderable part numbers.

[^]See section 05.6.1.1.1

TABLE A: DUAL PROBE PICKUP SENSOR CABLES

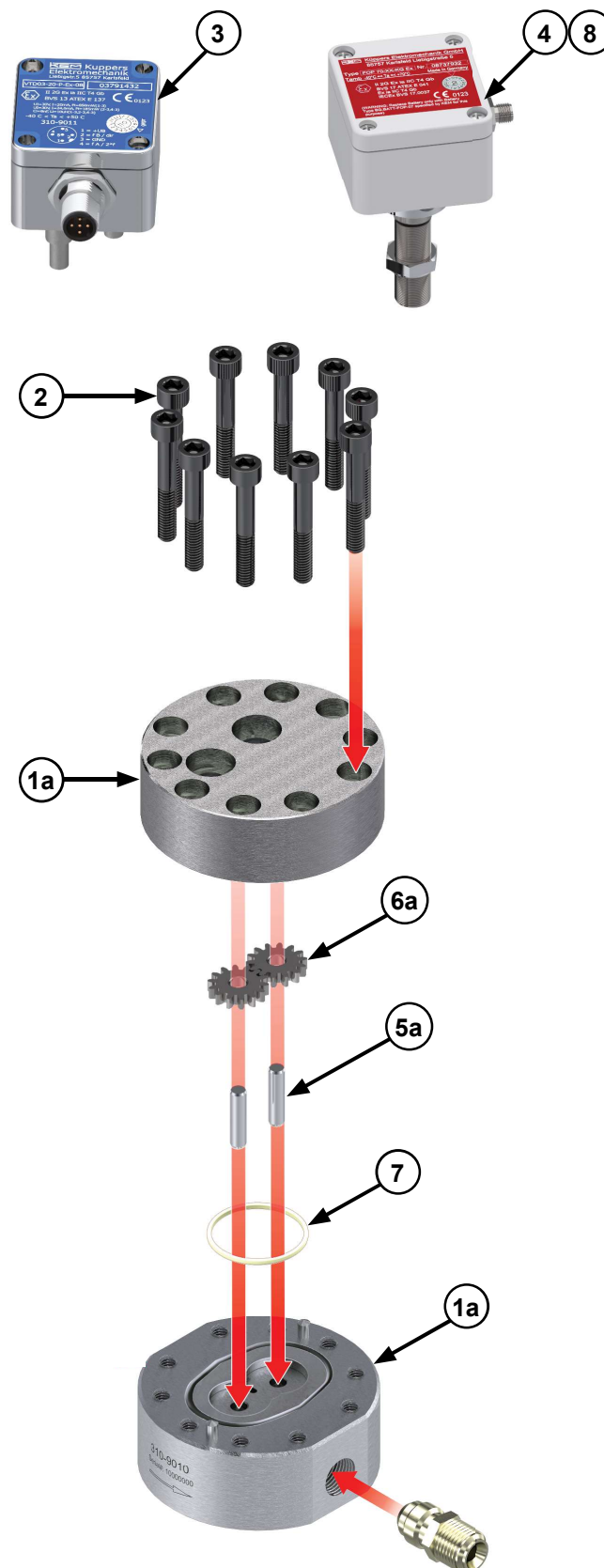
Part Number	Description	Quantity
310-4138	FLOW METER CABLE, STANDARD, 1 METER (39.37")	[†] incl. w/ Gear Meter (-1/-2)
310-4185-025	FLOW METER CABLE, ACCESSORY, 25 FT	SOLD SEPARATELY
310-4185-050	FLOW METER CABLE, ACCESSORY, 50 FT	SOLD SEPARATELY
310-4185-075	FLOW METER CABLE, ACCESSORY, 75 FT	SOLD SEPARATELY
310-4185-100	FLOW METER CABLE, ACCESSORY, 100 FT	SOLD SEPARATELY

TABLE B: FIBER OPTIC PICKUP SENSOR CABLES

Part Number	Description	Quantity
310-9018	FLOW METER FIBER OPTIC CABLE, STANDARD, 10 M	[‡] incl. w/ Fiber Optic Meter
310-4184-025	FLOW METER FIBER OPTIC CABLE, ACCESSORY, 25 FT	SOLD SEPARATELY
310-4184-050	FLOW METER FIBER OPTIC CABLE, ACCESSORY, 50 FT	SOLD SEPARATELY
310-4184-075	FLOW METER FIBER OPTIC CABLE, ACCESSORY, 75 FT	SOLD SEPARATELY
310-4184-100	FLOW METER FIBER OPTIC CABLE, ACCESSORY, 100 FT	SOLD SEPARATELY

5.6.1.1.1 GEAR FLOW METER PARTS

Refer to 77-3154 Flow Meter manuals for more details.



FLOW METER (PART NUMBER 310-900(0/1/2)*)				
Item	Part Number	Description	Quantity	Notes
1a	310-9010	FLOW METER BODY (CONTAINS NO. 1, 2, 5A, 6A, AND 7)	1	SOLD AS ASSEMBLY
1b	310-9013	FLOW METER BODY ACID COMPATIBLE (CONTAINS NO. 1, 2, 5B, 6B, AND 7) (NOT SHOWN)	1	SOLD AS ASSEMBLY
2	310-9020	SOCKET HEAD CAP SCREWS, M6 X 30 MM	10	
3	310-9011	DUAL PROBE PICKUP SENSOR	1	
4	310-9012	FIBER OPTIC PICKUP SENSOR	1	
5a	310-9016	SHAFT, FLOW METER	2	SOLD INDIVIDUALLY
5b	310-9022	SHAFT, FLOW METER, ACID COMPATIBLE (NOT SHOWN)	2	SOLD INDIVIDUALLY
6a	310-9015	GEAR	2	SOLD INDIVIDUALLY
6b	310-9021	GEAR, ACID COMPATIBLE (NOT SHOWN)	2	SOLD INDIVIDUALLY
7	310-9017-K5	SEALS, FLOW METER	1	SOLD AS 5-PACK
8	310-9024	BATTERY, INTERNAL, FIBER OPTIC SENSOR ONLY	1	SOLD INDIVIDUALLY

*310-9000 Standard (Dual Probe), 310-9001 Fiber Optic, 310-9002 Acid Compatible (Dual Probe)

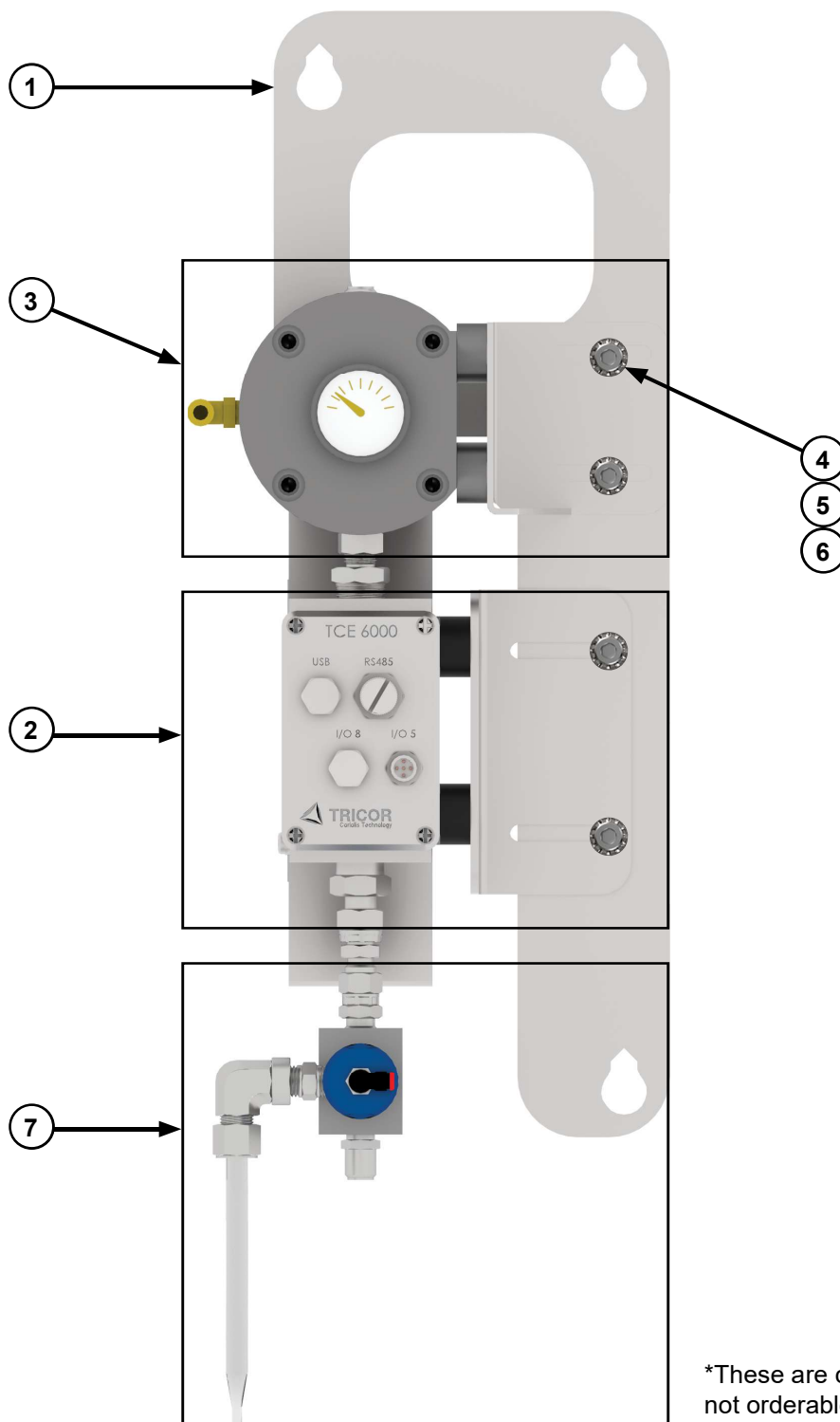
05.6.2 CORIOLIS FLOW METER FLUID MODULE ASSEMBLY

310-3300-(6/7)XX-XX*

TABLE "A" DIGIT

TABLE "B" DIGITS

TABLE "C" LETTERS



*These are configuration part numbers only,
not orderable part numbers.

FLUID MODULE ASSEMBLY (PART NUMBER 310-3300-(6/7)XX-XX*)				
Item	Part Number	Description	Quantity	310-3300-X(0/3/4/6)X Quantity
1	–	CORIOLIS FLUID CONTROL PANEL	1	1
2	SEE TABLE A	FLOW METER, SUB-ASSEMBLY	1	1
3	SEE TABLE B	FLOW CONTROL, SUB-ASSEMBLY	1	1
4	–	SHCS M6X1, 16MM LG, 18-8	4	2
5	–	FLAT WASHER, M6, 18-8	4	2
6	–	TOOTH WASHER, M6, 18-8	4	2
7	SEE TABLE C	CALIBRATION BLOCK ASSEMBLY	1	1
8	20-7081	UNION 3.8" JIC(F) X 3/8" JIC(F) (SEE 05.6.6)	–	1

*These are configuration part numbers only, not orderable part numbers.

