

# SOLUTIONS/ For TIG (GTAW) Welding

Precision.

Arc Stability.

Shaping.

Control.

Cleaning.

Penetration.

Starting.

Portability.



Finally, TIG selection, made simple.

**/// Miller** 

Maxstar



# Get a bead on the best TIG welding solutions from Miller

DC Power Sources. AC/DC Power Sources. Squarewave Output. Squarewave Inverters. Single- or Three-Phase. Pulsing Capabilities. TIGRunners. TIG Torches. Coolant Systems. Foot Controls. Fingertip Controls. Running Gears. Automation.

*So many options... What's a TIG buyer to do?*  If you operate a TIG (GTAW) machine, you're a true craftsman. And you know that nothing about the process is simple... especially selecting your next TIG solution.

At Miller Electric, we understand that one technology or machine will not fit all applications. So we've created this *TIG Solutions Guide* to help you select a TIG solution that's tailor-made for your welding application, budget and skills.

This *TIG Solutions Guide* makes it simple to evaluate power sources, compare features and benefits, and learn about options and accessories that can add control, performance and convenience to your system.

No matter what TIG package you ultimately decide on, you can depend on Miller Electric for the very best in TIG performance. Miller patented Squarewave technology and balance control in 1976, and we continue to enhance the process with industry-leading innovation, from advanced Squarewave inverter technology to state-of-the-art primary power management.

If you want the best TIG solution, Miller's got the answers.





# Why should you purchase inverter technology or conventional technology?

# **Inverter Technology**

- Portability 70% less weight per amp of output
- Arc characteristics
   Notable arc stability and directional control
- Electrical versatility Auto-Line<sup>™</sup> and Auto-Link<sup>®</sup> eliminates connection errors
- Parameter flexibility Wider operating range of ALL parameters
- Multiprocess capability
   Superior arc characteristics in ALL processes

# **Conventional Technology**

- Reputation Syncrowave has been the industry standard since 1976
- Robust Time-tested toughness
- Arc characteristics Superior AC and DC TIG arc performance
- Cost vs. performance
   Outstanding arc quality at an economical price
- Multiprocess capability
   Superior arc characteristics in ALL processes

No matter what metal you weld, no matter if you work on a production line or on a job site, TIG's common element is control — a precise, controlled weld on even the thinnest material. However, each TIG application varies in the degree of precision, power output and portability required.

From our portable Maxstar<sup>®</sup> Series, to the leading edge Syncrowave<sup>®</sup> Series, to our multiprocess Dynasty<sup>™</sup> Series, Miller Electric has a TIG solution that's perfect for your application.

# Choosing your TIG Solution is as easy as 1,2,3,4,5

# Determine the Types of Metals You Will Be Welding.

Maybe you're a rancher in search of an all-around unit. Or the go-guy on the construction site. Perhaps you maintain city transit systems. Work on classic cars. Or weld precision aluminum parts for the aerospace industry.

Your choice of TIG power source is driven first and foremost by the type of material you will weld. This will determine whether you require a machine for *All Weldable Metals Except, Aluminum (DC)* or one that is for *All Weldable Metals (AC/DC)*.

Select the types of metal you weld, "All Metals Except, Aluminum" or "All Weldable Metals".

![](_page_3_Picture_6.jpeg)

# Determine the Thickness of the Materials You Will Be Welding.

The thickness of the materials you weld is another critical factor in choosing your power source. Metal thickness determines the output (amperage) you will need to get the job done.

Regardless of how you use the TIG process, Miller has the product to deliver the performance you need. For thin materials and MRO, consider a 1-200 amp machine. Light manufacturing and MRO applications require 5-300 amps, and professional arc characteristics. For fabrication consider a power supply with 3-400 amps, while heavy applications require up to 700 amps.

Based on the range of *metal thicknesses* you will be welding, select a power supply from the "All Metals Except, Aluminum" or "All Weldable Metals" sections. Compare features and accessories to choose the product best suited to your needs.

# Locate a Packaged Solution That Suits Your Welding Application.

Now that you've selected a power supply, determine if Miller offers a *Packaged Solution*. Our preconfigured system solutions offer maximum compatibility, and get you up and running fast.

Review the "Packaged Solutions" section to determine if the power supply you selected is available in a package.

# Select Accessory Components That Add Performance to Your System.

If your application has unique requirements, you will need to add specific components to your power supply selection.

Fine-tune your system with the accessories that your application requires. Want the best TIG torch in the business? Check out the Diamondback<sup>™</sup> TIG torches. Need to run cool and compact? Add a Miller coolant system. Need control at a distance? Look at Miller's foot pedal or fingertip controls. Want mobility? Add a running gear.

Review the "Accessories" section to locate components that add functionality.

# Select Automation Products for Advanced Production Capabilities.

Need the consistency and efficiency of automated production? Miller has the components you need.

## Review the "Automation" section to locate components such as:

- Automatic Voltage Control Maintains a consistent arc length for higher weld quality and repeatability.
- Cold Wire Feeder Provides a continuous supply of wire to the weld pool no matter how long the weld is.
- Magnetic Arc Oscillator Increases travel speed and improves thick to thin weld placement. Eliminates undercutting, lack of fusion, and arc wander.

Each weld has its own special demands for cleaning, penetration and bead appearance. Inverter-based AC/DC power sources, especially those with controlled Squarewave output created by Miller's wave-shaping technology, allow you to tailor the arc to achieve the exact bead profile required: narrow beads with less etching for detail work, wider beads with more cleaning action, fill-in for fillet-type welds.

# All weldable metals except, aluminum

Choose the power supply based on the thickness of the material you'll be welding.

Maxstar 140 STR

![](_page_5_Picture_4.jpeg)

Dimensions H: 8 in (203 mm) W: 4<sup>1</sup>/<sub>4</sub> in (108 mm) D: 12<sup>1</sup>/<sub>4</sub> in (311 mm) Net Weight 10 lb (4.5 kg) Stock Numbers #903 643 Stick #903 830 Stick/TIG

Simple TIG starting with

Dual amperage range for

■ Miller's True Blue<sup>®</sup> Warranty:

1 year — parts and labor

115 or 230 V power

Miller's unique Lift-Arc<sup>™</sup> system

The Maxstar® 140 STR uses advanced inverter technology to put a complete DC TIG or Stick welding package in your hands. All you need is filler material and/or shielding gas and you are ready to weld. The Maxstar 140 STR delivers a welding output of 5-140 amps. With this power and weight even the tough jobs are easy to accomplish.

The Maxstar 140 STR carrying case provides a simple means for transporting, storage and protection of the machine, TIG torch, electrode holder, work clamp, and regulator.

#### FEATURES

- 2 packages available Stick/TIG and Stick only
- Remote amperage control (only), provided by 6-pin connector
- Auto-Link<sup>®</sup> adapts to 115 or 230 V

#### PACKAGES

Stick Package includes 13 ft (4 m) Stick Electrode Holder, 10 ft (3 m) Work Clamp, and Shoulder Strap.

Stick/TIG Package includes 13 ft (4 m) Stick Electrode Holder, 10 ft (3 m) Work Clamp, 150 Amp DB17V122 TIG Torch with Quick-Connect, Regulator, Shoulder Strap, and Carrying Case.

