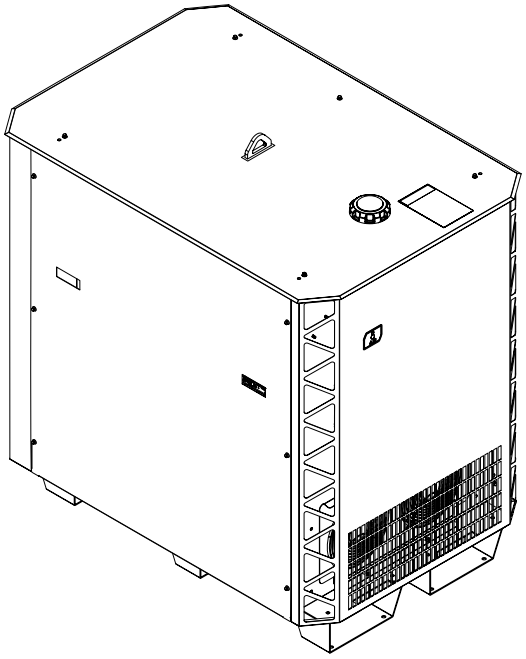
9 Parts List

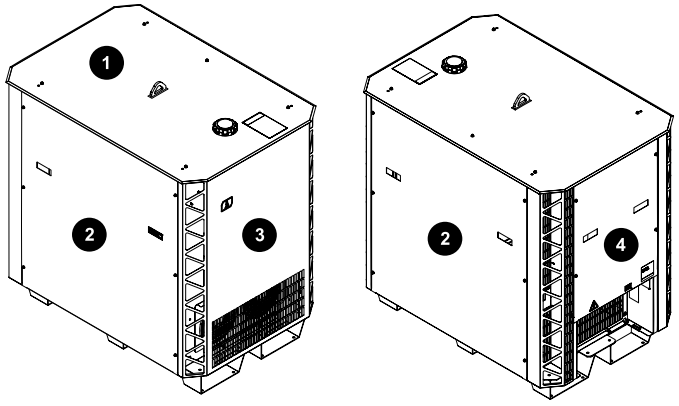
Plasma power supply parts



Part number	Voltage (VAC)
078620	200
078621	208
078622	220
078623	240
078624	380

Part number	Voltage (VAC)
078625	400
078626	415
078627	440
078628	480
078629	600

Outer panel parts

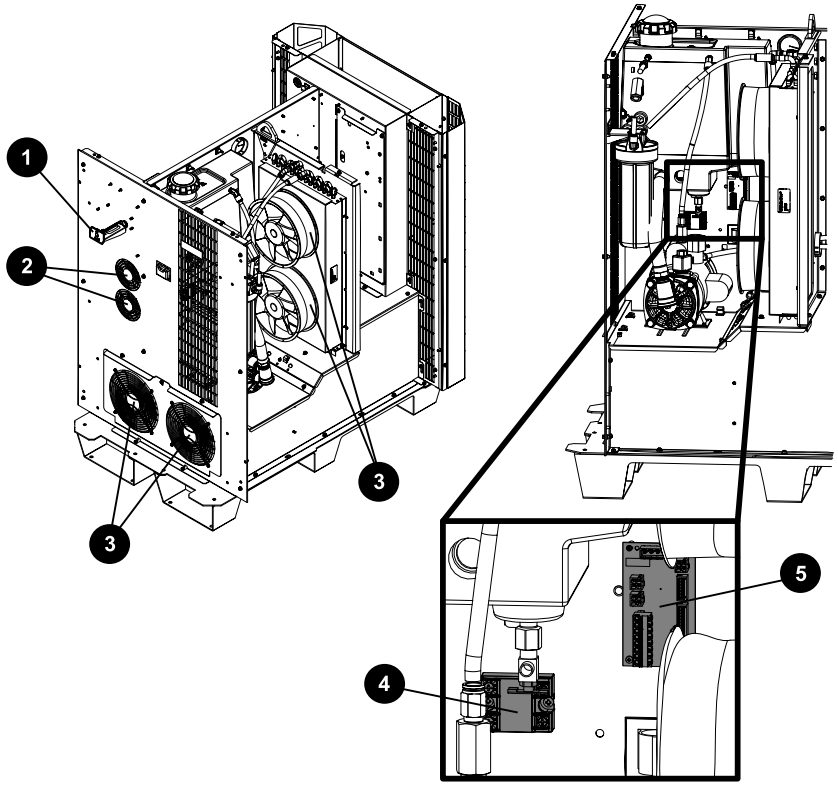


	Part number	Description	Quantity
1	10087259 [1]	Top panel with labels	1
	428728 [2]		
2	10087260 [1]	Side panel with labels and handles	2
	428727 [2]		
3	10087256 [1]	Front panel with "H" (not shown) and power-indicator LED label	1
	428725 [2]		
4	10087258 [1]	Rear panel with label and handles	1
	428726 [2]		
	10086627 [2]	Base (not shown)	1

1 Compatible only on systems with a serial number equal to or after XPR300-010000.

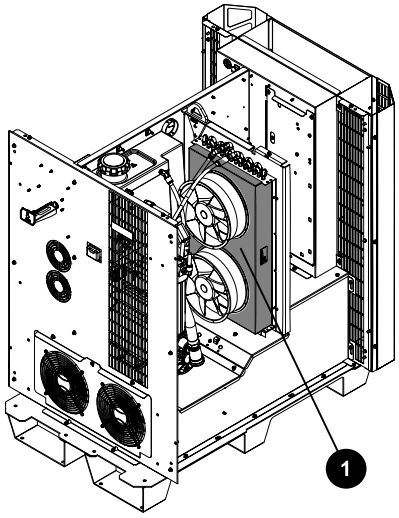
2 Compatible only on systems with a serial number before XPR300-010000.

Fans



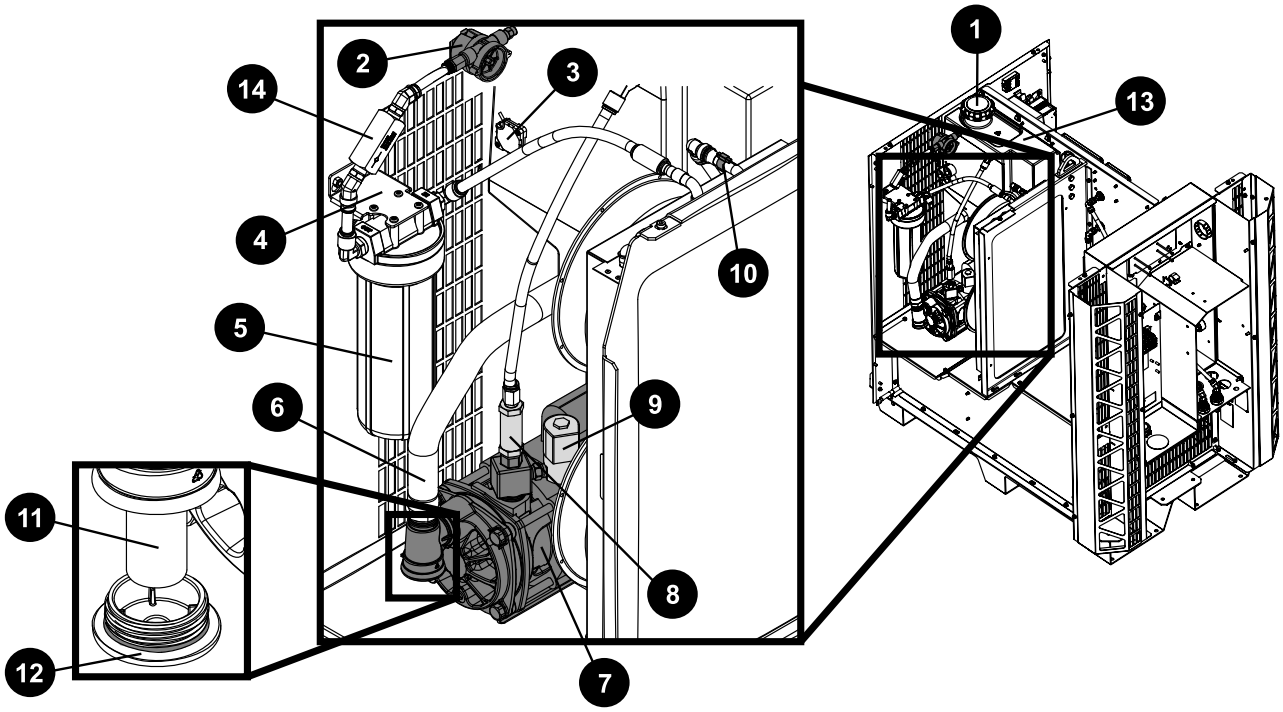
	Part number	Description	Designator	Quantity
1	429002	Power-indicator LED	–	1
2	229821	Fan: 250 cfm, 48 VDC, 120 mm (4.72 inch) diameter	CTRLFAN 1, CTRLFAN 2	2
3	229822	Fan: 890 cfm, 48 VDC, 254 mm (10 inch) diameter	HXFAN 1, HXFAN 2, MAGFAN 1, MAGFAN 2	4
4	003266	Solid state relay	–	1
5	141384	Fan power distribution PCB	PCB6	1

Heat exchanger



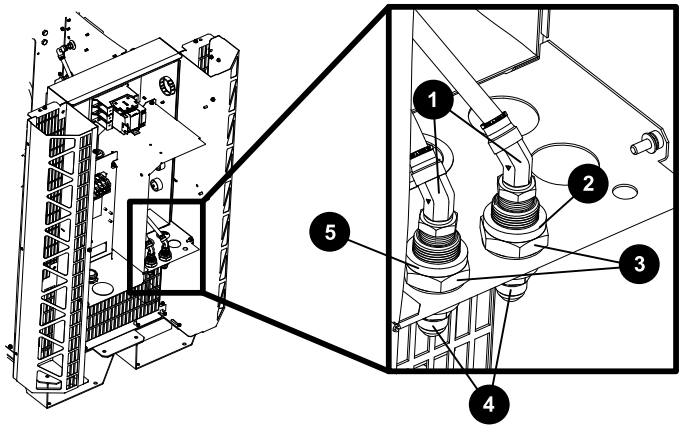
	Part number	Description	Designator	Quantity
1	229717	Heat-exchanger only	–	1

Coolant system parts



	Part number	Description	Quantity
1	127014	Coolant reservoir cap	1
2	229741	Coolant flow meter	1
3	229775	Coolant level sensor	1
4	101281	Coolant filter bracket	1
5	127344	Coolant filter housing	1
	027005	Coolant filter (fine)	1
6	229777	Coolant hose (1 inch)	1
7	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
8	006132	Coolant bypass check valve	1
9	229721	Coolant solenoid valve assembly	1
10	229654	Thermistor: Copper pipe clip with electrical connector	1
11	127559	Coolant pump screen (coarse)	1
12	428973	Kit: XPR inlet pump fitting replacement, with O-ring on plug	1
13	002561	Coolant reservoir	1
14	006113	Coolant check valve	1
	428330	Kit: Tubing (1 inch hose not included)	1

