

# FLANGE MAINTENANCE TOOLS

SOLUTIONS FOR YOUR FLANGE ALIGNMENT,  
FLANGE SPREADING AND FLANGE PULLING APPLICATIONS.



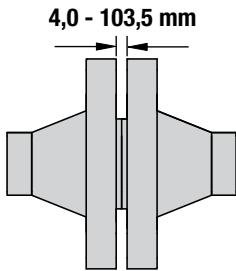
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# Equalizer Flange Spreading Tools

The Equalizer™ range of patented flange spreading tools have 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, tiffors, come-alongs or hammers – there is a safe, quick and effective alternative, the

## SWi Flange Spreading Wedges:



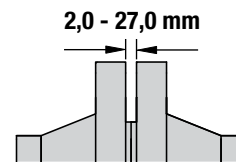
An innovative flange spreading wedge for use on small, medium or large flange joints with a minimum access gap of 4 mm. The SWi range includes ATEX approved options.

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 Standard 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 240 kN of spreading force when used in pairs, which provides additional confidence when spreading.
- Narrower jaws - the SWi5TE tools are only 50 mm wide to help them fit more easily between flange bolts.
- Fully rotational handle – the handle swivels 360-degrees around the wedge head, so that the SWi tools can be used comfortably in all orientations.
- 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.

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, the flange size and the required scope of work.

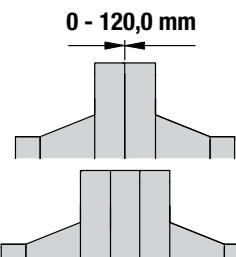
## MG Flange Spreading Tool:



A mechanical tool for small diameter, low pressure flanges with a minimum access gap of 2 mm.

For use on smaller, lower pressure flange joints, this portable and flexible tool can be assembled in two alternative configurations that gives it twice the application range from one tool. The tool is locked onto the flange joint by the spreading bar preventing the risk of it falling from the flange joint.

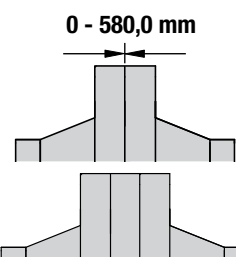
## SG Flange Spreading Tools:



A unique flange spreader, ideal for situations where there is no access gap, or where there is a spacer, a wafer or butterfly valve positioned between the flanges.

Equalizer's unique Secure-Grip tools spread by locking into the flange bolt holes and pulling the mating flanges away from each other, the Secure Grip flange spreaders are locked on to the flanges when under load making them arguably the world's safest flange spreading tools.

## VC Valve Change-Out Tools:



Using the same technology as the SG flange spreaders the VC range has been developed for valve removal applications.

The Equalizer™ VC Range of Valve Change-Out tools has been developed to assist in the removal of 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 applications.

# Equalizer Flange Spreading Tools



▼ SWi2025Ti



## SWi

FLANGE SPREADING WEDGES

Spreading Force:  
**77,0 - 240,0 kN**

Spreading Distance:  
**4,0 - 103,5 mm**

Maximum Operating Pressure:  
**700 bar \***

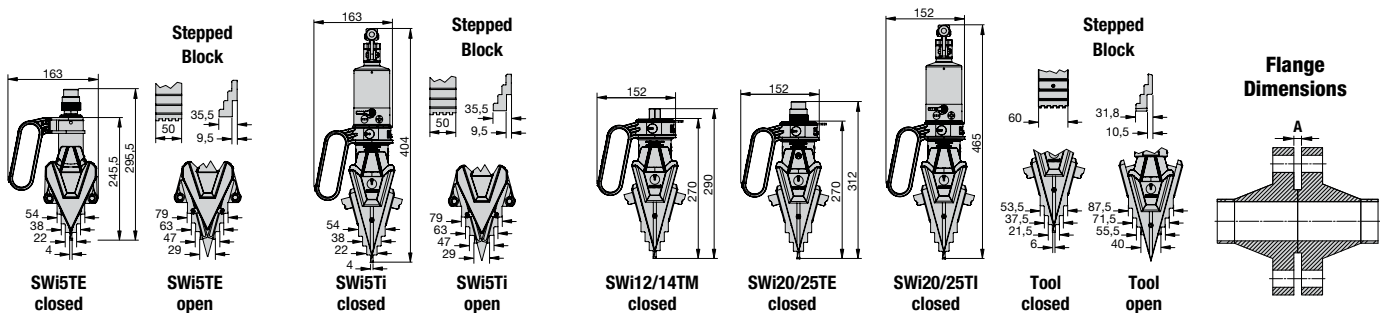
\* Only relevant for hydraulic tools

- Practical, portable and lightweight
- Revolving handle to aid horizontal or vertical spreading
- Removable handle for improved access
- No finger pinch-point
- Increased step-depth on upper steps
- Safety lanyard – 1,0 m length
- Forged key components for strength and reliability
- Rapid disassembly and assembly
- Narrow jaw teeth – improved tool wear.



### Caution

A minimum of two Flange Spreading Tools must be used when opening flange joints. This will enable the operator to maintain an equal spreading distance across the flange faces.



Model Number Tool Kit	Type	Maximum Spreading Force Per Tool (kN)	Spreading Distance Maximum * (mm)	Flange Dimensions		Jaw Width (mm)	Tool Weight (kg)	Kit Weight (kg)	Case Dimensions (mm)	Tool Number
				Minimum Access Gap A (mm)						
SWi5TE-S	External Hydraulic	77,0	101,0	4,0		50,0	5,2	8,7	580 x 340 x 180	SWi5TE
SWi5TE-T	External Hydraulic	77,0	101,0	4,0		50,0	5,2	14,4	580 x 340 x 180	SWi5TE
SWi5Ti-S	Integral Hydraulic	77,0	101,0	4,0		50,0	7,0	10,5	580 x 330 x 180	SWi5Ti
SWi1214TMSTDSPB	Mechanical	140,0	103,5	6,0		60,0	6,2	13,0	580 x 330 x 165	SWi12/14TM
SWi2025TEMINSPB	External Hydraulic	240,0	103,5	6,0		60,0	6,4	11,6	580 x 330 x 165	SWi20/25TE
SWi2025TESTDSPB	External Hydraulic	240,0	103,5	6,0		60,0	6,4	20,7	920 x 500 x 205	SWi20/25TE
SWi2025TEMAXSPB	External Hydraulic	240,0	103,5	6,0		60,0	6,4	33,0	920 x 500 x 205	SWi20/25TE
SWi2025TISTDSPB	Integral Hydraulic	240,0	103,5	6,0		60,0	8,5	13,8	580 x 330 x 165	SWi20/25Ti

\* Using stepped blocks.