TABLE A: FLOW METER SUB-ASSEMBLY		
Digit	Part Number	Description
6	–	CORIOLIS METER, STANDARD
7	–	CORIOLIS METER, FIBER OPTIC

TABLE B: FLOW CONTROL SUB-ASSEMBLY			
Digits	Part Number	Description	Low Pressure Only
00	–	–	
12	–	#2 WEEPLESS MVR SUB- ASSEMBLY (CORIOLIS)	
13	–	#3 WEEPLESS MVR SUB-ASSEMBLY (CORIOLIS)	
14	–	#4 WEEPLESS MVR SUB-ASSEMBLY (CORIOLIS)	
22	–	#2 WEEPING MVR SUB-ASSEMBLY (CORIOLIS) [^]	X
23	–	#3 WEEPING MVR SUB-ASSEMBLY (CORIOLIS) [^]	X
24	–	#4 WEEPING MVR SUB-ASSEMBLY (CORIOLIS) [^]	X
30	–	LOW PRESSURE CCV SUB-ASSEMBLY	X
31	–	HIGH PRESSURE CCV SUB-ASSEMBLY	
41	–	1:1 DR1 SUB-ASSEMBLY [†]	X
42	–	2:1 DR1 SUB-ASSEMBLY [†]	X
60	–	HP PULSE CCV SUB-ASSEMBLY	

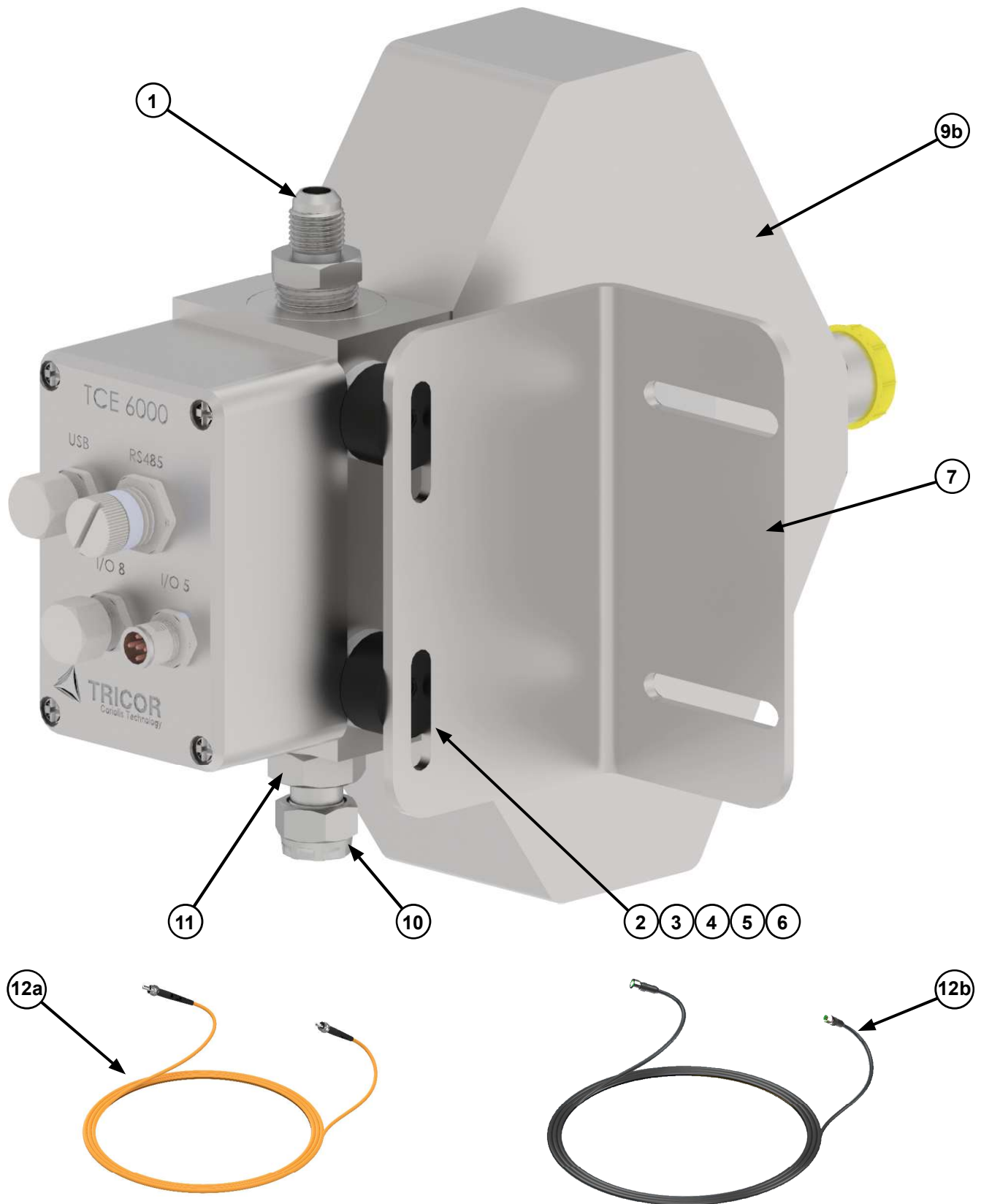
[^]Requires adding Quantity 1 of 4-6JIC.

[†]Requires adding Quantity 1 of 8T-6 and installing into the inlet side of the Coriolis Flow Meter.

TABLE C: CALIBRATION BLOCK		
Letters	Part Number	Description
NONE	310-8000	CALIBRATION BLOCK ASSEMBLY
HP	310-8010	HP, CALIBRATION BLOCK ASSEMBLY

05.6.2.1 FLOW METER (CORIOLIS)

Refer to 77-3150 Coriolis Flow Meter manuals for more details.



FLUID MODULE: CORIOLIS METER SUB-ASSEMBLIES (PART NUMBER 310-3400-X)

Item	Part Number	Description	Standard (-6) Quantity	Fiber Optic (-7) Quantity
1	–	1/2" NPT(M) X 3/8 JIC(M), SS	1	1
2	–	LOCK WASHER, M6, 18-8	2	2
3	–	FLAT WASHER, M6, 18-8	2	2
4	–	SHCH, M6, 14MM, 18-8	2	2
5	20-7071	VIBRATION ISOLATOR, M6	2	2
6	–	WASHER, CLIPPED, 3/8", ID, 1.125OD	4	4
7	310-2805	CORIOLIS MOUNTING BRACKET	1	1
8	310-4201	PROG CABLE, USB-RS485 (NOT SHOWN)	1	1
9a	310-4204	METER, CORIOLIS, FIBER OPTIC (NOT SHOWN)	–	1
9b	310-4205	METER, CORIOLIS, STANDARD	1	–
10	6SN-4	3/8" NPS(F) X 1/4" NPS(M)	1	1
11	8T-6	1/2" NPT(M) X 3/8" NPS(M)	1	1
12a	SEE TABLE A	CABLE, FIBER OPTIC, 10M*	–	1
12b	SEE TABLE B	CABLE, M12-M12, 5PIN, 1M [^] , SHIE	1	–
13	310-4040	PNEUMATIC POWER SUPPLY (NOT SHOWN)	1	1

TABLE A: FIBER OPTIC PICKUP SENSOR CABLES

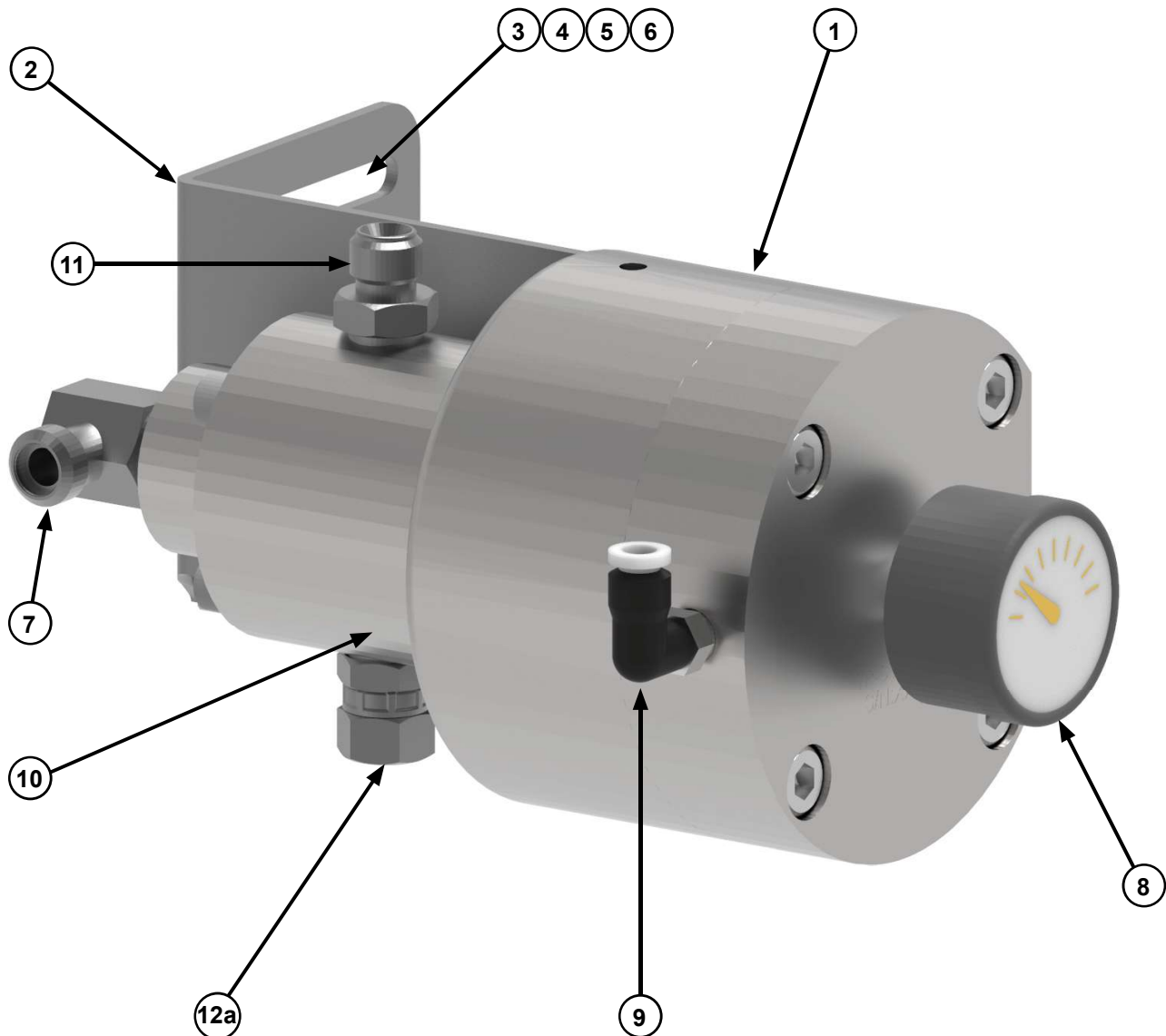
Part Number	Description	Quantity
310-9018	FLOW METER FIBER OPTIC CABLE, STANDARD, 10 M	*incl. w/ Fiber Optic Meter
310-4184-025	FLOW METER FIBER OPTIC CABLE, ACCESSORY, 25 FT	SOLD SEPARATELY
310-4184-050	FLOW METER FIBER OPTIC CABLE, ACCESSORY, 50 FT	SOLD SEPARATELY
310-4184-075	FLOW METER FIBER OPTIC CABLE, ACCESSORY, 75 FT	SOLD SEPARATELY
310-4184-100	FLOW METER FIBER OPTIC CABLE, ACCESSORY, 100 FT	SOLD SEPARATELY

TABLE B: DUAL PROBE PICKUP SENSOR CABLES

Part Number	Description	Quantity
310-4138	FLOW METER CABLE, STANDARD, 1 METER (39.37")	[^] incl. w/ Standard Meter
310-4185-025	FLOW METER CABLE, ACCESSORY, 25 FT	SOLD SEPARATELY
310-4185-050	FLOW METER CABLE, ACCESSORY, 50 FT	SOLD SEPARATELY
310-4185-075	FLOW METER CABLE, ACCESSORY, 75 FT	SOLD SEPARATELY
310-4185-100	FLOW METER CABLE, ACCESSORY, 100 FT	SOLD SEPARATELY

05.6.3 MVR FLOW REGULATORS (WEEPING)

Refer to LN-9112-00 Weeping MVR manual for more details.