Coolant adapters in the rear compartment



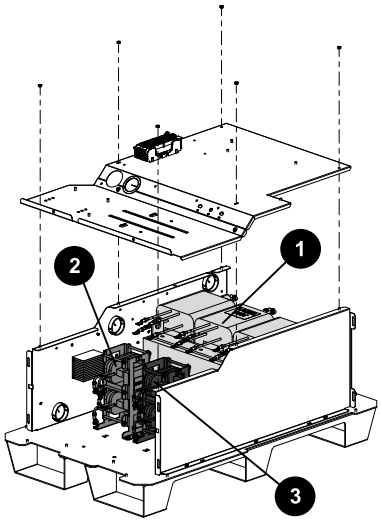
	Part number	Description	Quantity
1	015889	Elbow adapter: 1/2 inch NPT X 1/2 inch tube, 45° swivel	2
2	015903	Red ring: 1.13 inches inner diameter	1
3	015888	Adapter: 1/2 inch FNPT X 1-1/2 inch length bulkhead	2
	015899	Red ring: 0.87 inch inner diameter (not shown)	1
4	015029	Adapter: 1/2 inch NPT X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

Part number	Description	Location	Quantity
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 the chopper	4
015815	Elbow fitting: 1/2 inch tube X 1/2 inch tube, 90°	on the back of the chopper and the heat-exchanger inlet	5
015820	Fitting: 1/2 inch tube X 1/2 inch tube	heat-exchanger outlet	1

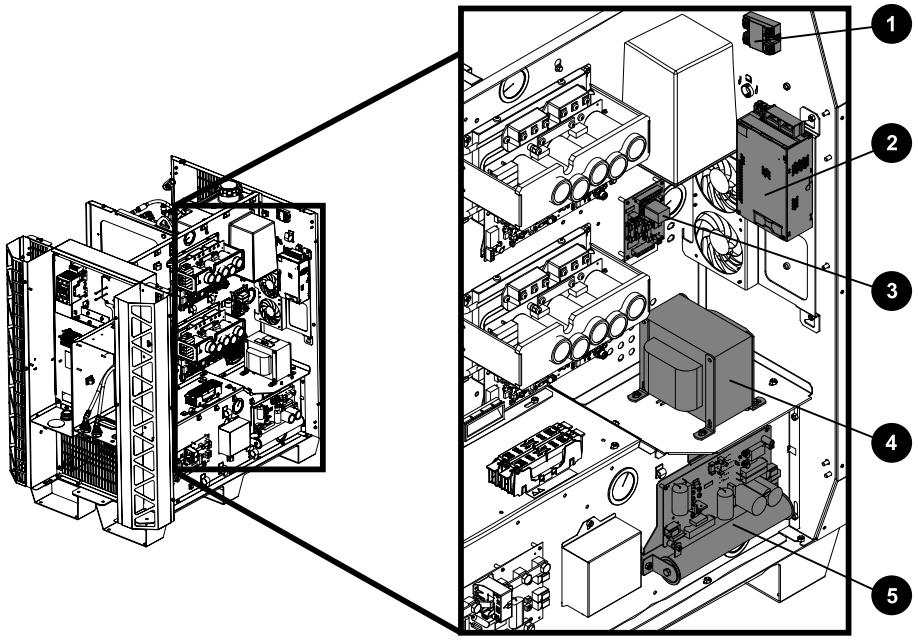
Transformers and inductors



	Part number	Description	Designator	Quantity
1	–	Transformer, horizontal, 66.5 kW, 3-phase [1]	T2	1
2	428844	Kit: Inductor 1A (top)/1B (bottom)	L1	1
3	428845	Kit: Inductor 2A (top)/2B (bottom)	L2	1

1 You cannot purchase this part. Shown for reference only.

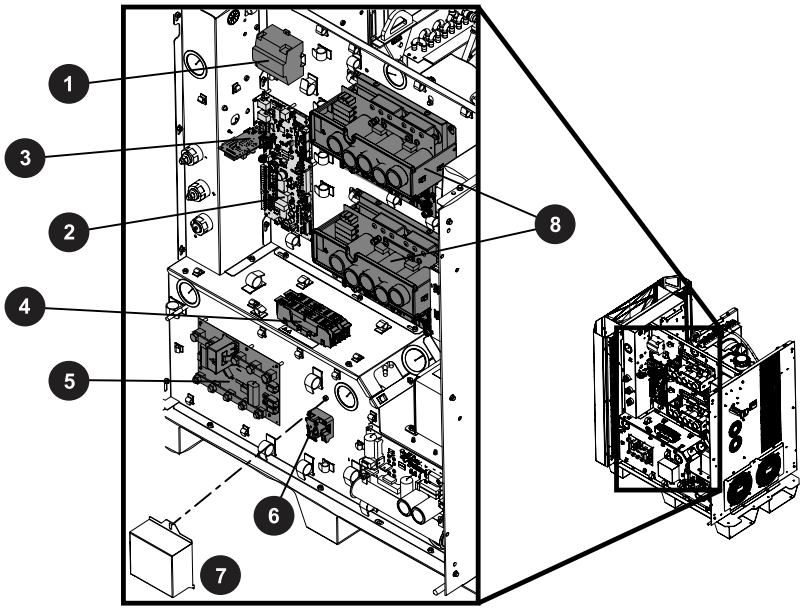
Control side – view 1



	Part number	Description	Designator	Quantity
1	003266	Solid state relay	–	1
2	229671	Power source: 88 VAC - 264 VAC to 48 VDC, 600 W	PS2	1
3	428893	Power distribution PCB	PCB7	1
	10084820	Fuse: 15 A, 250 VAC, time delay (on PCB7)	F1, F2	2
	108709	Fuse: 10 A, 250 VAC, time delay (on PCB7)	F3	1

	Part number	Description	Designator	Quantity
4	Control transformer assembly, 3 kVA			
	229809	200 V, 50 Hz – 60 Hz	T1	1
	229810	208 V, 60 Hz		
	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		
5	229678	Start circuit assembly	PCB4	1

Control side – view 2

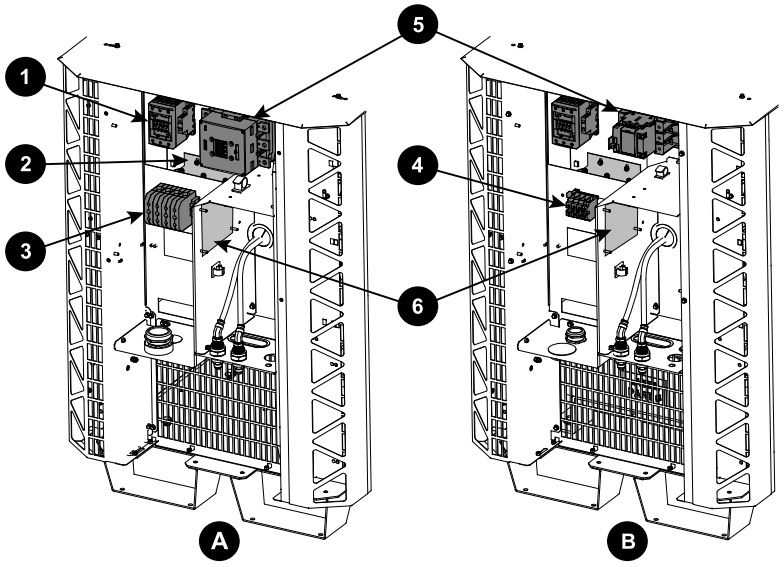


	Part number	Description	Designator	Quantity
1	229640	Power source: 88 VAC – 264 VAC to 24 VDC	PS1	1
2	10084334	Kit: XPR main control PCB assembly and wireless tag	PCB1	1
	10088158	Kit: Wireless (Wi-Fi) module for main control PCB and wireless tag (not shown)	U83	1
3	141597	Plasma power supply expansion PCB	PCB9	1
4	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)		
5	10081573	I/O PCB	PCB5	1
6	003277	Pilot arc relay: 24 VDC, coil, 60 A 28 VDC contacts	CR1	1
7	101316	Pilot arc relay cover	–	1
8	10085251	Chopper assembly	Chopper 1, Chopper 2	2

Wire harnesses and CAN cables in plasma power supply

Part number	Description
528134	Wire harnesses for the XPR300: ▪ Primary wire harness for the plasma power supply ▪ Wire harness to the 48 V power source in the plasma power supply when a solid state relay is present ▪ Wire harness to the 48 V power source in the plasma power supply when no solid state relay is present
10081204	Wire harness for the fan power distribution PCB
223399	CAN cable 0.5 m (1.6 ft) Located between the control PCB and chopper.
223400	CAN cable 1 m (3.3 ft) Located between the choppers.

