



NOVARC

The Spool Welding Robot (SWR™)

Cobot designed specifically for pipe and pressure vessel welding.

Response time within

2 business hours

for support tickets*.

With the purchase of NovCare Gold

Up to

12x

increase in pipe welding productivity.

Less than

1%

repair rates.

\$0 payments for up to

6 months

below the financing rate* with our partners.



Scan QR code to unlock the future of pipe welding.

For Business Owners

Win more projects

and get ahead in an increasingly competitive market.

Boost profit margins

on existing projects.

Shorten project timeframes

while increasing shop throughput.

See quick returns

The SWR™ typically pays off in 6-18 months.



The first project we did (with the SWR™) we cut off 4.5 man weeks of shop welding, so **we saved around \$114,000 on that project, and it made us competitive and added value to the end user.**

- Western Allied Mechanical.



For Operations Managers

Achieve 3-5x

productivity on carbon steel pipes.

Achieve up to 12X

productivity on stainless steel pipes.

Reduce dependency

on scarce, highly-skilled pipe welders.

Maximize arc-on time

with our non-stop root-to-cap process.

Dedicated Project Manager

to ensure a smooth and successful process,
from initial purchase to full integration.



A 16" schedule 10 stainless steel weld would take us around 2.5 hours to get a purge set up and then weld out. **With the SWR™, we now can do a 16" schedule 10 weld in 12- minutes that will pass RT.**

- W.W GAY Mechanical Contractors.



For Quality Managers

Lower the repair rates

to less than 1%, beating the industry average (3-5%).

Meet the requirements

of ASME Sec VIII, IX, B31.1, and B31.3.

Meet key quality test requirements

such as Radiography test, Charpy Impact test down to -50 F (-45.5 C), Hardness test, Bend test, Tensile test, and more.

Provide accountability

and traceability through NovSync™ and NovData™.