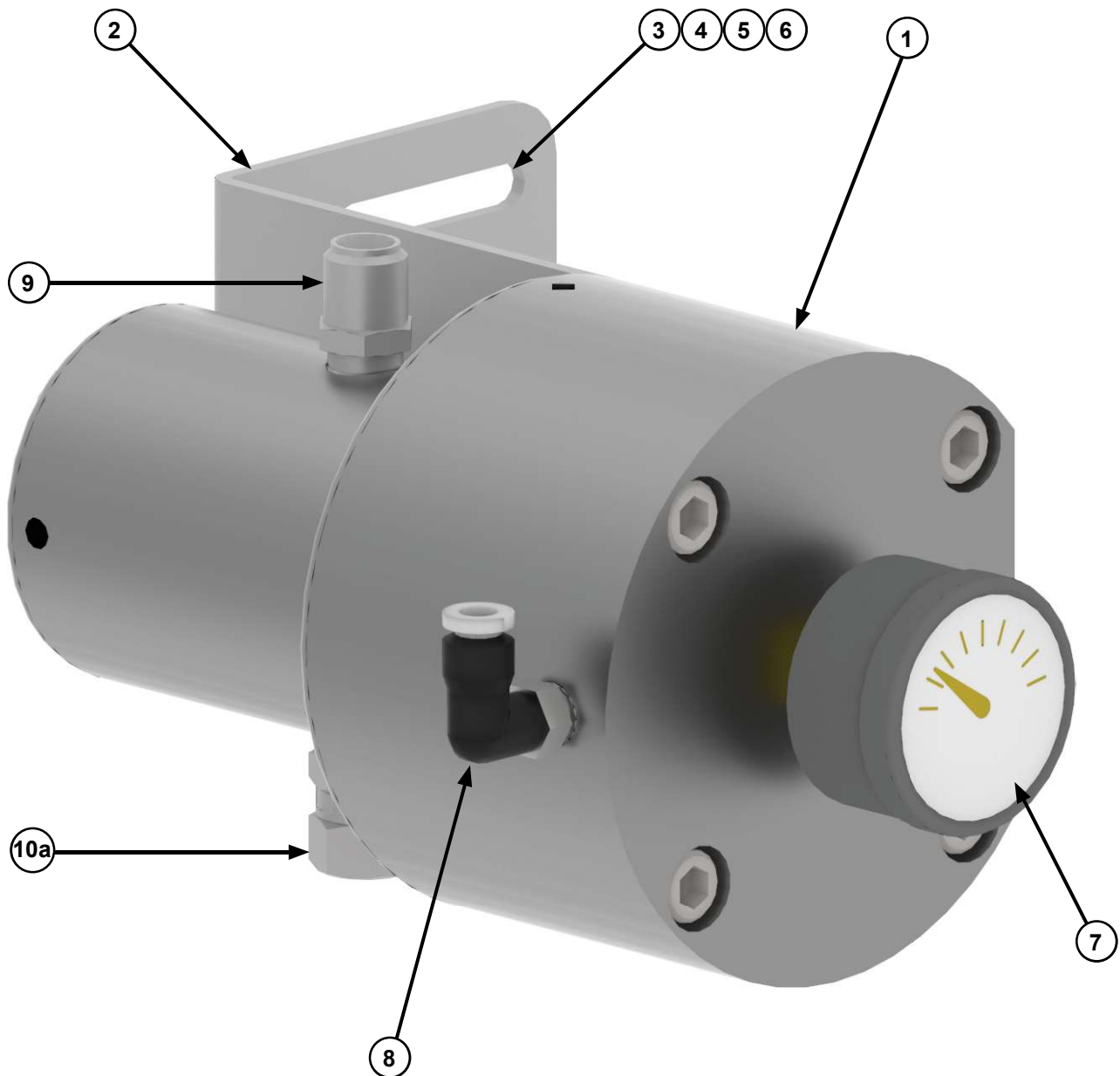
WEeping MVR FLOW REGULATOR (PART NUMBER 310-3404-XXX*)				
Item	Part Number	Description	-02X Quantity	-72X Quantity
1	SEE TABLE	WEeping MVR	1	1
2	–	MVR MOUNTING BRACKET	1	1
3	–	HHCS, 5/16"-24, 1/2" LG, 18-8	2	2
4	–	18-8 STAINLESS STEEL SPLIT LOCK WASHER	2	2
5	–	FLAT WASHER, 5/16", 18-8	2	2
6	20-7072	VIBRATION ISOLATOR, 5/16-18	2	2
7	6T-4-90	FITTING, ELBOW , 3/8" NPT(M) X 1/4" NPS(M)	1	1
8	GA-338	1/8" NPT BACK MOUNT GAUGE (0-160 PSI), 1 1/2" DIA	1	1
9	–	ELBOW 1/8 NPT(M) X 1/4 ODT	1	1
10	TR-100952	MATERIAL REGULATOR, WASHER (INTERIOR)	2	2
11	4-6B	FITTING, 1/4" NPS (M) X 3/8" NPS (M)	1	1
12a	4SN-6B	FITTING, 1/4" NPS (F) SWIVEL X 3/8" BSP (M)	1	–
12b	6SN-6B	3/8" NPS(F) SWIVEL X 3/8" BSP(M) (NOT SHOWN)	–	1

*These are configuration part numbers only, not orderable part numbers.

TABLE: WEeping MVR CONFIGURATION	
Part Number	Description
TR-SSMM-147	MVR ASSEMBLY, WEeping, #2
TR-SSMM-148	MVR ASSEMBLY, WEeping, #3
TR-SSMM-225	MVR ASSEMBLY, WEeping, #4

05.6.4 MVR FLOW REGULATORS (WEEPLESS)

Refer to LN-9225-00 Weepless MVR manual for more details.



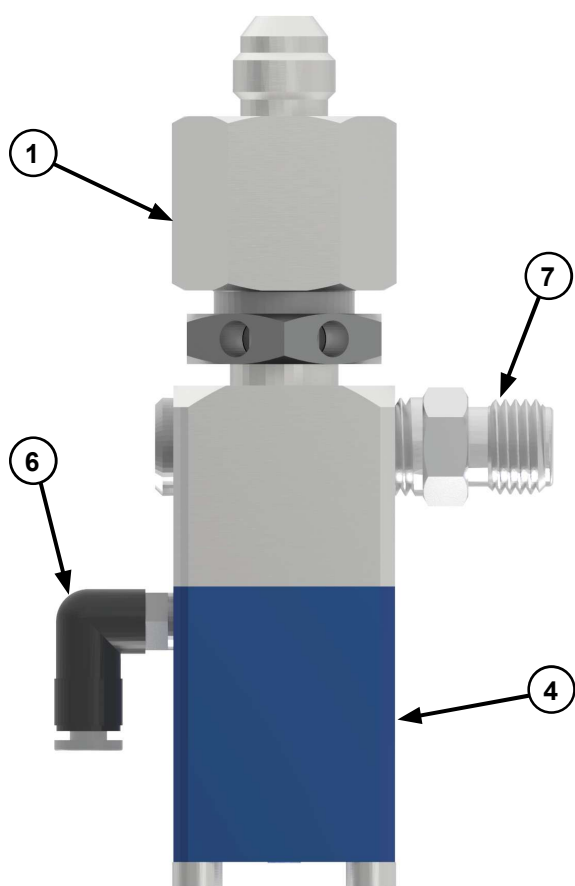
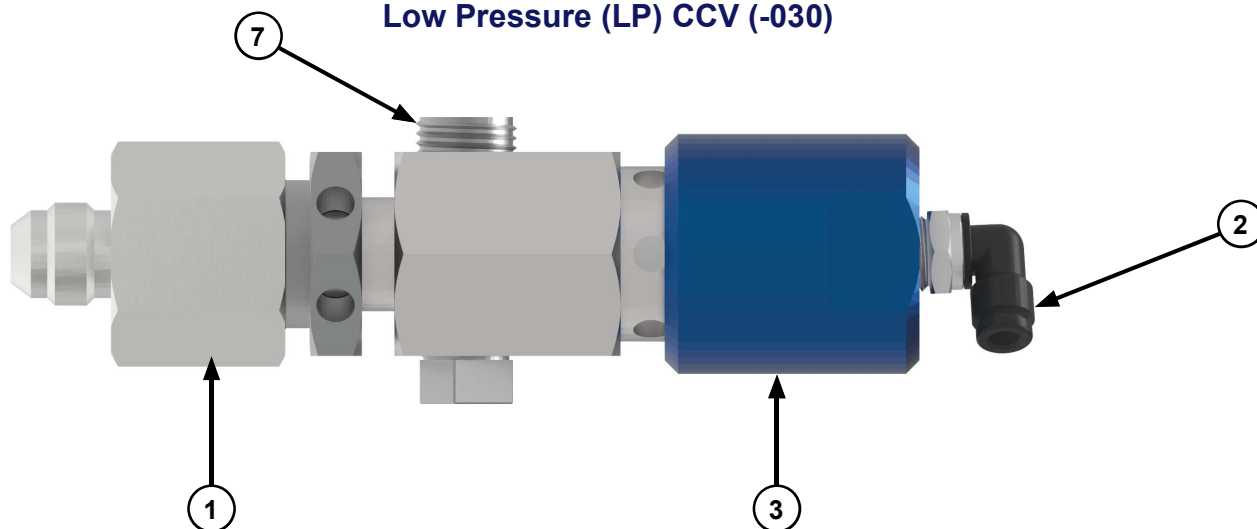
WEEPLESS MVR FLOW REGULATOR (PART NUMBER 310-3404-XXX*)				
Item	Part Number	Description	-01X Quantity	-71X Quantity
1	SEE TABLE	WEEPLESS MVR	1	1
2	–	MVR MOUNTING BRACKET	1	1
3	–	HHCS, 5/16"-24, 1/2" LG, 18-8	2	2
4	–	18-8 STAINLESS STEEL SPLIT LOCK WASHER	2	2
5	–	FLAT WASHER, 5/16", 18-8	2	2
6	20-7072	VIBRATION ISOLATOR, 5/16-18	2	2
7	GA-338	1/8" NPT BACK MOUNT GAUGE (0-160 PSI), 1 1/2" DIA	1	1
8	–	ELBOW 1/8 NPT(M) X 1/4 ODT	1	1
9	4-6JIC	FITTING, 1/4NPS(M) X 3/8" AN	1	1
10a	4SN-6JIC	FITTING, 1/4" NPS (F) X 3/8" JIC (F)	1	–
10b	20-7074	FITTING, 3/8 JIC(F) X 3/8 JIC (M) (NOT SHOWN)	–	1

*These are configuration part numbers only, not orderable part numbers.

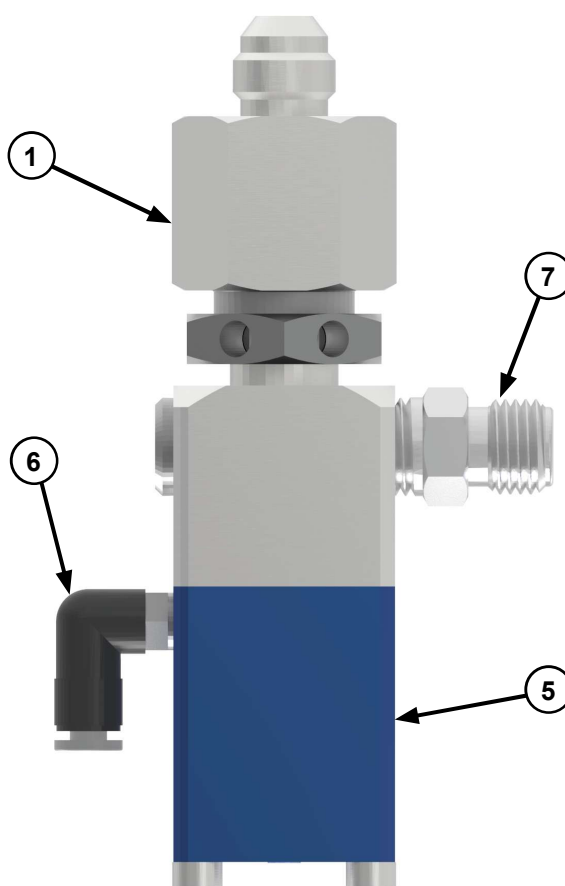
TABLE: WEEPLESS MVR CONFIGURATION	
Part Number	Description
76624-02	MVR ASSEMBLY, WEEPLESS, #2
76624-03	MVR ASSEMBLY, WEEPLESS, #3
76624-04	MVR ASSEMBLY, WEEPLESS, #4

05.6.5 COLOR CHANGE VALVES (CCV) FLOW REGULATORS

Low Pressure (LP) CCV (-030)



High Pressure (HP) CCV (-031)



