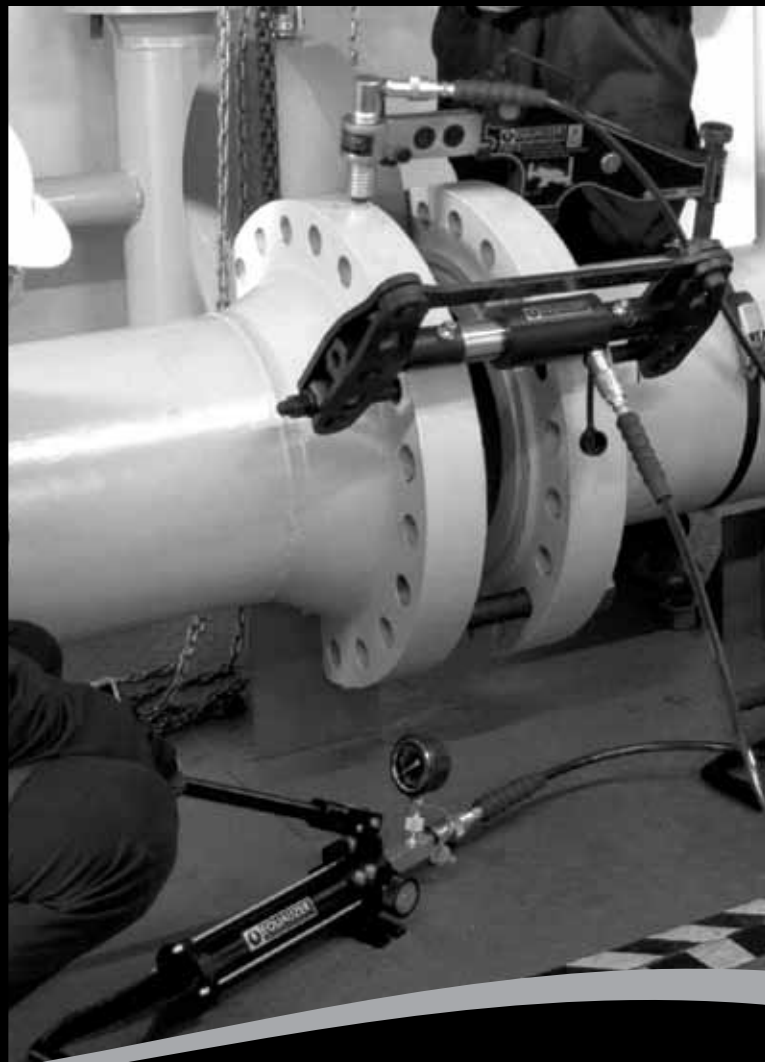




EQUALIZERTM
INTERNATIONAL

FLANGE TOOL INNOVATION





FROM DAY ONE, AT EQUALIZER INTERNATIONAL, we have always been passionate about finding new, simple, safe solutions to common industrial challenges. First established in Scotland in 1994 at the heart of the North Sea oil and gas industry, our aim has always been to deliver safe, innovative yet practical tools to industry. As experienced engineers looking for safer methods of flange alignment, we started life as Future Alignments Ltd. Our name may have changed but our philosophy remains the same - through innovation and dedication come simplicity, safety and therefore success.

Our commitment to technological leadership has resulted in the Equalizer™ range which is now marketed across the globe. Customers buy from us because of our reputation for developing tools which quite simply do the job well.

The Equalizer™ range has grown significantly over the years, thanks to our continuing drive to introduce new technology - we are always looking for creative, safer, easier ways. The Equalizer™ range now consists of precise, time-saving modern-day tools for aligning and spreading flange joints, as well as unique precision lifting equipment.

We listen carefully to our customers and continually identify opportunities for new products. Our tools are used every day throughout the world in a number of different industries - from oil to water, mining to petrochemicals, gas to nuclear. As our customers' businesses change, so do their requirements, and at Equalizer International we will continue to develop safe, simple and cost-effective solutions to meet the challenges of industry today, and tomorrow.

