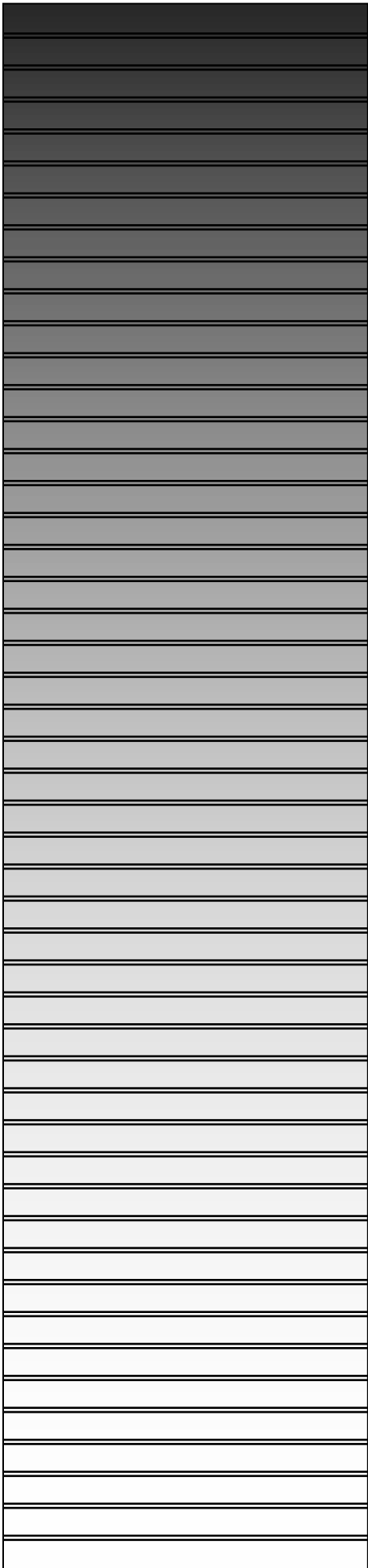




SanRex

Plasma Welding Torches

PWH/M P75, P15, P22, P30

Operators Manual

Version No: 3 Issue Date: October 2025

Manual No: 100125PAW

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General Information

1.1. DESCRIPTION OF EQUIPMENT

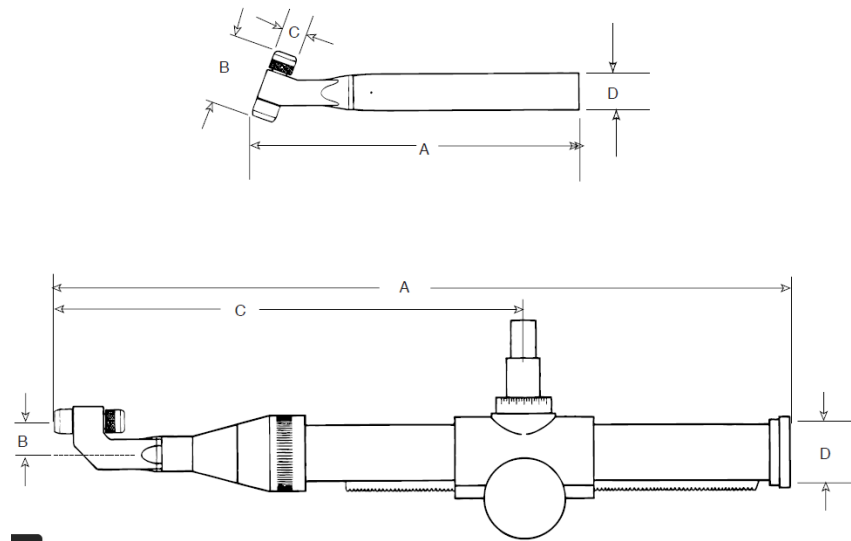
The Sanrex Plasma Welding Torches are designed for direct current plasma arc welding of ferrous metals using the transferred arc plasma process.

1.2. TORCH SPECIFICATIONS

P75 (2A) Specifications

- Straight Polarity Current Rating: 75 amperes DC maximum at 60%.
- Plasma Gas: Argon (Consumption): 0.5 – 2.5 SCFH (0.24 – 1.18 lpm)
- Shield Gas/Straight Polarity: Argon or Argon/Hydrogen (Consumption: 8-15 SCFH (3.8-7.1 lpm).
- Pilot Current – 1 Amps to 5 Amps on average.
- Shipping Weight:
 - Hand torch PWH-P75: 1 lbs. (0.45 kg);
 - Machine mounted torch PWM-P75: 2 lbs. (0.9k g).
- Cooling Requirements: 2,000 BTU/hr, ¼ gpm of Torch Coolant @ 50 psi.