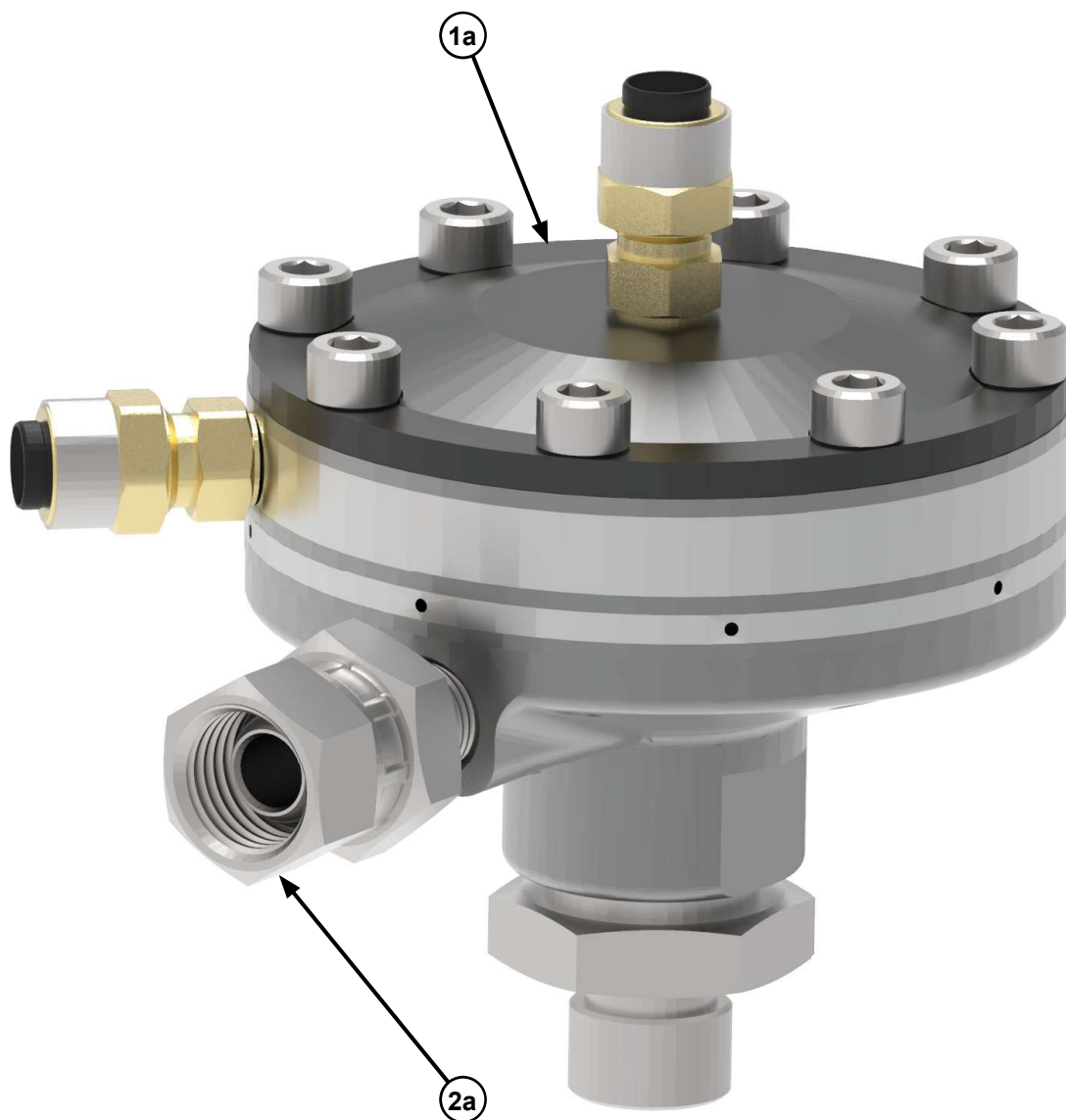
Pulse Valve (-060)

CCV FLOW REGULATORS (PART NUMBER 310-3404-0(3/6)X*)					
Item	Part Number	Description	LP (-030) Quantity	HP (-031) Quantity	Pulse (-060) Quantity
1	77103-00	FITTING, CCV TO -6 JIC	1	1	1
2	JML-532-2T	MALE ELBOW 5/32 TUBE X 1/8NPT	1	–	–
3	CCV-503-SS	CCV VALVE ASSEMBLY	1	–	–
4	240-2012	CCV VALVE, HP	–	1	–
5	240-2064	VARIABLE PULSE VALVE ASSEMBLY	–	–	1
6	240-5192	M5 X 4MM TUBE ELBOW	–	1	1
7	4T-4	FITTING, 1/4 NPT(M) X 1/4 NPS(M)	1	1	1

*These are configuration part numbers only, not orderable part numbers.

05.6.6 DR-1 FLOW REGULATOR

Refer to LN-9221-00.7 DR-1 manual for more details.

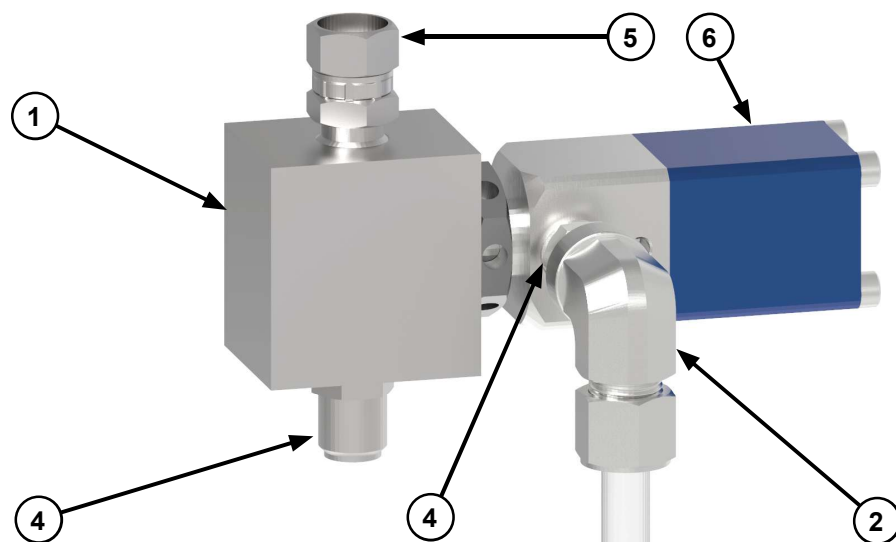


DR-1 FLOW REGULATORS (PART NUMBER 310-3404-X4X*)						
Item	Part Number	Description	1:1 DR-1 (-041) Quantity	1:2 DR-1 (-042) Quantity	Coriolis 1:1 (-741) Quantity	Coriolis 1:2 (-742) Quantity
1a	74151-01	FLUID REGULATOR, 2 STAGE, DR-1, 1:2	–	1	–	1
1b	74151-11	FLUID REGULATOR, 2 STAGE, DR-1, 1:1	1	–	1	–
2a	4SN-2T	FITTING, 1/4" NPS (F) X 1/8" NPT	1	1	–	–
2b	6SN-2T	FITTING, 3/8" NPSM(M) X 1/8" NPT(M)	–	–	1	1
3	4-6JIC	FITTING, 1/4NPS(M) X 3/8" AN (NOT SHOWN)	–	–	1^	1^
4	20-7081	UNION 3.8" JIC(F) X 3/8" JIC(F) (NOT SHOWN)	–	–	1^	1^

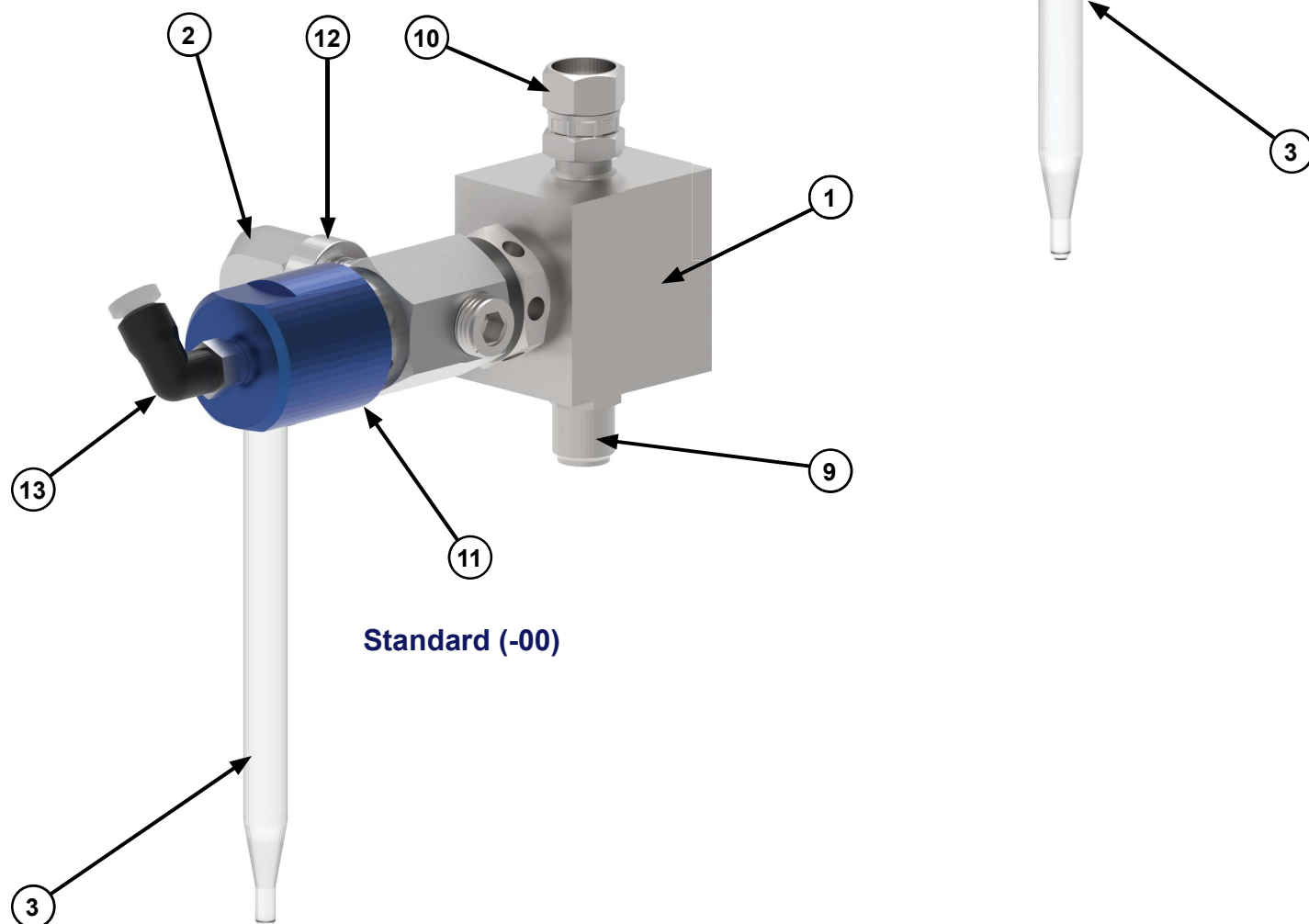
*These are configuration part numbers only, not orderable part numbers.

^Sold separately, used for Coriolis Fluid Meter mounting.

