

# Swagelok® Welding System

## M200 Power Supply



### Features

- Power supply for reliable, consistent orbital gas tungsten arc welding
- Up to 200 A peak output capability
- Easy-to-use color touch screen in multiple languages
- Integrated mass flow controller automatically controls OD shield gas flow
- Optional automatic ID purge system available
- Weighs approximately 50 lb (23 kg)
- Compatible with Swagelok welding system weld heads
- Ethernet capability to download weldlogs

## Features

The Swagelok welding system M200 power supply offers precision and control combined with easy-to-use touch-screen operation for orbital welding.

- High-resolution 12.1 in. (30.7 cm) color SVGA industrial touch screen
- Integrated mass flow controller automatically controls OD shield gas throughout the weld cycle
- Up to 200 A peak output capability
- Multiple weld procedure data entry options
  - Automatic weld procedure generation includes 15 different material options
  - Simplified manual weld procedure entry
- Monitoring and recording of weld output performance
- Low EMI arc start technology
- Multiple language capability, including Chinese (simplified and traditional), English, French, German, Japanese, Korean, Russian, Spanish, and Swedish
- Meets CE, RoHS (EU), CCC (China), and Canadian requirements

## Technical Data

### Power

Input: 100 to 230 V (ac);  
Output: 2 to 200 A (dc)

### Service Ratings<sup>①</sup>

Input	Average Output	Duty Cycle <sup>②</sup>
100 V/20 A	95 A	100 %
115 V/20 A	100 A	100 %
200 V/20 A	140 A	60 %
230 V/16 A	120 A	100 %
230 V/16 A	200 A	25 %

① See the Swagelok M200 Power Supply User's Manual, MS-13-212, for duty cycle at temperature.

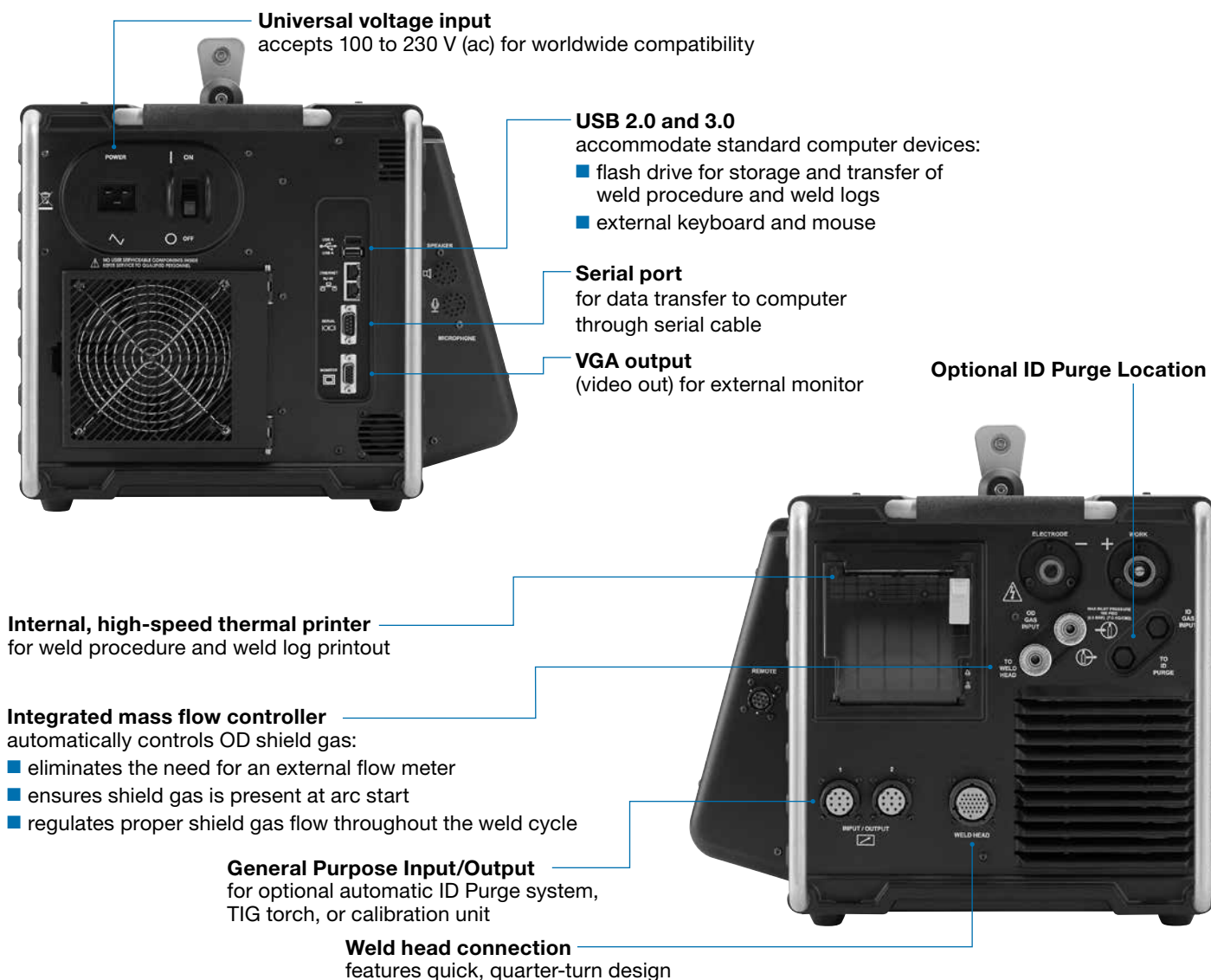
② Rating without optional fan filter.

