

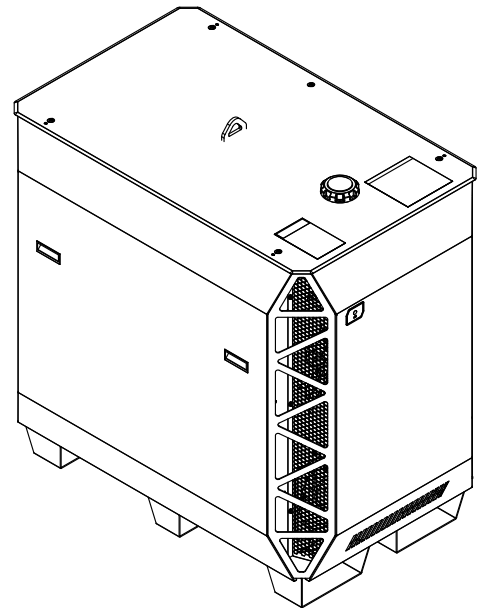
# 9

## Parts List

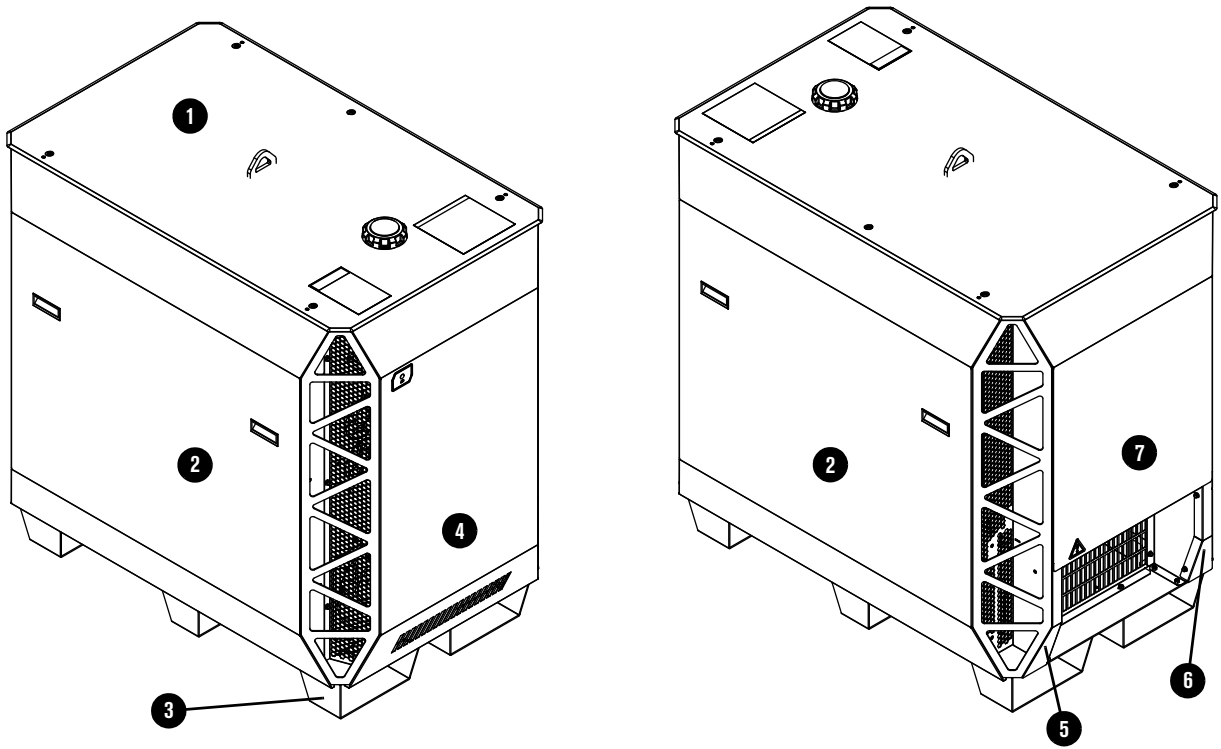
### Plasma power supply

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Part number	Voltage (AC)
078620	200
078621	208
078622	220
078623	240
078624	380
078625	400
078626	415
078627	440
078628	480
078629	600

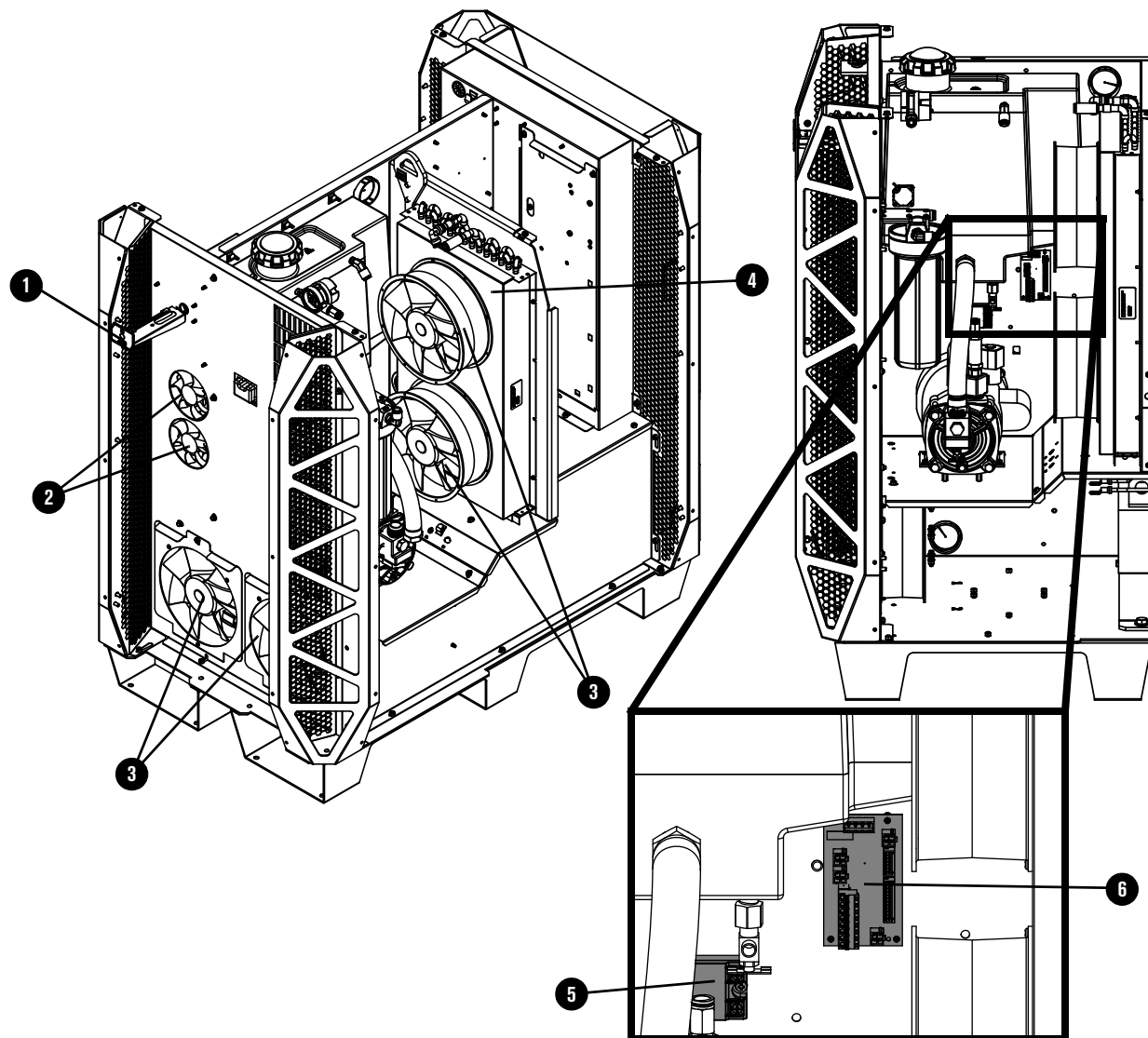


## Outer panels



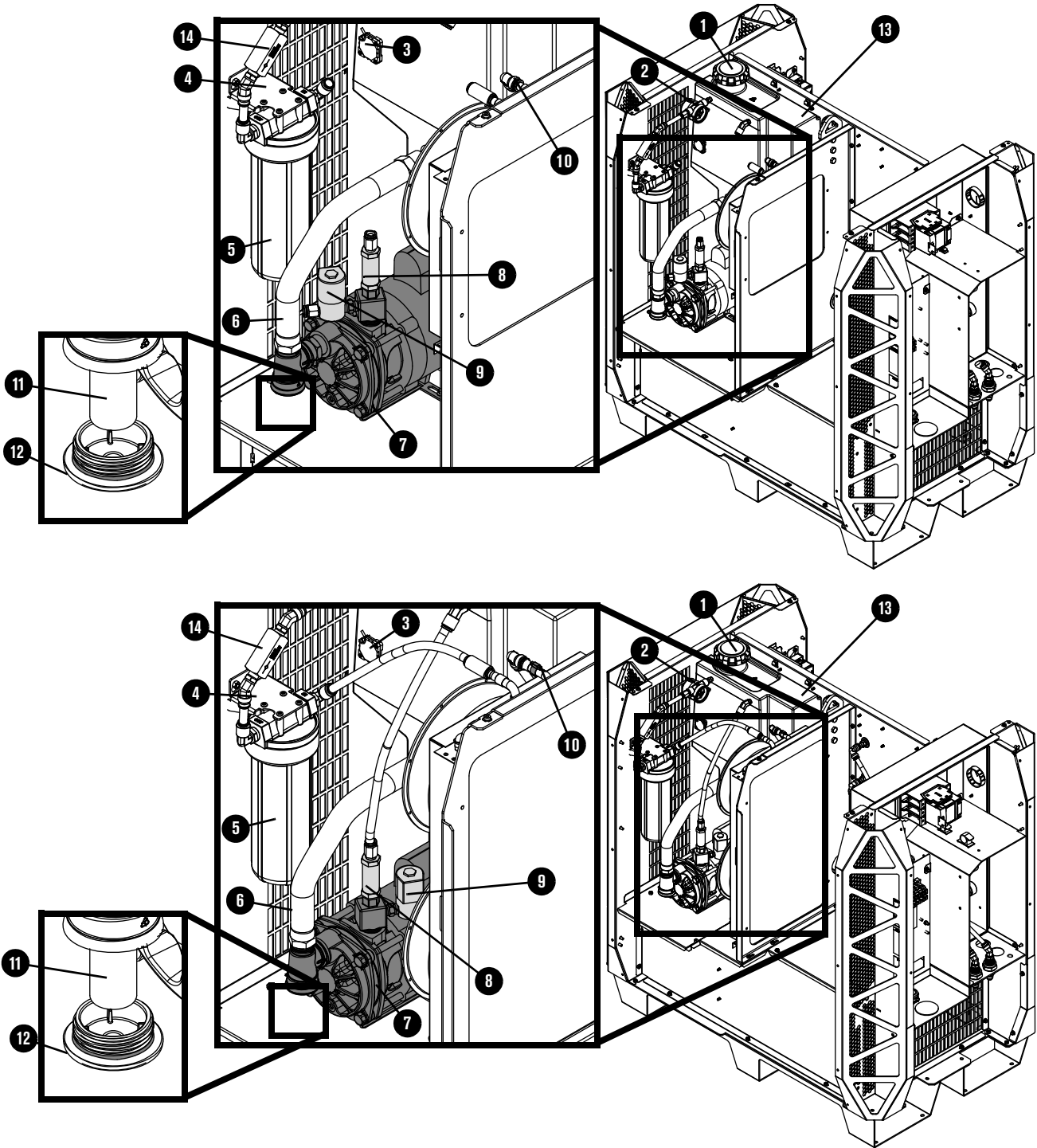
	Part number	Description	Quantity
1	428728	Top panel with labels	1
2	428727	Side panel with labels and handles	2
3	101300	Base	1
4	428725	Front panel with "H" (not shown) and power-indicator LED label	1
5	101314	Lower right (liquid-cooling) rear corner panel	1
6	101307	Lower left (control) rear corner panel	1
7	428726	Rear panel with label and handles	1

# Fans



Part number	Description	Designator	Quantity	
1	429002	Power-indicator LED	–	1
2	229821	Fan: 292 cfm, 48 VDC, 120 mm (4.7 inch) diameter	CAB FAN3, CAB FAN4	2
3	229822	Fan: 890 cfm, 48 VDC, 254 mm (10 inch) diameter	HX FAN1, HX FAN2, MAG FAN1, MAG FAN2	4
4	229717	Heat-exchanger only	–	1
5	003266	Solid state relay	–	1
6	141384	Fan power distribution PCB	PCB6	1

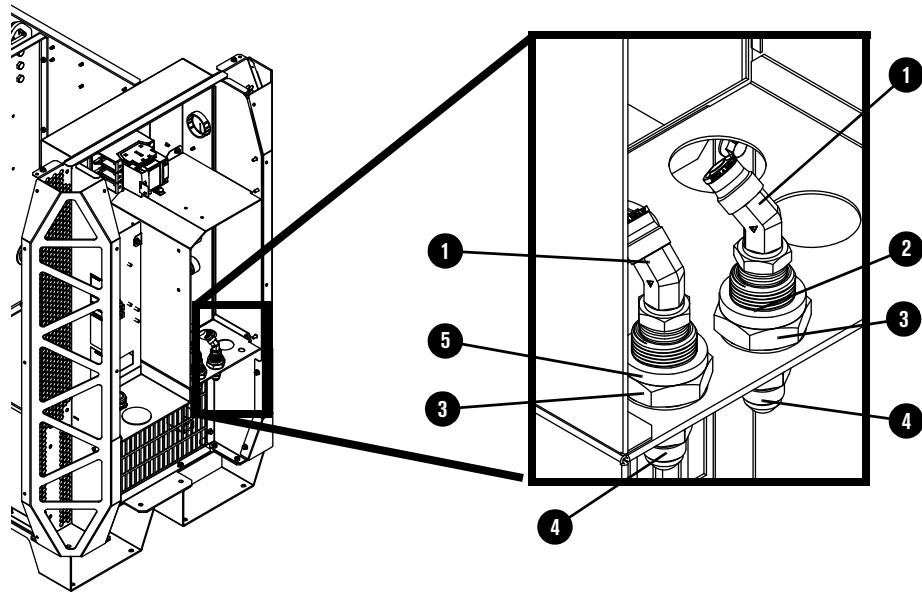
# Coolant system



Part number	Description	Quantity
1	Coolant reservoir cap	1
2	Coolant flow meter	1
3	Coolant level sensor	1
4	Coolant filter bracket	1