# Equalizer Flange Spreading Tools

## SWi5TE - Hydraulic Flange Spreading Wedge

### SWi5TE-S - SWi5TE S Kit



- 1 x SWi5TE Flange Spreading Tool
- 1 x Standard Safety Block
- 1 x Lanyard
- 1 x Moulded Plastic Carry Case with Protective Foam Inserts

### SWi5TE-T - SWi5TE T Kit



- 2 x SWi5TE Flange Spreading Tools
- 2 x Standard Safety Blocks
- 2 x Lanyards
- 1 x Moulded Plastic Carry Case with Protective Foam Inserts

### 1640016-01 - SWi5TE Stepped Block Kit



- 1 x Pair of SWi5TE Stepped Blocks
- 2 x M6 CSK Hex Screw
- 2 x Retaining Washer
- 1 x SWi5TE Large Safety Block
- 2 x Hex Key

## SWi12/14TM - Mechanical Flange Spreading Wedge

### SWi1214TMSTDSPB - SWi12/14TM STD Kit



- 1 x SWi12/14TM Flange Spreading Tool
- 1 x Torque Wrench with 22 mm Socket
- 1 x Set of Safety Blocks
- 1 x Pair of Stepped Blocks
- 1 x Lanyard
- 1 x Hex Key
- 1 x Moulded Plastic Carry Case

## SWi20/25TE - Hydraulic Flange Spreading Wedge

### SWi2025TEMINSPB - SWi20/25TE MIN Kit



- 1 x SWi20/25TE Flange Spreading Tool
- 1 x Set Safety Blocks
- 1 x Pair of Stepped Blocks
- 1 x Lanyard
- 1 x Hex Key
- 1 x Moulded Plastic Carry Case

### SWi2025TESTDSPB - SWi20/25TE STD Kit



- 1 x SWi20/25TE Flange Spreading Tool
- 1 x 700 bar Hydraulic Hose, 2 m with 90° Elbow
- 1 x 700 bar HP350S Single-Port Sealed Hand Pump with Gauge
- 1 x Set Safety Blocks
- 1 x Pair of Stepped Blocks
- 1 x Lanyard
- 1 x Hex Key
- 1 x Moulded Plastic Carry Case

### SWi2025TEMAXSPB - SWi20/25TE MAX Kit



- 2 x SWi20/25TE Flange Spreading Tools
- 2 x 700 bar Hydraulic Hoses, 2 m with 90° Elbow
- 1 x 700 bar HP550D Twin-Port Sealed Hand Pump with Gauge
- 2 x Set Safety Blocks
- 2 x Pair of Stepped Blocks
- 2 x Lanyards
- 2 x Hex Keys
- 1 x Moulded Plastic Carry Case

## SWi5TI - Integral Hydraulic Flange Spreading Wedge

### SWi5TI-S - SWi5TI-S Kit



- 1 x SWi5TI Flange Spreading Tool
- 1 x Standard Safety Block
- 1 x Lanyard
- 1 x Moulded Plastic Carry Case with Protective Foam Inserts

### 1640016-01 - SWi5TE Stepped Block Kit



- 1 x Pair of SWi5TE Stepped Blocks
- 2 x M6 CSK Hex Screw
- 2 x Retaining Washer
- 1 x SWi5TE Large Safety Block
- 2 x Hex Key

## SWi20/25TI - Integral Hydraulic Flange Spreading Wedge

### SWi2025TISTDSPB - SWi20/25TI STD Kit



- 1 x SWi20/25TI Flange Spreading Tool
- 1 x Set of Safety Blocks
- 1 x Pair of Stepped Blocks
- 1 x Lanyard
- 1 x Hex Key
- 1 x Carry-Strap
- 1 x Moulded Plastic Carry Case

# Equalizer Flange Spreading Tools



▼ SWi20/25TEEX



**SWi**

**ATEX CERTIFIED FLANGE SPREADING WEDGES**

Spreading Force:  
**140,0 - 240 kN**

Spreading Distance:  
**6,0 - 103,5 mm**

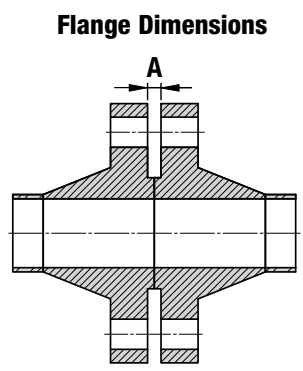
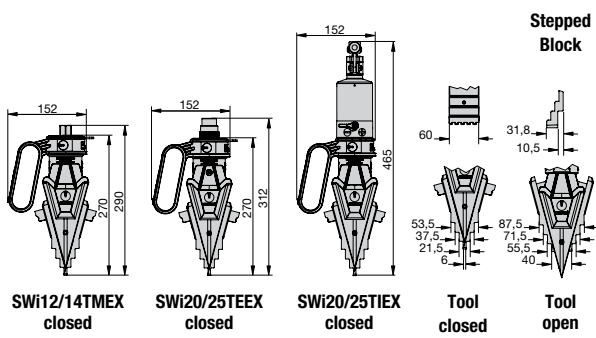
Maximum Operating Pressure:  
**700 bar \***

\* Only relevant for hydraulic tools

- ATEX certified
- Practical, portable and lightweight
- Revolving handle to aid horizontal or vertical spreading
- Removable handle for improved access
- No finger pinch-point
- Increased step-depth on upper steps
- Safety lanyard – 1,0 m length
- Forged key components for strength and reliability
- Rapid disassembly and assembly
- Narrow jaw teeth – improved tool wear.

**Caution**

A minimum of two Flange Spreading Tools must be used when opening flange joints. This will enable the operator to maintain an equal spreading distance across the flange faces.



Model Number Tool Kit	Type	Maximum Spreading Force Per Tool (kN)	Spreading Distance Maximum * (mm)	Flange Dimensions		Jaw Width (mm)	Tool Weight (kg)	Kit Weight (kg)	Case Dimensions (mm)	Tool Number
				Minimum Access Gap A (mm)						
SWi1214TMSTDEX	Mechanical	140,0	103,5	6,0		60,0	6,2	17,0	580 x 400 x 180	SWi12/14TMEX
SWi2025TEMINEX	External Hydraulic	240,0	103,5	6,0		60,0	6,4	15,0	580 x 400 x 180	SWi20/25TEEX
SWi2025TESTDEX	External Hydraulic	240,0	103,5	6,0		60,0	6,4	27,5	680 x 560 x 180	SWi20/25TEEX
SWi2025TEMAXEX	External Hydraulic	240,0	103,5	6,0		60,0	6,4	38,8	930 x 600 x 180	SWi20/25TEEX
SWi2025TISTDEX	Integral Hydraulic	240,0	103,5	6,0		60,0	8,5	17,5	580 x 400 x 180	SWi20/25TIEX

\* Using stepped blocks.

# Equalizer Flange Spreading Tools

## SWi12/14TMEX - ATEX Certified Mechanical Flange Spreading Wedge



II 2G Ex h IIB T5 Gb  
II 2D Ex h IIIC T85°C Db

### SWi1214TMSTDEX - SWi12/14TMEX STD Kit



1 x SWi12/14TMEX Flange Spreading Tool  
1 x ATEX Torque Wrench with 22 mm Socket  
1 x Set of Safety Blocks  
1 x Pair of Stepped Blocks  
1 x Lanyard  
1 x Hex Key  
1 x Aluminium Carry Case with Protective Foam Inserts

## SWi20/25TEEX - ATEX Certified Hydraulic Flange Spreading Wedge



II 2G Ex h IIB T5 Gb  
II 2D Ex h IIIC T100°C Db

### SWi2025TEMINEX - SWi20/25TEEX MIN Kit



1 x SWi20/25TEEX Flange Spreading Tool  
1 x Set Safety Blocks  
1 x Pair of Stepped Blocks  
1 x Lanyard  
1 x Hex Key  
1 x Aluminium Carry Case with Protective Foam Inserts

## SWi20/25TIEX - ATEX Certified Integral Hydraulic Flange Spreading Wedge



II 2G Ex h IIB T5 Gb  
II 2D Ex h IIIC T100°C Db

### SWi2025TISTDEX - SWi20/25TIEX STD Kit



1 x SWi20/25TIEX Flange Spreading Tool  
1 x Set of Safety Blocks  
1 x Pair of Stepped Blocks  
1 x Lanyard  
1 x Hex Key  
1 x Carry-Strap  
1 x Aluminium Carry Case with Protective Foam Inserts