CONTENTS

1. FLANGE ALIGNMENT SOLUTIONS	1
FA1TM	2
FA4TM	3
FA9TE	4
2. FLANGE SPREADING SOLUTIONS	5
MG TOOL	6
MG7TM	7
SW RANGE	8
SW9TM	9
SW15TE	10
SW14.5TI	11
SWi RANGE	12
SWi12/14TM	13
SWi20/25TE	14
SWi20/25TI	15
SG RANGE	16
SG4TM	17
SG6TM	17
SG11TM	17
SG13TE	18
SG15TE	18
SG18TE	19
SG25TE	19
3. FLANGE PULLING SOLUTIONS	20
FC10TE	21
4. PRECISION LIFTING SOLUTIONS	22
VLW18TE	23
VLW18TI	24
5. HYDRAULIC HAND-PUMPS	25
HP350/550/1000S	26
HP350/550/1000D	27
HP350/550/1000SD	28
6. FLANGE TOOL GURU	29
7. PRODUCT TRAINING	29
8. GLOBAL DISTRIBUTION	29

1. FLANGE ALIGNMENT SOLUTIONS

The Equalizer™ patented range of precise, time-saving alignment tools will eliminate risks associated with traditional flange alignment practices. Simple, safe, modern solutions for linear or rotational misalignment of fixed 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
- enables continuity of work
- safer operation
- precise operation
- lightweight and portable - ideal for remote locations or confined environments
- dispenses with need for cranes, tirlors 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



FA4™

MECHANICAL FIXED FLANGE AND ROTATIONAL 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 33N.m (50ft.lb) of torque applied:

- 40kN (4T)

APPLICATION RANGE

- Minimum Bolt Hole Diameter: 25.0mm (1.00")
- Maximum Wing Reach: 113.0mm (4.45")

TOOL WEIGHT

- 8.6kg (19.0lb)



STANDARD KIT



FA9TE

HYDRAULIC FIXED FLANGE AND ROTATIONAL 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:

- 9T (90kN)

APPLICATION RANGE

- Minimum Bolt Hole Diameter: 16.0mm (0.63")
- Maximum Wing Reach: 135.0mm (5.31")

TOOL WEIGHT

- 14.5kg (32.0lb)

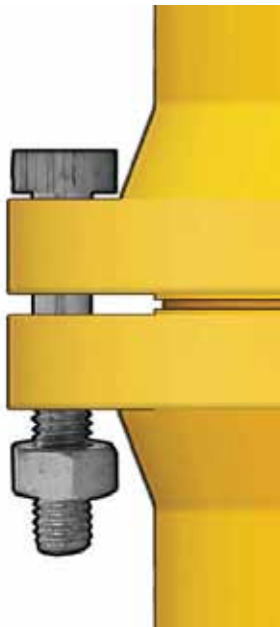


STANDARD KIT

2. FLANGE SPREADING SOLUTIONS

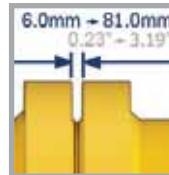
The Equalizer™ range of patented flange spreading tools have been developed to assist in the spreading of all flange joint types including those with no access gaps between them.

In order to select the most appropriate spreading tool for an application, the access gap of the flange joint should be examined:



MG Tool:

For use on a flange joint with an access gap of 2.0mm, which is of a smaller diameter and lower pressure.



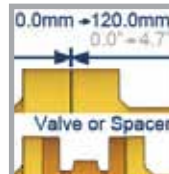
SW Range:

For use on a flange joint with an access gap of 6.0mm, and where a spread of up to 81.0mm is required.



SWi Range:

For use on a flange joint with an access gap of 6.0mm, and where a spreading distance (up to 103.5mm) or a greater spreading force is required.