Rear compartment of the plasma power supply

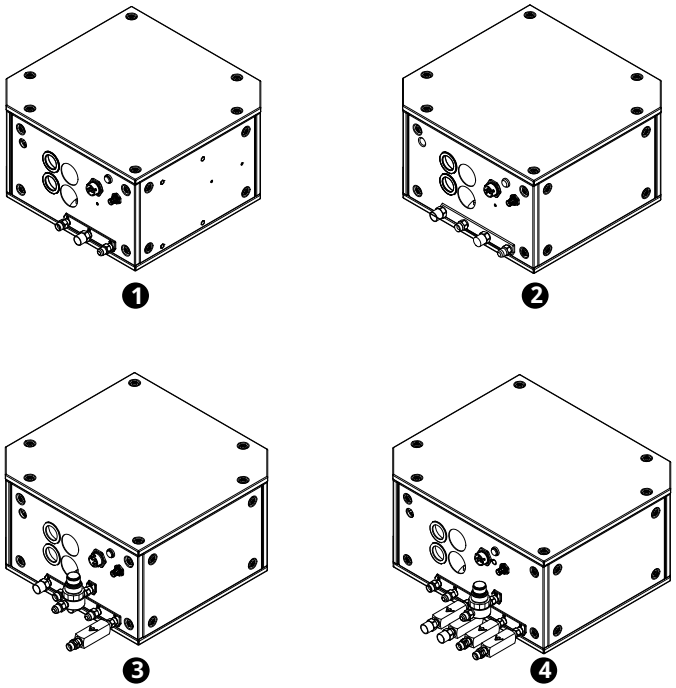


A 200 V, 208 V, 240 V plasma power supplies

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

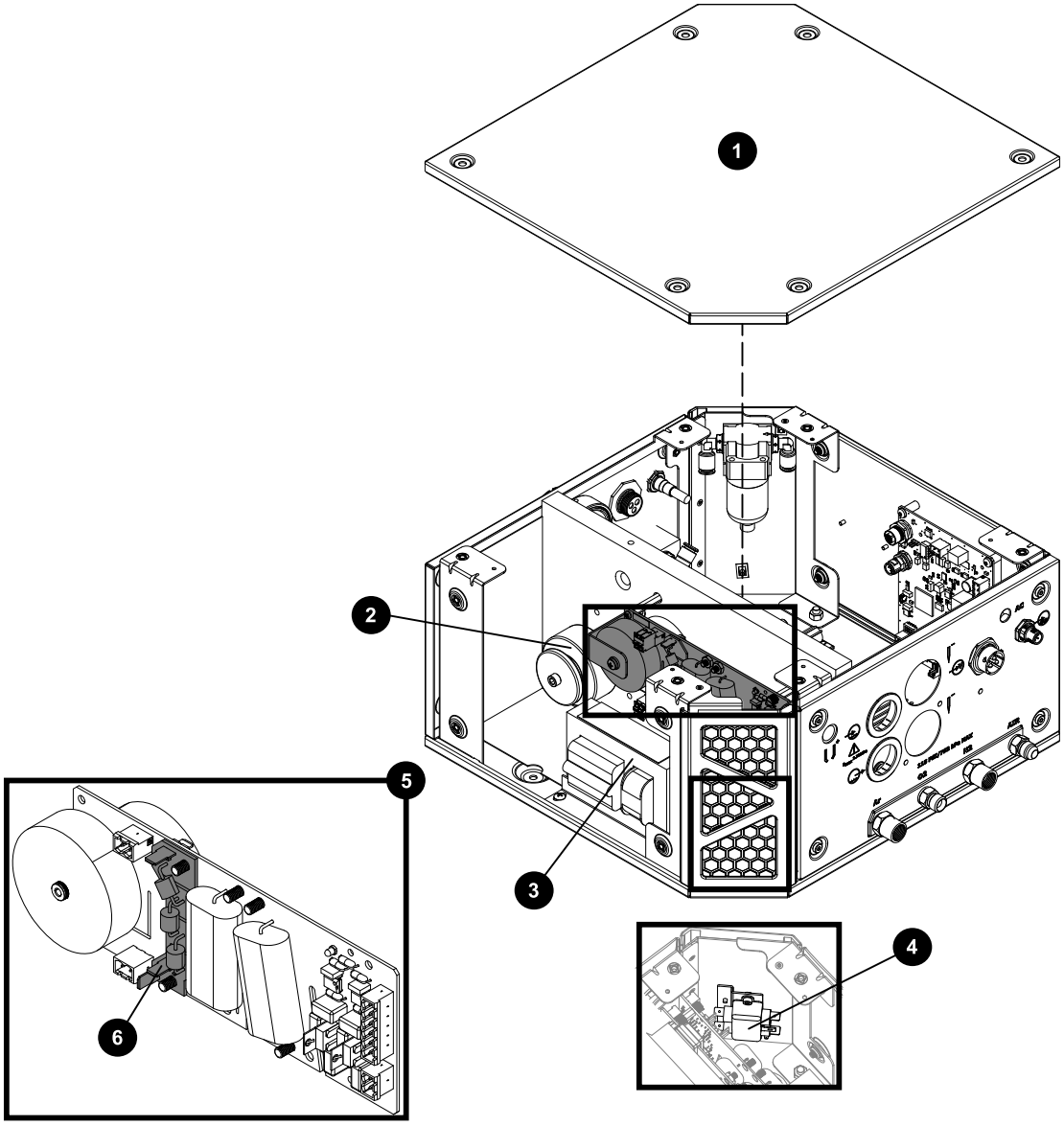
	Part number	Description	Designator	Quantity
1	229697	Inrush contactor: 80 A, IEC AC-3, 3-phase, 120 VAC	IR_CON	1
2	209274	Inrush resistor assembly, 2 Ω X 3	–	1
3	229033	Terminal block 600 V, 200 A (380 V, 400 V, 415 V, 440 V, 480 V, 600 V)	TB1	1
4	029316	Terminal block 600 V, 140 A (380 V, 440 V, 480 V, 600 V)		
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
	10080016	Kit: Replacement output terminals for connecting work cables and pilot arc cables in the plasma power supply	–	–

Gas connect console parts



	Part number	Description
1	078631	Core gas connect console
2	078662	CorePlus gas connect console
3	078632	VWI gas connect console
4	078633	OptiMix gas connect console

Gas connect console high-voltage side parts (CorePlus shown)



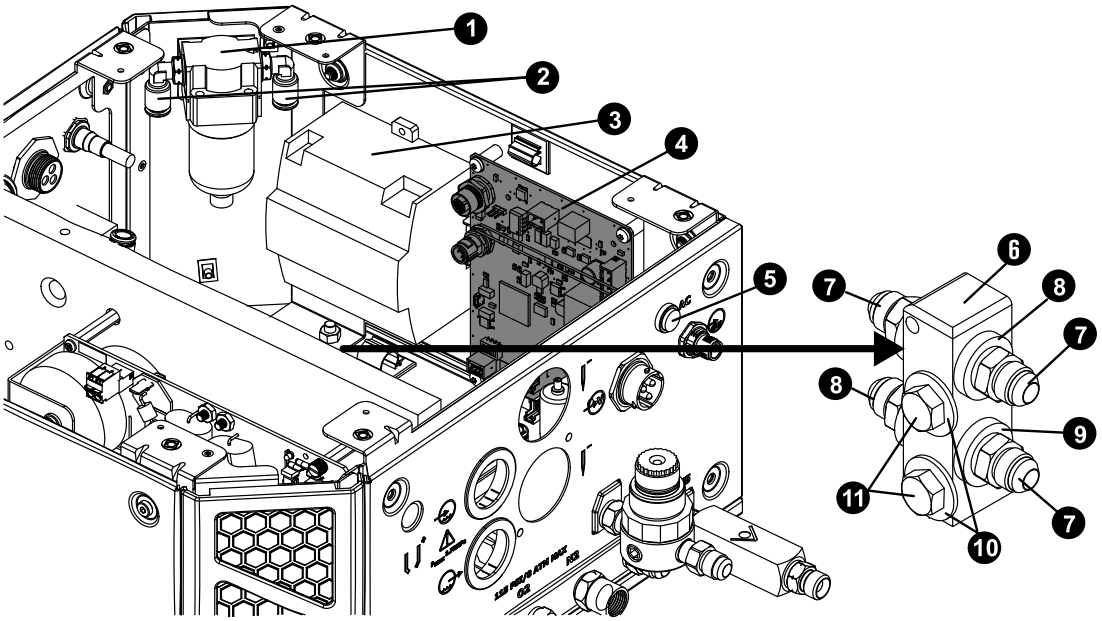
	Part number	Description	Console	Designator	Quantity
1	229930	Top panel with insulator	Core, CorePlus, VWI	–	1
	229929		OptiMix		
2	10079807 [1]	Coil assembly with coil mount	Core, CorePlus, VWI, OptiMix	T2	1
	229837 [2]	Coil assembly (not shown)	Core, VWI, OptiMix		

	Part number	Description	Console	Designator	Quantity
3	229838	High-frequency, high-voltage transformer	Core, CorePlus, VWI, OptiMix	T1	1
4	009045	EMI filter	Core, CorePlus, VWI, OptiMix	–	1
5	141563 [1]	High-frequency, high-voltage ignition PCB	Core, CorePlus, VWI, OptiMix	PCB2	1
	141354 [2]		Core, VWI, OptiMix		
6	141595	Spark gap PCB	Core, CorePlus, VWI, OptiMix	–	1

1 For gas connect consoles with a serial number that is more than 5,000.

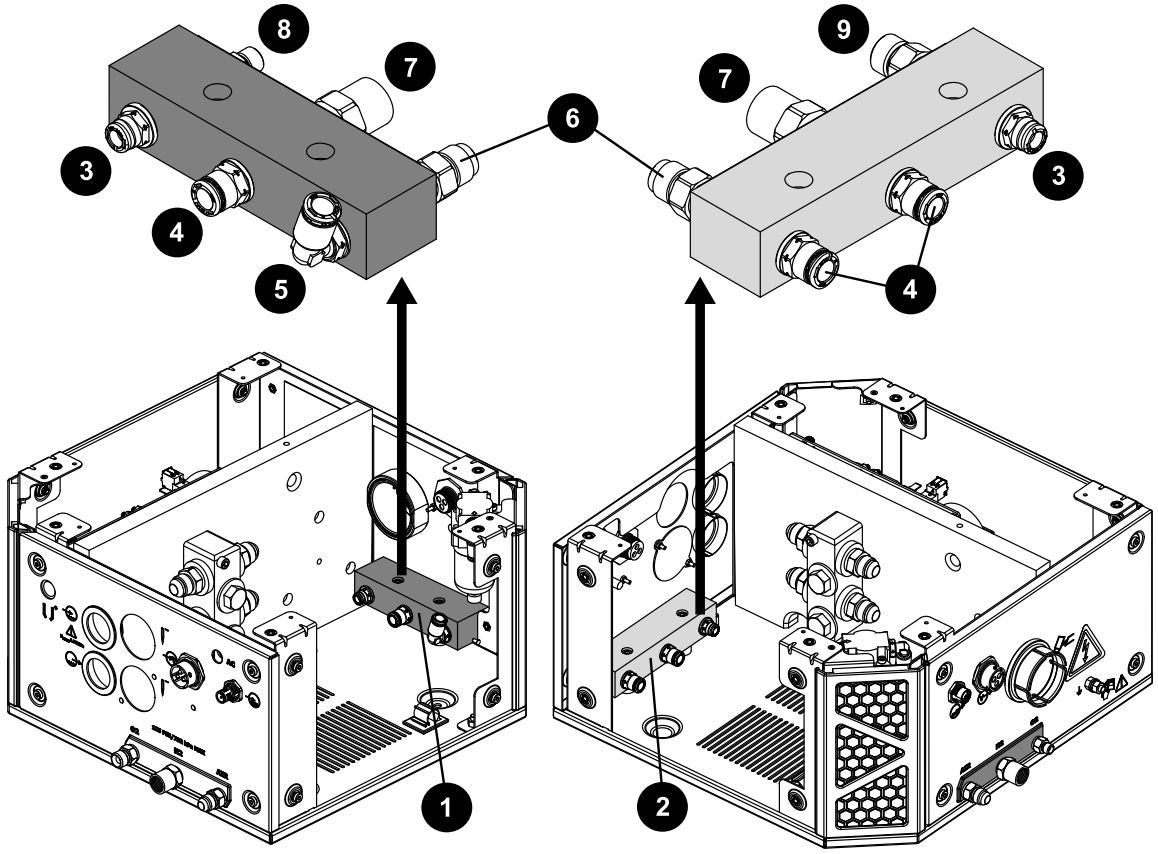
2 For gas connect consoles with a serial number that is less than 5,000.

