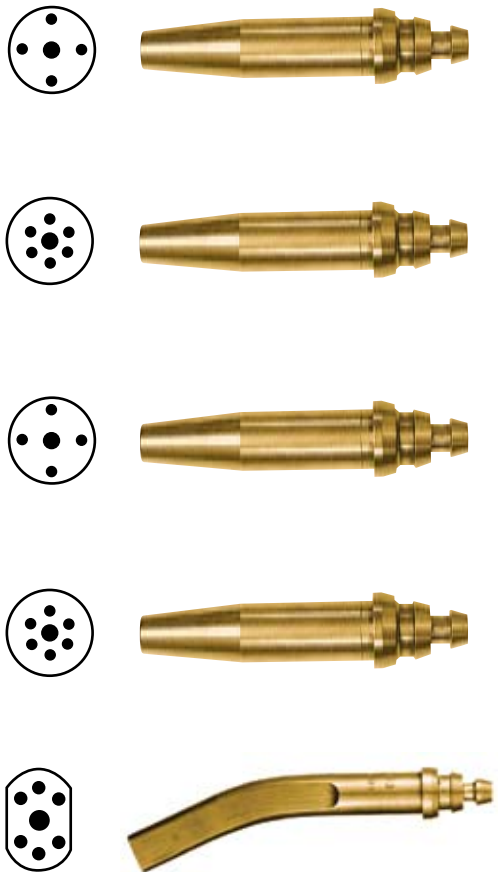


Cutting Tips

Cutting Tips – AIRCO / Concoa Acetylene - Oxygen



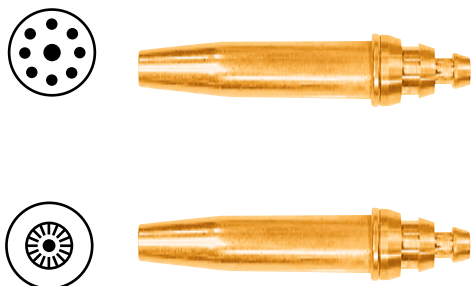
Part No.		Description
Style	Size	
124-	00, 0, 1, 2, 3	<ul style="list-style-type: none"> Light preheat For general cutting operations Fits Airco 3790, 4690, 4700, 4800, 5700, 5800, 1100, 3000, 9000, 9500 torches
138-	00, 0, 1, 2, 3, 4	<ul style="list-style-type: none"> Light preheat For general cutting operations with hand & machine cutting apparatus Fits Airco 3790, 4690, 4700, 4800, 5700, 5800, 1100, 3000, 9000, 9500 torches
144-	00, 0, 1, 2, 3, 4, 5, 6, 7, 8, 10	<ul style="list-style-type: none"> Medium preheat For general cutting operations with hand or machine cutting apparatus Fits Airco 3790, 4690, 4700, 4800, 5700, 5800, 1100, 3000, 9000, 9500 torches
164-	00, 0, 1, 2, 3, 4, 5, 6	<ul style="list-style-type: none"> Very heavy preheat For general cutting, also for use in cutting cast iron and stainless steel Fits Airco 3790, 4690, 4700, 4800, 5700, 5800, 1100, 3000, 9000, 9500 torches
183-	6, 8, 10	<ul style="list-style-type: none"> Gouging Medium to heavy preheat Fits Airco 3790, 4690, 4700, 4800, 5700, 5800, 1100, 3000, 9000, 9500 torches

Propane or Natural Gas-Oxygen



Part No.		Description
Style	Size	
261-	0, 1, 2, 3, 4	<ul style="list-style-type: none"> Heavy preheat, general cutting Two piece tip for hand cutting Fits Airco 3790, 4690, 4700, 4800, 5700, 5800, 1100, 3000, 9000, 9500, 2900 torches

MAPP-Propylene



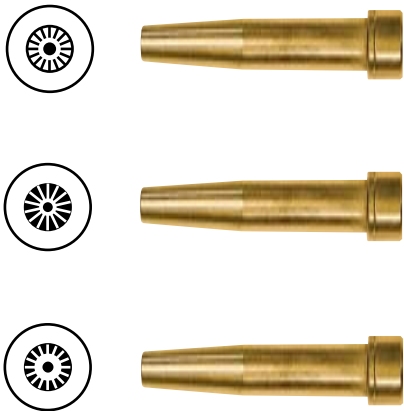
Part No.		Description
Style	Size	
A-SP-	72, 68, 60, 56, 54, 52, 49, 44, 38	<ul style="list-style-type: none"> General cutting Single piece Medium preheat Fits Airco 3790, 4690, 4700, 4800, 5700, 5800, 1100, 3000, 9000, 9500 torches
A-FS-	72, 68, 60, 56, 54, 52, 49, 44, 38	<ul style="list-style-type: none"> Hand and machine cutting Two piece Medium to heavy preheat Fits Airco 3790, 4690, 4700, 4800, 5700, 5800, 1100, 3000, 9000, 9500 torches

Cutting Tips – Harris Acetylene - Oxygen



Part No.		Description
Style	Size	
6290-	00, 0, 1, 2, 3, 4, 5, 6	<ul style="list-style-type: none"> Medium preheat, general hand cutting Fits Harris 42-3, 62-3, 72, 72A, 73, 73A, 63-2, and 85 series torches.

Propane or Natural Gas-Oxygen



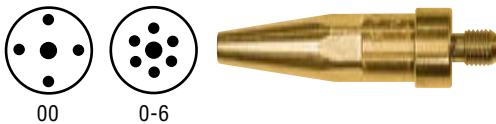
Part No.		Description
Style	Size	
6290NFF-	0, 1, 2, 3, 4, 5, 6	<ul style="list-style-type: none"> Heavy preheat, general cutting Two piece Fits Harris 42-3F, 49AF, 49F, 62-3F, 85, 72, 73, and 142 series torches.
6290NX-	000, 00, 0, 1, 2, 3, 4, 5, 6	<ul style="list-style-type: none"> Medium preheat, general cutting Two piece Fits Harris 42-3F, 49AF, 49F, 62-3F, 85, 72, 73, 142 series torches.
6290VVC-	000, 00, 0, 0.5, 1, 1.5, 2, 2.5, 3, 4, 5	<ul style="list-style-type: none"> High speed tips, for use in machine cutting Two piece Fits Harris 98-2 and 98-3 machine torches

Cutting Tips – Marquette Acetylene - Oxygen



Part No.		Description
Style	Size	
GW-6-	0, 1, 2, 3, 4	<ul style="list-style-type: none"> General hand and scrap cutting Medium preheat Fits Marquette 20-110 super jet and 21-110 star jet torches

Cutting Tips – MECO Acetylene - Oxygen



Part No.		Description
Style	Size	
LA-6-	00, 0, 1, 2, 3, 4, 5	<ul style="list-style-type: none"> General cutting One piece Fits Weldmaster, Cutmaster, SCA torches

Cutting Tips – Oxweld / Linde / L-Tec Acetylene - Oxygen



Part No.		Description
Style	Size	
1502-	2, 3, 4, 6, 8, 10, 12	<ul style="list-style-type: none"> Medium pre-heat For hand or machine cutting Fits CW-32, C-31, C-23, C-77 hand torches, C-37, C-39, C-58 machine torches

Cutting Tips

Cutting Tips – Purox / Linde / L-Tec Acetylene - Oxygen



Part No.		Description
Style	Size	
4202-	2, 3, 4, 5, 7, 9, 11, 13	<ul style="list-style-type: none"> Medium preheat for general cutting Fits CW-200, CW-202, Type E torches, C-205 machine torch, CW-300 torches

Propane or Natural Gas-Oxygen



Part No.		Description
Style	Size	
4213-14-	3, 4, 7	<ul style="list-style-type: none"> Two piece, general cutting Complete tip, medium preheat Fits CW-200, CW-202, Type E torches For CW-300 torches

MAPP or FG-2 Oxygen



Part No.		Description
Style	Size	
P-FS-	60, 56, 52, 49	<ul style="list-style-type: none"> General cutting Two piece tip standard speed Fits CW-200, CW-202, Type E, CW-300 torches

Cutting Tips – Rexarc (Rego) Acetylene - Oxygen



Part No.		Description
Style	Size	
KX-6-	68, 53, 51, 46, 42, 35	<ul style="list-style-type: none"> General cutting Light preheat 4 Preheat holes
KX-66-	62, 56	<ul style="list-style-type: none"> Medium preheat for hand cutting Fits KXA, LXA, SXA, CWP 9000, 7000, 18000, 8720, 6808, 6912, 6916 torches 6 Preheat holes

Cutting Tips – Smith Acetylene - Oxygen



Part No.		Description
Style	Size	
MC12-	00, 0, 1, 2, 3, 4	<ul style="list-style-type: none"> General cutting Medium duty hand cutting Fits cutting assemblies Pipeliner MC505, MC509, Airliner AC305, AC309
SC12-	000, 00, 0, 1, 2, 3, 4, 5, 6, 7	<ul style="list-style-type: none"> For hand or machine cutting MC409, SC170, SC200, SC220, SC270, SC360, SC720, SC730, SC770, SC771, SC780, SC780A, SC781A, SC782A, SC850, SC860, SC890 Series Cutting torches Tuf-Tony, Silver Star (000-5)

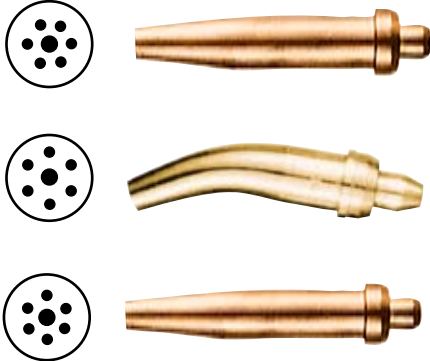
Propane or Natural Gas-Oxygen



Part No.		Description
Style	Size	
SC50-	00, 0, 1, 2, 3, 4, 5, 6	<ul style="list-style-type: none"> Hand and machine cutting Two piece Heavy preheat

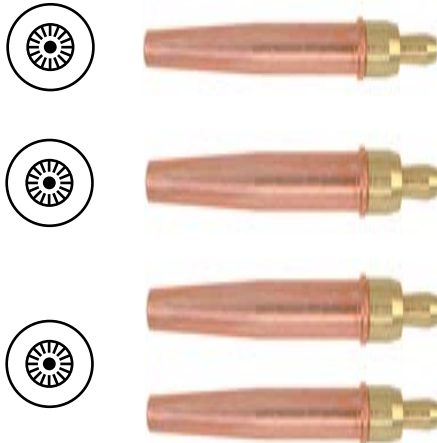
Cutting / Welding / Heating Tips

**Cutting Tips – Victor
Acetylene - Oxygen**



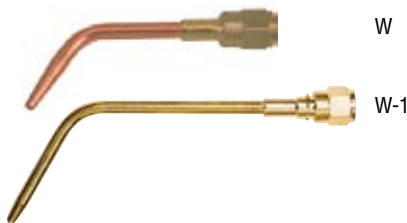
Part No.		Description
Style	Size	
1-101-	000, 00, 0, 1, 2, 3, 4, 5, 6, 7, 8	<ul style="list-style-type: none"> • Medium preheat for hand and machine cutting • Fits CA2460, CA1060, ST, SST, CA350, 1400C machine torches, Q2000
1-118-	0, 2, 4, 6, 8	<ul style="list-style-type: none"> • Gouging, scarfing, deseaming • Medium preheat • Fits CA2460, CA1060, ST, SST, CA350, 1400C machine torches, Q2000
3-101-	000, 00, 0, 1, 2, 3, 4, 5	<ul style="list-style-type: none"> • Medium preheat hand cutting • Fits CA1260, CA1350, C-1450, CA250 CA2060, CA2470, CST 800, C1400 torches.

Propane - Natural Gas



Part No.		Description
Style	Size	
3-GPN-	0, 1, 2, 3, 4,	<ul style="list-style-type: none"> • Two piece medium preheat series 3 tip • Fits CA1260, CA1350, C-1450, CA250 CA2060, CA2470, CST 800, C1400 torches
GPN-	000, 00, 0, 1, 2, 3, 4, 5, 6, 7, 8	<ul style="list-style-type: none"> • Two piece medium preheat for hand, machine and general cutting • Fits CA2450, CA1060, CAN 1060, ST, SST, STN machine torches
2V-FS-	72, 68, 60, 56, 54, 52, 49, 44, 38	<ul style="list-style-type: none"> • Medium and heavy preheat • Hand and machine cutting, two piece • Fits CA2450, CA1060, CAN 1060, ST, SST, STN machine torches
3V-FS-	68, 60, 56, 52, 49	<ul style="list-style-type: none"> • Medium preheat • Hand cutting, two piece

**Welding Tips – Victor
Acetylene - Oxygen**



Part No.		Description
Style	Size	
OW-	0, 1, 2, 3, 4, 5, 6	<ul style="list-style-type: none"> • Complete nozzle (nozzle nut included) • General welding and preheating • Fits 300 series torches
W-1-	00, 0, 1, 2, 3, 4, 5, 6, 7	<ul style="list-style-type: none"> • Complete nozzle (nozzle nut included) • Long cone flame general welding & brazing • Fits 100 series torches

**Heating Tips – Victor
Acetylene or Hydrogen - Oxygen**



Part No.		Description
Style	Size	
MFA-	6, 8	<ul style="list-style-type: none"> • Multiflame nozzle for preheating and straightening • Fits 300 series torches * Use HD 310C torch with 3/8" hose, manifold if acetylene withdrawal rate exceeds 1/7 cylinder content per hour.
MFA-1-	6, 8	<ul style="list-style-type: none"> • Fits 100 series torches

Air-Cooled Torches

80 AMP 24 Series

Includes: torch, ribbed handle, power cable and insulator.

Rubber

Part No.	Description	Hose Length
24-12-R	Torch package	12.5'
24-25-R		25'
24-90-12-R	Torch package 90° head	12.5'
24-90-25-R		25'
24V-12-R	Torch package w/valve	12.5'
24V-25-R		25'



80 AMP 24 Series Component Torch

Includes: torch head, torch body, ribbed handle, power cable and insulator.

Rubber

Part No.	Description	Hose Length
24FMT-12-R	Torch package flex	12.5'
24FMT-25-R		25'
24FVMT-12-R	Torch package flex w/valve	12.5'
24FVMT-25-R		25'

2-Piece

Part No.	Description	Hose Length
24FMT-12-2	Torch package flex	12.5'
24FMT-25-2		25'
24FVMT-12-2	Torch package flex w/valve	12.5'
24FVMT-25-2		25'

125 AMP 9 Series

Includes: torch, ribbed handle, power cable, insulator and medium back cap.

Rubber

Part No.	Description	Hose Length
9-12-R	Torch package	12.5'
9-25-R		25'
9F-12-R	Torch package flex	12.5'
9F-25-R		25'
9FV-12-R	Torch package flex w/valve	12.5'
9FV-25-R		25'
9V-12-R	Torch package w/valve	12.5'
9V-25-R		25'

2-Piece

Part No.	Description	Hose Length
9-12-2	Torch package	12.5'
9-25-2		25'
9F-12-2	Torch package flex	12.5'
9F-25-2		25'
9FV-12-2	Torch package flex w/valve	12.5'
9FV-25-2		25'
9V-12-2	Torch package w/valve	12.5'
9V-25-2		25'

125 AMP 9 Series Pencil Torch

Includes: torch, smooth handle, power cable and insulator.

Rubber

Part No.	Description	Hose Length
9P-12-R	Torch package 180° machine	12.5'
9P-25-R		25'

2-Piece

Part No.	Description	Hose Length
9P-12-2	Torch package 180° machine	12.5'
9P-25-2		25'

125 AMP 9 Series Component Torch

Includes: torch head, torch body, ribbed handle, power cable, insulator and medium back cap.

Rubber

Part No.	Description	Hose Length
9FMT-12-R	Torch package flex	12.5'
9FMT-25-R		25'
9FVMT-12-R	Torch package flex w/valve	12.5'
9FVMT-25-R		25'

2-Piece

Part No.	Description	Hose Length
9FMT-12-2	Torch package flex	12.5'
9FMT-25-2		25'
9FVMT-12-2	Torch package flex w/valve	12.5'
9FVMT-25-2		25'

TIG Torch Packages

150 AMP 17 Series

Includes: torch, ribbed handle, power cable, insulator and long back cap.

Rubber

Part No.	Description	Hose Length
17-12-R	Torch package	12.5'
17-25-R		25'
17F-12-R	Torch package flex	12.5'
17F-25-R		25'
17FV-12-R	Torch package flex w/valve	12.5'
17FV-25-R		25'
17V-12-R	Torch package w/valve	12.5'
17V-25-R		25'

2-Piece

Part No.	Description	Hose Length
17-12-2	Torch package	12.5'
17-25-2		25'
17F-12-2	Torch package flex	12.5'
17F-25-2		25'
17FV-12-2	Torch package flex w/valve	12.5'
17FV-25-2		25'
17V-12-2	Torch package w/valve	12.5'
17V-25-2		25'

150 AMP 17 Series Component Torch

Includes: torch head, torch body, ribbed handle, power cable, insulator and long back cap.

Rubber

Part No.	Description	Hose Length
17FMT-12-R	Torch package flex	12.5'
17FMT-25-R		25'
17FVMT-12-R	Torch package flex w/valve	12.5'
17FVMT-25-R		25'

2-Piece

Part No.	Description	Hose Length
17FMT-12-2	Torch package flex	12.5'
17FMT-25-2		25'
17FVMT-12-2	Torch package flex w/valve	12.5'
17FVMT-25-2		25'

150 AMP 150M Modular Torch

Includes: 9-70M head, 1726M head, flex coil element, solid element, torch body, power cable, handle and wrench.

Rubber

Part No.	Description	Hose Length
150M-12-R	Torch package	12.5'
150M-25-R		25'
150VM-12-R	Torch package w/valve	12.5'
150VM-25-R		25'

2-Piece

Part No.	Description	Hose Length
150M-12-2	Torch package	12.5'
150M-25-2		25'
150VM-12-2	Torch package w/valve	12.5'
150VM-25-2		25'

200 AMP 26 Series

Includes: torch, ribbed handle, power cable, insulator and long back cap.

Rubber

Part No.	Description	Hose Length
26-12-R	Torch package	12.5'
26-25-R		25'
26F-12-R	Torch package flex	12.5'
26F-25-R		25'
26FV-12-R	Torch package flex w/valve	12.5'
26FV-25-R		25'
26V-12-R	Torch package w/valve	12.5'
26V-25-R		25'

2-Piece

Part No.	Description	Hose Length
26-12-2	Torch package	12.5'
26-25-2		25'
26F-12-2	Torch package flex	12.5'
26F-25-2		25'
26FV-12-2	Torch package flex w/valve	12.5'
26FV-25-2		25'
26V-12-2	Torch package w/valve	12.5'
26V-25-2		25'

200 AMP 26 Series Component Torch

Includes: torch head, torch body, ribbed handle, power cable, insulator and long back cap.

Rubber

Part No.	Description	Hose Length
26FMT-12-R	Torch package flex	12.5'
26FMT-25-R		25'
26FVMT-12-R	Torch package flex w/valve	12.5'
26FVMT-25-R		25'

2-Piece

Part No.	Description	Hose Length
26FMT-12-2	Torch package flex	12.5'
26FMT-25-2		25'
26FVMT-12-2	Torch package flex w/valve	12.5'
26FVMT-25-2		25'

TIG Torch Packages

200 AMP 200M Modular Torch

Includes: 9-70M head, 1726M head, flex coil element, solid element, torch body, power cable, handle and wrench

Rubber

Part No.	Description	Hose Length
200M-12-R	Torch package	12.5'
200M-25-R		25'
200VM-12-R	Torch package w/valve	12.5'
200VM-25-R		25'

2-Piece

Part No.	Description	Hose Length
200M-12-2	Torch package	12.5'
200M-25-2		25'
200VM-12-2	Torch package w/valve	12.5'
200VM-25-2		25'

Water-Cooled Torches

180 AMP 24 Series

Includes: torch, smooth handle, power cable, water and gas hoses, and insulator.

Rubber

Part No.	Description	Hose Length
24W-12-R	Torch package	12.5'
24W-25-R		25'
24W-90-12-R	Torch package 90° head	12.5'
24W-90-25-R		25'

Vinyl

Part No.	Description	Hose Length
24W-12	Torch package	12.5'
24W-25		25'
24W-90-12	Torch package 90° head	12.5'
24W-90-25		25'

200 AMP 25 Series Flex Pencil Torch

Includes: torch, smooth handle, power cable, water and gas hoses, and insulator.

Rubber

Part No.	Description	Hose Length
25-12-R	Torch package machine flex	12.5'
25-25-R		25'

Vinyl

Part No.	Description	Hose Length
25-12	Torch package machine flex	12.5'
25-25		25'

225 AMP 225M Series Modular Torch

Includes: 9-70M head, 1726M head, torch body, power cable, water and gas hoses, and handle.

Rubber

Part No.	Description	Hose Length
225M-12-R	Torch package flex braided rubber	12.5'
225M-25-R		25'

Vinyl

Part No.	Description	Hose Length
225M-12	Torch package flex	12.5'
225M-25		25'

250 AMP 20 Series

Includes: torch, smooth handle, power cable, water and gas hoses, insulator and medium back cap.

Rubber

Part No.	Description	Hose Length
20-12-R	Torch package	12.5'
20-25-R		25'
20F-12-R	Torch package flex	12.5'
20F-25-R		25'
20M-12-R	Torch package mechanical fittings	12.5'
20M-25-R		25'

Vinyl

Part No.	Description	Hose Length
20-12	Torch package	12.5'
20-25		25'
20F-12	Torch package flex	12.5'
20F-25		25'
20M-12	Torch package mechanical fittings	12.5'
20M-25		25'

250 AMP 20 Series Pencil Torch

Includes: torch, smooth handle, power cable, water and gas hoses, and insulator.

Rubber

Part No.	Description	Hose Length
20P-12-R	Torch package 180° machine	12.5'
20P-25-R		25'

Vinyl

Part No.	Description	Hose Length
20P-12	Torch package 180° machine	12.5'
20P-25		25'

TIG Torch Packages

250 AMP 22 Series

Includes: torch, insulating boot, collet knob, power cable, water and gas hoses, and insulator.

Rubber

Part No.	Description	Hose Length
22A-12	Torch package 180° 7" machine	12.5'
22A-25		25'
22B-12	Torch package 180° 3" machine	12.5'
22B-25		25'

350 AMP 18 Series

Includes: torch, smooth handle, power cable, water and gas hoses, insulator and long back cap.

Rubber

Part No.	Description	Hose Length
18-12-R	Torch package	12.5'
18-25-R		25'
18F-12-R	Torch package flex	12.5'
18F-25-R		25'
18V-12-R	Torch package w/valve	12.5'
18V-25-R		25'

Vinyl

Part No.	Description	Hose Length
18-12	Torch package	12.5'
18-25		25'
18F-12	Torch package flex	12.5'
18F-25		25'
18V-12	Torch package w/valve	12.5'
18V-25		25'

500 AMP 18 Series Machine Torch

Includes: torch, barrel handle, power cable, water and gas hoses, and insulator.

Rubber

Part No.	Description	Hose Length
18P-12	Torch package 180° machine	12.5'
18P-25		25'

500 AMP 12 Series

Includes: torch, handle, power cable, water and gas hoses, and insulator and long back cap.

Rubber

Part No.	Description	Hose Length
12-12	Torch package	12.5'
12-25		25'

500 AMP 27 Series

Includes: torch, insulating boot, shaft assembly, power cable, water and gas hoses, and insulator.

Rubber

Part No.	Description	Hose Length
27A-12	Torch package 180° 9" machine	12.5'
27A-25		25'
27B-12	Torch package 180° 20" machine	12.5'
27B-25		25'

Modular TIG Torch Parts

150 AMP Air Cooled Modular Flex TIG Torch

Torch Package Part Number

Torch Hose Length Power Cable

150M **12** **R**

Possible options for selecting a complete torch configuration from this page.



150M 150 AMP modular flex torch
150VM 150 AMP modular flex torch w/valve
200M 200 AMP modular flex torch
200VM 200 AMP modular flex torch w/valve

12 12.5 feet
25 feet

R 1-Piece Rubber power cable
2-Piece Power cable

Item	Part No.	Description
1	1726M	Torch head 200 AMP 60°
2	1726PM	Torch head 200 AMP 180°
3	9-70M	Torch head 125 AMP 70°
4	9-90M	Torch head 125 AMP 90°
5	09PM	Torch head 125 AMP 180°
6	024M	Torch head 80 AMP 70°
7	24-90M	Torch head 80 AMP 90°

Item	Part No.	Description
8	150M	Torch, 150 AMP
9	150VM	Torch, 150 AMP with valve
10	VS-2	Valve stem
11	150CEM	Flex element 150 AMP
12	150SEM	Solid element 150 AMP
13	150TBM	Body 150 AMP

Item	Part No.	Description
15	105Z55R	Handle, ribbed (standard)
16	57Y01R	Power cable 12.5' 1pc
	57Y03R	Power cable 25' 2pc
17	57Y01-2	Power cable 12.5' 2pc
	57Y03-2	Power cable 25' 2pc

200 AMP Air Cooled Modular Flex TIG Torch



Item	Part No.	Description
1	1726M	Torch head 200 AMP 60°
2	1726PM	Torch head 200 AMP 180°
3	9-70M	Torch head 125 AMP 70°
4	9-90M	Torch head 125 AMP 90°
5	09PM	Torch head 125 AMP 180°
6	024M	Torch head 80 AMP 70°
7	24-90M	Torch head 80 AMP 90°

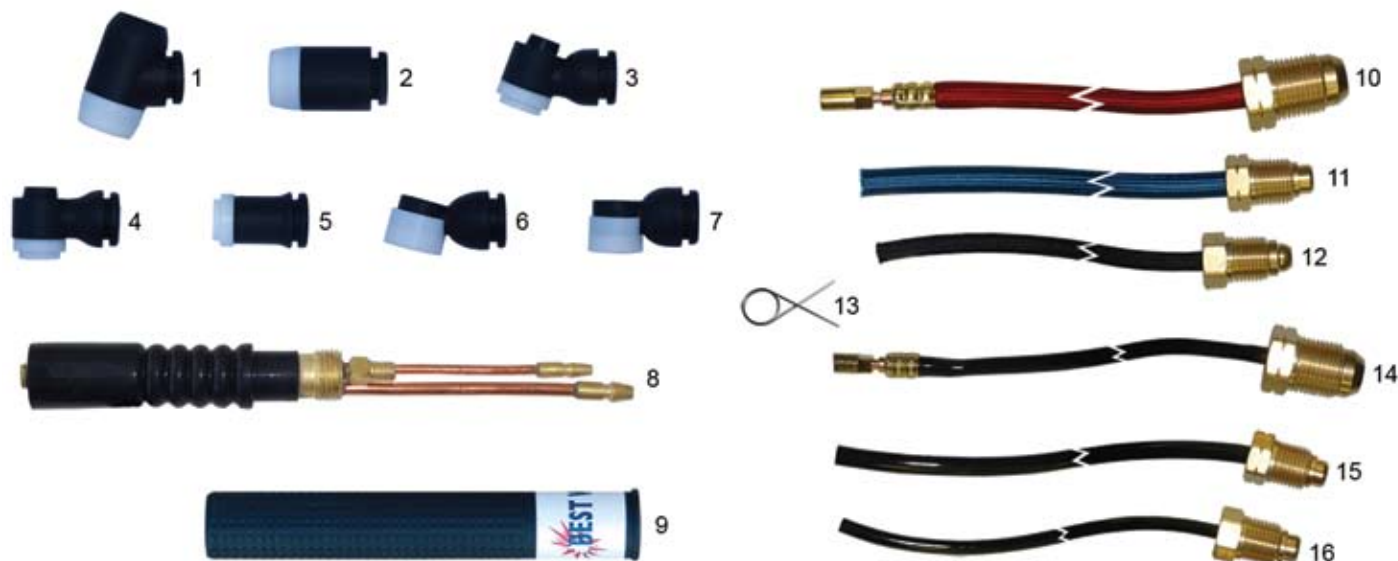
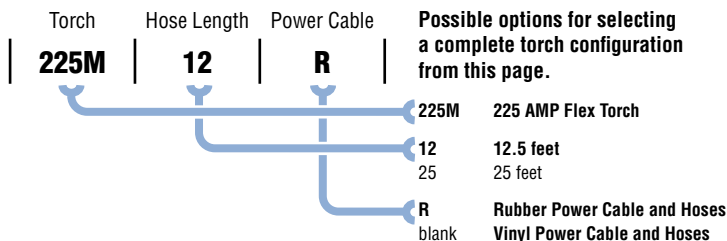
Item	Part No.	Description
18	200M	Torch, 200 AMP
19	200VM	Torch, 200 AMP with valve
20	VS-1	Valve stem
21	200CEM	Flex element 200 AMP
22	200SEM	Solid element 200 AMP
23	200TBM	Body 200 AMP
24	200VTBM	Body 200 AMP with valve

Item	Part No.	Description
25	10N15R	Handle, ribbed (std)
26	46V28R	Power cable 12.5' 1pc
	46V30R	Power cable 25' 2pc
27	46V28-2	Power cable 12.5' 2pc
	46V30-2	Power cable 25' 2pc

Modular TIG Torch Parts

225 AMP Water Cooled Modular Flex TIG Torch

Torch Package Part Number



Item	Part No.	Description
1	1726M	Torch head 200 AMP 60°
2	1726PM	Torch head 200 AMP 180°
3	9-70M	Torch head 125 AMP 70°
4	9-90M	Torch head 125 AMP 90°
5	09PM	Torch head 125 AMP 180°
6	024M	Torch head 80 AMP 70°
7	24-90M	Torch head 80 AMP 90°
8	225M	Torch body

Item	Part No.	Description
9	53N06	Handle
10	45V03R	Power cable 12.5' rubber
	45V04R	Power cable 25' rubber
11	45V07R	Water cable 12.5' rubber
	45V08R	Water cable 25' rubber
12	45V09R	Gas cable 12.5' rubber
	45V10R	Gas cable 25' rubber
13	53N04	Hose clamp

Item	Part No.	Description
14	45V03	Power cable 12.5' vinyl
	45V04	Power cable 25' vinyl
15	45V07	Power cable 12.5' vinyl
	45V08	Power cable 25' vinyl
16	45V09	Power cable 12.5' vinyl
	45V10	Power cable 25' vinyl

Modular Torch Head Installation



Torch Head Installation Procedure:

- 1 Screw element into torch head at point A – this should be **hand-tightened only**; as tight as possible.
- 2 Assure that lock nut is screwed all the way down onto the element.
- 3 Screw element into torch body at point B. Align torch head with torch body.
- 4 While keeping the torch head and body aligned, tighten lock nut.

