



FLANGE TOOL INNOVATION



Equalizer International is an award-winning, world-leading designer and supplier of innovative flange maintenance tools for the oil and gas, petrochemical, nuclear, water, mining and renewable energy sectors.

Established in Scotland in 1994, we have designed and developed more than 60 tools across a product range which includes flange aligning, spreading and pulling tools together with a series of hand pumps and hydraulic nut splitting tools.

Innovation remains at the very heart of our company and we have more than 60 active patents, trade-marks and design registrations in our expanding global intellectual portfolio. Our tools are sold in over 80 countries and are used around the world to resolve hundreds of technically-challenging flange joint applications while delivering significant safety, time and cost savings benefits. In addition to our standard products, our designers and engineers also work closely with customers on an individual basis to develop customised solutions to particular problems.

A truly-customer focussed organisation, many of the new tools we develop result from direct conversations with you, the customer. We understand the operational challenges you face and we respond by pushing out the boundaries of design and development to provide straightforward, highly efficient solutions.

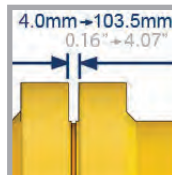
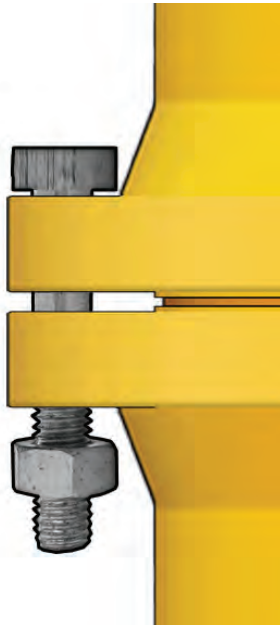
As our product range continues to grow our tools will always be built on the combined experience, creativity and innovation that have helped shape the Equalizer brand – **FLANGE TOOL INNOVATION.**

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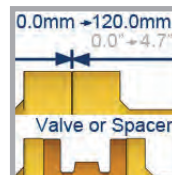
# 1. FLANGE SPREADING SOLUTIONS

The Equalizer™ range of patented flange spreading tools has been developed to aid and simplify the maintenance of flange joints. No longer will those tasked with separating flanges have to rely on using ropes and pulleys, podgers, tirsors, come-alongs or hammers – there is a safe, quick and effective alternative, the Equalizer™ range of spreaders. These spreaders use mechanical and hydraulic principles for separating flanges and can spread small, medium or large flange joints. Tool selection is made on the basis of the access gap between the flange faces:



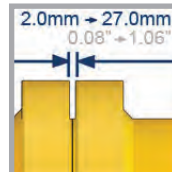
#### SWi Range:

The world's safest and most powerful flange spreading wedge for use on small, medium or large flange joints with an access gap of at least 4.0mm.



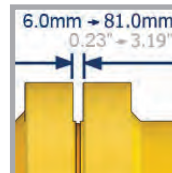
#### SG & VC Range:

A globally unique spreader for use on flange joints with no access gap, or where there is a spacer, wafer or butterfly valve positioned between the flanges.



#### MG Tool:

The safest tool for small diameter, low pressure flanges with an access gap of at least 2.0mm.



#### SW Range:

A general purpose spreading wedge for use on small, medium or large flange joints with an access gap of at least 6.0mm.

# SWi RANGE

## INNOVATIVE FLANGE SPREADING WEDGES

The SWi range has set the new standard for spreading flange joints powerfully, efficiently, effectively and safely. The tools offer the following features and benefits:

Wider spreading - using the supplied Stepped Block accessories means the SWi range offers up to 30% more flange spreading distance than a traditional SW tool.

Unrivalled power - the tools now offer up to 25T of spreading force, which provides additional confidence when spreading.

Narrower jaws - the SWi tools are 8% narrower than the traditional SW range to help them fit more easily between flange bolts.

Safer working – the 360-degree swivel lanyard on all SWi tools enables users to attach the spreader to some adjacent pipework, mitigating potential dropped object injury.

Fully rotational handle – the handle swivels 360-degrees around the wedge

head, so that the SWi tools can be used comfortably in all orientations.

Lighter tools – the SWi tools are on average lighter than the traditional SW spreaders and are therefore easier to carry on-site and to use.

Better handle grips – the SWi comes with a reinforced composite handle making it easier to grip, hold and use.

Safety blocks - designed to suit the step sizes of the SWi tools, the supplied safety blocks accommodate the wider spread offered when the stepped blocks are fitted.

Easier maintenance – end-users will appreciate the ease with which the tools can be maintained. The supplied hex-key and a two step-process is all that's required to disassemble and reassemble the tools.

No pinch points – the SWi range of tools has been engineered to overcome finger pinch-points.



FLANGE TOOL INNOVATION

# SWi5TE

## INNOVATIVE EXTERNAL HYDRAULIC FLANGE SPREADING WEDGE

This new addition to the SWi fleet is not only smaller and lighter while retaining the SWi safety features but incorporates a 4mm wedge tip to enable this innovative tool to be used in the smallest of flanges and is actuated by an external hydraulic hand pump.



NEW  
PRODUCT

### TOOL CAPABILITIES

#### SPREADING FORCE

with 700bar (10,000psi) hydraulic pressure applied::

- 63kN (6.3T) 1st Step
- 77kN (7.7T) 4th Step

#### SPREADING DISTANCE

- 4mm – 29mm (0.16" – 1.14") using only 1st step
- 4mm – 79mm (0.16" – 3.1") using 4 steps (without stepped blocks)
- 56mm – 101mm (2.2" – 4") using 2 steps (with stepped blocks)

**TOOL WEIGHT:** 5.2kg (11.4lb)



TWIN KIT  
(SWi5TE-T)



SINGLE KIT  
(SWi5TE-S)



STEP BLOCK KIT  
(1640016-01)



# SWi12/14TM

## INNOVATIVE MECHANICAL FLANGE SPREADING WEDGE

This innovative spreading wedge is applicable for use on small to medium sized flanges and is mechanically operated using the supplied torque-wrench.



### TOOL CAPABILITIES

#### SPREADING FORCE

with 175N.m (130ft.lb) torque applied:

- 120kN (12T) 1st step
- 140kN (14T) 4th step

#### SPREADING DISTANCE

- 6.0mm – 40.0mm (0.24" - 1.6") using only 1st step
- 6.0mm – 87.5mm (0.24" - 3.4") using 4 steps (without stepped blocks)
- 48.5mm – 103.5mm (1.9" - 4.1") using 2 steps (with stepped blocks)

#### TOOL WEIGHT

- 6.2kg (13.7lb)



STANDARD KIT  
(SWi1214TMSTDSPB)



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# SWi20/25TE

## INNOVATIVE EXTERNAL HYDRAULIC FLANGE SPREADING WEDGE

This innovative spreading wedge is applicable for use on medium to large sized flanges and is actuated by an external hydraulic hand-pump.



