

/ Perfect Welding / Solar Energy / Perfect Charging



SHIFTING THE LIMITS

# WELDING CARRIAGE FLEXTRACK 45

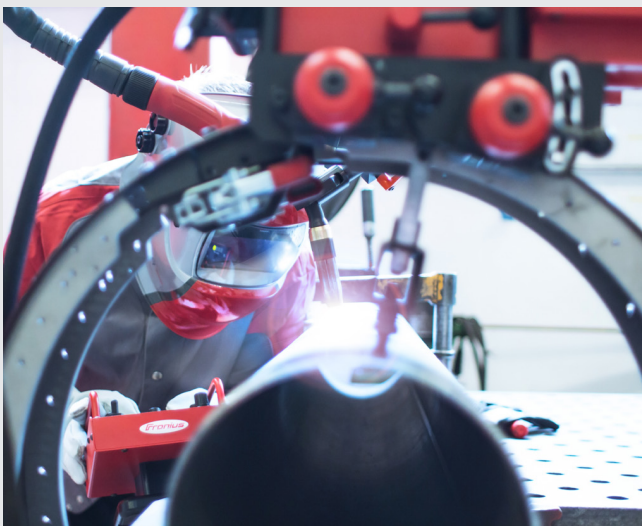
/ MIG-MAG / CMT

**/ ONE SYSTEM FOR UNIVERSAL  
APPLICATIONS**



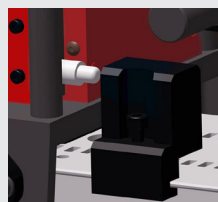
/ The compact carriage offers a wide range of application possibilities. Depending on the requirements 3 different rail types are available. In industries where varying types of surfaces are common (e.g. shipbuilding, tank construction), the FlexTrack 45 suits perfectly for universal operations.

- / ONE CARRIAGE FOR ALL APPLICATIONS**
- / FAST AND EASY SETUP OF RAILS AND CARRIAGE**
- / HIGHEST REPRODUCIBILITY**
- / DESIGNED FOR ROUGH APPLICATION AREA**
- / CONSTANT WELDING SPEED**
- / HIGH QUALITY COMPONENTS**
- / ROBUST ALUMINIUM HOUSING**
- / BEST WELDING RESULTS DUE TO FRONIUS WELDING TECHNOLOGY**



# FLEXTRACK 45 – ONE CARRIAGE FOR ALL APPLICATIONS

/ The high-quality carriage in combination with Fronius welding technology offers the perfect solution for mechanized welding applications. Due to precise and constant movement, excellent welding results can be produced. The highly modular system can be mounted onto any rail configuration. Only the driving angle has to be adjusted – no time consuming adaption required.



## LIMIT SWITCHES

/ For both directions the carriage has integrated limit switches for automatic return/stop.

## TORCHES

/ 5 different types of torches are compatible:

- Multilock
- Robacta
- Robacta Drive
- CMT Drive
- Manual torches



## TORCH HOLDERS

/ Easy and precise torch adjusting.

## CARRYING HANDLES

/ Two handles for comfortable carrying and mounting.

## CLUTCH ON/OFF

/ Allows manual fast positioning of the FlexTrack without unmounting the carriage.

## GUIDING WHEELS

/ Quick adjustable for easy mounting on different rail configurations.



## RAILS

/ 3 different types of rails are available:

- Flexible
- Straight
- Ring

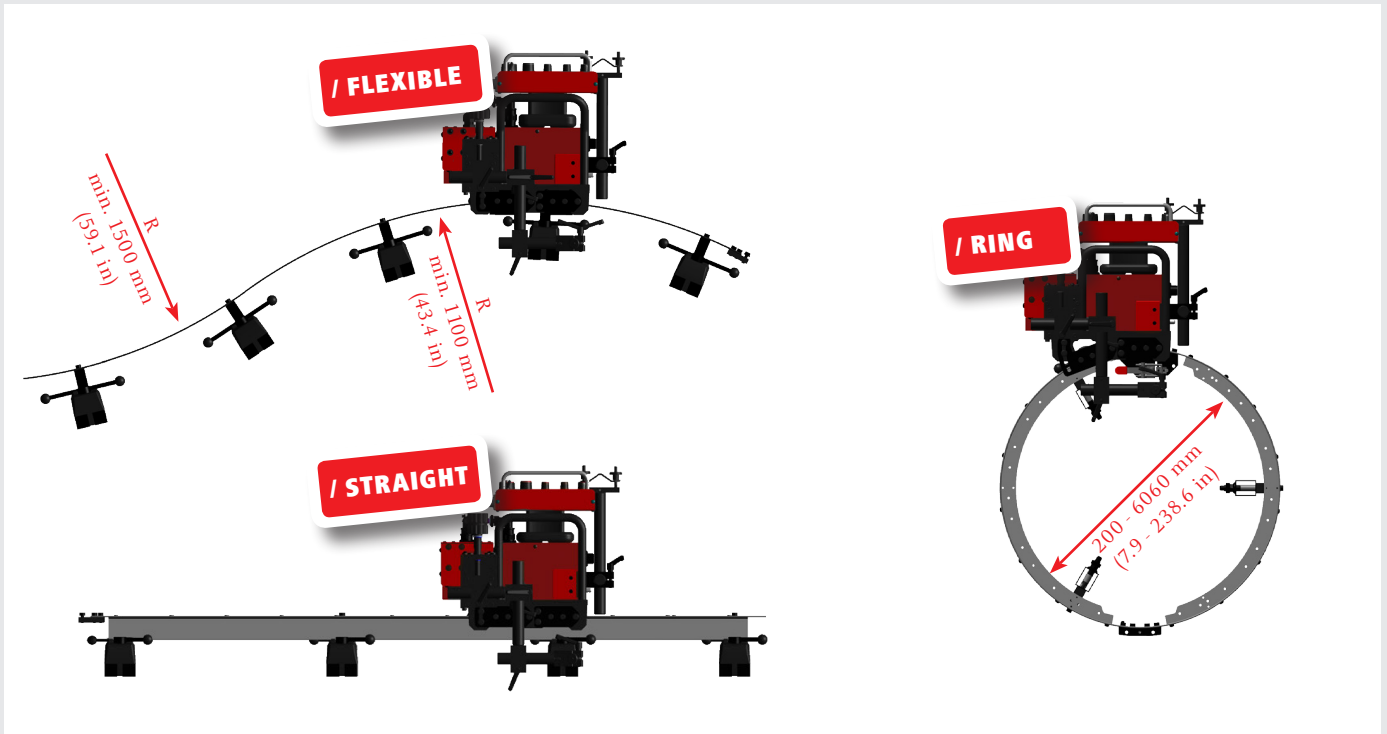
## BRIDGES

/ Magnetic bridge with fixing lever  
/ Vacuum bridge  
/ Screw feet bridge

## REMOTE CONTROL

/ With magnetic holder, which allows mounting to anything that is magnetic.





/ 3 different rail setups are available – the carriage fits any setup perfectly. Only the guiding wheels have to be adjusted correctly. The mounting/unmounting process is quick and easy.

**OSCILLATION UNIT (OPTIONAL)**

- / linear
- / radial

**GRAVITY SENSOR**

/ Determines the angular position of the carriage during orbital welding.



**E-CABINET**

/ Remote control and carriage are connected to the e-cabinet.

**MAINS VOLTAGE**

- / 230 V, 50 - 60 Hz
- / 115 V, 50 - 60 Hz

## REMOTE CONTROL – FUNCTIONS

/ The FlexTrack 45 is operated exclusively via remote control for maximum ease of use. The robust aluminium housing combined with two protection handles can compensate accidentally falls. The magnetic holder allows mounting the remote control to anything that is magnetic including the carriage itself.