P75 Torch Dimensions

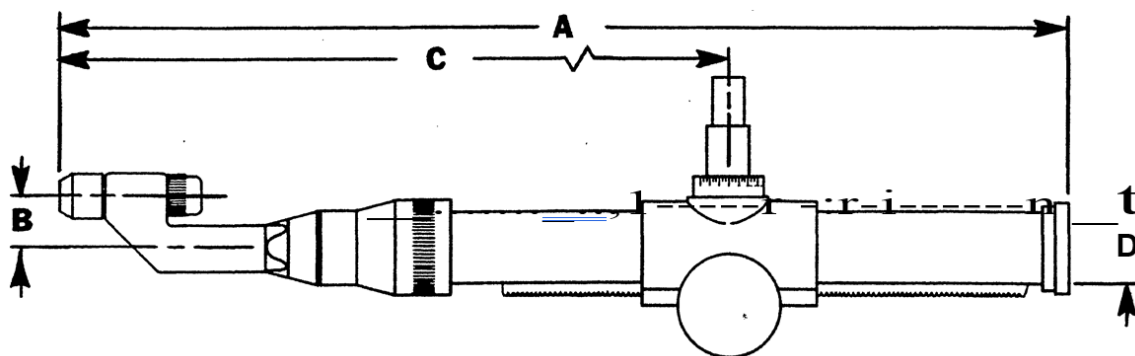
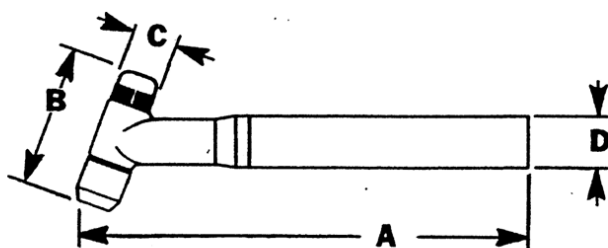


	A		B		C		D	
	Inches	(cm)	Inches	(cm)	Inches	(cm)	Inches	(cm)
PWH-P75 (70)	8.00	(20.32)	1.62	(4.11)	0.62	(1.57)	0.88	(2.24)
PWH-P75 (90)	7.75	(19.68)	1.62	(4.11)	0.62	(1.57)	0.88	(2.24)
PWM-P75	18.00	(47.72)	0.81	(2.06)	7.12	(18.08)	1.38	(3.50)
					15.00	(38.10)		

P15 (3A) Specifications

- Straight Polarity Current Rating: 150 amperes DC maximum at 60% Duty Cycle.
- Plasma Gas: Argon (Consumption): 0.5 – 3 SCFH (0.24 – 1.51 lpm)
- Shield Gas/Straight Polarity: Argon or Argon/Hydrogen (Consumption: 8-15 SCFH (3.8-7.1 lpm).
- Pilot Current – 5 Amps to 10 Amps on average.
- Shipping Weight:
 - Hand torch PWH-P15: 2 lbs. (0.9 kg);
 - Machine mounted torch PWM-P15: 3 lbs. (1.4k g).
- Cooling Requirements: 4,000 BTU/hr, 1/3 gpm of Torch Coolant @ 50 psi.