### TOOL CAPABILITIES

#### SPREADING FORCE

with 700bar (10,000psi) hydraulic pressure applied:

- 200kN (20T) 1st step
- 240kN (24T) 4th step

#### SPREADING DISTANCE

- 6.0mm – 40.0mm (0.24" - 1.6") using only 1st step
- 6.0mm – 87.5mm (0.24" - 3.4") using 4 steps (without stepped blocks)
- 48.5mm – 103.5mm (1.9" - 4.1") using 2 steps (with stepped blocks)

**TOOL WEIGHT:** 6.4kg (14.10lb)

Available in three kit formats:



MINI KIT  
(SWi2025TEMIN)



STANDARD KIT  
(SWi2025TESTDSPB)



MAXI KIT  
(SWi2025TEMAXSPB)



# SWi20/25TI

## INNOVATIVE INTEGRAL HYDRAULIC FLANGE SPREADING WEDGE

This self-contained, compact and portable innovative spreading wedge is applicable for use on medium to large sized flanges and is actuated by an integral hydraulic hand-pump, so no hoses or external pumps are required.



### TOOL CAPABILITIES

#### SPREADING FORCE

with 700bar (10,000psi) hydraulic pressure applied:

- 200kN (20T) 1st step
- 240kN (24T) 4th step

#### SPREADING DISTANCE

- 6.0mm – 40.0mm (0.24" - 1.6") using only 1st step
- 6.0mm – 87.5mm (0.24" - 3.4") using 4 steps (without stepped blocks)
- 48.5mm – 103.5mm (1.9" - 4.1") using 2 steps (with stepped blocks)

#### TOOL WEIGHT

- 8.5kg (18.8lb)



STANDARD KIT  
(SWI2025TISTDSPB)





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# ATEX TOOLING RANGE

INNOVATIVE ATEX CERTIFIED  
FLANGE SPREADING WEDGE KITS

NEW  
PRODUCT

The Equalizer range of ATEX certified tools includes SWi wedges, hand pumps and hoses. All ATEX certified tools can be used in potentially explosive atmospheres and conform with the EU Directive 2014/34/EU (ATEX) combined with harmonized standard EN ISO 80079-36:2016.



SWi20/25TEEX MINI KIT  
(SWi2025TEMINEX)



SWi20/25TEEX STANDARD KIT  
(SWi2025TESTDEX)



SWi20/25TEEX MAXI KIT  
(SWi2025TEMAXEX)



SWi12/14TMEX KIT  
(SWi1214TMSTDEX)



SWi20/25TIEX KIT  
(SWi2025TISTDEX)

Tool capabilities as per standard SWi Wedge range, refer to pages 6-8.  
Please refer to page 33 for ATEX Hand Pumps and Hoses.

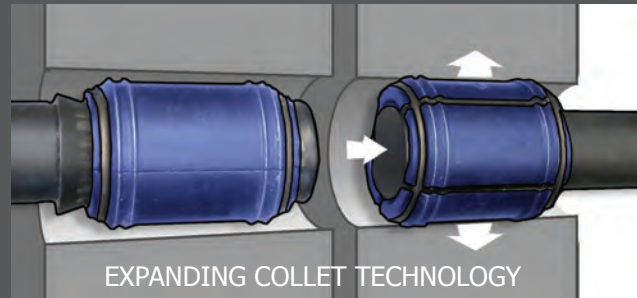


# SG RANGE

## SECURE-GRIP FLANGE SPREADING TOOLS

Equalizer's globally unique Secure-Grip tools spread via the flange bolt holes and offer, arguably the world's safest flange spreading tools.

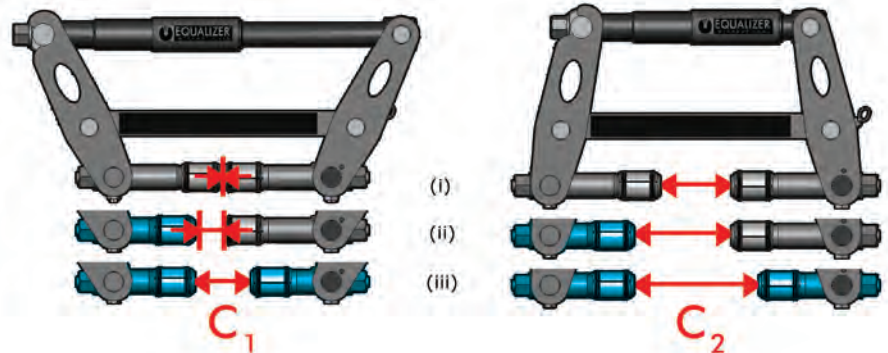
These tools use our patented expanding collet technology for application on flanges with a zero gap or where spacers, spectacles or butterfly valves reside between the flange joints.



### SHORT COLLET HOLDER KITS

TOOL	Configuration	C <sub>1</sub> (Closed)	C <sub>2</sub> (Open)
SG4TM	standard tool (i)	0mm (0")	75mm (2.95")
	single SCH kit (ii)	42mm (1.65")	117mm (4.61")
	double SCH kit (iii)	84mm (3.31")	159mm (6.26")
SG6TM	standard tool (i)	0mm (0")	80mm (3.15")
	single SCH kit (ii)	60mm (1.42")	140mm (4.57")
	double SCH kit (iii)	120mm (4.72")	200mm (7.87")
SG11TM	standard tool (i)	0 mm (0")	90mm (3.50")
	single SCH kit (ii)	13mm (0.51")	103mm (4.06")
	double SCH kit (iii)	26mm (1.02")	116mm (4.57")

A Short Collet Holder Kit is available for each mechanical Secure-Grip tool. The kit fits on in place of the standard Collet Holder, and uses the standard Collets.





# SG4TM SG6TM SG11TM



## SECURE-GRIP MECHANICAL FLANGE SPREADERS

The smaller lightweight mechanical SG tools are applicable for small to medium sized flanges, are actuated by the supplied torque wrench, and are suitable for bolt holes from 17.5mm (0.69") to 39.0mm (1.54"). Different collets are used to match the tool to the respective bolt hole diameter.



### TOOL CAPABILITIES

- **SG4TM:**  
spreading force of 37kN (3.7T);  
spreading distance of 75.0mm  
(2.95")  
tool weight: 4.5kg (10.0lb)
- **SG6TM:**  
spreading force of 60kN (6T);  
spreading distance of 80.0mm  
(3.15")  
tool weight: 7.5kg (16.5lb)
- **SG11TM:**  
spreading force of 110kN (11T);  
spreading distance of 90.0mm  
(3.55")  
tool weight: 10.5kg (23.2lb)



SG4TM KIT  
(SG4TMSTD)  
Includes Collets:  
M16 (5/8")  
M20 (3/4")



SG6TM KIT  
(SG6TMSTD)  
Includes Collets:  
M24 (7/8")  
M27 (1")



SG11TM KIT  
(SG11TMSTD)  
Includes Collets:  
M30 (1-1/8")  
M33 (1-1/4")  
M36 (1-3/8")



# SG13TE SG15TE



## SECURE-GRIP HYDRAULIC FLANGE SPREADERS

The hydraulic SG tools are applicable for medium to large sized flanges, are actuated by an external hand-pump and are suitable for bolt holes from 38.0mm (1.49") to 62.0mm (2.44"). Different collets are used to match the tool to the respective bolt hole diameter.



