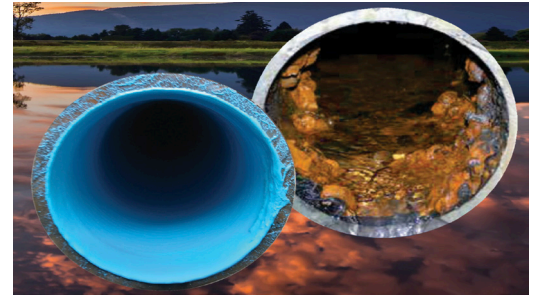


Designed, Built and Supported by the undisputed Global Leader

With over 44 years of design experience & knowledge built into our Rigs, with **143 Rigs sold in 33 countries**, we have been the undisputed global leader in our field for the past 20 years



Our Rigs apply a super smooth lining to the inside surface of pipelines using proven innovative designs with an online QA system. **The design has been independently assessed by WRC numerous times and shown to comply with UK regulations**

Our Rigs are packed full of our world 1st & globally recognised Innovations, simple and logical to operate, its easy to see why these machines are by far the most popular SIPP Lining Rigs in the world. Over the years, our Rigs have been used to successfully line well over 3000km of pipelines. Lining Potable Water / Sewer / Gas / Oil pipelines including industrial and nuclear facilities

Rigs are covered by our trusted & proven global customer training & support with over 70 teams trained globally



- » **W.E.R.M.S - SIPP RIG MONITORING SYSTEM** - the most popular system in the world
- » **NON CONTACT FLOW METERS (2023 world 1st)** massive benefits with 100% reliability for these ultra critical rig components
- » **DIAL A FLOW - (2023 world 1st)** Fully automatic lining operation with no user input required during the entire lining process, giving improved thickness consistency
- » **SMOOTH COAT (mk2) - (2012 world 1st)** Unique Umbilical hose that reduces rings by up to 95%
- » **A.V.O.S - (2006 world 1st)** game changing innovative system that removes operatives from the excavations and allows remotely operated in pipe stop /start operation
- » **EXHAUST HEAT RECOVERY SYSTEM (2022 world 1st)** computer controlled for greatly reduced carbon emissions and reduced running costs
- » **SMART CHECK - (2023 world 1st)** patent protected un-cheatable weight checking
- » **SMART TANK LEVEL MONITORING (S.T.M) (2021 world 1st)** using Radar sensors
- » **CIRCULAR PRESSURISED COATING TANKS (2006 world 1st)** Full bore wiper arms - zero "dead areas" with computer controlled Nano dry air purge system
- » **N.H.S - (2019 world 1st)** overnight heating system, rig is automatically ready for use at a time of your choosing with no user input required
- » **AUDIT FORMS - (2014 World 1st)** digital auditing online paperless lining records
- » On board ultra low noise Generator
- » **AUTOMATIC UMBILICAL HOSE SPOOLING - (1995 world 1st)**
- » **ROBOTIC APPLICATION - (2018 world 1st)** Battery powered lining head trolleys
- » **GRACO** pump system / worldwide spares from Graco global distributors
- » **Email (2004 world 1st), 4G/5G** with data logger and remote access & data storage with GPS
- » **POWER & COMMUNICATION** options for the umbilical hose if required, for real time application footage via camera etc

RIG DESIGN EXCEEDS REQUIREMENTS OF THE UK DWI & NORTH AMERICAN REGULATIONS FOR SIPP LINING OF POTABLE WATER PIPELINES

Rigs can be supplied on a trailer or in modular form with twist locks to allow fitting to a suitable vehicle



METRIC

PIPE DIAMETER RANGE	RIG MODEL	DIMENSIONS	MAXIMUM LINING LENGTH	WEIGHT WITH FULL TANKS	RESIN CAPACITY
100mm - 300mm	SR500	3000mm long 2100mm wide 2100mm high	100m	3000 kg	500 L
100mm - 600mm	SR1000	4300mm long 2100mm wide 2100mm high	180m	6000 kg	1000 L
100mm - 1200mm	SR2000	5300mm long 2100mm wide 2200mm high	180m	8000 kg	2000 L
200mm - 2500mm	SR3000	6300mm long 2230mm wide 2200mm high	430m	11,000 kg	3000 L