### SWi2025TESTDEX - SWi20/25TEEX STD Kit



1 x SWi20/25TEEX Flange Spreading Tool  
1 x 700 bar ATEX Hydraulic Hose, 2 m with 90° Elbow  
1 x 700 bar HP350S ATEX Single-Port Sealed Hand Pump with Gauge  
1 x Set Safety Blocks  
1 x Pair of Stepped Blocks  
1 x Lanyard  
1 x Hex Key  
1 x Aluminium Carry Case with Protective Foam Inserts

### SWi2025TEMAXEX - SWi20/25TEEX MAX Kit



2 x SWi20/25TEEX Flange Spreading Tools  
2 x 700 bar ATEX Hydraulic Hose, 2 m with 90° Elbow  
1 x 700 bar HP550D ATEX Twin-Port Sealed Hand Pump with Gauge  
2 x Set Safety Blocks  
2 x Pair of Stepped Blocks  
2 x Lanyards  
2 x Hex Keys  
1 x Aluminium Carry Case with Protective Foam Inserts



These tools have been designed for use in potentially explosive atmospheres which is:

- Group II (Non-mining equipment)
- Equipment **category 2** where explosive atmosphere is likely to occur in normal operation
- Can be applied in **zones 1 and 2** of gaseous explosive atmospheres and in **zones 21 and 22** of dust explosive atmosphere
- **Gas G** or **Dust D** with type of protection **Ex h** for non-electrical equipment
- Suitable for use with **Group IIB** of a gases and vapours (Ethylene group) and **Group IIIC** of dust (conductive dust)

- For hydraulic tools **T5** means that minimum ignition temperature of gas or vapor **>100°C**; **T100°C** means that minimum ignition temperature of a dust cloud  $\geq 150^\circ\text{C}$  and minimum ignition temperature of a 5mm dust layer  $\geq 175^\circ\text{C}$
- For mechanical tools **T6** means that minimum ignition temperature of gas or vapor **>85°C**; **T85°C** means that minimum ignition temperature of a dust cloud  $\geq 127,5^\circ\text{C}$  and minimum ignition temperature of a 5mm dust layer  $\geq 160^\circ\text{C}$ .

These tools have been designed and manufactured in accordance with the following transposed harmonized European standards:

- **EN ISO 80079-36:2016** Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements;
- **EN ISO 80079-37:2016** Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Non-electrical type of protection constructional safety "c", control of ignition sources "b", liquid immersion "k":

# Equalizer Flange Spreading Tools



▼ MG7TM



- Reversible leg design giving greater range of applications
- Unique double-angled wedge produces a greater spreading force without reducing spreading distance
- Robust lightweight tool
- Spreading force of 68,0 kN

## OPERATING BENEFITS

- Locks on to flange joint
- Safe, quick and easy operation
- Saves time and cost

# MG

FLANGE  
SPREADING TOOL

Spreading Force:

**68,0 kN**

Spreading Distance:

**2,0 - 27,0 mm**



### Range of Application

For a detailed range of application please request the MG7TM Operator Instruction Sheet.



### Caution

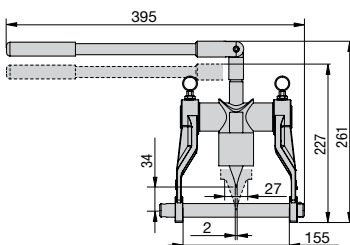
A minimum of two Flange Spreading Tools must be used when opening flange joints. This will enable the operator to maintain an equal spreading distance across the flange faces.

## MG7TMSTD Standard Kit

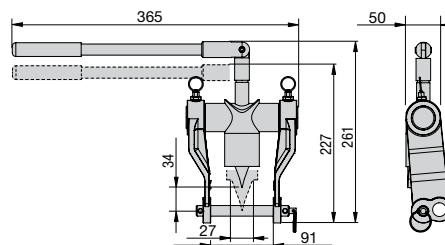


- 1 x MG7TM Tool
- 2 x Spreading Bar
- 1 x Moulded Plastic Carry Case

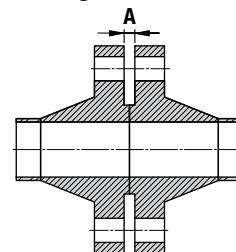
Tool retracted and advanced using large (Ø 20mm) spreading bar



Tool retracted and advanced using small (Ø 16mm) spreading bar



## Flange Dimensions



Model Number Tool Kit	Type	Maximum Spreading Force Per Tool (kN)	Spreading Distance Maximum (mm)	Flange Dimensions	Wedge Width (mm)	Tool Weight (kg)	Kit Weight (kg)	Case Dimensions (mm)	Tool Number
				Minimum Access Gap A (mm)					
MG7TMSTD	Mechanical	68,0	27,0	2,0	45,0	5,0	5,5	360 x 300 x 90	MG7TM



# Equalizer Flange Spreading Tools

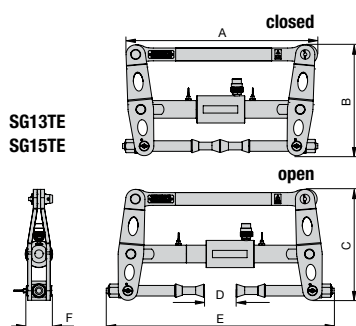
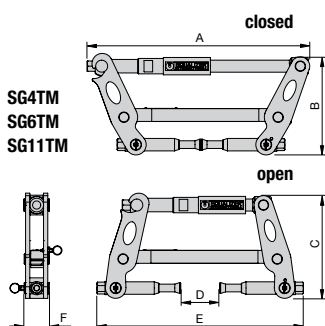
▼ SG11TM



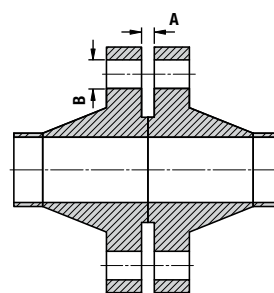
- For use on all flange types with bolt-hole sizes ranging from 17,5 mm to 62,0 mm
- Unique expanding collet technology
- Little or no access gap required
- Secure bolt-hole locking mechanism

## OPERATING BENEFITS

- Time-saving, simple operation
- Measurable, controlled flange spreading force
- Virtually universal, the Secure-Grip Flange Spreader range covers ANSI, DIN, SPO, ASME, API and BS flanges



## Flange Dimensions



# SG

FLANGE  
SPREADING TOOLS

Spreading Force:

**37,0 - 150,0 kN**

Spreading Distance:

**0 - 115 mm**

Maximum Operating Pressure:

**700 bar \***

\* Only relevant for hydraulic tools



### Range of Application

For a detailed range of application please request the Secure-Grip Mechanical or Hydraulic Operator Instruction Sheet.



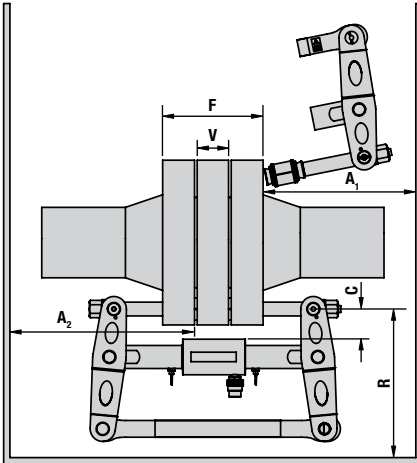
### Caution

A minimum of two Flange Spreading Tools must be used when opening flange joints. This will enable the operator to maintain an equal spreading distance across the flange faces.