### TOOL CAPABILITIES

- **SG13TE:**  
spreading force of 130kN (13T);  
spreading distance of 115.0mm  
(4.53")  
tool weight: 21.5kg (47.4lb)
- **SG15TE:**  
spreading force of 150kN (15T);  
spreading distance of 100.0mm  
(3.94")  
tool weight: 26.0kg (57.3lb)



SG13TE KIT  
(SG13TESTD)

Includes Collets:  
M39 (1-1/2")  
M42 (1-5/8")  
M45 (1-3/4")



SG15TE KIT  
(SG15TESTD)

Includes Collets:  
M48 (1-7/8")  
M52 (2")  
M56 (2-1/4")



# SG18TE SG25TE



## SECURE-GRIP IN-LINE HYDRAULIC FLANGE SPREADERS

The large in-line hydraulic SG tools are applicable for larger sized flanges. These are actuated by an external hand-pump and are suitable for bolt holes from 59.5mm (2.34") to 108.0mm (4.25"). Different collets are used to match the tool to the respective bolt hole diameter.



### TOOL CAPABILITIES

- SG18TE:  
spreading force of 180kN (18T);  
spreading distance of 100.0mm (3.94")  
tool weight: 14.0kg (30.9lb)
- SG25TE:  
spreading force of 250kN (25T);  
spreading distance of 120.0mm (4.72")  
tool weight: 24.0kg (52.9lb)



SG18TE KIT  
(SG18TESTD)

Includes Collets:  
M60  
M64 (2-1/2")  
M70 (2-3/4")



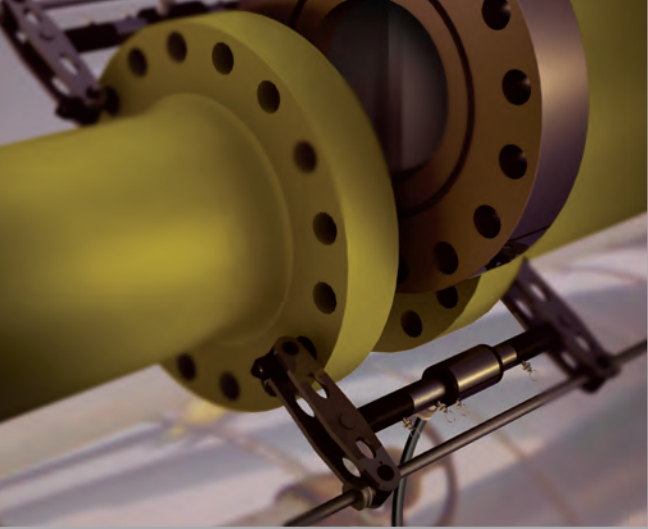
SG25TE KIT  
(SG25TESTD)

(collets supplied separately)

Collets :  
M76 (3") M90 (3-1/2")  
M80 (3-1/4") M95 (3-3/4")  
M84 M100 (4")

# VC RANGE

## SECURE-GRIP VALVE-CHANGE-OUT FLANGE SPREADING TOOLS



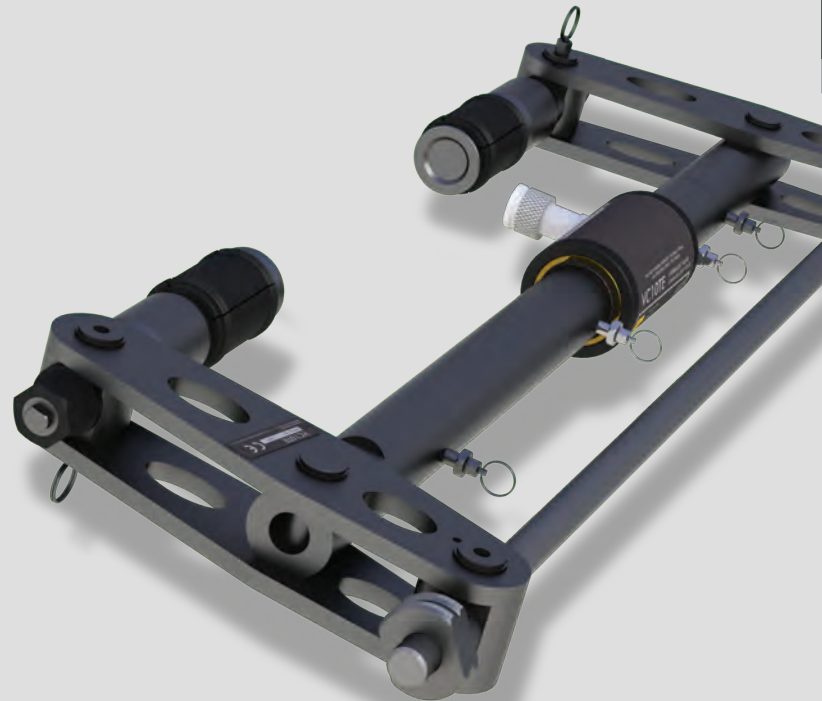
The Equalizer™ VC Range of Valve Change-Out tools has been developed to assist in the removal of wafer/butterfly valves, spades/spacers or gaskets from large flange joints. The span of the tool is longer than a standard Secure-Grip Flange Spreader and is adjustable to enable the tool to operate in a range of situations.

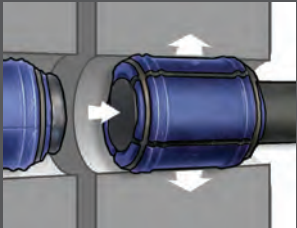
### IDEAL FOR:

Large flange joints

Flange joints with spacers, blinds, or valves present

Spreading force up to 10T per tool





### UNIQUE EXPANDING COLLET TECHNOLOGY

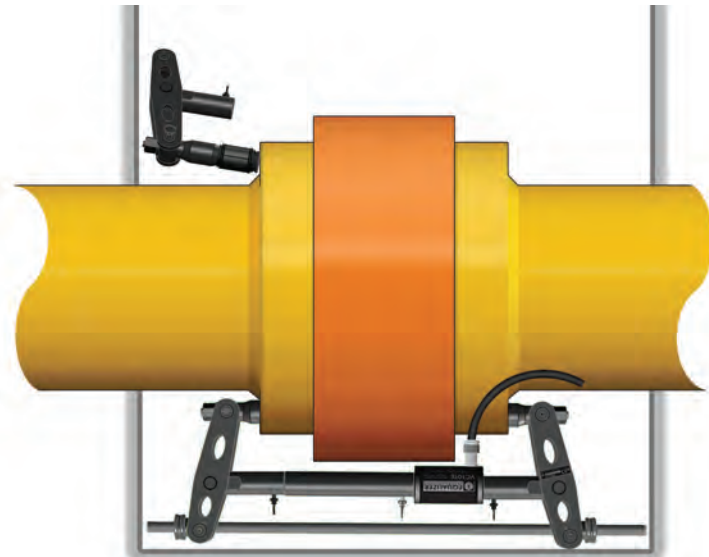
little or no access gap required  
secure bolt-hole locking mechanism

unique technology makes the Secure-Grip arguably the safest flange spreader available in the world today  
time-saving, simple operation  
measurable, controlled spreading force

### INFINITELY RECONFIGURABLE

By utilising the supplied extensions and adjusting the length of the tension rod, the tools can be reconfigured to suit a huge range of flange joint thicknesses, from 0 to 550mm.

Additional kits are available to further extend the range of application.





# VC10/13TE

## SECURE-GRIP VALVE CHANGE-OUT TOOL

The VC Range consists of several tool variations, each with its own set of collets designed to suit a range of bolt-hole sizes. The unique patented expanding collet technology is shared with the Secure-Grip range.

Contact us if you have an application that is beyond the capability of our standard tools, various kits that extend the range are available.