	Part number	Description	Quantity
<b>5</b>	127344	Coolant filter housing	1
	027005	Coolant filter (fine)	1
<b>6</b>	229777	Coolant hose (1 inch)	1
<b>7</b>	428729	Coolant pump and motor assembly: Adapter: 1-5/8 inch X 1 inch NPT X #16 JIC Plug with O-ring Coolant pump screen (coarse) Pump and motor Adapter: 1 inch MNPT X 1 inch MNPT hexagonal collar Adapter: 1 inch MNPT X 3/8 inch FNPT X 1/4 inch FNPT Adapter: 3/8 inch hexagonal Coolant solenoid valve assembly	1
<b>8</b>	006132	Coolant bypass check valve	1
<b>9</b>	229721	Coolant solenoid valve assembly	1
<b>10</b>	229654	Thermistor: Copper pipe clip with electrical connector	1
<b>11</b>	127559	Coolant pump screen (coarse)	1
<b>12</b>	229843	Plug and O-ring	1
<b>13</b>	002561	Coolant reservoir	1
<b>14</b>	006113	Coolant check valve	1
	428330	Kit: Tubing (1 inch hose not included)	1

## Coolant adapters in the rear compartment

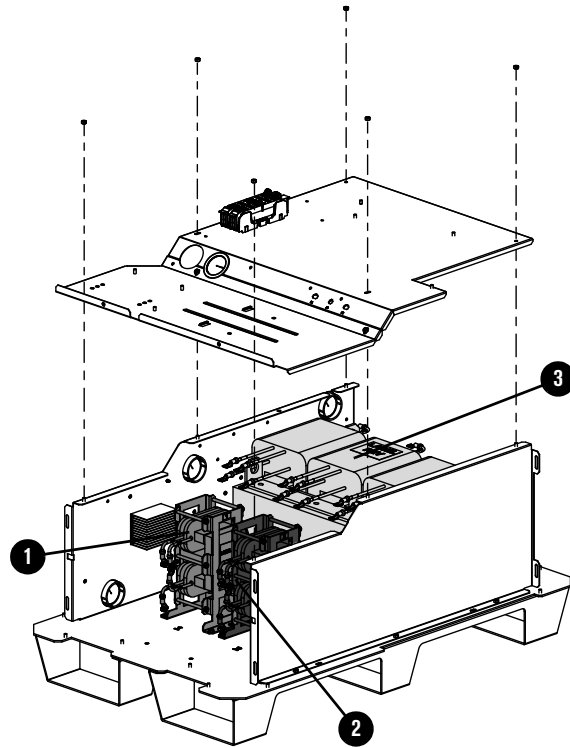


Part number	Description	Quantity
1 015889	Elbow adapter: 1/2 inch NPT X 1/2 inch tube, 45° swivel	2
2 015903	Red ring: 1.13 inches inner diameter	1
3 015888	Adapter: 1/2 inch FNPT X 1-1/2 inch length bulkhead	2
015899	Red ring: 0.87 inch inner diameter (not shown)	1
4 015029	Adapter: 1/2 inch NPT X #8 male	2
015898	Green ring: 0.87 inch inner diameter (not shown)	1
5 015902	Green ring: 1.13 inch inner diameter	1

## Other adapters not shown

Part number	Description	Location	Quantity
015669	Male adapter: 3/8 inch NPT X 1/2 inch tube	in coolant solenoid valve	1
006099	Coolant drain valve: 1/4 inch NPT X 3/8 inch tube	in the bottom of the coolant reservoir	1
015073	Adapter: 1/4 inch NPT X 1/4 FPT	in the bottom of the coolant reservoir	1
015738	Elbow adapter: 1/4 inch NPT X 1/2 inch tube, 45° swivel	in the top of the coolant reservoir	1
015510	Adapter: 1/4 inch X hexagonal collar	between the flow meter and coolant reservoir	1
015663	Adapter: 1/4 inch NPT X 1/2 inch tube	in the flow meter and coolant bypass check valve	2
015668	Elbow adapter: 1/2 inch NPT X 1/2 inch tube, 90°	in the coolant filter (fine) assembly	2
104807	Nut for chopper fitting	on the back of choppers	4
015815	Elbow fitting: 1/2 inch tube X 1/2 inch tube, 90°	on the back of the choppers (4) and the heat-exchanger inlet (1)	5
015820	Fitting: 1/2 inch tube X 1/2 inch tube	heat-exchanger outlet	1

## Transformers and inductors

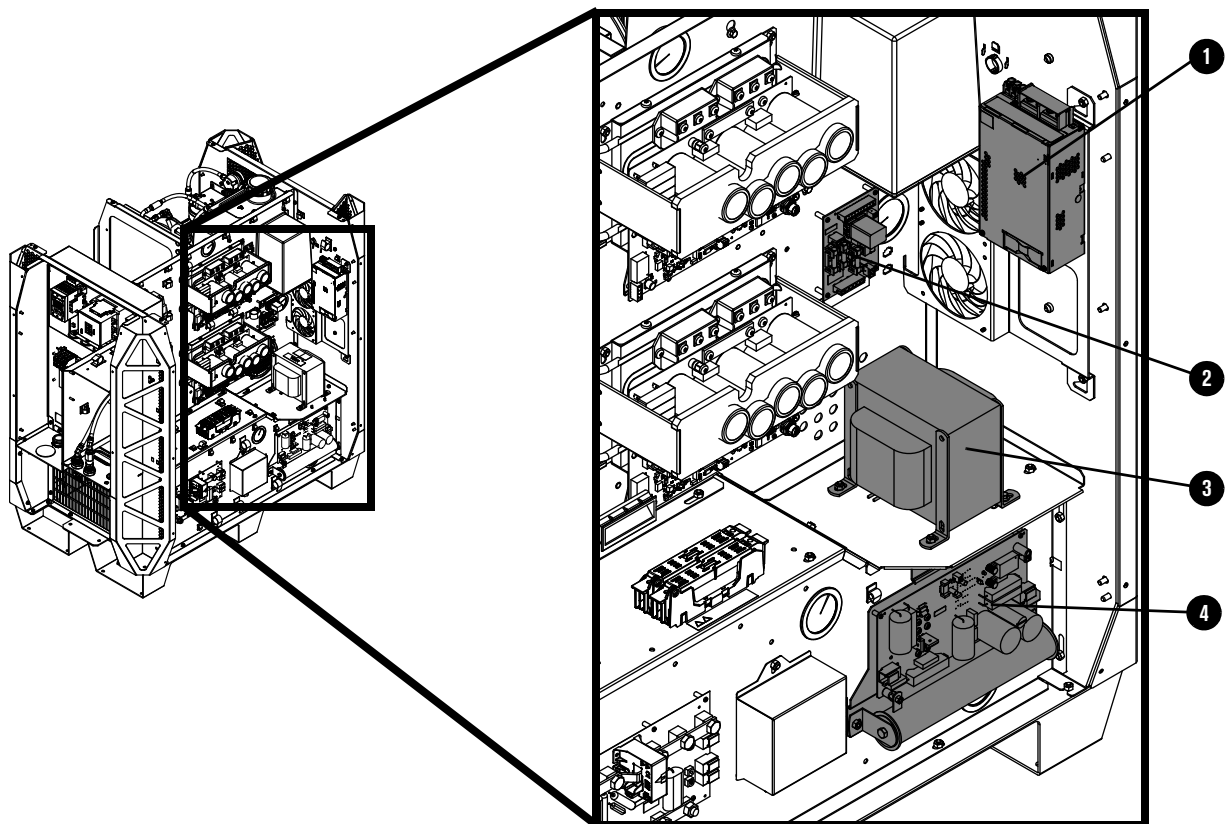


Part number	Description	Designator	Quantity	
1	Kit: Inductor 1A (top)/1B (bottom)	L1	1	
2	Kit: Inductor 2A (top)/2B (bottom)	L2	1	
3	Transformer, horizontal, 66.5 kW, 3-phase*	T2	1	
	–			200 V, 50 Hz – 60 Hz
	–			208 V, 60 Hz
	–			220 V, 50 Hz – 60 Hz
	–			240 V, 60 Hz
	–			380 V, 50 Hz – 60 Hz
	–			400 V, 50 Hz
	–			415 V, 50 Hz
	–			440 V, 50 Hz – 60 Hz
	–			480 V, 60 Hz
–	600 V, 60 Hz			

\* You cannot purchase this part. Shown for reference only.

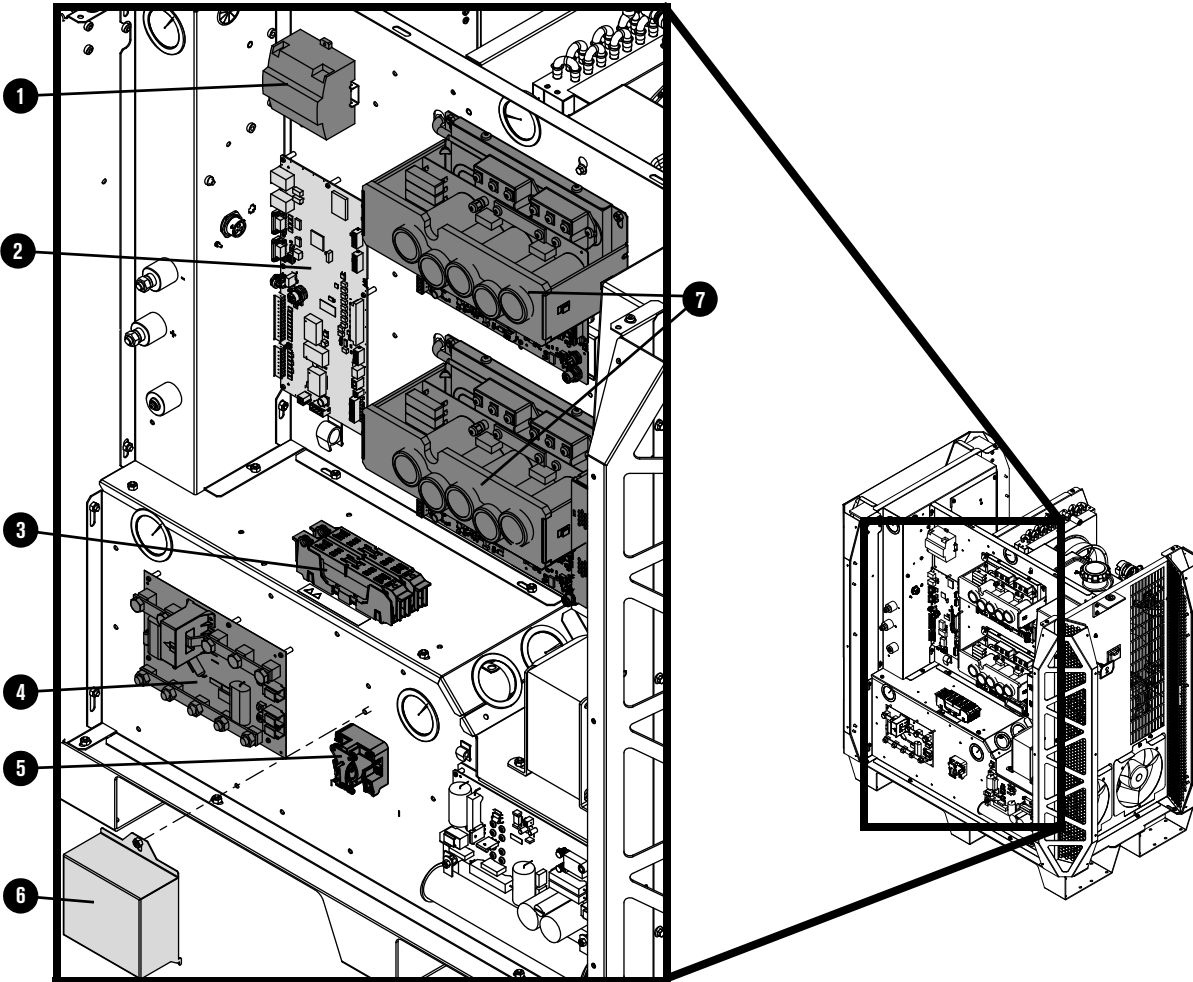


Control side – view 1



Part number	Description	Designator	Quantity	
1	229671	Power source: 88 VAC – 264 VAC to 48 VDC, 600 W	PS2	1
2	141425	Power distribution PCB	PCB7	1
	108709	Fuse: 10 A, 250 VAC, time delay (on PCB7)	F3, F4, F5	3
<b>Control transformer assembly, 3 kVA</b>				
3	229809	200 V, 50 Hz – 60 Hz	T1	1
	229810	208 V, 60 Hz, 3 kVA		
	229811	220 V, 50 Hz – 60 Hz		
	229812	240 V, 60 Hz		
	229813	380 V, 50 Hz		
	229814	400 V, 50 Hz		
	229815	415 V, 50 Hz		
	229816	440 V, 50 Hz – 60 Hz		
	229794	480 V, 60 Hz		
	229817	600 V, 60 Hz		
4	229678	Start circuit assembly	PCB4	1