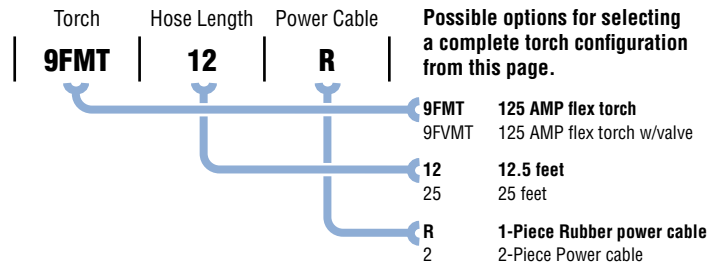
Component TIG Torch Parts

125 AMP Air Cooled

Component Flex TIG Torch

Electrode Range: .020" - 3/32" (0.5mm - 2.4mm)
Head Angle: 90°

Torch Package Part Number



Item	Part No.	Description
1	09FM	Torch head
2	9FMT	Torch, flex
3	9FVMT	Torch, flex w/valve
4	150TBM	Torch body
5	150VTBM	Torch body w/valve
6	41V24	Back cap, long
7	41V35	Back cap, medium
8	41V33	Back cap, short
9	598882	Gasket/insulator
10	set-up*	Collet
11	set-up*	Collet body

Item	Part No.	Description
12-17	set-up*	Nozzles
18	105Z55R	Handle, ribbed (standard)
19	105Z55	Handle, smooth (optional)
20	57Y01R	Power cable 12.5' 1pc
	57Y03R	Power cable 25' 1pc
21	57Y01-2	Power cable 12.5' 2pc
	57Y03-2	Power cable 25' 2pc
22	105Z57	Power cable adapter
23	WC-3-10	Cable cover 3" x 10'
	WC-3-22	Cable cover 3" x 22'

Item	Part No.	Description
24	BS-1	Switch boot, rubber
25	BS-1S	Switch boot, snap-on
26	SW-2	Switch, on-off
27	SW-1	Switch, momentary bulb
	SW-1F	Switch, momentary flat
28	DA-917F	D-plug 50mm, w/18" aux. hose
29	DI-917F	D-plug 50mm, in-line
30	DP-50M	D-plug 50mm, for 2pc cable
31	DA-917FS	D-plug 50mm, w/18" aux. hose
32	DP-25M	D-plug 50mm, for 2pc cable
33	VS-2	Valve stem

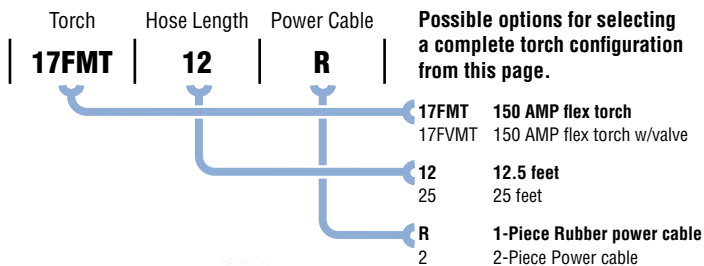
* Select proper size part from the set-up chart on page 162.

Component TIG Torch Parts

150 AMP Air Cooled Component Flex TIG Torch

Electrode Range: .020" - 3/32" (0.5mm - 2.4mm)
Head Angle: 90°

Torch Package Part Number



Item	Part No.	Description
1	17FM	Torch head
2	17FMT	Torch, flex
3	17FVMT	Torch, flex w/valve
4	150TBM	Torch body
5	150VTBM	Torch body w/valve
6	57Y02	Back cap, long
7	300M	Back cap, medium
8	57Y04	Back cap, short
9	18CG	Gasket/insulator
10	set-up*	Collet
11	set-up*	Collet body

Item	Part No.	Description
12-15	set-up*	Nozzles
16	105Z55R	Handle, ribbed (standard)
17	105Z55	Handle, smooth (optional)
18	57Y01R	Power cable 12.5' 1pc
	57Y03R	Power cable 25' 1pc
19	57Y01-2	Power cable 12.5' 2pc
	57Y03-2	Power cable 25' 2pc
20	WC-3-10	Cable cover 3" x 10'
	WC-3-22	Cable cover 3" x 22'
21	105Z57	Power cable adapter

Item	Part No.	Description
22	BS-1	Switch boot, rubber
23	BS-1S	Switch boot, snap-on
24	SW-2	Switch, on-off
25	SW-1	Switch, momentary bulb
	SW-1F	Switch, momentary flat
26	DA-917F	D-plug 50mm, w/18" aux. hose
27	DI-917F	D-plug 50mm, in-line
28	DP-50M	D-plug 50mm, for 2pc cable
29	DA-917FS	D-plug 50mm, w/18" aux. hose
30	DP-25M	D-plug 50mm, for 2pc cable
31	VS-2	Valve stem

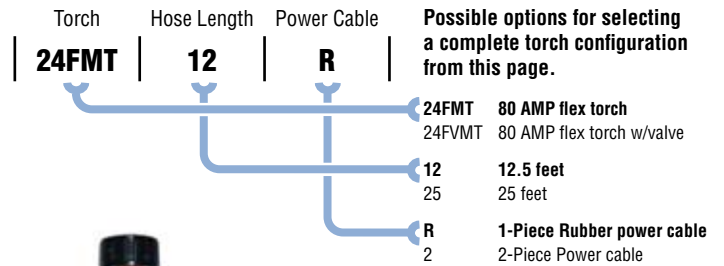
* Select proper size part from the set-up chart on page 162.

Component TIG Torch Parts

80 AMP Air Cooled Component Flex TIG Torch

Electrode Range: .020" - 3/32" (0.5mm - 2.4mm)
Head Angle: 90°

Torch Package Part Number



Item	Part No.	Description
1	24FM	Torch head
2	24FMT	Torch, flex
3	24FVMT	Torch, flex w/valve
4	150TBM	Torch body
5	150VTBM	Torch body w/valve
6	53N22	Gasket/insulator
7	set-up*	Collet
8	set-up*	Collet body
9-12	set-up*	Nozzles

Item	Part No.	Description
13	H-100R	Handle, ribbed (standard)
14	H-100	Handle, smooth (optional)
15	57Y01R	Power cable 12.5' 1pc
15	57Y03R	Power cable 25' 1pc
16	57Y01-2	Power cable 12.5' 2pc
16	57Y03-2	Power cable 25' 2pc
17	WC-3-10	Cable cover 3" x 10'
17	WC-3-22	Cable cover 3" x 22'
18	BS-1	Switch boot, rubber
19	BS-1S	Switch boot, snap-on

Item	Part No.	Description
20	SW-2	Switch, on-off
21	SW-1	Switch, momentary bulb
21	SW-1F	Switch, momentary flat
22	105Z57	Power cable adapter
23	DA-917F	D-plug 50mm, w/18" aux. hose
24	DI-917F	D-plug 50mm, in-line
25	DP-50M	D-plug 50mm, for 2pc cable
26	DA-917FS	D-plug 50mm, w/18" aux. hose
27	DP-25M	D-plug 50mm, for 2pc cable
28	VS-2	Valve stem

* Select proper size part from the set-up chart on page 164.

Component TIG Torch Parts

200 AMP Air Cooled Component Flex TIG Torch

Electrode Range: .020" - 1/8" (0.5mm - 3.2mm)
Head Angle: 90°

Torch Package Part Number

Torch	Hose Length	Power Cable
26FMT	12	R

Possible options for selecting a complete torch configuration from this page.

26FMT	200 AMP flex torch
26FVMT	200 AMP flex torch w/valve
12	12.5 feet
25	25 feet
R	1-Piece Rubber power cable
2	2-Piece power cable



Item	Part No.	Description
1	26FM	Torch head
2	26FMT	Torch, flex
3	26FVMT	Torch, flex w/valve
4	200VTBM	Torch body w/valve
5	200TBM	Torch body
6	57Y04	Back cap, short
7	300M	Back cap, medium
8	57Y02	Back cap, long
9	18CG	Gasket/insulator
10	set-up*	Collet

Item	Part No.	Description
11	set-up*	Collet body
12-15	set-up*	Nozzles
16	10N15R	Handle, ribbed (standard)
17	10N15	Handle, smooth (optional)
18	46V28R	Power cable 12.5' 1pc
	46V30R	Power cable 25' 1pc
19	46V28-2	Power cable 12.5' 2pc
	46V30-2	Power cable 25' 2pc
20	45V62	Power cable adapter

Item	Part No.	Description
21	WC-3-10	Cable cover 3" x 10'
	WC-3-22	Cable cover 3" x 22'
22	BL-1	Switch boot, rubber
23	BL-1S	Switch boot, snap-on
24	SW-2	Switch, on-off
	SW-1	Switch, momentary bulb
25	SW-1F	Switch, momentary flat
26	DA-26R	D-plug 50mm, w/18" gas hose
27	VS-1	Valve stem

* Select proper size part from the set-up chart on page 166.

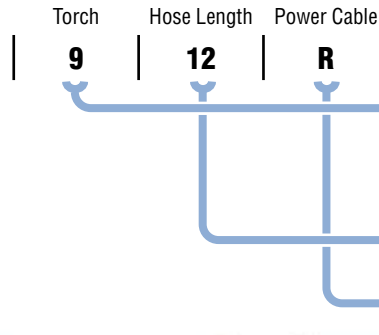
TIG Torch Parts

125 AMP Air Cooled

9 Series TIG Torch

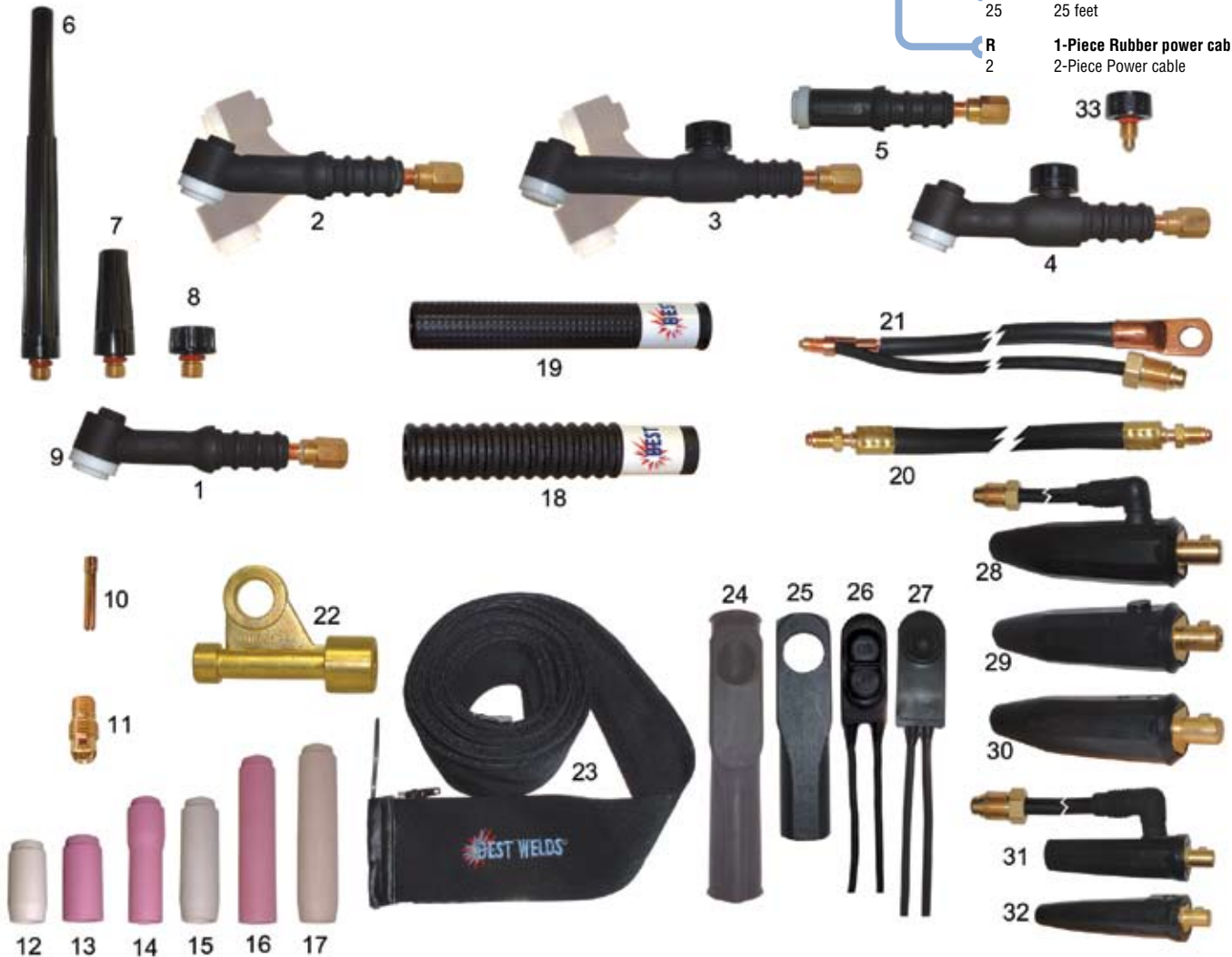
Electrode Range: .020" - 3/32" (0.5mm - 2.4mm)
Head Angle: 60°
180° (9P)

Torch Package Part Number



Possible options for selecting a complete torch configuration from this page.

- 9 125 AMP torch
- 9F 125 AMP flex torch
- 9FV 125 AMP flex torch w/valve
- 9P 125 AMP 180° pencil torch
- 9V 125 AMP torch w/valve
- 12 12.5 feet
- 25 25 feet
- R 1-Piece Rubber power cable
- 2 2-Piece Power cable



Item	Part No.	Description
1	0009	Torch body
2	009F	Torch body, flex
3	09FV	Torch body, flex w/valve
4	009V	Torch body, w/valve
5	009P	Torch body, pencil 180°
6	41V24	Back cap, long
7	41V35	Back cap, medium
8	41V33	Back cap, short
9	598882	Gasket/insulator
10	set-up*	Collet
11	set-up*	Collet body

Item	Part No.	Description
12-17	set-up*	Nozzles
18	H-100R	Handle, ribbed (standard)
19	H-100	Handle, smooth (optional)
20	57Y01R	Power cable 12.5' 1pc
	57Y03R	Power cable 25' 1pc
21	57Y01-2	Power cable 12.5' 2pc
	57Y03-2	Power cable 25' 2pc
22	105Z57	Power cable adapter
23	WC-3-10	Cable cover 3" x 10'
	WC-3-22	Cable cover 3" x 22'
24	BS-1	Switch boot, rubber

Item	Part No.	Description
25	BS-1S	Switch boot, snap-on
26	SW-2	Switch, on-off
27	SW-1	Switch, momentary bulb
	SW-1F	Switch, momentary flat
28	DA-917F	D-plug 50mm, w/18" aux. hose
29	DI-917F	D-plug 50mm, in-line
30	DP-50M	D-plug 50mm, for 2pc cable
31	DA-917FS	D-plug 50mm, w/18" aux. hose
32	DP-25M	D-plug 50mm, for 2pc cable
33	VS-2	Valve stem

* Select proper size part from the set-up chart on the following page.

TIG Torch Parts

Set-ups for 9 Series Standard Set-up



Gas Lens Set-up



Large Diameter Gas Lens Set-up



WARNING: 1/8" and larger set-ups may exceed the operational capacity for a torch of this amperage.

Item No.	Electrode Diameter		.020" (0.5mm)	.040" (1.0mm)	1/16" (1.6mm)	3/32" (2.4mm)	1/8" (3.2mm)	5/32" (4.0mm)	3/16" (4.8mm)	1/4" (6.4mm)
	Nozzle Size		#3 (3/16")	#4 (1/4")	#5 (5/16")	#6 (3/8")	#7 (7/16")	#8 (1/2")	#10 (5/8")	#12 (3/4")
Standard Set-up										
9	Gasket insulator		598882	598882	598882	598882	598882			
10	Collet		13N20	13N21	13N22	13N23	13N24			
11	Collet body		13N25	13N26	13N27	13N28	13N29			
12	Alumina nozzle standard		13N08	13N09	13N10	13N11	13N12	13N13		
13	Alumina nozzle long	A796F70	A796F71	A796F72	A796F73					
14	Alumina nozzle x-long	A796F74	A796F75	A796F76	A796F77					
15	Lava nozzle standard		13N14	13N15	13N16	13N17	13N18	13N19		
16	Lava nozzle long	796F70	796F71	796F72	796F73					
17	Lava nozzle x-long	796F74	796F75	796F76	796F77					
Gas Lens Set-up										
34	Gas lens collet body		45V41	45V42	45V43	45V44	45V45			
35	Alumina gas lens nozzle		53N58	53N59	53N60	53N61	53N61S			
Large Diameter Gas Lens Set-up										
36	Gasket insulator		54N63-20	54N63-20	54N63-20	54N63-20	54N63-20			
37	Gas lens collet		13N20L	13N21L	13N22L	13N23L	13N24L			
38	Gas lens collet body		45V0204S	45V0204S	45V116S	45V64S	995795S			
39	Alumina gas lens nozzle				57N75		57N74	53N88	53N87	53N89

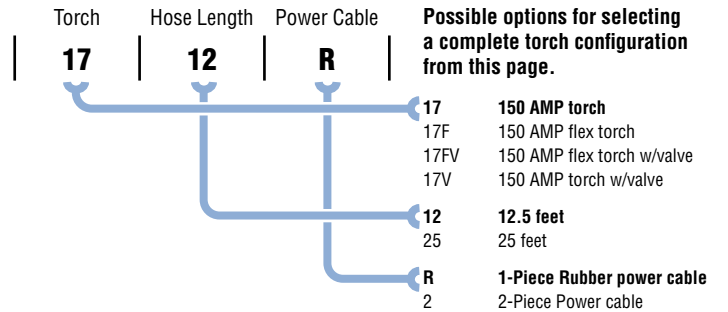
TIG Torch Parts

150 AMP Air Cooled

17 Series TIG Torch

Electrode Range: .020" - 3/32" (0.5mm - 2.4mm)
Head Angle: 60°

Torch Package Part Number



Item	Part No.	Description
1	0017	Torch body
2	017F	Torch body, flex
3	17FV	Torch body, flex w/valve
4	017V	Torch body, w/valve
5	57Y02	Back cap, long
6	300M	Back cap, medium
7	57Y04	Back cap, short
8	18CG	Gasket/insulator
9	set-up*	Collet
10	set-up*	Collet body

Item	Part No.	Description
11-14	set-up*	Nozzles
15	H-100R	Handle, ribbed (standard)
16	H-100	Handle, smooth (optional)
17	57Y01R	Power cable 12.5' 1pc
	57Y03R	Power cable 25' 1pc
18	57Y01-2	Power cable 12.5' 2pc
	57Y03-2	Power cable 25' 2pc
19	WC-3-10	Cable cover 3" x 10'
	WC-3-22	Cable cover 3" x 22'
20	105Z57	Power cable adapter

Item	Part No.	Description
21	BS-1	Switch boot, rubber
22	BS-1S	Switch boot, snap-on
23	SW-2	Switch, on-off
24	SW-1	Switch, momentary bulb
	SW-1F	Switch, momentary flat
25	DA-917F	D-plug 50mm, w/18" aux. hose
26	DI-917F	D-plug 50mm, in-line
27	DP-50M	D-plug 50mm, for 2pc cable
28	DA-917FS	D-plug 50mm, w/18" aux. hose
29	DP-25M	D-plug 50mm, for 2pc cable
30	VS-2	Valve stem

* Select proper size part from the set-up chart on the following page.

TIG Torch Parts

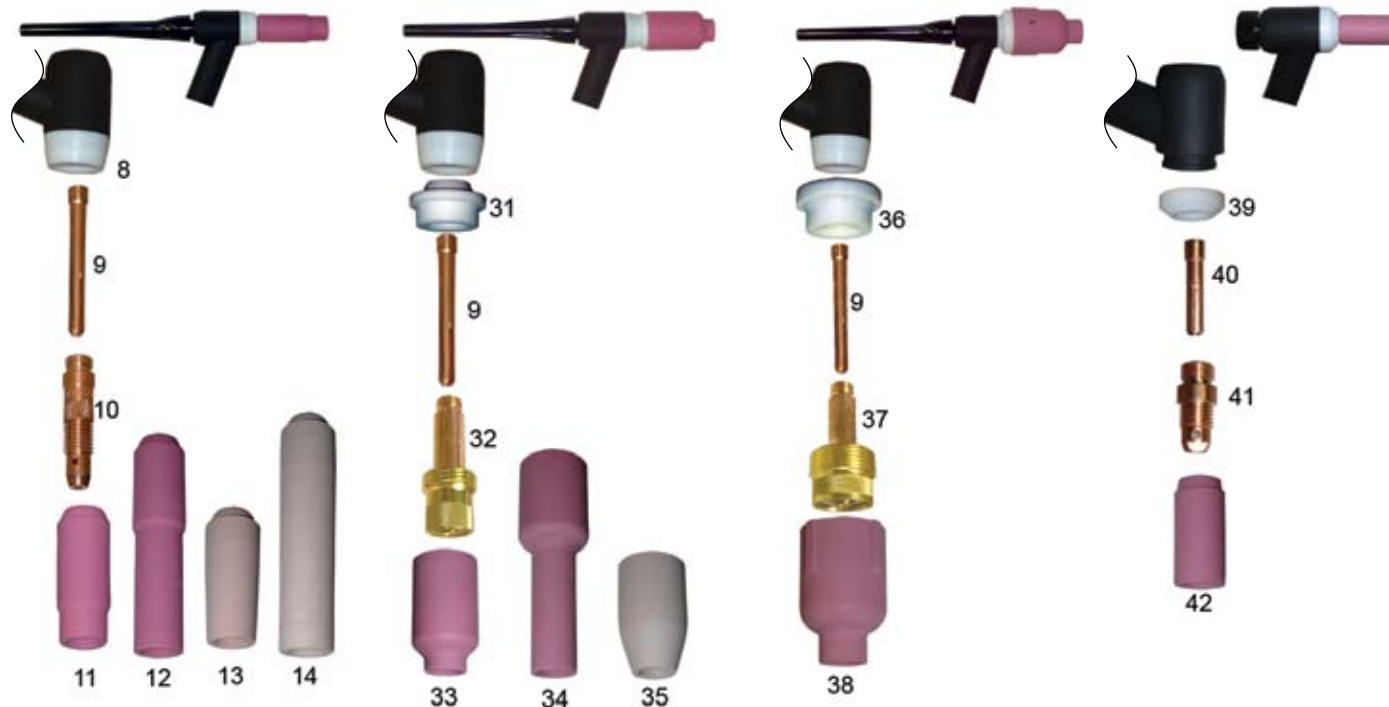
Set-ups for 17 Series

Standard Set-up

Gas Lens Set-up

Large Diameter Gas Lens Set-up

Stubby Collet Body Set-up



WARNING: 1/8" and larger set-ups may exceed the operational capacity for a torch of this amperage.

Item No.	Electrode Diameter	.020"	.040"	1/16"	3/32"	1/8"	5/32"			
		(0.5mm)	(1.0mm)	(1.6mm)	(2.4mm)	(3.2mm)	(4.0mm)	#11 (11/16")	#12 (3/4")	#15 (15/16")
	Nozzle Size	#4 (1/4")	#5 (5/16")	#6 (3/8")	#7 (7/16")	#8 (1/2")	#10 (5/8")			
Standard Set-up										
8	Gasket insulator	18CG	18CG	18CG	18CG	18CG	18CG			
9	Collet	10N21	10N22	10N23	10N24	10N25	54N20			
10	Collet body	10N29	10N30	10N31	10N32	10N28	406488			
11	Alumina nozzle standard	10N50	10N49	10N48	10N47	10N46	10N45		10N44	
12	Alumina nozzle long		10N49L	10N48L	10N47L					
13	Lava nozzle standard	105Z43	105Z42	105Z44	105Z45	08Z78	08Z79		08Z80	
14	Lava nozzle long	12N03	105Z60	12N02	105Z61					
Gas Lens Set-up										
31	Gasket insulator	54N01	54N01	54N01	54N01	54N01	54N01			
32	Gas lens collet body	45V29	45V24	45V25	45V26	45V27	45V28			
33	Alumina gas lens nozzle	54N18	54N17	54N16	54N15	54N14	54N19*			
34	Alumina gas lens nozzle long		54N17L	54N16L	54N15L	54N14L				
35	Lava gas lens nozzle	54N35	54N34	54N33	54N32	54N31		54N36		
Large Diameter Gas Lens Set-up										
36	Gasket Insulator	54N63	54N63	54N63	54N63	54N63				
37	Gas lens collet body	45V0204	45V0204	45V116	45V64	995795	45V63			
38	Alumina gas lens nozzle			57N75		57N74	53N88		53N87	53N89
	Alumina gas lens nozzle long			57N75L		57N74L				
	Alumina gas lens nozzle x-long			57N75XL		57N74XL				
Standard Set-up										
39	Gasket insulator	18CG20	18CG20	18CG20	18CG20	18CG20				
40	Stubby collet	10N21S	10N22S	10N23S	10N24S	10N25S				
41	Stubby collet body	17CB20	17CB20	17CB20	17CB20	17CB20				
42	Alumina nozzle standard	13N08	13N09	13N10	13N11	13N12	13N13			

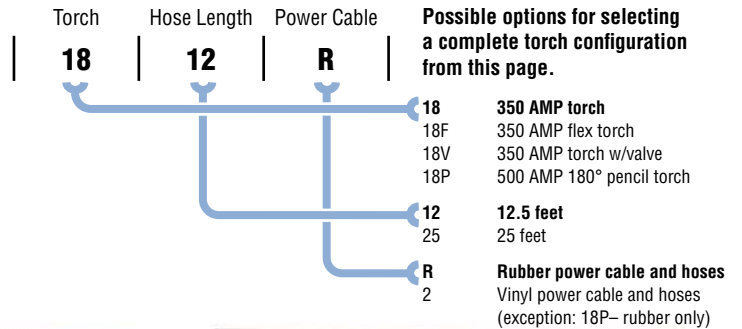
* Part No. 54N19 is a short nozzle: .700".