For larger flange joints (or those with a spacer or valve between the flanges) with bolt hole diameter between 38.0mm and 49.0mm (1.50" to 1.93")

Minimum bolt-hole diameter (mm)	Maximum bolt-hole diameter (mm)	COLLET	TOOL
38 (1.50")	42 (1.65")	<b>M39</b>	<b>VC10/13TE</b>
41 (1.61")	45 (1.77")	<b>M42</b>	
44 (1.73")	49 (1.93")	<b>M45</b>	
47.5 (1.87")	52 (2.05")	<b>M48</b>	<b>VC10/15TE</b>
50.5 (1.99")	56 (2.20")	<b>M52</b>	
55.5 (2.19")	62 (2.44")	<b>M56</b>	
59.5 (2.34")	63 (2.48")	<b>M60</b>	<b>VC10/18TE</b>
63 (2.48")	69 (2.72")	<b>M64</b>	
69 (2.72")	75 (2.95")	<b>M70</b>	
75 (2.95")	81 (3.19")	<b>M76</b>	
79 (3.11")	86 (3.39")	<b>M80</b>	<b>VC10/25TE</b>
83 (3.27")	88 (3.46")	<b>M84</b>	
88 (3.46")	94 (3.70")	<b>M90</b>	
94 (3.70")	101 (3.98")	<b>M95</b>	
99 (3.90")	107 (4.21")	<b>M100</b>	

### SPREADING FORCE

with 700bar (10,000psi) hydraulic pressure applied:

- 100kN (10.0T)

### SPREADING DISTANCE

- 151mm (5.9")



# VC10/15TE

## SECURE-GRIP VALVE CHANGE-OUT TOOL

For larger flange joints (or those with a spacer or valve between the flanges) with bolt hole diameter between 47.0mm and 62.0mm (1.85" to 2.44")

# VC10/18TE

## SECURE-GRIP VALVE CHANGE-OUT TOOL

For larger flange joints (or those with a spacer or valve between the flanges) with bolt hole diameter between 59.0mm and 75.0mm (2.32" to 2.95")

# VC10/25TE

## SECURE-GRIP VALVE CHANGE-OUT TOOL

For larger flange joints (or those with a spacer or valve between the flanges) with bolt hole diameter between 75.0mm and 107.0mm (2.95" to 4.21")



TYPICAL VC STANDARD KIT



TYPICAL VC MAXI KIT



# ADDITIONAL SPREADING TOOLS

## COMPLETING THE SPREADER RANGE



## MG7TM

### MINI-GAP FLANGE SPREADER

For use on smaller, lower pressure flange joints, this portable and flexible tool can be assembled in two alternative configurations to suit a range of flanges.

#### TOOL CAPABILITIES

##### SPREADING FORCE

single tool:

- 68kN (6.8T)

used in pairs (as recommended):

- 136kN (13.6T)

##### SPREADING DISTANCE

- 2.0mm - 27.0mm (0.08" - 1.06")

**TOOL WEIGHT:** 5.0kg (11.0lb)



# SW9TM

## MECHANICAL FLANGE SPREADING WEDGE

This general purpose, entry level spreading wedge is mechanically operated using the supplied torque-wrench.



# SW14.5TI

## INTEGRAL HYDRAULIC FLANGE SPREADING WEDGE

This general purpose self-contained spreading wedge is actuated by an integral hydraulic hand-pump, so no hoses or external pumps are required.



# SW15TE

## HYDRAULIC FLANGE SPREADING WEDGE

This general purpose spreading wedge is actuated by an external hydraulic hand-pump.

### TOOL CAPABILITIES

#### SPREADING FORCE

with 203N.m (150ft.lb) torque applied:

- 90kN (9T)

#### SPREADING DISTANCE

- 6.0mm – 31.0mm (0.24" - 1.22") using only 1st step
- 6.0mm – 62.0mm (0.24" - 2.44") using 4 steps (without stepped blocks)
- 31.0mm – 81.0mm (1.22" - 3.19") using optional stepped blocks kit

**TOOL WEIGHT:** 5.5kg (12.13lb)

### TOOL CAPABILITIES

#### SPREADING FORCE

with 700bar (10,000psi) hydraulic pressure applied:

- 145kN (14.5T)

#### SPREADING DISTANCE

- 6.0mm – 31.0mm (0.24" - 1.22") using only 1st step
- 6.0mm – 62.0mm (0.24" - 2.44") using 4 steps (without stepped blocks)
- 31.0mm – 81.0mm (1.22" - 3.19") using optional stepped blocks kit

**TOOL WEIGHT:** 9.0kg (19.8lb)

### TOOL CAPABILITIES

#### SPREADING FORCE

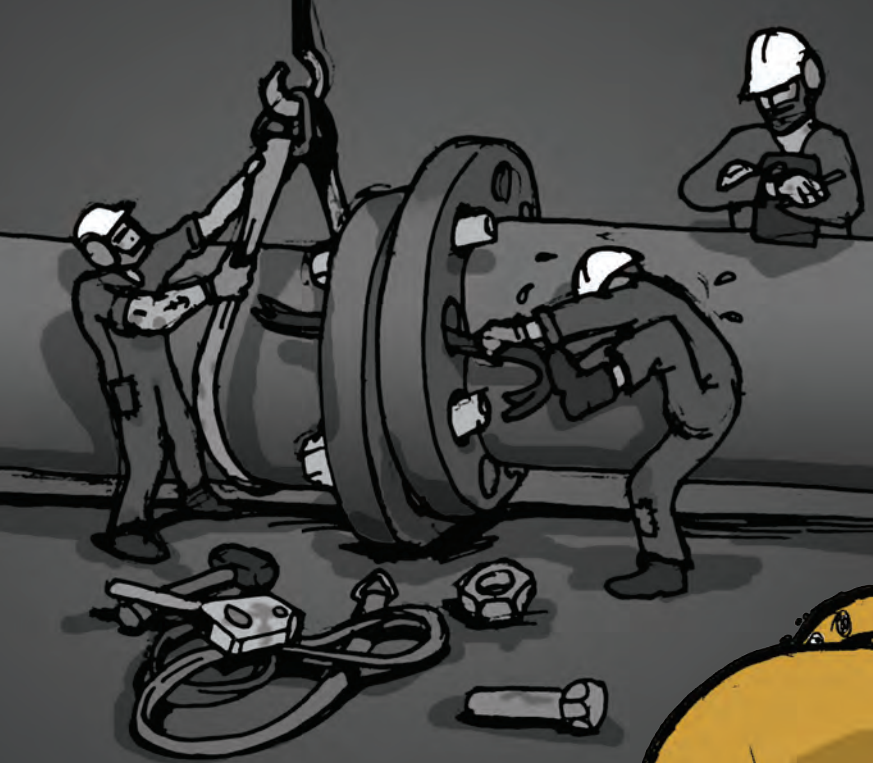
with 700bar (10,000psi) hydraulic pressure applied:

- 155kN (15.5T)