#### ACCESSORIES

Carrying Case, TIG Accessory Kit, Diamondback™ TIG Torches.

#### Greater than 1/8 inch but less than 1/4 inch

Less than 1/8 inch

#### Maxstar 200 SD

Dimensions H: 13<sup>1</sup>/<sub>2</sub> in (343 mm)

Lockout protection protects

Adjustable start parameters

HF start provides non-contact

and operator changes

Dual digital meters

for TIG

arc starting

Shoulder strap

10 ft primary cord

against parameter tampering

The Maxstar<sup>®</sup> 200 Series features Auto-Line<sup>™</sup> technology, the most advanced inverter power management circuitry in the welding industry. allowing the end user to automatically connect to any input power, 120-460 volt, single- or three-phase.

Built-in gas solenoid and HF means there are no additional accessories. required. With 1-200 amps of welding output, the Maxstar 200 Series provides the operator with superior low-end DC TIG or high-end DC Stick performance. Weighing in at 37 lb (16.8 kg), the Maxstar 200 is built to function dependably under the most demanding conditions.

#### FEATURES

- SD model provides basic features for TIG/Stick
- Auto-Line<sup>™</sup> adapts to 120-460 VAC. singleor three-phase
- Fan-On-Demand<sup>™</sup> cooling system only operates when needed
- Easy TIG starting with Miller's unique Lift-Arc<sup>™</sup> system

#### ACCESSORIES

Coolant System: Coolmate<sup>™</sup> 3. 4. or V3: Remote Controls: RCC-14. RCCS-14. RFCS-14, RFCS-14 HD, RMLS-14, RMS-14; Diamondback™ TIG torches.

![](_page_5_Picture_31.jpeg)

Maxstar 200 DX

H: 13<sup>1</sup>/<sub>2</sub> in (343 mm) W: 7<sup>1</sup>/<sub>2</sub> in (191 mm) D:  $17^{1/2}$  in (445 mm) Net Weight 37 lb (16.8 kg) Stock Number #903 701-01-1

Dimensions

Easy TIG starting with Miller's

unique Lift-Arc<sup>™</sup> system

and operator changes

Dual digital meters

for TIG

arc starting

Shoulder strap

10 ft primarv cord

Lockout protection protects

Adjustable start parameters

HF start provides non-contact

against parameter tampering

The Maxstar<sup>®</sup> 200 Series features Auto-Line<sup>™</sup> technology, the most advanced inverter power management circuitry in the welding industry. allowing the end user to automatically connect to any input power, 120-460 volt, single- or three-phase.

Built-in gas solenoid, pulser, sequencer and HF means there are no additional accessories required. With 1 – 200 amps of welding output, the Maxstar 200 Series provides the operator with superior low-end DC TIG or high-end DC Stick performance. Weighing in at 37 lb (16.8 kg), the Maxstar 200 is built to function dependably under the most demanding conditions.

#### FEATURES

- DX model provides pulser (full-function) and sequencer (initial/final slope and initial/final amperage) control
- Auto-Line<sup>™</sup> adapts to 120-460 VAC, singleor three-phase
- Fan-On-Demand<sup>™</sup> cooling system only operates when needed

#### ACCESSORIES

Coolant System: Coolmate™ 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14 HD, RMLS-14, RMS-14; Diamondback™ TIG torches.

See Literature Sheet Requires 1-Phase Input See Literature Sheet Requires 1- or 3-Phase Input See Literature Sheet Requires 1- or 3-Phase Input Supplies DC, Constant Current Weld Output Supplies DC, Constant Current Weld Output Supplies DC, Constant Current Weld Output No DC/29 No. DC/32 No DC/32

W: 7½ in (191 mm) D: 17<sup>1</sup>/<sub>2</sub> in (445 mm) Net Weight

37 lb (16.8 kg) Stock Number #903 701

![](_page_5_Picture_46.jpeg)

# Product features

	Welding Amperage Range	Max. Open- Circuit Voltage	Input Power	DETIN	alStick Autor	Line Autor	Link Porta	ile 13st P	nosedure	Built	n Pulsing	NN Posti	ow Section	Digital	Meters	e Built-	Adjust	Adapti Adapti	ve Hotes	Dig Cf	antrol VI	Packa	at s hall?	Iner Ava	Technolo	
Maxstar 140 STR	5-140 A	93	120/230					Â		~	/								$\sim$	c			$\sim$		\$	List Price Key:
Maxstar 200 SD	1-200 A	80	120/460				L																		\$\$	\$ (1900 or less)
Maxstar 200 DX	1-200 A	80	120/460	2				X											D				<u>}</u>		\$\$	\$\$ (1901 - 3000) \$\$\$ (3001 - 5000)
Maxstar 300 SD	5-300 A	95	230/460				29	C													Opt				\$\$\$	\$\$\$\$ (5001 - 700)
Maxstar 300 DX	5-300 A	95	230/460		<		1	D	s)			<u>í</u>									Opt			U	\$\$\$	\$\$\$\$ (7000+)
		_																		•		•				

Maxstar 300 DX

**Greater than 1/4 inch** 

### Maxstar 300 SD

![](_page_6_Picture_4.jpeg)

**Dimensions** H: 17 in (432 mm) W: 12½ in (318 mm) D: 24 in (610 mm)

Net Weight 85 lb (39 kg) Stock Numbers #903 836-01-1 w/115 Aux #903 836-01-1 w/115 Aux

High frequency is available

Dual digital meters display

percentage, or frequency

Lockout protection protects

and operator changes

10 ft primary cord

Requires 1- or 3-Phase Input

Supplies DC, Constant Current Weld Output

Line voltage compensation

Thermal overload protection

against parameter tampering

for applications requiring a

non-contact starting method

amps and volts, also displays

actual or preset values: seconds.

The Maxstar<sup>®</sup> 300 Series combines advanced inverter technology with a high-end TIG power source to offer you superior arc performance. The Maxstar's front panel interface allows the operator complete set-up capabilities in a compact size machine, and offers more precise control of output parameters compared to traditional knobs and switches.

#### FEATURES

- SD model provides basic features for TIG/Stick
   Auto-Link<sup>®</sup> automatically
- links the power source to 230 or 460 V primary input voltage
- Fan-On-Demand<sup>™</sup> cooling system only operates when needed
   ■ Easy TIG starting with Miller's
- unique Lift-Arc<sup>™</sup> system ■ Adjustable start parameters
- for TIG ■ Wind Tunnel Technology™

#### ACCESSORIES

See Literature Sheet

No. DC/24

Carts: Cylinder Cart, Deluxe Carrying Cart and Cylinder Rack, Universal Cart and Cylinder Rack; Coolant Systems: Coolmate™ 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14, RMLS-14, RMLS-14; Diamondback<sup>™</sup> TIG torches.