TIG Torch Parts

350 AMP and 500 AMP (18P) Water Cooled Torch Package Part Number

18 Series TIG Torch

Electrode Range: .020" - 5/32" (0.5mm - 4.0mm)
Head Angle: 60°
180° (18P)



Item	Part No.	Description
1	0018	Torch body
2	018F	Torch body, flex
3	018P	Torch body, pencil 180°
4	018V	Torch body, w/valve
5	57Y02	Back cap, long
6	300M	Back cap, medium
7	57Y04	Back cap, short
8	18CG	Gasket/insulator
9	set-up*	Collet
10	set-up*	Collet body
11-14	set-up*	Nozzles
15	H-200	Handle, smooth (standard)
16	H-200R	Handle, ribbed (optional)

Item	Part No.	Description
17	18PB	Barrel Handle
18	40V64	Power cable 12.5' vinyl
	40V64R	Power cable 12.5' rubber
	41V29	Power cable 25' vinyl
	41V29R	Power cable 25' rubber
19	40V74	Water hose 12.5' vinyl
	40V74R	Water hose 12.5' rubber
	41V32	Water hose 25' vinyl
	41V32R	Water hose 25' rubber
20	40V75	Gas hose 12.5' vinyl
	40V75R	Gas hose 12.5' rubber
	41V30	Gas hose 25' vinyl
	41V30R	Gas hose 25' rubber

Item	Part No.	Description
21	53N04	Hose clamp
22	45V11	Power cable adapter
23	WC-3-10	Cable cover 3" x 10'
	WC-3-22	Cable cover 3" x 22'
24	BL-1	Switch boot, rubber
25	BL-1S	Switch boot, snap-on
26	SW-2	Switch, on-off
27	SW-1	Switch, momentary bulb
	SW-1F	Switch, momentary flat
28	DA-1820L	D-plug 50mm, w/18" water hose
29	VS-2	Valve stem

* Select proper size part from the set-up chart on the following page.

TIG Torch Parts

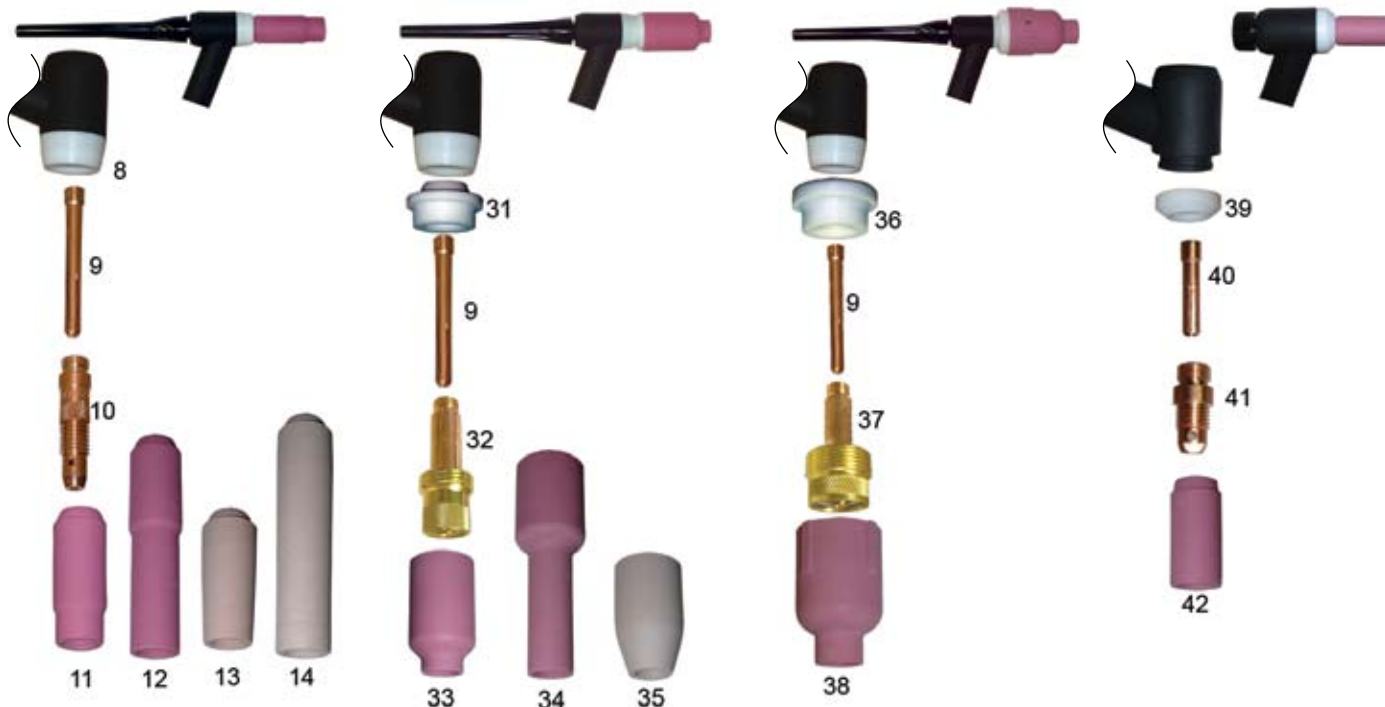
Set-ups for 18 Series

Standard Set-up

Gas Lens Set-up

Large Diameter Gas Lens Set-up

Stubby Collet Body Set-up



WARNING: #11 and larger set-ups may exceed the operational capacity for a torch of this amperage.

Item No.	Electrode Diameter	.020"	.040"	1/16"	3/32"	1/8"	5/32"			
		(0.5mm)	(1.0mm)	(1.6mm)	(2.4mm)	(3.2mm)	(4.0mm)	#11 (11/16")	#12 (3/4")	#15 (15/16")
Nozzle Size		#4 (1/4")	#5 (5/16")	#6 (3/8")	#7 (7/16")	#8 (1/2")	#10 (5/8")	#11 (11/16")	#12 (3/4")	#15 (15/16")
Standard Set-up										
8	Gasket insulator	18CG	18CG	18CG	18CG	18CG	18CG			
9	Collet	10N21	10N22	10N23	10N24	10N25	54N20			
10	Collet body	10N29	10N30	10N31	10N32	10N28	406488			
11	Alumina nozzle standard	10N50	10N49	10N48	10N47	10N46	10N45		10N44	
12	Alumina nozzle long		10N49L	10N48L	10N47L					
13	Lava nozzle standard	105Z43	105Z42	105Z44	105Z45	08Z78	08Z79		08Z80	
14	Lava nozzle long	12N03	105Z60	12N02	105Z61					
Gas Lens Set-up										
31	Gasket insulator	54N01	54N01	54N01	54N01	54N01	54N01			
32	Gas lens collet body	45V29	45V24	45V25	45V26	45V27	45V28			
33	Alumina gas lens nozzle	54N18	54N17	54N16	54N15	54N14	54N19*			
34	Alumina gas lens nozzle Long		54N17L	54N16L	54N15L	54N14L				
35	Lava gas lens nozzle	54N35	54N34	54N33	54N32	54N31		54N36		
Large Diameter Gas Lens Set-up										
36	Gasket insulator	54N63	54N63	54N63	54N63	54N63				
37	Gas lens collet body	45V0204	45V0204	45V116	45V64	995795	45V63			
38	Alumina gas lens nozzle			57N75		57N74	53N88		53N87	53N89
	Alumina gas lens nozzle long			57N75L		57N74L				
	Alumina gas lens nozzle x-long			57N75XL		57N74XL				
Stubby Collet Body Set-up										
39	Gasket insulator	18CG20	18CG20	18CG20	18CG20	18CG20				
40	Stubby collet	10N21S	10N22S	10N23S	10N24S	10N25S				
41	Stubby collet body	17CB20	17CB20	17CB20	17CB20	17CB20				
42	Alumina nozzle standard	13N08	13N09	13N10	13N11	13N12	13N13			

* Part No. 54N19 is a short nozzle: .700".

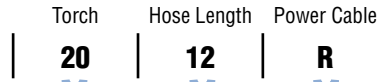
TIG Torch Parts

250 AMP and 200 AMP (25) Water Cooled

20 and 25 Series TIG Torch

Electrode Range: .020" - 1/8" (0.5mm - 3.2mm)
Head Angle: 60°
180° (20P, 25)

Torch Package Part Number



Possible options for selecting a complete torch configuration from this page.

- 20 250 AMP torch
- 20F 250 AMP flex torch
- 20M 250 AMP mechanical fittings
- 20P 250 AMP 180° pencil torch
- 25 200 AMP pencil flex
- 12 12.5 feet
- 25 25 feet
- R Rubber power cable and hoses
- blank Vinyl power cable and hoses



Item	Part No.	Description
1	0020	Torch body
2	0025	Torch body
3	020M	Torch body, flex pencil 180°
4	020P	Torch body, pencil 180°
5	020F	Torch body, flex
6	41V24	Back cap, long
7	41V35	Back cap, medium
8	41V33	Back cap, short
9	598882	Gasket/insulator
10	set-up*	Collet
11	set-up*	Collet body
12-17	set-up*	Nozzles
18	H-100	Handle, smooth (standard) 20F, 20M, 20P, 25
	53N06	Handle, smooth (standard) 20

Item	Part No.	Description
19	H-100R	Handle, ribbed (optional) 20F, 20M, 20P, 25
	53N06R	Handle, ribbed (optional) 20
20	45V03	Power cable 12.5' vinyl
	45V03R	Power cable 12.5' rubber
	45V04	Power cable 25' vinyl
	45V04R	Power cable 25' rubber
21	45V07	Water hose 12.5' vinyl
	45V07R	Water hose 12.5' rubber
	45V08	Water hose 25' vinyl
	45V08R	Water hose 25' rubber
22	45V09	Gas hose 12.5' vinyl
	45V09R	Gas hose 12.5' rubber
	45V10	Gas hose 25' vinyl
	45V10R	Gas hose 25' rubber

Item	Part No.	Description
23	53N04	Hose clamp
24	45V11	Power cable adapter
25	WC-3-10	Cable cover 3" x 10'
	WC-3-22	Cable cover 3" x 22'
26	BS-1	Switch boot, rubber
27	BS-1S	Switch boot, snap-on
28	SW-2	Switch, on-off
29	SW-1	Switch, momentary bulb
	SW-1F	Switch, momentary flat
30	DA-1820L	D-plug 50mm, w/18" water hose

* Select proper size part from the set-up chart on the following page.

TIG Torch Parts

Set-ups for 20 and 25 Series

Standard Set-up



Gas Lens Set-up



Large Diameter Gas Lens Set-up



WARNING: #10 and larger set-ups may exceed the operational capacity for a torch of this amperage.

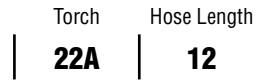
Item No.	Electrode Diameter	Nozzle Size	.020"	.040"	1/16"	3/32"	1/8"	5/32"	3/16"	1/4"
			(0.5mm)	(1.0mm)	(1.6mm)	(2.4mm)	(3.2mm)	(4.0mm)	(4.8mm)	(6.4mm)
		#3 (3/16")	#4 (1/4")	#5 (5/16")	#6 (3/8")	#7 (7/16")	#8 (1/2")	#10 (5/8")	#12 (3/4")	#15 (15/16")
Standard Set-up										
9	Gasket insulator		598882	598882	598882	598882	598882			
10	Collet		13N20	13N21	13N22	13N23	13N24			
11	Collet body		13N25	13N26	13N27	13N28	13N29			
12	Alumina nozzle standard		13N08	13N09	13N10	13N11	13N12	13N13		
13	Alumina nozzle long	A796F70	A796F71	A796F72	A796F73					
14	Alumina nozzle x-long	A796F74	A796F75	A796F76	A796F77					
15	Lava nozzle standard		13N14	13N15	13N16	13N17	13N18	13N19		
16	Lava nozzle long	796F70	796F71	796F72	796F73					
17	Lava nozzle x-long	796F74	796F75	796F76	796F77					
Gas Lens Set-up										
34	Gas lens collet body		45V41	45V42	45V43	45V44	45V45			
35	Alumina gas lens nozzle		53N58	53N59	53N60	53N61	53N61S			
Large Diameter Gas Lens Set-up										
36	Gasket insulator		54N63-20	54N63-20	54N63-20	54N63-20	54N63-20			
37	Gas lens collet		13N20L	13N21L	13N22L	13N23L	13N24L			
38	Gas lens collet body		45V0204S	45V0204S	45V116S	45V64S	995795S			
39	Alumina gas lens nozzle				57N75		57N74	53N88	53N87	53N89

TIG Torch Parts

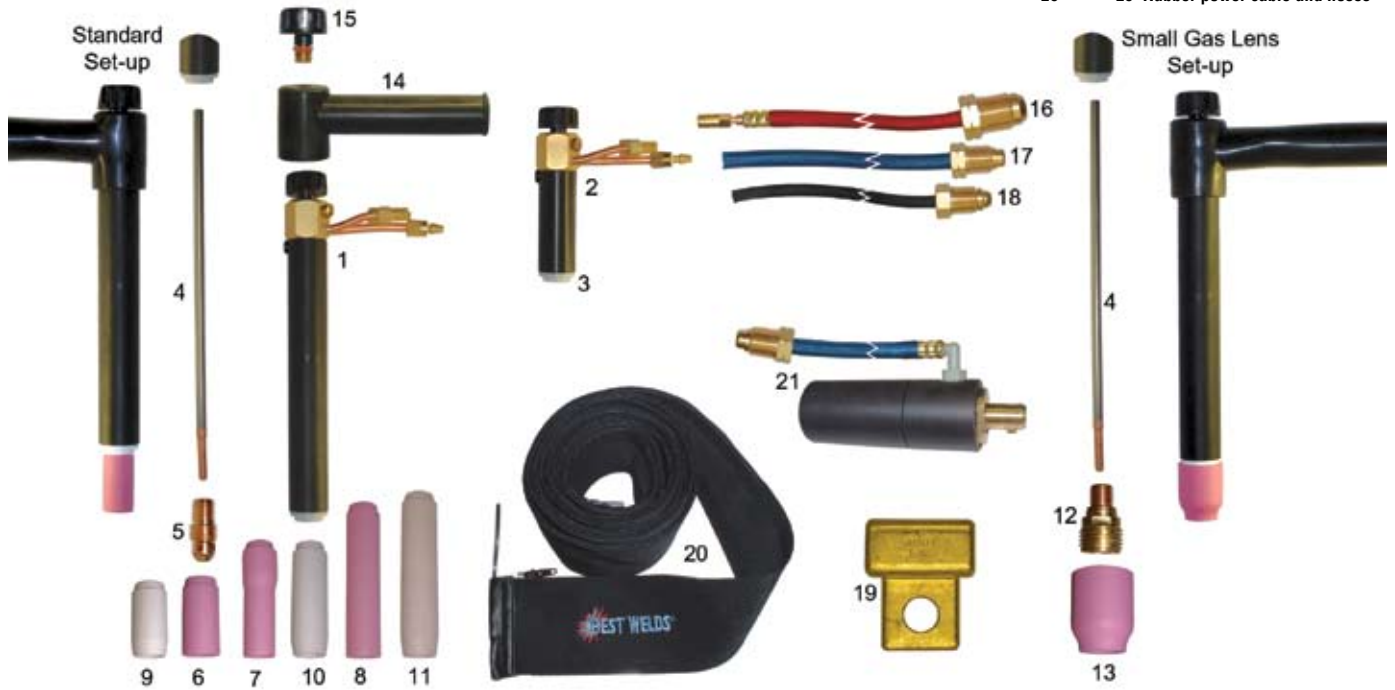
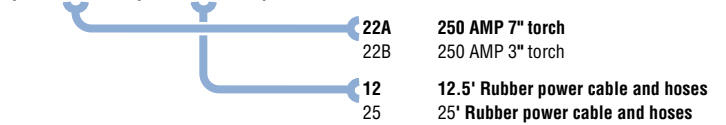
250 AMP Water Cooled 22 Series TIG Machine Torch

Electrode Range: .020" - 1/8" (0.5mm - 3.2mm)
Head Angle: 180°

Torch Package Part Number



Possible options for selecting a complete torch configuration from this page.



WARNING: #5 and #10 are set-ups outside the optimal operational capacity for a torch of this amperage.

Item	Part No.	Description
1	022A	Torch body, w/ins. boot
2	022B	Torch body, w/ins. boot
3	22-10	Gasket/insulator
4	set-up*	Collet
5	set-up*	Collet body
6-11	set-up*	Nozzles
12	set-up*	Gas lens collet body
13	set-up*	Nozzles
14	22-9	Insulating boot
15	22-7	Collet knob
16	45V03R	Power cable 12.5' rubber
	45V04R	Power cable 25' rubber
17	45V07R	Water hose 12.5' rubber
	45V08R	Water hose 25' rubber
18	45V09R	Gas hose 12.5' rubber
	45V10R	Gas hose 25' rubber
19	45V11	Power cable adapter
20	WC-3-10	Cable cover 3" x 10'
	WC-3-22	Cable cover 3" x 22'
21	DA-1820L	D-plug 50mm, w/18" water hose
22	54N63-22	Gasket/insulator
23	set-up*	Collet
24	set-up*	Gas lens collet body
25	set-up*	Nozzles

Item No.	Electrode Diameter	.040"	1/16"	3/32"	1/8"	5/32"
		(1.0mm)	(1.6mm)	(2.4mm)	(3.2mm)	(4.0mm)
Nozzle Size		#5 (5/16")	#6 (3/8")	#7 (7/16")	#8 (1/2")	#10 (5/8")
Standard Set-up						
4	Collet 22A		22N22A	22N23A	22N24A	
4	Collet 22B		22N22B	22N23B	22N24B	
5	Collet body		13N27	13N28	13N29	
6	Alumina nozzle standard	13N09	13N10	13N11	13N12	13N13
For other nozzle options: see pages 161 & 162.						
Gas Lens Set-up						
12	Gas lens collet body	45V42	45V43	45V44	45V45	
13	Alumina gas lens nozzle	53N59	53N60	53N61	53N61S	
Large Diameter Gas Lens Set-up						
23	Gas lens collet 22A		22N22AL	22N23AL	22N24AL	
23	Gas lens collet 22B		22N22BL	22N23BL	22N24BL	
24	Gas lens collet body		45V116S	45V64S	995795S	
25	Alumina gas lens nozzle		57N75		57N74	53N88
For other nozzle options: see pages 161 & 162.						

* Select proper size part from the set-up chart on the following page.

TIG Torch Parts

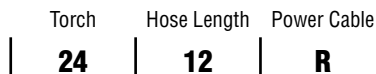
80 AMP Air Cooled and 180 AMP Water Cooled

24 Series TIG Torch

Electrode Range: .020" - 3/32" (0.5mm - 2.4mm)

Head Angle: 60° - 90°

Torch Package Part Number



Possible options for selecting a complete torch configuration from this page.

- 24** 80 AMP 60° torch
- 24-90 80 AMP 90° torch
- 24V 80 AMP 60° torch w/valve
- 24W 180 AMP 60° torch
- 24W-90 180 AMP 90° torch
- 12** 12.5 feet
- 25 25 feet
- R** 1-Piece Rubber power cable (24)
- blank Rubber power cable and hoses (24W)
- 2-Piece Power cable



Item	Part No.	Description
1	024V	Torch body, 60° w/valve
2	0024	Torch body, 60°
	24-90	Torch body, 90°
3	024W	Torch body, 60°
4	24W-90	Torch body, 90°
5	56Y38R	Power cable 12.5' rubber
	56Y97R	Power cable 25' rubber
6	45V03R	Power cable 12.5' rubber
	45V04R	Power cable 25' rubber
7	45V07R	Water hose 12.5' rubber
	45V08R	Water hose 25' rubber
8	45V09R	Gas hose 12.5' rubber
	45V10R	Gas hose 25' rubber

Item	Part No.	Description
9	53N04	Hose clamp
10	45V03	Power cable 12.5' vinyl
	45V04	Power cable 25' vinyl
11	45V07	Water hose 12.5' vinyl
	45V08	Water hose 25' vinyl
12	45V09	Gas hose 12.5' vinyl
	45V10	Gas hose 25' vinyl
13	53N22	Gasket/insulator
14	set-up*	Collet
15	set-up*	Collet body
16-19	set-up*	Nozzles
20	H-100R	Handle, ribbed (standard 24)
21	H-100	Handle, smooth (standard 24W)

Item	Part No.	Description
22	53N43	Power cable adapter (24)
23	45V11	Power cable adapter (24W)
24	WC-3-10	Cable cover 3" x 10'
	WC-3-22	Cable cover 3" x 22'
25	53N66	Gas lens gasket/insulator
26	set-up*	Collet
27	set-up*	Gas lens collet body
28	set-up*	Nozzles
29	DA-1820L	D-plug 50mm, w/18" water hose
30	DI-24F	D-plug 50mm, in-line

* Select proper size part from the set-up chart below.

WARNING: #8 is a set-up outside the optimal operational capacity for a torch of this amperage.

Item No.	Electrode Diameter	Nozzle Size					
		#3 (3/16")	#4 (1/4")	#5 (5/16")	#6 (3/8")	#7 (7/16")	#8 (1/2")
14	Collet		53N15	53N16	53N14	24C332	
15	Collet body		53N17	53N18	53N19	24CB332	
16	Alumina nozzle standard	A53N23	A53N24	A53N25	A53N27		
17	Alumina nozzle long				A53N26		
18	Lava nozzle standard	53N23	53N24	53N25	53N27		
19	Lava nozzle long		53N28		53N26		
26	Gas lens collet		53N62	53N63	53N64	24GLC332	
27	Gas lens collet body		45V41	45V42	45V43	45V44	
28	Alumina gas lens nozzle		53N58	53N59	53N60	53N61	53N61S

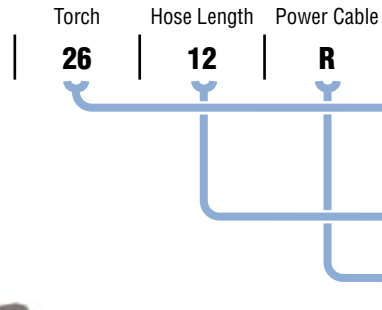
TIG Torch Parts

200 AMP Air Cooled

26 Series TIG Torch

Electrode Range: .020" - 5/32" (0.5mm - 4.0mm)
Head Angle: 60°

Torch Package Part Number



Possible options for selecting a complete torch configuration from this page.

- 26** 200 AMP torch
- 26F 200 AMP flex torch
- 26FV 200 AMP flex torch w/valve
- 26V 200 AMP torch w/valve
- 12** 12.5 feet
- 25 25 feet
- R** 1-Piece Rubber power cable
- 2 2-Piece Power cable



Item	Part No.	Description
1	0026	Torch body
2	026F	Torch body, flex
3	26FV	Torch body, flex w/valve
4	26V	Torch body, w/valve
5	57Y04	Cap back, long
6	300M	Cap back, medium
7	57Y02	Cap back, short
8	18CG	Gasket/insulator
9	set-up*	Collet

Item	Part No.	Description
10	set-up*	Collet body
11-14	set-up*	Nozzles
15	H-200R	Handle, ribbed (standard)
16	H-200	Handle, smooth (optional)
17	46V28R	Power cable 12.5' 1pc
	46V30R	Power cable 25' 1pc
18	46V28-2	Power cable 12.5' 2pc
	46V30-2	Power cable 25' 2pc
19	45V62	Power cable adapter

Item	Part No.	Description
20	WC-3-10	Cable cover 3" x 10'
	WC-3-22	Cable cover 3" x 22'
21	BL-1	Switch boot, rubber
22	BL-1S	Switch boot, snap-on
23	SW-2	Switch, on-off
24	SW-1	Switch, momentary bulb
	SW-1F	Switch, momentary flat
25	DA-26R	D-plug 50mm, w/18" gas hose
26	VS-1	Valve stem

* Select proper size part from the set-up chart on the following page.

TIG Torch Parts

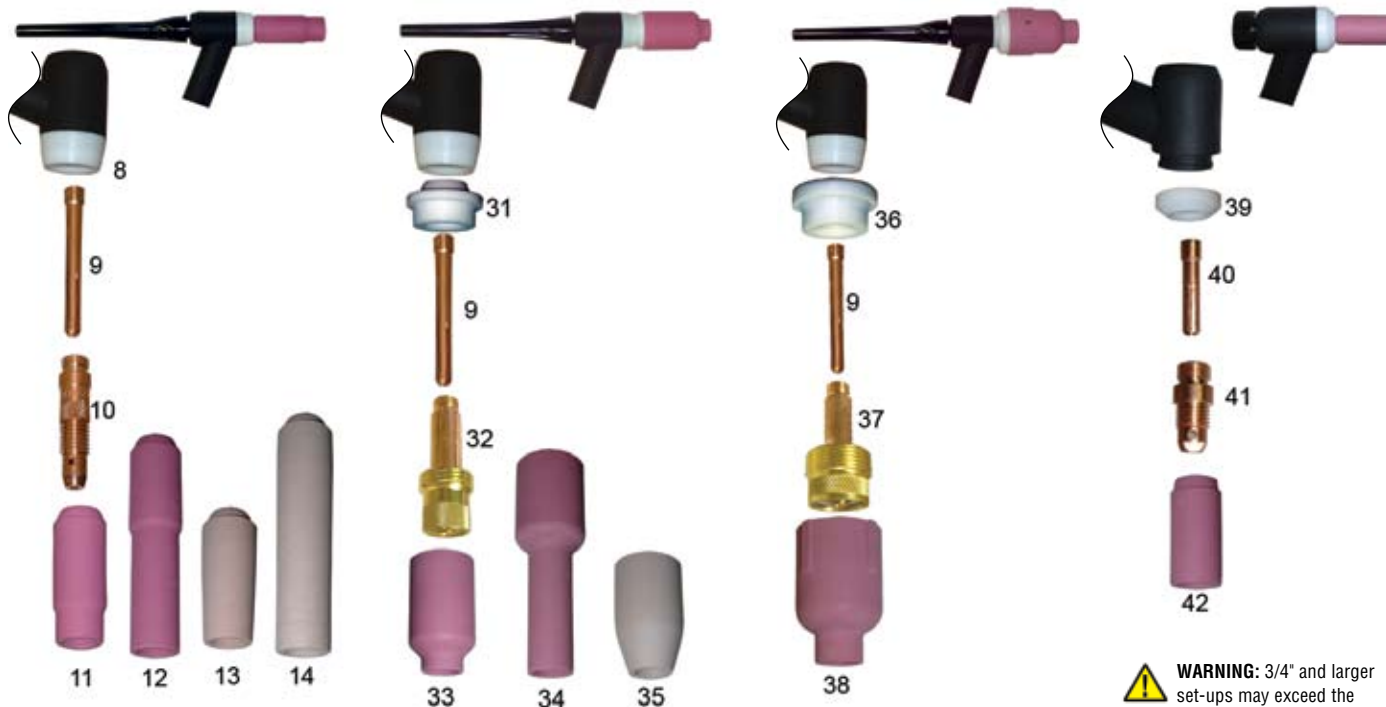
Set-ups for 26 Series

Standard Set-up

Gas Lens Set-up

Large Diameter Gas Lens Set-up

Stubby Collet Body Set-up



WARNING: 3/4" and larger set-ups may exceed the operational capacity for a torch of this amperage.