#### SPREADING DISTANCE

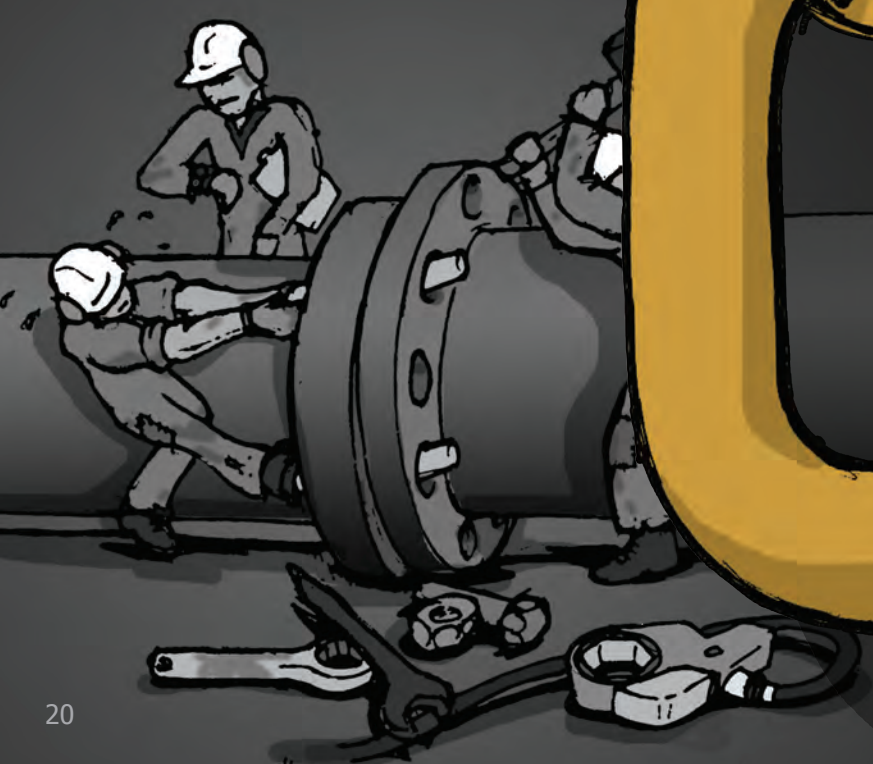
- 6.0mm – 31.0mm (0.24" - 1.22") using only 1st step
- 6.0mm – 62.0mm (0.24" - 2.44") using 4 steps (without stepped blocks)
- 31.0mm – 81.0mm (1.22" - 3.19") using optional stepped blocks kit

**TOOL WEIGHT:** 7.0kg (15.4lb)

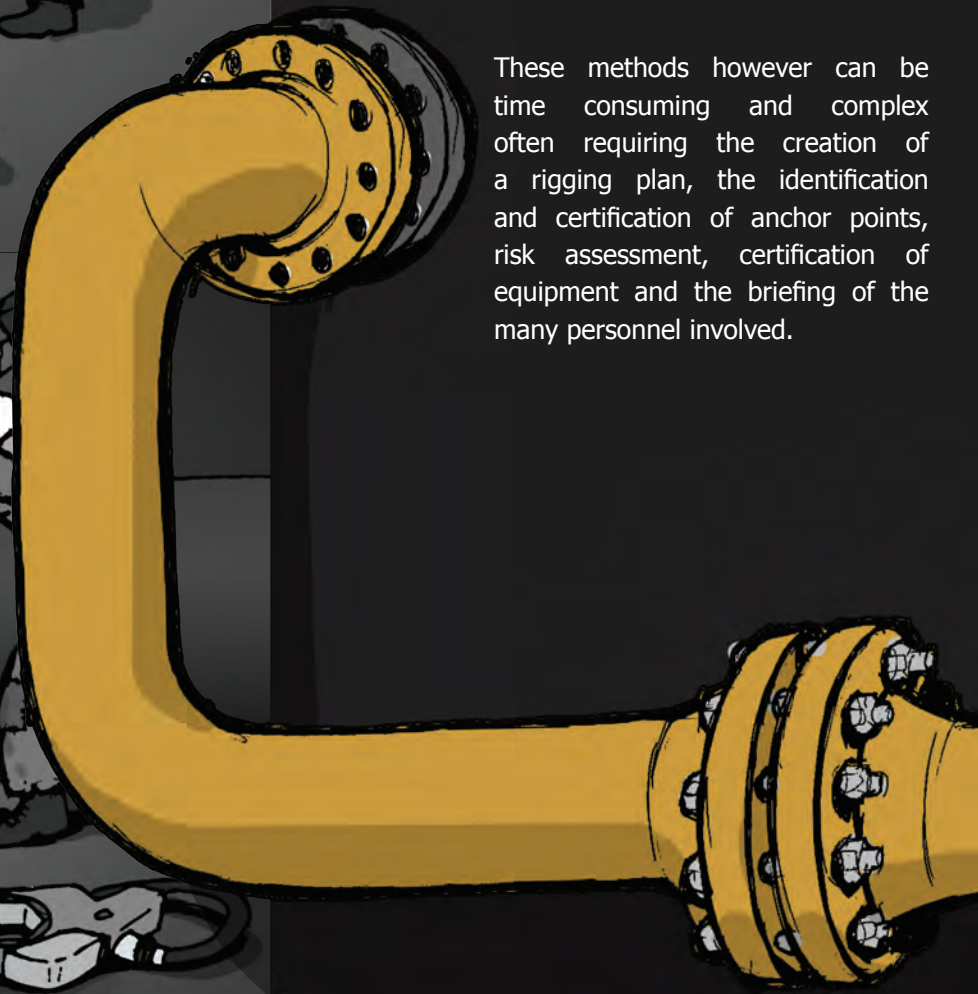


Alignment of flanges is an essential part of ensuring a leak-free bolted flange joint.

There are many causes of misalignment; over-hanging weight, pipe support positioning and fabrication tolerances for example. Traditionally these have been rectified by the use of chain blocks, pulleys, come-alongs and other rigging equipment.



These methods however can be time consuming and complex often requiring the creation of a rigging plan, the identification and certification of anchor points, risk assessment, certification of equipment and the briefing of the many personnel involved.



# 2. FLANGE ALIGNMENT SOLUTIONS

The Equalizer™ patented range of alignment tools addresses the rotational or lateral misalignment that can occur within flange joints. Compared with traditional, manual approaches, the Equalizer™ tools offer a much safer, quicker and effective means of realigning flanges.



## APPLICATIONS

Our Flange Alignment tools can be used to resolve lateral or rotational misalignment during:

- commissioning
- construction
- routine maintenance
- shut-downs or outages
- testing
- valve change-outs

## SPECIAL FEATURES

- operate on most pipe configurations
- use on horizontal or vertical flanges including ANSI/ASME, API, BS, DIN and SPO

- suitable for offshore and onshore applications

## OPERATING BENEFITS

Using our Flange Alignment tools:

- saves time
- saves cost
- optimises staffing
- promotes work continuity
- encourages safer working practice
- enables efficient operation
- lightweight and portable - ideal for remote locations or confined environments
- dispenses with need for cranes, tirsors and hooks



# FA1™

## MECHANICAL FLANGE ALIGNMENT TOOL

This portable, robust lightweight tool is a simple solution for small low-pressure flange misalignment requirements. It is hand-actuated using the crank handle.



### TOOL CAPABILITIES

#### ALIGNING FORCE

- 10kN (1T)

#### APPLICATION RANGE

- Minimum Bolt Hole Diameter: 16.0mm (0.63")
- Maximum Aligning Distance: 26.0mm (1.02")

#### TOOL WEIGHT

- 1.6kg (3.5lb)



STANDARD KIT  
(FA1TMSTD)



# FA4™

## MECHANICAL LINEAR AND ROTATIONAL FLANGE ALIGNMENT TOOL

This mid-range mechanical tool is for use on medium diameter, medium pressure flanges, and can address both rotational and radial misalignment. It is actuated by the supplied torque-wrench.