Dimensions H: 17 in (432 mm) W: 12½ in (318 mm) D: 24 in (610 mm) Net Weight 85 lb (39 kg)

Adjustable start parameters

■ Wind Tunnel Technologv<sup>™</sup>

High frequency is available

Dual digital meters display

for applications requiring a

non-contact starting method

amps and volts, also displays

onds, percentage, or frequency

against parameter tampering

actual or preset values: sec-

Lockout protection protects

and operator changes

Supplies DC, Constant Current Weld Output

10 ft primary cord

**Requires 1- or 3-Phase Input** 

Line voltage compensation

Thermal overload protection

for TIG

85 lb (39 kg) Stock Numbers #903 836-01-2 w/o 115 Aux #903 836-02-1 w/115 Aux

The Maxstar<sup>®</sup> 300 Series combines advanced inverter technology with a high-end TIG power source to offer you superior arc performance. The Maxstar's front panel interface allows the operator complete set-up capabilities in a compact size machine, and offers more precise control of output parameters compared to traditional knobs and switches.

#### FEATURES

- DX model provides full-function pulsing and sequence control
   Built-in pulser reduces heat
- input; adds arc stability Memory recall stores up to
- 4 weld procedures ■ Auto-Link<sup>®</sup> automatically links the power source to 230 or 460 V primary input voltage
- Fan-On-Demand<sup>™</sup> cooling system only operates when needed
- Easy TIG starting with Miller's unique Lift-Arc<sup>™</sup> system

#### ACCESSORIES

See Literature Sheet

No. DC/24

Carts: Cylinder Cart, Deluxe Carrying Cart and Cylinder Rack, Universal Cart and Cylinder Rack; Coolant Systems: Coolmate<sup>™</sup> 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14, RMLS-14, RMLS-14; Diamondback™ TIG torches.

**Real World Challenge** ISSUE Welding unit reliability on the plant floor was the biggest issue for a fabricator of process flow systems for the dairy, food and beverage industry. The company also needed a power source designed to withstand airborne contaminants that could provide positive arc starts and good tail-off at the end of the weld (crater control) to avoid marking the stainless. Miller's Maxstar® 300 DX 300 amp, SOLUTION inverter-based. TIG power source that weighs just 85 lb. "The Wind Tunnel Technology really RESULTS appealed to me," says A&B's maintenance supervisor George "Diddy" Mess. "The air flows through the machine in such a way that it doesn't blow over the electronic components, so grinding dust can't get at the PC boards.' Turning real world challenges into real world solutions. THE POWER OF BLUE.

art for TIS stick

POWER DIE ON

Metals

# All weldable metals

Choose the power supply based on the thickness of the material you'll be welding.

## Greater than 1/8 inch but less than 5/16 inch

Less than 1/8 inch

ADDITIONAL FEATURES OF

Start time/spot time control

Sequence selection switch

Start/final current control

FULL-FEATURE MODEL

Crater time control

Full-function pulser

### Syncrowave 180 SD

![](_page_7_Picture_6.jpeg)

W: 13<sup>5</sup>/<sub>8</sub> in (346 mm) D: 22<sup>1</sup>/<sub>8</sub> in (562 mm) Net Weight 210 lb (95 kg) Stock Number #903 600

Built-in HF arc starter and

Fixed balance control

Quick connect leads

Preflow/postflow

stabilizer

Dimensions

H: 21 in (533 mm)

The Syncrowave® 180 SD is a complete single-phase TIG/Stick Squarewave power source package. All you need is filler material, a bottle of shielding gas and/or some Stick electrodes and you're ready to start welding. With proven Squarewave technology, the Syncrowave 180 SD packs a maximum 180 amps, or 150 amps at 40% duty cycle. The Syncrowave 180 SD is a full-featured machine that brings you capabilities which were previously available only with heavy-duty industrial TIG equipment.

#### FEATURES

- Squarewave output
- 150 amps at 40% duty cycle
- 180 amps maximum output
- Single-range output
- Line voltage compensation
- Built-in gas solenoid

#### COMES COMPLETE WITH

Syncrowave 180 SD with Primary Cord, 150 Amp DB1712RDI TIG Torch with Quick-Connect, 12 ft (3.7 m) Work Cable with Clamp and Quick-Connect, Electrode Holder with Quick-Connect, RFCS-14 Remote Foot Control with 20 ft (6 m) Cord, Gas Regulator and Gas Hose.

#### ACCESSORIES

Carts: Deluxe Carrying Cart and Cylinder Rack, No. 29 Running Gear, Universal Carrying Cart and Cylinder Rack: Remote Controls: RCC-14. RCCS-14. RFCS-14. RFCS-14 HD, RHC-14, RMS-14.

#### Dimensions H: 34 in (864 mm) W: 221/2 in (572 mm) D: 25 in (635 mm) Net Weight New! 389 lb (176 kg) Stock Numbers **#903 726** 200/230/460 **#903 758** 230/460/575

Syncrowave 250 DX

The Syncrowave® 250 DX delivers excellent welding performance, control and versatility. The basic machine includes all the essential features you need for high-precision AC TIG welding, plus the flexibility to handle a wide variety of metals. It offers an effective solution in any light industrial situation that requires constant current Squarewave technology.

Efficient and adaptable, the single-phase Syncrowave 250 DX is a great choice for fabrication shops as well as vocational training facilities. Its low-profile case fits neatly into any industrial location, while its rugged construction ensures reliable operation under constant use. A number of available options allows you to start simple and add features as you need them. This high-performance machine pays off with extraordinary value.

#### FEATURES

- Squarewave output
- Balance/dig control
- 310 amps maximum output,
- 250 amps at 40% duty cycle
- Unique Lift-Arc<sup>™</sup> for TIG starts Last procedure recall
- Access door for primary hook-up
- Dual digital meters
- Preflow/postflow

#### ACCESSORIES

Running Gear: No. 28; Coolant Systems: Coolmate<sup>™</sup> 3, 4, or V3, Cool Runner<sup>™</sup> 3X; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14 HD, RHC-14, RMLS-14, RMS-14; Power Factor Correction; Diamondback™ TIG torches.

**Dynasty 300 Series** 

![](_page_7_Picture_36.jpeg)

D: 24 in (610 mm)

Stock Numbers #903 832 w/o 115 Aux #903 832-01-1 w/115 Aux #903 832-01-2 w/o 115 Aux #903 832-02-1 w/115 Aux

The Dynasty<sup>™</sup> 300 Series combines the advantages of advanced inverter technology with the built-in features of a high-end TIG power source offering you superior arc performance. Dynasty allows the operator extra set-up capabilities in a compact machine, and offers more precise control of output parameters compared to traditional knobs and switches.

#### FEATURES

SD — Provides basic features for TIG/Stick DX - Provides pulse on/off

and frequency, peak % time, background amperage, initial amperage and slope time, final slope time and amperage

- Advanced Squarewave arc stabilizes the arc on low power Built-in pulser reduces heat
- input; adds arc stability (DX/LX model only)

- Memory recall stores up to 4 weld procedures per process (DX/LX model only)
- Auto-Link<sup>®</sup> automatically links the power source to the primary input voltage ■ Fan-On-Demand<sup>™</sup>
- Unique Lift-Arc<sup>™</sup> for TIG starts
- Wind Tunnel Technology™ Lockout protection
- Dual digital meters
- 10 ft primary cord

ACCESSORIES

Carts: Cylinder Cart, Deluxe Carrying Cart and Cylinder Rack, Universal Cart and Cylinder Rack; Coolant Systems: Coolmate™ 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14 HD, RHC-14, RMLS-14, RMS-14; Diamondback<sup>™</sup> TIG torches.