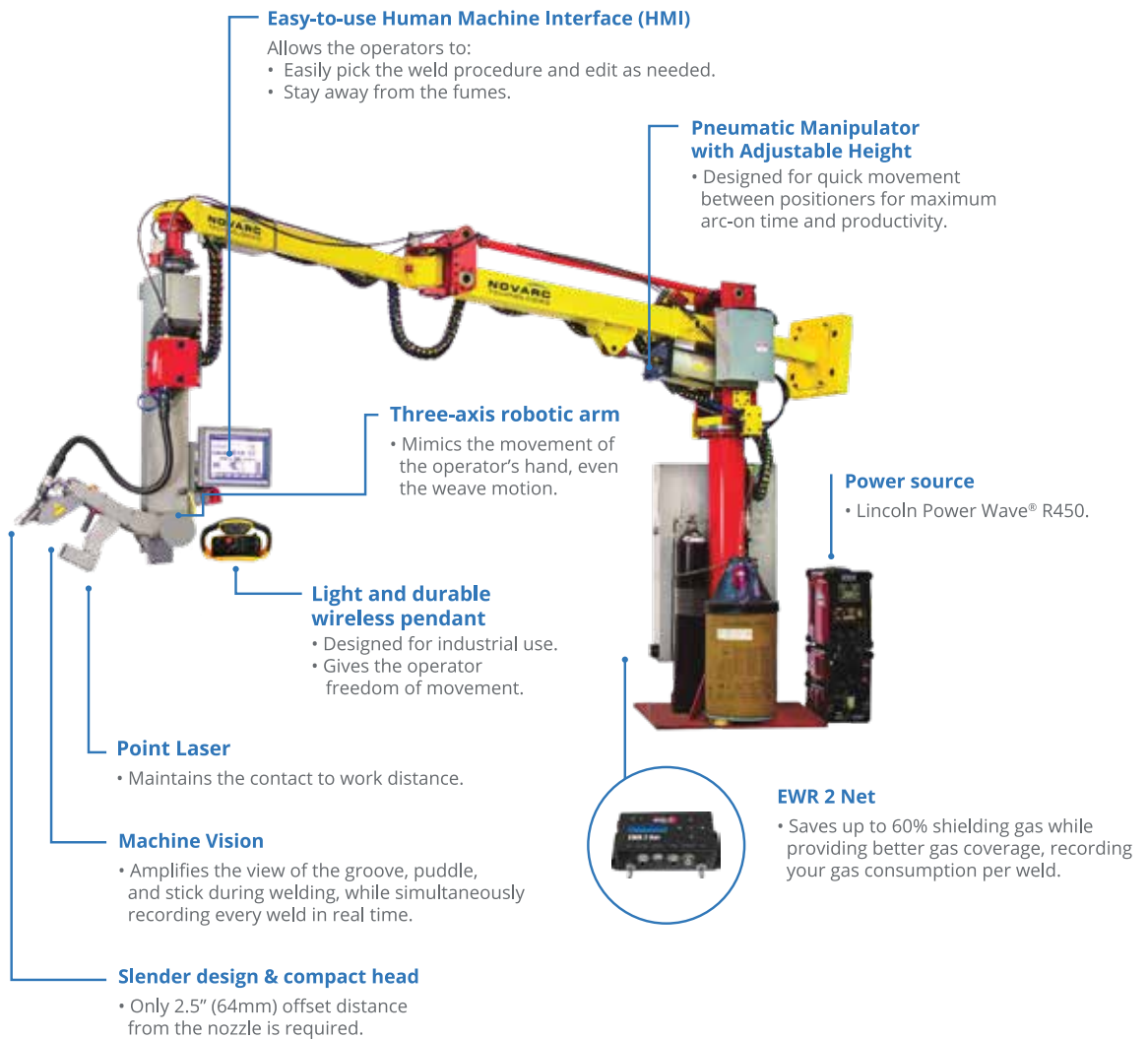


On the current job with the robot,
**we are doing x-rays and we
haven't had any repairs.**

- Harder Mechanical Contractors.



SWR™ At a Glance



Torch options



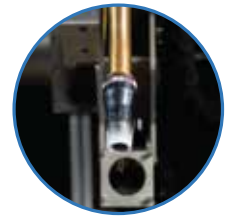
Single torch
The standard torch option with the SWR™.



Dual torch
Gives you flexibility to meet specific customer requirements such as:
• Flux-cored and metal-cored for fill and cap passes.
• Carbon steel and stainless steel welds.



SWR-F
Easier and faster slip-on flange welding.



SWR™+HyperFill®
Increases heavy fabrication productivity by increasing weld deposition rates while delivering excellent weld quality.

Applications

Pipe and pressure vessels from 2" - 60" (50mm - 1500mm).

Materials*

Carbon/Low Alloy (P1) and Stainless Steels (P8) alloys.

Weld Processes

GMAW, FCAW, MCAW, and HyperFill®.

Wire Diameter

0.035 - 0.062 in. (0.9-1.66 mm).

Working Diameter

30 ft (9.1 m).

Height

15 ft (4.5m).

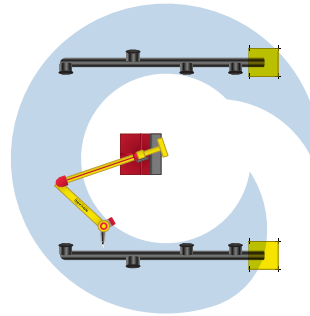
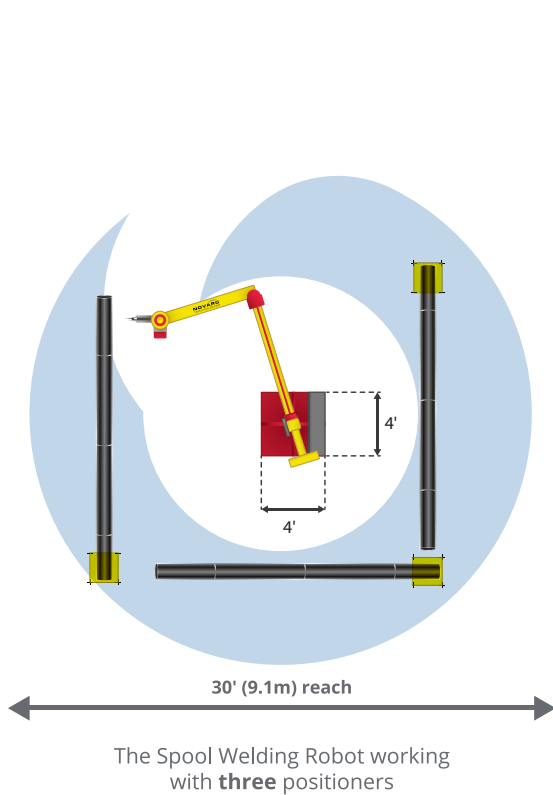
SWR™ Footprint

4'x4' (1.2m x 1.2m).

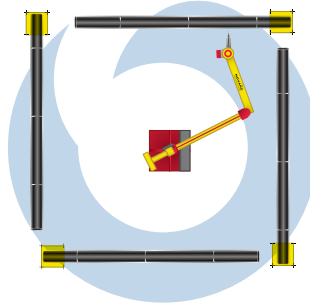
*Contact us for inquiries about other materials.

Sample layouts

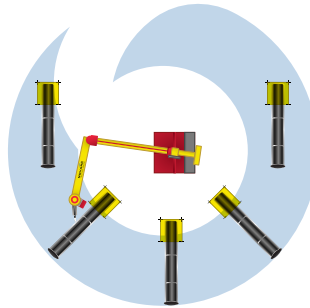
Flexibility to integrate with up to five positioners*
for maximum productivity and arc-on time.