SG Range:

For use on a flange joint with no access gap, where there are concerns about contacting the flange faces, or where there is a spacer, wafer or butterfly valve positioned between the flanges.



FLANGE SPREADING SOLUTIONS



MG TOOL

MINI-GAP FLANGE SPREADING TOOL

For use on smaller, lower pressure flange joints with a minimum access gap of 2.0mm (0.08”).

The tool will provide 6.8T (68kN) of spreading force.

SPECIAL FEATURES

- innovative double configuration design giving greater range of application
- unique double-angled wedge produces greater spreading force without reducing spreading distance
- robust lightweight tool
- environmentally friendly
- requires only 2.0mm (0.08”) access gap

OPERATING BENEFITS

- locks on to flange joint
- safe operation
- quick and easy operation
- saves time
- saves cost
- portable

MG7™

MINI-GAP FLANGE SPREADER

For use on smaller, lower pressure flange joints, this tool can be assembled in two alternative configurations to suit more flanges.



INVERTED CONFIGURATION



EXTENDED CONFIGURATION

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)



STANDARD KIT



FLANGE SPREADING SOLUTIONS



SW RANGE

FLANGE SPREADING WEDGES

APPLICATIONS

The SW tool range can be used during:

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

OPERATING BENEFITS

- secure hold on each step
- quick and easy operation
- saves time
- saves cost
- safe operation
- portable

SPECIAL FEATURES

- unique interlocking first step
- deep 17.0mm (0.59") secure hold on first step
- requires access gap of only 6.0mm (0.24")
- robust lightweight tool
- automatic mechanical retraction
- measurable force
- environmentally friendly



SW9™

MECHANICAL FLANGE SPREADING WEDGE

This spreading wedge is mechanically operated using the supplied torque-wrench.



TOOL CAPABILITIES

SPREADING FORCE

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

- 90kN (9T) 1st step

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)



STANDARD KIT

SW15TE

HYDRAULIC FLANGE SPREADING WEDGE

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



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

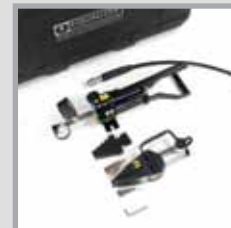
TOOL WEIGHT

- 10 • 7.0kg (15.4lb)

Available in three kit formats:



MINI KIT



STANDARD KIT



MAXI KIT

SW14.5TI

INTEGRAL HYDRAULIC FLANGE SPREADING WEDGE

This self-contained spreading wedge 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:

- 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)



STANDARD KIT



FLANGE SPREADING SOLUTIONS

SWi RANGE

INNOVATIVE FLANGE SPREADING WEDGES

The SWi innovative range of flange spreaders have less moving parts and no finger pinch points. The tools have been developed to increase the spreading distance on each step while gaining easier access between any remaining stud-bolts within the flange joint. The tools provide a much higher spreading force compared to the existing SW flange spreading tools. The SWi tools are supplied with a swivel handle, safety lanyard and stepped block attachment as standard.

The Equalizer™ SWi innovative range of flange spreading wedges have been developed to assist in the spreading of all flange joint types with a minimum access gap of 6.0mm (0.25"). The tools can be used during pipework construction, commissioning or during routine maintenance.

SPECIAL FEATURES

- unique interlocking first step
- practical, portable and lightweight
- moulded plastic handle for comfort
- revolving handle to aid horizontal or vertical spreading
- offset handle is directly over the centre of mass
- removable handle for improved access
- revolving lanyard connection point
- spread indicator markings for clear precise visual progress feedback

SAFETY FEATURES

- no finger pinch-points
- increased step depth on upper steps
- safety lanyard – 1.0m (39") length
- forged key components for strength and reliability
- fail-safe design – designated cylinder nose seal failure

MAINTENANCE FEATURES

- rapid disassembly and assembly
- quick jaw replacement – remove 1 fastener
- quick tip replacement – remove 2 fasteners
- narrow jaw teeth – improved tool wear