### TOOL CAPABILITIES

#### ALIGNING FORCE

with 68N.m (50ft.lb) of torque applied:

- 40kN (4T)

#### APPLICATION RANGE

- Minimum Bolt Hole Diameter: 25.0mm (1.00")
- Maximum Wing Reach: 158.0mm (6.22")

#### TOOL WEIGHT

- 8.6kg (19.0lb)



STANDARD KIT  
(FA4TMSTD)

# FA9TE

## HYDRAULIC LINEAR AND ROTATIONAL FLANGE ALIGNMENT TOOL

This hydraulic tool is for use on larger diameter, higher pressure flanges, and can address both rotational and radial misalignment. It is actuated by an external hydraulic pump.



### TOOL CAPABILITIES

#### ALIGNING FORCE

with 700bar (10,000psi) hydraulic pressure applied:

- 90kN (9T)

#### APPLICATION RANGE

- Minimum Bolt Hole Diameter: 35.5mm (1.40")
- Maximum Wing Reach: 240.0mm (9.45")

#### TOOL WEIGHT

- 14.5kg (32.0lb)



STANDARD KIT  
(FA9TESTD)





**EQUALIZER**  
INTERNATIONAL

FLANGE TOOL INNOVATION

# TFA WIND TOWER ALIGNMENT TOOLS

The Equalizer Tower Flange Alignment tools have been developed to aid the alignment of large flanges on the inside of wind turbine towers. These tools assist with the installation of wind turbine tower sections making it simpler, safer and more efficient.



NEW  
PRODUCT

## TFA15TI & TE

### TOOL CAPABILITIES

#### ALIGNING FORCE

with 700bar (10,000psi)  
hydraulic pressure applied:

- 150kN (15T)

#### APPLICATION RANGE

- Min. Bolt Hole Diameter:  
45.0mm (1.78")
- Misalignment:  
0.0mm - 65.0mm  
(0.00" - 2.56")

## TFA12TI & TE

### TOOL CAPABILITIES

#### ALIGNING FORCE

with 510bar (7400psi)  
hydraulic pressure applied:

- 120kN (12T)

#### APPLICATION RANGE

- Min. Bolt Hole Diameter:  
45.0mm (1.78")
- Misalignment:  
0.0mm - 65.0mm  
(0.00" - 2.56")

## TFA4TM

### TOOL CAPABILITIES

#### ALIGNING FORCE

with 68N·m (50ft·lb)  
of torque applied:

- 40kN (4T)

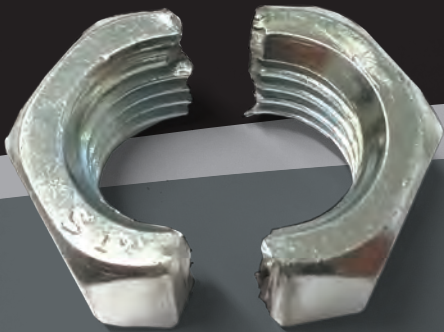
#### APPLICATION RANGE

- Min. Bolt Hole Diameter:  
25.0mm (1.0")
- Misalignment:  
0.0mm - 38.0mm  
(0.00" - 1.50")



# 3. NUT SPLITTING SOLUTIONS

DESIGNED TO MEET THE CHALLENGES OF BOLTED PIPE-LINE FLANGE JOINTS



A single heat-treated tool-steel cutting tip has achieved 100 cuts of high-grade heavy hex nuts





High strength revolving Composite handle for vibration and shock isolation allows for safer working.

Integrated steel shroud to enclose the cutting zone and protect against flying particles

Optimised Cutting head geometry allowing the nut splitter to be used on a wide range of flange joints; including ones that were previously too tight for nut splitters to fit.

The NS tool range includes a selection of 'TI' Integral Hydraulic tools which feature Equalizer's proven small pump built into the back end of the tool; useful for subsea applications and when working at heights. No need for hoses, separate hand-pumps or couplings.

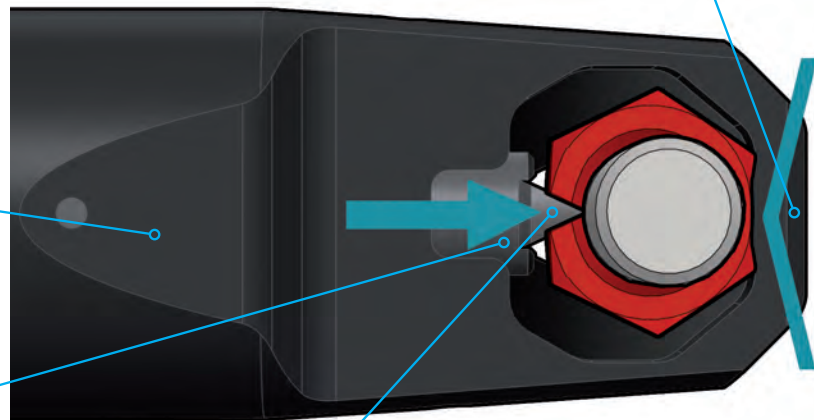
Drop-tested revolving anchor point and high-strength safety bond included as standard



The combination of the sharp cutting tip and opposing convex reaction point encourages more efficient splitting by spreading the nut open rather than squashing the nut onto the stud. This makes it easier to rotate the nut for the second cut.

Integral hydraulic cylinder and high grade materials make this the smallest and lightest nut splitter on the market

Quick and easy cutting tip replacement



Cutting tip made from heat-treated shock-resisting tool steel for better cut and longer life



# NS12TE NS12TI

## HYDRAULIC NUT SPLITTER

The smallest nut-splitter in the range has 12T (120kN) of splitting force and suits nuts sized between 19mm and 30.0mm (0.75" and 1.18") across flats. It is available as an external hydraulic version (NS12TE) or as an integral hydraulic version (NS12TI).

# NS15TE NS15TI

## HYDRAULIC NUT SPLITTER

The 15T (150kN) nut-splitter suits nuts sized between 24.0mm and 32mm (0.95" and 1.26") across flats. It is available as an external hydraulic version (NS15TE) or as an integral hydraulic version (NS15TI).



Integral Hydraulic 'TI' Type Nutsplitter



External Hydraulic 'TE' Type Nutsplitter

### APPLICATION RANGE

- Imperial Heavy Hex Nuts:  
1/2"; 5/8"
- Metric Nuts:  
M12; M16; M20

### TOOL WEIGHT

- NS12TE: 3.5kg (7.7lb)
- NS12TI: 5.8kg (12.8lb)

### APPLICATION RANGE

- Imperial Heavy Hex Nuts:  
3/4"; 7/8"
- Metric Nuts:  
M16; M20

### TOOL WEIGHT

- NS15TE: 4.0kg (8.8lb)
- NS15TI: 6.3kg (13.9lb)

# NS20TE NS20TI

## HYDRAULIC NUT SPLITTER

The 20T (200kN) nut-splitter suits nuts sized between 36.0mm and 46.0mm (1.42" and 1.81") across flats. It is available as an external hydraulic version (NS20TE) or as an integral hydraulic version (NS20TI).