See Literature Sheet Require Supplie	res 1-Phase Input	See Literature Sheet	Requires 1-Phase Input	See Literature Sheet	Requires 1- or 3-Phase Input
	es AC/DC, Constant Current Weld Output	No. AD/4.2	Supplies AC/DC, Constant Current Weld Output	No. AD/5.0	Supplies AC/DC, Constant Current Weld Output

Dimensions H: 17 in (432 mm) W: 121/2 in (318 mm)

Net Weight 90 lb (41 kg)

All Weldable

Metals

# Product features

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		Welding	Max. Open-			20	ctick	*	150	1210	Juen	"le	se dent	. 0.	ced!	Re	PUIS	N		e	Net!	8°	-Xt	ner	1° 40	, Del	in trol	CAU	the Phil	r et	180.	°.
		Amperage	Circuit	Input	0	6.6	<u>ري</u>	LIII 10	ICC. 13	en fr	,e01, 11	3 at les	1811. 13	910 J	ero m	50° 11	IN AL	JW ST	Howai	envil	31 1	ALC IN	In	Jar al	ill's a	24.6	ont	N. CA	alle ch	univer	le. Sh	•
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	Syncrowave 180 SD	10-180 A	80	230																											\$	List Price Key:
	Syncrowave 250 DX	5-310 A	80	200/230/460/575	D							6				Opt			Opt					D			D				\$\$	\$ (1900 or less)
	Dynasty 300 SD	5-300 A	95	230/460		D																					Opt				\$\$\$	\$\$ (1901 – 3000)
	Dynasty 300 DX	5-300 A	95	230/460		D																					Opt				\$\$\$	\$\$\$ (3001 - 5000)
	Syncrowave 350 LX	3-400 A	80	200/230/460/575															Opt												\$\$\$	\$\$\$\$ (5001 - 7000)
	Aerowave	1-375 A	90	200/230/460/575	D											Opt	Opt		Opt												\$\$\$\$\$	\$\$\$\$\$ (7000+)
	Syncrowave 500	25-625 A	80	200/230/460												Opt	Opt														\$\$\$\$\$	

e AC out of control control

**Greater than 1/4 inch** 

Aerowave

## Syncrowave 350 LX

![](_page_8_Picture_4.jpeg)

**Dimensions** H: 37% in (962 mm) W: 22% in (581 mm) D: 25¼ in (641 mm)

Net Weight 515 lb (234 kg) Stock Numbers #903 513 200/230/460 #903 514 230/460/575

The Syncrowave<sup>®</sup> 350 LX is an exceptional single-phase TIG/Stick power source designed for the master welding craftsman. When the work demands the arc control of Squarewave technology, premium performance and the highest levels of efficiency and functionality, the Syncrowave 350 LX meets the challenge.

The Syncrowave 350 LX front panel has been simplified, making it more user friendly. Easy-to-use pushbuttons make process set-up a snap. The standard model is equipped with preflow/postflow and pulser.

#### FEATURES

- Squarewave output
- Balance/dig control
- 400 amps maximum output, 350 amps at 40% duty cycle
   Unique Lift-Arc™ for TIG starts
- Start time/spot time control
   Crater time control
   Sequence selection switch
   Start/final current control

ADDITIONAL FEATURES OF

FULL-FEATURE MODEL

- Full-function pulser
- Last procedure recall
- Access door for primary hook-up
- Dual digital meters
- Preflow/postflow

#### ACCESSORIES

Running Gear: No. 28; Coolant Systems: Coolmate<sup>™</sup> 3, 4, or V3, Cool Runner<sup>™</sup> 3X; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14 HD, RHC-14, RMLS-14, RMS-14; Power Factor Correction; Diamondback<sup>™</sup> TIG torches.

#### W: 24 in (615 mm) D: 22<sup>3</sup>/<sub>4</sub> in (583 mm) Net Weight 351 lb (158 kg) Stock Numbers #903 329 200/230/460

**#903 330** 230/460/575

H: 35½ in (910 mm)

Dimensions

The Aerowave<sup>®</sup> AC/DC power source is the most exciting advancement in TIG (GTAW) since AC balance control and Squarewave. This premium AC and DC TIG power source expands TIG welding capabilities beyond common Squarewave machines, allowing the operator to control the arc as never before.

With the Aerowave power source, Miller introduces an exclusive — total AC arc-shaping capabilities. The Aerowave unit's AC waveform can be completely adjusted to:

Increase travel speed and improve quality of AC TIG application

Stabilize the arc cone and reduce arc wandering for better performance on fillet welds and automated applications

Control penetration and bead appearance to meet user's requirements

FEATURES	ADDITIONAL FEATURES WITH
■ Independent current control	FULL-FEATURE MODULE
■ Adjustable frequency (Hz)	TIG (GTAW) trigger
■ Balance control (%EN)	hold switch
■ Unique Lift-Arc™ for TIG starts	Preflow time
■ Dual digital meters	Initial/final sequence
■ Line voltage compensation	Pulser
■ Overload protection	Sont time controls
Overload protection	Spot time controls

#### ACCESSORIES

Running Gear: No. 17; Coolant Systems: Coolmate<sup>™</sup> 3, 4, or V3; Extension Cords; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14 HD, RHC-14, RMLS-14; Full-Feature Module; Diamondback<sup>™</sup> TIG torches.

# Syncrowave 500

tor The Stick

![](_page_8_Picture_32.jpeg)

**Dimensions** H: 47 in (1193 mm) W: 31<sup>1</sup>⁄<sub>4</sub> in (794 mm) D: 22<sup>3</sup>⁄<sub>4</sub> in (577 mm)

ower .e

Net Weight 875 lb (397 kg)

Stock Numbers #902 403 200/230/460 #902 404 230/460/575

With a maximum output of 625 amps, the Syncrowave® 500 has the power to meet the needs of heavy industrial production schedules. Its tall "bookshelf" style case encloses a machine that offers the ultimate in versatility, accuracy and reliable performance. The most technically demanding applications are easily handled with the 500's full spectrum of professional features.

The front-mounted control panel puts complete control at the operator's fingertips. Standard operating features include start current control, crater fill control and power factor correction. With available accessories, the Syncrowave 500 makes automating complicated AC TIG operations easy and straightforward. Optional solid-state equipment allows precise weld programming with full control over timing, slope and current parameters.

#### FEATURES

- Output range of 25 625 amps
   Full instrumentation including
- voltmeter and ammeter
- Process selector switch
- Simplified front control panel
- and durability to withstand the most rigorous production schedules

ranges and processes

Premium arc performance in all

Built with exceptional strength

ACCESSORIES

Running Gear: No. 17; Coolant Systems: Coolmate<sup>™</sup> 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14 HD; Preflow Timer, Spot Weld Timer, Pulser; Diamondback<sup>™</sup> TIG torches.