P15 Torch Dimensions

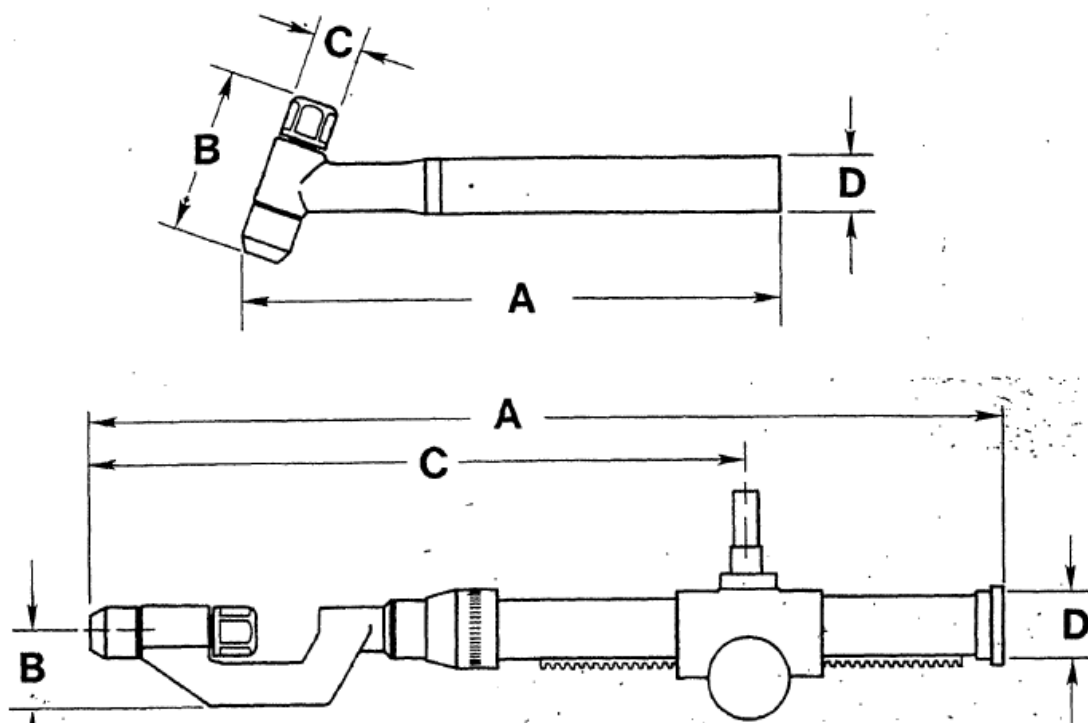


	A		B		C		D	
	Inches	(cm)	Inches	(cm)	Inches	(cm)	Inches	(cm)
PWH-P15 (70)	8.75	(22.22)	2.62	(6.65)	0.88	(2.24)	1.00	(2.54)
PWH-P15 (90)	8.50	(21.59)	2.62	(6.65)	0.88	(2.24)	1.00	(2.54)
PWM-P15	19.25	(48.90)	1.00	(2.54)	9.25	(23.50)	1.38	(3.50)
					16.75	(42.54)		

P22 (4A) Specifications

- Straight Polarity Current Rating: 220 amperes DC maximum at 60% Duty Cycle.
- Plasma Gas: Argon (Consumption): 0.5 – 7 SCFH (0.24 – 3.30 lpm)
- Shield Gas/Straight Polarity: Argon or Argon/Hydrogen (Consumption: 10-20 SCFH (4.72-9.44 lpm).
- Pilot Current – 7 Amps to 12 Amps on average.
- Shipping Weight:
 - Hand torch PWH-P22: 2 lbs. (0.9 kg);
 - Machine mounted torch PWM-P22: 3 lbs. (1.4k g).
- Cooling Requirements: 8,000 BTU/hr, 1/2 gpm of Torch Coolant @ 50 psi.

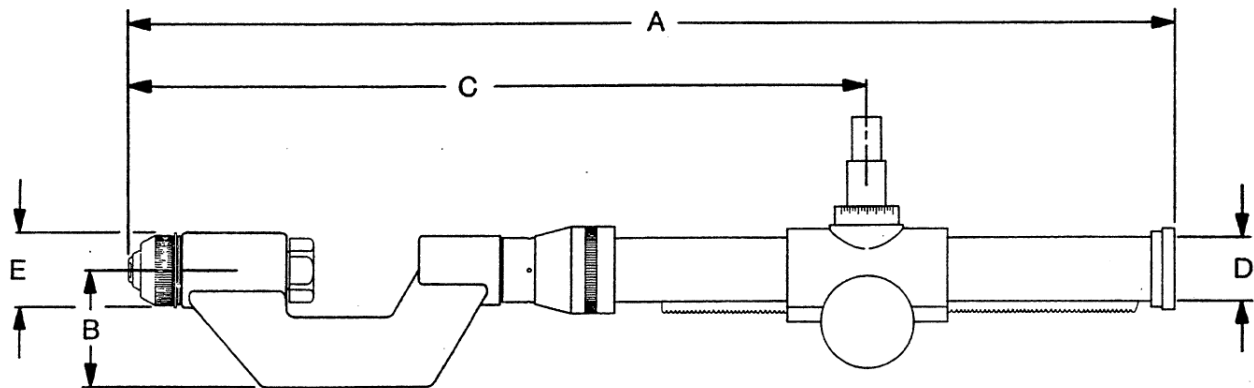
P22 Torch Dimensions



	A		B		C		D	
	Inches	(cm)	Inches	(cm)	Inches	(cm)	Inches	(cm)
PWH-P22 (70)	12.50	(31.80)	3.19	(8.1)	1.25	(2.24)	1.31	(3.3)
PWH-P22 (90)	12.25	(31.10)	3.19	(8.1)	1.25	(2.24)	1.31	(3.3)
PWM-P22	21.00	(53.30)	1.75	(4.4)	11.25	(28.6)	1.38	(3.5)
					19.00	(48.2)		

P30 (300) Specifications

- Straight Polarity Current Rating: 300 amperes DC maximum at 60% duty cycle.
- Plasma Gas: Argon (Consumption): 1.5 – 3.5 SCFH (0.71 – 1.65 lpm)
- Shield Gas/Straight Polarity: Argon or Argon/Hydrogen (Consumption: 10-20 SCFH (4.72-9.44 lpm)).
- Pilot Current – 10 Amps to 15 Amps on average.
- Shipping Weight:
 - Machine mounted torch PWM-P30: 3 lbs. (1.4k g).
- Cooling Requirements: 12,000 BTU/hr, 3/4 gpm of Torch Coolant @ 100 psi.