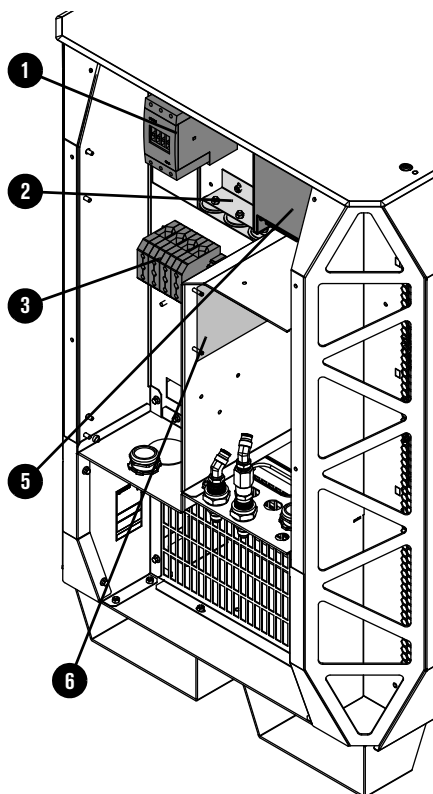
Control side – view 2



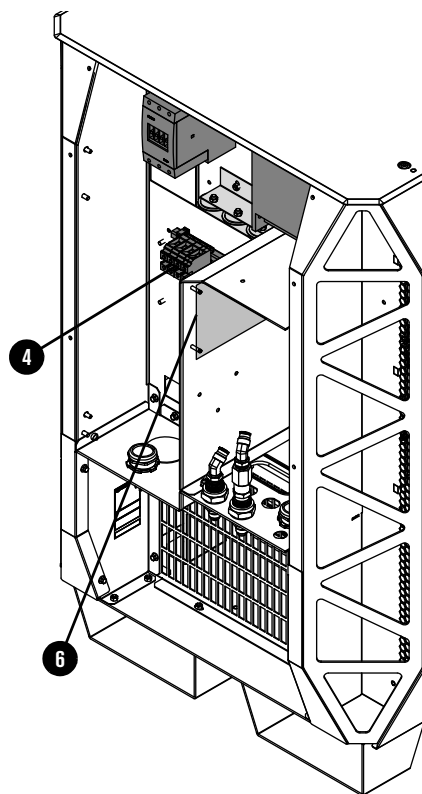
Part number	Description	Designator	Quantity	
1	229640	Power source: 88 VAC – 264 VAC to 24 VDC	PS1	1
2	428750	Control PCB	PCB1	1
3	208394	Fuse holder: 2P, 30 A, 600 V	–	1
	208395	Fuse: 8 A, 600 V, Class R (used in 380 V, 400 V, 415 V, 440 V, 480 V, 600 V)	F1, F2	2
	208397	Fuse: 15 A, 600 V, Class R (used in 200 V, 208 V, 220 V, 240 V)		
4	141371	I/O PCB	PCB5	1
5	003277	Pilot arc relay: 24 VDC, coil, 60 A 28 VDC contacts	CR1	1
6	101316	Pilot arc relay cover	–	1
7	229679	Chopper assembly	Chopper 1, Chopper 2	2

Part number	Description	Designator	Quantity
229711	XPR300 wire harness	–	1
223399	CAN cable 0.5 m (1.6 ft) (not shown) Located between the control PCB and Chopper 2.	–	1
223400	CAN cable 1 m (3.3 ft) (not shown) Located between Chopper 2 and Chopper 1.	–	1

### Rear compartment of the plasma power supply



200 V, 208 V, 220 V, 240 V plasma power supplies

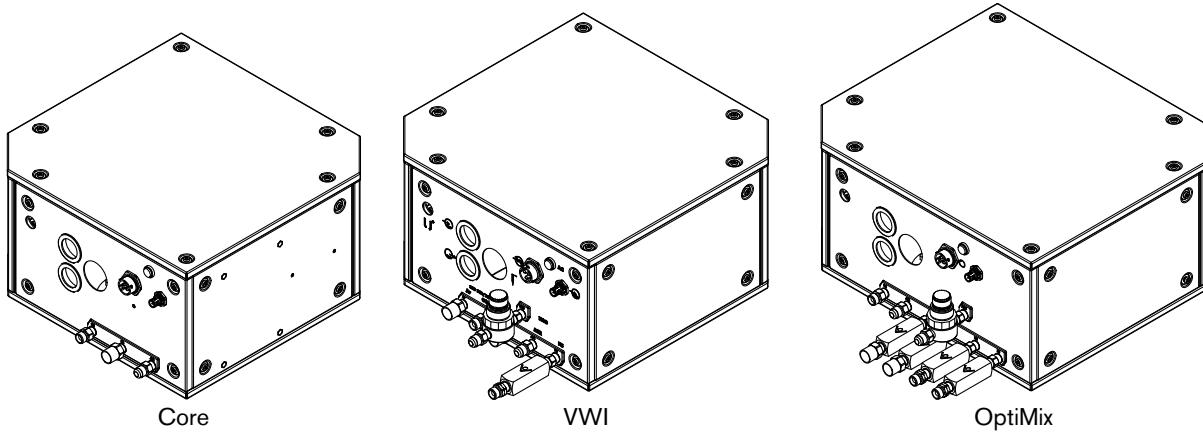


380 V, 400 V, 415 V, 440 V, 480 V, 600 V plasma power supplies

Part number	Description	Designator	Quantity
1 229697	Inrush contactor assembly: 80 A, IEC AC-3, 3-phase, 120 VAC	IR_CON	1
2 209274	Inrush resistor assembly, 2 Ω X 3	–	1
3 229033	Terminal block 600 V, 200 A (200 V, 208 V, 220 V, 240 V, 380 V, 400 V, 415 V)	TB1	1
4 029316	Terminal block 600 V, 140 A (380 V, 440 V, 480 V, 600 V)		

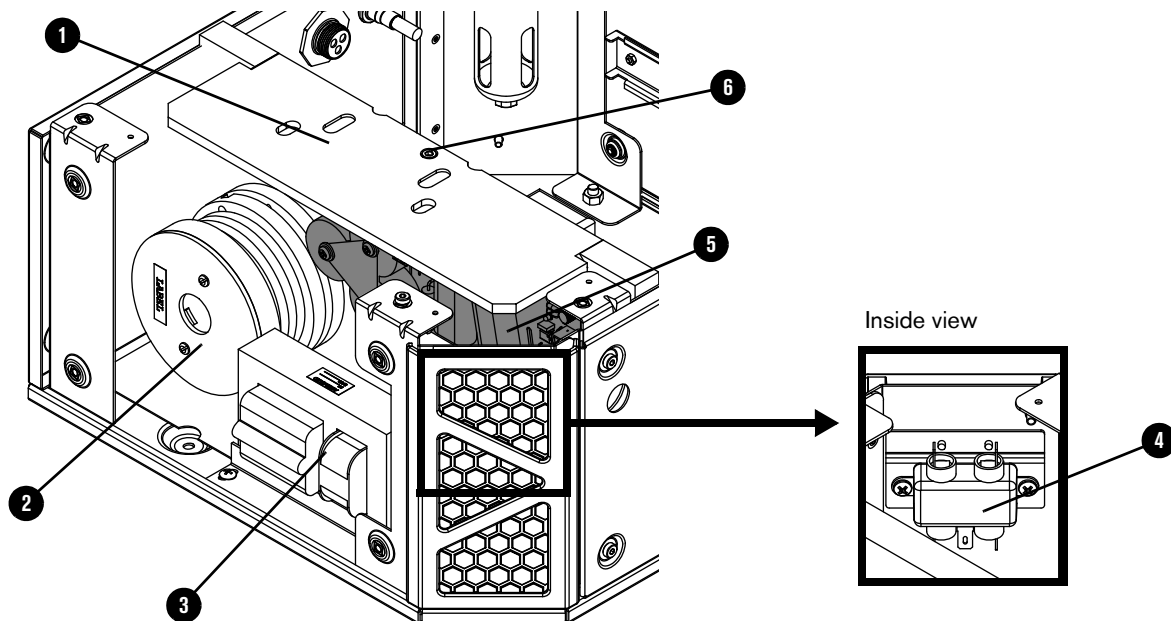
	Part number	Description	Designator	Quantity
5	003276	Main contactor (200 V, 208 V, 220 V, 240 V)	M_CON	1
	429060	Main contactor assembly (380 V, 400 V, 415 V, 440 V, 480 V, 600 V)		
6	141511	VDC3 PCB (Optional, for use with RS-422 and discrete cutting systems)	-	1

## Gas connect consoles



Part number	Description
078631	Core gas connect console
078632	VWI gas connect console
078633	OptiMix gas connect console

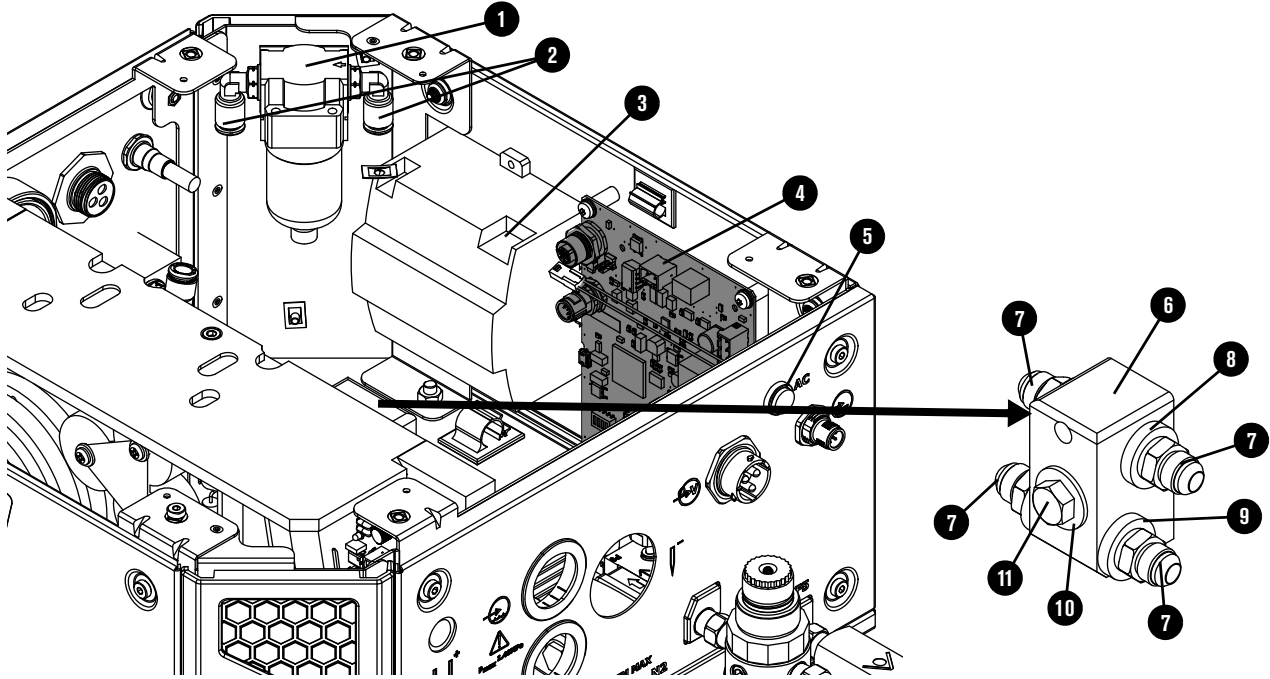
### Gas connect console high-voltage side parts



Part number	Description	Console	Designator	Quantity	
1	002570	Insulator	Core, VWI, OptiMix	–	1
2	229837	Coil assembly	Core, VWI, OptiMix	T2	1
3	229838	High-frequency, high-voltage transformer	Core, VWI, OptiMix	T1	1
4	009045	EMI filter	Core, VWI, OptiMix	–	1
5	141354	High-frequency, high-voltage ignition PCB	Core, VWI, OptiMix	PCB2	1
6	075678	Socket head cap screw: M5 – 0.8 X 10 mm hexagonal	Core, VWI, OptiMix	–	1

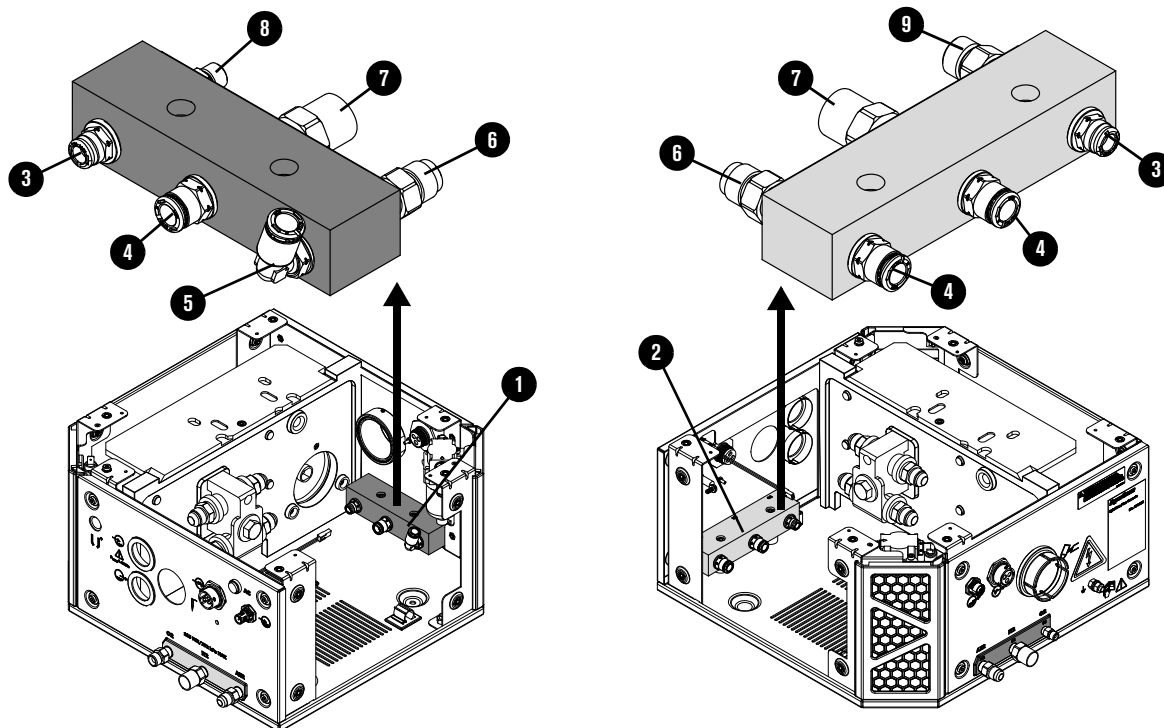
## Gas connect console manifold side parts