Gas connect console manifold side parts



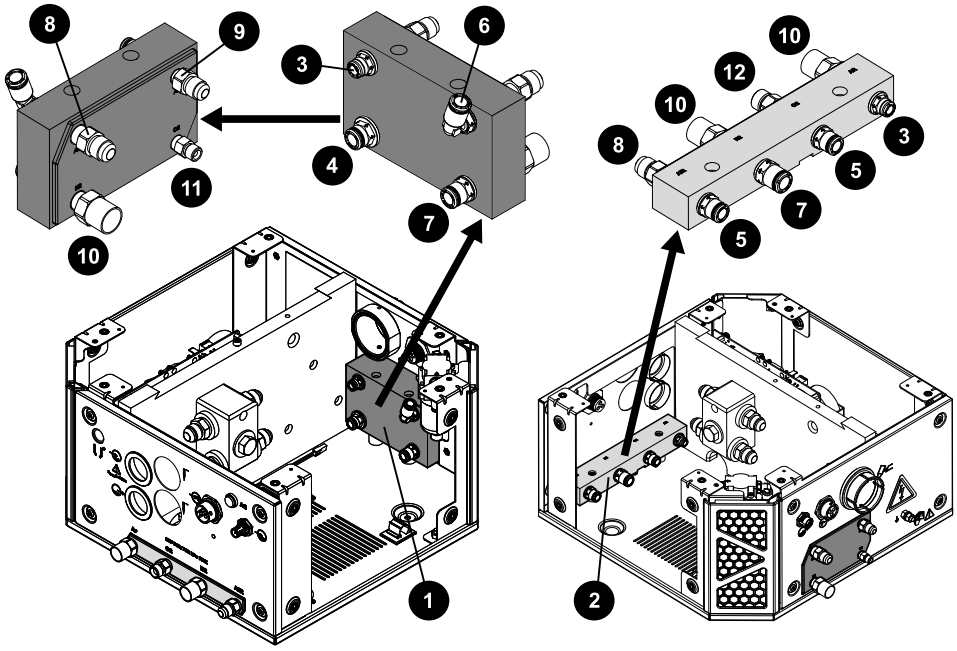
	Part number	Description	Console	Designator	Quantity
1	011151	Air filter assembly	Core, CorePlus, VWI, OptiMix	–	1
	011110	Air filter element	Core, CorePlus, VWI, OptiMix	–	1
2	015853	Male elbow adapter: 1/4 inch NPT X 5/16 inch tube	Core, CorePlus, VWI, OptiMix	–	2
3	229640	Power source: 88 VAC - 264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

Core gas connect console manifolds and adapters



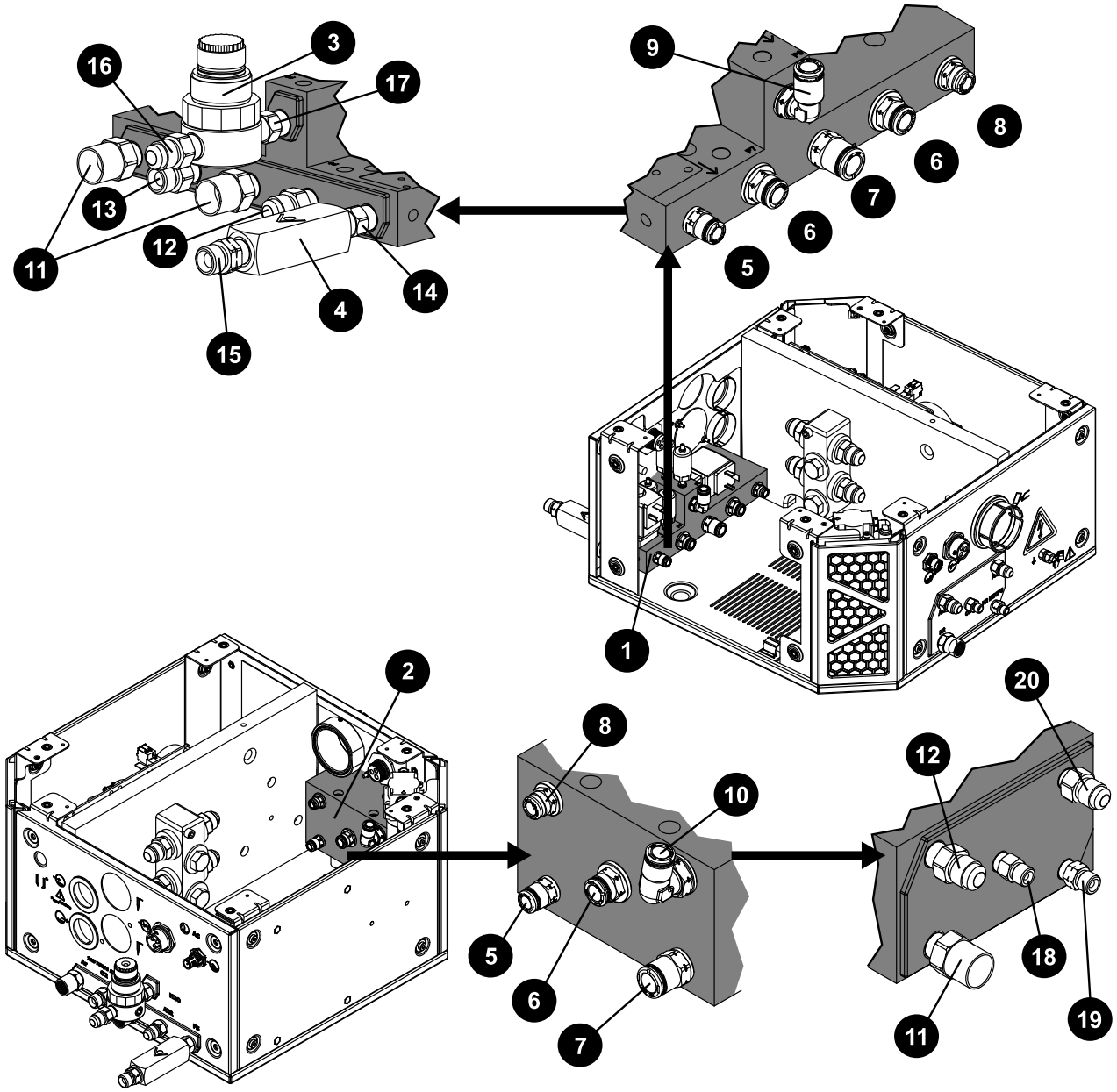
	Part number	Description	Quantity
1	104806	Manifold: Gas output (no adapters)	1
2	104802	Manifold: Gas input (no adapters)	1
Push-to-connect adapters			
3	015876	1/4 inch NPT X 1/4 inch tube	2
4	015811	1/4 inch NPT X 8 mm tube	3
5	015853	Male elbow: 1/4 inch NPT X 5/16 inch tube	1
Threaded adapters with thread sealant applied			
6	10083752	1/4 inch NPT X #6 male with O-ring (air output and input)	2
7	10083762	1/4 inch NPT X RH 'B' inert female with O-ring (nitrogen output and input)	2
8	10083766	1/8 inch NPT X RH 'A' with O-ring (oxygen output)	1
9	10083750	1/4 inch NPT X RH 'B' male with O-ring (oxygen input)	1

CorePlus gas connect console manifolds and adapters



	Part number	Description	Quantity
1	10078917	Manifold: Gas output (no adapters)	1
2	10078916	Manifold: Gas input (no adapters)	1
Push-to-connect adapters			
3	015876	1/4 inch NPT X 1/4 inch tube	2
4	015910	3/8 inch NPT X 5/16 inch tube	1
5	015811	1/4 inch NPT X 8 mm tube	2
6	015909	Male elbow: 1/4 inch NPT X 5/16 inch tube	1
7	015907	1/4 inch NPT X 3/8 inch tube	2
Threaded adapters with thread sealant applied			
8	10083752	1/4 inch NPT X #6 male with O-ring (air output and input)	2
9	10083768	Adapter: 1/8 inch NPT X #5 male with O-ring (argon outlet)	1
10	10083762	1/4 inch NPT X RH 'B' inert female with O-ring (nitrogen output and input)	3
11	10083766	1/8 inch NPT X RH 'A' with O-ring (oxygen output)	1
12	10083750	1/4 inch NPT X RH 'B' male with O-ring (oxygen input)	1

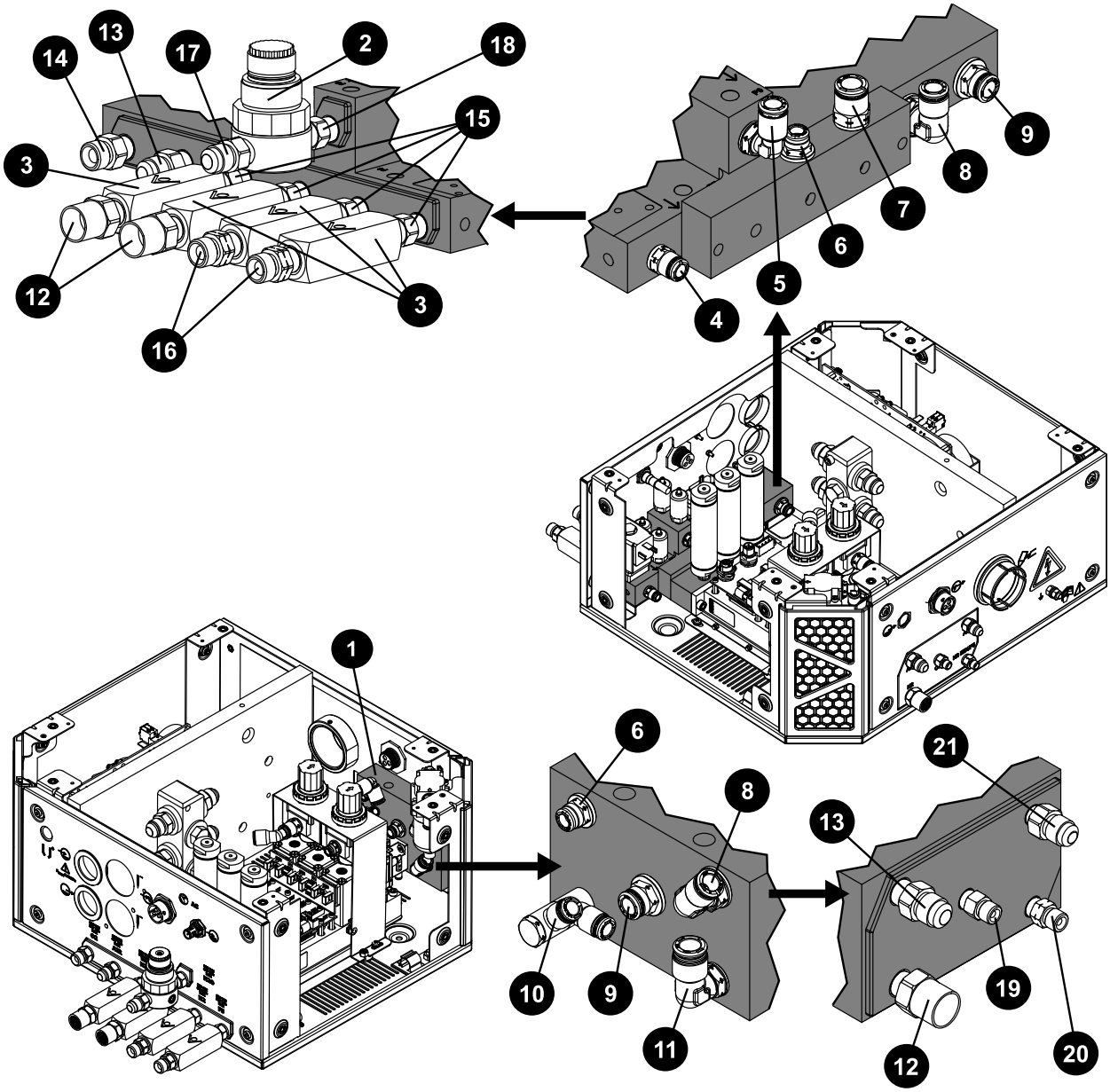
VWI gas connect console input and output manifolds and adapters