	A		B		C		D		E	
PWM-P30	22.19	(56.4)	2.50	(6.35)	12.44	(31.6)	1.38	(3.5)	1.63	(4.14)
					20.19	(51.3)				

PARTS LIST

4.1. GENERAL ARRANGEMENT

Assembly Parts List

The Assembly Parts List consists of illustrated parts lists of the following:

- Welding Torch
- Torch Assembly
- Torch Leads Assembly

An item number in parentheses indicates the item is located behind the item pointed to. An asterisk beside the item number indicates the part is a main assembly, not a component. Parts listed without item numbers are not illustrated but may be ordered by the catalog number shown.

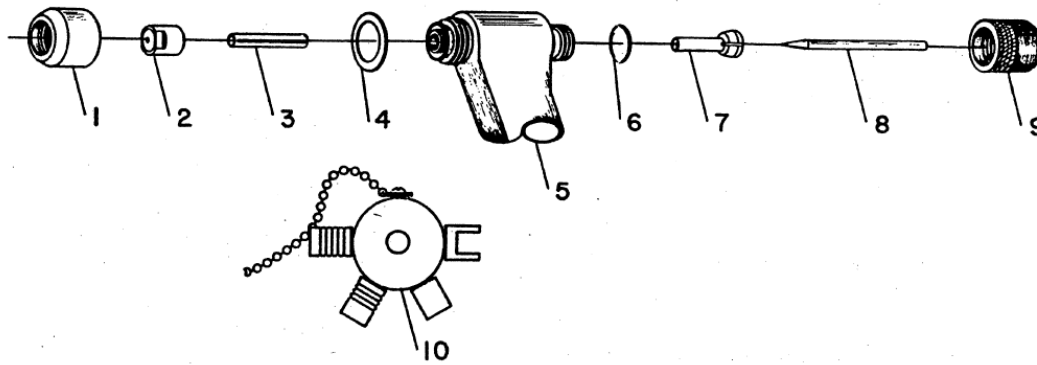
ORDERING INFORMATION

When ordering replacement parts, order by catalog number and complete description of the part or assembly, as given in the description column of the Assembly Parts List. Address all inquiries to your authorized Sanrex distributor.

RETURNS

In the event that a Sanrex product must be returned for service, contact your Sanrex distributor. Material returned to Sanrex without proper authorization will not be accepted.

PWH/M P75 Complete Assembly Replacements



Item	Part No.	Ref. No.	Description	Std. Pkg.	Item	Part No.	Ref. No.	Description	Std. Pkg.
1.	P75-3001	8-2071	Shield Cup	5	4.	P75-3015	8-2036	Gasket	5
	P75-3000	8-3236	Shield Cup, Ext.	10	5.	P75-2001	8-2027	Torch Head, 70°	1
2.	P75-3002	8-2023	Tip, .046, 35A	10		P75-2002	8-2028	Torch Head, 90°	1
	P75-3003	8-2024	Tip, .062, 55A	10		P75-2003	8-2097	Torch Head, Machine	1
	P75-3004	8-2025	Tip, .081, 75A	10	6.	P75-3016	8-2035	O-Ring	10
	P75-3005	8-2079	Tip, Long, .031	10	7.	P75-3017	8-2039	Collet	1
	P75-3006	8-2080	Tip, Long, .046	10		P75-3018	8-2041	Collet (.040)	1
	P75-3007	8-2082	Tip, Long, .062	10	8.	P75-3011	8-2044	Electrode (.040), Std.	10
	P75-3008	8-2083	Tip, Long, .081	10		P75-3010	8-2006	Electrode, Ext. (.093)	10
3.	P75-3013	8-2040	Gas Distributor	1	9.	P75-3019	8-2032	Back Cap	1
	P75-3014	8-2042	Gas Distributor (.040)	1		P75-3020	8-2030	Back Cap, Extended	1

Hand Torch



Machine Torch



Item	Part No.	Ref. No.	Description	Std. Pkg.	Item	Part No.	Ref. No.	Description	Std. Pkg.
1.	P75-2007	8-2026	Handle	1	4.		8-5005	Mounting Tube	1
2.	P30-2005	8-4018	Nut	1	5.	P30-2008	7-2827	Pinion Assembly	1
3.	P75-2010	8-2063	Sleeve	1	NS	P75-2006	8-2021	Wrench/Gauge	1

Note: P75 Torch obsolescence and upgrades

See P75 (2A) torch replacement and Upgrade at the end of this manual.