### Core, VWI, and OptiMix gas connect console manifold side



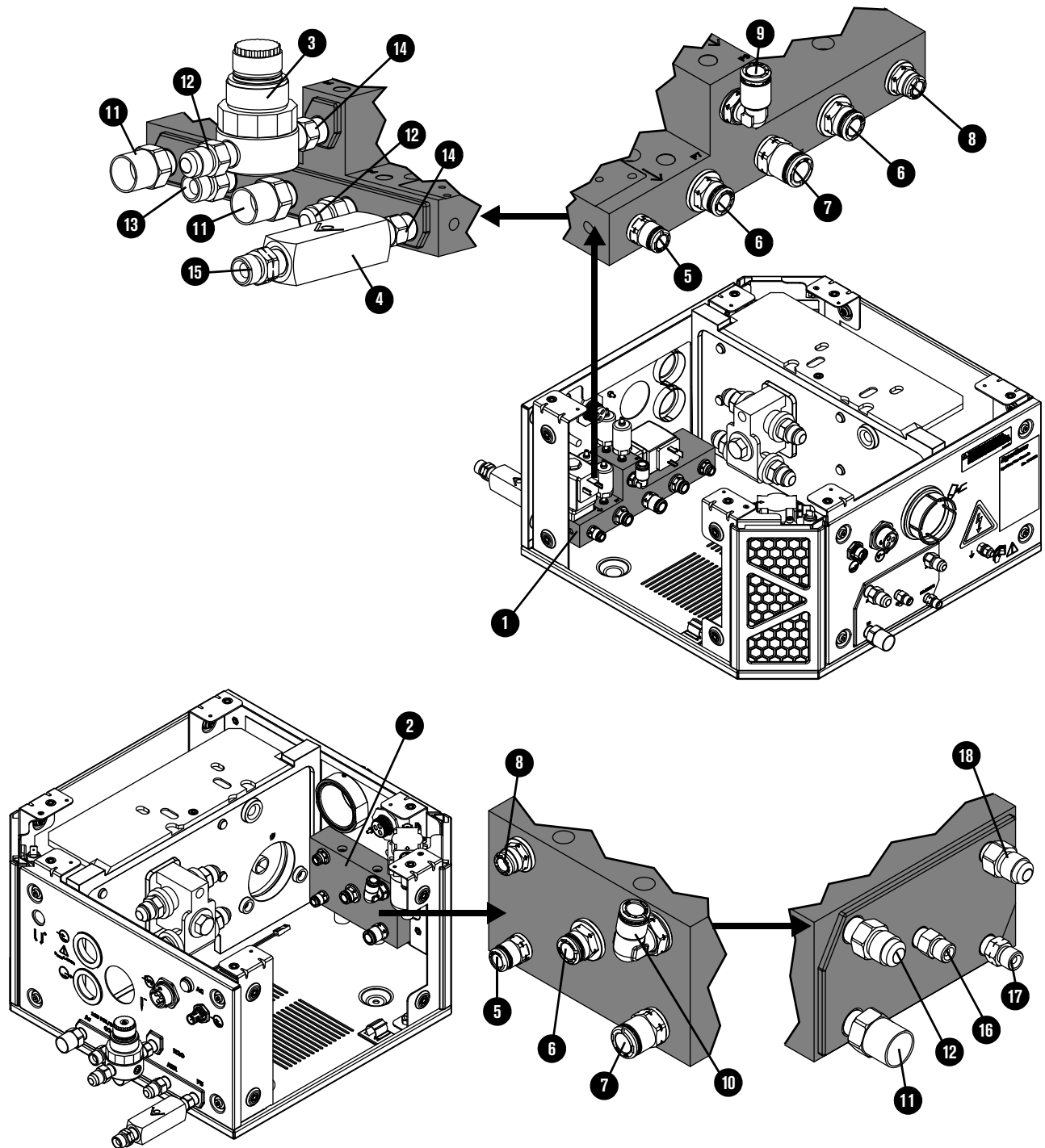
Part number	Description	Console	Designator	Quantity	
1	011151	Air filter assembly	Core, VWI, OptiMix	–	1
	011110	Air filter element	Core, VWI, OptiMix	–	1
2	015853	Male elbow adapter: 1/4 inch NPT X 5/16 inch tube	Core, VWI, OptiMix	–	2
3	229640	Power source: 88 VAC – 264 VAC to 24 VDC	VWI, OptiMix only	–	1
4	141375	Control PCB	Core, VWI, OptiMix	PCB1	1
5	229825	Green power-indicator LED assembly	Core, VWI, OptiMix	–	1
6	104757	Coolant manifold	Core, VWI, OptiMix	–	1
7	015029	Adapter: 1/2 inch NPT X #8 male	Core, VWI, OptiMix	–	4
8	015898	Green ring: 0.87 inches inner diameter	Core, VWI, OptiMix	–	2
9	015899	Red ring: 0.87 inches inner diameter	Core, VWI, OptiMix	–	2
10	075218	Washer	Core, VWI, OptiMix	–	1
11	075140	Bolt	Core, VWI, OptiMix	–	1

### Core gas connect console manifolds and adapters



Part number	Description	Quantity
1	104806 Manifold: Gas output (no adapters)	1
2	104802 Manifold: Gas input (no adapters)	1
<b>Push-to-connect adapters</b>		
3	015876 1/4 inch NPT X 1/4 inch tube	2
4	015811 1/4 inch NPT X 8 mm tube	3
5	015853 Male elbow: 1/4 inch NPT X 5/16 inch tube	1
<b>Threaded adapters with thread sealant applied</b>		
6	015012 1/4 inch NPT X #6 male (air output and input)	2
7	015103 1/4 inch NPT X RH 'B' inert female (nitrogen output and input)	2
8	015116 1/8 inch NPT X RH 'A' male (oxygen output)	1
9	015009 1/4 inch NPT X RH 'B' male (oxygen input)	1

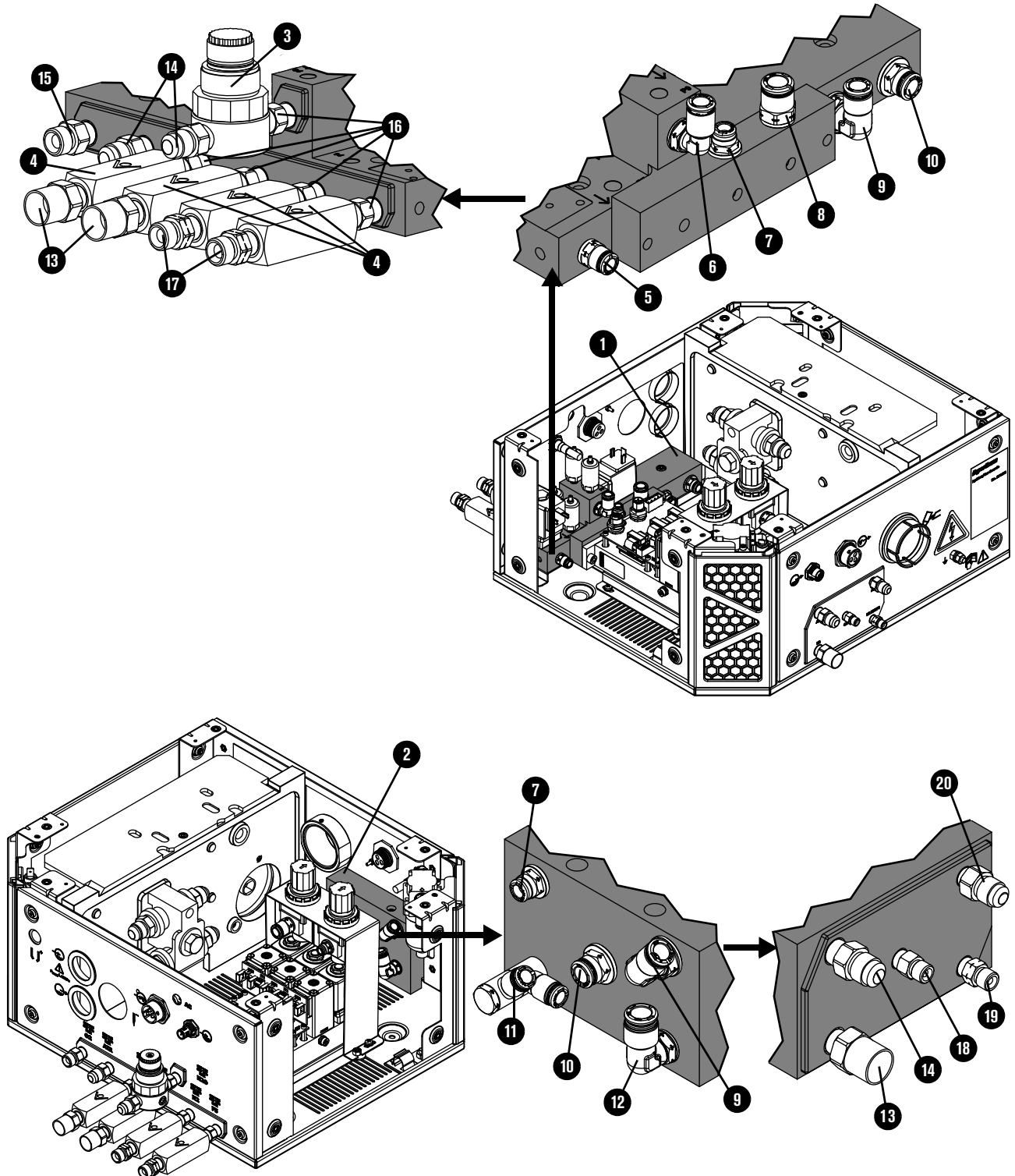
VWI gas connect console input and output manifolds and adapters





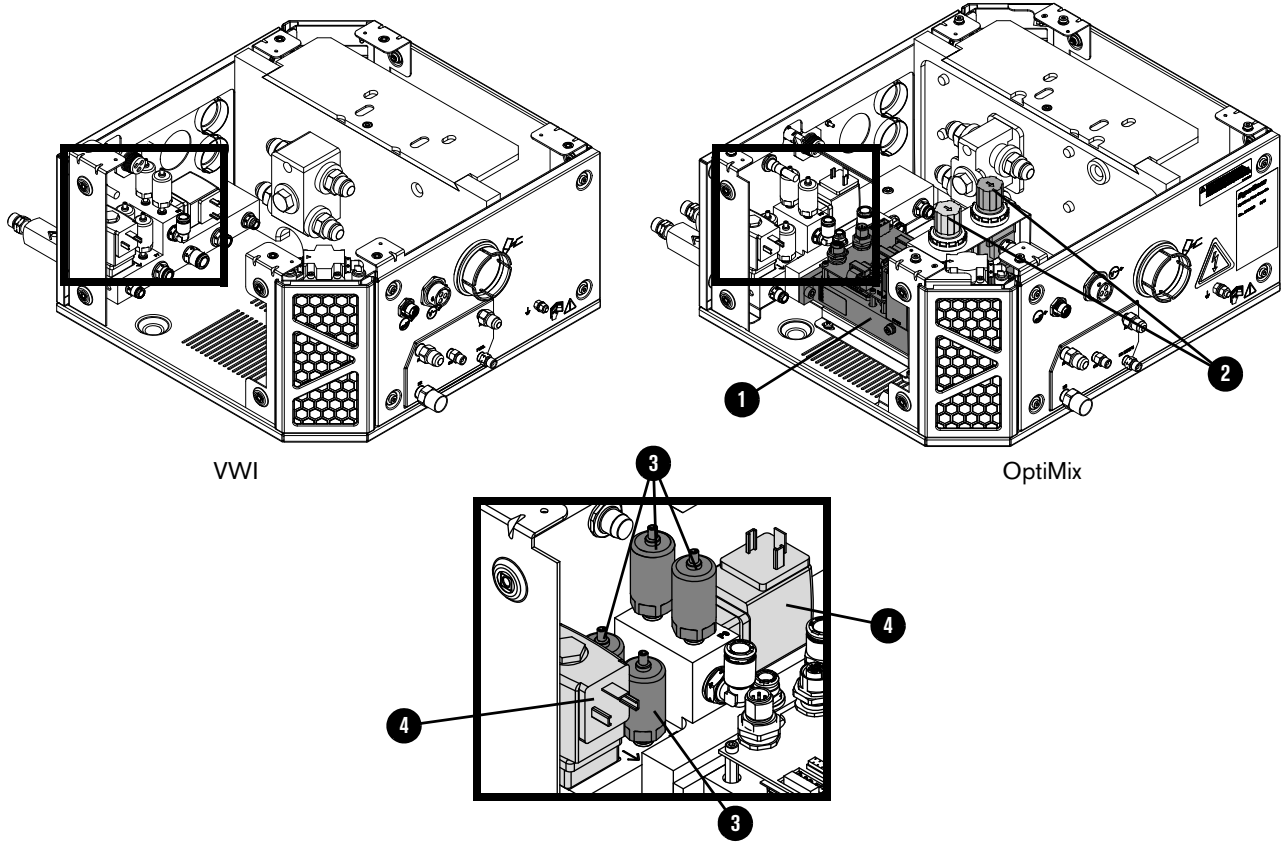
	Part number	Description	Quantity
1	229792	Manifold: Gas input (no adapters)	1
2	104843	Manifold: Gas output (no adapters)	1
3	229844	Water regulator	1
4	006157	Check valve	1
	<b>Push-to-connect adapters</b>		
5	015905	1/8 inch NPT X 1/4 inch tube	2
6	015910	3/8 inch NPT X 5/16 inch tube	2
7	015907	1/4 inch NPT X 3/8 inch tube	1
8	015876	1/4 inch NPT X 1/4 inch tube	1
9	015853	Elbow: 1/4 inch NPT X 5/16 inch tube, 90°	1
10	015909	Elbow: 3/8 inch NPT X 5/16 inch tube, 90°	–
	<b>Threaded adapters with thread sealant applied</b>		
11	015103	1/4 inch NPT X RH 'B' inert female	3
12	015012	1/4 inch NPT X #6 male	3
13	015009	1/4 inch NPT X RH 'B' male	1
14	015922	1/4 inch X hexagonal collar	2
15	015230	1/4 inch NPT X LH 'B'	1
16	015116	Adapter: 1/8 inch NPT X RH 'A' (oxygen outlet)	1
17	015210	Adapter: 1/8 inch NPT X LH 'A' male (hydrogen mix outlet)	1
18	015197	Adapter: 1/8 inch NPT X #5 male (argon outlet)	1