### Dimensions

13.5 H by 22.8 W by 15.5 D in.  
(34.3 by 57.9 by 39.4 cm)

### Weight

51.4 lb (23.3 kg)



## Operation

The Swagelok M200 power supply offers simple, user-friendly setup and operation. Screen appearances may vary with accessories in use.



## High-Resolution Touch Screen

The large, high-resolution industrial touch screen enables uncomplicated viewing of information and trouble-free data entry. The screen layouts are simple to follow, and information is readily available for viewing or editing.

With the flexibility of multiple language support, the M200 was designed to be a user-friendly power supply.

Weld procedure file name and description

Weld setup parameters

Details electrode, tack, level locations, weld progress, weld errors

Jogs electrode clockwise

Jogs electrode counterclockwise

Turns on OD shield gas

Weld head installed

Weld procedure parameters

Weld count parameters

OD shield gas visual gauge

Status indicator

Time-remaining counter

Information Weld Setup Notes User Fields 1 User Fields 2 Limits / Tolerances

Procedure: User Manual Example w tacks

Description: 0.500 - .049 316LV 04 03 5H

Creation Date: 08/12/2009

Programmer: [ ]

Welder: [ ]

Units: Inches

Electrode Change

Process Purge Setup General Levels (4) Tacks (3) Summary

Shield Gas (std ft<sup>3</sup>/h): Argon

Average Current: 34.2

Average Voltage: 7.9

Level 3 of 4

4.4 Seconds

Weld Count: 72

Parameter Value

Parameter	Value
Head	5H
Electrode	c.040-.555
Arc Gap	.035
Arc Gauge	.907
Shield Gas	Argon
ID Gas	Argon

Parameter Side 1 Side 2

Parameter	Side 1	Side 2
Joint Type	Tube	Tube
Material	316LV	316LV
Diameter	0.5	0.5
Wall	0.049	0.049

Parameter 3

Parameter	3
High Amps	64.5
Low Amps	21.7
Weld Time	5.0
Ramp Time	0.0
Pulse Rate	4.0
High Amps	28
High Amps	3.50
Low Amps	3.50
Start	210
Average	33.7

Test

Jog

Jog Back

Shield Gas

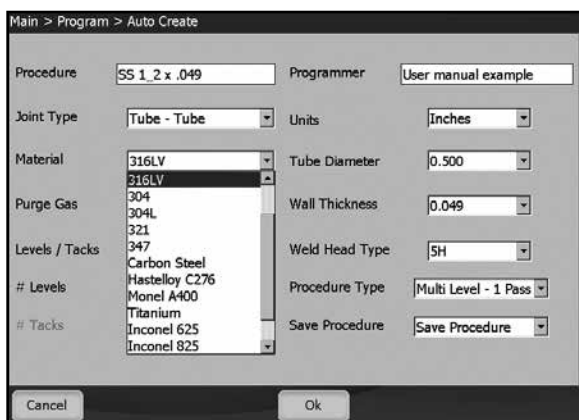
Back Start Home Print Stop

## One-Touch Adjustments

Weld procedures are easily adjusted. One-touch adjustments can be made to alter the average current value for individual levels. Additionally, values for specific settings can be entered manually. The need to scroll through multiple screen displays is minimized, as all parameter information is just one touch away.

## Automatic OD Shield Gas Flow

The integrated mass flow controller automatically controls OD shield gas flow, which promotes consistent weld results and prevents weld head damage caused by a lack of OD shield gas. In addition, a blast purge feature is available, allowing reduced prepurge time and increased production rates.



## Automatic or Manual Weld Procedure Creation











The easy-to-use graphic interface, including the Auto Create feature, provides rapid weld procedure creation and execution.

## Ordering Information

The Swagelok welding system M200 power supply is shipped in a heavy-duty, custom case for ease of storage and transport. Power cord, user's manual, and 1/4 in. male Swagelok Quick-Connect stem are included.