PWH/M P15 Complete Assembly Replacements



P15 Consumables

Item	Part No.	Ref. No.	Description	Std. Pkg.	Item	Part No.	Ref. No.	Description	Std. Pkg.
1.	P15-3001	8-3040	Shield Cup w/gas lens	1	8.	P15-2003	8-3032	Torch Head 180° offset	1
	P15-3000	8-3038	Shield Cup no gas lens	1		P15-2001	8-3030	Torch Head 70°	1
2.	P15-3003	8-3052	Tip, .014, 10A – Std.	10		P15-2002	8-3031	Torch Head 90°	1
	P15-3005	9-1782	Tip, .031, 30A – Std.	10	9.	P15-3020	8-0527	O-Ring Electrode Cap	10
	P15-3006	9-1783	Tip, .046, 50A – Std.	10	10.	P15-3021	9-1780	Collet	1
	P15-3007	9-1784	Tip, .062, 75A – Std.	10	11.	P15-3022	9-1779	Electrode Cap – Standard	1
	P15-3008	9-1785	Tip, .081, 100A – Std.	10	12.	P15-3023	9-1803	Electrode Cap – Extended	1
	P15-3009	9-1795	Tip, .093, 150A – Std.	10	NS	P15-2010	9-1757	PWH Handle	1
3.	P15-3010	9-1788	Tip Long, .031, 10A – Ext.	10	NS	P15-3026	9-1778	Sleeve	1
	P15-3011	9-1789	Tip Long, .046, 20A – Ext.	10	NS	P30-2005	8-4018	Nut	1
	P15-3012	9-1790	Tip Long, .062, 55A – Ext.	10	NS	P30-2006	9-1901	Adaptor	1
	P15-3013	9-1791	Tip Long, .081, 75A – Ext.	10	NS	P30-2010	8-5005	Positioning Tube	1
	P15-3014	9-1811	Tip Long, .093, 85A – Ext.	10	NS	P30-2009	8-4204	End Cap	1
4.	P15-3017	9-2240	Gas Distributor Insulating Sleeve	1	NS	P15-2006	9-1810	Gage/Wrench	1
5.	P15-3024	9-1747	Electrode	1					
6.	P15-3019	8-3059	Gas Diffuser	1					
7.	P15-3018	8-3057	Gasket – Shield Cup	5					

NS – Not shown in the picture.



P15 Common Lead Set Components

Item	Part No.	Ref. No.	Description	Std. Pkg.	Item	Part No.	Ref. No.	Description	Std. Pkg.
1.	P15-3027	9-5914	Handle (Use with item 2)	1	6.	P30-2008	7-2827	Pinion Assembly	1
2.	P15-3026	9-1778	Sleeve (Use with item 1)	1	7.	P30-2009	8-4204	Bushing	1
3.	P30-2005	8-4018	Nut	1	5.	P30-2010	8-5005	Mounting Tube	1
4.	P30-2006	9-1901	Adapter	1	NS	P15-2006	9-1810	Wrench/ Gage	1

P15 Torch Lead Sets

Item	Part No.	Ref. No.	Description	Std. Pkg.	Item	Part No.	Ref. No.	Description	Std. Pkg.
NS	P15-2004	4-2615	Leads 12 1/2'	1	NS	P15-2005	4-2624	Leads 25'	1

PWH/M P22 Complete Assembly Replacements



P22 Torch Consumable

Item	Part No.	Ref. No.	Description	Std. Pkg.	Item	Part No.	Ref. No.	Description	Std. Pkg.
1.	N/A	8-4062	Shield Cup	5		P22-2002	8-4015	Torch Head Assembly 90°	1
	P22-3000	8-4064	Shield Cup with Lens	5		P22-2004	8-4054	Torch Head Assembly 180° inline	1
2.	P22-3003	9-1847	Tip, (.062), 100 A - Std.	10	11.	P22-3018	9-1876	Collet	1
	P22-3004	9-1848	Tip, (.093), 125 A - Std.	10	12.	P22-3020	9-1877	Electrode Cap Extended	1
	P22-3005	9-1849	Tip, (.125), 250 A - Std.	10					
3.	P22-3006	9-1890	Tip, (.062), 100 A - Ext.	10	NS	P30-2005	8-4018	Nut	1
	P22-3007	9-1891	Tip, (.093), 125 A - Ext.	10	NS	P30-2006	9-1901	Adaptor	1
	P22-3008	9-1892	Tip, (.125), 250 A - Ext.	5	NS	P30-2010	8-5005	Positioning Tube	1
4.	P30-3008	9-1827	Electrode (.187) - Std.	5					
	P22-3010	9-1834	Electrode (.187) - Ext.	5					
5.	P22-3011	8-4011	Liner (without Gas Distributor)	1					
6.	P22-3012	9-2204	Gas Distributor	1					
7.	P22-2005	8-4024	Collar	1					
8.	P22-3014	8-4040	Shield Gas Diffuser - Threaded	1					
9.	P22-3013	8-4069	Gasket - Shield Cup	5					
10.	P22-2001	8-4014	Torch Head Assembly 70°	1					
	P22-2003	8-4016	Torch Head Assembly 180° offset	1					

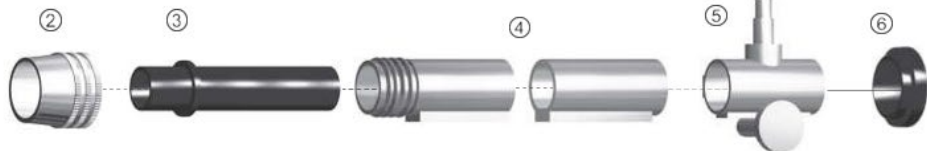
NS – Not shown in the picture.