SWi12/14TM

INNOVATIVE MECHANICAL FLANGE SPREADING WEDGE

This innovative spreading wedge 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

SWi20/25TE

INNOVATIVE EXTERNAL HYDRAULIC FLANGE SPREADING WEDGE

This innovative spreading wedge 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

- 14 • 6.4kg (14.02lb)

Available in three kit formats:



MINI KIT



STANDARD KIT



MAXI KIT

SWi20/25TI

INNOVATIVE INTEGRAL HYDRAULIC FLANGE SPREADING WEDGE

This self-contained innovative spreading wedge 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



FLANGE SPREADING SOLUTIONS



FLANGE TOOL INNOVATION

SG RANGE

SECURE-GRIP FLANGE SPREADING TOOLS

Years of research and development have produced one of the safest, most innovative flange spreading tools in the world today - the Equalizer™ Secure-Grip.

Equalizer International's Secure-Grip flange spreaders use our patented expanding collet technology for safe separation of flange joints with little or no access gap.



EXPANDING COLLET TECHNOLOGY

APPLICATIONS

The Secure-Grip tool range can be used during:

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

OPERATING BENEFITS

- unique technology makes the Secure-Grip arguably the safest flange spreader in the world today
- virtually universal, the Secure-Grip range will cover ANSI/ASME, DIN, SPO, API and BS flanges
- time-saving, simple operation
- measurable, controlled spreading force
- portable

SPECIAL FEATURES

- unique expanding collet technology
- little or no access gap required
- secure bolt hole locking mechanism
- environmentally friendly



SG4TM SG6TM SG11TM



SECURE-GRIP MECHANICAL FLANGE SPREADERS

The smaller lightweight mechanical SG tools 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 required bolt holes.

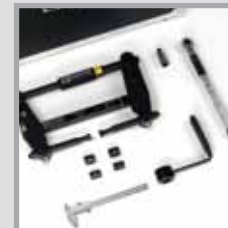


TOOL CAPABILITIES

- **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



SG6TM KIT



SG11TM KIT



SG13TE SG15TE



SECURE-GRIP HYDRAULIC FLANGE SPREADERS

The hydraulic SG tools 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 required bolt holes.



TOOL CAPABILITIES

- SG13TE:
spreading force of 130kN (13T);
spreading distance of 115.0mm (4.53")
tool weight: 21.5kg (47.3lb)
- SG15TE:
spreading force of 150kN (15T);
spreading distance of 100.0mm (3.94")
tool weight: 26.0kg (57.3lb)



SG13TE KIT



SG15TE KIT



SG18TE SG25TE



SECURE-GRIP IN-LINE HYDRAULIC FLANGE SPREADERS

The large in-line hydraulic SG tools 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 required bolt holes.



TOOL CAPABILITIES

- SG18TE:
spreading force of 180kN (18T);
spreading distance of 100.0mm (3.94")
tool weight: 14.0kg (30.8lb)
- SG25TE:
spreading force of 250kN (25T);
spreading distance of 120.0mm (4.72")
tool weight: 24.0kg (52.9lb)



SG18TE STANDARD KIT



SG25TE STANDARD KIT
(collets supplied separately)

3 . FLANGE PULLING SOLUTIONS

The Equalizer™ FC10TE Flange Closing 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 20T (200kN) 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 CLOSING TOOL

Designed around tandem hydraulic cylinders the result is a very low profile tool. Ideal for use on both large flanges and smaller diameter flanges with limited access.



TOOL CAPABILITIES

CLOSING FORCE

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

- 100kN (10T) per tool

BOLT HOLE DIAMETER

- 22.0mm (7/8") minimum

CLOSING DISTANCE

- 600.0mm (23.6") down to 0.0mm (0.0")

TOOL WEIGHT

- 11.0kg (24.25lb)

Available in two kit formats:



STANDARD KIT



MAXI KIT

4. PRECISION LIFTING SOLUTIONS

Designed to lift or lower objects in a straight, vertical motion, the VLW range will give a safe, smooth, secure hold when lifting or lowering heavy equipment.