	Part number	Description	Quantity
1	229898	Manifold: Gas input (with adapters)	1
2	104843	Manifold: Gas output (no adapters)	1
3	229844	Water regulator	1

	Part number	Description	Quantity
4	006157	Check valve	1
Push-to-connect adapters			
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°	-
Threaded adapters with thread sealant applied			
11	10083762	1/4 inch NPT X RH 'B' inert female with O-ring	3
12	10083752	1/4 inch NPT X #6 male with O-ring	2
13	10083750	1/4 inch NPT X RH 'B' male with O-ring	1
14	10083806	1/4 inch X hexagonal collar with O-ring	1
15	10083808	1/4 inch NPT X LH 'B' with O-ring	1
16	015012	1/4 inch NPT X #6 male	1
17	10084047	1/4 inch NPT hexagonal collar with O-ring	1
18	10083766	Adapter: 1/8 inch NPT X RH 'A' with O-ring (oxygen outlet)	1
19	10083783	Adapter: 1/8 inch NPT X LH 'A' male with O-ring (hydrogen mix outlet)	1
20	10083768	Adapter: 1/8 inch NPT X #5 male with O-ring (argon outlet)	1

OptiMix gas connect console input and output manifolds and adapters

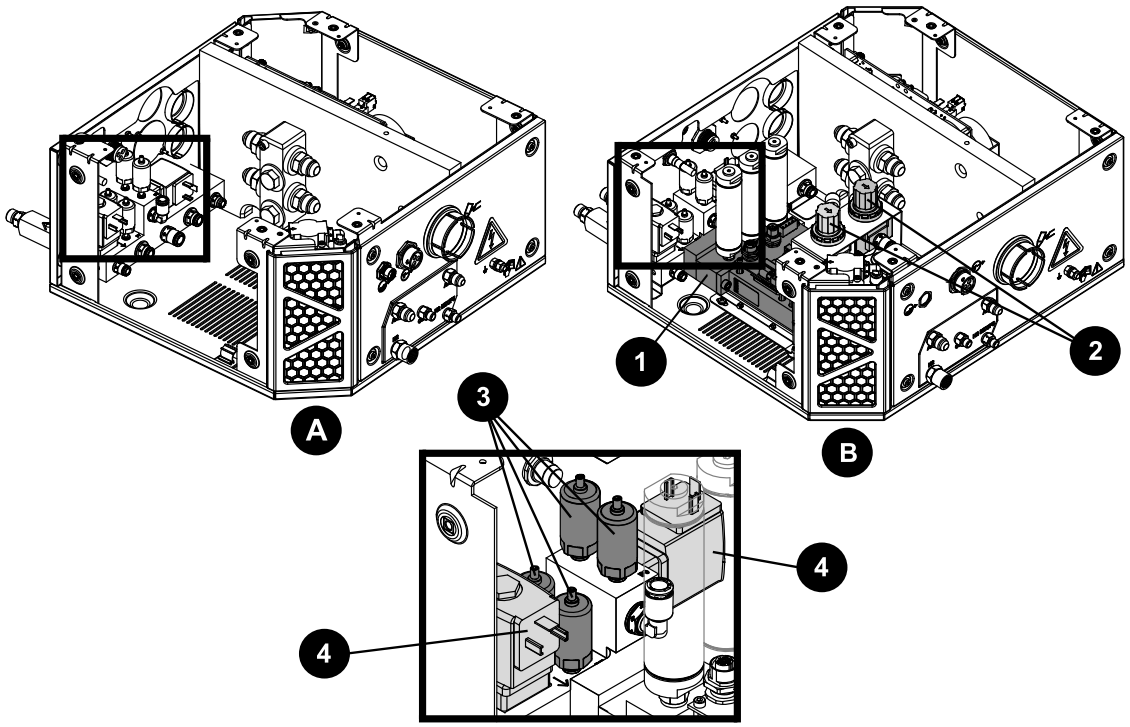


	Part number	Description	Quantity
1	104843	Manifold: Gas output (no adapters)	1
2	229844	Water regulator	1
3	006157	Check valve	4
Push-to-connect adapters			

	Part number	Description	Quantity
4	015905	1/8 inch NPT X 1/4 inch tube	1
5	015853	Elbow: 1/4 inch NPT X 5/16 inch tube	1
6	015876	1/4 inch NPT X 1/4 inch tube	1
7	015907	1/4 inch NPT X 3/8 inch tube	1
8	015909	Elbow: 3/8 inch NPT X 5/16 inch tube	1
9	015910	3/8 inch NPT X 5/16 inch tube	1
10	015906	Dual connection: 1/8 inch NPT X 1/4 inch tube	1
11	015908	Elbow: 1/4 inch NPT X 3/8 inch tube	1
Threaded adapters with thread sealant applied			
12	10083762	1/4 inch NPT X RH 'B' inert female with O-ring	3
13	10083752	1/4 inch NPT X #6 male with O-ring	2
14	10083750	1/4 inch NPT X RH 'B' male with O-ring	1
15	10083806	1/4 inch X hexagonal collar with O-ring	4
16	10083808	1/4 inch NPT X LH 'B' with O-ring	2
17	015012	1/4 inch NPT X #6 male	1
18	10084047	1/4 inch NPT hexagonal collar with O-ring	1
19	10083766	1/8 inch NPT X RH 'A' with O-ring	1
20	10083783	1/8 inch NPT X LH 'A' with O-ring	1
21	10083768	1/8 inch NPT X #5 with O-ring	1

To replace the gas input manifold with adapters in an OptiMix gas connect console, contact your cutting machine supplier or regional Hypertherm Customer Service representative.

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



A VWI

B OptiMix

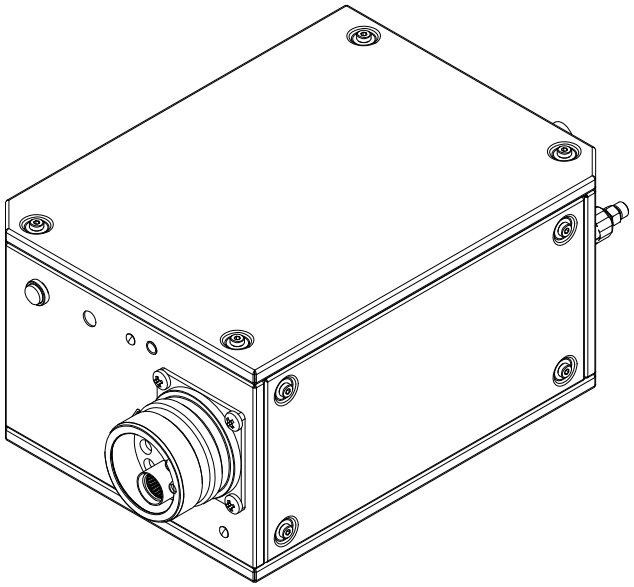
	Part number	Description	Console	Designator	Quantity
1	528057	Kit: Mixer module and cable tie	OptiMix	-	1
2	011101	Regulator	OptiMix	-	2
3	223398	Pressure transducer	VWI and OptiMix	P6 - P9	4
4	006167	Proportional valve	VWI and OptiMix	B4, B5	2

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

Part number	Description	Console	Quantity
229718	Wire harness	Core, CorePlus	1
229719	Wire harness	VWI	
229720	Wire harness	OptiMix	

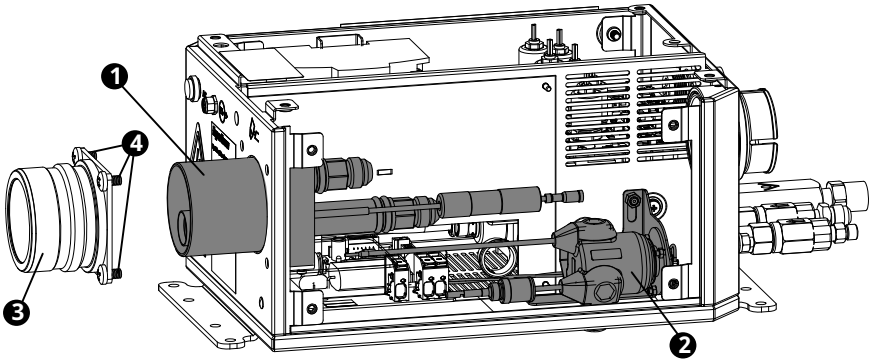
Part number	Description	Console	Quantity
428490	Kit: Tubing	Core	1
10078918	Kit: Tubing	CorePlus	
428491	Kit: Tubing	VWI	
428492	Kit: Tubing	OptiMix	
223709	CAN cable 0.38 m (1.2 ft) to external connector	Core, CorePlus, VWI, OptiMix	1
223710	CAN cable 0.48 m (1.6 ft) male-female	Core, CorePlus, VWI	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

TorchConnect console parts



Part number	Description
078618	TorchConnect console

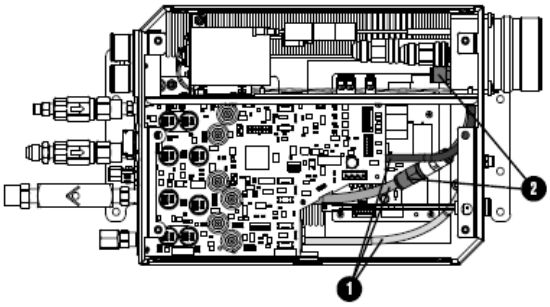
TorchConnect console EasyConnect side



	Part number	Description	Designator	Quantity
1	428730	Torch receptacle block	-	1
2	229882 [1]	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)

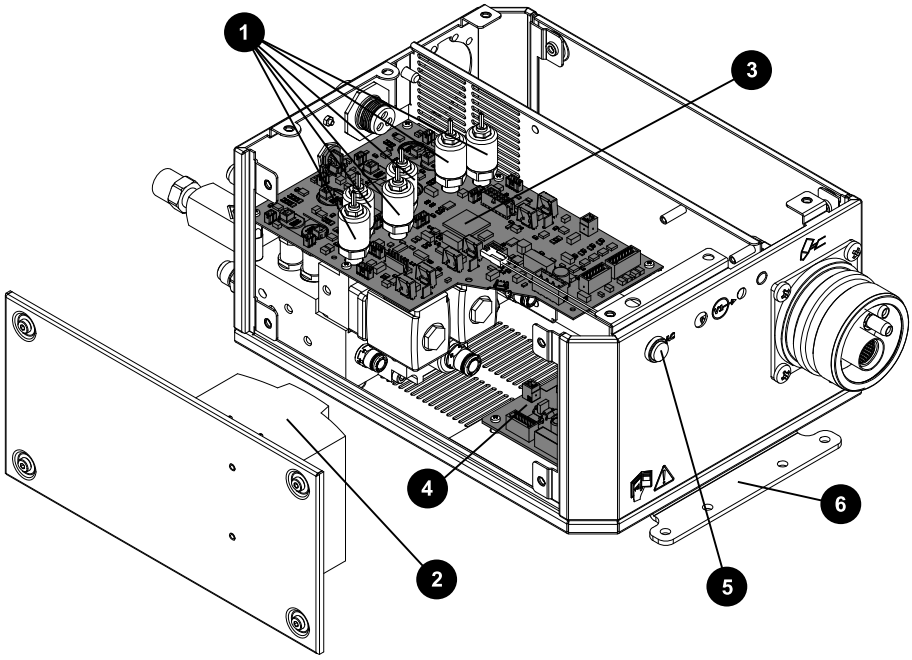
1 Includes the ohmic contact PCB (141368).

TorchConnect console – top



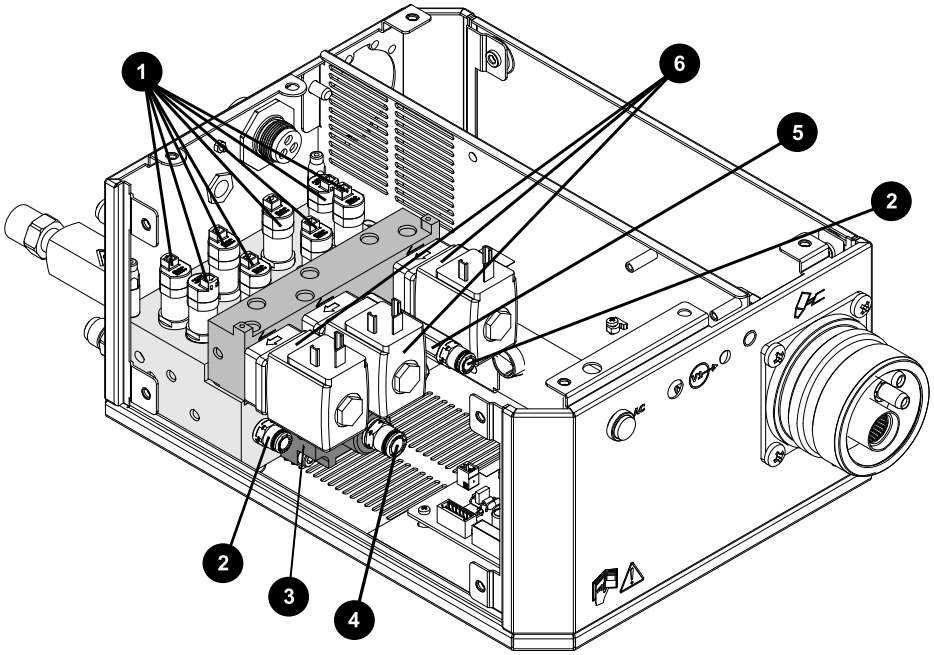
	Part number	Description	Designator	Quantity
1	428338	Kit: Tubing	-	1
2	006152	Check valve	-	2

TorchConnect 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

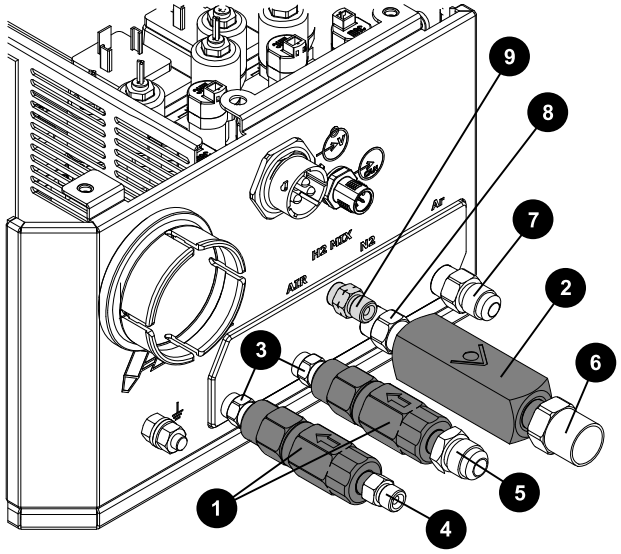
TorchConnect console manifold side – view 2



	Part number	Description	Designator	Quantity
	229895	Manifold assembly: ▪ Solenoid valves ▪ Proportional valves ▪ All manifolds ▪ All fittings	-	1
1	229965	Solenoid valve	V4 – V12	9 (8 shown)
	229917	Solenoid valve (229965) tool [1]	-	
2	015905	Adapter: 1/8 inch NPT O-ring seal X 1/4 inch tube	-	2
3	428756	Bottom manifold assembly: ▪ Bottom manifold ▪ Adapter ▪ Critical orifice ▪ Solenoid valve	-	1
4	015811	Adapter: 1/4 inch NPT O-ring seal X 8 mm tube	-	1
5	10084090	Adapter: 1/8 inch FPT X 1/8 inch NPT X 1-5/8 inch with O-ring	-	1
6	006167	Proportional valve	B1 – B3	3
	044508	O-ring		7

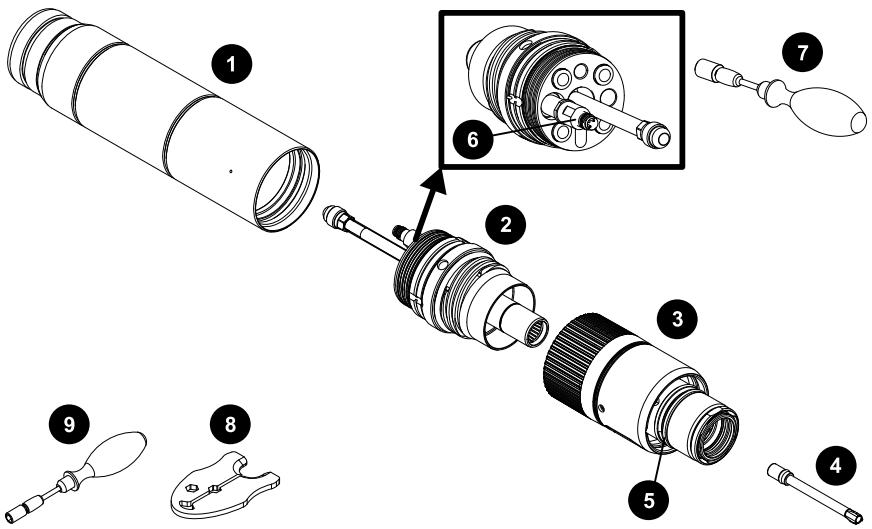
1 Use this tool to remove the solenoid valve without removing the control PCB or the pressure transducers.

TorchConnect console 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
	Threaded adapters with thread sealant applied			
3	10083626	1/8 inch hexagonal collar with O-ring	-	2
4	10083766	1/8 inch NPT X RH ‘A’ with O-ring	-	1
5	10083803	1/8 inch NPT X #6 male with O-ring	-	1
6	10083762	1/4 inch NPT X RH ‘B’ inert female with O-ring	-	1
7	10083738	1/4 inch NPT X #5 male with O-ring	-	1
8	10083806	1/4 inch hexagonal collar with O-ring	-	1
9	10083783	1/8 inch NPT X LH ‘A’ male with O-ring	-	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 Preventive maintenance kits on page 447)
6	006155	Torch solenoid valve (V1)
7	229918	Torch solenoid valve (V1) tool
8	10080574	XPR consumable tool
9	429013	XPR electrode torque tool
	428488	Torch assembly, 300 A mild steel consumables
	104879	2.25 inch spanner wrench

Torch bracket

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

Consumable starter kits

Refer to Example configurations for consumables on page 242 or the *XPR Cut Charts Instruction Manual (809830)* for specific applications.

Mild steel consumable starter kit (428616)

Part number	Description	Quantity
420231	Electrode: 50 A	1
420234	Nozzle: 50 A	1
420237	Shield: 50 A	1
420233	Swirl ring: 50 A	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: 220 A / 300 A	4
420270	Nozzle: 220 A	1
420273	Shield: 220 A	1
420406	Swirl ring: 220 A / 300 A	2
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

Part number	Description	Quantity
420200	Shield retaining cap	1
420365	Nozzle retaining cap	1
104879	2.25 inch spanner wrench	1
10080574	XPR 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_2O	1
420306	Nozzle: 80 A	2
420290	Nozzle: 80 A H_2O	2
420469	Shield: 130 A H_2O	1
420356	Electrode: 130 A - 300 A	4
420315	Nozzle: 130 A	2
420318	Shield: 130 A	1
420472	Shield: 170 A H_2O	1
420324	Nozzle: 170 A	3
420327	Shield: 170 A	1
420358	Swirl ring: 300 A fuel	1
420475	Shield: 300 A H_2O	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_2O	1

Part number	Description	Quantity
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
420231	Electrode: 50 A	1
420234	Nozzle: 50 A	1
420237	Shield: 50 A	1
420233	Swirl ring: 50 A	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: 220 A / 300 A	4
420270	Nozzle: 220 A	1

Part number	Description	Quantity
420273	Shield: 220 A	1
420279	Nozzle: 300 A	3
420491	Shield: 300 A	2
420406	Swirl ring: 220 A / 300 A	2
420368	Water tube	2
420200	Shield retaining cap	2
420365	Nozzle retaining cap	2
104879	2.25 inch spanner wrench	1
10080574	XPR 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_2O	1
420306	Nozzle: 80 A	2
420290	Nozzle: 80 A H_2O	2
420469	Shield: 130 A H_2O	1
420356	Electrode: 130 A - 300 A	4
420315	Nozzle: 130 A	2
420318	Shield: 130 A	1
420472	Shield: 170 A H_2O	1
420324	Nozzle: 170 A	3
420327	Shield: 170 A	1
420358	Swirl ring: 300 A fuel	1

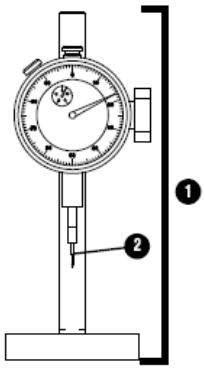
Part number	Description	Quantity
420475	Shield: 300 A H_2O	1
420359	Nozzle: 300 A	2
420362	Shield: 300 A	2
420303	Electrode: 40 A - 80 A	3
420309	Shield: 60 A - 80 A	2
420294	Electrode: 40 A - 80 A aluminum air/air	1
420300	Shield: 60 A - 80 A H_2O	1
420314	Swirl ring: 40 A - 170 A multiple processes	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

Core and CorePlus console non-ferrous consumable starter kit (428945)

Part number	Description	Quantity
420288	Nozzle: 40 A	3
420291	Shield: 40 A	2
420297	Nozzle: 60 A	3
420306	Nozzle: 80 A	3
420356	Electrode: 130 A – 300 A	5
420315	Nozzle: 130 A	2
420318	Shield: 130 A	1
420324	Nozzle: 170 A	3
420327	Shield: 170 A	1
420359	Nozzle: 300 A	3

Part number	Description	Quantity
420362	Shield: 300 A	2
420303	Electrode: 40 A – 80 A	4
420309	Shield: 60 A – 80 A	3
420294	Electrode: 40 A – 80 A aluminum air/air	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
10080574	Consumable tool	1
027055	Silicone lubricant, 1/4 ounce	1

Other consumable and torch parts



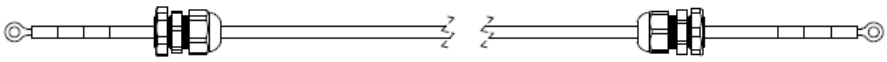
	Part number	Description
1	004630	Pit depth gauge
2	004629	Gauge point – thin tip
	027047	Gauge point – blunt tip
	027055	Silicone lubricant, 1/4 ounce

	Part number	Description
	10080574	XPR consumable tool
	428764	XPR robotic torch teach accessory
	429013	XPR electrode torque tool

Cable, hose, and lead parts

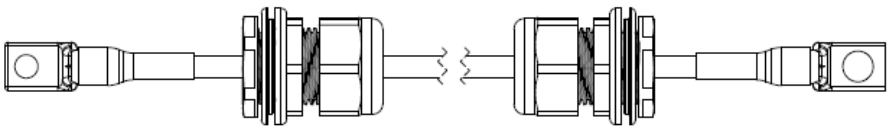
Use the following cables, hoses, and leads to connect cutting system components.

Pilot-arc cables 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 cables with strain relief



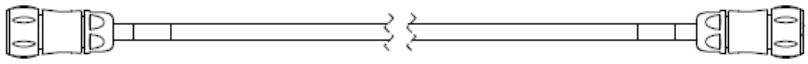
Part number	Type	Length	Part number	Type	Length
223573	2/0	3 m (9.8 feet)	223527	4/0	60 m (196.9 feet)
223574	2/0	4.5 m (14.8 feet)	223528	4/0	75 m (246.1 feet)
223575	2/0	7.5 m (24.6 feet)	223551 [1]	2/0	3 m (9.8 feet)
223576	2/0	10 m (32.8 feet)	223552 [1]	2/0	4.5 m (14.8 feet)

Part number	Type	Length	Part number	Type	Length
223577	2/0	15 m (49.2 feet)	223553 [1]	2/0	7.5 m (24.6 feet)
223578	2/0	20 m (65.6 feet)	223554 [1]	2/0	10 m (32.8 feet)
223579	2/0	25 m (82 feet)	223555 [1]	2/0	15 m (49.2 feet)
223525	4/0	35 m (114.8 feet)	223556 [1]	2/0	20 m (65.6 feet)
223526	4/0	45 m (147.6 feet)	223557 [1]	2/0	25 m (82 feet)

1 Leads labeled with CCC mark only. CCC is defined in Safety and EMC symbols and marks on page 36.

Power cable, 120 VAC

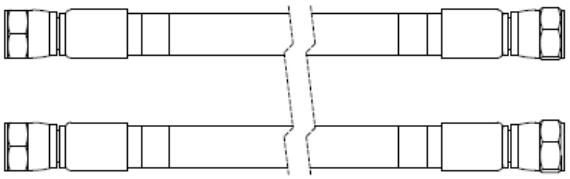
These power cables are 3-position, male-female, 120 VAC cables.



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 assemblies (plasma power supply to gas connect console)

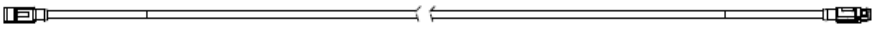
This hose assembly has an internal diameter of 1.27 cm (0.50 inch).



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)	-	-

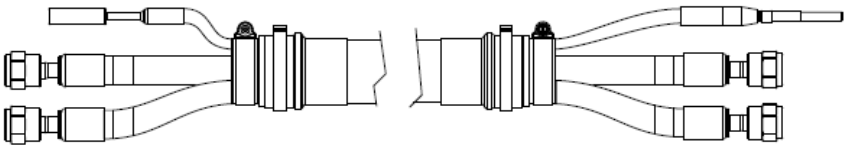
CAN cables

CAN cables are 5-position, male-female. One CAN cable is necessary.



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)	-	-

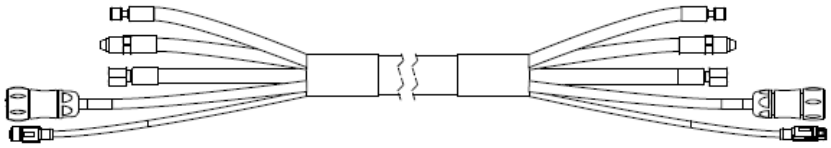
Pilot-arc and coolant assemblies (Core, CorePlus)



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)	428983	18 m (59.1 feet) [1]
428457	7.5 m (24.6 feet)	–	–

1 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.

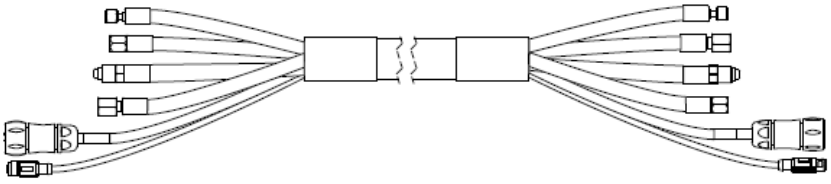
Power, CAN, and 3-gas assemblies (Core)



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)	428982	18 m (59.1 feet) [1]
428467	7.5 m (24.6 feet)	–	–

1 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.

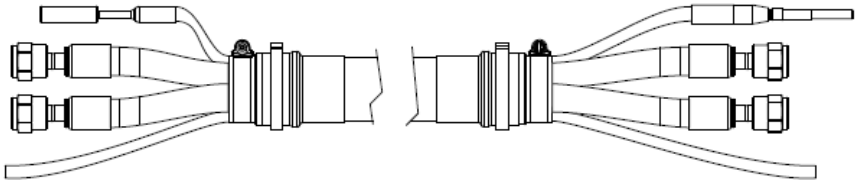
Power, CAN, and 4-gas assemblies (CorePlus)



Part number	Length	Part number	Length
10079381	3 m (9.8 feet)	10079385	10 m (32.8 feet)
10079382	4.5 m (14.8 feet)	10079386	15 m (49.2 feet)
10079383	6 m (19.7 feet)	10079387	18 m (59.1 feet) [1]
10079384	7.5 m (24.6 feet)	–	–

1 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.

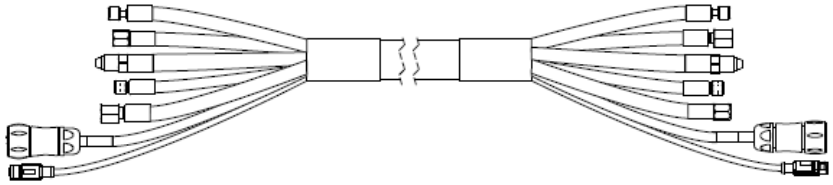
Pilot-arc, coolant-hose, and shield-water assemblies (VWI, OptiMix)



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) [1]
428356	7.5 m (24.6 feet)	–	–

1 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.

Power, CAN, and 5-gas assemblies (VWI, OptiMix)



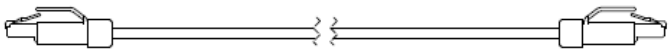
Part number	Length	Part number	Length
428363	3 m (9.8 feet)	428367	10 m (32.8 feet)
428364	4.5 m (14.8 feet)	428368	15 m (49.2 feet)
428365	6 m (19.7 feet)	428980	18 m (59.1 feet) [1]
428366	7.5 m (24.6 feet)	–	–

1 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.

EtherCAT and Ethernet LAN interface cables

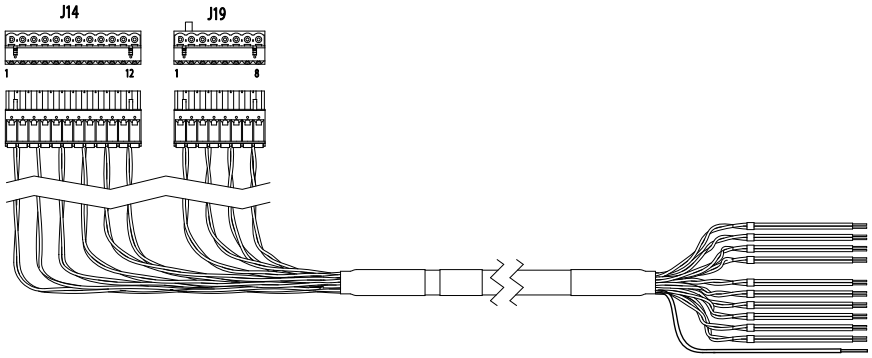
The EtherCAT and Ethernet LAN interface cable has the following characteristics: RJ-45 connector, male-male, SF/UTP shield, 2 twisted pairs, 22 AWG.

For more information on EtherCAT and Ethernet LAN cable specifications, refer to Requirements for EtherCAT and Ethernet LAN cables on page 151.