Model Number Tool Kit	Type*	Maximum Spreading Force Per Tool (kN)	Spreading Distance Maximum (mm)	Flange Dimensions (mm)		Tool Dimensions (mm)						Tool Weight (kg)	Kit Weight (kg)	Case Dimensions (mm)	Tool Number
				Minimum Access Gap A	Bolt-hole Diameter B	A	B	C	D	E	F				
<b>SG4TMSTD</b>	M	37,0	75	0	17,5 - 23	398	190	182	75	385	48	4,5	12,8	520x375x165	SG4TM
<b>SG6TMSTD</b>	M	60,0	80	0	24 - 30	468	245	252	80	444	52	7,5	16,0	640x540x165	SG6TM
<b>SG11TMSTD</b>	H	110,0	90	0	30 - 39	516	250	263	90	462	60	10,5	20,0	640x540x165	SG11TM
<b>SG13TESTD</b>	H	130,0	115	0	38 - 49	516	303	314	115	630	72	21,5	40,5	890x570x165	SG13TE
<b>SG15TESTD</b>	H	150,0	100	0	47,5 - 62	600	346	380	100	720	80	26,0	45,0	890x570x165	SG15TE

\* M = Mechanical  
H = Hydraulic

# Equalizer Flange Spreading Tools



## SG FLANGE SPREADING TOOLS

Model Number	Flange Joint Thickness F			Valve / Spacer Thickness V			Flange Clearance C		Radial Space R		Axial Space (for installation) A <sub>1</sub>		Axial Space (installed) A <sub>2</sub>		Tool Number
	Min. (mm)	Max. (mm)	Measured: From / To	Min. (mm)	Max. (mm)	Measured: From / To	Max. (mm)	Measured: From / To	Min. (mm)	Measured: From / To	Min. (mm)	Measured: From / To	Min. (mm)	Measured: From / To	
<b>SG4TMSTD</b>	60	185	Outside face of flange / Outside face of flange	0*	45*	Inside face of flange / Inside face of flange	50	Bolt-hole circle / Largest OD of valve/spacer	170	Bolt-hole circle / Closest obstruction	170	Outside face of flange / Closest obstruction	200	Inner face of flange / Closest obstruction	SG4TM
<b>SG6TMSTD</b>	60	210		0*	50*		55		230		200		234		
<b>SG11TMSTD</b>	96	240		0*	60*		60		240		223		258		
<b>SG13TESTD</b>	120	310		0*	95*		70		280		310		260		
<b>SG15TESTD</b>	140	400		0*	80*		80		370		380		315		

\* Short Collet Holder Kits (SCH) are available which can offer improved range of application.

### SG4TM MECHANICAL TOOL KIT



- 1 X SG4TM Tool
- 1 X 150 mm Vernier Calliper
- 1 X 3/8" Drive Torque Wrench and 16 mm Socket
- 1 X Safety Block
- 2 X M16 (5/8") Collets
- 2 X M20 (3/4") Collets
- 1 x Aluminium Carry Case with Protective Foam Inserts

### SG6TM MECHANICAL TOOL KIT



- 1 x SG6TM Tool
- 1 X 150 mm Vernier Calliper
- 1 X 3/8" Drive Torque Wrench and 21 mm Socket
- 1 x Safety Block
- 2 x M24 (7/8") Collets
- 2 x M27 (1") Collets
- 1 x Aluminium Carry Case with Protective Foam Inserts

### SG11TM MECHANICAL TOOL KIT



- 1 x SG11TM Tool
- 1 X 150 mm Vernier calliper
- 1 x 1/2" Drive torque wrench and 24 mm socket
- 1 x Safety block
- 2 x M30 (1-1/8") Collets
- 2 x M33 (1-1/4") Collets
- 2 x M36 (1-3/8") Collets
- 1 x Aluminium Carry Case with Protective Foam Inserts

### SG13TE HYDRAULIC TOOL KIT



- 1 x SG13TE Tool
- 1 x 700 bar HP550S Single Port Sealed Hand Pump with Gauge
- 1 x 700 bar Hydraulic Hose, 2 m
- 1 x 150 mm Vernier Calliper
- 1 x 1/2" Square Drive Flexible Handle
- 1 x 30 mm Socket
- 1 x Safety Block
- 2 x M39 (1-1/2") Collets
- 2 x M42 (1-5/8") Collets
- 2 x M45 (1-3/4") Collets
- 1 x Aluminium Carry Case with Protective Foam Inserts

### SG15TE HYDRAULIC TOOL KIT



- 1 x SG15TE Tool
- 1 x 700 bar HP550S Single Port Sealed Hand Pump with Gauge
- 1 x 700 bar Hydraulic Hose, 2 m
- 1 x 300 mm Vernier Calliper
- 1 x 1/2" Square Drive Flexible Handle
- 1 x 36 mm Socket
- 1 x Safety Block
- 2 x M48 (1-7/8") Collets
- 2 x M52 (2") Collets
- 2 x M56 (2-1/4") Collets
- 1 x Aluminium Carry Case with Protective Foam Inserts

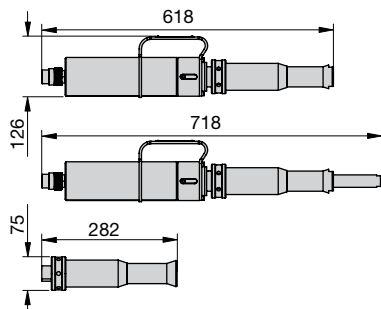
# Equalizer Flange Spreading Tools

## ▼ SG18TE & SG25TE

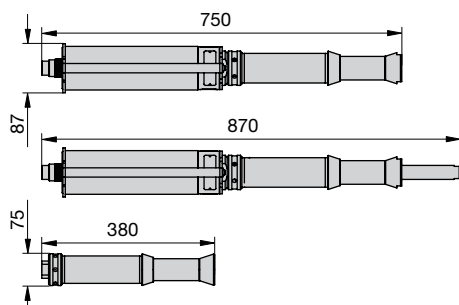


- Applicable for larger-sized flanges
- Actuated by an external hand pump
- Suitable for bolt holes from 59,5 mm to 108 mm

### SG18TE



### SG25TE



# SG

FLANGE  
SPREADING TOOLS

Spreading Force:

**180,0 - 250,0 kN**

Spreading Distance:

**0 - 120 mm**

Maximum Operating Pressure:

**700 bar**



#### Range of Application

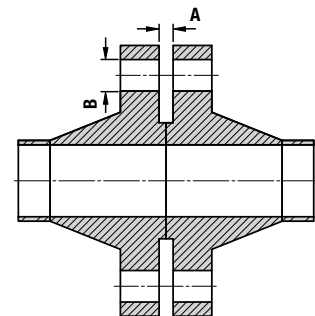
For a detailed range of application please request the Secure-Grip In-Line Hydraulic Operator Instruction Sheet.