Each parameter can be changed supported by a numeric display – accidentally parameter change is minimized by using click-wheel-buttons.



/ Radial oscillation for fillet welds.



/ Linear oscillation with arc current control during orbital welding.



### NUMERIC DISPLAY (METRIC/ IMPERIAL)

/ Display of parameter values and error codes.

### DIRECTION CHANGE/ STOP

/ Changes direction or stops when limit switch is activated.

### ENDCRATER FILLING

/ Allows perfect welding seam endings.

### OSC DWELL TIME

/ Regulation for oscillation dwell time left/center/right.

### OSC AMPLITUDE

/ Regulation for oscillation amplitude.

### OSC SPEED

/ Regulation for oscillation speed.

### OSC OFFSET

/ Regulation for oscillation offset.

### OSC MODES

/ 4 modes:  
 - No weave  
 - Trapezoid  
 - Rectangular  
 - Triangular



### ARC CURRENT CONTROL

/ Regulation for the distance of the welding torch.



### TRAVEL DIRECTION

/ Selection for travel direction.

### SEGMENT WELDING SETTINGS

#### TOTAL WELDING DISTANCE

#### SEGMENT WELDING

/ Flying start  
 / Welding segment length  
 / Gap length between segments  
 / End crater filling



#### SEGMENT WELDING ORBITAL\*

/ Segment welding settings for orbital welding. Own welding parameter can be assigned to every predefined segment.



### WELDING MODES

/ 3 modes:  
 - No arc  
 - Arc  
 - Test

### CONNECTOR FOR REMOTE CONTROL CABLE

/ High quality metal socket.

### TRAVEL SPEED

/ Regulation for travel speed.

### MAGNETIC HOLDER

/ Mounts the remote control to anything that is magnetic.

\* Segment welding settings only in combination with CanOpen Interface (optional). At the moment only available for TPS.

## OSCILLATION UNIT

/ Available are 2 types of oscillation units, which can be used in 4 different modes. The linear- and the radial oscillation are, depending on the application, operated as a right or left variant.

Due to the modular design of the Flex Track 45, it is possible to add or change the appropriate oscillation unit just in a few steps.

### LINEAR

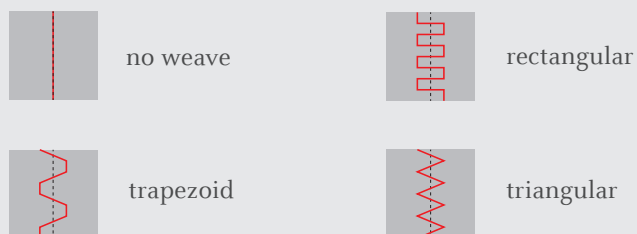


### RADIAL



/ The radial oscillation unit is especially used for fillet welds.

### OSCILLATION MODES



OSCILLATION UNIT LINEAR	
Oscillation speed	5 - 400 cm/min (1.97 - 157.48 in/min)
Amplitude	2 - 30 mm (0.079 - 1.18 in)
Offset	0 - 50 mm (0 - 1.97 in)
Dwell time	0 - 3 seconds
Net weight (without torch holder)	2 kg (4.4 lb)
IEC Ingress Protection rating	IP 23

### OSCILLATION MODES



OSCILLATION UNIT RADIAL	
Travel speed (radius: 150 mm (5.91 in))	20 - 120 cm/min (7.87 - 47.24 in/min)
Travel distance (radius: 150 mm (5.91 in))	1 - 30 mm (0.039 - 1.18 in)
Offset	0 - 50 mm (0 - 1.97 in)
Dwell time	0 - 3 seconds
Net weight (without torch holder)	3,6 kg (7.94 lb)
IEC Ingress Protection rating	IP 23

## ARC CURRENT CONTROL (ACC)

/ The ACC module is used for automatic distance control of the torch to the work piece.