IMPERIAL

PIPE DIAMETER RANGE	RIG MODEL	DIMENSIONS	MAXIMUM LINING LENGTH	WEIGHT WITH FULL TANKS	RESIN CAPACITY
4" - 12"	SR500	9.84 ft long 6.88 ft wide 6.88ft high	328 ft	6,613 lb	132 US gal
4" - 24"	SR1000	14.1 ft long 6.88 ft wide 6.88 ft high	600 ft	13,227 lb	264 US gal
4" to 47"	SR2000	17.38 ft long 6.88 ft wide 6.88 ft high	600 ft	20,000 lb	528 US gal
8" to 98"	SR3000	20.66 ft long 7.31 ft wide 7.21 ft high	1410 ft	24,250 lb	792 US gal

All rigs can line much bigger pipes than the stated but at reduced length
 Or

A feeder unit can be added at any time to increase capacities of all rigs.

For example, SR1000 could line 60" x 600ft with a Feeder Unit



THESE WORLD 1st & GLOBALLY RECOGNISED INNOVATIONS ARE FITTED AS STANDARD TO ALL NEW RIGS

INNOVATION
DIAL A FLOW



AUTOMATIC COATING
FLOW RATE CONTROL



DIAL A FLOW
Automatic Lining thickness & flow rate control
The world 1st Fully autonomous SIPP system

INNOVATION
NON CONTACT FLOW METERS




REMOVES ALL THE USUAL ISSUES OF MECHANICAL METERS




NON CONTACT FLOW METERS
Remove all the usual issues with mechanical meters. Massive increase in rig reliability and accuracy of the monitoring system

INNOVATION
Open & Close Umbilical Valves Automatically

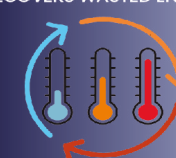


A.V.O.S
Automated Valve Operating System




A.V.O.S
Game changing world 1st innovation removing personnel from the launch and receive areas during lining.

INNOVATION
EXHAUST HEAT RECOVERY RECOVERS WASTED ENERGY



WASTED HEAT IS USED TO WARM THE COATING TANKS



EXHAUST HEAT RECOVERY
Carbon reduction & fuel saving system. World 1st Heat exchanger energy saving system fitted to a SIPP rig, saving 6kw of wasted energy.

INNOVATION
SMART PRE WARMING SYSTEM
N.H.S NIGHT HEAT SYSTEM



Over Night Heat Management
No App Required



N.H.S
NHS Overnight rig heating, forget coming into work early to start the rig warming process, simply program the rig to switch on automatically at a pre-set time. This system can use the on board generator or plug into mains supply

INNOVATION
SMOOTH - COAT UMBILICAL HOSE



Standard Umbilical Hose

SMOOTH-COAT Umbilical Hose

Proven 80% Smoother Coatings



SMOOTH-COAT UMBILICAL HOSE
"Anti ring" umbilical hoses offering massive improvements to the applied linings, "rings" used to the scourge of our industry, not any more. Mk1 version developed over 12 years ago, now on Mk2

INNOVATION
S.T.M Smart Tank Monitor



Accurately monitors tank levels at all times



S.T.M
Smart Coating tank level monitoring in real time with Radar sensors

INNOVATION
Online Software Updates



UPDATE

Online Lining Rig Software Updates



ONLINE
Online at all times with 100% remote access and interrogation, c/w software updates. Want to fully control your rig from your office? No problem with our online Rigs



We're really proud of our achievements over the years. Our "innovation factory" the birthplace of so many world 1st innovations continues to deliver innovative solutions by the bucket load

INNOVATION
MASSIVE REDUCTION IN SOLVENT USE DURING SIPP LINING OPERATIONS USING DISPOSABLE PARTS



MINIMAL SOLVENT USE - SAFER FOR OPERATIVES



SOLVENT REDUCTION
We have pioneered the use of disposable parts to reduce the need for cleaning with solvents

INNOVATION
Intelligent Coating Rig Management System



A R O
Assisted Rig Operation - Follow the A.R.O.



A.R.O
Always on, built in rig operation assistant

INNOVATION
AUDIT - FORMS




Paperless Lining & maintenance Online Record System




AUDIT FORMS
Unique online paperless lining record system

INNOVATION
SMART-CHECK



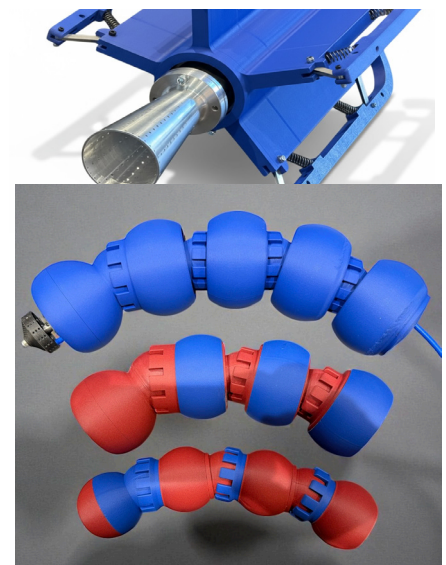
Patent Pending
THE ONLY WEIGHT CHECK SYSTEM THAT CANNOT BE CHEATED



SMART CHECK
World 1st Patent protected Un-cheatable weight checking system for SIPP rigs

3D PRINTING

We were the 1st SIPP equipment supplier to use 3D printing, we began our 3D printing journey in 2012. Now used daily to innovative and manufacture prototypes, We now wonder how we managed without this game changing manufacturing process



SR1000

Fitted to a Truck

Over 80 SR1000s
sold to date



SCHUR LTD
SR1000 FITTED TO A TRUCK



SR2000

Fitted to a Truck

Over 50 SR2000s sold to date

SR3000

The Worlds Largest
& Most Advanced
SIPP Pipe Lining Rig
with a 3000L tank
capacity

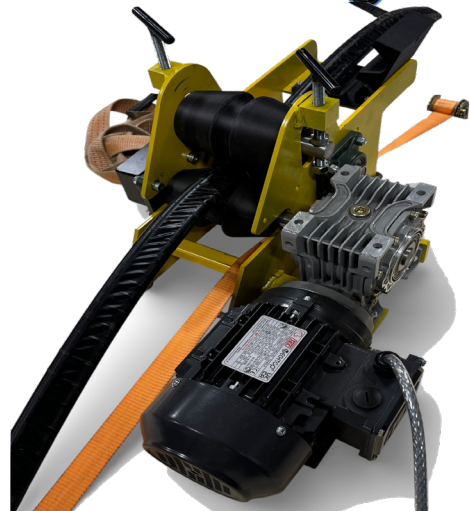




SR500S
Smaller SIPP Lining
Rig

MULTI - SYSTEM

Modular Lining & Coating system for smaller diameters / Restricted Access / Inside Buildings / Vertical lining / Hand Spraying Access Chambers etc





All Rigs offer:

- Low Carbon Footprint (heat recovery system saving 40% on fuel costs)
- All our innovations fitted as standard
- Perfect for highly urbanised areas





W.E.R.M.S - The most popular SIPP Rig Monitoring System in the world - Fitted to all our Lining Rigs

- WRc / DWI approved for use on potable water pipelines
- High level monitoring of Ratio / Pressure / Temperature etc
- Online & globally connected at all times
- **AUDIT FORMS (world 1st)** enabled for paperless record keeping
- Developed & updated over 24 years by Schur-BPH
- Precise computer controlled lining application
- Continually updated with many innovations
- 100% remote access & control using any web enabled device (**world 1st**)
- GPS & email (**world 1st**)
- Sun readable screens



All Rigs come fitted with W.E.R.M.S as standard



Lining data captured and emailed after each lining process

```

153643,START
153643,#####
153643,      W.E.R.M.S
153643,
153643,Contractor:      MWS
153643,Rig Ref:      SPT042
153643,Date:      Mo 15/08/22
153643,Time:      15:37
153644,Contract:      6303
153644,Scheme/Location:  WAKEFIELD
153644,Street/Road:      LUNDHILL LA
153644,Resin Material:  RES-320
153644,Base Batch No.1: 13822922
153644,Activatr Batch No.2: 13802922
153644,Last Calibration: D. 1 M. 4 Y.2022
153644,Since Calibration:-
153644,      Base : 14458.2 Litre
153644,      Activatr: 9484.8 Litre
153644,Operator:      CM
153644,Gang Reference:  MWS
153644,
153644,Hole Reference from: 12
153644,Hole Reference to: 13
153645,Pipe Diameter: 105 mm
153645,Pipe Material:  Cast Iron
153645,
153645,Auto Lining Thickness: 3 mm
153645,Auto Joint Thickness: 5.15 mm
153645,Manual Joint Factor: 0.7
153645,Rig Operating Mode: Rig Operation
153645,Flow Detection:  Flowmeter
153645,
153645,S7226 PLC 3.88
153645,EXTER T70 HMI 3.75 L3 Log Yes ASC Yes
153645,#####
153827,Weight Check Mode Mo 15/08/22 15:39
153827,      Check 1 of 3
153827,Activatr Weight1 = 351.00 gms
153828,Base Weight2 = 474.00 gms
153828,Mix Ratio = 100:74.050
153828,% between Results = 0.00%.
153828,Flows: B 2.19L/M A 1.47L/M MR 1.49
153828,Check Result: Pass
153828,      #####
154216,Weight Check Mode Mo 15/08/22 15:43
154216,      Check 2 of 3
154216,Activatr Weight2 = 326.00 gms
154216,Base Weight2 = 440.00 gms
154216,Mix Ratio = 100:74.090
154216,% between Results = 0.05%.
154216,Flows: B 1.78L/M A 1.19L/M MR 1.5
154218,Check Result: Pass
154218,      #####
154551,Weight Check Mode Mo 15/08/22 15:46
154551,      Check 3 of 3
154551,Activatr Weight3 = 345.00 gms
154551,Base Weight4 = 466.00 gms
154551,Mix Ratio = 100:74.034
154551,% between Results = 0.08%.
154552,Flows: B 1.78L/M A 1.19L/M MR 1.49
154554,Check Result: Pass
154554,      #####

160340,#####
160341,Spin Up Mode      Mo 15/08/22 16:04
160341,      Pressures
160341,Time      B      A      Flow      MR
160356,0:15 135.17 56.315 3.0034 1.5
160416,0:35 129.68 52.992 3.4420 1.49
160436,0:55 109.28 45.161 3.2794 1.49
160456,1:15 112.12 46.034 3.1034 1.49
160516,1:35 117.75 49.026 2.9277 1.49
160536,1:55 132.69 53.266 3.1473 1.49
160549,Spin Up Timer: 30 secs
160549,#####
160549,Lining Mode      Mo 15/08/22 16:06
160549,Pipe Offset      0 M
160549,Temperatures Base 34 Activatr 32
160549,      Press
160549,Time Lined B A Flow Speed MR TK
160549,Man      Joints Off Diams Off
160606,0:15 0.869 130 53 3.19 2.75 1.49 3.66
160626,0:35 1.876 130 53 3.25 3.21 1.49 3.16
160627,Auto 3 mm Joints Off Diams Off
160647,0:55 3.009 122 49 3.32 3.47 1.49 2.98
160706,1:15 4.076 125 52 3.15 3.35 1.49 2.92
160727,1:35 5.175 124 51 2.96 3.22 1.49 2.86
160745,1:55 6.125 111 45 2.82 3.03 1.49 2.90
160806,2:15 7.143 118 49 2.90 2.99 1.5 3.02
160827,2:35 8.222 122 48 3.10 3.15 1.49 3.07
160829,
160829,MR OK 100 Error 0 Temp B 33 A 32
160829,TK OK 100 Error 0 Fail 0
160829,Auto 3mm I Joint 5.15mm I X 0.7
160829,
160829,Time Lined B A Flow Speed MR TK
160845,2:55 9.239 121 48 3.18 3.26 1.49 3.03
160908,3:15 10.42 121 50 3.20 3.29 1.49 3.03
160926,3:35 11.48 123 49 3.17 3.32 1.49 2.97
160945,3:55 12.54 126 51 3.11 3.26 1.49 3.00
161005,4:15 13.50 129 53 3.05 3.21 1.49 2.99
161027,4:35 14.47 129 53 3.01 3.09 1.49 3.04
161047,4:55 15.53 132 55 2.97 3.08 1.49 3.00
161106,5:15 16.50 130 54 2.92 3.08 1.49 2.97
161108,
161108,MR OK 100 Error 0 Temp B 33 A 32
161108,TK OK 100 Error 0 Fail 0
161108,Auto 3mm I Joint 5.15mm I X 0.7
161108,
161108,Time Lined B A Flow Speed MR TK
161126,5:35 17.52 126 52 2.92 3.03 1.5 2.98
161146,5:55 18.57 119 49 2.98 3.10 1.49 2.99
161207,6:15 19.65 119 47 3.01 3.15 1.49 2.98
161226,6:35 20.62 124 51 2.95 3.09 1.49 2.98
161246,6:55 21.66 127 52 2.90 3.03 1.49 2.98
161305,7:15 22.62 138 57 3.05 3.03 1.5 3.14
161326,7:35 23.74 139 57 3.16 3.20 1.49 3.08
161347,7:55 24.92 136 56 3.36 3.43 1.49 3.05
161349,
161349,MR OK 100 Error 0 Temp B 33 A 32
161349,TK OK 100 Error 0 Fail 0
161349,Auto 3mm I Joint 5.15mm I X 0.7
161349,
161349,Time Lined B A Flow Speed MR TK
161405,8:15 25.96 127 52 3.11 3.30 1.5 2.93
161426,8:35 27.06 117 49 3.03 3.15 1.49 2.93
161446,8:55 28.08 124 50 2.81 2.96 1.49 2.95
161505,9:15 29.02 134 54 3.06 3.09 1.5 3.08
161526,9:35 30.17 127 51 3.22 3.25 1.49 3.08
161546,9:55 31.23 133 55 3.20 3.31 1.49 3.01

```

RECORDED PARAMETERS

Pressures - Temperatures - **Mix Ratio** - Lining Thickness - **Lining Speed** - Lining Distance - **Base Flow Rate** - Activator Flow Rate - **Elapsed Time** - Total Time - **Total Flow Rate** - Operators Name - **GPS Coordinates** - Weight Check Data- **Contractor Name** - Pipe Internal Diameter - **Pipe Length** - Coating Batch Numbers - **Rig Serial Number** - Date & Time



High speed Lining data (world 1st)

High speed data capture offers lining thickness confirmation which is captured in real time every second. This data is emailed along with the standard lining data

How is the Lining thickness calculated?

Lining thickness is a function of the following

- 1 Internal Pipe Diameter
- 2 Pump Flow Rate
- 3 Lining head travel speed

Prior to lining the pipe, the internal pipe diameter is confirmed by physically measuring the pipe, this value is entered into the rig monitoring system (**W.E.R.M.S**)

Assuming that the pump flow rate and the lining head travel speed are correctly calibrated, then the lining thickness will be correct.

Pump flow rate measurement & control

Two high quality high accuracy non contact flow meters (world 1st) are used for measuring the flow rate and ratio, offering high accuracy with zero maintenance on these most critical rig components. flow rate controlled by our world first DIAL A FLOW system, coupled with our automatic thickness control offers a unique world first fully automatic pipe lining system.

Lining head travel speed measurement

A high quality / high accuracy rotary encoder is used to measure the linear speed of the lining head

Rig calibration

Calibration is carried out every 6 months or at any time if a problem is suspected



Having successfully trained over 70 SIPP Pipe Lining teams around the world using our proven training schedules, you can trust us to get your team trained in all aspects of SIPP. Many teams have never previously carried out any SIPP operations, under our guidance, we soon have them lining pipes successfully.

Having trained vastly more teams than any other company, you can trust us to get you on your SIPP journey using proven training schedules and our unrivalled knowledge