P22 Common Lead Set Components

Hand Torch

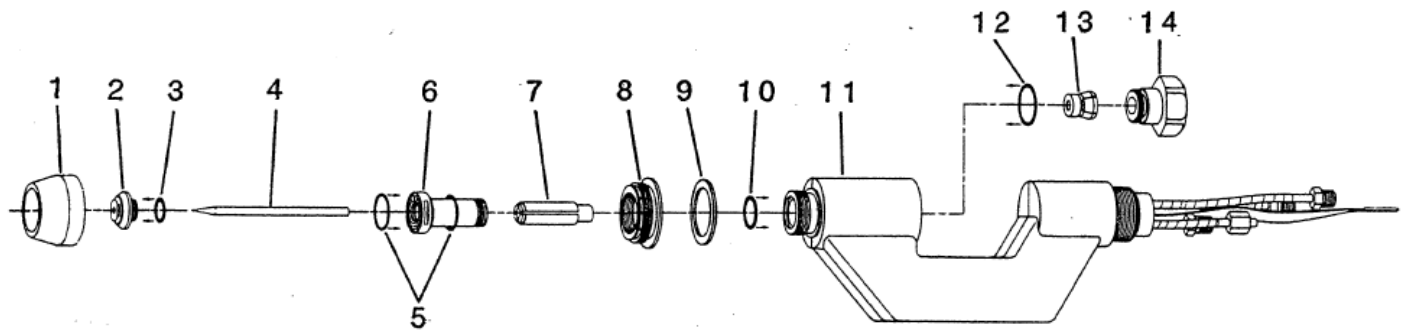


Machine Torch



Item	Part No.	Ref. No.	Description	Std. Pkg.	Item	Part No.	Ref. No.	Description	Std. Pkg.
1.	P22-2013	9-5914	Handle	1	5.	P30-2008	7-2827	Pinion Assembly	1
2.	P22-2005	8-4018	Nut	1	6.	P30-2009	8-4204	Bushing	1
3.	P30-2006	9-1901	Adapter	1	NS	P22-2006	4-2525	Leads 12.5'	1
4.	P30-2010	8-5005	Mounting Tube	1	NS	P22-2007	4-2544	Leads, 25'	1

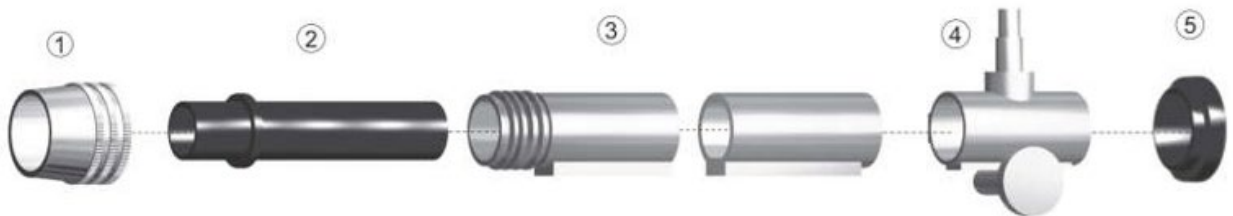
PWM P30 Complete Assembly Replacements



P30 Consumables

Item	Part No.	Item No.	Description	Std. Pkg.
1	P30-3001	8-4373	Shield Cup	1
2	P30-3005	8-4370	Tip, 0.093, 200A	5
	P30-3006	8-4371	Tip, 113, 250A	5
	P30-3007	8-4372	Tip, 125, 300A	5
3	P30-3016	9-2863	O-Ring	10
4	P30-3008	9-1827	Electrode	5
5	P30-3017	9-2956	O-Ring	10
6	P30-3009	8-6509	Liner, Includes O-Rings	1
7	P30-3010	8-6651	Gas Distributor	1
8	P30-3012	8-6652	Shield Cup Diffuser	1
9	P30-3011	8-6512	Gasket	5
10	P30-3018	8-0531	O-Ring	10
11	P30-2001	8-6649	Torch Body	1
12	P30-3013	8-0534	O-Ring	10
13	P30-3014	8-6650	Collet	1
14	P30-3015	8-6654	Electrode Cap	1