### APPLICATION RANGE

- Imperial Heavy Hex Nuts:  
7/8"; 1"; 1-1/8"
- Metric Nuts:  
M24; M30

### TOOL WEIGHT

- NS20TE: 6.9kg (15.2lb)
- NS20TI: 9.4kg (20.7lb)

# NS36TE

## EXTERNAL HYDRAULIC NUT SPLITTER

The 36T (360kN) nut-splitter suits nuts sized between 50.8mm and 65.0mm (2.00" and 2.56") across flats. It is only available as an external hydraulic tool (NS36TE).

### APPLICATION RANGE

- Imperial Heavy Hex Nuts:  
1-1/4"; 1-3/8"; 1-1/2";  
1-5/8"
- Metric Nuts:  
M33; M36; M39; M42

### TOOL WEIGHT

- 10.6kg (23.4lb)

# NS50TE

## EXTERNAL HYDRAULIC NUT SPLITTER

The 50T (500kN) nut-splitter suits nuts sized between 65.0mm and 75.0mm (2.56" and 2.95") across flats. It is only available as an external hydraulic tool (NS50TE).

### APPLICATION RANGE

- Imperial Heavy Hex Nuts:  
1-5/8"; 1-3/4"; 1-7/8"
- Metric Nuts:  
M42, M45, M48

### TOOL WEIGHT

- 24.5kg (54.0lb)

# 4. FLANGE PULLING SOLUTIONS

The Equalizer™ FC10TE Flange Pulling Tool is a simple, lightweight hydraulic tool used to pull together flanges prior to the application of bolts.

The Equalizer™ FC10TE can pull flanges from a distance of 600.0mm (23.62") down to 0.0mm (0.00")

with a force of 200kN (20T) when used as recommended in pairs.

Any number of FC10TE tools can be used simultaneously to provide greater pulling loads.



## APPLICATIONS

The FC10TE can be used during:

- commissioning
- construction
- routine maintenance
- shut-downs or outages
- valve change-outs

## OPERATING BENEFITS

- reduction in operator fatigue
- reduction in pinch-points
- quick and easy to use
- controllable pulling for flanges or any other heavy equipment

## SPECIAL FEATURES

- ratchet nut system
- small footprint
- can be used on all vertical and horizontal flanges including ANSI/ASME, API, BS, DIN & SPO
- pulling force of 100kN (10T)
- pulling force of 200kN (20T) when used in pairs
- robust yet lightweight
- reciprocating hydraulic action



# FC10TE

## HYDRAULIC FLANGE PULLING TOOL

This low profile tool utilises tandem hydraulic cylinders to offer 10T of closing force and is ideal for use on flanges where access is limited.



### TOOL CAPABILITIES

#### CLOSING FORCE

with 700bar (10,000psi) hydraulic pressure applied:

- 100kN (10T) per tool

#### APPLICATION RANGE

- Minimum Bolt Hole Diameter: 22.0mm (0.87)
- Closing Distance: 600.0mm (23.6")  
down to 0.0mm (0.0")

#### TOOL WEIGHT

- 11.0kg (24.25lb)

Available in two kit formats:  
(MAXI KIT shown far left)



STANDARD KIT  
(FC10TESTD)

# 5. HYDRAULIC HAND-PUMPS

The Equalizer™ range of hydraulic hand-pumps have been designed with a sealed oil reservoir, which allows the pumps to be used in any orientation without the risk of oil spills or air contamination.

The pumps can be used to operate any 700bar (10,000psi) rated hydraulic equipment in most environments including onshore, topside or sub-sea.

Single-port hand-pumps are used for actuating one single acting cylinder.

Twin-port hand-pumps are used for actuating two single acting cylinders simultaneously.

Double-acting hand-pumps are used for actuating one double-acting cylinder.



## OPERATING BENEFITS

- universal orientation
- no oil spillage
- no air contamination
- each pump is available in 350cc, 550cc and 1000cc capacity versions

## SPECIAL FEATURES

- two speed
- lightweight
- sealed unit
- hand-held
- retractable/expandable oil reservoir
- pressure rating of 700bar (10,000psi)
- environmentally friendly



'S' TYPE SINGLE ACTING  
HAND-PUMP



'D' TYPE TWIN-PORT  
HAND-PUMP



'SD' TYPE DOUBLE-ACTING  
HAND-PUMP





# ATEX CERTIFIED HAND-PUMPS & HOSES

The single and twin port hand-pumps are also available in ATEX versions. Each pump is available in 350cc, 550cc and 1000cc capacity versions. ATEX certified hydraulic hoses are available in a range of lengths and are tailored for use with all Equalizer International hydraulic equipment.

The ATEX hand-pumps and hoses can be used in potentially explosive atmospheres and conform with EU Directive 2014/34/EU (ATEX) combined with harmonized standard EN ISO 80079-36:2016.



**NEW  
PRODUCT**



ATEX 'S' TYPE  
SINGLE ACTING HAND-PUMP



ATEX 'D' TYPE  
TWIN PORT HAND-PUMP



ATEX CERTIFIED HOSE ASSEMBLY,  
6 METRE (6M)



The ATEX certified hose assemblies are available in 2 metre (2M), 4 metre (4M) and 6 metre (6M) lengths

# 6

# BESPOKE TOOLING

## CASE STUDY:

SG11TM820LCSTD

DN 500,600,700 Flanges

CUSTOMER: NUCLEAR POWER INDUSTRY

LOCATION: FRANCE

### BACKGROUND

The customer had to remove various size and classes of valves in various positions including horizontally and vertically with very limited access. Distances including the flange to flange dimensions were numerous due to different types, sizes and configurations of the pipework. The client first contacted Equalizer through our exclusive distributor in France. The enquiry was then passed from the distributor to the Equalizer Technical & Design Team in our Head Office in Aberdeen. A design brief was held with the distributor and the client with an agreed lead time for the design, testing and ultimate production of the tools. The tools were delivered to the client within 8 weeks.

### PROBLEM

Using standard tooling, the client could not open two opposing flanges on a valve with sufficient distance to drop the gaskets and remove the valve.

The customer had 4 specific requests regarding the bespoke tool:

- The distances from flange to flange were from a minimum of 360mm to maximum 450mm.
- The tool had to manage to spread a maximum of 100mm once mounted on the flanges ready to spread apart.
- The tool had to mount and actuate spreading from M27, M30 and M33 bolt holes.
- It had to be 1 (one) tool to cover all above specifications.





## TRADITIONAL METHODS

- Valve Changeout tool
- Secure Grip Tool
- Rigging & Fox Wedges
- Traditional hand tools, pinch bars etc
- Manual handling
- Crane
- Forklift

## EQUALIZER SOLUTION

Once the initial discussions had taken place with both our exclusive distributor and the client we produced a model of what was requested to carry out all the works. We also managed to modify an existing tool in our range, a standard SG11TMSTD. An extended cantilever and actuator arm, various sizes of short and long collet holder's kits including additional ancillary tooling were added to the standard tool to come up with a bespoke solution for the client.

Bespoke Tool Ref – SG11TM820LCSTD

## OUTCOME/MOVING FORWARD

Good practice to involve all parties from the start and have a clear understanding of goals and deliverables.



## CUSTOMER BENEFITS

- Safer to use
- Saves times
- Cost effective
- Correct tool for the scope

# 7. PRODUCT TRAINING

Equalizer International designs and builds products of the highest quality, using the best components. This quality ethos extends to training and a range of training components are offered to ensure the optimal use of the tools. In addition to online training materials, Equalizer

International has built a demo suite at their HQ and has created a mobile demo trailer which travels around providing on-site introductions and training. Through this, users can experience first-hand how quick, simple and easy the tools are to apply and use on a series of custom-built flanges.