#### Caution

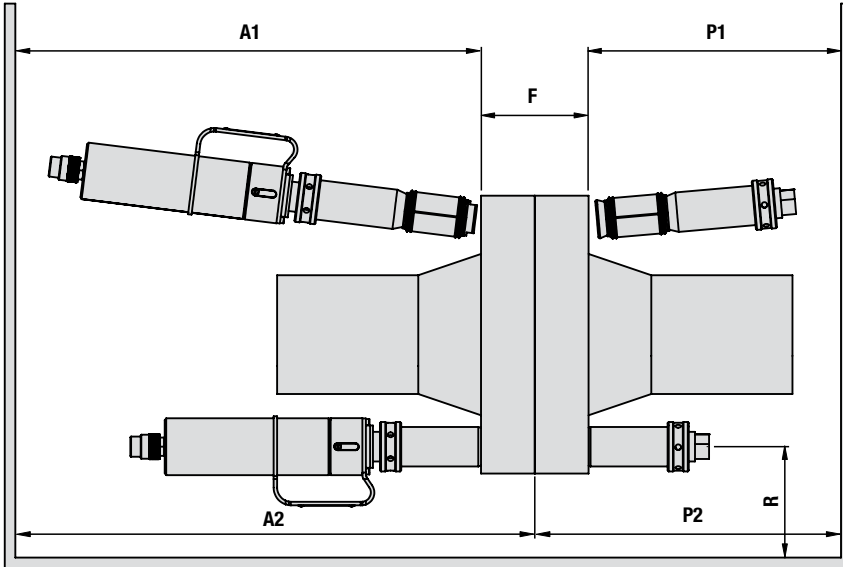
A minimum of two Flange Spreading Tools must be used when opening flange joints. This will enable the operator to maintain an equal spreading distance across the flange faces.

#### Flange Dimensions



Model Number Tool Kit	Type	Maximum Spreading Force Per Tool (kN)	Spreading Distance Maximum (mm)	Flange Dimensions (mm)		Tool Weight (kg)	Kit Weight (kg)	Case Dimensions (mm)	Tool Number
				Minimum Access Gap A	Bolt-hole Diameter B				
<b>SG18TESTD</b>	Hydraulic	180,0	100	0	59,5 - 75	14	45	890 x 570 x 165	SG18TE
<b>SG25TESTD</b>	Hydraulic	250,0	120	0	75 - 108	24	50	890 x 570 x 165	SG25TE

# Equalizer Flange Spreading Tools



## SG FLANGE SPREADING TOOLS

Model Number Tool Kit	Flange Joint Thickness F			Radial Space R		Axial Space (for installation) A1		Axial Space (installed) A2		Axial Plug Space (for installation) P1		Axial Plug Space (installed) P2		Tool Number
	Min. (mm)	Max. (mm)	Measured: From / To	Min. (mm)	Measured: From / To	Min. (mm)	Measured: From / To	Min. (mm)	Measured: From / To	Min. (mm)	Measured: From / To	Min. (mm)	Measured: From / To	
<b>SG18TESTD</b>	190	450	Outside face of flange/ Outside face of flange	55	Bolt-hole circle / Closest obstruction	620	Outside face of flange/ Closest obstruction	900	Inner face of flange/ Closest obstruction	283	Outside face of flange/ Closest obstruction	283	Inner face of flange/ Closest obstruction	SG18TE
<b>SG25TESTD</b>	210	570	Outside face of flange/ Outside face of flange	55	Bolt-hole circle / Closest obstruction	750	Outside face of flange/ Closest obstruction	1100	Inner face of flange/ Closest obstruction	380	Outside face of flange/ Closest obstruction	380	Inner face of flange/ Closest obstruction	SG25TE

### SG18TE HYDRAULIC TOOL KIT



- 1 x SG18TE Tool
- 1 x Spreading Plug
- 1 x 700 bar HP550S Single Port Sealed Hand Pump with Gauge
- 1 x 700 bar Hydraulic Hose, 2 m
- 1 x 300 mm Vernier Calliper
- 1 x 12.5 mm Spacer Plate
- 1 x 5mm Allen Key
- 1 x 50 mm Spacer
- 1 x Safety Block
- 2 x M60 (2-3/8") Collets
- 2 x M64 (2-1/2") Collets
- 2 x M70 (2-3/4") Collets
- 1 x Aluminium Carry Case with Protective Foam Inserts

### SG25TE HYDRAULIC TOOL KIT



- 1 x SG25TE Tool
- 1 x Spreading Plug
- 1 x 700 bar HP550S Single Port Sealed Hand Pump with Gauge
- 1 x 700 bar Hydraulic Hose, 2 m
- 1 x 300 mm Vernier Calliper
- 1 x 12.5 mm Spacer Plate
- 1 x Safety Block
- 1 x Aluminium Carry Case with Protective Foam Inserts

#### SG25TE COLLETS (AVAILABLE SEPARATELY)

Model Number	Description
<b>673601-01</b>	2 x M76 (3") Collets
<b>674801-01</b>	2 x M90 (3-1/2") Collets
<b>673901-01</b>	2 x M80 (3-1/4") Collets
<b>675101-01</b>	2 x M95 (3-3/4") Collets
<b>674501-01</b>	2 x M84 (3-3/8") Collets
<b>675601-01</b>	2 x M100 (4") Collets

# Equalizer Flange Spreading Tools

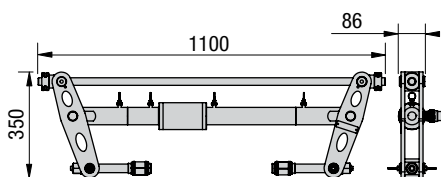
▼ VC10TE



- Assists in the removal of wafer/butterfly valves, spades/spacers or gaskets from large flange joints
- Tool span is longer than a standard Secure-Grip Flange Spreader
- Adjustable to enable the tool to operate in a range of situations

#### PATENTED SECURE-GRIP SYSTEM:

- Unique expanding collet technology
- Secure bolt-hole locking mechanism
- Unique technology makes the Secure-Grip arguably the safest flange spreader available in the world today
- Virtually universal, the Secure-Grip Flange Spreader range will cover ANSI, DIN, Norsok L005, ASME, API and BS Flanges
- Time-saving, simple operation



## VC

VALVE  
CHANGE-OUT TOOLS

Spreading Force:

**100 kN**

Spreading Distance:

**0 - 580 mm**

Maximum Operating Pressure:

**700 bar**



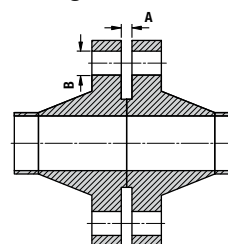
#### Caution

A minimum of two Flange Spreading Tools must be used when opening flange joints. This will enable the operator to maintain an equal spreading distance across the flange faces.



The Actuator and Extension Subassembly can be assembled into 4 different configurations to suit a variety of applications. For a detailed range of application please request the VC10 Operator Instruction Sheet.

