

Orbital Welding System

Weld Head, Tube and Pipe Collets,
and Tungsten Electrodes



Series 40

- Is available for outside tube diameters ranging from 1 1/2 to 4 in. and 38.1 to 114.3 mm and pipe diameters ranging from 1 1/4 to 4 in. and 42.2 to 114.3 mm
- Offers versatility for use in a variety of industries

Series 40 Weld Head

- Provides an ideal welding solution in the bioprocessing and power industries, among others
- Includes a viewing port, allowing the operator to line up the weld for ultimate reliability; an optional integral welding lens allows the operator to monitor the weld in process.
- Offers optical speed control—no tachometer or calibration required.

Ordering Information and Dimensions

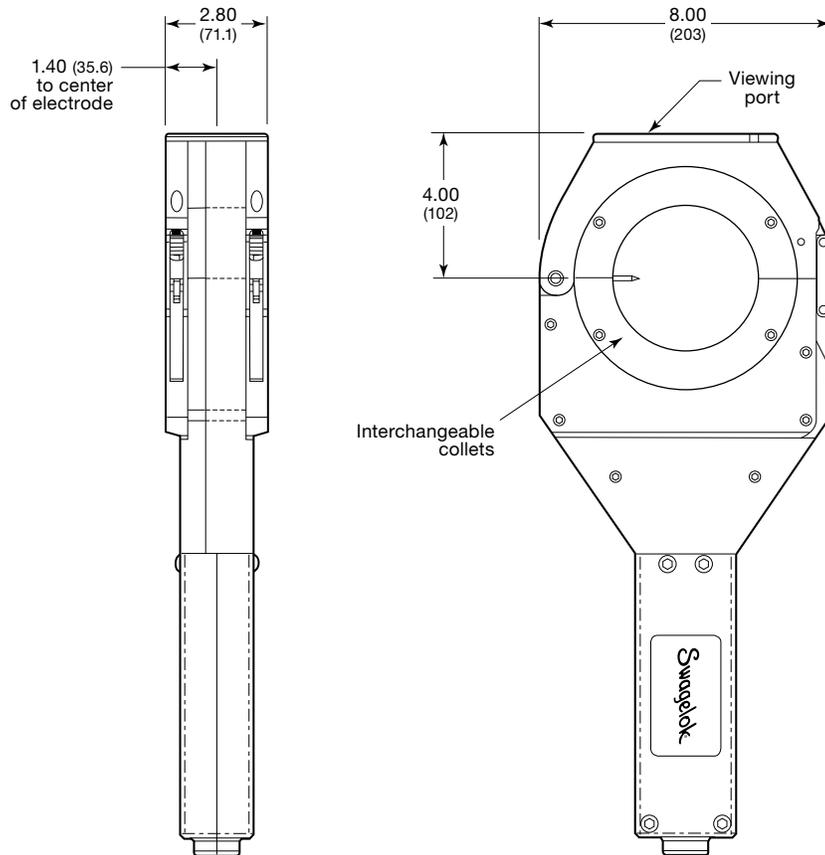
Dimensions, in inches (millimeters), are for reference only and are subject to change.

Cable Length ft (m)	Ordering Number	Weld Head Weight ^① lb (kg)
15 (4.6)	SWS-40H-D-15	12.8 (5.8)
35 (10.7)	SWS-40H-D-35	
50 (15.2)	SWS-40H-D-50	

Cables attach directly to the Swagelok® M200 power supply. For Swagelok M100 and earlier power supply models, an adapter is required.

Ordering number: **SWS-M100-WH-ADPTR**

① Weight does not include collets or cable.



Tube and Pipe Collets

Two collet halves are required per side plate.

Tube Collets

- Hold components rigidly during welding.
- Are easily changed for varying outside diameters.