05.6.7 CALIBRATION BLOCK ASSEMBLY



High Pressure (-10)

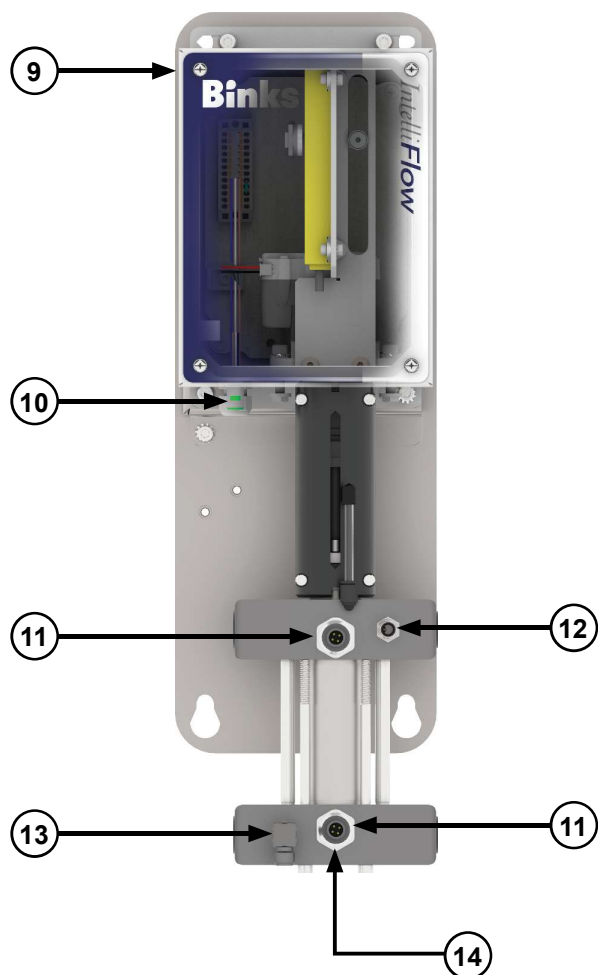
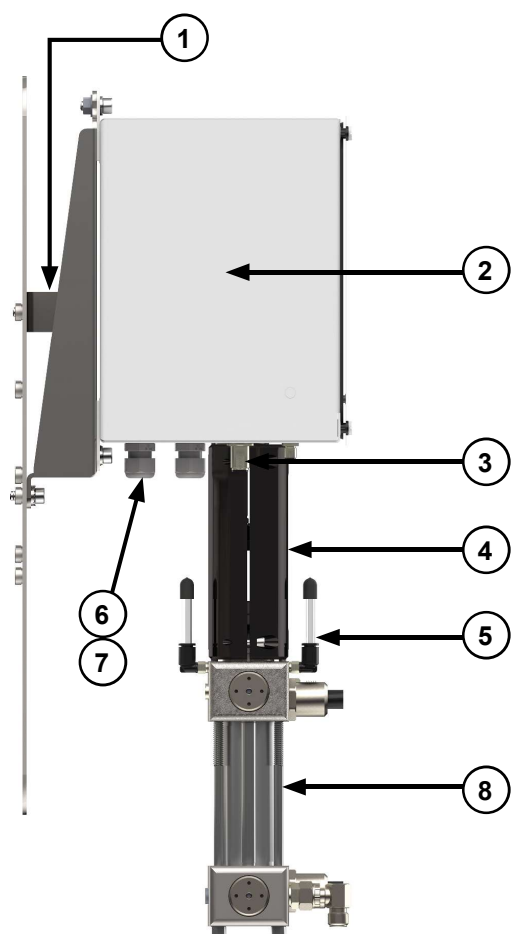


Standard (-00)

CALIBRATION BLOCK ASSEMBLY (PART NUMBER 310-80XX)				
Item	Part Number	Description	Standard (-00) Quantity	High Pressure (-10) Quantity
1	310-8200	CALIBRATION BLOCK	1	1
2	4T(F)-6TF-90	1/4" NPT (F) X 3/8" TUBE FITTING 90 DEG	1	1
3	LSMM0059-01	CALIBRATION TUBE	1	1
4	6T-4	3/8" NPT (M) X 1/4" NPS (M)	1	—
5	4SN-6JIC	FITTING, 1/4" NPS (F) X 3/8" JIC (F)	1	—
6	240-2012	CCV VALVE	1	—
7	20-7090	1/4" NPT(M) X .025IN ID ORIFICE(M)	1	—
8	240-5192	M5 X 4MM TUBE ELBOW (NOT SHOWN)	1	—
9	4T-4T	FITTING, 1/4" NPT(M) X 1/4" NPT(M)	—	1
10	4-6JIC	3/8" JIC - 1/4" NPSM	—	1
11	CCV-503-SS	VALVE ASSEMBLY	—	1
12	4SN-6JIC	FITTING, 1/4" NPS(F) X 3/8" JIC(F)	—	1
13	JML-532-2T	MALE ELBOW 5/32" TUBE X 1/8" NPT	—	1

05.6.8 DISPENSE PUMP

300 cc and 600 cc (See manual 77-3167 for servicing)

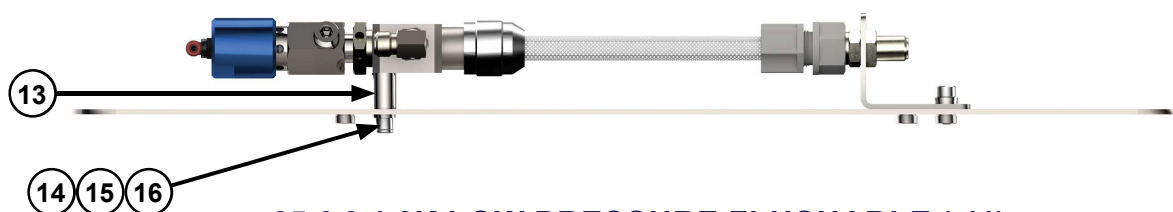
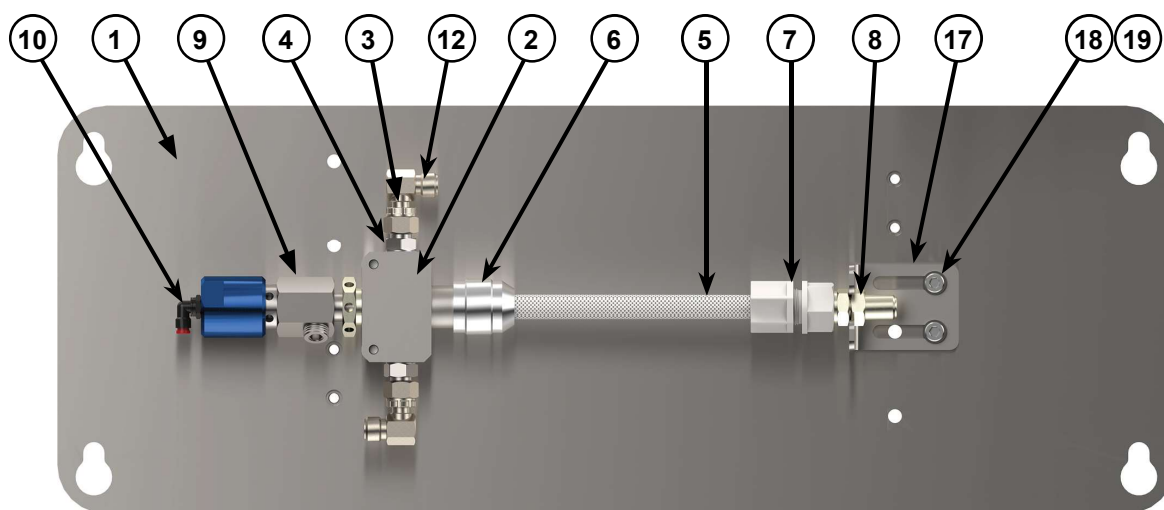


DISPENSE PUMP (PART NUMBER 310-3300-05(1/2)*)			
Item	Part Number	Description	Quantity
1	–	PUMP ENCLOSURE MOUNT	1
2	–	DISPENSE PUMP ENCLOSURE	1
3	–	BULKHEAD, M12, 5 PIN, M2L, 1M	1
4	310-4218	LINEAR MOTOR ASSEMBLY, RF2+	1
5	240-3117	OIL RESEVOIR ASSEMBLY	2
6	–	NYLON STRESS RELIEF FITTING, PG9	2
7	–	GRAY NYLON LOCKING NUT, PG9	2
8	240-5136-XXX	DISPENSE PUMP*	1
9	310-3301	FLUID CONTROL PANEL	1
10	310-4161	BULKHEAD, M8, 4 PIN, M2L, 0.5 MM	1
11	240-5186	PRESSURE SENSOR, 0-500 PSI	2
12	4T-4	FITTING, 1/4" NPT(M) X 1/4" NPS(M)	2
13	4SN-4-90	ELBOW FITTING, 1/4" NPS (M) x 1/4" NPS (F)	1
14	240-5187	CABLE M12 4-PIN CABLE, 2M	5

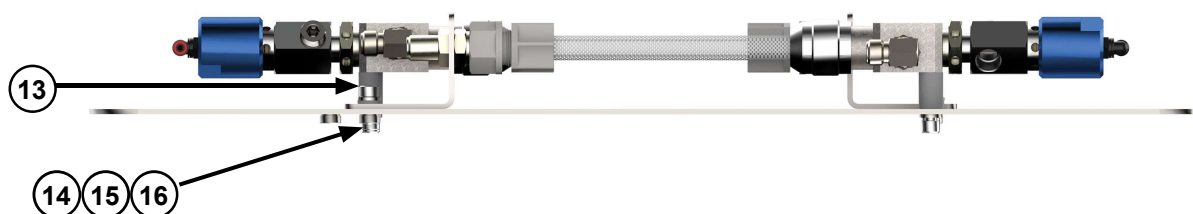
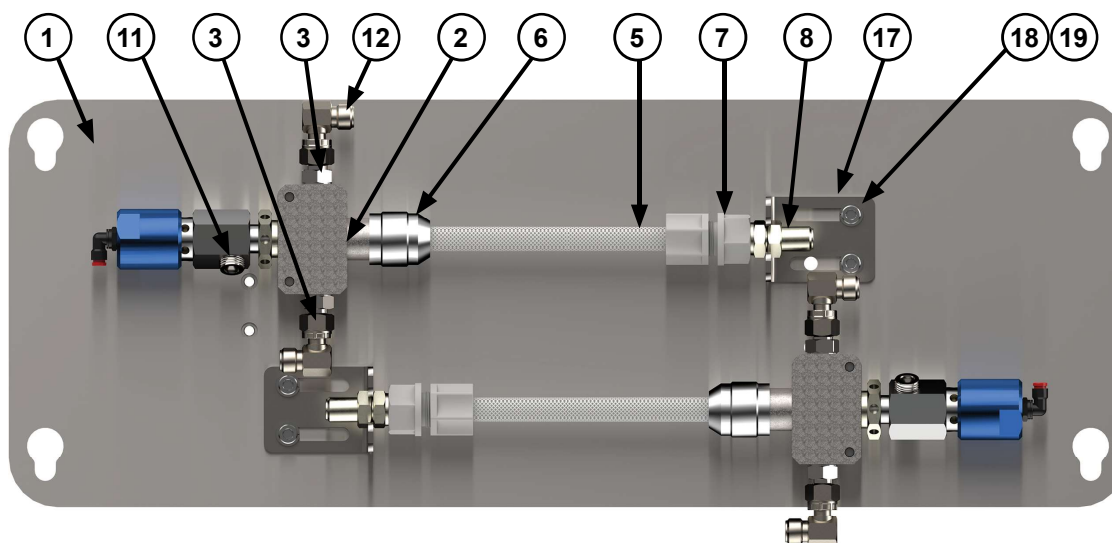
*300 cc (-051) or 600 cc (-052).

For detailed parts list please refer to 77-3167 Dispense Pump Service manual.

05.6.9 FLUID MIX PANELS



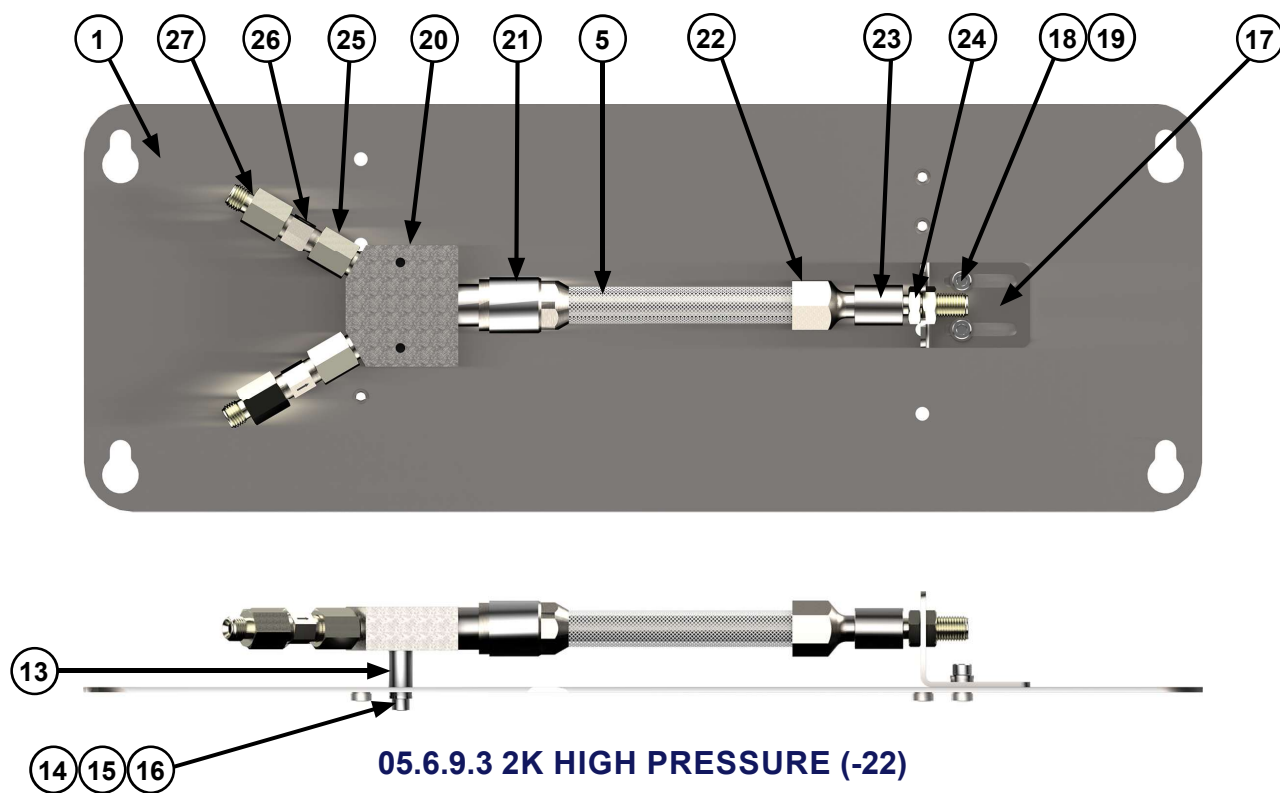
05.6.9.1 2K LOW PRESSURE FLUSHABLE (-11)