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)

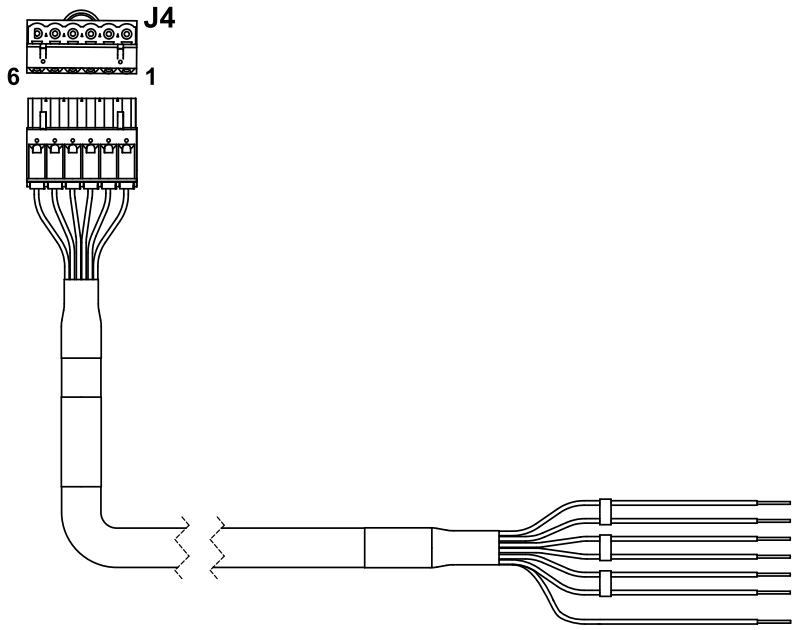
Discrete interface cables



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)

Part number	Length	Part number	Length
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)

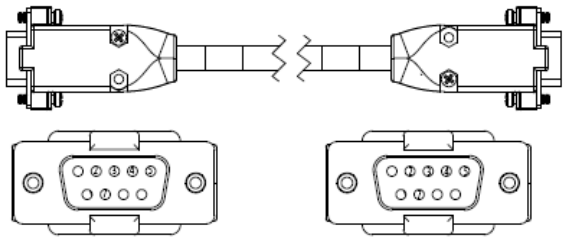
Discrete cables for the expansion PCB



Part number	Length	Part number	Length
10083813	3 m (9.8 feet)	10083823	20 m (65.6 feet)
10083814	4.5 m (14.8 feet)	10083824	22.5 m (73.8 feet)
10083815	6 m (19.7 feet)	10083825	25 m (82 feet)
10083816	7.5 m (24.6 feet)	10083826	30 m (98.4 feet)
10083817	10 m (32.8 feet)	10083827	35 m (114.8 feet)
10083818	12 m (39.4 feet)	10083828	37.5 m (123 feet)
10083819	13.5 m (44.3 feet)	10083829	45 m (147.6 feet)
10083820	15 m (49.2 feet)	10083830	60 m (196.9 feet)
10083822	16.5 m (54.1 feet)	10083831	75 m (246.1 feet)

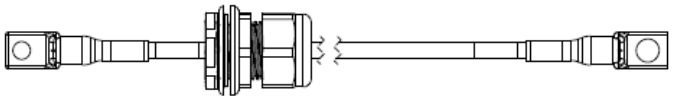
Serial CNC interface cables

The serial CNC interface cables have the following characteristics: 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)

Work cables

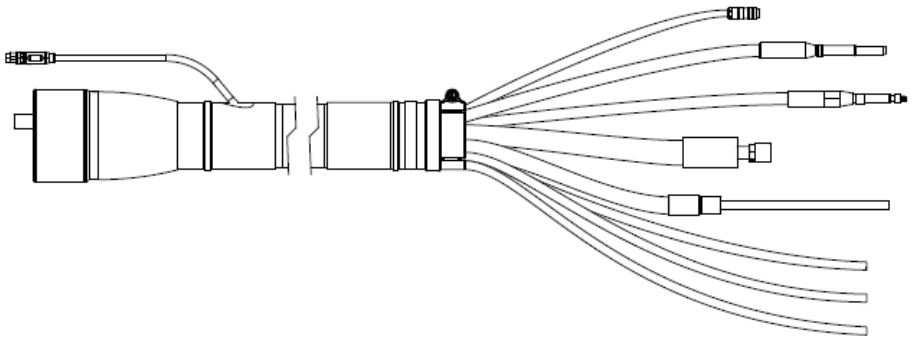


Part number	Type	Length	Part number	Type	Length
223628	2/0	3 m (9.8 feet)	223648	3/0	60 m (196.9 feet)
223629	2/0	4.5 m (14.8 feet)	223649	3/0	75 m (246.1 feet)
223630	2/0	7.5 m (24.6 feet)	223661 [1]	2/0	3 m (9.8 feet)
223631	2/0	10 m (32.8 feet)	223662 [1]	2/0	4.5 m (14.8 feet)
223632	2/0	15 m (49.2 feet)	223663 [1]	2/0	7.5 m (24.6 feet)

Part number	Type	Length	Part number	Type	Length
223633	2/0	20 m (65.6 feet)	223664 [1]	2/0	10 m (32.8 feet)
223634	2/0	25 m (82 feet)	223665 [1]	2/0	15 m (49.2 feet)
223646	3/0	35 m (114.8 feet)	223666 [1]	2/0	20 m (65.6 feet)
223647	3/0	45 m (147.6 feet)	223667 [1]	2/0	25 m (82 feet)

1 Leads labeled with CCC mark only. CCC is defined in Safety and EMC symbols and marks on page 36.

Torch leads



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 leads and bevel robotic leads

Bevel torch leads can also be used as bevel robotic leads.

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) [1]		428979	6 m (20 feet) [1]	

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

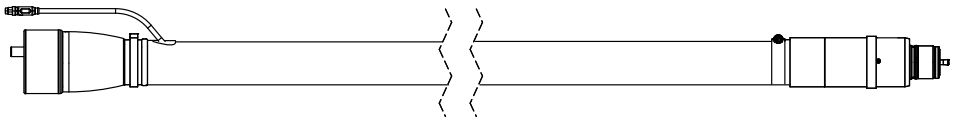
Robotic through-arm leads

Part number	Lead length	Part number	Lead length
428913	2 m (6.6 feet)	428916	3.5 m (11.5 feet)
428914	2.5 m (8.2 feet)	428917	4 m (13.1 feet)
428915	3 m (9.8 feet)	428918	4.5 m (14.8 feet)

Short torch

A different setup and installation is necessary to use the short torch. Refer to the *XPR Short Torch Instruction Manual (810640)* for important information on how to safely install and use this torch.

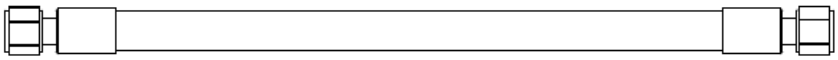
The XPR short torch can be used only with XPR170 and XPR300 cutting systems.



Part number	Description	Quantity
420750	Short torch with integrated lead	1

Oxygen hoses (blue)

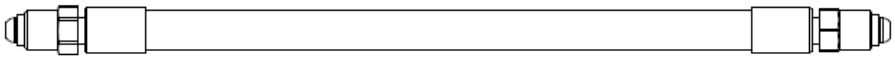
The oxygen hose has RH type "B" female fittings.



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 hoses (black)

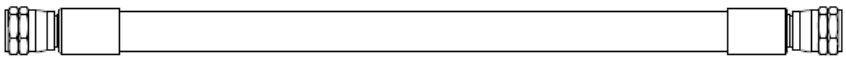
The nitrogen or argon hose has RH type "B" male fittings.



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 hoses (black)

The air hose has JIC-6 female fittings.



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) hoses (red)

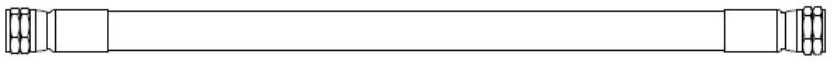
The hydrogen or nitrogen-hydrogen (F5) hose has LH type "B" female fittings.



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) hoses (blue)

The water hose has JIC-6 female fittings.



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)

Part number	Length	Part number	Length
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
428641	Kit: Electronics (200 V – 240 V)
428642	Kit: Electronics (380 V – 600 V)

Tools

Part number	Description
229917	TorchConnect console solenoid valve tool
229918	Torch solenoid valve tool
104879	2.25 inch spanner wrench
004630	Pit depth gauge
004629	Gauge point
10080574	XPR consumable tool
429013	XPR electrode torque tool
1-13897 (Hypertherm Waterjet part number)	TDS meter

Recommended spare parts

Plasma power supply – recommended spare parts

Hypertherm recommends that you keep these parts available for the plasma power supply.

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
10085251	Chopper assembly	Chopper 1	1
10084334	Kit: XPR main control PCB assembly and wireless tag	PCB1	1
10081573	Kit: I/O PCB	PCB5	1
141384	Fan power distribution PCB	PCB6	1
428893	Power distribution PCB	PCB7	1
10084820	Fuse: 15 A, 250 VAC, time delay (on PCB7)	F1, F2	2
108709	Fuse: 10 A, 250 VAC, time delay (on PCB7)	F3	1
208397 [1]	Fuse: 15 A, 600 V, Class R (used in 200 V, 208 V, 220 V, 240 V)	F1, F2	2
208395 [1]	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: 24 VDC, coil, 60 A 28 VDC contacts	CR1	1
229697	Inrush contactor assembly: 80 A, IEC AC-3, 3-phase, 120 VAC	IN_CON	1
003276 [1]	Main contactor (200 V, 208 V, 220 V, 240 V)	M_CON	1
429060 [1]	Main contactor assembly (380 V, 400 V, 415 V, 440 V, 480 V, 600 V)		1

1 Select the part that is the correct voltage for your cutting system and worksite.

Gas connect consoles – recommended spare parts

Hypertherm recommends that you keep these parts available for the gas connect consoles.

Part number	Description	Designator	Quantity
011110	Air filter element	-	1
223398	Pressure transducer (VWI and OptiMix only)	P6 - P9	1
006167	Proportional valve (VWI and OptiMix only)	B4 - B5	1
141563	High-frequency, high-voltage ignition PCB	PCB2	1
141595	Spark gap PCB for ignition PCB	-	1

TorchConnect console – recommended spare parts

Hypertherm recommends that you keep these parts available for the TorchConnect console.

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

Torch – recommended spare parts

Hypertherm recommends that you keep these parts available for the torch.

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
428639	Kit: Filter, torch rebuild without coolant	-	1
428640	Kit: Filter, torch rebuild with coolant	-	1

Descriptions of warning label icons

This warning label is affixed to some plasma power supplies. It is important that the operator and maintenance technician understand the intent of these warning symbols as described.

The numbered text in the table corresponds to the numbered boxes on the label.



1.	Cutting sparks can cause explosion or fire.
1.1	Do not cut near flammables.
1.2	Have a fire extinguisher nearby and ready to use.
1.3	Do not use a drum or other closed container as a cutting table.
2.	Plasma arc can injure and burn; point the nozzle away from yourself. Arc starts instantly when triggered.
2.1	Turn off power before disassembling torch.
2.2	Do not grip the workpiece near the cutting path.
2.3	Wear complete body protection.
3.	Hazardous voltage. Risk of electric shock or burn.
3.1	Wear insulating gloves. Replace gloves when wet or damaged.
3.2	Protect from shock by insulating yourself from work and ground.
3.3	Disconnect power before servicing. Do not touch live parts.
4.	Plasma fumes can be hazardous.
4.1	Do not inhale fumes.
4.2	Use forced ventilation or local exhaust to remove the fumes.
4.3	Do not operate in closed spaces. Remove fumes with ventilation.
5.	Arc rays can burn eyes and injure skin.
5.1	Wear correct and appropriate protective equipment to protect head, eyes, ears, hands, and body. Button shirt collar. Protect ears from noise. Use welding helmet with the correct shade of filter.
6.	Become trained. Only qualified personnel should operate this equipment. Use torches specified in the manual. Keep nonqualified personnel and children away.
7.	Do not remove, destroy, or cover this label. Replace if it is missing, damaged, or worn.