Item No.	Electrode Diameter	.020"	.040"	1/16"	3/32"	1/8"	5/32"			
		(0.5mm)	(1.0mm)	(1.6mm)	(2.4mm)	(3.2mm)	(4.0mm)	#11 (11/16")	#12 (3/4")	#15 (15/16")
	Nozzle Size	#4 (1/4")	#5 (5/16")	#6 (3/8")	#7 (7/16")	#8 (1/2")	#10 (5/8")			
Standard Set-up										
8	Gasket insulator	18CG	18CG	18CG	18CG	18CG	18CG			
9	Collet	10N21	10N22	10N23	10N24	10N25	54N20			
10	Collet body	10N29	10N30	10N31	10N32	10N28	406488			
11	Alumina nozzle standard	10N50	10N49	10N48	10N47	10N46	10N45		10N44	
12	Alumina nozzle long		10N49L	10N48L	10N47L					
13	Lava nozzle standard	105Z43	105Z42	105Z44	105Z45	08Z78	08Z79		08Z80	
14	Lava nozzle long	12N03	105Z60	12N02	105Z61					
Gas Lens Set-up										
31	Gasket insulator	54N01	54N01	54N01	54N01	54N01	54N01			
32	Gas lens collet body	45V29	45V24	45V25	45V26	45V27	45V28			
33	Alumina gas lens nozzle	54N18	54N17	54N16	54N15	54N14	54N19*			
34	Alumina gas lens nozzle long		54N17L	54N16L	54N15L	54N14L				
35	Lava gas lens nozzle	54N35	54N34	54N33	54N32	54N31		54N36		
Large Diameter Gas Lens Set-up										
36	Gasket Insulator	54N63	54N63-20	54N63-20	54N63-20	54N63-20				
37	Gas lens collet body	45V0204	45V0204	45V116	45V64	995795	45V63			
38	Alumina gas lens nozzle			57N75		57N74	53N88		53N87	53N89
	Alumina gas lens nozzle long			57N75L		57N74L				
	Alumina gas lens nozzle x-long			57N75XL		57N74XL				
Stubby Collet Body Set-up										
39	Gasket insulator	18CG20	18CG20	18CG20	18CG	18CG20				
40	Stubby collet	10N21S	10N22S	10N23S	10N24S	10N25S				
41	Stubby collet body	17CB20	17CB20	17CB20	17CB20	17CB20				
42	Alumina nozzle standard	13N08	13N09	13N10	13N11	13N12	13N13			

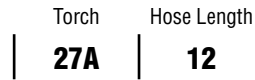
* Part No. 54N19 is a short nozzle: .700".

TIG Torch Parts

500 AMP Water Cooled 27 Series TIG Machine Torch

Electrode Range: .040" - 1/4" (1.0mm - 6.4mm)
Head Angle: 180°

Torch Package Part Number



Possible options for selecting a complete torch configuration from this page.

- 27A 200 AMP torch
- 27B 200 AMP flex torch
- 12 12.5' Rubber power cable and hoses
- 25 25' Rubber power cable and hoses



Item	Part No.	Description
1	027A	Torch body 9", w/ins. boot
2	027B	Torch body 22", w/ins. boot
3	27-13A	Shaft assembly (27A)
	27-13B	Shaft assembly (27B)
4	27-13-2	O-ring
5	27-13-3	O-ring
6	27-12	Insulating boot
7	set-up*	Collet
8	set-up*	Gas lens collet body
9	18W89	O-ring for 49V gas lens
10	57N56	Gasket
11	set-up*	Nozzles

Item	Part No.	Description
12	40V82R	Gas hose 12.5' rubber
	40V82RL	Gas hose 25' rubber
	40V82R-3	Gas hose 3' rubber
13	40V83R	Water hose 12.5' rubber
	40V83RL	Water hose 25' rubber
	40V83R-3	Water hose 3' rubber
14	40V84R	Power cable 12.5' rubber
	40V84RL	Power cable 25' rubber
15	40V84R-3	Power cable 3' rubber
16	WC-4-10	Cable cover 4" x 10'
	WC-4-22	Cable cover 4" x 22'
17	45V11	Power cable adapter**

* Select proper size part from the set-up chart below.

**Not for use with 40V84R-3.

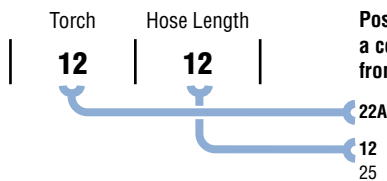
Item No.	Electrode Diameter	.040"	1/16"	3/32"	1/8"	5/32"	3/16"	1/4"
		(1.0mm)	(1.6mm)	(2.4mm)	(3.2mm)	(4.0mm)	(4.8mm)	(6.4mm)
	Nozzle Size	#5 (5/16")	#6 (3/8")	#7 (7/16")	#8 (1/2")	#10 (5/8")	#12 (3/4")	#15 (15/16")
7	Collet	57N45	57N46	57N47	57N48	57N49	57N50	57N51
8	Gas lens collet body	49V22	49V23	49V24	49V25	49V26	49V27	49V28
11	Alumina gas lens nozzle		57N75		57N74	53N88	53N87	53N89 (short)
	Alumina gas lens long nozzle		57N75L		57N74L	53N88L	53N87L	
	Alumina gas lens x-long nozzle		57N75XL		57N74XL	53N88XL	53N87XL	

TIG Torch Parts

500 AMP Water Cooled 12 Series TIG Torch

Electrode Range: 1/16" - 1/4" (1.6mm - 6.4mm)
Head Angle: 60°

Torch Package Part Number



Possible options for selecting a complete torch configuration from this page.

- 22A 500 AMP torch
- 12 12.5' Rubber power cable and hoses
- 25 25' Rubber power cable and hoses



Item	Part No.	Description
1	0012	Torch body
2	56Y44	Back cap, long
3	56Y45	Back cap, short
4	40V82R	Gas hose 12.5' rubber
	40V82RL	Gas hose 25' rubber
5	40V83R	Water hose 12.5' rubber
	40V83RL	Water hose 25' rubber

Item	Part No.	Description
6	40V84R	Power cable 12.5' rubber
	40V84RL	Power cable 25' rubber
7	85WP13	Handle
8	12NG	Gasket/insulator
9	set-up*	Collet
10	set-up*	Collet body
11	set-up*	Nozzles

Item	Part No.	Description
12	12GLC	Gasket/insulator
13	set-up*	Gas lens collet body
14	set-up*	Nozzles
15	WC-4-10	Cable cover 4" x 10'
	WC-4-22	Cable cover 4" x 22'
16	45V11	Power cable adapter

* Select proper size part from the set-up chart below.

WARNING: #12 set-up is outside the optimal operational capacity for a torch of this amperage.

Item No.	Electrode Diameter	1/16" (1.6mm)	3/32" (2.4mm)	1/8" (3.2mm)	5/32" (4.0mm)	3/16" (4.0mm)	1/4" (4.0mm)	
		Nozzle Size	#4 (1/4")	#5 (5/16")	#6 (3/8")	#7 (7/16")	#8 (1/2")	#10 (5/8")
9	Collet	85Z14	85Z15	85Z16	85Z17	85Z18	85Z19	
10	Collet body	11WP65	11WP65	11WP65	11WP65	11WP65	11WP65	
11	Alumina nozzle standard	14N57	14N58	14N59	14N60	14N61	14N61-10	
13	Gas lens collet body	11GL16	11GL32	11GL18	11GL53	11GL36		
14	Alumina gas lens nozzle			57N75		57N74	53N88	53N87
	Alumina gas lens nozzle long			57N75L		57N74L	53N88L	53N87L
	Alumina gas lens nozzle X-long			57N75XL		57N74XL	53N88XL	53N87XL

Alumina Nozzles



Standard Nozzles

Torch Series: 17, 18, 26

Part No.	Description	Orifice	Length
10N44	#12	3/4"	1-7/8"
10N45	#10	5/8"	
10N46	#8	1/2"	
10N47	#7	7/16"	1-7/8"
10N47L	Long alumina nozzle		3"
10N48	#6	3/8"	1-7/8"
10N48L	Long alumina nozzle		3"
10N49	#5	5/16"	1-7/8"
10N49L	Long alumina nozzle		3"
10N50	#4	1/4"	1-7/8"

Torch Series: 9, 20, 22, 25, (Stubby: 17, 18, 26)

Part No.	Description	Orifice	Length
13N08	#4	1/4"	1-3/16"
13N09	#5	5/16"	
13N10	#6	3/8"	
13N11	#7	7/16"	
13N12	#8	1/2"	
13N13	#10	5/8"	
	Alumina nozzle		

Torch Series: 12

Part No.	Description	Orifice	Length
14N57	#4	1/4"	1-1/4"
14N58	#5	5/16"	
14N59	#6	3/8"	
14N60	#7	7/16"	
14N61	#8	1/2"	
14N61-10	#10	5/8"	
14N61-12	#12	3/4"	
	Alumina nozzle		

Torch Series: 24, 24W

Part No.	Description	Orifice	Length
A53N23	.165	.165	5/8"
A53N24	#4	1/4"	
A53N25	#5	5/16"	
A53N27	#6	3/8"	
	Alumina nozzle		

Long Standard Nozzles

Torch Series: 9, 20, 22, 25

Part No.	Description	Orifice	Length
A796F70	#3 Alumina nozzle	3/16"	1-15/16"
A796F71	#4	1/4"	1-15/16"
A796F72	#5 Long alumina nozzle	5/16"	
A796F73	#6	3/8"	
A796F74	#3	3/16"	2-1/2"
A796F75	#4 X-long alumina nozzle	1/4"	
A796F76	#5	5/16"	
A796F77	#6	3/8"	

Gas Lens Nozzles

Torch Series: 9, 20, 22, 24, 25

Part No.	Description	Orifice	Length
53N58	#4	1/4"	1"
53N59	#5	5/16"	
53N60	#6 Alumina nozzle	3/8"	
53N61	#7	7/16"	
53N61S	#8	1/2"	
	Alumina nozzle		

Torch Series: 17, 18, 26

Part No.	Description	Orifice	Length
54N14	#8 Alumina nozzle	1/2"	1-5/8"
54N14L	Long alumina nozzle		3"
54N15	#7 Alumina nozzle	7/16"	1-5/8"
54N15L	Long alumina nozzle		3"
54N16	#6 Alumina nozzle	3/8"	1-5/8"
54N16L	Long alumina nozzle		3"
54N17	#5 Alumina nozzle	5/16"	1-5/8"
54N17L	Long alumina nozzle		3"
54N18	#4 Alumina nozzle	1/4"	1-5/8"
54N19	.700 Short alumina nozzle	.700"	1-1/8"

Large Diameter Gas Lens Nozzles

Torch Series: 9, 17, 18, 20, 22, 25, 26, 27

Part No.	Description	Orifice	Length
53N87	#12 Alumina nozzle	3/4"	1-7/8"
53N87L	Long alumina nozzle		2-3/4"
53N87XL	X-long alumina nozzle		3-1/4"
53N88	#10 Alumina nozzle	5/8"	1-7/8"
53N88L	Long alumina nozzle		2-3/4"
53N88XL	X-long alumina nozzle		3-1/4"
53N89	#15 Short alumina nozzle	15/16"	1-3/8"
57N74	#8 Alumina nozzle	1/2"	1-7/8"
57N74L	Long alumina nozzle		2-3/4"
57N74XL	X-long alumina nozzle		3-1/4"
57N75	#6 Alumina nozzle	3/8"	1-7/8"
57N75L	Long alumina nozzle		2-3/4"
57N75XL	X-long alumina nozzle		3-1/4"

TIG Torch Parts

Lava Nozzles



Standard Nozzles

Torch Series: 17, 18, 26

Part No.	Description	Orifice	Length
105Z42	#5	3/4"	1-7/8"
105Z43	#4	5/8"	
105Z44	#6	1/2"	
105Z45	#7	7/16"	
08N78	#8	1/2"	
08N79	#10	5/8"	
08N80	#12	3/4"	
105Z60	#5	5/16"	
105Z61	#7	7/16"	
12N02	#6	3/8"	
12N03	#4	1/4"	

Torch Series: 9, 20, 22, 25, (Stubby: 17, 18, 26)

Part No.	Description	Orifice	Length
13N14	#4	1/4"	1-1/8"
13N15	#5	5/16"	
13N16	#6	3/8"	
13N17	#7	7/16"	
13N18	#8	1/2"	
13N19	#10	5/8"	

Torch Series: 24, 24W

Part No.	Description	Orifice	Length
53N23	.165	.165	5/8"
53N24	#4	1/4"	
53N25	#5	5/16"	
53N26	#6	Long lava nozzle	1-1/8"
53N27	#6	Lava nozzle	5/8"
53N28	#4	Long lava nozzle	1-1/8"

Long Standard Nozzles

Torch Series: 9, 20, 22, 25, (Stubby: 17, 18, 26)

Part No.	Description	Orifice	Length
796F70	#3	3/16"	1-7/8"
796F71	#4	1/4"	
796F72	#5	5/16"	
796F73	#6	3/8"	
796F74	#3	3/16"	2-5/8"
796F75	#4	1/4"	
796F76	#5	5/16"	
796F77	#6	3/8"	3-1/2"
796F79	#4	1/4"	
796F80	#5	3/8"	

Gas Lens Nozzles

Torch Series: 17, 18, 26

Part No.	Description	Orifice	Length
54N31	#8	1/2"	1-11/16"
54N32	#7	7/16"	
54N33	#6	3/8"	
54N34	#5	5/16"	
54N35	#4	1/4"	
54N36	#11	11/16"	1-1/8"

Back Caps

Torch Series: 9, 10



Part No.	Description	Length
41V24	Long back cap	5-3/4"
41V33	Short back cap	5/8"
41V35	Medium back cap	1-7/8"
98W77	O-ring	

Torch Series: 17, 18, 20



Part No.	Description	Length
57Y02	Long back cap	4-3/4"
57Y04	Short back cap	1"
300M	Medium back cap	2-1/4"
98W18	O-ring	

Torch Series: 12



Part No.	Description	Length
56Y44	Long back cap	4-1/2"
56Y45	Short back cap	1-3/16"

Collets



10N Collets

Torch Series: 17, 18, 26

Part No.	Description	Size	
		Inches	mm
10N21	Collet	.020	0.5
10N21S	Stubby collet		
10N22	Collet	.040	1.0
10N22S	Stubby collet		
10N23	Collet	1/16	1.6
10N23S	Stubby collet		
10N24	Collet	3/32	2.4
10N24S	Stubby collet		
10N25	Collet	1/8	3.2
10N25S	Stubby collet		
54N20	Collet	5/32	4.0
54N20S	Stubby collet		

13N Collets

Torch Series: 9, 20, 25

Part No.	Description	Size	
		Inches	mm
13N20	Collet	.020	0.5
13N20L	Lg. dia. gas lens collet		
13N21	Collet	.040	1.0
13N21L	Lg. dia. gas lens collet		
13N22	Collet	1/16	1.6
13N22L	Lg. dia. gas lens collet		
13N23	Collet	3/32	2.4
13N23L	Lg. dia. gas lens collet		
13N24	Collet	1/8	3.2
13N24L	Lg. dia. gas lens collet		

22N Collets

Torch Series: 22A, 22B

Part No.	Description	Size	
		Inches	mm
22N22A	Collet	1/16	1.6
22N22AL	Lg. dia. gas lens collet		
22N22B	Collet	1/16	1.6
22N22BL	Lg. dia. gas lens collet		
22N23A	Collet	3/32	2.4
22N23AL	Lg. dia. gas lens collet		
22N23B	Collet	3/32	2.4
22N23BL	Lg. dia. gas lens collet		
22N24A	Collet	1/8	3.2
22N24AL	Lg. dia. gas lens collet		
22N24B	Collet	1/8	3.2
22N24BL	Lg. dia. gas lens collet		

57N Collets

Torch Series: 27A, 27B

Part No.	Description	Size	
		Inches	mm
57N45	Collet	.040	1.0
57N46		1/16	1.6
57N47		3/32	2.4
57N48		1/8	3.2
57N49		5/32	4.0
57N50		3/16	4.8
57N51		1/4	6.4

53N Collets

Torch Series: 24, 24W

Part No.	Description	Size	
		Inches	mm
24C332	Collet	3/32	2.4
24GLC332	Gas lens collet		
53N14	Collet	1/16	1.6
53N15		.020	0.5
53N16		.040	1.0
53N62		.020	0.5
53N63	Gas lens collet	.040	1.0
53N64		1/16	1.6

85Z Collets

Torch Series: 12

Part No.	Description	Size	
		Inches	mm
85Z14	Collet	1/16	1.6
85Z15		3/32	2.4
85Z16		1/8	3.2
85Z17		5/32	4.0
85Z18		3/16	4.8
85Z19		1/4	6.4

Collet Bodies



13N Collet Bodies

Torch Series: 9, 20, 22, 25

Part No.	Description	Size	
		Inches	mm
13N25	Collet body	.020	0.5
13N26		.040	1.0
13N27		1/16	1.6
13N28		3/32	2.4
13N29		1/8	3.2

53N Collet Bodies

Torch Series: 24, 24W

Part No.	Description	Size	
		Inches	mm
53N17	Collet body	.020	0.5
53N18		.040	1.0
53N19		1/16	1.6
24CB332		3/32	2.4

10N Collet Bodies

Torch Series: 17, 18, 26

Part No.	Description	Size	
		Inches	mm
10N28	Collet body	1/8	3.2
10N29		.020	0.5
10N30		.040	1.0
10N31		1/16	1.6
10N32		3/32	2.4
406488		5/32	4.0

Special Collet Bodies

Part No.	Description	Size	
		Inches	mm
Torch Series: 17, 18, 26			
17CB20	Stubby collet body	All	All
Torch Series: 12			
24CB332	Collet body	All	All

TIG Torch Parts

Gas Lens Collet Bodies



Gas Lens Collet Bodies

Torch Series: 17, 18, 26

Part No.	Description	Size	
		Inches	mm
45V24	Gas lens collet body	.040	1.0
45V25		1/16	1.6
45V26		3/32	2.4
45V27		1/8	3.2
45V28		5/32	4.0
45V29		.020	0.5

Torch Series: 27A, 27B

Part No.	Description	Size	
		Inches	mm
49V22	Gas lens collet body	.040	1.0
49V23		1/16	1.6
49V24		3/32	2.4
49V25		1/8	3.2
49V26		5/32	4.0
49V27		3/16	4.8
49V28		1/4	6.4

Torch Series: 9, 20, 22, 25

Part No.	Description	Size	
		Inches	mm
45V41	Gas lens collet body	.020	0.5
45V42		.040	1.0
45V43		1/16	1.6
45V44		3/32	2.4
45V45		1/8	3.2

Large Diameter Gas Lens Collet Bodies

Torch Series: 17, 18, 26

Part No.	Description	Size	
		Inches	mm
45V0204	Large diameter gas lens collet body	.020 - .040	0.5 - 1.0
45V116		1/16	1.6
45V63		5/32	4.0
45V64		3/32	2.4
995795		1/8	3.2

Torch Series: 12

Part No.	Description	Size	
		Inches	mm
11GL16	Gas lens collet body	1/16	1.6
11GL18		1/8	3.2
11GL32		3/32	2.4
11GL53		5/32	4.0
11GL36		3/16	4.8

Torch Series: 9, 20, 22, 25

Part No.	Description	Size	
		Inches	mm
45V0204S	Large diameter gas lens collet body	.020 - .040	0.5 - 1.0
45V116S		1/16	1.6
45V64S		3/32	2.4
995795S		1/8	3.2

Power Cable Adapters

Torch Series: 9, 17

- Threads: 3/8" - 24RH, 5/8" - 18RH
- Part No. 105Z57



Torch Series: 26

- Threads: 7/8" - 14RH, 5/8" - 18RH
- Part No. 45V62



Torch Series: 12, 18, 20, 22A, 22B, 24W, 25, 27

- Threads: 7/8" - 14LH, 5/8" - 18LH
- Part No. 45V11



Torch Series: 24

- Threads: 3/8" - 24RH, 5/8" - 18RH
- Part No. 53N43



TIG Torch Parts

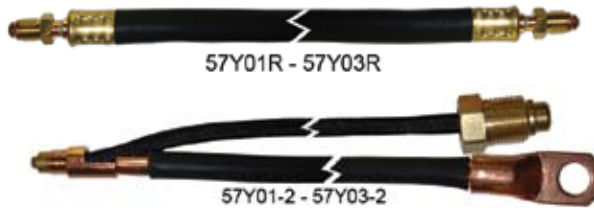
Handles



Torch	Part No.	Description
18P	18PB	Barrel handle
18, 26	H-200	Smooth push-on
	H-200R	Ribbed push-on
HP 18, HP 26	10N15	Smooth threaded
	10N15R	Ribbed threaded
9, 17, 20M, 20F, 24	H-100	Smooth push-on
	H-100R	Ribbed push-on
20, HP9, HP20	53N06	Smooth threaded
HP17, HP24	105Z55	Smooth threaded
	105Z55R	Ribbed threaded
12	85WP13	Smooth handle

Power Cables, Air Cooled

Torch Series: 9, 17



Part No.	Description	Length
57Y01R	1-Piece, Rubber power cable	12.5'
57Y03R		25'
57Y01-2	2-Piece, 4 ga. welding cable w/braided rubber gas hose	12.5'
57Y03-2		25'

Torch Series: 26



Part No.	Description	Length
46V28R	1-Piece, Rubber power cable	12.5'
46V30R		25'
46V28RS	Rubber; for use with DI-26F	12.5'
46V30RS		25'
46V28-2	2-Piece, 2 ga. welding cable w/braided rubber gas hose	12.5'
46V30-2		25'

Torch Series: 24



Part No.	Description	Length
56Y38R	1-Piece, Rubber power cable	12.5'
56Y97R		25'

Ground Clamp Cables



Part No. GCD-15



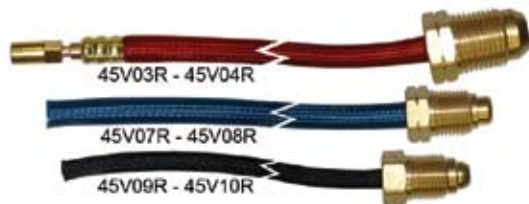
Part No. GCS-15

Part No.	Description	Length
GCD-15	Ground cable for machines with D-plugs	15'
GCS-15	Ground cable for machines with stud terminal	

TIG Torch Parts

Power Cables, Water And Gas Hoses

Torch Series: 20, 22, 24W, 25



Power Cables

Part No.	Description	Length
45V03	Vinyl	12.5'
45V04		25'
45V03R	Braided rubber	12.5'
45V04R		25'
45V04R-50		50'

Water Hoses

Part No.	Description	Length
45V07	Vinyl	12.5'
45V08		25'
45V07R	Braided rubber	12.5'
45V08R		25'
45V08R-50		50'

Gas Hoses

Part No.	Description	Length
45V09	Vinyl	12.5'
45V10		25'
45V09R	Braided rubber	12.5'
45V10R		25'
45V10R-50		50'

For Torches 20M, 20F with Mechanical Fittings		
45V07M	Vinyl	12.5'
45V08M		25'
45V07RM	Braided rubber	12.5'
45V08RM		25'

Torch Series: 18



Power Cables

Part No.	Description	Length
40V64	Vinyl	12.5'
41V29		25'
40V64R	Rubber	12.5'
41V29R		25'
41V29R-50		50'
40V64P	Rubber (18P torch)	12.5'
41V29P		25'

Water Hoses

Part No.	Description	Length
40V74	Vinyl	12.5'
41V32		25'
40V74R	Braided rubber	12.5'
41V32R		25'
41V32R-50		50'

Gas Hoses

Part No.	Description	Length
40V75	Vinyl	12.5'
41V30		25'
40V75R	Braided rubber	12.5'
41V30R		25'
41V30R-50		50'

Torch Series: 12, 27



Power Cables

Part No.	Description	Length
40V84R-3	Rubber	3'
40V84R		12.5'
40V84RL		25'

Water Hoses

Part No.	Description	Length
40V83R-3	Rubber	3'
40V83R		12.5'
41V83RL		25'

Gas Hoses

Part No.	Description	Length
40V82R-3	Rubber	3'
40V82R		12.5'
40V82RL		25'

Accessory Kits

Modular Torch Kits Model M-150-R TIG Torches



Torch Kit Includes:

- (1) 150 AMP air cooled torch package, 25', 1-pc. cable
- (5) Modular torch heads
- (2) Torch bodies with and without valve
- (2) Elements: flex coil and solid
- (1) Consumables kit with collets, collet bodies, nozzles and back caps to fit all heads and tungsten sizes .040", 1/16" & 3/32".
- (1) Tungsten kit with (3) pure and (3) 1.5% Lanthanated tungsten sizes .040", 1/16" & 3/32" each.
- (1) Reusable aluminum attaché case

Accessory Kit: AK-150

Part No. M-150-R

Model M-200-R TIG Torches



Torch Kit Includes:

- (1) 200 AMP air cooled torch package, 25', 1-pc. cable
- (5) Modular torch heads
- (2) Torch bodies with and without valve
- (2) Elements: flex coil and solid
- (1) Consumables kit with collets, collet bodies, nozzles and back caps to fit all heads and tungsten sizes 1/16", 3/32" and 1/8".
- (1) Tungsten kit with (3) pure and (3) 1.5% Lanthanated tungsten sizes 1/16", 3/32" and 1/8" each.
- (1) Reusable aluminum attaché case

Accessory Kit: AK-200

Part No. M-200-R

Model M-225-R TIG Torches



Torch Kit Includes:

- (1) 225 AMP air cooled torch package, 25', 1-pc. cable
- (5) Modular torch heads
- (1) Consumables kit with collets, collet bodies, nozzles and back caps to fit all heads and tungsten sizes 1/16", 3/32" and 1/8".
- (1) Tungsten kit with (3) pure and (3) 1.5% Lanthanated tungsten sizes 1/16", 3/32" and 1/8" each.
- (1) Reusable aluminum attaché case

Accessory Kit: AK-225

Part No. M-225-R

Accessory Kits

Accessory Kits

Torch Series: 9 (standard), 20 (optional)



Part No.	Qty.	Description	Sizes
AK-1	1	Back cap	Long
	2	Collets	.040", 1/16"
	2	Collet bodies	.040", 1/16"
	3	Alumina nozzles	#4, 5, 6
	2	Tungsten 7"	.040", 1/16"

Torch Series: 17 (standard), 18, 26 (optional)



Part No.	Qty.	Description	Sizes
AK-2	1	Back cap	Short
	3	Collets	.040", 1/16", 3/32"
	3	Collet bodies	.040", 1/16", 3/32"
	3	Alumina nozzles	#4, 5, 6
	3	Tungsten 7"	.040", 1/16", 3/32"

Torch Series: 8, 26



Part No.	Qty	Description	Sizes
AK-3	1	Back cap	Short
	3	Collets	1/16", 3/32", 1/8"
	3	Collet bodies	1/16", 3/32", 1/8"
	3	Alumina nozzles	#5, 6, 8
	3	Tungsten 7"	1/16", 3/32", 1/8"

Torch Series: 20 (standard), 9 (optional)



Part No.	Qty	Description	Sizes
AK-4	1	Back cap	Long
	3	Collets	1/16", 3/32", 1/8"
	3	Collet bodies	1/16", 3/32", 1/8"
	3	Alumina nozzles	#5, 6, 7
	3	Tungsten 7"	1/16", 3/32", 1/8"

Torch Series: 24, 24W



Part No.	Qty	Description	Sizes
AK-5	2	Collets	.040", 1/16"
	2	Collet bodies	.040", 1/16"
	3	Lava nozzles	#4, 5, 6
	2	Tungsten 7"	.040", 1/16"

Master Accessory Kits

Torch Series: 9, 20



Part No.	Qty	Description	Sizes
MAK-1S	4	Back caps	(1) Short, (2) Medium (1) Long
	12	Collets	(2).040", (4)1/16", (4)3/32", (2)1/8"
	7	Collet bodies	(1).040", (2)1/16", (2)3/32", (2)1/8"
	4	Gas lenses	.040", 1/16", 3/32", 1/8"
	1	Cup gasket	
	4	O-ring for back caps	
	10	Wire clamps	

Torch Series: 17, 18, 26



Part No.	Qty.	Description	Sizes
MAK-2S	2	Back caps	(1) Short, (1) Long
	10	Collets	(1).040", (3)1/16", (3)3/32", (2)1/8", (1)5/32"
	8	Collet bodies	(1).040", (2)1/16", (2)3/32", (2)1/8", (1)5/32"
	4	Gas lenses	.040", 1/16", 3/32", 1/8"
	2	Cup gaskets	
	4	O-ring for back caps	

Accessory Kits

Extension Kits

Torch Series: 18, 20, 20F, 24W, 25
Water-Cooled, Vinyl



Part No.	Qty	Description
EK-1-25	1	40V78L - 25' Extension power cable
	1	40V76L - 25' Water hose
	1	40V77L - 25' Gas hose
	1	11N19 - Power cable coupler
	1	11N18 - Water hose coupler
	1	11N17 - Gas hose coupler
	1	11N19IS - Insulator sleeve

Water-Cooled, Rubber



Part No.	Qty	Description
EK-1-25-R	1	40V78L - 25' Ext. power cable
	1	40V76L - 25' Water hose
	1	40V77L - 25' Gas hose
	1	11N19 - Power cable coupler
	1	11N18 - Water hose coupler
	1	11N17 - Gas hose coupler
	1	11N19IS - Insulator sleeve

Torch Series: 26
Air-Cooled, Rubber



Part No.	Qty	Description
EK-26-25-R	1	46V30EK-R - 25' Extension power cable
	1	11N20 - Power cable coupler
	1	11N19IS - Insulator sleeve

Torch Series: 9, 17
Air-Cooled, Rubber



Part No.	Qty	Description
EK-2-25-R	1	57Y03R - 25' Extension power cable
	1	430A - Power cable coupler
	1	430AIS - Insulator sleeve

Hook-up Kits

Torch Series: 18, 20, 20F, 24W, 25
Water-Cooled, Vinyl



Part No.	Qty	Description
HK-1	1	45V11 - power cable adapter
	2	40V76 - 12.5' Water hoses
	2	AW-15 - Water adapters
	1	40V77 - 12.5' Gas hoses

Torch Series: 9, 17, 24, 26
Air-Cooled, Vinyl



Part No.	Qty	Description
HK-2	1	40V77 - 12.5' Gas hose
	1	11N17 - Argon coupler extension



Part No.	Qty	Description
HK-3	1	40V77 - 12.5' Gas hose
	1	18" Gas hose (solenoid to P/C)

Note: The correct power cable adapter must be ordered.