See Literature Sheet         Requires 1-Phase Input           No. AD/4.3         Supplies AC/DC, Constant Current Weld Output	See Literature Sheet No. AD/6.0	Requires 1- or 3-Phase Input Supplies AC/DC, Constant Current Weld Output	See Literature Sheet No. AD/4.5	Requires 1-Phase Input Supplies AC/DC, Constant Current Weld Outr

# Packaged solutions

# Maxstar 300 DX TIGRunner

![](_page_9_Picture_3.jpeg)

The Maxstar<sup>®</sup> 300 Series combines advanced inverter technology with a high-end TIG power source to offer you superior arc performance. The Maxstar's front panel interface allows the operator complete set-up capabilities in a compact size machine, and offers more precise control of output parameters compared to traditional knobs and switches.

#### FEATURES See Maxstar 300 DX Listing

#### MAXSTAR 300 DX TIGRUNNER

Includes Maxstar 300 DX with Auxiliary Power, Coolmate<sup>™</sup> 3, Deluxe Carrying Cart and Cylinder Rack, International TIG Torch Adapter, and Remote Foot Control (completely assembled).

#### MAXSTAR 300 DX TIGRUNNER WITH TORCH

Includes Maxstar 300 DX with Auxiliary Power, Coolmate<sup>™</sup> 3, Deluxe Carrying Cart and Cylinder Rack, International TIG Torch Adapter, and Remote Foot Control (completely assembled). Also a 25 ft, 250 Amp DB20M25R Water-Cooled Diamondback<sup>™</sup> Torch, Work Clamp, 10 ft Gas Hose, Regulator/Flowmeter, Cable Cover and an AK-4 Accessory Kit.

#### ACCESSORIES

Carts: Cylinder Cart, Deluxe Carrying Cart and Cylinder Rack, Universal Cart and Cylinder Rack; Coolant Systems: Coolmate™ 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14, RMCS-14, RMLS-14, RMS-14; Diamondback<sup>™</sup> TIG torches.

# **Dynasty 300 SD TIGRunner**

![](_page_9_Picture_13.jpeg)

The Dynasty<sup>™</sup> 300 Series combines the advantages of advanced inverter technology with the built-in features of a high-end TIG power source offering you superior arc performance. Dynasty allows the operator extra set-up capabilities in a compact machine, and offers more precise control of output parameters compared to traditional knobs and switches.

FEATURES See Dynasty 300 Series Listing

#### DYNASTY 300 SD TIGRUNNER

Includes Dynasty 300 SD with Auxiliary Power, Coolmate<sup>™</sup> 3, Deluxe Carrying Cart and Cylinder Rack, and Remote Foot Control (completely assembled).

#### DYNASTY 300 SD TIGRUNNER WITH TORCH

Includes Dynasty 300 SD with Auxiliary Power, Coolmate<sup>™</sup> 3, Deluxe Carrying Cart and Cylinder Rack, and Remote Foot Control (completely assembled). Also a 25 ft, 250 Amp DB20M25R Water-Cooled Diamondback<sup>™</sup> Torch, Work Clamp, 10 ft Gas Hose, Regulator/Flowmeter, Cable Cover and an AK-4 Accessory Kit.

#### ACCESSORIES

Carts: Cylinder Cart, Deluxe Carrying Cart and Cylinder Rack, Universal Cart and Cylinder Rack; Coolant Systems: Coolmate<sup>™</sup> 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14, RFCS-14, RMLS-14, RMLS-14; Diamondback<sup>™</sup> TIG torches.

# **Dynasty 300 DX TIGRunner**

![](_page_9_Picture_23.jpeg)

The Dynasty™ 300 Series combines the advantages of advanced inverter technology with the built-in features of a high-end TIG power source offering you superior arc performance. Dynasty allows the operator extra set-up capabilities in a compact machine, and offers more precise control of output parameters compared to traditional knobs and switches.

#### FEATURES See Dynasty 300 Series Listing

#### **DYNASTY 300 DX TIGRUNNER**

Includes Dynasty 300 DX with Auxiliary Power, Coolmate<sup>™</sup> 3, Deluxe Carrying Cart and Cylinder Rack, and Remote Foot Control (completely assembled).

#### DYNASTY 300 DX TIGRUNNER WITH TORCH

Includes Dynasty 300 DX with Auxiliary Power, Coolmate<sup>™</sup> 3, Deluxe Carrying Cart and Cylinder Rack, and Remote Foot Control (completely assembled). Also a 25 ft, 250 Amp DB20M25R Water-Cooled Diamondback<sup>™</sup> Torch, Work Clamp, 10 ft Gas Hose, Regulator/Flowmeter, Cable Cover and an AK-4 Accessory Kit.

#### ACCESSORIES

Carts: Cylinder Cart, Deluxe Carrying Cart and Cylinder Rack, Universal Cart and Cylinder Rack; Coolant Systems: Coolmate<sup>™</sup> 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14, RFCS-14, RMLS-14, RMLS-14; Diamondback<sup>™</sup> TIG torches.

Packaged Solutions

Requires 1- or 3-Phase Input Supplies DC, Constant Current Weld Output See Literature Sheet No. AD/5.0 Requires 1- or 3-Phase Input Supplies AC/DC, Constant Current Weld Output See Literature Sheet No. AD/5.0 Requires 1- or 3-Phase Input Supplies AC/DC, Constant Current Weld Output

# Product features

	Welding Amperage Range	Max. Open Circuit Voltage	- Input Power	DU	IG STIC	A THE	C Stick	Link	nced Sol	Hand New AC	e Action Adi	et Ctop	Salar. Proced	Ine Ref	all Puls	ow Post	10W Sent	ence cr	al Mete	AFG BUIL	Adin	Adar	tot Fan	Str. Dig	antrol ontrol	AC AUX	Packs	oe Ave	ter recht	0 (6 <sup>8</sup>
Maxstar 300 DX TIGRunner	5-300 A	95	230/460				Ϋ́	ń.																			Opt		\$\$\$\$	List Price Key:
Dynasty 300 SD TIGRunner	5-300 A	95	230/460																			È.		Ľ	-	Δ.	Opt		\$\$\$\$	\$ (1900 or less)
Dynasty 300 DX TIGRunner	5-300 A	95	230/460																								Opt	[1]	\$\$\$\$	\$\$ (1901 – 3000)
Syncrowave 180 SD Runner	10-180 A	80	230	/	D		2																$\sim$					عر ر	\$\$	\$\$\$ (3001 – 5000)
Syncrowave 250 DX TIGRunner	5-310 A	80	200/230/460/575	6			7	٩.,						Opt									<b>T</b>				Opt		\$\$\$	\$\$\$\$ (5001 – 7000)
Syncrowave 350 LX TIGRunner	3-400 A	80	200/230/460/575	<				$\sim$				Í.									ð					U	Opt	·	\$\$\$\$	\$\$\$\$\$ (7000+)

# Syncrowave 180 SD Runner

![](_page_10_Picture_3.jpeg)

The Syncrowave® 180 SD is a complete single-phase TIG/Stick Squarewave power source package. All you need is filler material, a bottle of shielding gas and/or some Stick electrodes and you're ready to start welding. With proven Squarewave technology, the Syncrowave 180 SD packs a maximum 180 amps, or 150 amps at 40% duty cycle. The Syncrowave 180 SD is a full-featured machine that brings you capabilities which were previously available only with heavy-duty industrial TIG equipment.

#### FEATURES See Syncrowave 180 SD Listing

#### SYNCROWAVE 180 SD RUNNER

Includes Syncrowave 180 SD with Primary Cord, No. 29 Running Gear, 150 Amp DB1712RDI Diamondback<sup>™</sup> Torch with Quick-Connect, 12 ft (3.7 m) Work Cable with Clamp and Quick-Connect, Electrode Holder with Quick-Connect, RFCS-14 Remote Foot Control with 20 ft (6 m) Cord, Gas Regulator and Gas Hose.

#### ACCESSORIES

Carts: Deluxe Carrying Cart and Cylinder Rack, No. 29 Running Gear, Universal Carrying Cart and Cylinder Rack; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14, RFCS-14, HD, RHC-14, RMS-14.

# Syncrowave 250 DX TIGRunner

![](_page_10_Picture_11.jpeg)

The Syncrowave<sup>®</sup> 250 DX delivers excellent welding performance, control and versatility. The basic machine includes all the essential features you need for high-precision AC TIG welding, plus the flexibility to handle a wide variety of metals. It offers an effective solution in any light industrial situation that requires constant current Squarewave technology.

FEATURES See Syncrowave 250 DX Listing

#### SYNCROWAVE 250 DX TIGRUNNER

Includes Syncrowave 250 DX, Cool Runner<sup>™</sup> 3X, No. 28 Running Gear, 45V11, and RFCS-14 HD Remote Foot Control (completely assembled).

#### SYNCROWAVE 250 DX TIGRUNNER WITH TORCH

Includes Syncrowave 250 DX, Cool Runner<sup>™</sup> 3X, No. 28 Running Gear, 45V11, and RFCS-14 HD Remote Foot Control (completely assembled). Also a 25 ft, 250 Amp DB20M25R Water-Cooled Diamondback<sup>™</sup> Torch, Work Clamp, 10 ft Gas Hose, Regulator/Flowmeter, Cable Cover and an AK-4 Accessory Kit.

#### ACCESSORIES

Running Gear: No. 28; Coolant Systems: Coolmate™ 3, 4, or V3, Cool Runner™ 3X; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14 HD, RHC-14, RMLS-14, RMS-14; Power Factor Correction; Diamondback™ TIG torches.

# Syncrowave 350 LX TIGRunner

1 for stick

![](_page_10_Picture_21.jpeg)

The Syncrowave<sup>®</sup> 350 LX is an exceptional single-phase TIG/Stick power source designed for the master welding craftsman. When the work demands the arc control of Squarewave technology, premium performance and the highest levels of efficiency and functionality, the Syncrowave 350 LX meets the challenge.

FEATURES See Syncrowave 350 LX Listing

#### SYNCROWAVE 350 LX TIGRUNNER

Includes Syncrowave 350 LX, Cool Runner™ 3X, No. 28 Running Gear, 45V11, and RFCS-14 HD Remote Foot Control (completely assembled).

#### SYNCROWAVE 350 LX TIGRUNNER WITH TORCH

Includes Syncrowave 350 LX, Cool Runner<sup>™</sup> 3X, No. 28 Running Gear, 45V11, and RFCS-14 HD Remote Foot Control (completely assembled). Also a 25 ft, 250 Amp D820M25R Water-Cooled Diamondback<sup>™</sup> Torch, Work Clamp, TIG Block, 10 ft Gas Hose, Regulator/Flowmeter, Cable Cover and an AK-4 Accessory Kit.

#### ACCESSORIES

Running Gear: No. 28; Coolant Systems: Coolmate™ 3, 4, or V3, Cool Runner™ 3X; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14 HD, RHC-14, RMLS-14, RMS-14; Power Factor Correction; Diamondback™ TIG torches.

See	Literature Sheet	
No.	AD/4.4	

Requires 1-Phase Input Supplies AC/DC, Constant Current Weld Output See Literature Sheet No. AD/4.2 Requires 1-Phase Input Supplies AC/DC, Constant Current Weld Output See Literature Sheet No. AD/4.3 Requires 1-Phase Input Supplies AC/DC, Constant Current Weld Output

# Accessories add performance to your system

### **Diamondback Torches**

The Diamondback<sup>™</sup> provides a comfortable grip and better torch control in all positions. The ergonomic torch design ensures proper relationship between the torch and weld joint with maximum comfort and maneuverability.

![](_page_11_Figure_4.jpeg)

The NEW Diamondback<sup>™</sup> line of ergonomically designed TIG torches from Miller Electric complements the most popular TIG power source line available today. The Diamondback torch line includes both air-cooled and water-cooled models. The air-cooled models range in size from 125 to 200 amps. The water-cooled models include 250 and 350 amp torches. All models are standard with a rigid head.

#### For more info, see Diamondback TIG Torch Selector Guide

![](_page_11_Figure_7.jpeg)

#### Coolmate™ 3 #043 007 115 VAC

The compact, horizontal design of the Coolmate  $^{\rm m}$  3 allows stacking or convenient mounting onto a trailer or other equipment.

- 14,000 BTU/hour cooling capacity
- 3 gallon (11.4 L) coolant tank
- For water-cooled torches rated up to 500 amps\*
- 115 and 230 VAC models
- Rustproof, polyethylene molding serves as the coolant tank, fan shroud, filler spout and lifting handles.
- Coolant filler spout and coolant filter are easy-to-access at the front panel
- Efficient fin and tube heat exchanger
- "Paddle wheel" flow indicator
- Panel-mounted on/off switch

#### Coolmate™ 4 #042 288 115 VAC

The Coolmate<sup>m</sup> 4 is a patented design available only from Miller. This coolant system has a constant flow of coolant inside to keep the pump primed and to reduce algae buildup in the tank. The one-piece, circular case is portable and rustproof.

Features

- 15,000 BTU/hour cooling capacity
- 4 gallon (15 L) coolant tank
- For water-cooled torches rated up to 600 amps\*
- Patented design assures pump is always primed and reduces algae buildup in coolant tank
- Rustproof, durable polyethylene case and tank
- Convenient carrying handle and filler spout molded into case
- Easily accessible coolant filter

#### Coolmate™ V3 #043 009 115 VAC

Turn to the Coolmate<sup>™</sup> V3 to complete your water-cooled system. Its distinct, vertical design allows you to mount it onto a power source running gear or gas cylinder rack. Filter and coolant filling spout are conveniently located for easy access.

Features

- 14,000 BTU/hour cooling capacity
- 3 gallon (11.4 L) coolant tank
- For water-cooled torches rated up to 500 amps\*
- Vertical design mounts easily onto running gears and cylinder racks
- Paddle wheel flow indicator
- Panel-mounted on/off switch

![](_page_11_Picture_38.jpeg)

#### Cool Runner™ 3X #043 994 115 VAC

The Cool Runner<sup>™</sup> 3X water coolant system is dedicated to any new Syncrowave<sup>®</sup> 250 DX or 350 LX power source. The Cool Runner 3X conveniently mounts under the Syncrowave 250 DX or 350 LX to provide the perfect solution for industrial, water-cooled TIG applications. To easily move the system in the shop, add the easy-to-install No. 28 running gear.

#### Features

- 14,000 BTU/hour cooling capacity
- 3 gallon (11.4 L) coolant tank
- For water-cooled torches rated up to 500 amps\*
- 115 VAC supplied by Syncrowave 250 power source
- Rustproof, polyethylene molded tank serves as coolant reservoir and easy-to-fill coolant spout
- Efficient fin and tube heat exchanger
- "Paddle wheel" flow indicator
- External filter can be quickly accessed for cleaning

\*May vary with torch design and cable length.

# Miller's got more ways to add value

Miller TIG power sources offer turnkey packages, but many welders choose to tailor their system for enhanced control, flexibility, or convenience. Miller has a broad spectrum of options to fine-tune your package. We offer Diamondback<sup>™</sup> TIG torches that have to be tried to be believed. Coolant systems. Remote controls for extended reach and control. And a wide range of running gear. That's just the beginning. No matter how you'd like to round out your package, Miller adds value.

#### Remotes

![](_page_12_Picture_3.jpeg)

RFCS-14 HD Foot Control #194 744 RFCS-14 Foot Control #043 554 For all Miller solid-state power sources. Foot pedals provide remote current and contactor control and include 20 ft (6 m) cords and 14-pin plugs. The new HD design increases stability with a larger base, and durability with a beavier cord. Maximum flexibility is

with a larger base, and durability with a heavier cord. Maximum flexibility is accomplished with a reconfigurable cord that can exit the front, back or either side of the pedal.

![](_page_12_Picture_6.jpeg)

RCCS-14 Remote Contactor and Current Control #043 688 North/south rotary-motion fingertip control fastens to TIG torch using two Velcro® straps. Includes 28 ft (8.5 m) control cord. Great for applications that require a finer amperage control.

![](_page_12_Picture_8.jpeg)

**RCC-14 Remote Contactor and Current Control #151 086** 14-pin plug Side-to-side rotary-motion fingertip control fastens to TIG torch using two Velcro<sup>®</sup> straps. Includes 28 ft (8.5 m) control cord. Great for production or contractors that need quick ramp-up.

![](_page_12_Picture_10.jpeg)

**RMS-14 On/Off Control #187 208** Momentary-contact switch for contactor control. Rubber-covered pushbutton dome switch ideal for repetitive on-off applications. Includes 26.5 ft (8 m) cord with 14-pin plug.

![](_page_12_Picture_12.jpeg)

#### RMLS-14 Switch #129 337

Momentary- and maintained-contact rocker switch for contactor control. Push forward for maintained contact and backward for momentary contact. Includes 26.5 ft (8 m) cord and 14-pin plug.

![](_page_12_Picture_15.jpeg)

#### RHC-14 Hand Control #129 340

For all Miller solid-state power sources. Miniature hand control for remote current and contactor control. Dimensions:  $4 \times 4 \times 3-1/4$  in (102 x 102 x 82 mm). Includes 20 ft (6 m) cord and 14-pin plug.

## **Carts and Running Gear**

![](_page_12_Picture_19.jpeg)

#### Cylinder Cart #042 537

Has adjustable handles and is slanted for convenient access to power source front panel controls. Carries two 160 lb (72.6 kg) gas bottles or one gas bottle and one Coolmate V3 for TIG welding. Accommodates Coolmate 3 or 4 coolant systems.

#### Deluxe Carrying Cart and Cylinder Rack #043 867

Accommodates inverter power source, cooler, and one gas cylinder. Includes bottom drawer for miscellaneous items.

#### Universal Cart and Cylinder Rack #042 934

Accommodates gas cylinder up to 56 in (142.2 cm) high measuring 6 to 9 in (15.2 to 22.8 cm) in diameter.

![](_page_12_Picture_26.jpeg)

No. 17 Running Gear #004 563 Three 8 in (203 mm) rubber-tired wheels with rack for two cylinders and towing handle.

#### No. 28 Running Gear #043 861

Two 10 in (254 mm) wheels, two 5 in (127 mm) casters, two-compartment rack (for gas cylinder(s) or Coolmate V3 coolant system), and handles.

#### No. 29 Running Gear #043 998

Two 8 in (203 mm) wheels, two 4 in (102 mm) casters and handle. Two compartments have been integrated for filler materials and will accommodate gas cylinders up to 48 in (122 cm) high measuring 7 in (17.8 cm) in diameter.

# Automation

# Maxstar 200 LX

![](_page_13_Picture_3.jpeg)

**Dimensions** H: 13½ in (343 mm) W: 7½ in (191 mm) D: 17½ in (445 mm) **Net Weight** 37 lb (16.8 kg)

The Maxstar<sup>®</sup> 200 Series features Auto-Line<sup>™</sup> technology, the most advanced inverter power management circuitry in the welding industry, allowing the end user to automatically connect to any input power, 120–460 volt, single- or three-phase.

Built-in gas solenoid, pulser, sequencer and HF means there are no additional accessories required. With 1 – 200 amps of welding output, the Maxstar 200 Series provides the operator with superior low-end DC TIG or high-end DC Stick performance. Weighing in at 37 lb (16.8 kg), the Maxstar 200 is built to function dependably under the most demanding conditions.

Sequence control

Lock out protection

Dual digital meters

or three-phase

arc starting

needed

■ Auto-Line<sup>™</sup> adapts to

120-460 VAC. single-

Easy TIG starting with Miller's

HF start provides non-contact

unique Lift-Arc<sup>™</sup> system

■ Fan-On-Demand<sup>™</sup> cooling system only operates when

#### FEATURES

 LX model has Automation Interface Connector for automation functions.
 Integrator can quickly interface to the output disable, weld start/stop, and gas start/stop inputs; and valid arc, pulse lock out, and end of weld sequence outputs
 Built-in pulser reduces heat input; adds arc stability

#### ACCESSORIES

No. DC/32

See Literature Sheet

Coolant System: Coolmate<sup>TM</sup> 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14, RFCS-14, RMLS-14, RMS-14; Diamondback<sup>TM</sup> TIG torches.

## Maxstar 300 LX

![](_page_13_Picture_12.jpeg)

The Maxstar<sup>®</sup> 300 Series combines advanced inverter technology with a high-end TIG power source to offer you superior arc performance. The Maxstar's front panel interface allows the operator complete set-up capabilities in a compact size machine, and offers more precise control of output parameters compared to traditional knobs and switches.

Auto-Link<sup>®</sup> automatically

links the power source to

the primary input voltage

Lockout protection protects

and operator changes

Dual digital meters display

against parameter tampering

amps and volts, also displays

actual or preset values: sec-

onds, percentage, or frequency

Thermal overload protection

system only operates when

■ Fan-On-Demand<sup>™</sup> cooling

needed

#### FEATURES

- LX model has Automation Interface Connector for automation functions. Integrator can quickly interface to the output disable, weld start/stop, and gas start/stop inputs; and valid arc, pulse lock out, and end of weld sequence outputs
- Built-in pulser reduces heat input; adds arc stability
   Memory recall stores up to
- Well procedures
   High frequency is available
- for applications requiring a non-contact starting method

#### ACCESSORIES

Carts: Cylinder Cart, Deluxe Carrying Cart and Cylinder Rack, Universal Cart and Cylinder Rack; Coolant Systems: Coolmate<sup>™</sup> 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14 HD, RHC-14, RMLS-14, RMS-14; Diamondback<sup>™</sup> TIG torches.

# Dynasty 300 LX

![](_page_13_Picture_22.jpeg)

Dimensions H: 17 in (432 mm) W: 12½ in (318 mm) D: 24 in (610 mm) Net Weight 90 lb (41 kg)

HF start provides non-contact

links the power source to the

against parameter tampering

amps and volts, also displays

actual or preset values: sec-

onds, percentage, or frequency

Thermal overload protection

system only operates when

■ Fan-On-Demand<sup>™</sup> cooling

needed

Auto-Link<sup>®</sup> automatically

primary input voltage

and operator changes

Dual digital meters display

Lockout protection protects

arc starting

The Dynasty™ 300 Series combines the advantages of advanced inverter technology with the built-in features of a high-end TIG power source offering you superior arc performance. Dynasty allows the operator extra set-up capabilities in a compact machine, and offers more precise control of output parameters compared to traditional knobs and switches.

#### FEATURES

- LX model has Automation Interface Connector for automation functions. Integrator can quickly interface to the output disable, weld start/stop, and gas start/stop inputs; and valid arc, pulse lock out, and end of weld sequence outputs
- Advanced Squarewave arc stabilizes the arc on low power
   Built-in pulser reduces heat
- input; adds arc stability
   Memory recall stores up to 4 weld procedures per process

#### ACCESSORIES

Carts: Cylinder Cart, Deluxe Carrying Cart and Cylinder Rack, Universal Cart and Cylinder Rack; Coolant Systems: Coolmate<sup>™</sup> 3, 4, or V3; Remote Controls: RCC-14, RCCS-14, RFCS-14, RFCS-14 HD, RHC-14, RMLS-14, RMS-14; Diamondback<sup>™</sup> TIG torches.

 Requires 1- or 3-Phase Input
 See Literature Sheet
 Requires 1- or 3-Phase Input

 Supplies DC, Constant Current Weld Output
 No. DC/24
 Supplies DC, Constant Current Weld Output

See Literature Sheet No. AD/5.0 Requires 1- or 3-Phase Input Supplies AC/DC, Constant Current Weld Output

# Cyclomatic

If you're looking for on-line automation options, Miller has technology for consistent, measurable control of your process. Need training assistance? Miller's library of books, CDs and videos put you on the road to polishing your skills.

**Cyclomatic Arc Voltage Control System** 

![](_page_14_Picture_3.jpeg)

Improved weld quality from existing equipment. The controlled, consistent arc lengths provided by the Cyclomatic Arc Voltage Control system mean higher weld quality and reliable uniformity from weld to weld.

The Cyclomatic Arc Voltage Control system automatically maintains precise arc length by controlling arc voltage to within  $\pm 0.1$  volts.

#### FEATURES

- Integral drive cable interfaces the control unit with the drive unit to provide convenient, flexible control of all welding conditions and operating functions
- Field-proven closed-loop proportional servo provides dependable system control
- Optional AC converter allows the system to be used for AC welding, typical for aluminum applications
- Higher-speed welding from your existing equipment

Cyclomatic Digital Cold Wire Feed System

![](_page_14_Picture_12.jpeg)

The superior wire feed control of the DWF-3 brings accuracy and reliable repeatability to the automatic delivery of filler wire for TIG (GTAW ) welding.

All digital controls and a precision-built wire drive unit combine to offer consistent quality in wire delivery, even in the midst of line voltage variations. A time-tested stepper motor design provides accurate/repeatable feed rates.

#### FEATURES

- Precision stepper motor design provides accurate speed control for weld quality
- Wire feed delay setting from 0-9.9 seconds ensures precise start and stop
- Accommodates wire diameters of .020 – .062 in (0.5 – 1.6 mm)
   Broad feed range of 0 – 299.9 IPM
- offers versatility over a range of applications
- Four-drive-roll design utilizes polyurethane-surface drive rolls to minimize marring of wire

- Compact four-axis wire guide assembly maximizes accuracy and control of wire placement
- Large, easy-to-read digital display allows access to system parameters and improves accuracy of settings
   Wire can be jogged in both forward
- and reverse, and wire automatically retracts from the weld puddle at the end of each welding cycle

# Cyclomatic Magnetic Arc Control System

![](_page_14_Picture_25.jpeg)

This rugged, proven, easy-to-use system controls welding at the point of its greatest impact: the welding arc itself. By adding stability and control over arc oscillation and positioning, Magnetic Arc Control ensures a quality weld, even when welding on exotic metals.

The Cyclomatic system bolts on to your present automatic or semiautomatic welding torch and goes immediately to work solving some of welding's toughest problems.

This advanced model features digital settings for repeatability and up to 50 oscillations per second. Independently controlled left and right dwell settings allow maximum flexibility to adjust heat profiles between thick and thin parts of the workpiece. A Stabilize/Oscillate (STAB/OSC) switch allows you to disable the speed and dwell controls while the position and amplitude controls remain operative.

#### FEATURES

Provides even heat distribution, prevents undercutting, eliminates porosity, ensures sufficient penetration and evens out weld puddle

#### Solid-state controller for consistent, high-quality control

 Interchangeable magnetic probes and solid-state controls create a magnetic field around the arc to precisely position, oscillate and stabilize it

Sound welds every time on

Automatic compensation for

Fast detection of burn-through

Minimized set-up times, easy

with automatic power shutoff and

arc head retraction for operator

Lower operator skill requirements

uneven surfaces

electrode erosion

equipment protection

to use

Works with any standard or pulsed arc TIG welding power source See Literature Sheet No. AU/3.2

# See what's new at www.MillerWelds.com

![](_page_15_Picture_1.jpeg)

![](_page_15_Picture_2.jpeg)

Have you been to Miller's Web site lately? If not, you're missing out on a truly customized cyber experience. Log on to *www.MillerWelds.com* and you'll discover everything you've ever wanted to know about Miller and welding. Whether you're a professional welder or a casual user, MillerWelds.com has what you're looking for. Log on today and see what **The Power of Blue**<sup>®</sup> can do for you.

#### **NEW features include:**

- Product Selector answer a few simple questions and we'll recommend the welding systems best suited to your application.
- Miller Motorsports and Ask Andy see what Miller equipment your favorite race teams use in their fabrication shops on our Motorsports page and send your questions to our racing industry expert, Andy.
- "Best-Practices" Information select our new training and education channel and you'll find a wealth of information designed to build your knowledge base, improve your skills and increase overall productivity.
- What's New and Cyber Offers from the latest new products to future promotional offers, MillerWelds.com is your source for innovative welding equipment solutions.