05.6.9.2 3K LOW PRESSURE FLUSHABLE STAGED MIXING (-13)

FLUID MIX PANEL – 2K AND 3K LP FLUSHABLE (PART NUMBER 310-3800-XX)

Item	Part Number	Description	2K Low Pressure Flushable (-11) Quantity	3K Low Pressure Flushable Staged Mixing (-13) Quantity
1	–	FLUID MIX PANEL WELDMENT	1	1
2	78015-00	2K MIX BLOCK	1	2
3	22-280	CHECK VALVE ASSEMBLY	2	4
4	22-285	SEAL	2	4
5	LSMM0046-00	3/8" ID x 18 ELEMENT MIXER	1	2
6	LSMM0047-00	MIX TUBE RETAINING KIT	1	2
7	–	FITTING, 1/2" ODT x 3/8" NPT (F), ACETAL	1	2
8	6T-4RB	FITTING, 3/8" NPT (M) x 1/4" NPS (M), BULKHEAD	1	2
9	CCV-503-SS	VALVE ASSEMBLY	1	2
10	41-FTP-1006	1/8" NPT (M) x 5/32" TUBE ELBOW	1	2
12	4SN-4-90	FITTING, ELBOW, 1/4" NPS (M) x 1/4" NPS (F)	2	4
13	–	SPACER, 1/2" OD, 1/4" ID, 3/4" LG	2	4
14	–	SHCS, 1/4"-20, 1-7/8" LG, 18-8	2	4
15	–	WASHER, LOCK, 1/4", 18-8	2	4
16	–	WASHER, FLAT, 1/4", 18-8	4	8
17	–	MIXER MOUNT BRACKET	1	2
18	–	WASHER, LOCK, 18-8	–	4
19	–	SHCS, M6 x 1, 14MM LG, 18-8	2	4
28	–	LOCK WASHER, M6, 18-8	2	–



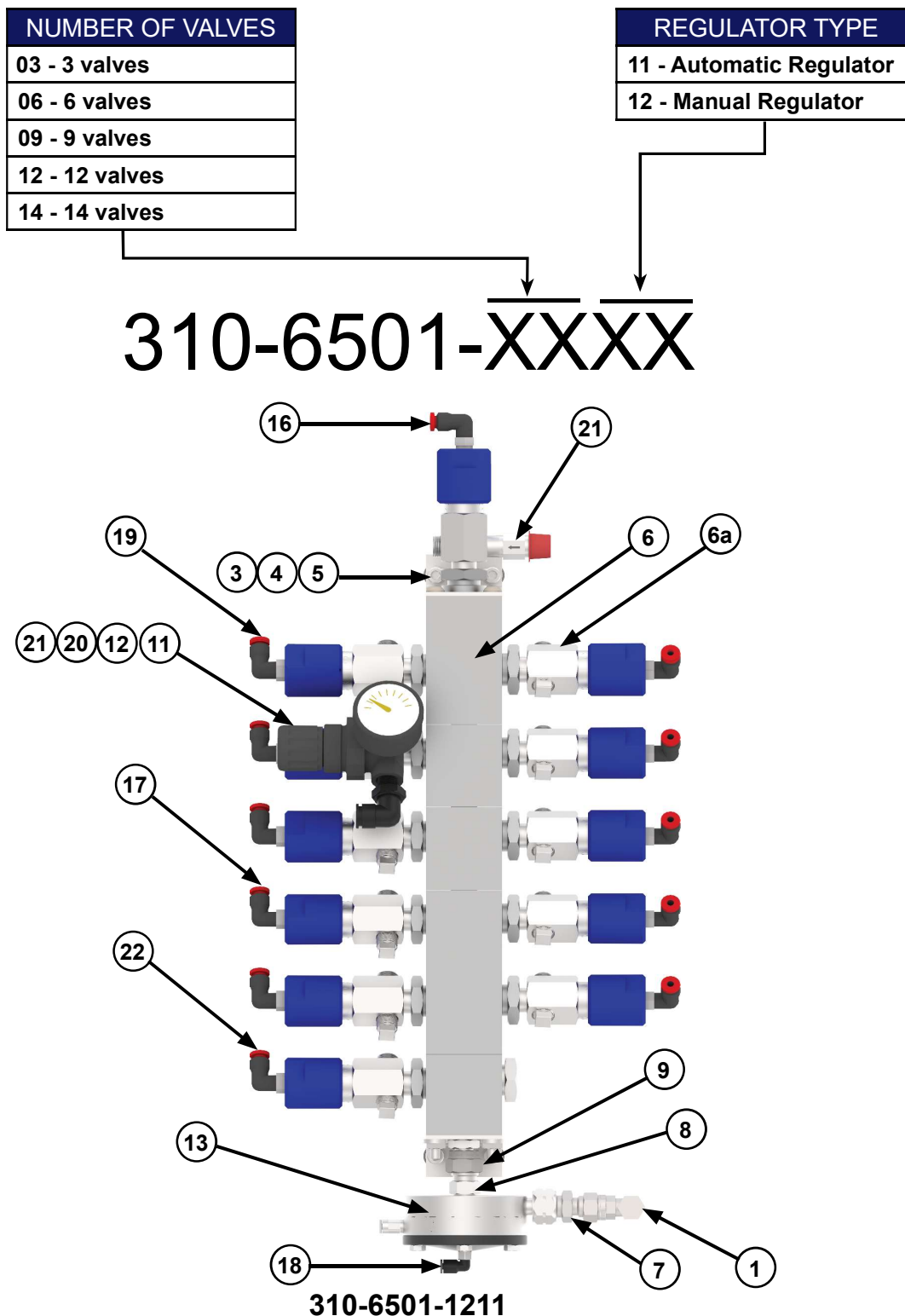
FLUID MIX PANEL – 2K HP (PART NUMBER 310-3800-22)

Item	Part Number	Description	2K High Pressure (-22) Quantity
1	–	FLUID MIX PANEL WELDMENT	1
5	LSMM0046-00	3/8" ID x 18 ELEMENT MIXER	1
13	–	SPACER, 1/2" OD, 1/4" ID, 3/4" LG	2
14	–	SHCS, 1/4"-20, 1-7/8" LG, 18-8	2
15	–	WASHER, LOCK, 1/4", 18-8	2
16	–	WASHER, FLAT, 1/4", 18-8	4
17	–	MIXER MOUNT BRACKET	1
18	–	WASHER, LOCK, 18-8	2
19	–	SHCS, M6 x 1, 14MM LG, 18-8	2
20	LBAL0016-00	"Y"-BLOCK, 2K	1
21	LBAL0022-00	JACKET, HIGH PRESSURE, FOR DISPOSABLE MIXER	1
22	LBAL0023-00	ADAPTER, FLUID HOSE, HIGH PRESSURE	1
23	240-3133	FITTING, 1/4" NPT (M) x 1/4" NPT (F)	1
24	4T-4RB	FITTING, 1/4" NPT (M) x 1/4" NPS (M), BULKHEAD	1
25	20-7064	FITTING, 1/4" NPT (F) x 3/8" JIC (M)	2
26	SSV-809	CHECK VALVE	2
27	4-4T (F)	FITTING, 1/4" NPS (M) x 1/4" NPT (F)	2

05.7 RESIN AND CATALYST STACKS

05.7.1 RESIN VALVE STACK WITH AUTOMATIC FLUID PRESSURE REGULATOR

See 77-3118 Low-Pressure Color Change Valve Stacks for servicing and additional information on low-pressure color stacks (part number 240-5100). Refer to SB-6-HGB-R5 HGB Flow Regulator manual for more details.



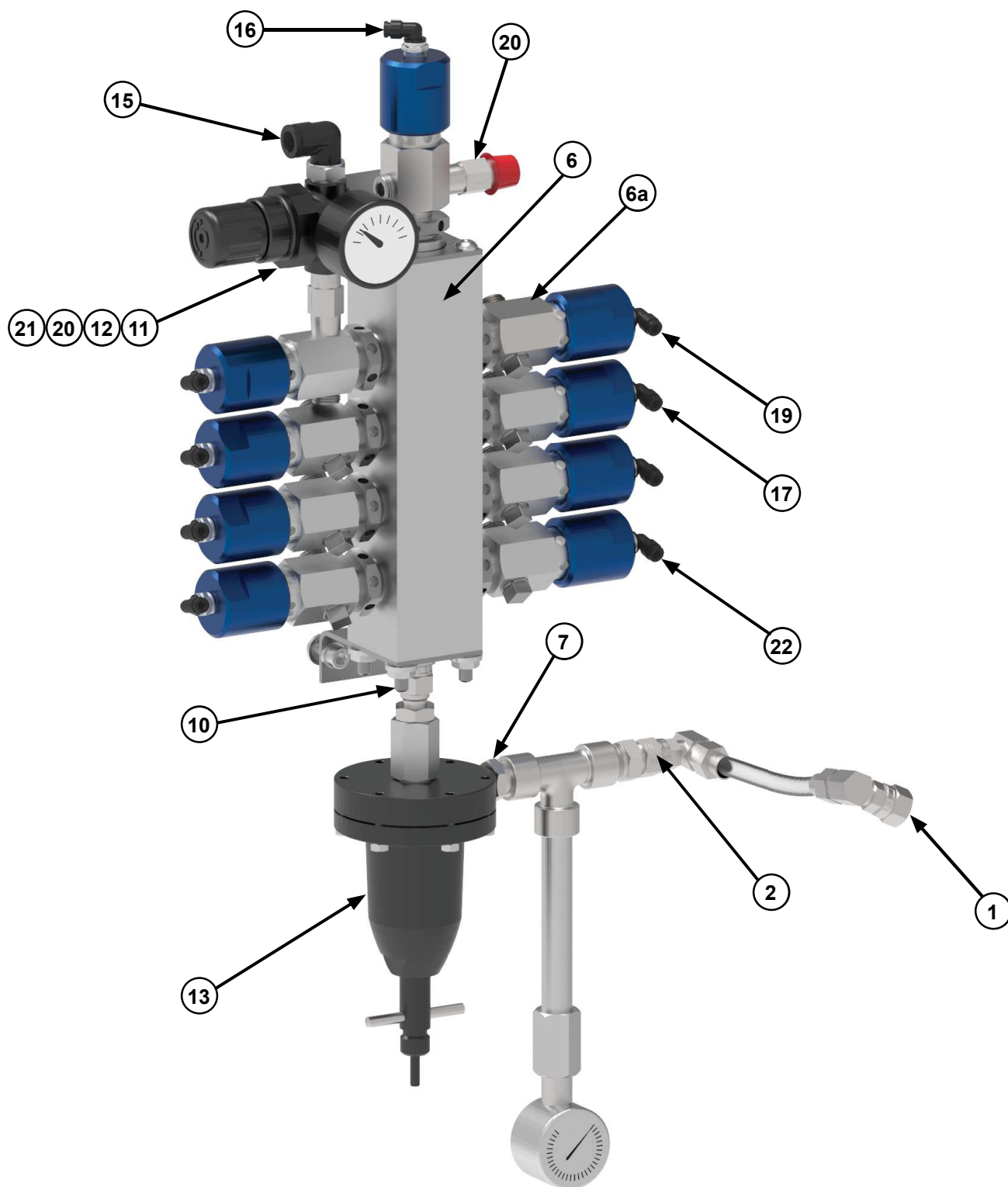
12-valve resin stack, low-pressure air push, auto regulator