Connectors

International D-plug Connectors

Torch Series: 9, 17

- Size: 9.0mm / .355"
- Set screw fitting for connection to welding cable.
- Connection to power cables: 57Y01-2, 57Y03-2.

Part No. DP-25M

- Size: 9.0mm / .355"
- Includes an 18" gas auxiliary hose with 5/8"-18RH nut, 3/8"-24RH power cable connection.
- Connection to power cables: 57Y01-2, 57Y03-2.

Part No. DA-917FS

- Size: 12.9mm / .508"
- Includes an in-line gas hole for use with machines equipped with gas solenoids, 3/8"-24RH power cable connection.
- Connection to power cables: 57Y01-2, 57Y03-2.

Part No. DI-917F

- Size: 12.9mm / .508"
- Includes an 18" gas auxiliary hose with 5/8"-18RH nut, 3/8"-24RH power cable connection.
- Connection to power cables: 57Y01R, 57Y03R.

Part No. DA-917F



Torch Series: 9, 17, 26

- Size: 12.9mm / .508"
- Set screw fitting for connection to welding cable.
- Connection to power cables: 57Y01-2, 57Y03-2, 46V28-2, 46V30-2.

Part No. DP-50M



Torch Series: 26

- Size: 12.9mm / .508"
- Includes an in-line gas hole for use with machines equipped with gas solenoids, 5/8"-18RH power cable connection (special power cable required).
- Connection to power cables: 46V28RS, 46V30RS.

Part No. DI-26F

- Size: 12.9mm / .508"
- Includes an 18" gas auxiliary hose with 5/8"-18RH nut, 7/8"-14RH power cable connection.
- Connection to power cables: 46V28R, 46V30R.

Part No. DA-26R



Torch Series: 24

- Size: 12.9mm / .508"
- Includes an in-line gas hole for use with machines equipped with gas solenoids, 3/8"-24RH power cable connection.
- Connection to power cables: 56Y38R, 56Y97R.

Part No. DI-24F



Torch Series: 18, 20, 22A, 22B, 24W, 25, 27

- Size: 12.9mm / .508"
- Includes an 18" water auxiliary hose with 5/8"-18LH nut, 7/8"-14LH power cable connection.
- Connection to power cables: 40V64, 40V64R, 41V29, 41V29R, 45V03, 45V03R, 45V04, 45V04R

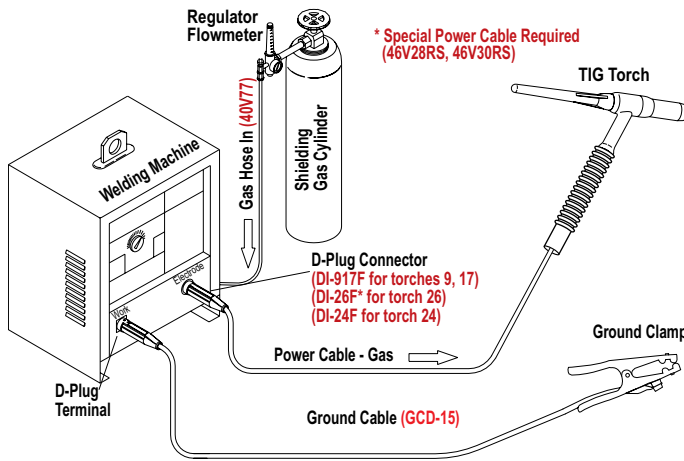
Part No. DA-1820L



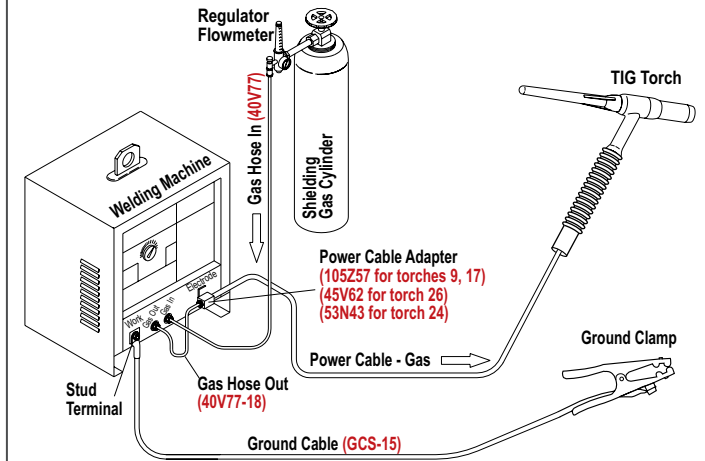
TIG Torch Welding Machines

Air-Cooled, 1-Piece Power Cable

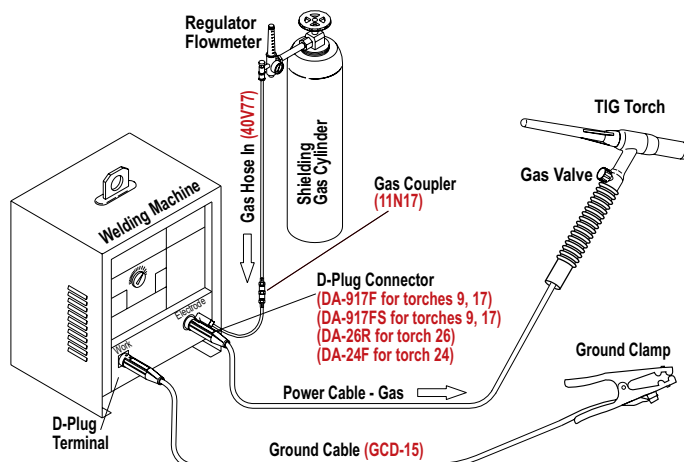
- D-plug connection
- Gas solenoid
- No valve



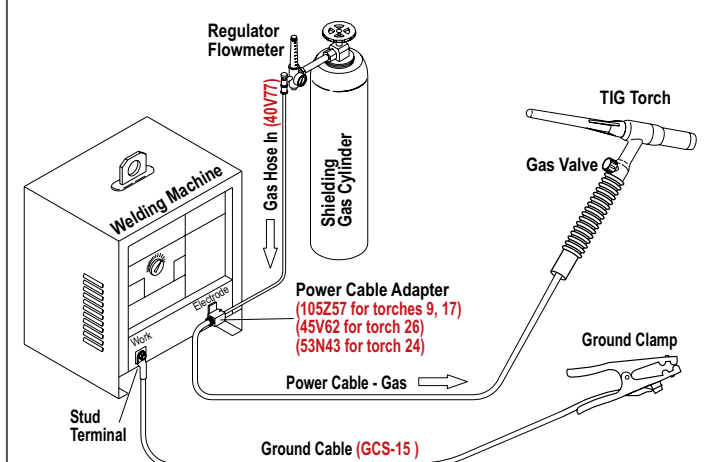
- Stud connection
- Gas solenoid
- No valve



- D-plug connection
- No gas solenoid
- With valve



- Stud connection
- No gas solenoid
- With valve

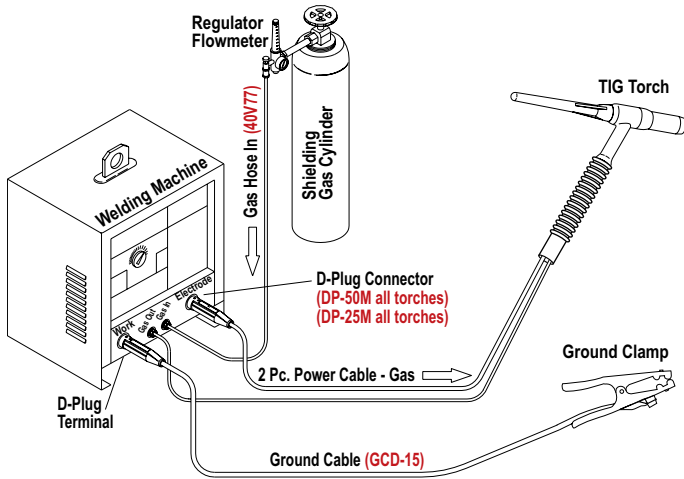


Hook-up Installation Diagrams

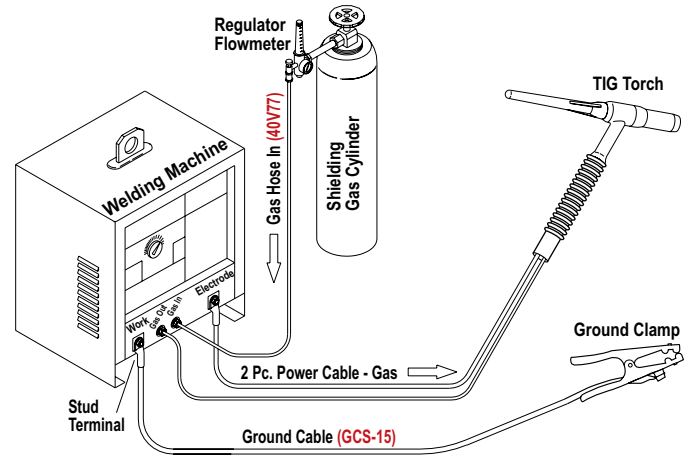
TIG Torch Welding Machines

Air-Cooled, 2-Piece Power Cable

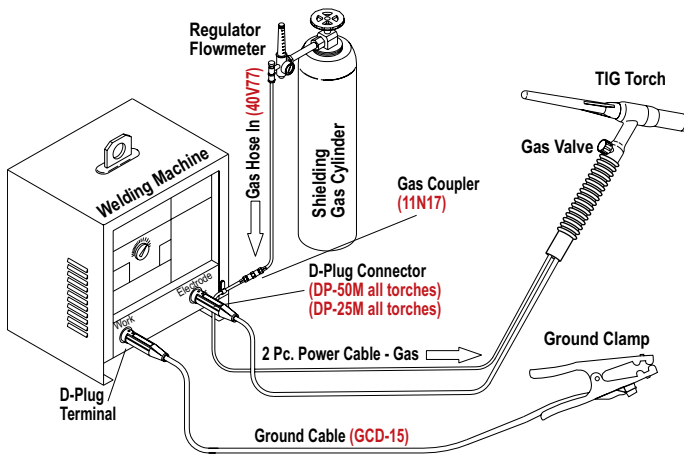
- D-plug connection
- Gas solenoid
- No valve



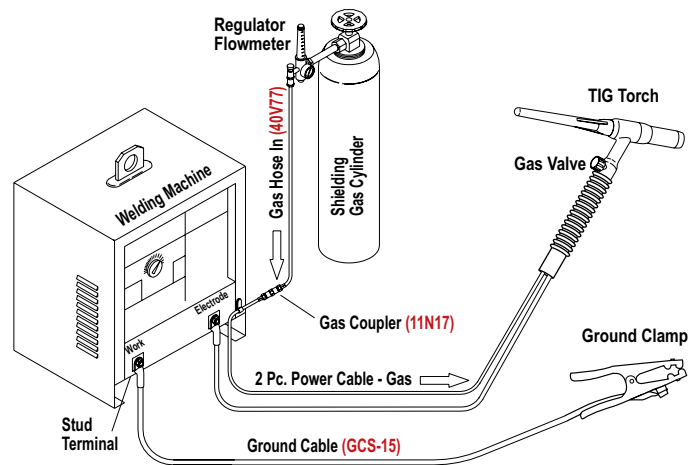
- Stud connection
- Gas solenoid
- No valve



- D-plug connection
- No gas solenoid
- With valve



- Stud connection
- No gas solenoid
- With valve

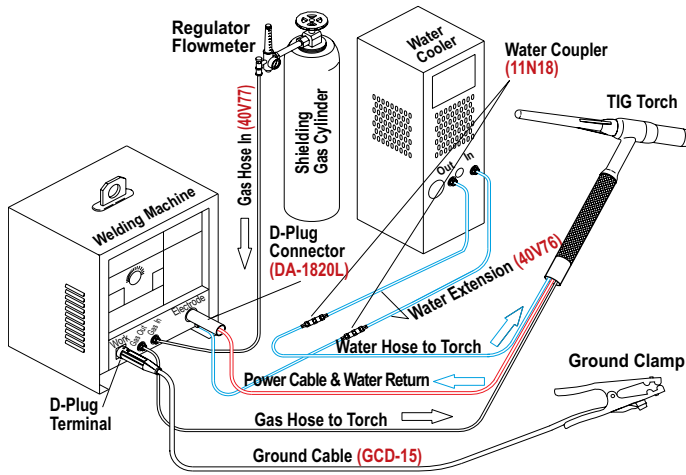


Hook-up Installation Diagrams

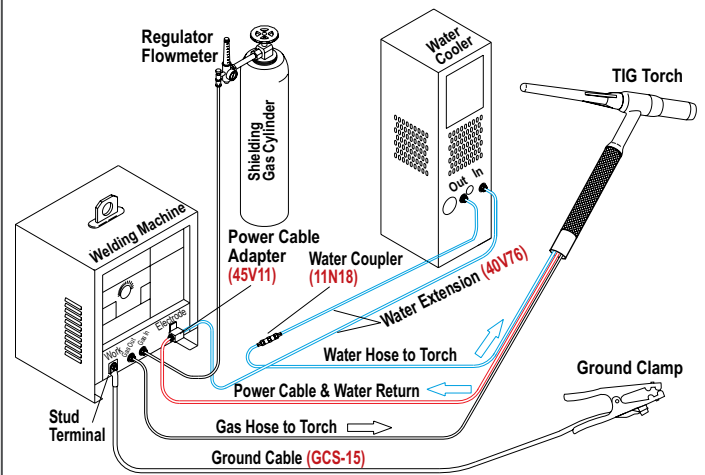
TIG Torch Welding Machines

Water-Cooled Power Cable

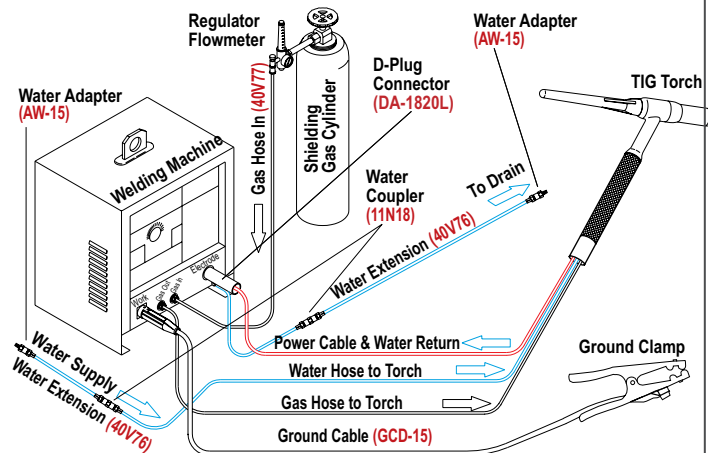
- Water cooler
- D-plug connection
- No gas solenoid



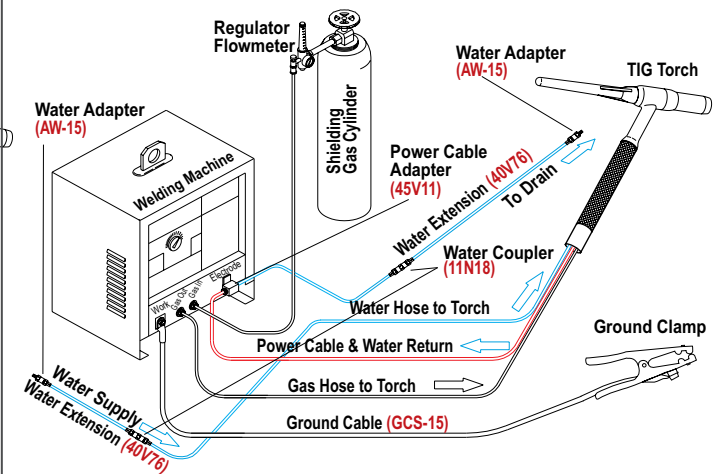
- Water cooler
- Stud connection
- No gas solenoid



- City water supply
- D-plug connection
- Gas solenoid



- City water supply
- Stud connection
- Gas solenoid



MIG Welding - General Information

Welding Benefits

- Easiest to learn.
- Better control on thin metals.
- Out-of-position welding.
- Same power source for solid and flux cored (gasless) wire.

Welding Guns

Guns come rated for use with CO₂-shielding gas at 60% duty cycle. Welding under 200 AMP, match the gun rating to the power supply rating. For argon shielding gas mixtures, welding at 200-350 AMPs and less than 60% duty cycle, select a 400 AMP air-cooled gun. At 200 AMP and higher at duty cycles over 60%, use water-cooled gun. Up to 350 AMP at duty cycles less than 60%, use a 600 AMP gun, air-cooled.¹

Shielding Gases

Gases that protect the weld puddle from the atmosphere include carbon dioxide, argon, and helium, used singly and in mixtures that may also include oxygen. Used for short-circuiting transfer to 200 AMP, carbon dioxide (CO₂) gives a stable arc and reduce spatter. Argon shielding of nonferrous metals and alloys give a stable arc, good penetration, and smooth beads. Adding oxygen to argon increases arc stability, and smooths wetting and weld-face contour. Mixtures of more than two gases satisfy critical applications, such as welding of high-strength steel out-of-position and of stainless steels.²

Safety Practice

Eye damage and skin burns are the most common injuries resulting from gas-metal-arc welding. Hazards include fume and gaseous emissions and electrical shock.²



Welding Wire Thickness Chart³

Material Thickness	Recommended Wire Sizes						
	MIG Solid Wire				Gasless Flux-Cored Wire		
	.024"	.030"	.035"	.045"	.030"	.035"	.045"
24 gauge (.025)	•						
22 gauge (.031)	•				•		
20 gauge (.037)	•	•			•	•	
18 gauge (.050)	•	•	•		•	•	
16 gauge (.063)		•	•		•	•	•
14 gauge (.078)		•	•	•	•	•	•
1/8" (.125)		•	•	•		•	•
3/16" (.188)			•	•		•	•
1/4" (.25)			•	•			•
5/16" (.313)			•	•			•
3/8" (.375)			•	•			•
1/2" (.5)			•	•			•

• recommended wire sizes shown by gray box with dot

Good Safety for Safe Welding!

- Arc rays can burn eyes and skin.
- Breathing welding fumes can be hazardous to your health. Use proper air ventilation or local exhaust.
- Use a welding helmet with the correct shade of filter.
- Wear safety glasses with side shields and welder's cap.
- Use ear protection when welding out-of-position or in a confined space.
- Use a button-down shirt collar.
- Wear complete body protection: oil-free protective clothing such as heavy shirt, leather gloves, pants without cuffs, and high boots.

¹ Welding & Fabricating Data Book. American Welding Society, 1996.

² Miller - Improving Your Skills - MIG Welding". <http://millerwelds.com/resources/improving-your-skills/mig/>.

³ Miller - MIG Welding Tips - Intro". http://millerwelds.com/education/tech_tips/MIG_tips/.

135 AMP MIG Gun



Available Best Welds 135 MIG Guns

Part No.	Connector/Style	Wire Size	Length
		Inches	Feet
T135-10-3035	Tweco®/MIG	.030-.035	10
M135-10-3035	Miller®/MIG	.030-.035	10
FC135-10-3545	Tweco®/flux core	.035-.045	10

Diffusers, Contact Tips and Nozzles MIG Gun Set-up



Flux Core Set-up



Item	Part No.	Description	Tip Size	
			Inches	mm
1	35-50	Diffuser		
2	11-23	Contact tip, standard	.023	0.6
	11-30		.030	0.8
	11-35		.035	0.9
	11-45		.045	1.2
2a	11T-23	Contact tip, tapered	.023	0.6
	11T-30		.030	0.8
	11T-35		.035	0.9
3	21-37	Nozzle, self-insulated 1/8" recess 3/8"		
	21-50	Nozzle, self-insulated 1/8" recess 1/2"		
	21-50F	Nozzle, self-insulated flush		
	21-62	Nozzle, self-insulated 1/8" recess 5/8"		
	21T-37	Nozzle, self-insulated tapered		
4	KP1939-1	Nozzle, gasless (flux core)		

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MIG Gun Parts

135 AMP MIG Gun



Item	Part No.	Description
1	35-50	Diffuser
2	see previous page	Contact tip
3		Nozzle (MIG)
4	KP1939-1	Nozzle, gasless (flux core)
5	13SR	Strain relief
6	25HR	Handle locking ring
7	13HD	Handle 2 pcs w/screws
8	25GH	Gun hanger
9	13BK	Tube block
10	13CT	Conductor tube

Item	Part No.	Description
11	25TB	Trigger blade
12	25TR	Comfort grip trigger
13	13TC	Connector (Tweco®)
14	13MC	Connector (Miller®)
15	13PC	Power cable assembly
16	35-40-15	Wire conduit (MIG)
	45-40-15	Wire conduit (flux cored)
17	13TA	Trigger connector (Tweco®)
18	25MA	Trigger connector (Miller®)

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**250 AMP
MIG Gun**



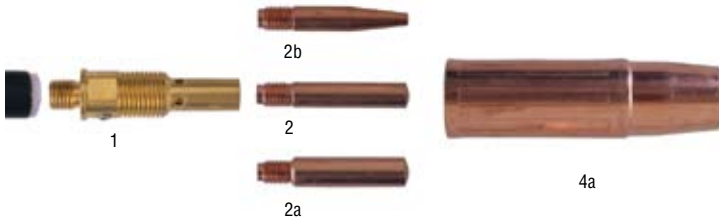
Available Best Welds 250 MIG Guns

Part No.	Connector	Wire Size	Length
		Inches	Feet
T250-15-3035	Tweco®	.030-.035	15
T250-15-4045		.040-.045	
M250-12-3035	Miller®	.030-.035	12
M250-15-3035		.030-.035	15
M250-15-4045		.040-.045	15
L250-15-3035	Lincoln®	.030-.035	15
L250-15-4045		.040-.045	

**Diffusers, Contact Tips and Nozzles
Standard MIG Gun Set-up**



Optional MIG Gun Set-up



Item	Part No.	Description	Tip Size	
			Inches	mm
1	0052	Diffuser		
1a	52FN			
2	14-23	Contact tip, standard	.023	0.6
	14-30		.030	0.8
	14-35		.035	0.9
	14-45		.045	1.2
	14-52		.052	1.3
	14-116		1/16	1.6
	14-564		5/64	2.0
2a	14H-35	Contact tip, heavy duty	.035	0.9
	14H-45		.045	1.2
	14H-52		.052	1.3
	14H-116		1/16	1.6
	14H-564		5/64	2.0
2b	14T-30	Contact tip, tapered	.030	0.8
	14T-35		.035	0.9
	14T-45		.045	1.2
	14T-52		.052	1.3
	14T-116		1/16	1.6
3	0032	Nozzle insulator/retainer		
4	22-37SS	Nozzle, short stop 1/8" recess 3/8" bore		
	22-50	Nozzle, adjustable 1/2" bore		
	22-50SS	Nozzle, short stop 1/8" recess 1/2" bore		
	22-62	Nozzle, adjustable 5/8" bore		
	22-62SS	Nozzle, short stop 1/8" recess 5/8" bore		
4a	23-37	Nozzle, self-insulated 1/8" recess 3/8" bore		
	23-50	Nozzle, self-insulated 1/8" recess 1/2" bore		
	23-62	Nozzle, self-insulated 1/8" recess 5/8" bore		
	23-75	Nozzle, self-insulated 1/8" recess 3/4" bore		
	23T-37	Nozzle, self-insulated tapered 3/8" bore		
	23T-37F	Nozzle, self-insulated tapered flush 3/8" bore		

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MIG Gun Parts

250 AMP MIG Gun



Item	Part No.	Description
1	see previous page	Diffuser
2	see previous page	Contact tip
3	0032	Nozzle insulator/retainer
4	see previous page	Nozzle
5	25SR	Strain relief
6	25HR	Handle locking ring
7	25HD	Handle 2pcs w/screws
8	25GH	Gun hanger
9	25TB	Trigger blade
10	25TR	Comfort grip trigger
11	25BK	Tube block
12	25CT	Conductor tube

Item	Part No.	Description
13	25MA	Trigger connector (Miller®)
14	25LA	Trigger connector (Lincoln®)
15	25CA	Connector case assembly
16	40HR	Connector locking ring
17	25LC	Connector (Lincoln®)
18	25TC	Connector (Tweco®)
19	25MC	Connector (Miller®)
20	25CB	Connector body
21	25PC	Power cable assembly
22	42-23-15	Wire conduit, .023" x 15'
23	42-3035-15	Wire conduit, .030 - .035" x 15'
24	42-4045-15	Wire conduit, .040 - .045" x 15'

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400 AMP MIG Gun



Available Best Welds 400 MIG Guns

Part No.	Connector	Wire Size	Length
		Inches	Feet
T400-15-3545	Tweco®	.035-.045	15
T400-15-116		.045-1/16	
M400-15-3545	Miller®	.035-.045	12
M400-15-116		.045-1/16	
L400-15-3545	Lincoln®	.035-.045	15
L400-15-116		.045-1/16	