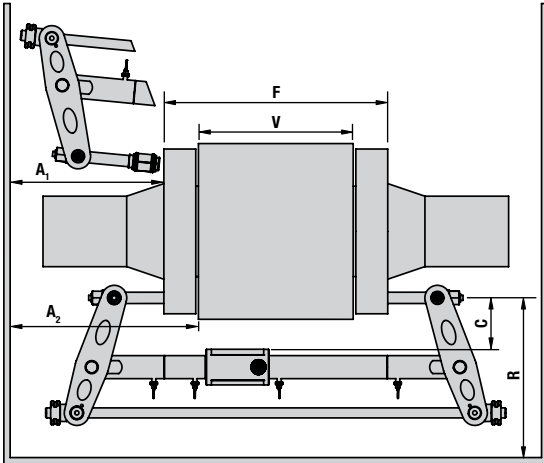
#### Flange Dimensions



Model Number Tool Kit	Type*	Maximum Spreading Force Per Tool (kN)	Spreading Distance Maximum (mm)	Flange Dimensions (mm)		Tool Kit Weight (kg) (2 per Maxi Kit)	Pump Kit Weight (kg)	Gross Kit Weight (kg)	Tool Case Dimensions (mm)	Pump Case Dimensions (mm)	Tool Number
				Minimum Access Gap A	Bolt-hole Diameter B						
<b>VC10/13TESTD</b>	H	100	580	0	38 - 49	50	27	77	550x1200x170	550x1200x170	VC10/13TE
<b>VC10/13TEMAX</b>	H	100	580	0	38 - 49	50	30	130	550x1200x170	550x1200x170	VC10/13TE
<b>VC10/15TESTD</b>	H	100	560	0	47,5 - 62	53	27	80	550x1200x170	550x1200x170	VC10/15TE
<b>VC10/15TEMAX</b>	H	100	560	0	47,5 - 62	53	30	136	550x1200x170	550x1200x170	VC10/15TE
<b>VC10/18TESTD</b>	H	100	514	0	59,5 - 75	58	27	85	550x1200x170	550x1200x170	VC10/18TE
<b>VC10/18TEMAX</b>	H	100	514	0	59,5 - 75	58	30	146	550x1200x170	550x1200x170	VC10/18TE
<b>VC10/25TESTD</b>	H	100	490	0	75 - 108	58	27	85	550x1200x170	550x1200x170	VC10/25TE
<b>VC10/25TEMAX</b>	H	100	490	0	75 - 108	58	30	146	550x1200x170	550x1200x170	VC10/25TE

\* H = Hydraulic

# Equalizer Flange Spreading Tools



**VC**  
VALVE  
CHANGE-OUT TOOLS

Model Number Tool Kit	Flange Joint Thickness F			Valve / Spacer Thickness V			Flange Clearance C	Radial Space R	Axial Space (for installation) A <sub>1</sub>	Axial Space (installed) A <sub>2</sub>	Tool Number
	Min. (mm)	Max. (mm)	Measured: From / To	Min. (mm)	Max. (mm)	Measured: From / To	Measured: From / To	Measured: From / To	Measured: From / To	Measured: From / To	
<b>VC10/13TESTD</b>	110	690	Outside face of flange / Outside face of flange	0*	580*	Inside face of flange / Inside face of flange	Bolt-hole circle / Largest OD of valve/spacer - max. 130 mm	Bolt-hole circle / Closest obstruction - min. 360 mm	Outside face of flange / Closest obstruction - min. 300 mm	Inner face of flange / Closest obstruction - min. 370 mm	VC10/13TE
<b>VC10/13TEMAX</b>	110	690		0*	580*						VC10/13TE
<b>VC10/15TESTD</b>	130	690		0*	560*						VC10/15TE
<b>VC10/15TEMAX</b>	130	690		0*	560*						VC10/15TE
<b>VC10/18TESTD</b>	176	690		0*	514*						VC10/18TE
<b>VC10/18TEMAX</b>	176	690		0*	514*						VC10/18TE
<b>VC10/25TESTD</b>	200	690		0*	490*						VC10/25TE
<b>VC10/25TEMAX</b>	200	690		0*	490*						VC10/25TE

\* Short Collet Holder Kits (SCH) are available which can offer improved range of application.

**TOOL KITS**  
(1 PER STD KIT, 2 PER MAX KIT)



- VC10/13TE**  
1 x VC10/13TE Tool  
2 x M39 (1-1/2") Collets  
2 x M42 (1-5/8") Collets  
2 x M45 (1-3/4") Collets  
1 x Aluminium Carry Case with Protective Foam Inserts

- VC10/18TE**  
1 x VC10/18TE Tool  
2 x M60 (2-3/8") Collets  
2 x M64 (2-1/2") Collets  
2 x M70 (2-3/4") Collets  
1 x Aluminium Carry Case with Protective Foam Inserts

- VC10/15TE**  
1 x VC10/15TE Tool  
2 x M48 (1-7/8") Collets  
2 x M52 (2") Collets  
2 x M56 (2-1/4") Collets  
1 x Aluminium Carry Case with Protective Foam Inserts

- VC10/25TE**  
1 x VC10/25TE Tool  
1 x Aluminium Carry Case with Protective Foam Inserts

**PUMP KITS**



- For STD Tool Kits**  
1 x 700 bar HP550S Single Port Hydraulic Hand Pump  
1 x Hydraulic Gauge with Manifold  
1 x 700 bar Hydraulic Hose, 2,0 m  
1 x Secure Grip Safety Block  
1 x Square Drive Flexible Handle  
1 x Vernier Calliper  
1 x Aluminium Carry Case with Protective Foam Inserts

- For MAX Tool Kits**  
1 x 700 bar HP1000D Twin Port Hydraulic Hand Pump  
2 x Hydraulic Gauges with Manifolds  
2 x 700 bar Hydraulic Hoses, 2,0 m  
2 x Secure Grip Safety Blocks  
1 x Square Drive Flexible Handle  
1 x Vernier Calliper  
1 x Aluminium Carry Case with Protective Foam Inserts



**Collet Sizing**  
It is important that the correct size of collet is used. An undersized collet could allow the collet holder to pull through its bore. An oversized collet has the potential to become jammed in the bolt-hole.



**Range of Application**  
For a detailed range of application please request the Hydraulic Secure-Grip Valve Change-Out Tool Operator Instruction Sheet.

**VC10/25TE COLLETS (AVAILABLE SEPARATELY)**

Model Number	Description
<b>673601-01</b>	2 x M76 (3") Collets
<b>673901-01</b>	2 x M80 (3-1/4") Collets
<b>674501-01</b>	2 x M84 (3-3/8") Collets
<b>674801-01</b>	2 x M90 (3-1/2") Collets
<b>675101-01</b>	2 x M95 (3-3/4") Collets
<b>675601-01</b>	2 x M100 (4") Collets

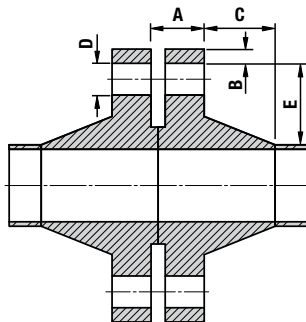
# Equalizer Flange Alignment Tools

▼ FA9TE



The FA Flange Alignment tools can be used to align or re-align flanges on small, medium or large sized flange joints during pipework construction, commissioning or during routine maintenance.