RESIN VALVE STACK WITH AUTOMATIC FLUID PRESSURE REGULATOR							
Item	Part Number	Description	Quantity/Model				
			-0311	-0611	-0911	-1211	-1411
1	1414-SS-90-T	HOSE FITTING 3/8" OD X 1/4" ID X 1/4" NPS(F) SWIVEL	2	2	2	2	2
2	1438-SS-90-T	HOSE FITTING 3/8" OD X 1/4" ID X 3/8" NPS(F) SWIVEL, 90	-	-	-	-	-
3	—	SHCS M6X1, 16MM LG, 18-8	4	4	4	4	4
4	—	FLAT WASHER, M6, 18-8	4	4	4	4	4
5	—	SERRATED FLANG LOCKNUT,M6X1M	4	4	4	4	4
6	240-5103	LP COLOR STACK, 3 VALVE	1	-	-	-	-
	240-5106	LP COLOR STACK, 6 VALVE	-	1	-	-	-
	240-5109	LP COLOR STACK, 9 VALVE	-	-	1	-	-
	240-5112	LP COLOR STACK, 12 VALVE	-	-	-	1	-
	240-5114	LP COLOR STACK, 14 VALVE	-	-	-	-	1
6a*	CCV-503-SS	COLOR CHANGE VALVE	3	6	9	12	14
7	4-6	FITTING, 1/4" NPS (M) x 3/8" NPS (M)	1	1	1	1	1
8	4-6B	FITTING, 1/4" NPS (M) X 3/8" BSP (M)	-	-	-	-	-
9	4SN-6JIC	FITTING, 1/4" NPS (F) SWIVEL X 3/8" JIC (M)	-	-	-	-	-
10	6SN-6JIC	FITTING, 3/8" NPS (F) SWIVEL X 3/8" JIC (M)	1	1	1	1	1
11	A10857-00	AIR REGULATOR	1	1	1	1	1
12	GA-338	1/8" NPT BACK MOUNT GAUGE (0-160 PSI), 1 1/2" DIA	1	1	1	1	1
13	HGB-510-R1-CO	HGB FLUID PRESSURE REGULATOR ASSEMBLY	1	1	1	1	1
14	FEP-0604	3/8" OD 1/4" ID TEFLON PAINT HOSE, 290 PSI WP	1.25	1.5	1.66	1.83	2.0
15	NHA-375275-BL	3/8" TUBING BLACK	4	4	4	4	4
16	NHA-532	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL NATURAL	4	4	4	4	4
17	NHA-532B	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL BLUE	4	14	31.5	38	42
18	NHA-532G	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL GREEN	3.5	4	4.5	4.75	5
19	NHA-532S	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL SILVER	4	4	4	4	4
20	SSV-809	CHECK VALVE 1/4NPT(M) X 1/4NPT(M)	2	2	2	2	2
21	JML-38-4T	MALE ELBOW 3/8 TUBE X 1/4NPT	1	1	1	1	1
22	JML-532-2T	MALE ELBOW 5/32 TUBE X 1/8NPT	3	6	9	12	14
23	—	BRACKET, REGULATOR	-	-	-	-	-
24	—	BHCS, M5X0.8, 8MM LG, 18-8	-	-	-	-	-

*Part sold separately. See CCV-503-SS Color Change Valve Service Manual for more information on color change valves.

05.7.2 RESIN VALVE STACK WITH MANUAL FLUID PRESSURE REGULATOR

See 77-3118 Low-Pressure Color Change Valve Stacks for servicing and additional information on low-pressure color stacks (part number 240-5100).

**310-6501-0912**

9-valve resin stack, low-pressure air push, manual regulator shown

RESIN VALVE STACK WITH MANUAL FLUID PRESSURE REGULATOR							
Item	Part Number	Description	Quantity/Model				
			-0312	-0612	-0912	-1212	-1412
1	1414-SS-90-T	HOSE FITTING 3/8" OD X 1/4" ID X 1/4" NPS (F) SWIVEL	1	1	1	1	1
2	1438-SS-90-T	HOSE FITTING 3/8" OD X 1/4" ID X 3/8" NPS (F) SWIVEL, 90	1	1	1	1	1
3	—	SHCS M6X1, 16MM LG, 18-8	4	4	4	4	4
4	—	FLAT WASHER, M6, 18-8	4	4	4	4	4
5	—	SERRATED FLANG LOCKNUT, M6X1M	4	4	4	4	4
6	240-5103	LP COLOR STACK, 3 VALVE	1	-	-	-	-
	240-5106	LP COLOR STACK, 6 VALVE	-	1	-	-	-
	240-5109	LP COLOR STACK, 9 VALVE	-	-	1	-	-
	240-5112	LP COLOR STACK, 12 VALVE	-	-	-	1	-
	240-5114	LP COLOR STACK, 14 VALVE	-	-	-	-	1
6a*	CCV-503-SS	COLOR CHANGE VALVE	3	6	9	12	14
7	4-6	FITTING, 1/4" NPS (M) x 3/8" NPS (M)	-	-	-	-	-
8	4-6B	FITTING, 1/4" NPS (M) X 3/8" BSP (M)	1	1	1	1	1
9	4SN-6JIC	FITTING, 1/4" NPS (F) SWIVEL X 3/8" JIC (M)	1	1	1	1	1
10	6SN-6JIC	FITTING, 3/8" NPS (F) SWIVEL X 3/8" JIC (M)	-	-	-	-	-
11	A10857-00	AIR REGULATOR	1	1	1	1	1
12	GA-338	1/8" NPT BACK MOUNT GAUGE (0-160 PSI), 1 1/2" DIA	1	1	1	1	1
13	HGB-609-9-R38	MANUAL FLUID REGULATOR ASSEMBLY	1	1	1	1	1
14	FEP-0604	3/8" OD 1/4" ID TEFLON PAINT HOSE, 290 PSI WP	1.25	1.5	1.66	1.83	2.0
15	NHA-375275-BL	3/8" TUBING BLACK	4	4	4	4	4
16	NHA-532	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL NATURAL	4	4	4	4	4
17	NHA-532B	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL BLUE	4	14	31.5	38	42
18	NHA-532G	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL GREEN	-	-	-	-	-
19	NHA-532S	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL SILVER	4	4	4	4	4
20	SSV-809	CHECK VALVE 1/4NPT(M) X 1/4NPT(M)	2	2	2	2	2
21	JML-38-4T	MALE ELBOW 3/8 TUBE X 1/4NPT	1	1	1	1	1
22	JML-532-2T	MALE ELBOW 5/32 TUBE X 1/8NPT	3	6	9	12	14
23	—	BRACKET, REGULATOR	-	-	-	-	-
24	—	BHCS, M5X0.8, 8MM LG, 18-8	-	-	-	-	-

*Part sold separately. See CCV-503-SS Color Change Valve Service Manual for more information on color change valves.

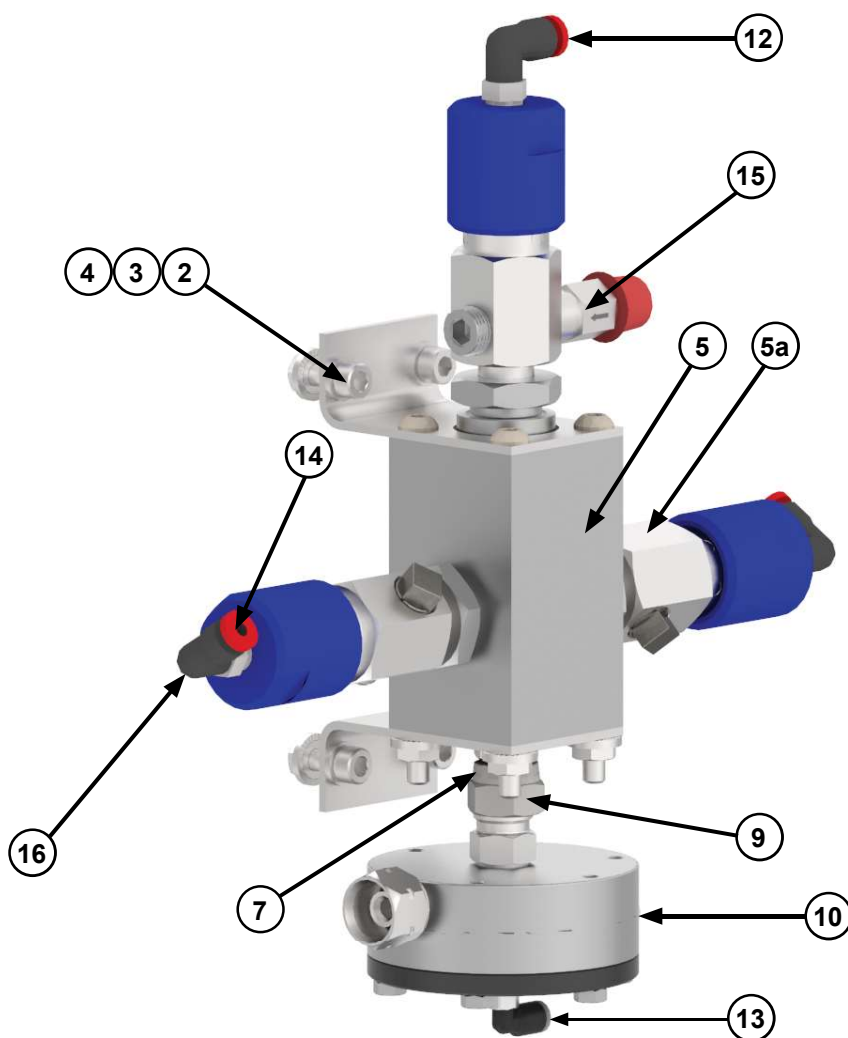
05.7.3 CATALYST VALVE STACK

See 77-3118 Low-Pressure Color Change Valve Stacks for servicing and additional information on low-pressure color stacks (part number 240-5100).

NUMBER OF VALVES
02 - 2 valves
03 - 3 valves
05 - 5 valves

REGULATOR TYPE
00 - Manual Regulator
01 - Automatic Regulator

310-6502-XXXX



310-6502-0301

3-valve catalyst stack, automatic regulator shown

CATALYST COLOR STACK (PART NUMBER 310-6502-XXXX)								
Item	Part Number	Description	Quantity/Model					
			-0200	-0201	-0300	-0301	-0500	-0501
1	1414-SS-90-T	HOSE FITTING 3/8" OD X 1/4" ID X 1/4" NPS (F) SWIVEL	1	2	1	2	1	2
2	—	SHCS M6X1, 16MM LG, 18-8	4	4	4	4	4	4
3	—	FLAT WASHER, M6, 18-8	4	4	4	4	4	4
4	—	SERRATED FLANG LOCKNUT, M6X1M	4	4	4	4	4	4
5	240-5103	LP COLOR STACK, 3 VALVE	-	-	1	1	-	-
	240-5105	LP COLOR STACK, 5 VALVE	-	-	-	-	1	1
	240-5102	LP COLOR STACK, 5 VALVE	1	1	-	-	-	-
5a*	CCV-503-SS	COLOR CHANGE VALVE	3	6	9	12	14	
6	4-6	FITTING, 1/4" NPS (M) X 3/8" NPS (M)	-	1	-	1	-	1
7	4-6JIC	FITTING, 1/4" NPS (M) X 3/8" AN	1	-	1	-	1	-
8	4T-6TF	1/4 NPT (M) X 3/8" TF	1	-	1	-	1	-
9	6SN-6JIC	FITTING, 3/8" NPS (F) SWIVEL X 3/8" JIC (M)	-	1	-	1	-	1
10	HGB-510-R1-CO	HGB FLUID PRESSURE REGULATOR ASSEMBLY	-	1	-	1	-	1
11	FEP-0604	3/8" OD X 1/4" ID TEFLON PAINT HOSE, 290 PSI WP	1.16	1.16	1.16	1.16	1.25	1.25
12	NHA-532	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL NATURAL	4	4	4	4	4	4
13	NHA-532G	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL GREEN	-	3	-	3	-	3
14	NHA-532Y	NHA-4X2.7 5/32" OD X .106" ID NYLON .025" WALL YELLOW	4	4	7	7	14	14
15	SSV-809	CHECK VALVE 1/4NPT (M) X 1/4NPT (M)	1	1	1	1	1	1
16	JML-532-2T	MALE ELBOW 5/32 TUBE X 1/8 NPT	2	2	3	3	5	5

*Part sold separately. See CCV-503-SS Color Change Valve Service Manual for more information on color change valves.