OptiMix gas connect console input and output manifolds and adapters



	Part number	Description	Quantity
1	229793	Manifold: Gas input (no adapters)	1
2	104843	Manifold: Gas output (no adapters)	1
3	229844	Water regulator	1
4	006157	Check valve	4
	<b>Push-to-connect adapters</b>		
5	015905	1/8 inch NPT X 1/4 inch tube	1
6	015853	Elbow: 1/4 inch NPT X 5/16 inch tube	1
7	015876	1/4 inch NPT X 1/4 inch tube	1
8	015907	1/4 inch NPT X 3/8 inch tube	1
9	015909	Elbow: 3/8 inch NPT X 5/16 inch tube	1
10	015910	3/8 inch NPT X 5/16 inch tube	1
11	015906	Dual connection: 1/8 inch NPT X 1/4 inch tube	1
12	015908	Elbow: 1/4 inch NPT X 3/8 inch tube	1
	<b>Threaded adapters with thread sealant applied</b>		
13	015103	1/4 inch NPT X RH 'B' inert female	3
14	015012	1/4 inch NPT X #6 male	3
15	015009	1/4 inch NPT X RH 'B' male	1
16	015922	1/4 inch X hexagonal collar	5
17	015230	1/4 inch NPT X LH 'B'	1
18	015116	1/8 inch NPT X RH 'A'	1
19	015210	1/8 inch NPT X LH 'A'	1
20	015197	1/8 inch NPT X #5	1

VWI and OptiMix gas connect console mixer, transducers, and valves

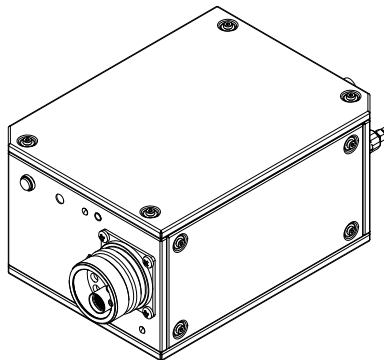


Part number	Description	Console	Designator	Quantity	
1	229703	Mixer module	OptiMix	–	1
	528057	Kit: Mixer module and cable ties	OptiMix	–	1
2	011101	Regulator	OptiMix	–	2
3	223398	Pressure transducer	VWI and OptiMix	P6 – P9	4
4	006167	Solenoid valve	VWI and OptiMix	B4, B5	2

## Gas connect console wire harness, hose kit, and CAN cables

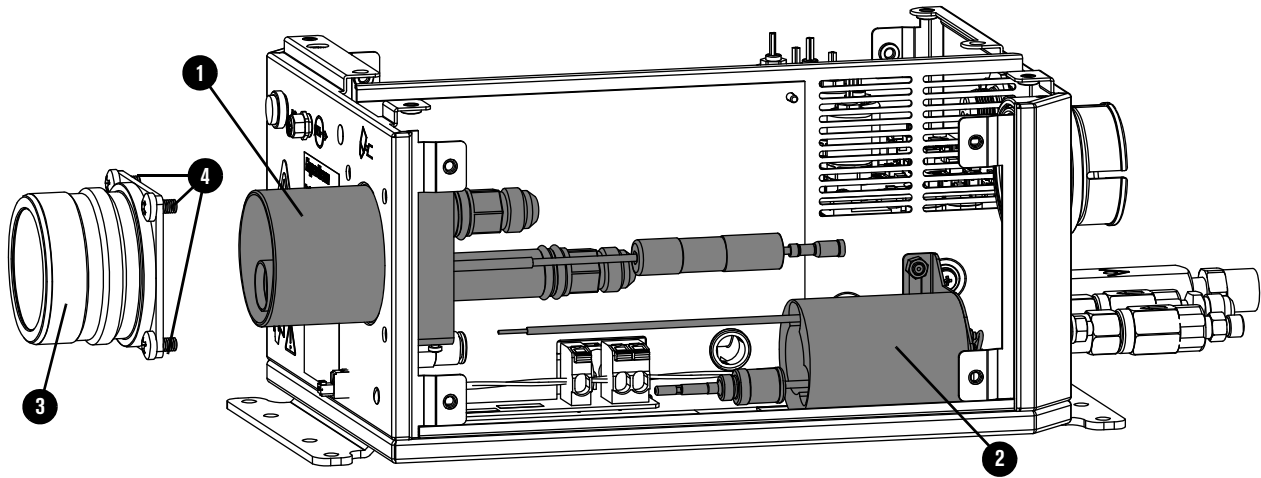
Part number	Description	Console	Quantity
229718	Wire harness	Core	1
229719	Wire harness	VWI	
229720	Wire harness	OptiMix	
428490	Kit: Tubing	Core	1
428491	Kit: Tubing	VWI	
428492	Kit: Tubing	OptiMix	
223709	CAN cable 0.38 m (1.2 ft) to external connector	Core, VWI, OptiMix	1
223710	CAN cable 0.48 m (1.6 ft) male-female	Core, VWI	1
223711	CAN cable 0.5 m (1.6 ft) male-female	OptiMix	1
223712	CAN cable 0.39 m (1.3 ft) male-female	OptiMix	1

## Torch connect console



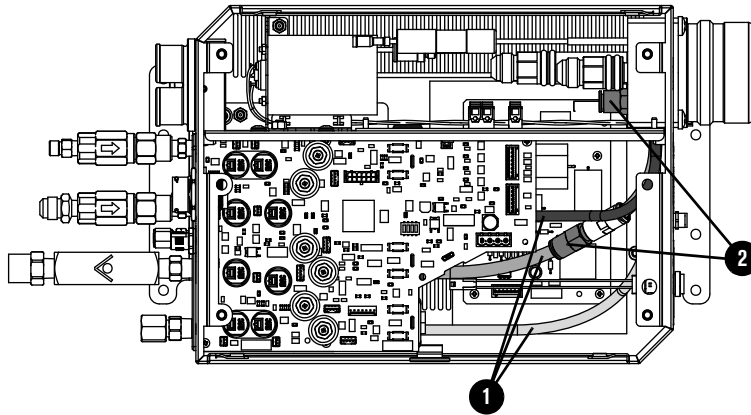
Part number	Description
078618	Torch connect console

### Torch connect console Easy Connect side



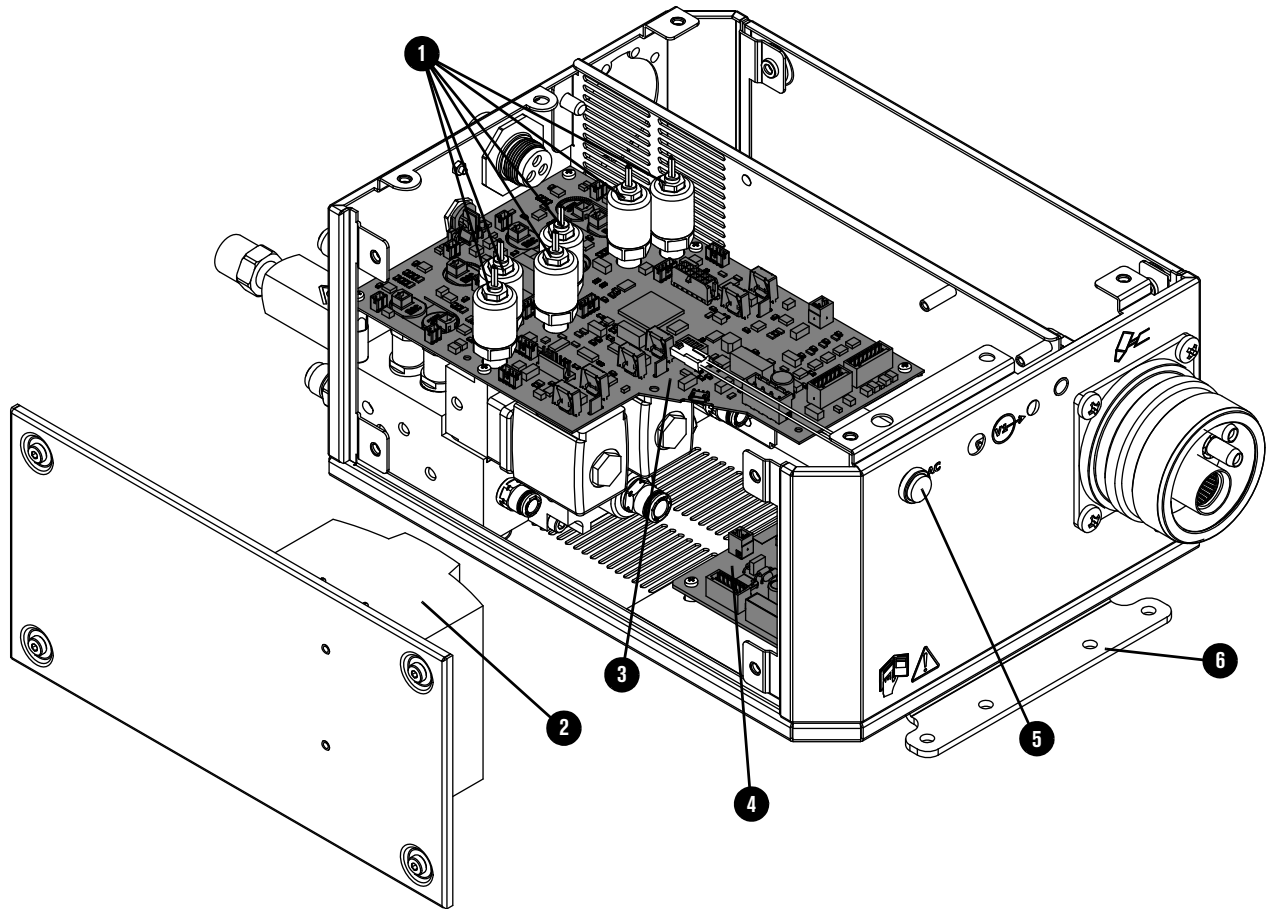
Part number	Description	Designator	Quantity
1 428730	Torch receptacle block	—	1
2 229882	Ohmic relay and bracket	—	1
3 420376	Torch lead connector	—	1
4 075544	Machine screw: M6 X 10 mm Phillips, pan head	—	4 (3 shown)

### Torch connect console – top



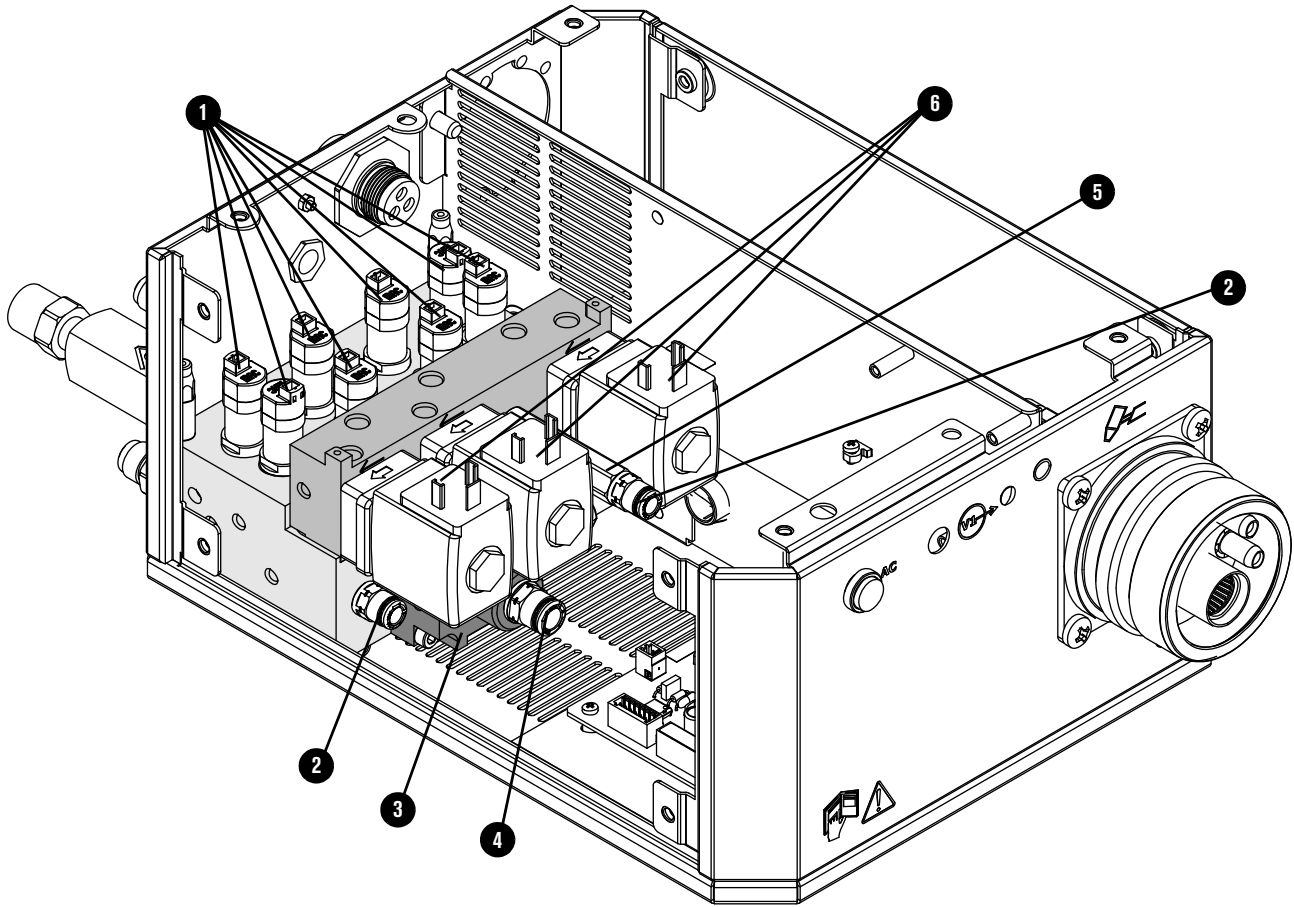
Part number	Description	Designator	Quantity
1 428338	Kit: Tubing	—	1
2 006152	Check valve	—	2

### Torch connect console manifold side - view 1



Part number	Description	Designator	Quantity	
1	223477	Pressure transducer with wire and connector	P1 – P5, P14	6
2	229640	Power source: 88 VAC – 264 VAC to 24 VDC	PS1	1
3	141334	Control PCB	PCB1	1
4	141368	Ohmic contact PCB	PCB2	1
5	229825	Green power-indicator LED assembly	–	1
6	101366	Bracket	–	2 (1 shown)
	229780	Valve cable 40 mm (1.6 inches)	–	8
	229800	Valve cable 279.4 mm (11 inches)	–	1
	229655	Wire harness	–	1

Torch connect console manifold side - view 2

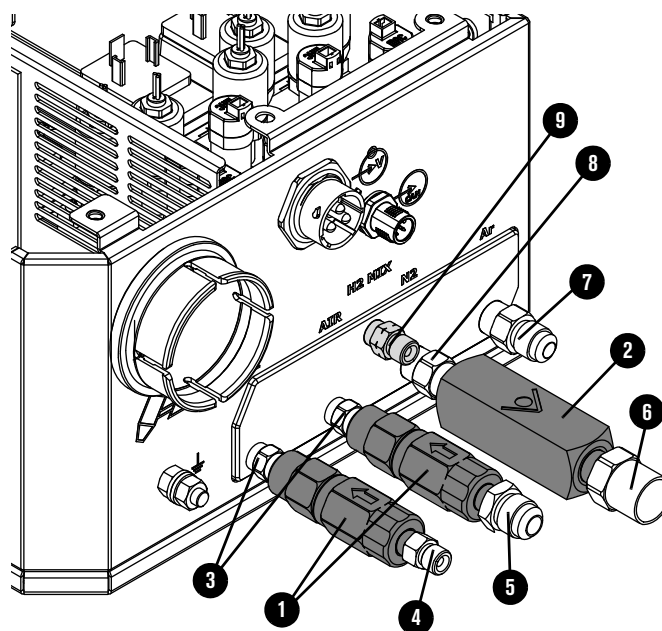


Part number	Description	Designator	Quantity
229895	Manifold assembly: <ul style="list-style-type: none"> <li>▪ Solenoid valves</li> <li>▪ Proportional valves</li> <li>▪ All manifolds</li> <li>▪ All fittings</li> </ul>	–	1
1	229965 Solenoid valve	V4 – V12	9 (8 shown)
	229917 Solenoid valve (229965) tool	–	
2	015905 Adapter: 1/8 inch NPT O-ring seal X 1/4 inch tube	–	2
3	428756 Bottom manifold assembly: <ul style="list-style-type: none"> <li>▪ Bottom manifold</li> <li>▪ Adapter</li> <li>▪ Critical orifice</li> <li>▪ Solenoid valve</li> </ul>	–	1
4	015811 Adapter: 1/4 inch NPT O-ring seal X 8 mm tube	–	1



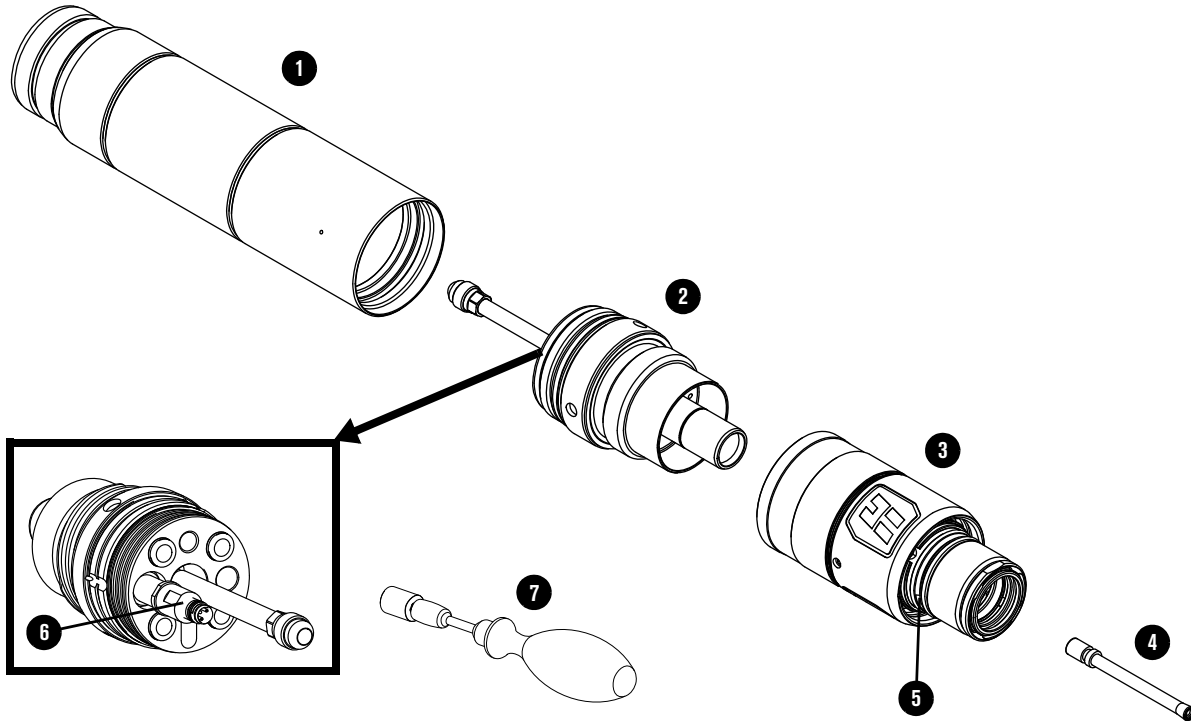
Part number	Description	Designator	Quantity
5	104406 Adapter: 1/8 inch FPT X1/8 inch NPT X1-5/8 inch	–	1
6	006167 Proportional valve	B1 – B3	3
	044508 O-ring		7

### Front adapters and valves



Part number	Description	Designator	Quantity
1	006077 Check valve: 1/8 inch FPT	–	2
2	006157 Check valve: 1/4 inch NPT female	–	1
<b>Threaded adapters with thread sealant applied</b>			
3	015517 1/8 inch hexagonal collar	–	2
4	015116 1/8 inch NPT X RH 'A'	–	1
5	015226 1/8 inch NPT X #6 male	–	1
6	015103 1/4 inch NPT X RH 'B' inert female	–	1
7	015007 1/4 inch NPT X #5 male	–	1
8	015922 1/4 inch hexagonal collar	–	1
9	015210 1/8 inch NPT X LH 'A' male	–	1

## Torch assembly



Part number	Description
1	420500 Torch mount sleeve assembly: Standard
	420501 Torch mount sleeve assembly: Short
	420502 Torch mount sleeve assembly: Extended
2	420220 Quick-disconnect/torch receptacle
3	420221 Quick-disconnect torch
4	420368 Water tube
5	044028 O-ring for quick-disconnect torch (Refer to <a href="#">Preventive maintenance kits</a> on page 401.)
6	006155 Torch solenoid valve (V1)
7	229918 Torch solenoid valve (V1) tool
	006169 Torch solenoid valve connector
	428488 Torch assembly, 300 A mild steel consumables
	104879 2.25 inch spanner wrench

## Torch bracket

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Part number	Description
428646	Torch lifter bracket: 2.25 inch diameter sleeve

## Consumable starter kits



Refer to [Example configurations for consumables](#) on page 138 or the *XPR Cut Charts Instruction Manual (809830)* for specific applications.

### Mild steel consumable starter kit (428616)

Part number	Description	Quantity
420240	Electrode: 80 A	2
420243	Nozzle: 80 A	2
420246	Shield: 80 A	2
420242	Swirl ring: 80 A – 130 A	2
420249	Electrode: 130 A	3
420252	Nozzle: 130 A	3
420255	Shield: 130 A	2
420261	Nozzle: 170 A	3
420258	Electrode: 170 A	3
420513	Shield: 170 A	2
420260	Swirl ring: 170 A	1
420276	Electrode: 220 A	3
420270	Nozzle: 220 A	3
420273	Shield: 220 A	2
420368	Swirl ring: 220 A	1
420276	Electrode: 300 A	3
420279	Nozzle: 300 A	3
420491	Shield: 300 A	2
420406	Swirl ring: 300 A	1
420368	Water tube	1
420200	Shield retaining cap	1
420365	Nozzle retaining cap	1
104879	2.25 inch spanner wrench	1
104119	Consumable tool	1
027055	Silicone lubricant, 1/4 ounce	1

## Stainless steel and aluminum consumable starter kit (428617)

Part number	Description	Quantity
420288	Nozzle: 40 A	3
420291	Shield: 40 A	2
420297	Nozzle: 60 A	1
420296	Nozzle: 60 A H <sub>2</sub> O	1
420306	Nozzle: 80 A	2
420290	Nozzle: 80 A H <sub>2</sub> O	2
420469	Shield: 130 A H <sub>2</sub> O	1
420356	Electrode: 130 A – 300 A	4
420315	Nozzle: 130 A	2
420318	Shield: 130 A	1
420472	Shield: 170 A H <sub>2</sub> O	1
420324	Nozzle: 170 A	3
420327	Shield: 170 A	1
420358	Swirl ring: 300 A fuel	1
420475	Shield: 300 A H <sub>2</sub> O	1
420359	Nozzle: 300 A	2
420362	Shield: 300 A	2
420303	Electrode: 40 A – 80 A	3
420309	Shield: 60 A – 80 A	2
420294	Electrode: 40 A – 80 A aluminum air/air	1
420300	Shield: 60 A – 80 A H <sub>2</sub> O	1
420314	Swirl ring: 40 A – 170 A multiple processes	1
420323	Swirl ring: 60 A – 300 A multiple processes	1
420368	Water tube	1
420200	Shield retaining cap	1
420365	Nozzle retaining cap	1
104879	2.25 inch spanner wrench	1
104119	Consumable tool	1
027055	Silicone lubricant, 1/4 ounce	1

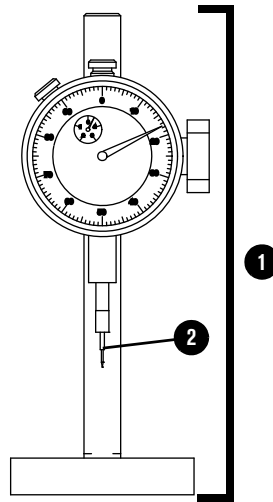
**Mild steel consumable starter kit with torch (428618)**

Part number	Description	Quantity
420221	Quick-disconnect torch head	1
420240	Electrode: 80 A	2
420243	Nozzle: 80 A	2
420246	Shield: 80 A	2
420242	Swirl ring: 80 A – 130 A	2
420249	Electrode: 130 A	3
420252	Nozzle: 130 A	3
420255	Shield: 130 A	2
420261	Nozzle: 170 A	3
420258	Electrode: 170 A	3
420513	Shield: 170 A	2
420260	Swirl ring: 170 A	1
420276	Electrode: 300 A	3
420279	Nozzle: 300 A	3
420491	Shield: 300 A	2
420406	Swirl ring: 300 A	1
420368	Water tube	2
420200	Shield retaining cap	2
420365	Nozzle retaining cap	2
104879	2.25 inch spanner wrench	1
104119	Consumable tool	1
027055	Silicone lubricant, 1/4 ounce	1

## Stainless steel and aluminum consumable starter kit with torch (428619)

Part number	Description	Quantity
420221	Quick-disconnect torch head	1
420288	Nozzle: 40 A	3
420291	Shield: 40 A	2
420297	Nozzle: 60 A	1
420296	Nozzle: 60 A H <sub>2</sub> O	1
420306	Nozzle: 80 A	2
420290	Nozzle: 80 A H <sub>2</sub> O	2
420469	Shield: 130 A H <sub>2</sub> O	1
420356	Electrode: 130 A – 300 A	4
420315	Nozzle: 130 A	2
420318	Shield: 130 A	1
420472	Shield: 170 A H <sub>2</sub> O	1
420324	Nozzle: 170 A	3
420327	Shield: 170 A	1
420358	Swirl ring: 300 A fuel	1
420475	Shield: 300 A H <sub>2</sub> O	1
420359	Nozzle: 300 A	2
420362	Shield: 300 A	2
420303	Electrode: 40 A – 80 A	3
420309	Shield: 60 A – 80 A	2
420294	Electrode: 40 A – 80 A aluminum air/air	1
420300	Shield: 60 A – 80 A H <sub>2</sub> O	1
420314	Swirl ring: 40 A – 170 A multiple processes	1
420323	Swirl ring: 60 A – 300 A multiple processes	1
420368	Water tube	2
420200	Shield retaining cap	2
420365	Nozzle retaining cap	2
104879	2.25 inch spanner wrench	1
104119	Consumable tool	1
027055	Silicone lubricant, 1/4 ounce	1

## Other consumable and torch parts

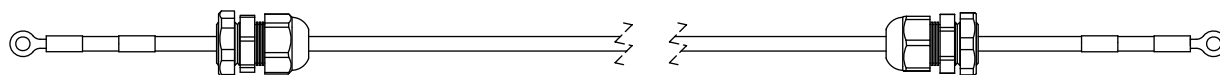


	Part number	Description
1	004630	Pit depth gauge
2	004629	Gauge point
	027055	Silicone lubricant, 1/4 ounce
	104119	Consumable tool
	428764	XPR robotic torch teach accessory
	429013	XPR electrode torque tool