- Compact light-weight design
- Safe, simple and cost-effective
- Use during commissioning, construction and routine maintenance



Flange Dimensions

## FA

FLANGE  
ALIGNMENT TOOLS

Hook Force:

**10 - 90 kN**

Aligning Distance:

**26 - 80 mm**

**FA1TMSTD** Mechanical Tool Kit



- 1 x FA1TM Tool
- 1 x Mini Ratchet Strap

**FA4TMSTD** Mechanical Linear and Rotational Tool Kit



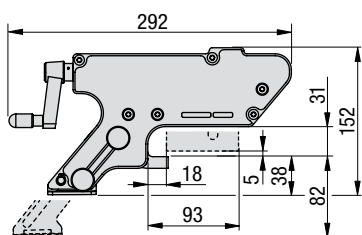
- 1 x FA4TM Tool
- 1 x 68 N-m Torque Wrench
- 1 x 22 mm Socket
- 1 x Ratchet Strap
- 1 x Moulded Plastic Carry Case

**FA9TE** Linear and Rotational Tool Kit

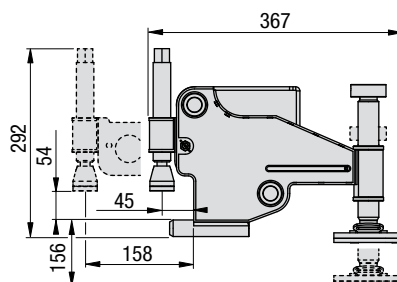


- 1 x FA9TE Tool
- 1 x 700 bar Hydraulic Hose, 2 m
- 1 x 700 bar HP350S Single Port Sealed Hand Pump with Gauge
- 1 x Ratchet Strap
- 1 x Moulded Plastic Carry Case

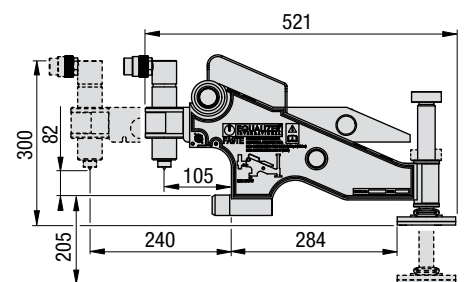
Model Number Tool Kit	Type	Maximum Hook Force Per Tool (kN)	Maximum Aligning Distance (mm)	Flange Dimensions (mm)					Tool Weight (kg)	Kit Weight (kg)	Box/Case Dimensions (mm)	Tool Number
				A	B	C	D min	E				
<b>FA1TMSTD</b>	Mechanical	10	26	16-80	0-24	0-92	16	37-81	2,1	2,3	180 x 330 x 220	FA1TM
<b>FA4TMSTD</b>	Mechanical	40	61	36-139	0-55	0-202	25	0-155	8,6	12,2	600 x 370 x 200	FA4TM
<b>FA9TESTD</b>	Hydraulic	90	80	106-229	0-46	0-283	35.5	53-204	14,5	26,5	920 x 520 x 210	FA9TE



FA1TM



FA4TM



FA9TE

# Equalizer Flange Alignment Tools

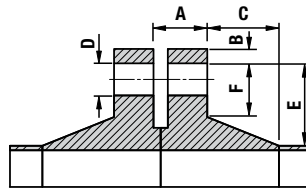


▼ TFA15TI



The TFA Wind Turbine Tower Flange Alignment Tools have been developed to aid the alignment of large flanges on the inside of wind turbine towers during their assembly or installation.

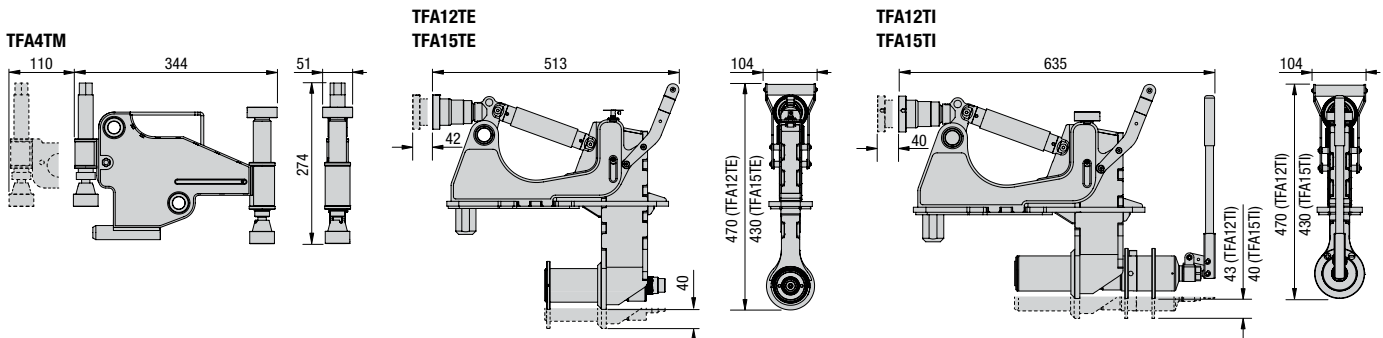
- Assists in aligning / de-ovalizing large internal pipe flanges
- Helps resolve bolt-hole misalignment within tower sections of wind turbine towers
- Can be used both on and offshore



Flange Dimensions

Model Number Tool Kit	Type*	Maximum Hook Force Per Tool (kN)	Maximum Aligning Distance (mm)	Maximum Operating Pressure (bar)	Flange Dimensions (mm)						Tool Weight (kg)	Kit Weight (kg)	Box/Case Dimensions (mm)	Tool Number
					A	B	C	D min	E	F min				
TFA4TMSTD	M	40	42	-	36-135	0-55	0-231	25	0-105	24	8,1	18,0	600x370x200	TFA4TM
TFA12TEMIN	H	240	65	510	129-178	110-241	0-167	45	87-125	62	19,3	28,4	640x540x165	TFA12TE
TFA15TEMIN	H	270	65	700	89-138	110-241	0-167	45	87-125	62	18,9	28,0	640x540x165	TFA15TE
TFA12TIMIN	H	240	65	-	129-178	113-241	0-167	45	87-125	62	21,9	31,0	585x900x160	TFA12TI
TFA15TIMIN	H	270	65	-	89-138	113-241	0-167	45	87-125	62	21,5	30,6	585x900x160	TFA15TI

\* M = Mechanical  
H = Hydraulic



## TFA

### WIND TURBINE TOWER FLANGE ALIGNMENT TOOLS

Hook Force:  
**40 - 270 kN**

Aligning Distance:  
**42 - 65 mm**

#### TFA4TM Mechanical Tool Kit



- 1 x TFA4TM Tool
- 1 x Torque Wrench
- 1 x Moulded Plastic Carry Case

#### TFA12TE / TFA15TE External Hydraulic Tool Kit



- 1 x TFA12TE or TFA15TE Tool
- 1 x Safety Lanyard
- 1 x Aluminium Carry Case with Protective Foam Inserts

#### TFA12TI / TFA15TI Internal Hydraulic Tool Kit



- 1 x TFA12TI or TFA15TI Tool
- 1 x Aluminium Carry Case with Protective Foam Inserts



# Equalizer Flange Pulling Tool

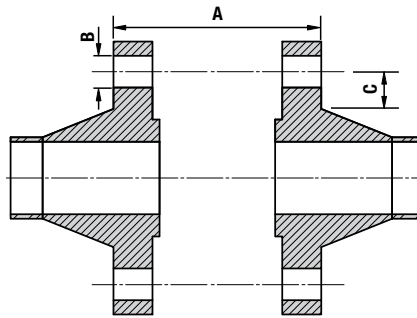
▼ FC10TE



- Applicable to all flanges with a bolt-hole diameter of 1 inch or greater, including ANSI, DIN, Norsok L005, ASME and BS flanges
- Slide and lock collet system
- Low profile tool
- Can be used on all vertical and horizontal flanges including ANSI, API, BS, DIN & Norsok L005
- Robust yet light weight
- Subsea compatible
- Reciprocating hydraulic action

## OPERATING BENEFITS

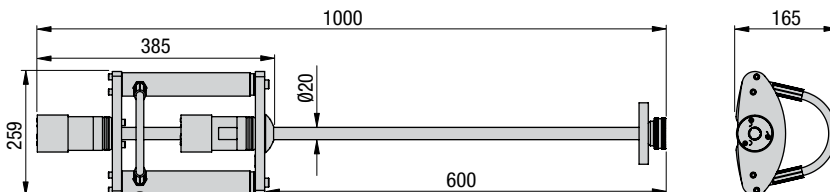
- Reduction in operator fatigue
- Reduction in pinch point
- Quick and easy to use



Flange Dimensions

Model Number Tool Kit	Type	Maximum Closing Force Per Tool (kN)	Closing Distance (mm)	Flange Dimensions (mm)			Tool Weight (kg)	Kit Weight (kg)	Box/Case Dimensions (mm)	Tool Number
				A	B min	C min				
FC10TESTD	Hydraulic	100	570	16-570	25,4*	32	11	23,5	890 x 570 x 165	FC10TE
FC10TEMAX	Hydraulic	100	570	16-570	25,4*	32	11	36,5	890 x 570 x 165	FC10TE

\* For hole diameter greater than 45mm, please contact Enerpac.