Using the Equalizer™ interlocking first-step technology,

this tool will lift an object in a stable movement from an access gap of only 9.5mm (0.37").



APPLICATIONS

The VLW range can be used for:

- lifting heavy machinery
- machine installation
- plant maintenance
- machinery alignment
- can be used in conjunction with skates

OPERATING BENEFITS

- stable lift motion
- robust and precise tool
- secure hold on each step
- safe operation
- saves time
- saves cost

SPECIAL FEATURES

- smooth, straight, vertical lift
- operates with an access gap of only 9.5mm (0.37")
- each step offers 19.0mm (0.75") of vertical lift
- maximum lift using stepped block 67.5mm (2.66")
- single acting ram
- lifting force of 180kN (18T)
- automatic manual retraction
- interlocking first step
- environmentally friendly



VLW18TE

HYDRAULIC VERTICAL LIFTING WEDGE

The safe, simple and cost-effective solution to lifting heavy equipment with minimum floor clearance.

Using two VLW18TE lifting wedges will allow a lift of 360kN (36T).



TOOL CAPABILITIES

LIFTING FORCE

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

- 180kN (18T)

LIFTING DISTANCE

- 9.5mm – 29.5mm (0.37" - 1.16") using only 1st step
- 9.5mm – 51.5mm (0.37" - 2.03") using 4 steps (without stepped blocks)
- 39.5mm – 67.5mm (1.55" - 2.66") using stepped block

TOOL WEIGHT

- 8.5kg (18.7lb)

Available in three kit formats:



MINI KIT



STANDARD KIT



MAXI KIT



VLW18TI

INTEGRAL HYDRAULIC VERTICAL LIFTING WEDGE

The safe, simple and cost-effective solution to lifting heavy equipment with minimum floor clearance.

The VLW18TI version is actuated by an integral hydraulic hand-pump, so no hoses or external pumps are required.



TOOL CAPABILITIES

LIFTING FORCE

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

- 180kN (18T)

LIFTING DISTANCE

- 9.5mm – 29.5mm (0.37" - 1.16") using only 1st step
- 9.5mm – 67.5mm (0.37" - 2.03") using 4 steps (without stepped blocks)
- 39.5mm – 67.5mm (1.55" - 2.66") using stepped block

TOOL WEIGHT

- 12.0kg (26.5lb)



STANDARD KIT

6. FLANGE TOOL GURU



EQUALIZER
INTERNATIONAL

FLANGE TOOL INNOVATION

The Flange Tool Guru is an online tool selector to assist with Equalizer tool selection.

If you know the flange specification and the flange is of a weld neck type then you can select the flange specification, class / pressure-rating and nominal diameter from the drop down menus.

If you do not know the flange specification or

the flange is not of a weld neck type you can enter the flange dimensions A, B, C & D then click 'Ask the Guru!'

The Guru will then recommend the most applicable Equalizer flange tool.



7. PRODUCT TRAINING



Equalizer International is the global expert in flange aligning, spreading, precision lifting and pulling. The experience and knowledge gained over the last 20 years is the reason why companies buy tools from Equalizer and this is extended to the technical training provided by the company, whether for tool users themselves or potential distributors.

In addition to online training materials, Equalizer has built a demo suite at their Scottish HQ where

tool users can experience first-hand how quick, simple and easy the tools are to apply and use on a series of custom-built flanges.

All distributors undergo an extensive period of technical training to ensure they can respond to a range of customer issues, challenges and questions.

8. 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 and advise on the selection of the most relevant flange maintenance tool.

These companies undertake specialist training on the usage of Equalizer's 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.





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Services Inc
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