## ONSITE TRAINING SYSTEM

- custom built trailer, containing the full range of Equalizer™ tools
- Portable training rig with flange joints
- Flange aligning, spreading and pulling tool demonstrations





### CLASS-ROOM BASED TRAINING

Commercial and technical presentations provide distributors with the necessary information to respond to a wide range of customer enquiries and challenges.

### HANDS-ON TRAINING FACILITY

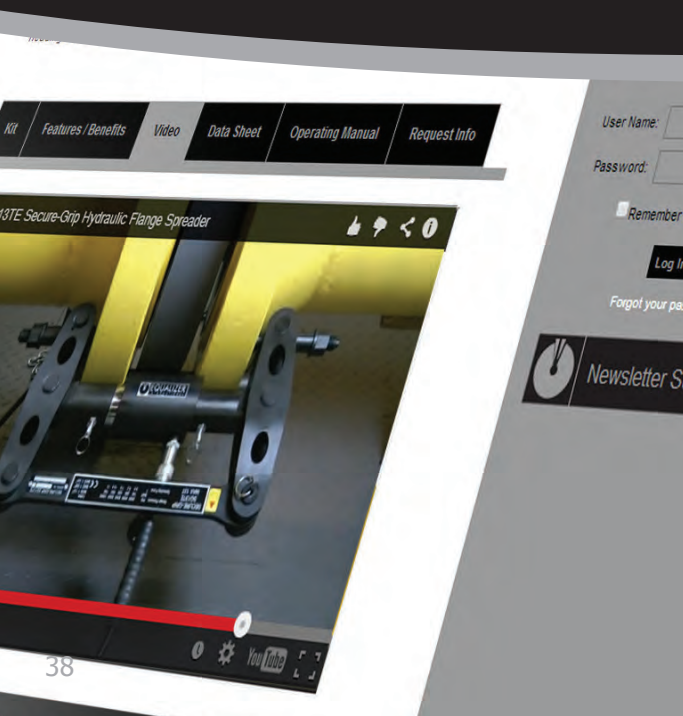
Practical demonstrations and hands-on training provide distributors and customers with valuable knowledge, information and experience to safely use the full range of Equalizer™ products.

This in turn strengthens Equalizer International's reputation as the expert in tools for flange maintenance within the oil and gas, chemical, power generation, nuclear, water, mining and renewable energy sectors world-wide.



# 8 . ONLINE SUPPORT

Equalizer offers a range of online support for customers and distributors.



## MANUALS & DATA SHEETS

- up-to-date product documentation
- download, save or print

## YOUTUBE PRODUCT VIDEOS

- watch each Equalizer™ tool being used in real-time
- watch videos directly from within product pages for easy cross-referencing

## FLANGE TOOL GURU

Online tool to help select the most appropriate Equalizer™ tool.

Using a series of drop-down menus or manual entry, users can quickly and easily identify the most appropriate tool(s) for their flange maintenance requirements.

Why not try it out at:

[www.equalizerinternational.com](http://www.equalizerinternational.com)

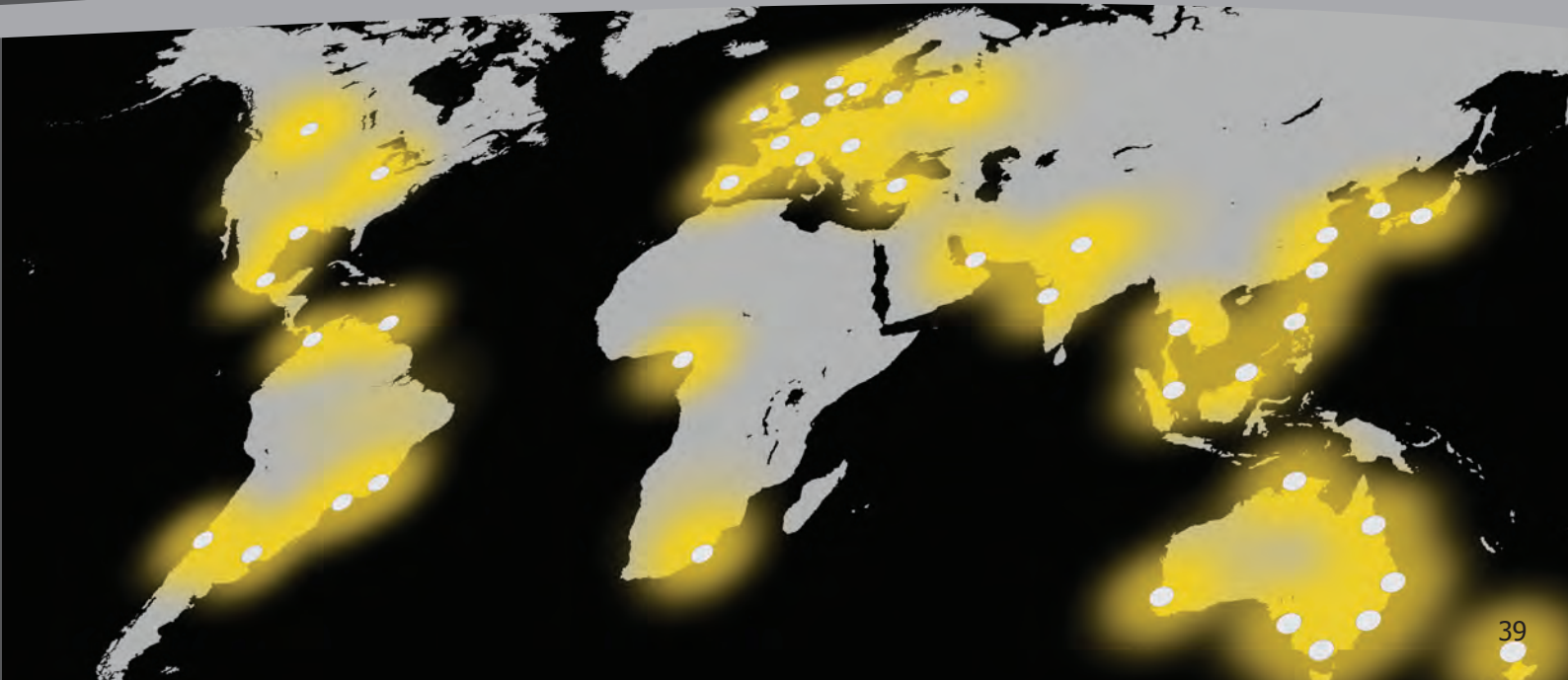
# 9. GLOBAL DISTRIBUTION

Global interest in Equalizer's flange maintenance tools has led the company to invest heavily in building a network of international distributors; local experts who help advise and select the most relevant flange maintenance tool.

These companies undertake specialist training on the use of Equalizer™ tools and are well equipped to show users how to

get the best out of them. In addition to selling, the distributors provide an after-sale parts service and work with Equalizer's Scottish Head Office to fulfil any spare parts requests. The map below indicates the countries and locations of our distributors – please refer to the Equalizer website for specific contact details.

[www.equalizerinternational.com](http://www.equalizerinternational.com)





FLANGE TOOL INNOVATION

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DISTRIBUTOR STAMP:

