

Trailblazer® 302 Air Pak™

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Gas Engine-Driven Welder/
AC Generator/Air Compressor/
12/24 V Battery Charger/Jump Starter



Quick Specs

Industrial Applications

Fabrication
Maintenance
Repair
Structural Steel Work
Sheet Metal

Processes (X-Ray Quality)

Stick (SMAW)
MIG (GMAW)
Flux Cored (FCAW)
AC/DC TIG (GTAW)
Battery Charger/Jump Starter
Air Carbon Arc (CAC-A) Cutting and Gouging
Rated: 3/16 in carbons,
Capable: 1/4 in carbons
Air Plasma Cutting and Gouging with
optional Spectrum® models
Rated: 5/8 in mild steel

Output Range

DC Stick 25–300 A DC TIG 10–300 A
AC TIG/Stick 10–225 A MIG/FCAW 13–35 V, 350 A

Generator Power Output Rated at 104°F (40°C)

Peak: 13,000 W — Continuous: 11,000 W

Air Compressor

26 CFM, 100% Duty Cycle, 70–160 PSI

Battery Charger/Jump Starter

Battery Charger: 12/24 V, 10–75 A
Battery Jump Starter: 12/24 V, 450 A/350 A

The Power of Blue.®

The all-in-one tool that delivers multiprocess output for welding, plasma cutting, gouging, air tools, and 12/24 volt battery charger/jump starter.



Trailblazer 302 Air Pak with Battery
Charger/Jump Starter (Welder, Generator,
Air Compressor, Battery Charger)



Rotary-Screw Air Compressor

Two Generators

13,000 Watt Generator

12/24 Volt Battery Charger/
Jump Starter

Plasma Cutting Capability

Superior Arc Performance

Small Size and Lightweight

Easy to Service

3-Year True Blue®
Compressor Warranty

Carbon Arc Gouging



Welder/generator/air compressor/battery charger is warranted for 3 years, parts and labor. Engine is warranted separately by the engine manufacturer.

MADE IN **USA**
APPLETON, WI **USA**



Miller Electric Mfg. Co.
An Illinois Tool Works Company
1635 West Spencer Street
Appleton, WI 54914 USA

Equipment Sales US and Canada
Phone: 866-931-9730
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International Phone: 920-735-4554
International FAX: 920-735-4125

Web Site
www.MillerWelds.com



Trailblazer® 302 Air Pak™ Features

Size and Weight

Takes only half the bed space of a separate engine-driven air compressor and welder, freeing up to 50% more room on your truck for equipment and supplies. Plus decrease axle weight up to 25%.

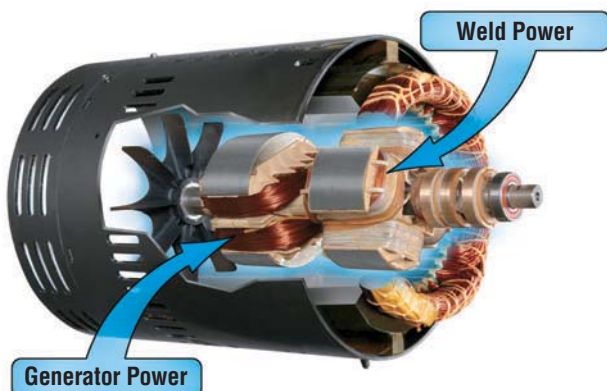
Battery Charger/Jump Starter

- Provides selectable 12 or 24 volt battery charging capability
- Provides up to 450 amps of battery jump-starting capability
- Convenient front panel battery charger/jump starter access
- 25 ft battery jumper cables available (#300 422)



Trailblazer® 2-Generator Advantages

- 13,000 watts of voltage regulated power
- No interaction between grinders, power tools, etc. and the welding arc
- Generator power is independent of weld
- 4-pole weld generator produces the best arc quality



Industrial Rotary Screw Air Compressor

- Runs most air impact wrenches at idle
- Produces 26 CFM of air at 100% duty cycle
- Delivers 70–160 PSI of air with no storage tank
- Gives 100% deliverable air
- Compressor is warranted by Miller for 3 years



Trailblazer® 302 Air Pak™ Features

Easy to Service

Toolless Top Access to:

- Engine air cleaner
- Engine oil check/fill dipstick
- Battery
- Compressor oil check/fill dipstick
- Compressor oil separator
- Air compressor air filter

Toolless Side Access to:

- Engine oil filter
- Engine oil drain
- Engine fuel filter

Rear Access to:

- Compressor oil filter
- Compressor oil drain



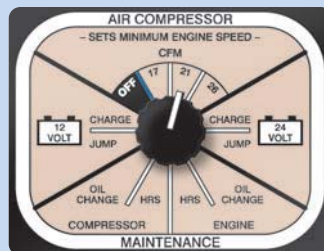
Front Panel Air Pressure Adjustment

- Simple to adjust the correct air pressure for specific applications (70–160 PSI)
- Lower pressure will increase engine power for more gouging and plasma cutting output capabilities



Easy Operation

- Reduce fuel consumption and noise by using the front panel air flow control which matches engine speeds to air flow requirements for tools, plasma cutting and gouging.



Answers to Frequently Asked Trailblazer® 302 Air Pak™ Questions

Air facts

- Moisture going into a compressor also comes out.
- Air compressors heat air, turning moisture droplets into vapor.

How can I reduce moisture in the air?

Air Cooler with Separator #300 420

- **Most popular.**
- The cooler cools air which turns vapor moisture into droplets and the separator removes the droplets.
- Removes 70% of the moisture from the air.
- Use for most applications including tools, blasters, plasma cutters and gouging.
- Effective when temperatures are above freezing (this is also when the most moisture is in the air). Below 32 degrees the separator can freeze. If this happens, bypass the cooler/separator system and continue air operations without drying it.
- Fully integrated inside of the Air Pak.



RTI Filter #300 491

- Recommended for plasma cutting. Separators remove droplets of water, not vapor, but this is good enough for most plasma cutting applications.
- Because compressors heat air, this filter option is less effective at removing moisture (heat turns droplets into vapor and vapor is not filtered).



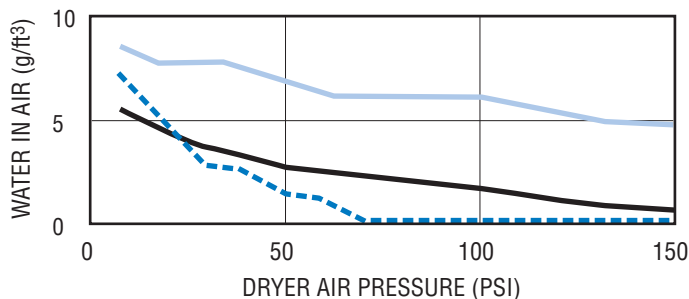
Desiccant Air Dryer #300 690

- Cools air and removes 99% of the moisture from the air.
- Primary use is when temperature ranges below freezing and moisture still must be removed from the air.
- Has a built in heater.
- Mounted externally from the machine with some wiring that needs to take place inside of the machine.



Note: Reduces air flow up to 4 CFM at all speeds.

MAX FLOW ABSOLUTE HUMIDITY



- Air Cooler with Separator (#300 420)
- - - Desiccant Air Dryer (#195 117)
- No Air Cooler or Dryer

What does Average vs Continuous CFM mean?

- Air tools are often rated as “Average CFM.” “Average CFM” is typically based on 15 second usage intervals. Impact wrenches, button punch/deck tools, and decking crimp tools are typically used intermittently (short time durations).
- Continuous CFM: This rating is based on continuous usage. Air grinders and sand blasters are examples of air tools that are used continuously.

The Air Pak will easily run the following:

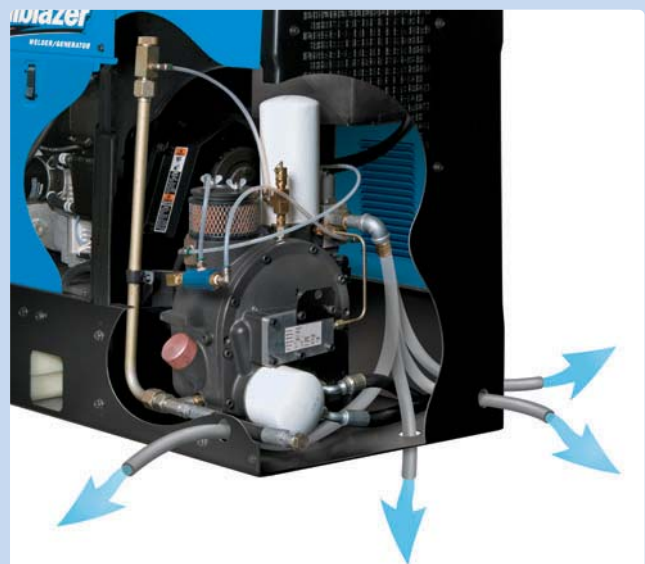
Air Tools	Average CFM*	Continuous CFM*
3/4 in Impact Wrench (IR 2141)	10	40
3/4 in Impact Wrench (Speedaire)	7	26
1/2 in Impact Wrench (IR 231C)	4	22
Needle Scaler (IR 182LNA1)	3	13
4-1/2 in Grinder (Dayton)	7	26
1/4 in Die Grinder (IR G1H350RG4)	6	25
1/2 in Drill (IR 7AQSTB)	4	17
Air Shears (IR 7802SA)	4	21
Sand Blaster	—	6
Soda Blaster	—	18
Button Punch/Deck Tool	—	4
Decking Crimp Tool	4	15

**1/2 in air hose is recommended for better tool efficiency.*

Note: Impact wrenches use Continuous CFM when “free” spinning. In actual use, CFM requirements are less. Thus, the Trailblazer Air Pak is rated to run a 40 CFM impact wrench.

How do I access the air?

The Trailblazer Air Pak provides 4 convenient air compressor access points. The air outlet connection requires a 1/2 in NPT swivel fitting (50 ft air hose assembly #300 571 includes the 1/2 in NPT swivel fitting).



Specifications (Subject to change without notice.)



Welding Mode	Process	Amp/Volt Ranges	Weld Output Rated at 104°F/40°C*	Single-Phase Generator Power	Sound Levels at Rated Output 7 m (23 ft)	Dimensions	Weight
CV/DC	MIG/FCAW	13–35 V	300 A, 32 V at 100% Duty Cycle 350 A, 32 V at 60% Duty Cycle	Peak: 13,000 watts Continuous: 11,000 watts 120/240 VAC, 100/50 A, 60 Hz	2400 RPM (Idle) 73.4 dB (98.4 Lwa) 3000 RPM 76.5 dB (101.5 Lwa) 3600 RPM 81.2 dB (106.6 Lwa)	H: 28 in (838 mm) 34-1/4 in (870 mm) <i>(to top of exhaust)</i> W: 20 in (508 mm) D: 59-5/8 in (1514 mm)	Without Fuel: 771 lb (350 kg)
CC/DC	Stick/TIG	10–300 A	280 A, 32 V at 100% Duty Cycle				
CC/AC	Stick/TIG	10–225 A	200 A, 25 V at 60% Duty Cycle				
	Air Compressor	26 CFM @ 3600 RPM 21 CFM @ 3000 RPM 17 CFM @ 2400 RPM	26 CFM at 100% Duty Cycle				
	Battery Charger/Jump Starter	12 V 24 V	450 A, 12 V, Jump Start 350 A, 24 V, Jump Start 10–75 A, Charge				

*Rated at sea level. Certified to both Canadian and U.S. Standards for welding equipment.

Engine Specifications (Engines warranted separately by the engine manufacturer.)

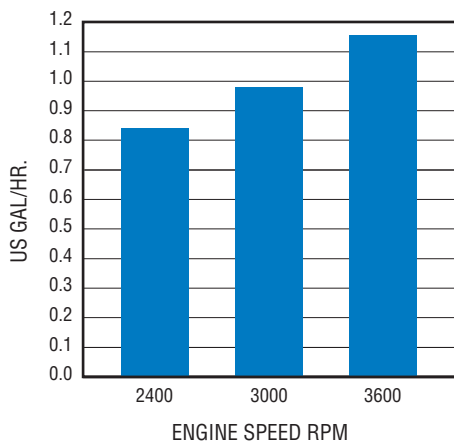
Engine Brand/Warranty	Horsepower (HP)	Type	Weld Speed	Idle Speed	Fuel Capacity	Oil Capacity	Standard Shutdowns
Kohler: 3-year mfg	30 HP (Gas)	Twin-cylinder, 4-cycle overhead valve	3600/3000 RPM	2400 RPM	12 gal (45 L)	1.75 qt (1.7 L)	Low Oil Pressure

Air Compressor Specifications

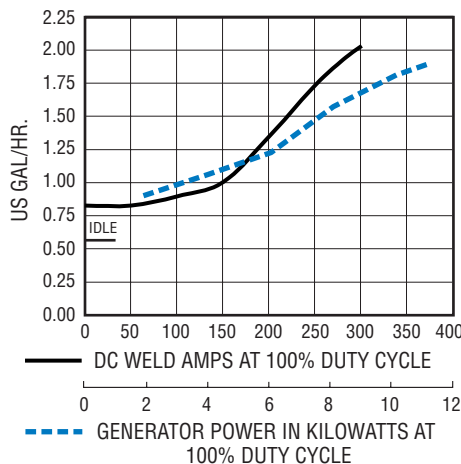
Compressor Warranty	Features	Free Air Delivery at 2400 RPM	Free Air Delivery at 3000 RPM	Free Air Delivery at 3600 RPM	Working Pressure Constant	Duty Cycle	Oil Capacity	Automatic Compressor Shutdowns
3-year True Blue® Warranty by Miller	Rotary screw with electric clutch for on/off. Oil change intervals 500 hours.	17 CFM	21 CFM	26 CFM	100 PSIG	100%	1.75 qt (1.7 L)	High Pressure (160 PSI)

Performance Data

AIR COMPRESSOR FUEL CONSUMPTION
(at 100% Duty Cycle)



WELD/GENERATOR FUEL CONSUMPTION

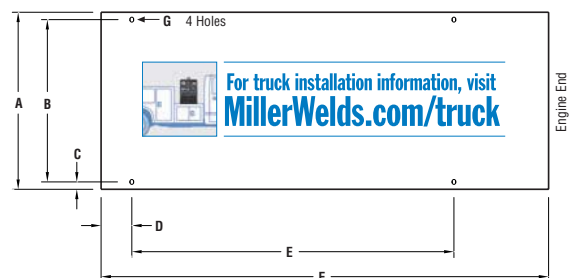


FUEL CONSUMPTION DATA

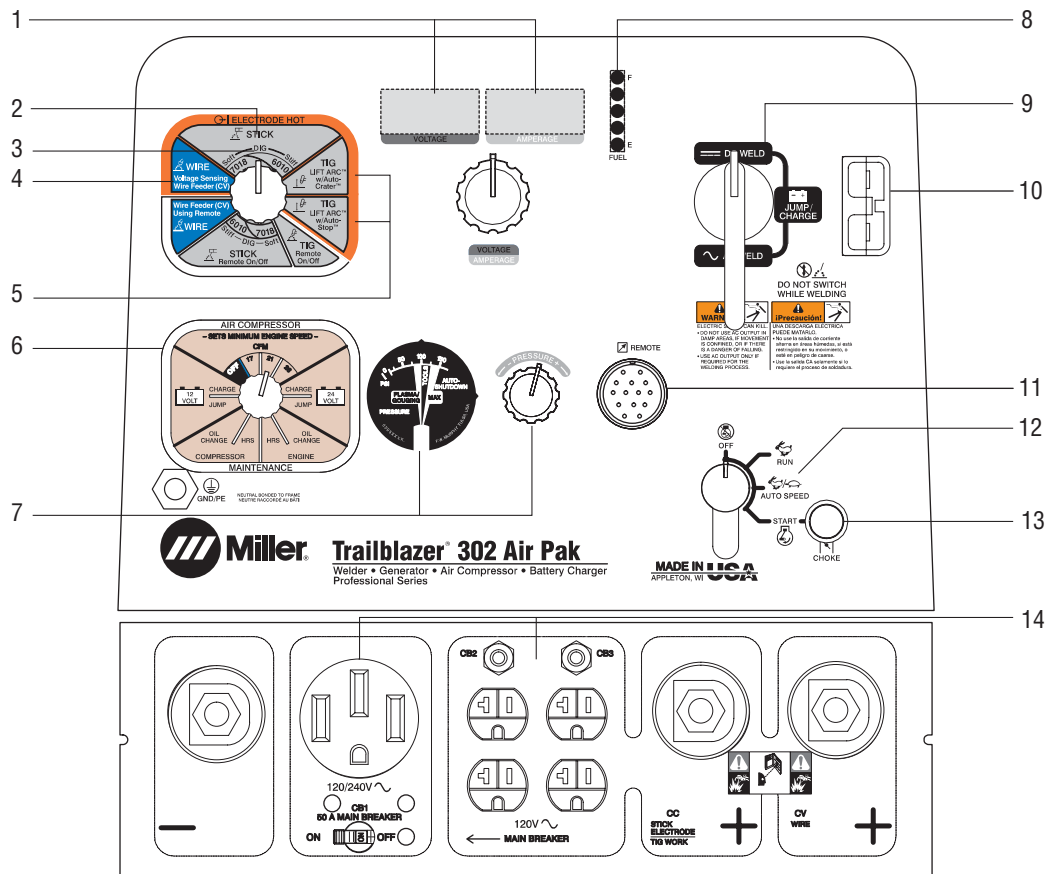
- 12-gallon fuel capacity.
- On a typical job using 1/8 in 7018 electrodes (125 A, 20% duty cycle) expect over 16 hours of operation.
- Welding at 150 A, 40% duty cycle uses approximately: 3/4 gallon per hour—over 13 hours of operation.
- Many air tools can be used when running at idle. Running at idle with a compressor load will provide 14 hours of run time.
- Running the air compressor at 26 CFM will provide 11 hours of run time.
- Reduce fuel consumption by turning the air compressor off when the Air Pak is not in use. For weld/generator fuel consumption chart see chart at left.

Mounting Specifications

- A. 20 in (508 mm)
 - B. 16-1/2 in (419 mm)
 - C. 1-3/4 in (44 mm)
 - D. 6-1/16 in (154 mm)
 - E. 32-3/4 in (832 mm)
 - F. 59-5/8 in (1514 mm)
 - G. 13/32 in (10 mm) diameter
- Height:** 28 in (838 mm)
34-1/4 in (870 mm)
(to top of exhaust)
- Width:** 20 in (508 mm)
- Depth:** 59-5/8 in (1514 mm)
- Lifting eye rating:**
1000 lb (453 kg)



Function Guide



*Category Exclusive

1. **Self-calibrating digital weld meters with meter maintenance displays** capable of displaying engine and air compressor oil change intervals.
2. **Four preset DIG settings*** offer the best arc characteristics for different electrodes and joint designs. The amount of DIG determines how much amperage (heat) varies with Stick arc length. The combined Process switch along with preset DIG settings make the Trailblazer easy to set without the complication of multiple switches.
3. **Adaptive Hot Start™*** (Stick) automatically sets starting amperage for great arc starts.
4. **Great MIG/CAW performance and arc starts** make the Trailblazer's arc best in its class. Easy to run all wires from .023 in solid wires to large diameter 5/64 in flux cored wires.
5. **Lift-Arc™ TIG with Auto-Crater™* and Auto-Stop™***
6. **Air compressor, battery charger/jump starter, and maintenance selector.**
7. **Air pressure gauge/regulator** gives the approximate air pressure settings needed for common air tools/plasma/carbon arc gouging. The pressure gauge also reads the actual air pressure being used. The regulator allows user control of the pressure settings up to 160 psi.
8. **Front panel fuel gauge*** LEDs indicate fuel level. The "E" LED lights when fuel is low.
9. **AC/DC and battery charger/jump starter switch** allows selection between AC or DC weld output and battery charger/jump function.
10. **Battery charger/jump starter receptacle** for connection to battery charger/jump cable (12 or 24 volt).
11. **Standard 14-pin receptacle** for simple connection of remote controls and wire feeders. It features **Auto Remote Sense™*** which automatically switches from Panel to Remote Amperage/Voltage (A/V) control with remote connected. Eliminates confusion of the Panel/Remote A/V switch.
12. **Speed control switch** allows for control of engine speed based on the switch position. In the auto speed mode, the speed will be auto selected depending on total power needed. The speed will auto select between 3000 and 3600 RPM depending on weld demand or weld + air demand. Anytime auxiliary load is needed the engine will go to 3600 RPM.
13. **Engine choke control**
14. **120 VAC and 240 VAC receptacles with circuit breakers** (optional 120 VAC GFCI receptacles available).
Note: For matching plug, order #119 172.