Diffusers, Contact Tips and Nozzles Standard MIG Gun Set-up



Optional MIG Gun Set-up 1



Optional MIG Gun Set-up 2

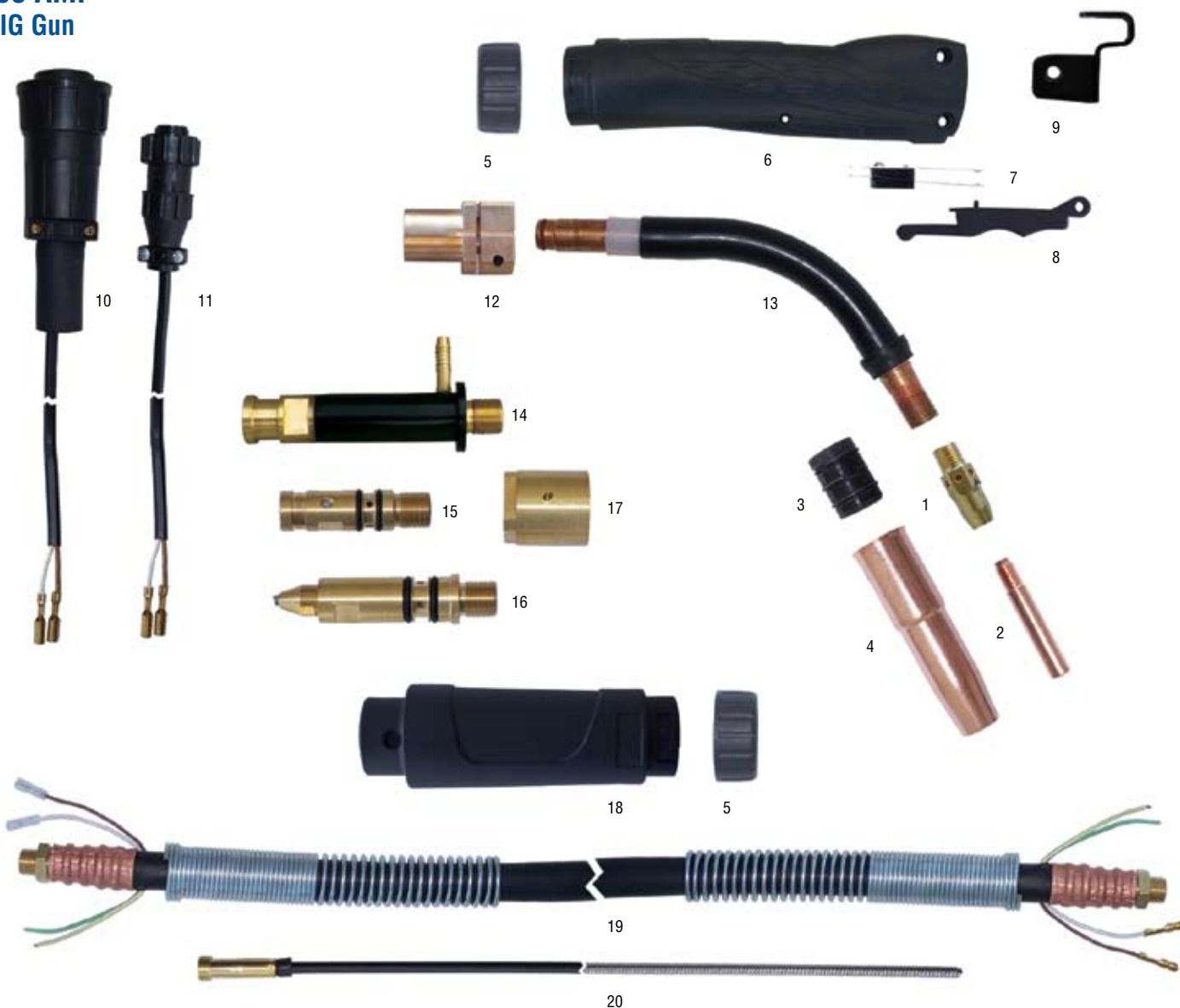


Item	Part No.	Description	Tip Size	
			Inches	mm
1	054A	Diffuser, brass		
	054P	Diffuser, copper		
2	14-23	Contact tip, standard	.023	0.6
	14-30		.030	0.8
	14-35		.035	0.9
	14-45		.045	1.2
	14-52		.052	1.3
	14-116		1/16	1.6
	14-564		5/64	2.0
2a	14H-35	Contact tip, heavy duty	.035	0.9
	14H-45		.045	1.2
	14H-52		.052	1.3
	14H-116		1/16	1.6
	14H-564		5/64	2.0
2b	14T-30	Contact tip, tapered	.030	0.8
	14T-35		.035	0.9
	14T-45		.045	1.2
	14T-52		.052	1.3
	14T-116		1/16	1.6
3	34A	Nozzle insulator/retainer		
4	24A-50	Nozzle, adjustable 1/2" bore		
	24A-50SS	Nozzle, short stop 1/8" recess 1/2" bore		
	24A-62	Nozzle, adjustable 5/8" bore		
	24A-62SS	Nozzle, short stop 1/8" recess 5/8" bore		
	24A-75	Nozzle, adjustable 3/4" bore		
	24A-75SS	Nozzle, short stop 1/8" recess 3/4" bore		
4a	23-37	Nozzle, self-insulated 1/8" recess 3/8" bore		
	23-50	Nozzle, self-insulated 1/8" recess 1/2" bore		
	23-62	Nozzle, self-insulated 1/8" recess 5/8" bore		
	23-75	Nozzle, self-insulated 1/8" recess 3/4" bore		
	23T-37	Nozzle, self-insulated tapered 3/8" bore		
	23T-37F	Nozzle, self-insulated tapered flush 3/8" bore		
	3a	34CT	Insulator, coarse thread	
4b	24CT-50S	Nozzle, coarse thread 1/8" recess 1/2"		
	24CT-62S	Nozzle, coarse thread 1/8" recess 5/8"		
	24CT-75S	Nozzle, coarse thread 1/8" recess 3/4"		

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MIG Gun Parts

400 AMP MIG Gun



Item	Part No.	Description
1	see previous page	Diffuser
2	see previous page	Contact tip
3	034A	Nozzle insulator/retainer
4	see previous page	Nozzle
5	40HR	Handle locking ring
6	40HD	Handle 2pcs w/screws
7	25TB	Trigger blade
8	25TR	Comfort grip trigger
9	25GH	Gun hanger
10	25LA	Trigger connector (Lincoln®)
11	25MA	Trigger connector (Miller®)

Item	Part No.	Description
12	40BK	Tube block
13	40CT	Conductor tube
14	25LC	Connector (Lincoln®)
15	25TC	Connector (Tweco®)
16	25MC	Connector (Miller®)
17	40CB	Connector body
18	25CA	Connector case assembly
19	40PC	Power cable assembly
20	44-3545-15	Wire conduit, .035" -.045" x 15'
	44-116-15	Wire conduit, .052" -1/16" x 15'
	44-564-15	Wire conduit, 5/64" x 15'

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Replacement MIG Parts

Tweco® Style Consumables Nozzles

135 AMP, Mini®, No.1



Part No.	Description	Bore Dia.
21-37	Nozzle, self-insulated 1/8" recess	3/8"
21-50		1/2"
21-62		5/8"
21-50F	Nozzle, self-insulated flush	1/2"



Part No.	Description	Bore Dia.
21T-37	Nozzle, self-insulated 1/8" recess	3/8"

250 AMP, No.2



Part No.	Description	Bore Dia.
22-37SS	Nozzle, short stop 1/8" recess	3/8"
22-50SS		1/2"
22-62SS		5/8"
22-50	Nozzle, adjustable	1/2"
22-62		5/8"

250/400 AMP, Nos. 2, 3, 4



Part No.	Description	Bore Dia.
23-37	Nozzle, self-insulated 1/8" recess	3/8"
23-50		1/2"
23-62		5/8"
23-75		3/4"



Part No.	Description	Bore Dia.
23T-37	Nozzle, self-insulated 1/8" recess	3/8"
23T-37F	Nozzle, self-insulated flush	3/8"

Insulators

250 AMP, No.2

Part No. 0032



400 AMP, Nos.3, 4

Part No. 034A

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400 AMP, No.4



Part No.	Description	Bore Dia.
24A-50SS	Nozzle, short stop 1/8" recess	1/2"
24A-62SS	Nozzle, short stop 1/8" recess	5/8"
24A-75SS	Nozzle, short stop 1/8" recess	3/4"
24A-50	Nozzle, adjustable	1/2"
24A-62	Nozzle, adjustable	5/8"
24A-75	Nozzle, adjustable	3/4"



Part No.	Description	Bore Dia.
24FN-50S	Nozzle, fine thread 1/8" recess	1/2"
24FN-62S		5/8"
24FN-75S		3/4"
34FN	Insulator, fine thread	



Part No.	Description	Bore Dia.
24CT-50S	Nozzle, coarse thread 1/8" recess	1/2"
24CT-62S		5/8"
24CT-75S		3/4"
34CT	Insulator, coarse thread	



Conductor Tubes



Part No.	Description
Gun: No.2	
62A-60	Conductor tube 60° No.2
62A-60J	Conductor tube w/metal jacket 60° No.2
Gun: No.3	
63-60	Conductor tube 60° No.3
63-60J	Conductor tube w/metal jacket 60° No.3
Gun: No.4	
64A-60	Conductor tube 60° No.4
64A-60J	Conductor tube w/metal jacket 60° No.4
Gun: No.5	
65-60	Conductor tube 60° No.5
65-60J	Conductor tube w/metal jacket 60° No.5

Replacement MIG Parts

Tweco® Style Consumables Contact Tips

135 AMP, Mini®, No.1



Part No.	Description	Size	
		Inches	mm
11-23	Contact tip, standard	.023	0.6
11-30		.030	0.8
11-35		.035	0.9
11-45		.045	1.2



Part No.	Description	Size	
		Inches	mm
11T-23	Contact tip, tapered	.023	0.6
11T-30		.030	0.8
11T-35		.035	0.9

250/400 AMP, Nos. 2, 3, 4



Part No.	Description	Size	
		Inches	mm
14-23	Contact tip, standard	.023	0.6
14-30		.030	0.8
14-35		.035	0.9
14-45		.045	1.2
14-52		.052	1.3
14-116		1/16	1.6
14-564		5/64	2.0



Part No.	Description	Size	
		Inches	mm
14H-35	Contact tip, heavy duty	.035	0.9
14H-45		.045	1.2
14H-52		.052	1.3
14H-116		1/16	1.6
14H-564		5/64	2.0



Part No.	Description	Size	
		Inches	mm
14T-30	Contact tip, tapered	.030	0.8
14T-35		.035	0.9
14T-45		.045	1.2
14T-52		.052	1.3
14T-116		1/16	1.6

Diffusers

135 AMP, Mini® Gun

Part No. 35-50- .030-.045 wire



Part No. 35-50

No. 1 Gun

Part No. 0051- .030-.045 wire

Part No. 51-23- .023 wire



Part No. 0051

250 AMP, No. 2 Gun

Part No. 0052- .030-.045 wire

Part No. 52-23- .023 wire



Part No. 0052



Part No. 52-23

400 AMP, No. 4 Gun

Part No. 054A brass

Part No. 054P copper

• For .030 - .078



Part No. 054A

Wire Conduits



Part No.	Description	Size	Length
35-40-15	135 AMP, Mini®	.030"-.035"	15'
45-40-15		.035"-.045"	
42-23-15	250 AMP, Nos.1, 2	.023"	15'
42-3035-15		.030"-.035"	
42-4045-15		.040"-.045"	
42-3035-25		.030"-.035"	
42-4045-25	25'	.040"-.045"	
44-3545-15		.035"-.045"	
44-116-15	400 AMP, Nos.3, 4	1/16"	15'
44-564-15		5/64"	
44-564-25		5/64"	25'
44-3545-25		.035"-.045"	
44-116-25	1/16"		

Bernard® Style Consumables Nozzles



Part No.	Description	Bore Dia.
4295	Nozzle, brass tapered	1/2"



Part No.	Description	Bore Dia.
4391	Nozzle, brass	5/8"
4392		1/2"
4393	Nozzle, copper	5/8"
4394		1/2"



Part No.	Description	Bore Dia.
4491	Nozzle, brass	3/4"
4492		9/16"
4591	Nozzle, copper	3/4"
4592		9/16"

Gas Diffusers

Use with 7400 and 4200 series tips
Part No. 4435



Use with 7400 series tips.
Part No. 4435
Use with 4200 series tips.
Part No. 4635



Conductor Tubes



Part No.	Description	Gun AMP
4786	Body Tubes	200-300
4790		400-500

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Contact Tips



Part No.	Description	Size	
		Inches	mm
1588	Contact tip	.030	0.8
1589		.035	0.9
1590		.045	1.2
1591		1/16	1.6
1592		5/64	2.0
1593		3/32	2.4
1598		.052	1.4



Part No.	Description	Size	
		Inches	mm
4281	Contact tip, tapered	.035	0.9
4282		.045	1.2



Part No.	Description	Size	
		Inches	mm
7488	Contact tip	.030	0.8
7489		.035	0.9
7490		.045	1.2
7491		1/16	1.6
7492		5/64	2.0
7493		3/32	2.4
7498		.052	1.4

Liners



Part No.	Description	Size	Length
43015	Wire conduit	.023"-.030"	15'
43115		.035"-.045"	
43215		.045"-1/16"	
44115		.035"	
44215		.045"-1/16"	25'
44225		.045"-1/16"	
45415	3/32"	15'	

Gas Diffusers

Use with 200-300 guns
Part No. 4323R



Use with 350-500 guns
Part No. 4423R



Replacement MIG Parts

Miller® Style Consumables

Nozzles M10, M15



Part No.	Description	Bore Dia.
169-715	Nozzle, flush	1/2"

M25/25/M, M40/40AL



Part No.	Description	Bore Dia.
169-724	Nozzle, 1/8" tip recess	1/2"
200-258	Nozzle, flush	1/2"
169-725	Nozzle, 1/8" tip recess	5/8"
169-726	Nozzle, flush	5/8"
169-727	Nozzle, 1/8" tip stickout	5/8"

Spoolmatic® 1, 2, 3, 40A/XR™'s, XRM™'s



Part No.	Description	Bore Dia.
050-115	Nozzle	1/2"
050-622		5/8"

Contact Tips

M15, M25/25/M, M40/40AL



Part No.	Description	Size	
		Inches	mm
087-299	Contact tip	.023	0.6
000-067		.030	0.8
000-068		.035	0.9
000-069		.045	1.2
172-024		1/16	1.6
172-025		5/64	2.0
172-034		.045	1.2

XR™/XRM™-15A/30A, 15W/30W XR-Edge, Spoolmatic® 30A/30W



Part No.	Description	Size	I.D.
135-424	Tip (aluminum wire)	.047"	.059"
135-425		.062"	.078"
135-426	Tip (steel wire)	.062"	.073"
135-427		.030"	.035"
135-428	Tip (aluminum wire)	.030"	.040"
135-429	Tip (steel wire)	.047"	.054"
135-430	Tip (aluminum wire)	.035"	.050"

Adapters, Diffusers and Retainers

M25/25/M, M40/40AL

Tip adapter/diffuser.

Part No. 169-728



Nozzle retainer.

Part No. 169-729



M15

Nozzle retainer/diffuser.

Part No. 169-716



Liners

M10, M15, M25/25/M, M40/40AL



Part No.	Description	Size	Length
194010	Wire conduit	.023"-.030"	15'
194011		.030"-.035"	
194012		.035"-.045"	

XR™/XRM™-15A/30A, 15W/30W XR-Edge, Spoolmatic® 30A/30W



Part No.	Description	Size	Length
136-682	Wire conduit, Teflon®	.023"-.035"	6-3/4"
136-683		.045"-1/16"	

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Tregaskiss® Style Consumables Nozzles



Part No.	Description	Bore Dia.
401-4-38	Nozzle, insulated flush	3/8"
401-4-50	Nozzle, insulated 1/8" recess	1/2"
401-4-62		5/8"



Part No.	Description	Bore Dia.
401-5-62	Nozzle, H.D. insulated 1/4" recess	5/8"
401-5-75		3/4"
401-6-62	Nozzle, H.D. insulated 1/8" recess	5/8"
401-6-75		3/4"

Diffusers

Nozzle retainer.
Part No. 402-3



Diffuser for standard contact tips.
Part No. 0404



Diffuser for heavy duty contact tips.
Part No. 404-1

Retainer ring only.
Part No. 402-4

Nozzle retainer/diffuser for heavy duty contact tips.
Part No. 404-3



Nozzle retainer/diffuser, heavy duty for heavy duty contact tips.
Part No. 404-13

Conductor Tubes



Part No.	Description	Gun AMP
305-60	Body tube 60°	300
405-45	Body tube 45°	400
405-60	Body tube 60°	400

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Contact Tips



Part No.	Description	Size	
		Inches	mm
403-35	Contact tip, standard	.035	0.9
403-45		.045	1.2
403-116		1/16	1.6



Part No.	Description	Size	
		Inches	mm
403-1-35	Contact tip, heavy duty	.035	0.9
403-1-45		.045	1.2
403-1-52		.052	1.4
403-1-116		1/16	1.6



Part No.	Description	Size	
		Inches	mm
403-3-35	Contact tip, H.D. tapered	.035	0.9
403-3-45		.045	1.2

Liners



Part No.	Description	Size	Length
415-35-15	Wire conduit	.035"-.045"	15'
415-116-15		.045"-1/16"	
415-116-2	Wire conduit, nylon core	.045"-1/16"	25'
415-35-25	Wire conduit	3/64"-1/16"	

Shock Washers

Heavy duty
Part No. 402-5



Standard
Part No. 402-7



Replacement MIG Parts

135 AMP Back End Options

Tweco® Style Guns

Part No. T135-10-3035- standard wire
Part No. FC135-10-3545- flux cored



Miller® Style Guns

Part No. M135-10-3035- standard wire



200 & 400 AMP Back End Options

Tweco® Style Guns



Part No.	AMP	Length (inches)	Wire size (inches)
T250-15-3035	250	15	.030 - .035
T250-15-4045	250	15	.040 - .045
T400-15-3545	400	15	.035 - .045
T400-15-116	400	15	.0625

Lincoln® Style Guns



Part No.	AMP	Length (inches)	Wire size (inches)
L250-15-3035	250	15	.030 - .035
L250-15-4045	250	15	.040 - .045
L400-15-3545	400	15	.035 - .045
L400-15-116	400	15	.0625

Miller® Style Guns



Part No.	AMP	Length (inches)	Wire size (inches)
M250-12-3035	250	12	.030 - .035
M250-15-3035	250	15	.030 - .035
M250-15-4045	250	15	.040 - .045
M400-15-3545	400	15	.035 - .045
M400-15-116	400	15	.0625

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Arc Gouging Torches

Best Welds® torches will groove, bevel, cut, gouge, pierce or flush away any kind of metal. The Best Welds® torch saves time, costs less to use and gives a better finished job than older methods such as grinding, chipping, etc.

GT4000

- Heavy duty yet light weight.
- 1000 AMP maximum.
- Accepts pointed carbons to 1/2".
- Accepts flat carbons to 5/8".

Gouge torch with 7' cable
Part No. GT61-082-008

Gouge torch with 10' cable
Part No. GT61-082-009

Gouge torch only
Part No. GT01-082-002



Model H3

General purpose gouge torch
Part No. 61-062-016X



Model K3

The K3 is a medium-duty torch. This torch is built for repair and maintenance jobs in areas such as mining, construction and all types of metal fabrication.

Part No. 61-064-009X



GT4000 Replacement Parts

All parts are interchangeable with other industry-leading gouging torches.



Part No.	Description
GT94-476-066	Lever assembly w/screw
GT94-800-077	Spring
GT94-433-183	Insulator assembly w/screw
GT94-370-163	Handle
GT94-103-206	Torch body
GT94-632-094	Hinge pin
GT94-048-088	Upper arm
GT94-378-368	Head
GT94-170-150	Air/power connector
GT94-105-014	Insulating boot
GT94-104-016	Valve with bonnet
GT94-801-011	Valve with o-rings
GT94-710-036	O-rings only
GT94-104-012	Bonnet
GT70-084-207	Power cable 7'
GT70-084-210	Power cable 10'

Carbons Arc Gouging Electrodes

- Designed specifically for the air carbon arc metal removal process.
- Highly resistant to breakage, heat and oxidation.
- Excellent for fast-cutting of carbon and ductile irons, aluminum, copper and other high strength and high alloys.
- Broad range of cutting applications:
 - Machining grooves for weld-joint preparation.
 - Removing hard surface metal to facilitate repair.
 - Cutting non-ferrous and other hard-to-cut metals.
 - Used in industries such as metal fabrication, foundries, ship building, construction, machine shops, transportation, salvage yards, general maintenance, etc.

Copper-Coated Jointed Gouging Carbons



Part No.	Size		Qty/Box
	Inches	mm	
24-064-003X	3/8 x 17	9.5 x 430	100
24-084-003X	1/2 x 17	13.0 x 430	100
24-104-003X	5/8 x 17	16.0 x 430	100
24-124-003X	3/4 x 17	19.0 x 430	100

DC Copperclad Electrodes

- Superior Metal Removal Rate.
- Clean Cuts.
- Cooler Operation.
- Uniform Diameter.
- Excellent Arc Stability.

Copper-Coated Pointed Gouging Carbons



Part No.	Size		Qty/Box
	Inches	mm	
22-023-003X	1/8 x 12	3.2 x 305	100
22-983-003X	5/32 x 12	4.0 x 305	50
22-033-003X	3/16 x 12	5.0 x 305	50
22-043-003X	1/4 x 12	6.5 x 305	50
22-053-003X	5/16 x 12	8.0 x 305	50
22-063-003X	3/8 x 12	9.5 x 305	50
22-082-003X	1/2 x 14	13.0 x 355	50

Carbon Steel Solid Wires for MIG/MAG

ER70S-3

A deoxidized wire used for mild and low alloy steel general purpose fabrication. Good for out-of-position welding using short circuiting transfer with 75% Ar +25% CO₂ or CO₂ shielding gases. Good performance over mill scale and rust.

ER70S-6

The high silicon content increases the fluidity of the weld pool, creating a smoother bead appearance and resulting in minimal post-weld grinding.

AWS Classification	Chemical Composition (as percentages)					Typical Mechanical Properties			
	C	Mn	Si	P	S	TS (PSI)	YS (PSI)	ELONG %	ft. lbs.@-20°F
ER70S-3	0.06 – 0.15	0.90 – 1.40	0.45 – 0.70	0.025	0.035	78,000	63,000	25	32
ER70S-6	0.07 – 0.15	1.40 – 1.85	0.80 – 1.15	0.025	0.035	84,000	71,000	26	43

Note: Single values shown are maximum. Ni, Cr, Mo and V maybe present but are not intentionally added. The maximum weight of copper due to any coating plus the residual copper content in the steel shall be .50.



AWS Classification	Size (inch)	Part No.		
		2 lb. Spool	11 lb. Spool	33 lb. Spool
ER70S-3	.030	S3-030-2		
	.035	S3-035-2		
	.045	S3-045-2		
ER70S-6	.023	S6-023-2	S6-023-11	
	.030	S6-030-2	S6-030-11	S6-030-33
	.035	S6-035-2	S6-035-11	S6-035-33
	.045	S6-045-2	S6-045-11	S6-045-33

Aluminum Solid Wires

ER4043

5% Si bare Aluminum welding wire, flows freely at 1155°F. Recommended for welding 3003, 3004, 5052, 6061, 6063, casting alloys 43, 355, 356, 214.

ER5356

5356, 5% Mg bare Aluminum welding wire, flows freely at 1180°F. Recommended for joining 5050, 5052, 5083, 5454, and 5456.

AWS Classification	Chemical Composition (as percentages)									
	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others	Al
ER4043	4.5 – 6.0	0.80	0.30	0.05	0.05		0.10	0.20	0.15	Rem
ER5356	0.25	0.50	0.10	0.05 – 0.20	4.5 – 5.5	0.05 – 0.20	0.10	0.06 – 0.20	0.15	Rem

Note: Single values shown are maximum percentages, unless otherwise specified.

Spools

AWS Classification	Size (inch)	Part No.		
		1 lb. Spool	12 lb. Spool	16 lb. Spool
ER4043	.030	4043-030-1	4043-030-12	
	.035	4043-035-1		4043-035-16
	3/64	4043-364-1		4043-364-16
	1/16			4043-116-16
ER5356	.030	5356-030-1		
	.035	5356-035-1		5356-035-16
	3/64	5356-364-1		5356-364-16
	1/16	5356-116-1		5356-116-16

Cut Lengths

AWS Classification	Size (inch)	Part No.
		10 lb. Tube/40 lb. Box
ER4043	1/16	4043-116-36
	3/32	4043-332-36
	1/8	4043-18-36
ER5356	1/16	5356-116-36
	3/32	5356-332-36
	1/8	5356-18-36

Helpful Hint

An increase in wire feed speed will increase your amperage.

Welding Rods

Gas Welding Rods

RG45

This is a copper coated, iron based low alloy steel rod, predominately used for torch welding mild steel alloys. This alloy offers very good machinability and ductility for ordinary purposes, where a minimum tensile strength is often used for gas fusion welding of plate, sheet, structural shapes, pipe and castings.

RG60

This is a steel rod used for torch welding of various carbon steels. These rods consistently produce medium to high quality welds.

Silicon Bronze

A copper alloy, suitable for welding copper and other copper alloys, and for many sheet metal applications employing plain and galvanized steel. Melting point 1866°F.

Low Fuming Bronze

A low-fuming oxy-acetylene brazing rod extensively used for joining of steels and overlaying of cast iron. The fuming qualities and good mechanical properties make this a widely used general purpose rod. Melting point 1620°F.

AWS Classification/ Description	Chemical Composition (as percentages)									
	C	Cu	Zn	Sn	Mn	Fe	Si	P	Al	Pb
RG45	0.08	0.30		0.04	0.50	Rem	0.10	0.035	0.02	
RG60	0.16	0.30		0.35	0.90 - 1.40	Rem	0.10 - 0.35	0.035		
Silicon Bronze Bare		94.0 min.	1.50	1.50	1.50	0.05	2.8 - 4.0		0.01	0.02
Low Fuming Bronze Bare		56.60	Bal	0.80 - 1.10	0.01 - 0.50	0.25 - 1.20	0.04 - 0.15		0.01	0.05
Low Fuming Bronze Flux Coated		56.60	Bal	0.80 - 1.10	0.01 - 0.50	0.25 - 1.20	0.04 - 0.15		0.01	0.05

AWS Classification	Size (inch)	Part No.		
		50 lb. Box	1 lb. Tube	5 lb. Tube
R45 (RG45)	1/16	45-116-36		45-116-36-5
	3/32	45-332-36	45-332-36-1	45-332-36-5
	1/8	45-18-36		45-18-36-5
	5/32	45-532-36		
	3/16	45-316-36		
R60 (RG60)	1/16	60-116-36		
	3/32	60-332-36		
	1/8	60-18-36		
	5/32	60-532-36		
	3/16	60-316-36		

Description	Size (inch)	Part No.		
		10 lb. Tube 40 lb. Box	1 lb. Tube	5 lb. Tube
Silicon Bronze	1/16	656-116-36		
	3/32	656-332-36		
	1/8	656-18-36		
		50 lb. Bulk	1 lb. Tube	5 lb. Tube
Low Fuming Bronze Bare	1/16	681-116-36		
	3/32	681-332-36		
	1/8	681-18-36		681-18-36-5
	5/32	681-532-36		
	3/16	681-316-36		
		10 lb. Tube 50 lb. Box	1 lb. Tube	
Low Fuming Bronze (Flux Coated)	1/16		681C-116-18-1	
	1/8	681C-18-36		
	3/32	681C-332-36		

TIG Wire and Rod

ER70S2

This is a premium TIG wire for welding on all grades of mild and carbon steels, producing quality welds with minimal porosity. It contains 5 deoxidizers (Manganese, Silicon, Zirconium, Titanium and Aluminum) which make it an excellent choice for welding over rust and mill scale. No flux required. This product is embossed on both ends for easy identification.