To order an M200 power supply, add a plug type designator and user's manual designator to the basic ordering number: **SWS-M200-**  
Example: **SWS-M200-11-E**



Region	Voltage	Plug Type	Designator
Australia, China, New Zealand	230 V 50/60 Hz	AS 3112 	18
Continental Europe, Korea	230 V 50/60 Hz	CEE 7/7 	17
Japan, Taiwan	100/115 V 50/60 Hz	NEMA 5-15 	13
	200/230 V 50/60 Hz	NEMA L6-20 	14
India	230 V 50/60 Hz	BS 546 	21
North America	115 V 50/60 Hz	NEMA 5-15 	11
		NEMA 5-20 	19
	230 V 50/60 Hz	NEMA 6-15 	12
United Kingdom	115 V 50/60 Hz	IEC 309 	15
	230 V 50/60 Hz	BS 1363 	16

## User's Manual

Language	Designator
Chinese (simplified)	-C
English	-E
French	-F
German	-G
Japanese	-J
Korean	-K
Russian	-R
Spanish	-S

## Options and Accessories

### Automatic ID Purge Control

The automatic purge control for the Swagelok M200 power supply provides a complete and fully automated inside diameter (ID) purge system, for a consistent, repeatable weld bead. When this option is combined with the standard integrated mass flow controller (MFC) of the M200 for outside diameter (OD) shield gas, it provides a complete, automated system for purge control.

For more information about the Automatic ID Purge Control, see the *Automatic ID Purge Control* catalog, MS-02-367.

### Bar Code Scanner

The scanner allows fast and accurate data entry. The scanner comes with a 6 ft (1.8 m) cable and accepts 1D barcode format (other bar code formats available on request).

Ordering number: **SWS-M200-BARCODE**



### Calibration Unit

The M200 calibration unit is used to calibrate the current and voltage of the Swagelok M200 power supply and verify the rotor speed of Swagelok weld heads. This enables you to ensure the equipment is operating within specification without removing it from service.

Ordering number: **SWS-M200-CAL**



### Printer Paper

One roll of paper is included with the M200 power supply. Additional packages of rolls can be ordered separately. Each package contains 10 rolls.

Ordering number: **CWS-DRP-PAPER**



### Remote Pendant

The pendant provides remote operation of primary power supply controls, as well as power supply status indicators. The remote pendant comes with a 15 ft (4.6 m) cable. Extension cable is available.

Ordering number: **SWS-M200-REMOTE**



### TIG Torch

Expanding the versatility of the Swagelok M200 welding system, the M200 power supply offers a manual mode that can operate a dedicated manual tungsten inert gas (TIG) torch. This feature meets the needs of customers who wish to perform manual welding. When combined with version 2.30 or later software, the M200 power supply can serve as a single weld power source for a customer's automated or manual weld needs.

Ordering number: **SWS-M200-TORCH-KIT**



### Weld Head Adapter Cable

The weld head adapter cable allows connection from Swagelok weld heads with multiturn-style connectors to Swagelok power supplies with quarter-turn-style connectors.

Ordering number: **SWS-M200-WH-ADPTR**



## Options and Accessories

### Power Cord

A 12 ft (3.7 m) power cord is included with the M200 power supply. To order a separate power cord, add a power cord designator from the table to the basic ordering number:

Example: CWS-CORD-1



**Square**

Example: K-SWS-M200-CORD-18



**Round**

Region	Voltage	Plug Type	Designator (Square)	Designator (Round)
Australia, China, New Zealand	230 V 50/60 Hz	AS 3112	8	18 <sup>①</sup>
Continental Europe, Korea	230 V 50/60 Hz	CEE 7/7	7	17
Japan, Taiwan	100/115 V 50/60 Hz	NEMA 5-15	3	13
	200/230 V 50/60 Hz	NEMA L6-20	4	14
India	230 V 50/60 Hz	BS 546	10	21
North America	115 V 50/60 Hz	NEMA 5-15	1	11
		NEMA 5-20	9	19
	230 V 50/60 Hz	NEMA 6-15	2	12
United Kingdom	115 V 50/60 Hz	IEC 309	5	15
	230 V 50/60 Hz	BS 1363	6	16

<sup>①</sup> Not RoHS (EU) compliant.

### Stainless Steel Flux

Thicker walls require more heat during gas tungsten arc welding. Swagelok stainless steel flux serves as a reactive agent with the arc, enabling operators to significantly reduce bead width and increase penetration by as much as 300 %. By using Swagelok flux, an operator will be able to reduce the amount of heat required for full penetration and maintain the critical phase balance of the Alloy 2507.



### Features

- Provides deeper penetration, reduced bead width, and reduced heat-affected zone when welding thick-walled tubing.
- Is ideally suited for use with Sandvik Alloy 2507 and other super-duplex stainless steels.
- Allows operators to autogenously weld Alloy 2507 and maintain critical phase balance.
- Kit includes 1 oz (30 mL) stainless steel flux, brush, and measuring cup.

Ordering number:  
**SWS-FLUX-1**



### Additional Accessories

Fan filter: **SWS-M200-IND-FLTR**

Port cover: **K-SWS-M200-PORT-CVR-KIT**

### Swagelok Weld Heads

See these Swagelok catalogs:

- Series 20, MS-02-128
- Series 4 and 8, MS-02-130
- Series 40, MS-02-140
- Series 5, MS-02-129
- Series 10, MS-02-131
- Series 8 HPH, MS-02-304

#### ⚠ WARNING

**Do not mix/interchange Swagelok products or components not governed by industrial design standards, including Swagelok tube fitting end connections, with those of other manufacturers.**