## FC

FLANGE  
CLOSING TOOLS

Closing Force:  
**100 kN**

Closing Distance:  
**570 - 0 mm**

Maximum Operating Pressure:  
**700 bar**



### Caution

A minimum of two flange closing tools must be used when flange pulling. This will enable the operator to maintain an even gap between flange faces and prevent flange / gasket damage.

### FC10TESTD STD Kit



- 1 x FC10TE Tool
- 1 x 700 bar Hydraulic Hose, 2 m long
- 1 x 700 bar HP550S Single Port Sealed Hand Pump with Gauge
- 1 x Aluminium Carry Case with Protective Foam Inserts

### FC10TEMAX MAX Kit

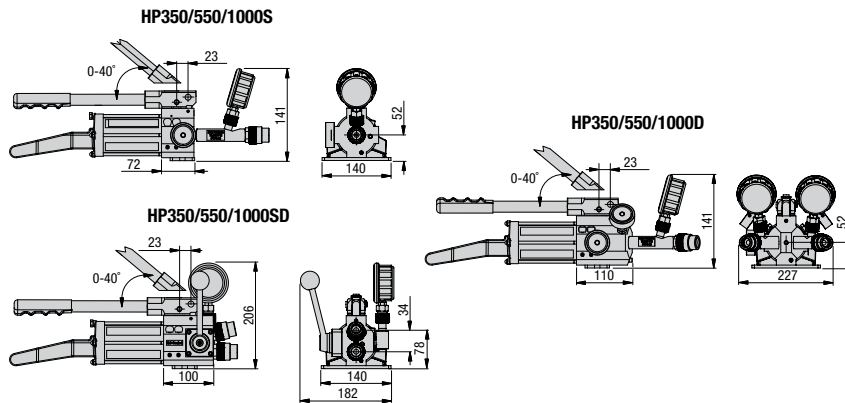


- 2 x FC10TE Tool
- 2 x 700 bar Hydraulic Hoses, 2 m long
- 1 x 700 bar HP550D Twin Port Sealed Hand Pump with Gauge
- 1 x Aluminium Carry Case with Protective Foam Inserts

▼ HP350D



- HP-S , HP-D and HP-SD pump ranges are operable at all angles and are highly resistant to accidental spillage of hydraulic fluid. (certified)
- The Single-Port and Twin-Port Hand Pumps are also available with ATEX rating, which are certified for use in hazardous areas II 2G Ex h IIB T5 Gb, II 2D Ex h IIIC T100°C Db



## HP



HYDRAULIC SEALED  
HAND PUMPS

Maximum Pressure Rating:

**1st Stage: 13,8 bar**  
**2nd Stage: 700 bar**

Pump Type:

**2-Speed**



### Pump Ratings

The Hydraulic Single Port, Twin Port and Double-Acting Hand-Pump (and hoses) are tailored for use with

hydraulic equipment. Each pump's output is regulated to 700 bar and is delivered from threaded 3/8" NPT output ports. The pumps and hoses can be used with any 700 bar rated hydraulic equipment within their oil capacity specification. The HP range of hydraulic hand-pumps have been designed with a seal oil reservoir, which allows the pumps to be used in any orientation without the risk of oil spills or air contamination

### 700 BAR HOSES

AVAILABLE TO PURCHASE SEPARATELY

Model Number	Description
302701-01	HYDRAULIC HOSE 2M
302702-01	HYDRAULIC HOSE 4M
302705-01	HYDRAULIC HOSE 3M
302706-01	HYDRAULIC HOSE 5M
302707-01	HYDRAULIC HOSE 6M
1440008-01	ATEX HOSE 2M
1440013-01	ATEX HOSE 4M
1440014-01	ATEX HOSE 6M

Model Number Hand Pump Kit		Type*	Nominal Oil Capacity (cc)	Useable Oil Capacity (cc)	Oil Volume per Stroke (cc)		Max. Handle Effort (kgf)	Piston Stroke (mm)	Overall Length (mm)	Box Dimensions (mm)	Pump Weight (kg)	Kit Weight (kg)	Tool Number
Standard	ATEX				1st Stage	2nd Stage							
HP350SMIN	HP350SMINEX	SA, SP	350	300	3,62	0,77	33	18	554	250 x 180 x 600	4,4	4,9	HP350S
HP550SMIN	HP550SMINEX	SA, SP	550	580	3,62	0,77	25	18	643	250 x 180 x 700	5,1	5,9	HP550S
HP1000SMIN	HP1000SMINEX	SA, SP	1000	1110	3,62	0,77	21	18	867	250 x 180 x 900	6,1	7,1	HP1000S
HP350DMIN	HP350DMINEX	SA, TP	350	300	3,62	0,77	33	18	580	250 x 180 x 600	6,5	7,2	HP350D
HP550DMIN	HP550DMINEX	SA, TP	550	580	3,62	0,77	25	18	669	250 x 180 x 700	7,2	8,1	HP550D
HP1000DMIN	HP1000DMINEX	SA, TP	1000	1110	3,62	0,77	21	18	893	250 x 180 x 900	7,1	9,3	HP1000D
HP350SDMIN	—	DA	350	300	3,62	0,77	33	18	456	250 x 180 x 600	5,3	5,7	HP350SD
HP550SDMIN	—	DA	550	580	3,62	0,77	25	18	579	250 x 180 x 700	5,7	6,0	HP550SD
HP1000SDMIN	—	DA	1000	1110	3,62	0,77	31	18	769	250 x 180 x 900	5,9	6,3	HP1000SD

\* SA = Single Acting    DA = Double Acting  
SP = Single Port       TP = Twin Port



## Product training

Equalizer 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 has a hands-on training facility, class-room based training and an onsite training system with 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.

## 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.



## On-site training

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

## Hands-on training and demonstration

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'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.





# FLANGE MAINTENANCE TOOLS

Equalizer tools provide a safe, cost effective and simple solution for your flange alignment, flange spreading and flange pulling applications. The Equalizer range of tools have been developed to simplify the maintenance of flange joints. The innovative product range includes flange spreading, aligning and pulling tools together with a series of hand pumps. All tools are supplied as ready to-use sets.

## Tensioning Tools



Power Generation Bolt Tensioners



Topside Bolt Tensioners



Electric Tensioning Pumps



Pneumatic Tensioning Pumps



High-Pressure Hand Pumps

## Controlled Tightening and Loosening



Pneumatic and Electric Torque Wrenches



Hydraulic Torque Wrenches



Electric Torque Wrench Pumps



Pneumatic Torque Wrench Pumps

## Joint Assembly & Joint Separation



Hydraulic Nut Cutters and Nut Splitters



Step-Type Flange Spreaders



Flange Alignment Tools



Pin-Type Flange Spreaders



Battery-Powered Torque Wrench Pumps



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EQUALIZER

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