ER70S6

This is a mild steel welding wire that contains higher levels of manganese and silicon than other standard grades of MIG wire to produce high quality welds when used on dirty, oily or rusty steel. A higher silicon content increases the fluidity of the weld pool, creating a smoother bead resulting in minimal post-weld grinding. This wire is engineered to provide porosity-free, x-ray quality welds at the highest tensile strength (as welded) of all the plain carbon steel wires.

Note: This product requires the use of CO₂ as a shielding gas.

AWS Classification	Size (inch)	Part No.	
		10 lb. Tube/30 lb. Box	1 lb. Tube
ER70S-2	.035	S2-035-36	
	1/16	S2-116-36	
	3/32	S2-332-36	
	1/8	S2-18-36	S2-18-36-1
ER70S-6	1/16	S6-116-36	
	3/32	S6-332-36	
	1/8	S6-18-36	

Stainless Steel Solid Wires

308L

308L contains an average .03% carbon, producing a weld deposit with good resistance against intergranular corrosion caused by carbide precipitation. 308L is commonly used for welding AISI types 304L, 308L, 321, and 347.

308LSi

308LSi has a higher silicon content along with a low carbon content. The increased silicon level provides better arc stability and a smoother bead appearance while an average .03% carbon level reduces carbide precipitation. 308LSi produces excellent quality fillet and butt welds. Typical applications would include those of 308 and 308L welding wires.

309L

309L contains an average .03% carbon to provide a weld deposit that will offer good resistance against intergranular corrosion caused by carbide precipitation. 309L is excellent for buttering passes and overlay work. Typical applications include those of 309 welding wire.

316L

316L is used for welding AISI 316L stainless that may be exposed to organic and inorganic acids. The addition of .03% carbon produces a weld deposit with excellent resistance against intergranular corrosion caused by carbide precipitation.

316LSi

316LSi has a higher silicon content along with a low carbon content, producing better arc stability, smoother bead appearance and excellent resistance to carbide precipitation. 316LSi is used for welding austenitic acid-resistant steels such as those containing 18% Cr, 8% Ni, 2-3% Mo.

AWS Classification	Chemical Composition (as percentages)									
	C	Cr	Ni	Mo	Mn	Si	P	S	Fe	Cu
ER308L	0.03	19.5 - 22.0	9.0 - 11.0	0.75	1.0 - 2.5	0.30 - 0.65	0.03	0.03	Rem	0.75
ER308LSi	0.03	19.5 - 22.0	9.0 - 11.0	0.75	1.0 - 2.5	0.65 - 1.00	0.03	0.03	Rem	0.75
ER309L	0.03	23.0 - 25.0	12.0 - 14.0	0.75	1.0 - 2.5	0.30 - 0.65	0.03	0.03	Rem	0.75
ER316L	0.03	18.0 - 20.0	11.0 - 14.0	2.0 - 3.0	1.0 - 2.5	0.30 - 0.65	0.03	0.03	Rem	0.75
ER316LSi	0.03	18.0 - 20.0	11.0 - 14.0	2.0 - 3.0	1.0 - 2.5	0.65 - 1.00	0.03	0.03	Rem	0.75

Single values shown are maximum percentages, unless otherwise specified.

Spools

AWS Classification	Size (inch)	Part No.		
		2 lb. Spool	10 lb. Spool	30 lb. Spool
ER308L	.023		308L-023-10	
	.030	308L-030-2	308L-030-10	308L-030-30
	.035	308L-035-2	308L-035-10	308L-035-30
	.045			308L-045-30
ER308LSi	.030			308LHS-030-30
	.035			308LHS-035-30
ER309L	.023		309L-023-10	
	.030		309L-030-10	
	.035			309L-035-30
	.045			309L-045-30
ER316L	.023		316L-023-10	
	.030		316L-030-10	
	.035		316L-035-10	316L-035-30
	.045			316L-045-30

Cut Lengths

AWS Classification	Size (inch)	Part No.	
		10 lb. TB/40 lb. Box	1 lb. TB
ER308L	1/16	308L-116-36	308L-116-36-1
	3/32	308L-332-36	308L-332-36-1
	1/8	308L-18-36	
ER309L	1/16	309L-116-36	
	3/32	309L-332-36	
	1/8	309L-18-36	
ER316L	1/16	316L-116-36	
	3/32	316L-332-36	
	1/8	316L-18-36	

Stainless Steel Rods are 36" cut lengths/10 lbs. per box; 30 lbs. per master.

Self-Shielded Flux Cored Wires

This flux cored wire is for single pass welding of mild and low alloy steels in all positions. Travel speed is rapid and weld edges are smooth.



AWS Classification	Size (inch)	Part No.		
		2 lb. Spool	10 lb. Spool	25 lb. Spool
E71T-GS	.030	71-030-2	71-030-10	
	.035	71-035-2	71-035-10	71-035-25
	.045	71-045-2	71-045-10	71-045-25

Electrodes

Packaged Stick Electrodes

E6011

Steel electrode offering excellent mechanical properties in the welding of mild steels, galvanized, and some low alloy steels. The coating produces a forceful, spray-type arc, resulting in deeply penetrating welds in all positions. The slag is thin and readily removable. Operates on AC or DCEP.

E6013

Establishes a smooth, quiet, medium penetrating arc that is readily maintained with minimal spatter loss. The slag lifts easily, revealing a finely rippled bead contour. This quick freezing slag gives optimum performance in vertical-down welding. E6013 is ideally suited for general purpose welding, even with small AC and power sources having low open-circuit voltage. Works well on AC and DC.

E7014

Has an iron powder covering. The iron powder content yields a high deposition rate in all positions. The welds reflect smooth beads with fine ripples. E7014 is particularly advantageous when poor fit-up exists. The slag is easily removed, often self lifting. E7014 operates on AC, DCEN or DCEP.

E7018

Is an efficient, all position, iron powder, low hydrogen type electrode which exhibits excellent mechanical properties, crack resistance, and X-ray quality welds. This electrode offers a quiet, stable, low penetration, spatter-free arc. The moderately heavy slag is remarkably easy to remove, revealing a bead with distinct ripples. Operator appeal is a plus factor. Operates on AC or DCEP.

E7018AC

This low-hydrogen type welding electrode is a version of E7018 specifically designed to have optimum characteristics when used with an AC power source. It is very easy to strike and has an extremely stable arc giving it excellent operator appeal. It welds exceptionally well on small, utility-type welders.

E7024

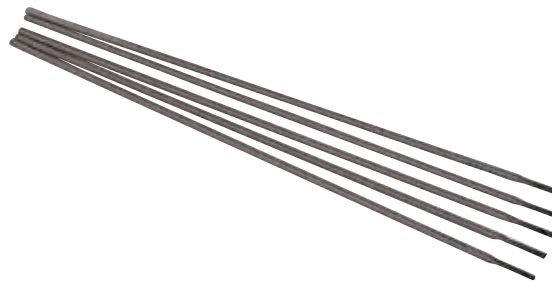
Is a high speed, iron powder, heavy coated electrode for high deposition rates on horizontal and down hand welding. Excellent bead appearance and self-cleaning slag give it operator appeal. This electrode has good weldability and superior mechanical properties and is particularly useful in obtaining increased penetration with little or no root porosity in horizontal or positioned fillets.

NI-55

Nickel iron electrode for repairing large defects in cast iron, joining sections over 1/4" thick. For welding modular, malleable and alloy cast irons; high-phosphorus castings.

NI-99

Nickel electrode for repairing small defects in cast iron, welding thin cast iron sections together or to steel. Machinability and color match excellent.



AWS Classification	Size (inch)	Part No.	
		1 lb. Box	5 lb. Box
E6011	3/32		6011-332-5
	1/8		6011-18-5
	5/32		6011-532-5
E6013	3/32		6013-332-5
	1/8		6013-18-5
	5/32		6013-532-5
E7014	3/32		7014-332-5
	1/8		7014-18-5
	5/32		7014-532-5
E7018	3/32		7018-332-5
	1/8		7018-18-5
	5/32		7018-532-5
E7018AC	3/32		7018AC-332-5
	1/8		7018AC-18-5
	5/32		7018AC-532-5
E7024	3/32		7024-332-5
	1/8		7024-18-5
	5/32		7024-532-5
NI-55	3/32	NI55-332-1	
ENiFeCl	1/8	NI55-18-1	
NI-99	3/32	NI99-332-1	
ENiCl	1/8	NI99-18-1	

Single values shown are maximum percentages, unless otherwise specified.

AWS Classification	Chemical Composition (as percentages)				
	C	Mn	Si	P	S
E6011	0.08	0.45	0.18	0.014	0.015
E6013	0.08	0.45	0.18	0.014	0.012
E7014	0.12	0.68	0.33	0.021	0.012
E7018	0.08	1.0	0.6	0.012	0.011
E7024	0.06	.81	0.43	0.018	0.019
E316L-16	0.04	0.5 - 2.5	0.90	0.04	0.03

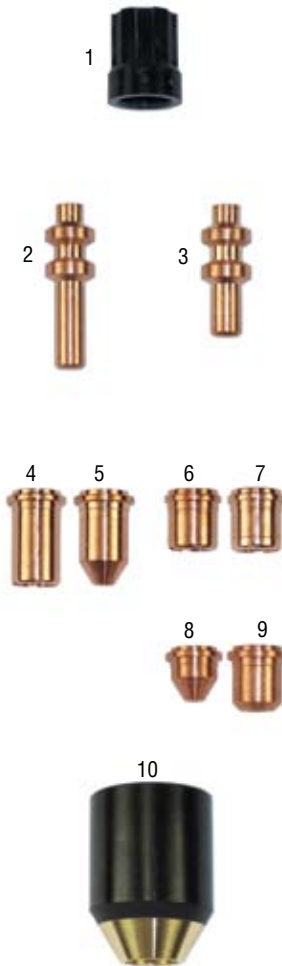
Hypertherm®

MAX20®



Item	Part No.	Description
1	020239	Swirl ring
2	020382	Electrode, extended
3	020381	Nozzle, extended
4	020218	Retaining cap

MAX40CS®, MAX42®, MAX43®



Item	Part No.	Description
1	T-4452*	Swirl ring
2	T-4451*	Electrode, extended
3	T-4450*	Electrode
4	020546	Nozzle, extended 40A
5	120023	Nozzle, extended pipe
6	020395	Nozzle, unshielded 50A
7	020350	Nozzle, unshielded 40A
8	020542	Nozzle, pipe 40A
9	020539	Nozzle, gouging
10	020930	Retaining cap

MAX40®



Item	Part No.	Description
1	020122	Hand torch w/handle
2	020114	Machine torch
3	020103	Electrode
4	020101	Swirl ring
5	020115	Nozzle, hand
6	020131	Nozzle, pipe
7	020102	Nozzle, machine
8	020104	Retaining cap
	057112	Torch package 25 ft.

*A unique design which enhances performance and differs from OEM designs.

Hypertherm® Torches

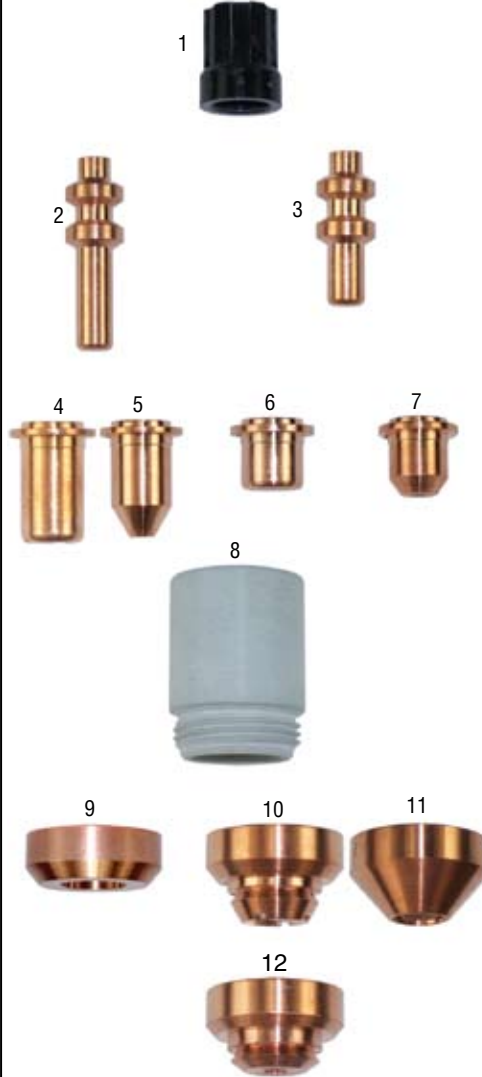
Hypertherm®

POWERMAX600®



Item	Part No.	Description
1	T-4453*	Swirl ring
2	T-4451*	Electrode, extended
3	T-4450*	Electrode
4	120606	Nozzle, extended pipe 35A
5	120600	Retaining cap
6	120303	Deflector ring

POWERMAX800®



Item	Part No.	Description
1	T-4452*	Swirl ring
2	T-4451*	Electrode, extended
3	T-4450*	Electrode
4	120304	Nozzle, extended pipe 50A
5	120305	Nozzle, extended pipe 50A
6	120282	Nozzle, shielded 50A
7	120281	Nozzle, gouging 50A
8	120600	Retaining cap
9	120303	Deflector ring
10	T-9824	Shield, hand
11	120608	Shield, gouging
12	T-9825	Shield, machine

POWERMAX900®



Item	Part No.	Description
1	T-4453*	Swirl ring
2	T-4451*	Electrode, extended
3	T-4450*	Electrode
4	120606	Nozzle, extended pipe 35A
5	120578	Nozzle, extended pipe 55A
6	120577	Nozzle, shielded 55A
7	120607	Nozzle, gouging 55A
8	120600	Retaining cap
9	120303	Deflector ring
10	T-9824	Shield, hand
11	120608	Shield, gouging
12	T-9825	Shield, machine

*A unique design which enhances performance and differs from OEM designs.

Hypertherm®

MAX100®



Item	Part No.	Description
1	020189	Hand torch w/handle
2	020201	Machine torch
3	020191	Electrode, air
	020193	Electrode, nitrogen
4	020194	Swirl ring
5	020203	Nozzle, 40A
	020345	Nozzle, 80A
	020195	Nozzle, 100A
6	020337	Nozzle, shielded 100A
7	020336	Retaining cap
8	020333	Deflector
	059076	Torch package 25 ft.

MAX200®



Item	Part No.	Description
1	020470	Machine torch
2	020414	Electrode, air/oxygen
3	020616	Nozzle, 100A oxygen
	020611	Nozzle, 100A air
4	020608	Nozzle, 100A air, N ₂ , ArH ₂
	020605	Nozzle, 100A oxygen

POWERMAX1000®



Item	Part No.	Description
1	T-4456*	Swirl ring
2	T-4454*	Electrode
3	220006	Nozzle, extended 40A
4	220007	Nozzle, extended 60A
5	120928	Retaining cap
6	120979	Deflector ring

*A unique design which enhances performance and differs from OEM designs.

Hypertherm® Torches

Hypertherm®

POWERMAX1100®



POWERMAX1250®



POWERMAX1650®



Item	Part No.	Description
1	120517	Electrode, extended
2	120473	Electrode
3	120474	Swirl ring
4	T-2531*	Nozzle, 80A
5	T-2530*	Nozzle, 40A
6	T-2532*	Nozzle, extended
7	T-2527*	Tip spring
8	120519	Deflector

Item	Part No.	Description
1	T-4456*	Swirl ring
2	T-4454*	Electrode
3	120980	Nozzle, extended 80A
	220007	Nozzle, extended 60A
4	220006	Nozzle, extended 40A
5	120928	Retaining cap
6	120979	Deflector ring

Item	Part No.	Description
1	T-4456*	Swirl ring
2	T-4454*	Electrode
3	120980	Nozzle, extended 80A
4	220007	Nozzle, extended 60A
5	220006	Nozzle, extended 40A
6	220048	Retaining cap
7	120979	Deflector ring

*A unique design which enhances performance and differs from OEM designs.

Thermal Dynamics®

PCH/M-35



Item	Part No.	Description
1	9-5807	Hand torch, Dura 70°
2	9-6506	Electrode, long life
3	9-6006	Electrode
4	9-6507	Gas distributor, long life
5	9-6007	Gas distributor
6	9-6501	Tip, drag long life
7	9-6500	Tip, stand off long life
8	9-6001	Tip, drag
9	9-6000	Tip
10	9-6003	Shield cup
11	9-6503	Shield cup, long life
	2-6053	Torch package 25 ft.

PCH/M-51



Item	Part No.	Description
1	9-5635	Hand torch
2	9-5634	Machine torch
3	9-5633	Electrode
4	9-5631	Tip
5	9-5630	Shield cup
6	8-5526	Shield cup, crown
7	8-2152	Shield cup, shock resistant
	2-2860	Torch package 25 ft. (Button)
	2-2985	Torch package 25 ft. (Trigger)

PCH/M-52



Item	Part No.	Description
1	9-5642	Hand torch
2	9-5643	Hand torch, machine
3	9-5619	Electrode, air
	9-5611	Electrode, nitrogen
4	9-5618	Tip, 45A
	9-5707	Tip, 70A
	9-5708	Tip, 100A
5	9-5617	Shield cup
6	9-5694	Shield cup, crown
7	9-5781	Shield cup, phenolic
	2-2936	Torch package 25 ft.

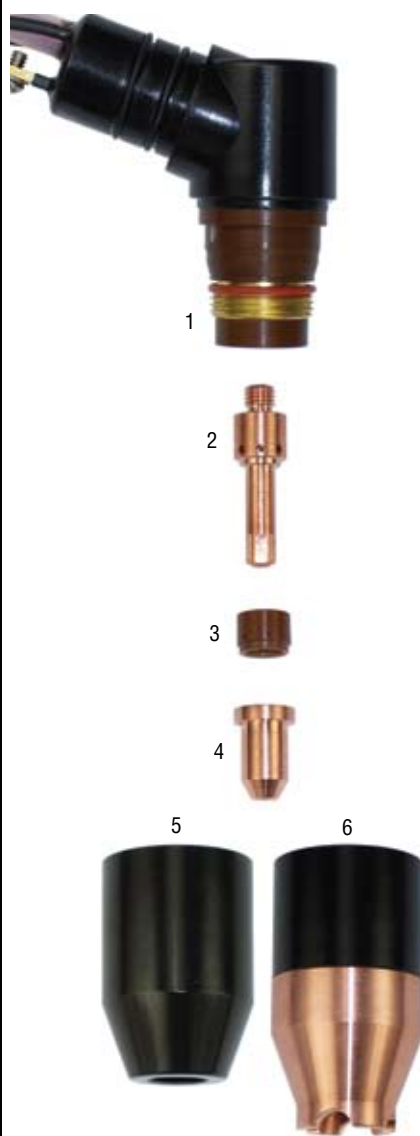
Thermal Dynamics® Torches

Thermal Dynamics®

PCH/M-6B



PCH/M-75



PCH/M-150



Item	Part No.	Description
1	8-6615	Electrode holder
2	8-6569	Gas distributor
3	8-6571	Liner w/O-ring
4	8-6578	Electrode
5	8-6572	Tip, 400A
	8-6582	Tip, 300A
	8-6575	Tip, 200A
6	8-6581	Outer insulator
7	8-6514	End piece
8	8-6515	End cap

Item	Part No.	Description
1	8-7510	Hand torch, 70°
2	8-7502	Electrode
3	8-7501	Gas distributor
4	8-7503	Tip, drag 35A
	8-7505	Tip, 70A
	8-7504	Tip, 55A
5	8-7500	Shield cup
6	8-7507	Shield cup, crown
		2-7501 Torch package 25 ft.

Item	Part No.	Description
1	9-5749	Electrode, air
	9-5754	Electrode, nitrogen
	9-5760	Electrode, oxygen
2	9-5746	Tip, air 150A
	9-5747	Tip, air 100A
	9-5767	Tip, nitrogen 150A
3	9-5751	Tip, oxygen 1500A
4	9-5750	Shield cup
5	9-5790	Shield cup, metal

ESAB® / L-TEC®

PT-17A



Item	Part No.	Description
1	20008	Hand torch
2	20053	Electrode adapter
3	19114	Baffle tube
4	19918	Electrode
5	20056	Tip, 100A
	19917	Tip, 80A
	19916	Tip, 70A
	19915	Tip, 50A
6	19124	Heat shield
7	19502	Shroud
8	19498	Shroud cap
	19999	Torch package 25 ft.

PT-20AM



Item	Part No.	Description
1	21359	Machine torch
2	21332	Electrode adapter assembly
3	21150	Electrode
4	21328	Nozzle, 100A
	21329	Nozzle, 70A
	21330	Nozzle, 50A
5	21326	Heat shield

PT-23



Item	Part No.	Description
1	21421	Hand torch
2	33366	Electrode
3	33367	Swirl baffle
4	33418	Nozzle, 80A
	33369	Nozzle, 50A
	33368	Nozzle, 30A
5	33371	Retaining nut
6	33419	Shield cap

ESAB® / L-TEC® Torches

ESAB® / L-TEC®

PT-25



Item	Part No.	Description
1	21625	Hand torch
2	21657	Electrode holder
3	21595	Electrode, air/N ₂
4	21599	Nozzle, gouging
	21598	Nozzle, 150A
	21597	Nozzle, 100A
	21596	Nozzle, 50A
5	21654	Heat shield

PT-27



Item	Part No.	Description
1	21610	Hand torch
2	31619	Valve pin (OEM torch only)
3	19114	Electrode
4	19918	Swirl baffle
5	20056	Nozzle, 80A
	19917	Nozzle, 50A
	19916	Nozzle, 30A
6	19124	Heat shield
	21620	Torch package 25 ft. (plug)
	61661	Torch package 25 ft. (lug)

PT-31



Item	Part No.	Description
1	20072	Hand torch
2	18205	Electrode, standard
	19683	Electrode, XL
3	18785	Swirl baffle, standard
	20463	Swirl baffle, XL, XT
4	18866	Tip, standard, 30A
5	18204	Shield cup, standard
6	20862	Electrode, XT
	20861	Tip, XT, 50A
7	21008	Tip, XT, 40A
	20860	Tip, XT, 30A
8	20282	Shield cup, standard, XL, XT
	20080	Torch package 25 ft.

Miller®

APT 5000



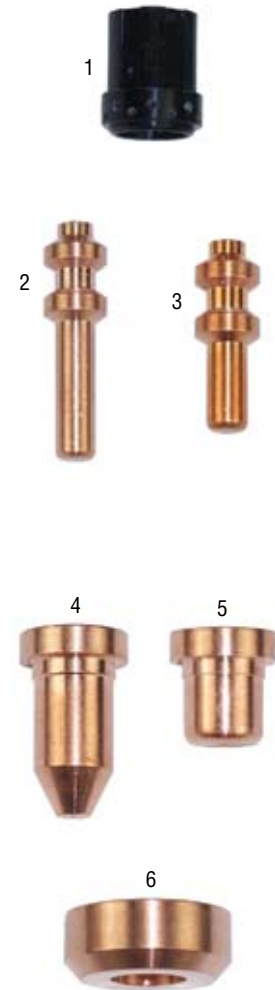
Item	Part No.	Description
1	123899	Electrode
2	134338	Tip "H"
	123898	Tip "S"
4	123897	Shield cup

ICE 25C



Item	Part No.	Description
1	176657	Swirl ring, 25A
2	176655	Electrode, 25A
3	176656	Tip, 25 AMP
4	176658	Shield cup, 25A

ICE 40C / 55C / 55CM



Item	Part No.	Description
1	T-4453*	Swirl ring
2	T-4451*	Electrode, extended
3	T-4450*	Electrode
4	192052	Tip, extended 35A
	192056	Tip, extended 55A
5	204325	Tip, 40 AMP (ICE-40C)
6	177888	Deflector

*A unique design which enhances performance and differs from OEM designs.

Miller® Torches

Miller®

ICE 50C



Item	Part No.	Description
1	T-4452*	Swirl ring
2	T-4460*	Electrode, extended
3	T-4449*	Electrode, standard
4	177876	Tip, extended
5	177890	Tip, standard
6	177888	Deflector

ICE 70C



Item	Part No.	Description
1	171257	Hand torch, w/handle
2	173816	Electrode, extended
3	169217	Electrode, standard
4	169222	Swirl ring
5	173815	Tip, extended, .050
	173814	Tip, extended, .059
6	169220	Tip, non-shielded, 80A
	169227	Tip, non-shielded, 100A
7	169219	Tip, shielded, 80A
	169226	Tip, shielded, 100A
8	169225	Deflector

ICE 80T / TM / CX



Item	Part No.	Description
1	T-4456*	Swirl ring, 10-80A
2	T-4461*	Electrode, 40-80A
3	212729	Tip, 40A

*A unique design which enhances performance and differs from OEM designs.

Grade R

- Economical welding hose for applications with acetylene fuel gas only.
- All Grade R hose has a non-oil resistant cover.
- Grade R twin line welding hose has a smooth cover and Grade R single line hose has a corrugated cover for added abrasion resistance.
- All Grade R twin line reels are one continuous length of hose.
- Welding hose cover is red for acetylene; green for oxygen.

Grade RM

- High quality welding hose for use with acetylene fuel gas only.
- All Grade RM hose has a flame and oil resistant cover.
- All Grade RM twin line reels are one continuous length of hose.
- Welding hose cover is red for acetylene; green for oxygen.

Twin Line Hose-Cut Lengths

Hose Grade	Part No.	I.D.	Length	Fittings
		Inches	Feet	
Grade R	RH-2000	3/16	10	BB
	RH-2000M	3/16	10	MF
	RH-2001	3/16	12-1/2	BB
	RH-2001A	3/16	12-1/2	AB
	RH-2001AA	3/16	12-1/2	AA
	RH-2002	3/16	25	BB
	RH-2002A	3/16	25	AB
	RH-2003	3/16	50	BB
	RH-2005	3/16	10	BB
	RH-2101	1/4	12-1/2	BB
	RH-2102	1/4	25	BB
	RH-2103	1/4	50	BB
	RH-2105	1/4	100	BB
	RH-2302	5/16	25	BB
	RH-2303	5/16	50	BB
	RH-2305	5/16	100	BB
	RH-2402	3/8	25	BB
	RH-2403	3/8	50	BB
	RH-2405	3/8	100	BB
	Grade RM	NH-321	3/16	12-1/2
NH-322		3/16	12-1/2	AB
NH-331		3/16	25	BB
NH-332		3/16	25	AB
NH-341		3/16	50	BB
NH-731		1/4	25	BB
NH-741		1/4	50	BB
NH-751		1/4	100	BB
NH-841		5/16	50	BB
Grade T	TH-1621	3/16	12-1/2	BB
	TH-1622	3/16	12-1/2	AB
	TH-1631	3/16	25	BB
	TH-1632	3/16	25	AB
	TH-1641	3/16	50	BB
	TH-1651	3/16	100	BB
	TH-1731	1/4	25	BB
	TH-1741	1/4	50	BB
	TH-1751	1/4	100	BB
	TH-1831	5/16	25	BB
	TH-1841	5/16	50	BB
	TH-1851	5/16	100	BB
	TH-1931	3/8	25	BB
	TH-1941	3/8	50	BB
	TH-1951	3/8	100	BB

Grade T

- Premium quality welding hose for use with fuel gases including acetylene.
- All Grade T hose has a flame and oil resistant tube and cover.
- Grade T twin line welding hose has a smooth cover.
- All Grade T twin line reels are one continuous length of hose.
- Welding hose cover is red for fuel gas; green for oxygen.



All welding hose meets or exceeds the RMA – CGA – specifications.