P30 Lead Set Components

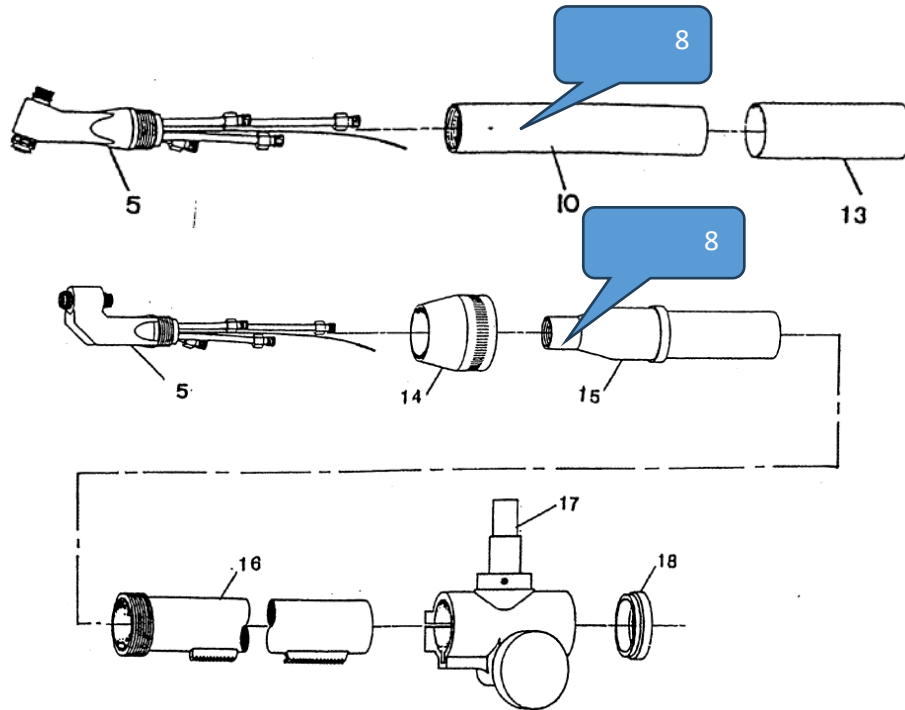


Item	Part No.	Ref. No.	Description	Std. Pkg.
1	P30-2005	8-4018	Nut	1
2	P30-2006	9-1901	Adapter	1
3	P30-2010	8-5005	Mounting Tube	1
4	P30-2008	7-2827	Pinion Assembly	1
5	P30-2009	8-4204	Bushing	1
NS	P30-2002	4-2525	Torch Leads 12.5ft.	1
NS	P30-2003	4-2544	Torch Leads 25ft.	1
NS	P30-2011	8-6517	Wrench	1

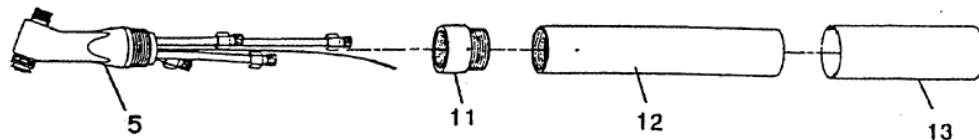
P75 (2A) torch replacement and Upgrade

The P75 (2A) torch changes.

- The 0.935" dia. Handle 8-2026 (Item 10) is no longer available and replaced with P75-3037 (9-5557) Handle adapter and P15-2010 (9-1757) 1.062 dia. 3A Handle.
- 8-2063 (Item 15) Sleeve adaptor is no longer available replaced with P75-3037 (9-5557) Handle Adaptor, (P15-2009) 9-1778 Adaptor and (P30-2006) 9-1901 Sleeve adaptor.