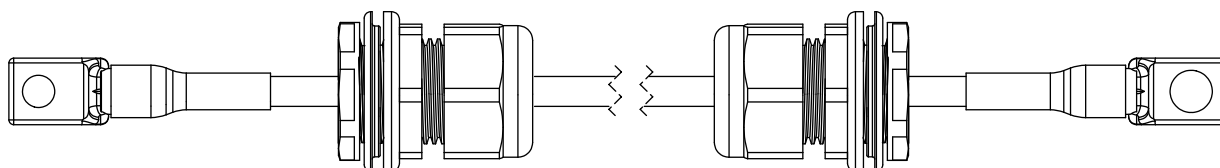
## Plasma power supply to gas connect console connections

### Pilot arc lead with strain relief



Part number	Length	Part number	Length
223529	3 m (9.8 feet)	223535	25 m (82 feet)
223530	4.5 m (14.8 feet)	223536	35 m (114.8 feet)
223531	7.5 m (24.6 feet)	223537	45 m (147.6 feet)
223532	10 m (32.8 feet)	223538	60 m (196.9 feet)
223533	15 m (49.2 feet)	223539	75 m (246.1 feet)
223534	20 m (65.6 feet)	—	—

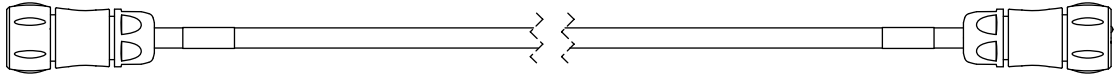
### Negative lead with strain relief



Part number	Type	Length	Part number	Type	Length
223573	2/0	3 m (9.8 feet)	223527	4/0	60 m (196.9 feet)
223574	2/0	4.5 m (14.8 feet)	223528	4/0	75 m (246.1 feet)
223575	2/0	7.5 m (24.6 feet)	223551*	2/0	3 m (9.8 feet)
223576	2/0	10 m (32.8 feet)	223552*	2/0	4.5 m (14.8 feet)
223577	2/0	15 m (49.2 feet)	223553*	2/0	7.5 m (24.6 feet)
223578	2/0	20 m (65.6 feet)	223554*	2/0	10 m (32.8 feet)
223579	2/0	25 m (82 feet)	223555*	2/0	15 m (49.2 feet)
223525	4/0	35 m (114.8 feet)	223556*	2/0	20 m (65.6 feet)
223526	4/0	45 m (147.6 feet)	223557*	2/0	25 m (82 feet)

\* Leads labeled with CCC mark only. CCC is defined in [Symbols and marks](#) on page 36.

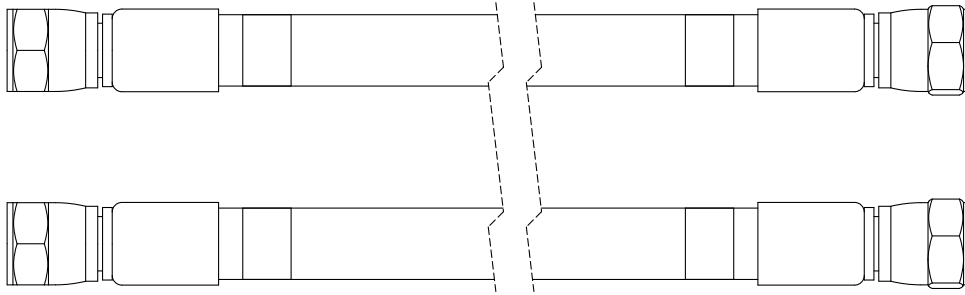
### Power cable



Description: 3-position, male-female

Part number	Length	Part number	Length
223436	3 m (9.8 feet)	223446	25 m (82 feet)
223437	4.5 m (14.8 feet)	223447	35 m (114.8 feet)
223439	7.5 m (24.6 feet)	223448	45 m (147.6 feet)
223441	10 m (32.8 feet)	223449	60 m (196.9 feet)
223444	15 m (49.2 feet)	223450	75 m (246.1 feet)
223445	20 m (65.6 feet)	–	–

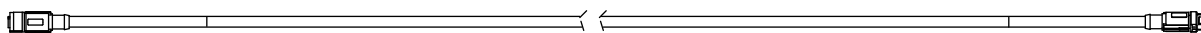
### Coolant hose set



Description: 1.27 cm (0.50 inch) internal diameter

Part number	Length	Part number	Length
428475	3 m (9.8 feet)	428481	25 m (82 feet)
428476	4.5 m (14.8 feet)	428482	35 m (114.8 feet)
428477	7.5 m (24.6 feet)	428483	45 m (147.6 feet)
428478	10 m (32.8 feet)	428484	60 m (196.9 feet)
428479	15 m (49.2 feet)	428485	75 m (246.1 feet)
428480	20 m (65.6 feet)	–	–

## CAN cable

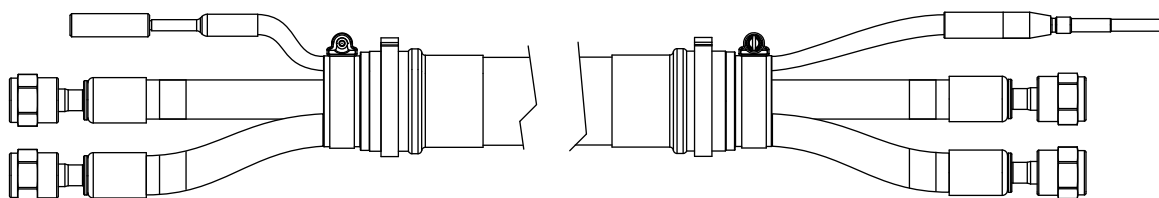


Description: 5-position, male-female

Part number	Length	Part number	Length
223417	3 m (9.8 feet)	223427	25 m (82 feet)
223418	4.5 m (14.8 feet)	223428	35 m (114.8 feet)
223420	7.5 m (24.6 feet)	223429	45 m (147.6 feet)
223422	10 m (32.8 feet)	223430	60 m (196.9 feet)
223425	15 m (49.2 feet)	223431	75 m (246.1 feet)
223426	20 m (65.6 feet)	-	-

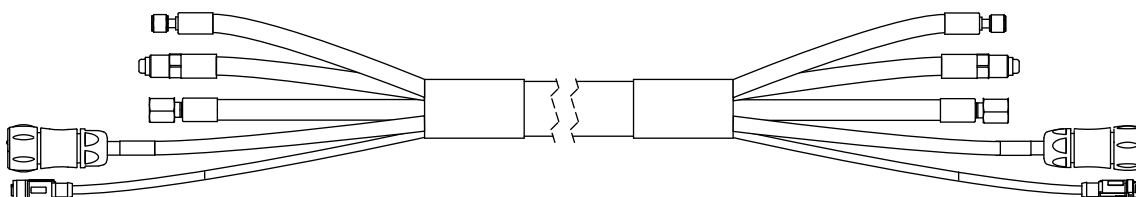
## Gas connect console to torch connect console connections

### Pilot arc and coolant hose set assembly (Core)



Part number	Length	Part number	Length
428454	3 m (9.8 feet)	428458	10 m (32.8 feet)
428455	4.5 m (14.8 feet)	428459	15 m (49.2 feet)
428456	6 m (19.7 feet)	428982	18 m (59.1 feet)
428457	7.5 m (24.6 feet)	-	-

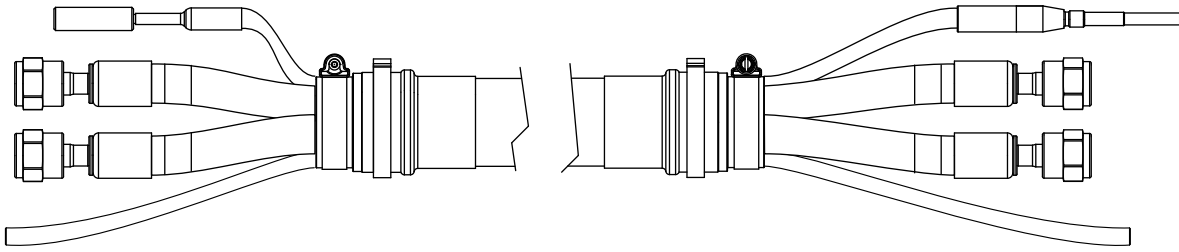
### Power, CAN, and 3-gas assembly (Core)



Part number	Length	Part number	Length
428464	3 m (9.8 feet)	428468	10 m (32.8 feet)
428465	4.5 m (14.8 feet)	428469	15 m (49.2 feet)
428466	6 m (19.7 feet)	428983	18 m (59.1 feet)*
428467	7.5 m (24.6 feet)	-	-

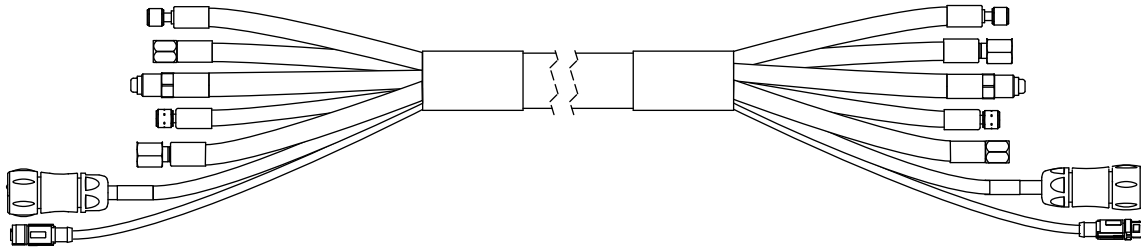
\* The 18 meter (59.1 feet) assembly is compatible only with the 2 meter (6.6 feet) or 2.5 meter (8.2 feet) torch lead.

### Pilot arc, coolant hose set, and shield water assembly (VWI or OptiMix)



Part number	Length	Part number	Length
428353	3 m (9.8 feet)	428357	10 m (32.8 feet)
428354	4.5 m (14.8 feet)	428358	15 m (49.2 feet)
428355	6 m (19.7 feet)	428981	18 m (59.1 feet)
428356	7.5 m (24.6 feet)	–	–

### Power, CAN, and 5-gas assembly (VWI or OptiMix)

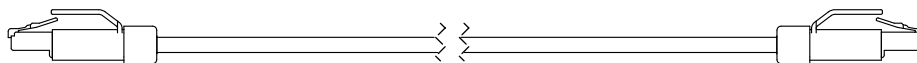


Part number	Length	Part number	Length
428363	3 m (9.8 feet)	428367	10 m (32.8 feet)
428364	4.5 m (14.8 feet)	428368	15 m (49.2 feet)
428365	6 m (19.7 feet)	428980	18 m (59.1 feet)*
428366	7.5 m (24.6 feet)	–	–

\* The 18 meter (59.1 feet) assembly is compatible only with the 2 meter (6.6 feet) or 2.5 meter (8.2 feet) torch lead.

## Plasma power supply to CNC connections

### EtherCAT CNC interface cable

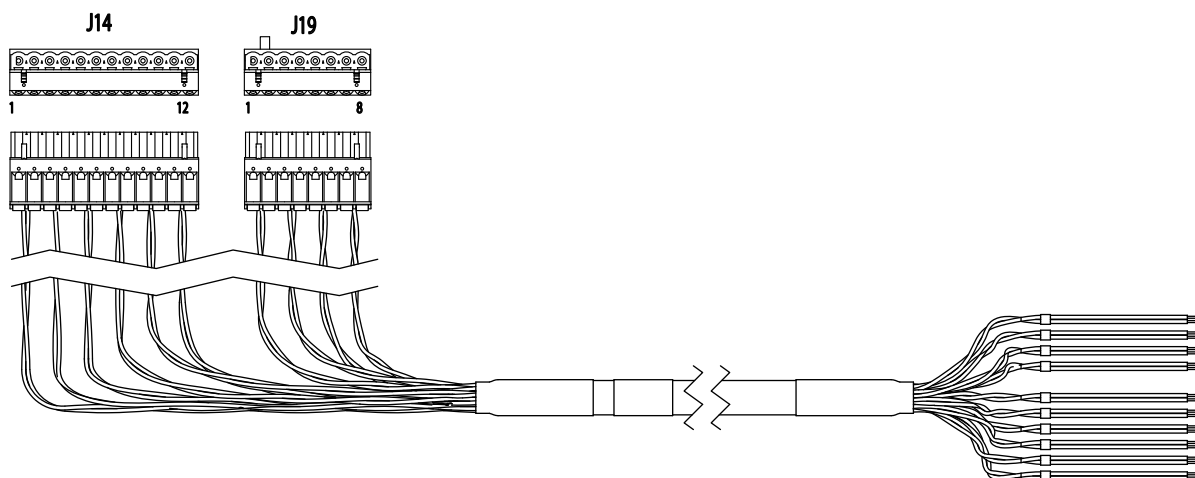


Description: RJ-45 connector, male-male, SF/UTP shield, 2 twisted pairs, 22 AWG

For more information on EtherCAT cable specifications, refer to [How to connect to the plasma power supply with EtherCAT](#) on page 149.