Inert Hose - Cut Lengths

Hose Grade	Part No.	I.D.	Length	Fittings
		Inches	Feet	
Grade R	RH-14GH-10	1/4	10	IGF
	RH-14GH-25	1/4	25	IGF
	RH-14GH-50	1/4	50	IGF
	RH-14GH-6	1/4	6	IGF
	RH-14GH-8	1/4	8	IGF
	RH-15WH-10	1/4	10	IWF
	RH-15WH-25	1/4	25	IWF
	RH-15WH-50	1/4	50	IWF
	RH-15WH-6	1/4	6	IWF

Single Line Hose - Cut Lengths - Acetylene

Hose Grade	Part No.	I.D.	Length	Fittings
		Inches	Feet	
Grade R	RH-11A	3/16	6	AA
	RH-11B	3/16	6	BB
	RH-12A	3/16	12 1/2	AA
	RH-12B	3/16	12 1/2	BB
	RH-13A	3/16	25	AA
	RH-13B	3/16	25	BB

Single Line Reel

Hose Grade	Hose Color	Part No.	I.D. Inches
Grade R	●	RH-3017	3/16
	●	RH-3027	3/16
	●	RH-3117	1/4
	●	RH-3127*	1/4
	●	RH-3217*	1/4
	●	RH-3227	1/4
	●	RH-3417	5/16
	●	RH-3427	5/16
	●	RH-3617	3/8
	●	RH-3627	3/8
	●	RH-3717	1/2
	●	RH-3727	1/2
Grade T	●	TH-3017	3/16
	●	TH-3217	1/4
	●	TH-3617	3/8
	●	TH-3627	3/8
	●	TH-3717	1/2

● Red Hose ● Green Hose

Twin Line Reel

Hose Grade	Part No.	I.D. Inches
Grade R	RH-2106	3/16
	RH-2107	1/4
	RH-2108	5/16
	RH-2109	3/8
Grade RM	NH-1400	3/8
	NH-300	3/16
	NH-700	1/4
Grade T	TH-1600	3/16
	TH-1700	1/4
	TH-1800	5/16
	TH-1900	3/8

* Four spiral (remainder are two spiral)

Average reel is 700' in length.

Warning:

- If you cut or heat with an alternative fuel gas, Grade R or RM welding hose is not recommended.
- Grade R and RM hose is recommended for use with Acetylene Gas Only.
- Grade T welding hose is safe for use with Fuel Gases including Acetylene.

Tungsten Electrodes

Classification of Electrodes

Pure Tungsten

Color Code: Green

These electrodes are used mainly with alternating current (AC) for welding of aluminum and magnesium alloys. With this type of current, the tip of the EWP electrode forms a clean, balled end, which provides good arc stability. Pure tungsten is the least expensive, but is more prone to contamination of the weld than the other types of tungsten electrodes.

1% Thoria

Color Code: Yellow

Thorium dioxide dipped tungsten electrodes containing 0.8% to 1.2% ThO₂. They provide easy arc starting, stable arc, good current capacity, and resistance to weld pool contamination.

1.5% Lanthanated Tungsten

Color Code: Black

These electrodes can be used as a nonradioactive substitute for 2% thoriated tungsten. They will provide very similar performance with minimum amount of adjustment of operating conditions required. These materials are certified to be free of radioactivity.

2% Ceriated Tungsten

Color Code: Orange

2% Ceriated tungsten electrodes operate successfully with alternating current (AC) or direct current (DC), either polarity. The advantage of 2% Ceriated tungsten compared to Pure tungsten include increase ease of starting, improved arc stability and reduced rate of vaporization. Contrary to thoriated electrodes, Ceriated electrodes are not radioactive.

2% Thoriated Tungsten

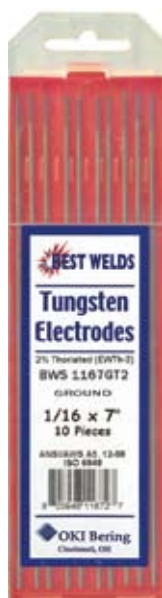
Color Code: Red

Thoriated tungsten electrodes, were designed for direct current electrode negative (DCEN) or straight polarity applications. They maintain a sharpened tip configuration during welding which is desirable for the welding of steels, nickel alloys, and most alloys other than aluminum and magnesium. Thoriated tungsten electrodes are not normally used with AC welding because it is difficult to maintain the balled end (which is necessary with AC welding) without splitting the electrode.

Zirconiated Tungsten

Color Code: Brown

Zirconiated Tungsten contains zirconium oxide, commonly known as zirconia. Zirconiated tungsten is generally preferred when welding applications require the tungsten contamination of the weld minimized. Zirconiated electrodes perform best when using alternating current (AC) because it will maintain a balled end during welding and has a very high resistance to weld contamination.



Part No. 1167GT2

Electrodes	Ground Part No.	Dia. (inches)	Length (inches)
Pure	0407G	.040	7
	1167G	1/16	7
	3327G	3/32	7
	187G	1/8	7
1% Thoriated	5327G	5/32	7
	0407GT	.040	7
	1167GT	1/16	7
	3327GT	3/32	7
1.5% Lanthanated	187GT	1/8	7
	0407GL	.040	7
	1167GL	1/16	7
	3327GL	3/32	7
2% Ceriated	187GL	1/8	7
	5327GL	5/32	7
	0407GC2	.040	7
	1167GC2	1/16	7
2% Thoriated	3327GC2	3/32	7
	187GC2	1/8	7
	5327GC2	5/32	7
	0407GT2	.040	7
Zirconiated	1167GT2	1/16	7
	3327GT2	3/32	7
	187GT2	1/8	7
	5327GT2	5/32	7
Zirconiated	0407GZ	.040	7
	1167GZ	1/16	7
	3327GZ	3/32	7
	187GZ	1/8	7
	5327GZ	5/32	7

All tungsten electrodes are packaged 10 pieces per box.

ANSI AWS A5.12-92 Classification System

Tungsten electrodes are classified on the basis of their chemical compositions.

E: stands for an electrode

W: stands for the chemical symbol for tungsten (also called Wolfram)

The final letter indicates the alloying element or oxide additions.

P: Pure

La: Lanthanated

Ce: Ceriated

Th: Thoriated

Zr: Zirconiated

G: stands for unspecified oxide additions

The numbers specify the nominal alloying composition (in weight - percent). For instance, EWTH-2 is a thoriated tungsten electrode that contains nominally 2 wt - % thoria.

For more information regarding tungsten electrodes:

A Guide to the Use of Tungsten Electrodes for GTA Welding, as printed in the *Welding Journal*. Authors: R.D. Campbell and E.J. LaCoursiere

The basics regarding tungsten electrode classifications, types, sizes, current types and levels, and recommended uses are explained.

Selection of Gases for Gas Tungsten Arc Welding (GTAW)

Metal	Type of Welding Process	Shielding Gas	Advantages
Aluminum and its alloys	Manual continuous	Argon	Better arc starting and cleaning action; lower gas consumption.
		Helium	High welding speeds possible.
	Machine continuous	Argon-Helium	Lower gas flow than required with straight helium.
Magnesium and its alloys	Less than 1/14 in.	Argon	Controlled penetration; excellent cleaning; ease of puddle manipulation; low gas flow.
	Greater than 1/14 in.	Helium	Good penetration; best for DC welding.
Carbon Steel	Manual continuous	Argon	Ease of manipulation; freedom from overheating; better puddle control, especially for position welding.
	Machine continuous	Argon-Helium	Helium addition improves penetration on heavy gage metal; preference depends on joint preparation.
	Spot	Argon	Generally preferred for longer electrode life, better weld nugget contour, ease of starting, lower gas flow.
Austenitic Chromium-Nickel Stainless Steel	Manual continuous	Argon	Permits controlled penetration on thin-gage material (up to 15 gage).
		Argon-Helium	Higher heat input and welding speeds possible on heavier gages.
	Machine continuous	Argon-Hydrogen (35% H ₂ max)	Prevents undercutting; produces desirable weld contour at low current levels; requires lower gas flows.
		Helium	Provides highest heat input and deepest penetration.
Copper, Nickel and their alloys		Argon	Ease of obtaining puddle control, penetration and bead contour on thin-gage metal.
		Argon-Helium	Higher heat input to offset high conductivity of heavier gages.
		Helium	Highest heat input for high welding speed on heavy metal section.
Titanium and its alloys		Argon	Low gas flow rate minimizes turbulence and air contamination of weld.
		Helium	Better penetration for welding of thick sections (inert-gas backing required to shield back of weld against contamination).

Neutra Wet Tungsten Grinder

- 110 volt grinder.
 - Coolant-containing/dust-receiving bottle.
 - Accessory box of supplies is included.
- Part No. W95/1**



Grinder Accessory Box Includes:

- (1) Electrode holder
- (4) Collets: .040", 1/16", 3/32", 1/8"
- (1) 8 oz bottle of coolant
- (1) Coolant disposal bottle
- (1) Spare side wall seal
- (1) Spacer piece

Replacement Parts and Accessories



Item	Part No.	Description
1	W95/1-05-1	Grinding wheel - long life
	W95/1-05-2	Grinding wheel - standard
2	W95/1-35	Side wall seal
3	W95/1-40	Grinding coolant - 1 gallon
4	W95/1-12	Grinding coolant - 8 oz.
5	W95/1-45	Coolant-containing/dust-receiving bottle
6	W95/1-34-C	Electrode holder (complete)
7	W95/1-27	Collet .040"
	W95/1-28	Collet 1/16"
	W95/1-29	Collet 3/32"
	W95/1-30	Collet 1/8"
	W95/1-31	Collet 5/32"

Tungsten Grinder / Coolers / Cable Covers

Neutra Portable Tungsten Grinder

- 110 volt grinder
- Coolant-containing/dust-receiving bottle.
- Carrying case containing grinder and supplies:

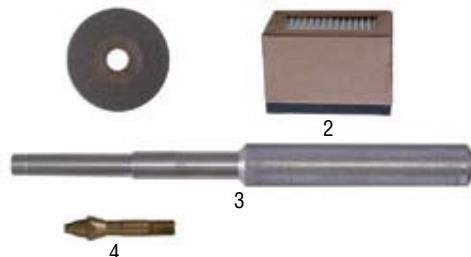
Part No. 88896022



Grinder Carrying Case Includes:

- (1) Portable Grinder
- (1) Electrode holder
- (3) Collets: 1/16", 3/32", 1/8"
- (2) Open-ended wrenches
- (2) Allen wrenches
- (1) Spare filter

Replacement Parts and Accessories



Item	Part No.	Description
1	44510030	Diamond grinding wheel
2	44510260	Filter cassette
3	44510050	Electrode holder
4	44510162	Collet 1/16"
	44510164	Collet 3/32"
	44510165	Collet 1/8"

MIG-TIG Cable Cover

- Abrasion resistant woven material.
- Non-conductive zipper with overlap flap to protect it from weld spatter.
- "Snug Straps" to secure both ends on torch.
- Ultraviolet light resistant.
- Acid/chemical resistant.
- Flame & tear resistant.



Part No.		Description	Size	
Value	Premium*		Width	Length
WC-3-10	CC310B	TIG 10'	3"	10'
WC-3-22		TIG 22'	3"	22'
	CC323B	TIG 23'	3"	23'
	CC410B	MIG 10'	4"	10'
	CC423B	MIG 23'	4"	23'

* Enter-Tube™ design innovation saves time by allowing the cover to be installed without disconnecting the torch from the power source.

Valu Coolers

- Ideal for MIG, TIG, Plasma, resistance, and Electro-Slag type welding.
- Features an all stainless steel tank, copper radiator coils, and a reinforced hose.
- Easy-to-read water indicators, quick change pumps and filters.
- Available in two compact styles with rigid motor mount to minimize damage and vibration.
- High efficiency, copper core and rustproof heat exchanger.



Part No. VC2500SS



Part No. VC3500SS

Model	VC2500SS	VC3500SS
Dimensions	17" x 11" x 14" (43.2 cm x 27.9 cm x 35.6 cm)	21-1/4" x 13-1/8" x 16-3/4" (54.0 cm x 33.3 cm x 42.5 cm)
Reservoir Capacity	2 gallon, stainless steel	3 gallon, stainless steel
Pump Capacity	100 PSI maximum 1.5 GPM (5.68 LPM) @ 50 PSI 1.8 GPM (6.81 LPM) @ 60 PSI	100 PSI maximum 1.5 GPM (5.68 LPM) @ 50 PSI 1.8 GPM (6.81 LPM) @ 60 PSI
Heat Exchanger	High efficiency, copper core, rustproof	High efficiency, copper core, rustproof
Motor Voltage	115 VAC single phase 60 Hz	115 VAC single phase 60 Hz
Amperage	6.8	6.8
Water Connections	1/4" NPT supplied w/ 5/8-18" UNC LH thread fitting	1/4" NPT supplied w/ 5/8-18" UNC LH thread fitting
Net Weight	29.3 lbs. (13.3 kg)	43 lbs. (19.5 kg)
Approximately Shipping Weight	34.3 lbs. (15.5 kg)	46 lbs. (20.9 kg)

Cable Covers

- Golden willow tanned leather.
- Adjustable to fit 1-1/2" to 1-3/4" diameter.
- Nickel plated snaps every 6 inches.

Part No. CC-10: 10'

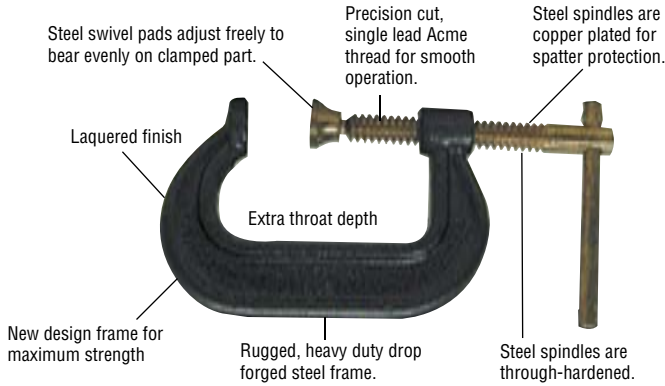
Part No. CC-23: 23'

Part No. CC-50: 50'

Part No. CC-100: 100'



C-Clamps



Never needs greasing-dry lubricated for smooth operation

Part No.	Capacity	Throat Depth	Proof Test (lbs.)
402P	0 Thru 2-1/8"	2-5/8"	3500
404P	0 Thru 4-7/16"	3-1/4"	6200
406P	0 Thru 6-1/16"	4-1/8"	6900
408P	0 Thru 8-3/16"	5"	6600
410P	2" Thru 10-1/8"	6"	8000
412P	2" Thru 12-3/16"	6-5/16"	9300

Cone and Chisel

This model features Flex-O steel coil hand grips welded to tough steel handle shafts. Heads are pinned for safety and reliability.

Part No. 000H



Tank Wrench

This 9" long combination wrench has a total of 10 openings from 7/16" to 1-1/8" including a boxed opening for B and MC acetylene valves and a socket for commercial acetylene cylinders.

Part No. 1013



Safety Tomahawks

Coil Handle Models

These popular models feature Flex-O steel coil hand grips welded to tough steel handle shafts. Heads are pinned for safety and reliability.

Replacement Parts:

Part No. 0029 - Coil Handle

Wood Handle Grip Models

Hickory handle shaped to fit the hand. Offers user comfort and directional feel.

Replacement Parts:

Part No. 0019 - Wooden handle



Part No. 000H



Part No. 000J

Part No.	Description
000G	Chisel & cross chisel
000H	Cone & chisel
0HCP	Cone & cross chisel
0HSS	Cone & chisel, stainless steel - 420 grade
000L	Super duty cone & chisel
0LCP	Super duty cone & cross chisel
000J*	Cone & chisel - 420 grade
0JSS*	Cone & chisel stainless steel

*Cone optional

Economy Tomahawks

Low cost Tomahawk manufactured under the same rigid standards as all other hammers. Coil handle.

Replacement Parts:

Part No. 0029 - Coil handle



Part No. S-20

Bulk No.	Description
S-10	Chisel & cross chisel
S-20	Cone & chisel
S-30	Cone & cross chisel

Layout Tools

Welders & Pipe Fitters “Rap-Around”

- Double ruled so both the top and bottom surfaces can be used for layouts - **it is never upside-down!**
- Packaged in its own clear plastic tube to protect it between uses.
- 12 per case.



Part No.	Description		
	Size	W x L	Pipe Size
RA150	small	2-1/2" x 2'	1" to 3"
RA160	medium	4" x 4' *	3" to 6"
RA170	large	4" x 6' *	3" to 10"
RA177	x-large	4" x 7' *	4" to 12"
RA179	xx-large	4" x 9' *	6" to 16"
RA184	Special "4"	4" x length desired	
RA185	Special "5"	5" x length desired	
RA187	Special "7"	7" x length desired	

* 36" area imprinted with layout information.



Wrap-A-Round®

An inexpensive tool for marking straight lines around pipe, or for use as a straight edge. Made out of flexible gasket material, with good resistance to heat and cold.



All Wrap-A-Rounds® are available in two colors. These designate material type and service temperature. GG (Gray) material is used for high temperature applications up to 550° F. B (Black) material has a service temperature of up to 350° F. Both material types are asbestos free.

Extra small and special order sizes are unmarked. All other sizes are printed with a scale in inches, pitch chart, tangent chart and other useful markings. Wrap-A-Rounds® in 3.88" and 5.00" feature a metric scale and pitch chart.

B (black)		GG (gray)		Size	Dimensions Width / Length	Pipe Diameter
Part No.	Item No.	Part No.	Item No.			
0720-0001	150B	0720-0027	150GG	Ex-small	1.94" x 2'	1" to 3"
0720-0004	152B	0720-0028	152GG	Small	2.50" x 2'	1" to 3"
0720-0007	164B	0720-0029	164GG	Medium	3.88" x 4'	3" to 6"
0720-0010	176B	0720-0030	176GG	Large	3.88" x 6'	3" to 10"
0720-0013	177B	0720-0031	177GG	Ex-large	5.00" x 7'	4" to 12"
0720-0016	179B	0720-0032	179GG	Ex-large	5.00" x 9'	6" to 16"
0720-0019	184B	0720-0033	184GG	Special	3.88" x length desired	
0720-0022	185B	0720-0034	185GG	Special	5.00" x length desired	
0720-0025	187B	0720-0035	187GG	Special	7.00" x length desired	

Special lengths available up to a maximum of 375'.

Centering Heads

Curv-O-Mark® Centering Heads aid in the setting of center lines, establishing angles and marks for butt-ins, locating points inside pipes and tanks, laying out keyways and measuring declivity.

The Standard Model is used on pipe 1/2" diameter and larger. It has a 4" Y-type head and is fitted with an adjustable dial bubble protractor (DSL) and a manually operated hardened centering pin.

The Jumbo Centering Head is for pipe 1" diameter and up. It has an 8" Y-type head, and a DSL. A spring loaded hardened centering pin eliminates the need for a hammer. Just make the alignment and press the trigger.



Part No. 0721-0005

Part No.	Stock No.	Description
0721-0005	6	Standard Centering Head
0721-0006	7	Jumbo Centering Head

Multi-Trammel Heads

For reliable marking using standard 1/2" pipe, heads feature radius set points cast in alignment with marking pointers for easy setting. Each is equipped with 1/4" screws and squared on the back side for perpendicular alignment. The stationary head holds a 1/4" case hardened center point. The moveable head has a 1/8" steel scribe hardened to 59 rockwell. The chalk holder will accept round, square or flat soapstone crayon, pencil or steel point scribe. Marks from 1-1/2" circle to any diameter needed, depending on length of pipe used as a trammel bar.

Heads are made from durable aluminum. Each set weighs approximately 8 oz. An allen wrench, soapstone, scribe and pointer are included.



Part No.	Stock No.	Description
0721-0016	19	Multi-Trammel Heads

Pipe Jacks / Scratch Brushes / Industrial Tape

Folding V-Head Pipe Stand

- 2,000 lb. capacity.
- Handles up to 36" (900 mm) pipe.
- Folding legs.
- Set screw.
- 1-1/2" acme adjustment thread.
- V-head locks for storage.
- Lightweight (21 lbs.).
- Convenient carrying handle.
- Large comfortable adjustment handle.
- 1" (25 mm.) square legs.
- Adjustable 27" to 42" height.

Part No. FVJACK



Tall V-Head Stand

- 2,500 lb. capacity
- Handles up to 36" (900 mm) pipe.
- Strut tension plate for lateral support.
- 1" square tube base construction.
- Lockwasher for fast height positioning.
- 1-1/2" (38 mm) Acme threads for accurate safe, setting.
- Heavy Duty, convenient adjustment handle.
- Set screw for doubles your margin of safety.
- Set screw locks head to stand for transportation.
- Load tested for quality assurance.

Part No. HDVJACK



Ball Transfer Head

- Fits over V-head.

Part No. OBTH



Scratch Brushes

Weld Cleaning and Inspection Brushes

Choice of brush material is stainless steel or straight brass, both materials are .006 gauge wire.



Block Size	No. of Row	Trim Length	Handle	Part No.	
				Steel	Brass
7-1/2" x 1/2"	3 x 7	1/2"	Wood	BW-189**	
				BW-190	
			Plastic	BW-190C*	
				BW-192	
8-3/4" x 1/2"	2 x 9	5/8"	Wood	BW-195	
				BW-195C*	
7-1/2" x 1/2"	3 x 7	1/2"	Wood		BW-205
					BW-205C*

* "C" items are packed 2 per card.

** Hand tied

Curved Handle Brushes



Block Size	Brush Length	No. of Row	Trim Length	Part No.	
				Steel	Stainless
13-3/4" x 15/16"	6"	3 x 19	1-1/8"	BW-103	BW-9103
13-3/4" x 1-1/8"		4 x 19	1-3/16"	BW-104	BW-9104

Shoe Handle Brush



Block Size	Brush Length	No. of Row	Trim Length	Part No.	
				Steel	Stainless
10" x 1-1/16"	5"	4 x 16	1-3/16"	BW-112	BW-9112

Acid Brushes



Width	Trim Length	Overall Length	Part No.
5-1/16"	3/4"	5-3/4"	BW-180 ¹
			BW-180C*
1/2"	3/4"	5-3/4"	BW-181 ¹

* "C" items are packed 6 per card.

¹ Sold by the gross.

Chipping Hammer Brushes

Brush material is .012 gauge steel wire.



Block Size	Brush Length	No. of Row	Trim Length	Part No.
4-5/8" x 7/8"	4-1/2"	3 x 15	1-1/8"	BW-135
				BW-135C*

* Stock numbers ending in "C" are display packed for P.O.P. merchandising.

3M INDUSTRIAL TAPE

Tartan™ Masking Tape 200

- Utility-purpose masking tape with rubber adhesive for general use.
- Suited for holding, bundling, sealing, and other non-critical masking applications.
- Use for jobs where pressure sensitive tape is needed.
- Economical natural colored tape available in three widths.
- Use in temperatures up to 200° F.
- Natural color tape.



Part No./UPC	Description
02120071183	1/2" x 36 yds. (12 mm x 33 m)
02120071180	1" x 36 yds. (25 mm x 33 m)
02120071177	2" x 36 yds. (50 mm x 33 m)

Double Coated Urethane Foam Tapes 4016

- This tape has an acrylic adhesive that seals, cushions vibrations, resists impacts, and insulates.
- It adheres to most clean, dry, rough, or smooth surfaces.
- Resists heat up to 380° F for short periods and 225° F for an extended time.



Part No./UPC	Description
02120006453	1/2" x 36 yds. (12 mm x 33 m)
02120006455	1" x 36 yds. (25 mm x 33 m)

Welding Filters/ Lenses

Quality Auto-Darkening Filters

Auto-darkening filters provide reliable protection against UV/IR emissions, heat, sparks and spatter in both dark and light state. When striking an arc, the filter automatically darkens; providing the following advantages: hands free use, UV/IR protection to your eyes and skin, faster and more efficient welding, better quality and less fatigue.

THREE YEAR 3 WARRANTY
on auto-darkening filter

Variable Shade 9-12 Auto-Darkening Filter

- Controls make it easier to adjust shade, sensitivity and delay.
- Filter comes with both a horizontal and vertical adapter (shown).
- Variable shade 9-12.
- **Switching Speed:** Varies 0.5s - 1.0s.
- **Active Viewing Area:** 1.9" x 3.8"
- Meets ANSI Z87.1-2003.

Part No. C54-V



Extended View - 4" x 5.25" Fixed Shade 10 Auto-Darkening Filter

The magenta area (the active portion) sits idle in shade 3 until you strike the arc. Once the arc is struck, the magenta area automatically switches to a fixed shade 10, matching the rest of the filter and giving the user an edge to edge viewing area. This allows for continuous protection and vision throughout the entire job.

- Solar powered with dual sensors.
- Water resistant.
- **Switching Speed:** Up to 0.3ms.
- **Active Magenta Area:** 1.6" x 3.8"
Edge to edge viewing area is 3.25" x 5"
- Meets ANSI Z87.1-2003.

Part No. HS54-10X



THREE YEAR 3 WARRANTY
on auto-darkening filter

2" x 4.25" Fixed Shade 10 Auto-Darkening Filter

- Patented ultra thin design.
- Solar powered with dual sensors.
- Water resistant.
- **Switching Speed:** Up to 0.3ms.
- **Active Viewing Area:** 1.4" x 3.4"
- Meets ANSI Z87.1-2003.

Part No. C24-10



THREE YEAR 3 WARRANTY
on auto-darkening filter

4.5" x 5.25" Auto-Darkening Filter

- Variable shade 9-12.
- Sequential colored light indicators for shade, sensitivity, and delay settings.
- Low battery indicated by lights flashing in sequence.
- Replaceable CR 2032 battery.

Part No. 600-333-A



THREE YEAR 3 WARRANTY
on auto-darkening filter

2" x 4.25" Auto-Darkening Filter

- Fits most popular helmets.
- Dark shade 10.5.
- Reliable in-the-window sensor bar – virtually eliminates sensor blocking.
- Sophisticated circuitry is always ready – no On/Off or other adjustments.
- Solar cell helps extend battery life.

Part No. 600-350-A



ONE YEAR 1 WARRANTY
on auto-darkening filter

Filter Accessories

Diopter HalfMag™ Lenses

- Top half doesn't magnify; bottom half does.
- Fits 4-1/2" x 5-1/4" or 90 mm x 110 mm Best Welds® brand auto-darkening welding filters.
- Replaces rear cover plate; no extra layer.
- Excellent clarity.

Part No. 600-336-A- 1.50 diopter lens

Part No. 600-337-A- 2.00 diopter lens

Part No. 600-338-A- 2.50 diopter lens



Inside Protection Plate

- Fits 4-1/2" x 5-1/4"

Part No. 600-335-A- pkg of 5



Reliable Protection; Making Welding Quick, Safe and Efficient

Balanced, ergonomically crafted and lightweight, Best Welds® welding helmets have been thoughtfully engineered to maximize performance and enable welders to work more efficiently and comfortably. Made of durable, incredibly heat resistant material with contours that not only look fantastic, but actually redirect spatter safely away from the cover plate.

**THREE YEAR WARRANTY**
on auto-darkening filter

Silver Welding Helmet with Variable Shade Auto-Darkening Filter

- Controls make it easier to adjust shade, sensitivity and delay.
- Filter comes with both a horizontal and vertical adapter (shown).
- Variable shade 9-12.
- **Switching Speed:** Varies 0.5s - 1.0s.
- **Active Viewing Area:** 1.9" x 3.8"
- Meets ANSI Z87.1-2003.

Part No. H54-SVG- Silver helmet w/ U.S. flag graphic

Part No. H54-SV Silver helmet

**THREE YEAR WARRANTY**
on auto-darkening filter



Part No. H54-SVG



Part No. H54-SV

Black Welding Helmet with Extended View Fixed Shade 10 Auto-Darkening Filter

- Solar powered with dual sensors.
- Water resistant.
- Affordable.
- **Switching Speed:** Up to 0.3ms.
- **Active Magenta Area:** 1.6" x 3.8"
Edge to edge viewing area is 3-1/4" x 5"
- Meets ANSI Z87.1-2003.

Part No. H54-10X- Black helmet w/ U.S. flag graphic

Part No. H54-10X- Black helmet

**THREE YEAR WARRANTY**
on auto-darkening filter



Part No. H54-10XG



Part No. H54-10X