The Spool Welding Robot working with **two** positioners



The Spool Welding Robot working with **four** positioners



The Spool Welding Robot working with **five** positioners

* Max 4 for SWR-F model



I could really tell that it was on Novarc's priority to get us up and running. I've done a lot of integration products and projects like this, but **this has been by far the best one because of their communication and support.**

- Trident Process Systems.



Innovations

Tack Fusion, Root Save, Repeat Pass

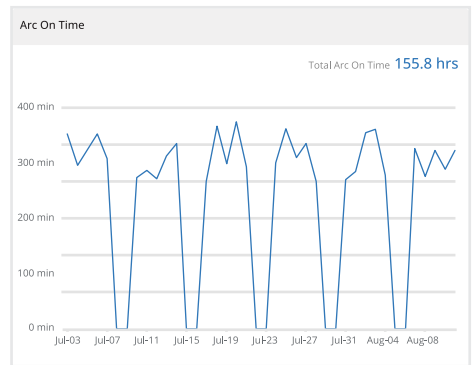
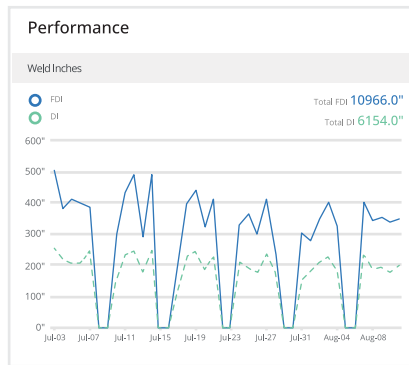
Technology to ensure 100% joint penetration without blow through at tack locations and pipe with poor fit-up, and Hi-Lo.

NovEye™ Assist, NovData™, NovSync™

Providing you with all the data and videos you need to seamlessly manage your welding operations, enhance productivity, and minimize disruptions, all with the assurance of dependable support and reliability at every step.



Activity				
Weld History				
Date	Order	T Spool	Start Time	Arc Off Time
2023-08-11	119005	HWR 19	15:15:12	18m 46s
2023-08-11	119006	SWR 18	13:41:50	3m 4s
2023-08-11	119005	HWR 4	13:16:29	20m 18s
2023-08-11	112004	SWR 3	11:59:58	3m 4s
2023-08-11	112423	Spool D2	11:13:07	3m 4s
2023-08-11	293193	HWR 2	08:47:49	0m 0s
2023-08-11	123953	6in SS	16:42:12	14m 4s
2023-08-11	112004	SWR 6	14:15:24	9m 39s
2023-08-11	193142	SWR 6	13:49:20	3m 4s



Production insights

Speed: 7.00
Weave: 3.50@1.10
Dwell: 0.10

WFS: 135.00
Trim: 0.00
Amps: 136.40
Volts: 16.20

STT Peak: 288
STT Bkg: 88
Tail-Out: 88
Ultimarc: 0
Weld mode: 309
Heat: 27.44
CTWD: 4mm

Pos: 88.92
Pass: 1 / 2
Pipe: 6 in 40
Position ID: 1

Job #: Autonomy-1720
Spool #: July-15
Weld #: 6inSTD
2024-07-15 10:11:06.238

NovEye™ Autonomy (Gen 2)

Industry First: Zero Operator Intervention, X-Ray Quality Welds. Just set up the Spool Welding Robot (SWR), hit start, and move to set up another weld.

NovEye™ Autonomy (Gen2)

Zero Operator Intervention:

Achieve the highest quality welds, maximizing productivity and minimizing errors.

AI/ML-Driven Precision:

Continuously improves by collecting weld data and enhancing models, ensuring unmatched precision and reliability.

Perfect Root Pass:

Controls weld and motion parameters against changes in the gap, hi-lo, tacks, and out-of-round pipes.

Real-World Adaptability:

Detects and adapts to pipe fitting inconsistencies, maintaining weld integrity despite hi-lo and varying root gaps.

Continuous Learning:

Leverages a terabyte-scale library of welding videos to refine its precision and reliability over time.



"We knew NovEye Autonomy was a big deal when one of our operators forgot he was welding and walked away from the machine."

-Sam Revel, Director of Industrialized Construction
at Pitt Meadows Plumbing





Currently in four continents and expanding



CERTIFICATION



Complies with applicable European Community Directives including European Directives for Safety of machinery (EN60204-1), electro-magnetic compatibility (EN61000-6) and safety of collaborative robots (ISO 15066-2016).

About Novarc Technologies

Novarc Technologies is a full-stack robotics company specializing in the design and manufacturing of cobots and AI-based machine vision solutions for autonomous welding. Novarc's Spool Welding Robot (SWR™) is the world's first of its kind in pipe welding applications. As a proven pioneer in the field, Novarc's team is dedicated to solving challenging welding automation problems that improve customers' bottom line.

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