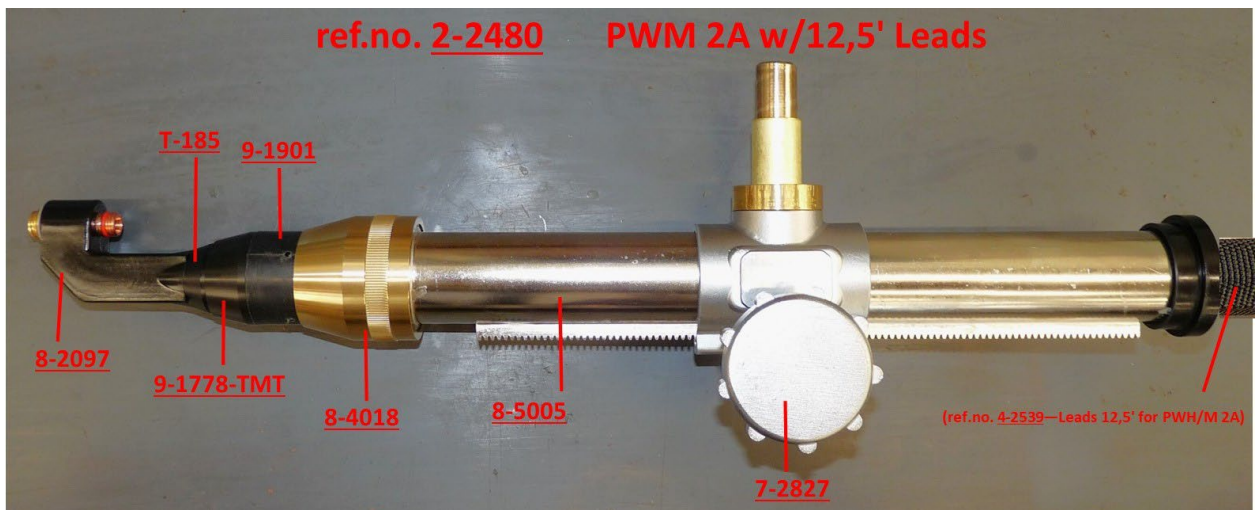
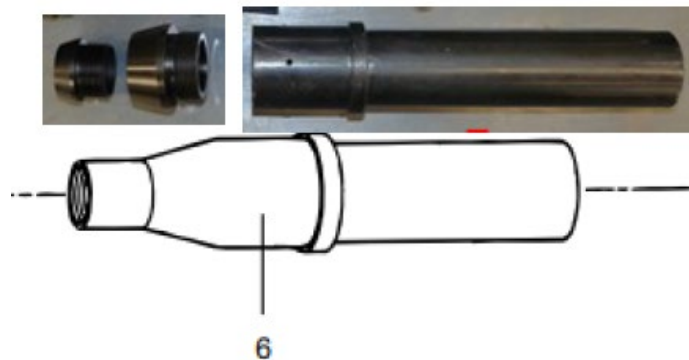
Use (Item 11) (P75-3037) 9-5557 = T-185) Handle Adaptor and (Item 12) (P15-2010) 9-1757 = 9-1775-TMT Replacement handle.





Machine Torch – Rack and Pinion mounting.

For Rack and Pinion mounting use P75-3037 (9-5557) Handle Adaptor, P15-2009 (9-1778) Adaptor and P30-2006 (9-1901) Sleeve adaptor.



P75 (2A) Torch and leads

Complete Hand Torch and leads will come with a 1.062" larger handle and larger leads. Machine torches will come with larger Leads.

Below is the Torch with leads assemblies effected with these changes.

Sanrex #	Description	REF
P75-1000	2A - Torch, 70 degree, 12.5ft, Hand	2-2443
P75-1001	2A - Torch, 70 degree, 25ft, Hand	2-2505
P75-1002	2A - Torch, 90 degree, 12.5ft, Hand	2-2444
P75-1003	2A - Torch, 90 degree, 25ft, Hand	2-2506
P75-1004	2A - Torch, 180 degree offset, Phenolic, 12.5ft	2-3002
P75-1005	2A - Torch, 180 degree offset, 12.5ft, Rack and Pinion.	2-2480
P75-1006	2A - Torch, 180 degree offset, 25ft, Rack and Pinion.	2-2594
P75-1007	2A - Torch, 180 degree offset, Phenolic, 25ft	2-2108

They will now have the larger 1.062 dia. Handle.

P75-1000-L	2A - Torch, 70 degree, 12.5ft, Hand (With Larger Handle)	2-2443
P75-1001-L	2A - Torch, 70 degree, 25ft, Hand (With Larger Handle)	2-2505
P75-1002-L	2A - Torch, 90 degree, 12.5ft, Hand (With Larger Handle)	2-2444
P75-1003-L	2A - Torch, 90 degree, 25ft, Hand (With Larger Handle)	2-2506
P75-1004-L	2A - Torch, 180 degree offset, Phenolic, 12.5ft (With Larger Handle)	2-3002
P75-1005-RP	2A - Torch, 180 degree offset, 12.5ft, Rack and Pinion. (With Larger Sleeve)	2-2480
P75-1006-RP	2A - Torch, 180 degree offset, 25ft, Rack and Pinion. (With Larger Sleeve)	2-2594
P75-1007-L	2A - Torch, 180 degree offset, Phenolic, 25ft (With Larger Handle)	2-2108

Leads Packages

P75-2004	2A - Torch Leads w/out torch head 12.5 ft. / 3.8m	4-2539
P75-2004-L	2A - Torch Leads w/out torch head 12.5 ft. / 3.8m (Larger Handle included)	4-2539
P75-2004-RP	2A - Torch Leads w/out torch head 12.5 ft. / 3.8m (Larger Sleeve included)	4-2539
P75-2005	2A - Torch Leads w/out torch head 25 ft. / 7.6m	4-2585
P75-2005-L	2A - Torch Leads w/out torch head 25 ft. / 7.6m (Larger Handle included)	4-2585
P75-2005-RP	2A - Torch Leads w/out torch head 25 ft. / 7.6m (Larger Sleeve included)	4-2585

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