This page intentionally left blank.

06 APPENDIX – KITS, ACCESSORIES, AND SPARES

KITS, ACCESSORIES, AND SPARES		
Part Number	Description	Product Type
310-2002	FLOOR STAND KIT, RF2+	TOP ASSEMBLY
HGB-510-R1-CO	HGB INLET PRESSURE REGULATOR, UP TO 215 PSI	TOP ASSEMBLY
107906	HIGH PRESSURE REGULATOR, AIR PILOT	TOP ASSEMBLY
240-5203	REMOTE COLOR CHANGE KIT - 7 RECIPE (RM2/RF2+)	TOP ASSEMBLY
310-5203	REMOTE COLOR CHANGE KIT - 14 RECIPE (RF2+ ONLY)	TOP ASSEMBLY
310-8020	IN-BOOTH FLUID PANEL KIT - 2 CHANNEL STD	TOP ASSEMBLY
310-8021	IN-BOOTH FLUID PANEL KIT - 3 CHANNEL STD	TOP ASSEMBLY
310-8022	IN-BOOTH FLUID PANEL KIT - 2 CHANNEL FIBEROPTIC	TOP ASSEMBLY
310-8023	IN-BOOTH FLUID PANEL KIT - 3 CHANNEL FIBEROPTIC	TOP ASSEMBLY
310-8030	SCREEN PROTECTOR KIT	SPARE
310-9019	CONNECTOR HEAD - LEGACY FLOWMETER CABLE	SPARE
310-4185-025	GEAR FLOWMETER CABLE, 25 FT, STANDARD PICKUP	SPARE
310-4185-050	GEAR FLOWMETER CABLE, 50 FT, STANDARD PICKUP	SPARE
310-4185-075	GEAR FLOWMETER CABLE, 75 FT, STANDARD PICKUP	SPARE
310-4185-100	GEAR FLOWMETER CABLE, 100 FT, STANDARD PICKUP	SPARE
84-409	MANUAL REGULATOR, LP	TOP ASSEMBLY
HGB-609-9-R38	MANUAL REGULATOR, LP	TOP ASSEMBLY
84-420	MANUAL REGULATOR, HP	TOP ASSEMBLY
101-3069	GAUGE - 3000#	SPARE
72-2341	SWIVEL ADAPTER 100 MESH	SPARE
310-6171	WI-FI AND ANTENNA MODULE	TOP ASSEMBLY
240-5205-1	GUN FLUSH BOX KIT, 1 GUN	TOP ASSEMBLY
240-5205-2	GUN FLUSH BOX KIT, 2 GUN	TOP ASSEMBLY
240-3198-C	FLUSH BOX SADDLE - BINKS 2100	SPARE
240-3198-D	FLUSH BOX SADDLE - BINKS TROPHY TOUCH UP	SPARE
240-3198-F	FLUSH BOX SADDLE - BINKS TROPHY AA	SPARE
240-3198-G	FLUSH BOX SADDLE - DEVILBISS JGA / JGHV	SPARE
240-3198-H	FLUSH BOX SADDLE - RANSBURG VECTOR	SPARE
240-3198-J	FLUSH BOX SADDLE - DEVILBISS GTI PRO LITE	SPARE
240-3198-K	FLUSH BOX SADDLE - DEVILBISS ADVANCE HD	SPARE
240-3198-L	FLUSH BOX SADDLE - RANSBURG RANSFLEX	SPARE
240-3198-M	FLUSH BOX SADDLE - BINKS TROPHY	SPARE
240-3198-X	FLUSH BOX SADDLE - DVX	SPARE
310-4051	SOLENOID BANK ADD-ON KIT W/ECAT	TOP ASSEMBLY
810-2813-32	WALL MOUNTED SOLENOID BANK W/ECAT (32 SOL)	TOP ASSEMBLY
810-2813-64	WALL MOUNTED SOLENOID BANK W/ECAT (64 SOL)	TOP ASSEMBLY
310-6940-01	PRESSURE REGULATOR ADD-ON MODULE, 2 CHANNEL	SPARE
310-6940-02	PRESSURE REGULATOR ADD-ON MODULE, 4 CHANNEL	SPARE
310-6940-03	PRESSURE REGULATOR ADD-ON MODULE, 6 CHANNEL	SPARE
310-6940-04	PRESSURE REGULATOR ADD-ON MODULE, 8 CHANNEL	SPARE

KITS, ACCESSORIES, AND SPARES (CONTINUED)

Part Number	Description	Product Type
310-4046	PRESSURE REGULATOR REMOTE MOUNT KIT2	TOP ASSEMBLY
310-4930	DISCRETE I/O MODULE	SPARE
310-4142	COMMS GATEWAY, ETHERNET IP	SPARE
310-4143	COMMS GATEWAY, PROFINET	TOP ASSEMBLY
310-4144	COMMS GATEWAY, DEVICENET	TOP ASSEMBLY
310-4145	COMMS GATEWAY, CC-LINK	TOP ASSEMBLY
310-4146	COMMS GATEWAY, ETHERCAT	TOP ASSEMBLY
310-4164	COMMS GATEWAY, MODBUS TCP	SPARE
310-6910	PRESSURE REGULATOR CONTROL MODULE, 2 CHANNEL	SPARE
310-6911	PRESSURE REGULATOR CONTROL MODULE, 4 CHANNEL	SPARE
KK-4841	CCV REPAIR KIT, LP	SPARE
240-2048	HP CCV SEAL KIT, NEEDLE	SPARE
240-2049	HP CCV SEAL KIT, SEAT	SPARE
240-5136-300	DISPENSE PUMP ASSEMBLY, 300CC	SPARE
240-5136-600	DISPENSE PUMP ASSEMBLY, 600CC	SPARE
240-5141	PUMP REBUILD KIT, 300CC	SPARE
240-5142	PUMP REBUILD KIT, 600CC	SPARE
77052-00	MVR REPAIR KIT, WEEPLESS	SPARE
TR-SSMM-151	AIR DIAPHRAGM, MVR ASSEMBLY (WEEPING ONLY)	SPARE
78783-00	COMPRESSION SPRING, MVR (WEEPING ONLY)	SPARE
SSG-8125-K6	KIT, O-RING, PTFE (WEEPING ONLY)	SPARE
310-4002	15" HMI, PROGRAMMED	SPARE
76623-00	#0 MVR NEEDLE, WEEPLESS	SPARE
76623-01	#1 MVR NEEDLE, WEEPLESS	SPARE
76623-02	#2 MVR NEEDLE, WEEPLESS	SPARE
76623-03	#3 MVR NEEDLE, WEEPLESS	SPARE
76623-04	#4 MVR NEEDLE, WEEPLESS	SPARE
TR-SSMM-145	#0 MVR NEEDLE, WEEPING	SPARE
TR-SSMM-146	#1 MVR NEEDLE, WEEPING	SPARE
TR-SSMM-149	#2 MVR NEEDLE, WEEPING	SPARE
TR-SSMM-150	#3 MVR NEEDLE, WEEPING	SPARE
TR-SSMM-226	#4 MVR NEEDLE, WEEPING	SPARE
22-280	CHECK VALVE	SPARE
SSV-809	CHECK VALVE	SPARE
240-2061	PULSE VALVE ASSEMBLY	SPARE
240-2062	PULSE VALVE REPAIR KIT	SPARE
240-2063	VARIABLE PULSE VALVE SEAT HOUSING ORIFICE SET (0.010 - 0.050)	SPARE
240-2064	VARIABLE PULSE VALVE ASSEMBLY	SPARE
240-2065	VARIABLE PULSE VALVE REPAIR KIT	SPARE
6-1306	REPAIR KIT, HP FLUID REGULATOR, MANUALLY-OPERATED	SPARE
LSMM0056-00	STATIC MIXER INCLUDING JACKET	SPARE

KITS, ACCESSORIES, AND SPARES (CONTINUED)		
Part Number	Description	Product Type
310-3915	PROPORTIONAL VALVE, INDIVIDUAL REPLACEMENT	SPARE
310-3925	SOLENOID VALVE, INDIVIDUAL REPLACEMENT	SPARE
810-2813-32	32 SOLENOID ADD ON KIT	SPARE
810-2813-64	64 SOLENOID ADD ON KIT	SPARE
13742-02	AIR FLOW SWITCH, LOW FLOW	SPARE
13742-01	AIR FLOW SWITCH	SPARE
310-3905-SS	AIR CUTOFF KIT, 2 GUNS (REQUIRED FOR RF2+ MANUAL CUSTOM SYSTEMS)	SPARE
240-5189	AIR CUT OFF VALVE	SPARE
CCV-503-SS	CCV VALVE, LP	SPARE
240-2012	CCV VALVE, HP	TOP ASSEMBLY
310-9000	GEAR FLOW METER KIT INCLUDING DUAL PROBE PICKUP	SPARE
310-9010	GEAR FLOWMETER BODY	SPARE
310-9011	GEAR FLOWMETER DUAL PROBE PICKUP	SPARE
310-9016	GEAR FLOWMETER SHAFT	SPARE
310-9015	GEAR FLOW METER GEAR	SPARE
310-9017-K5	GEAR FLOWMETER SEAL KIT, 5 PACK	SPARE
310-9021	ACID COMPATILBE FLOW METER GEAR ONLY	SPARE
310-9013	FLOWMETER BODY, ACID COMPATIBLE	SPARE
310-9012	FIBEROPTIC PICK UP, GEAR FLOW METER	SPARE
310-9024	FIBER OPTIC GEAR FLOW METER PICK UP BATTERY	SPARE
A13296-00	PISTON FLOW METER	SPARE
310-3415	PISTON FLOW METER CABLE ASSEMBLY	SPARE
310-3400-6	CORIOLIS METER UPGRADE KIT	SPARE
240-5410	ATEX ZONE 1 CORIOLIS METER KIT	SPARE
HGB-510-R1-CO	HGB FLUID REGULATOR, AIR-PILOTED	TOP ASSEMBLY
HGB-609-9-R38	HGB FLUID REGULATOR, MANUALLY-OPERATED	TOP ASSEMBLY
84-420	MANUAL FLUID REGULATOR, HP	TOP ASSEMBLY
76624-02	MVR ASSEMBLY, #2 WEEPLESS	SPARE
76624-03	MVR ASSEMBLY, #3 WEEPLESS	SPARE
76624-04	MVR ASSEMBLY, #4 WEEPLESS	SPARE
TR-SSMM-147	MVR ASSEMBLY, #2 WEEPING	SPARE
TR-SSMM-148	MVR ASSEMBLY, #3 WEEPING	SPARE
TR-SSMM-225	MVR ASSEMBLY, #4 WEEPING	SPARE
78015-00	MIX MANIFOLD ASSEMBLY, LP, WITH SOLVENT FLUSH	SPARE
LBAL0016-00	MIX MANIFOLD ASSEMBLY, HP	SPARE

This page intentionally left blank.

MANUAL CHANGE SUMMARY

Date	Description	Version
05/2026	Initial release	R1.0

This page intentionally left blank.

WARRANTY POLICY

This product is covered by Binks' materials and workmanship limited warranty.

The use of parts or accessories from sources other than Binks will void all warranties. Failure to follow reasonable maintenance guidance provided can invalidate the warranty.

For specific warranty information, please contact Binks.

For technical assistance or to locate an authorized distributor, contact one of our international sales and customer support locations listed below.

REGION	BINKS CONTACT
Americas	Tel: 1-800-992-4657
Europe, Africa, Middle East	Tel: +4401202571111
India	marketingroa@binks.com
China	Tel: +862133730108
Korea	Tel: +82313663303
Japan	Tel: +81457856421
Australia	Tel: +61085257555

WARRANTY PAGE





Binks

Binks is a global leader in innovative finishing technologies.
Binks reserves the right to modify equipment specifications without prior notice.
Binks®, DeVilbiss® and Ransburg® are registered trademarks of Binks US, LLC.