Tube Collet Size		Collet Half Ordering Number
in.	mm	
1 1/2	38.1	SWS-40CI-24
—	42.4	SWS-40CI-42.4MM
	44.5	SWS-40CI-44.5MM
	48.3	SWS-40CI-48.3MM
2	50.8	SWS-40CI-32
—	54.0	SWS-40CI-54MM
	60.3	SWS-40CI-60.3MM
2 1/2	63.5	SWS-40CI-40
3	76.2	SWS-40CI-48
3 1/2	88.9	SWS-40CI-56
4	101.6	SWS-40CI-64
—	104.0	SWS-40CI-104MM
—	114.3	SWS-40CI-114.3MM

Pipe Collets

- Design compensates for pipe size variation.
- Pre-tacking of weld joint is required.



Pipe Collet Size		Collet Half Ordering Number
in.	mm (JIS)	
1 1/4	42.2	SWS-40CI-20P
1 1/2	48.3	SWS-40CI-24P
2	60.3	SWS-40CI-32P
—	60.5 (50A)	SWS-40CI-60.5MMP
2 1/2	73.0	SWS-40CI-40P
—	76.3 (65A)	SWS-40CI-76.3MMP
3	88.9	SWS-40CI-48P
—	89.1 (80A)	SWS-40CI-89.1MMP
3 1/2	101.6 (90A)	SWS-40CI-56P
4	114.3 (100A)	SWS-40CI-64P

Support Extensions

Use support extensions when welding vertical runs of pipe. The support extensions minimize angular misalignment and provide maximum rigidity. Use in sets of either 4 or 8 pieces.

Description	Ordering Number
Support extension	SWS-40CI-EXT

Tungsten Electrodes

Swagelok electrodes, available in packages of ten, provide consistent, repeatable welds. Electrodes consist of 2 % ceriated tungsten, axially ground to rigid specifications.



Tube Collet Size		Tungsten Electrodes Ordering Number
in.	mm	
1 1/2	38.1	SWS-C.094-2.615-P
—	42.4	SWS-C.094-2.530-P
	44.5	SWS-C.094-2.489-P
	48.3	SWS-C.094-2.414-P
2	50.8	SWS-C.094-2.365-P
—	54.0	SWS-C.094-2.302-P
	60.3	SWS-C.094-2.178-P
2 1/2	63.5	SWS-C.094-2.115-P
3	76.2	SWS-C.094-1.865-P
3 1/2	88.9	SWS-C.094-1.615-P
4	101.6	SWS-C.094-1.365-P
—	104.0	SWS-C.094-1.318-P
—	114.3	SWS-C.094-1.115-P

Pipe Collet Size		Tungsten Electrodes Ordering Number
in.	mm (JIS)	
1 1/4	42.2	SWS-C.094-2.535-P
1 1/2	48.3	SWS-C.094-2.414-P
2	60.3	SWS-C.094-2.178-P
—	60.5 (50A)	SWS-C.094-2.174-P
2 1/2	73.0	SWS-C.094-1.928-P
—	76.3 (65A)	SWS-C.094-1.863-P
3	88.9	SWS-C.094-1.615-P
—	89.1 (80A)	SWS-C.094-1.611-P
3 1/2	101.6 (90A)	SWS-C.094-1.365-P
4	114.3 (100A)	SWS-C.094-1.115-P

Options and Accessories

Weld Head Extension Cables

Swagelok weld head extension cables enable weld head operation away from the M200 power supply, up to a total cable length of 200 ft (61 m).

See the Swagelok *Series 40 Weld Head User's Manual*, MS-13-206, for information on weld head performance with optional weld head extension cables.



Extension Cable ft (m)	Ordering Number
35 (10.7)	SWS-WHEC-D-35
50 (15.2)	SWS-WHEC-D-50

Weld Head Adapter Cable

The weld head adapter cable allows connection from earlier Swagelok 40H-C model weld heads to the Swagelok M200 power supply.



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

Viewing Port Weld Lens

The optional viewing port weld lens allows the operator to monitor the weld in process. The lens is for welding applications of 120 A at 50 % duty cycle or below.

Ordering number: **SWS-WIN-WL-CVR**

Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Caution: Do not mix or interchange parts with those of other manufacturers.

Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit swagelok.com or contact your authorized Swagelok representative.