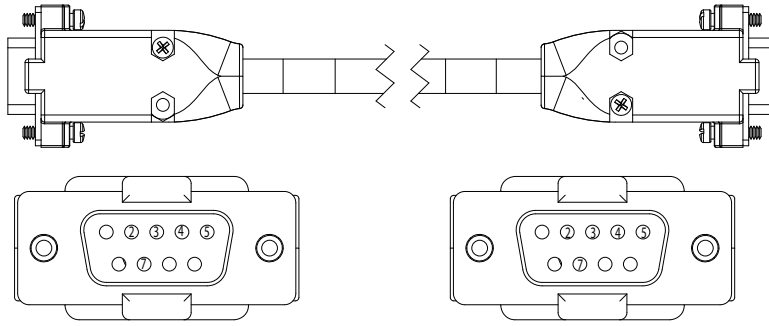
Part number	Length	Part number	Length
223506	0.3 m (1 foot)	223512	10 m (32.8 feet)
223507	0.6 m (2 feet)	223513	15 m (49.2 feet)
223508	1.5 m (4.9 feet)	223514	22.5 m (73.8 feet)
223672	2.5 m (8.2 feet)	223515	30 m (98.4 feet)
223509	3 m (9.8 feet)	223516	45 m (147.6 feet)
223510	6 m (19.7 feet)	223517	60 m (196.9 feet)
223511	7.5 m (24.6 feet)	223714	75 m (246.1 feet)

### Discrete CNC interface cable



Part number	Length	Part number	Length
223691	3 m (9.8 feet)	223700	20 m (65.6 feet)
223692	4.5 m (14.8 feet)	223701	22.5 m (73.8 feet)
223693	6 m (19.7 feet)	223702	25 m (82 feet)
223694	7.5 m (24.6 feet)	223703	30 m (98.4 feet)
223695	10 m (32.8 feet)	223704	35 m (114.8 feet)
223696	12 m (39.4 feet)	223705	37.5 m (123 feet)
223697	13.5 m (44.3 feet)	223706	45 m (147.6 feet)
223698	15 m (49.2 feet)	223707	60 m (196.9 feet)
223699	16.5 m (54.1 feet)	223708	75 m (246.1 feet)

## Serial CNC interface cable

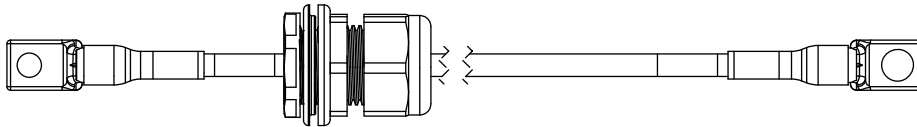


Description: 9-position, D-subminiature (D-sub) connector, male-male, RS-422

Part number	Length	Part number	Length
223673	3 m (9.8 feet)	223682	20 m (65.6 feet)
223674	4.5 m (14.8 feet)	223683	22.5 m (73.8 feet)
223675	6 m (19.7 feet)	223684	25 m (82.0 feet)
223676	7.5 m (24.6 feet)	223685	30 m (98.4 feet)
223677	10 m (32.8 feet)	223686	35 m (114.8 feet)
223678	12 m (39.4 feet)	223687	37.5 m (123 feet)
223679	13.5 m (44.3 feet)	223688	45 m (147.6 feet)
223680	15 m (49.2 feet)	223689	60 m (196.9 feet)
223681	16.5 m (54.1 feet)	223690	75 m (246.1 feet)

## Plasma power supply to cutting table connection

### Work lead

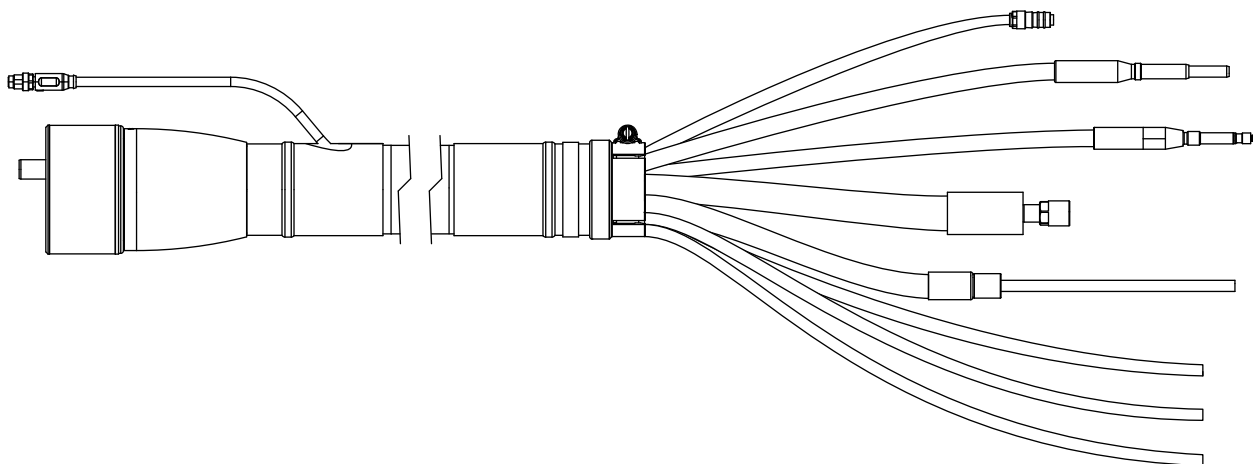


Part number	Type	Length	Part number	Type	Length
223628	2/0	3 m (9.8 feet)	223648	4/0	60 m (196.9 feet)
223629	2/0	4.5 m (14.8 feet)	223649	4/0	75 m (246.1 feet)
223630	2/0	7.5 m (24.6 feet)	223661*	2/0	3 m (9.8 feet)
223631	2/0	10 m (32.8 feet)	223662*	2/0	4.5 m (14.8 feet)
223632	2/0	15 m (49.2 feet)	223663*	2/0	7.5 m (24.6 feet)
223633	2/0	20 m (65.6 feet)	223664*	2/0	10 m (32.8 feet)
223634	2/0	25 m (82 feet)	223665*	2/0	15 m (49.2 feet)
223646	4/0	35 m (114.8 feet)	223666*	2/0	20 m (65.6 feet)
223647	4/0	45 m (147.6 feet)	223667*	2/0	25 m (82 feet)

\* Leads labeled with CCC mark only. CCC is defined in [Symbols and marks](#) on page 36.

## Torch connect console to torch receptacle connection

### Torch lead



Part number	Length	Part number	Length
428383	2 m (6.6 feet)	428386	3.5 m (11.5 feet)
428384	2.5 m (8.2 feet)	428824	4 m (13.1 feet)
428385	3 m (9.8 feet)	428387	4.5 m (14.8 feet)

### Bevel torch lead

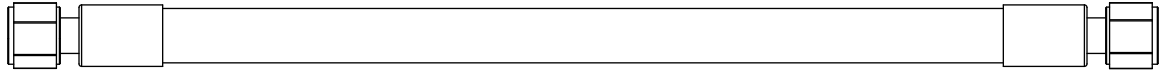
Part number	Lead length	Strain relief length	Part number	Lead length	Strain relief length
428825	2 m (6.6 feet)	0.5 m (20 inches)	428831	2 m (6.6 feet)	1.2 m (48 inches)
428826	2.5 m (8.2 feet)		428832	2.5 m (8.2 feet)	
428827	3 m (9.8 feet)		428833	3 m (9.8 feet)	
428828	3.5 m (11.5 feet)		428834	3.5 m (11.5 feet)	
428829	4 m (13.1 feet)		428835	4 m (13.1 feet)	
428830	4.5 m (14.8 feet)		428836	4.5 m (14.8 feet)	
428978	6 m (20 feet)*		428979	6 m (20 feet)*	

\* The 6 meter (20 feet) lead is compatible only with gas assemblies that are 7.5 meters (24.6 feet) or less.

## Supply hoses

### Oxygen hose (blue)

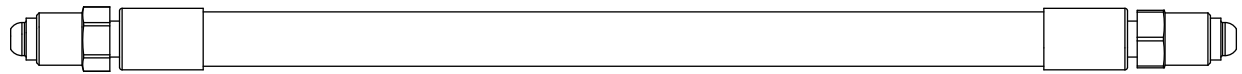
Fittings: RH type "B" female



Part number	Length	Part number	Length
124003	3 m (9.8 feet)	124009	25 m (82 feet)
124004	4.5 m (14.8 feet)	124107	30 m (98.4 feet)
124005	7.5 m (24.6 feet)	124010	35 m (114.8 feet)
124006	10 m (32.8 feet)	124011	45 m (147.6 feet)
124007	15 m (49.2 feet)	124012	60 m (196.9 feet)
124008	20 m (65.6 feet)	124013	75 m (246.1 feet)

### Nitrogen or Argon hose (black)

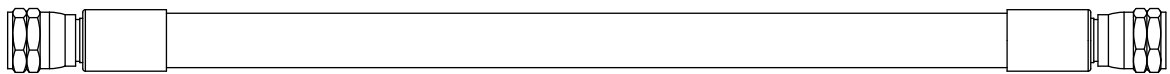
Fittings: RH type "B" male



Part number	Length	Part number	Length
124014	3 m (9.8 feet)	124020	25 m (82 feet)
124015	4.5 m (14.8 feet)	124108	30 m (98.4 feet)
124016	7.5 m (24.6 feet)	124021	35 m (114.8 feet)
124017	10 m (32.8 feet)	124022	45 m (147.6 feet)
124018	15 m (49.2 feet)	124023	60 m (196.9 feet)
124019	20 m (65.6 feet)	124024	75 m (246.1 feet)

### Air hose (black)

Fittings: JIC-6 female

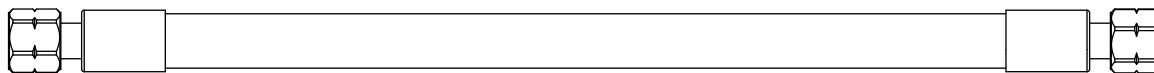


Part number	Length	Part number	Length
124025	3 m (9.8 feet)	124031	25 m (82 feet)
124026	4.5 m (14.8 feet)	124109	30 m (98.4 feet)
124027	7.5 m (24.6 feet)	124032	35 m (114.8 feet)
124028	10 m (32.8 feet)	124033	45 m (147.6 feet)
124029	15 m (49.2 feet)	124034	60 m (196.9 feet)
124030	20 m (65.6 feet)	124035	75 m (246.1 feet)



## Hydrogen or nitrogen-hydrogen (F5) (red)

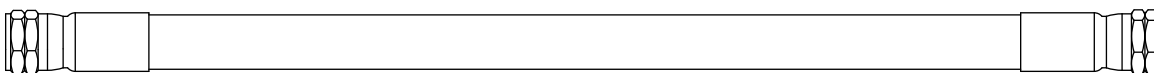
Fittings: LH type "B" female



Part number	Length	Part number	Length
124036	3 m (9.8 feet)	124042	25 m (82 feet)
124037	4.5 m (14.8 feet)	124110	30 m (98.4 feet)
124038	7.5 m (24.6 feet)	124043	35 m (114.8 feet)
124039	10 m (32.8 feet)	124044	45 m (147.6 feet)
124040	15 m (49.2 feet)	124045	60 m (196.9 feet)
124041	20 m (65.6 feet)	124046	75 m (246.1 feet)

## Water (optional shield fluid) (blue)

Fittings: JIC-6 female



Part number	Length	Part number	Length
124047	3 m (9.8 feet)	124053	25 m (82 feet)
124048	4.5 m (14.8 feet)	124111	30 m (98.4 feet)
124049	7.5 m (24.6 feet)	124054	35 m (114.8 feet)
124050	10 m (32.8 feet)	124055	45 m (147.6 feet)
124051	15 m (49.2 feet)	124056	60 m (196.9 feet)
124052	20 m (65.6 feet)	124057	75 m (246.1 feet)

## Preventive maintenance kits

Part number	Description
428639	Kit: Filter, torch rebuild without coolant
428640	Kit: Filter, torch rebuild with coolant
428920	Kit: Shield-fluid treatment
428641	Kit: Electronics (200 V – 240 V)
428642	Kit: Electronics (380 V – 600 V)

## Tools

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Part number	Description
229917	Torch connect console solenoid valve tool
229918	Torch solenoid valve tool
104879	2.25 inch spanner wrench
004629	Pit depth gauge
104119	Consumable tool
1-13897 (Hypertherm Waterjet part number)	TDS meter

## Recommended spare parts

### Plasma power supply – recommended spare parts

Part number	Description	Designator	Quantity
428810	Shield-fluid treatment filter	–	1
027005	Coolant filter (fine)	–	1
006113	Coolant check valve	–	1
229640	Power source: 88 VAC – 264 VAC to 24 VDC	PS1	1
229671	Power source: 88 VAC – 264 VAC to 48 VDC, 600 W	PS2	1
229679	Chopper assembly	Chopper 1	1
428750	Control PCB	PCB1	1
141371	I/O PCB	PCB5	1
141384	Fan power distribution PCB	PCB6	1
141425	Power distribution PCB	PCB7	1
108709	Fuse: 10 A, 250 VAC, time delay (on PCB7)	F3, F4, F5	2
208397*	Fuse: 15 A, 600 V, Class R (used in 200 V, 208 V, 220 V, 240 V)	F1, F2	2
208395*	Fuse: 8 A, 600 V, Class R (used in 380 V, 400 V, 415 V, 440 V, 480 V, 600 V)		2
003277	Pilot arc relay	CR1	1
229697	Inrush contactor assembly: 80 A, IEC AC-3, 3-phase, 120 VAC	IR_CON	1
003276*	Main contactor (200 V, 208 V, 220 V, 240 V)	M_CON	1
429060*	Main contactor assembly (380 V, 400 V, 415 V, 440 V, 480 V, 600 V)		1

\* Voltage dependent - Select accordingly

### Gas connect consoles – recommended spare parts

Part number	Description	Designator	Quantity
011110	Air filter element	–	1
223398	Pressure transducer (VWI and OptiMix only)	P6 – P9	1
006167	Solenoid valve (VWI and OptiMix only)	B4 – B5	1
141354	High-frequency, high-voltage ignition PCB	PCB2	1

### Torch connect console – recommended spare parts

Part number	Description	Designator	Quantity
141368	Ohmic contact PCB	PCB2	1
223477	Pressure transducer with wire and connector	P1 – P5, P14	1
006167	Solenoid valve	B1 – B3	1
229965	Solenoid valve	V4 – V12	1

### Torch – recommended spare parts

Part number	Description	Designator	Quantity
420220	Quick-disconnect/torch receptacle	–	1
420221	Quick-disconnect torch	–	1
420368	Water tube	–	1
006155	Torch solenoid valve	–	1