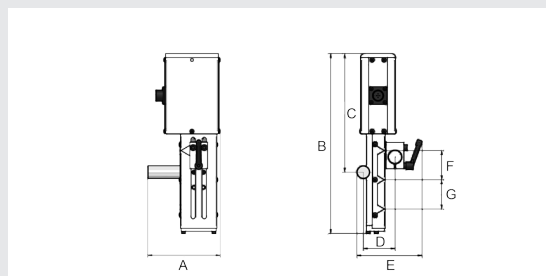
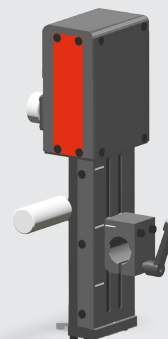
The main advantage is, that on possibly uneven surfaces or at not exactly centrally mounted guide rails, best welding results can be realised.

### FEATURES

/ Compact protected design

/ Quick and easy assembly

/ Spatter protection



ARC CURRENT CONTROL			
Control voltage	24 VDC	B (height)	308 mm (12.13 in)
Power consumption	8 W	C	203 mm (7.99 in)
IEC Ingress Protection rating	IP 23	D	54 mm (2.13 in)
Working distance	5 - 100 mm (0.2 - 3.94 in)	E (width)	111 mm (4.37 in)
Travel speed (automatic mode)	30 cm/min (11.81 in)	F	50 mm (1.97 in)
Travel speed (manual mode)	100 cm/min (39.37 in)	G	50 mm (1.97 in)
Sensibility	1 - 9	Max. load capacity	15 kg (33.07 lb)
Dwell time	1 - 60 seconds	Net weight	2,45 kg (5.40 lb)
A (length)	124 mm (4.88 in)		

## VACUUM PUMP

/ In working cases of using non-magnetic materials, where you have to fix the rails via vacuum bridges, a corresponding vacuum pump is needed. Integrated in a robust steel frame, it provides a suction performance, which ensures a best-possible fastening of up to 13 vacuum bridges on the object. The suction strength can be adjusted by shut-off valves.

### STANDARD EQUIPMENT

/ Dry-sealed, oil-free, rotary vane vacuum pump

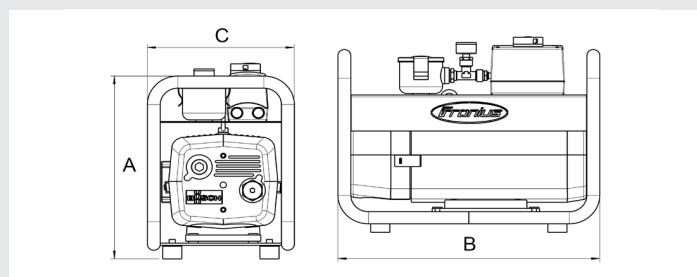
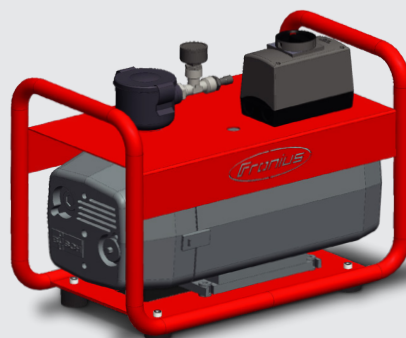
/ Portable base frame

/ Non reversing starter

/ Inlet filter with paper cartridge

/ Pressure manometer

/ Mains cable with plug 5m (196.85 in)



VACUUM PUMP	
Pumping speed	40 m <sup>3</sup> /h
Ultimate pressure	120 mbar
Mains voltage 50 - 60 Hz	3x200-240/346-420 V
Power consumption	900 W
IEC Ingress Protection rating	IP 23
A (height)	406 mm (15.98 in)
B (length)	547 mm (21.54 in)
C (width)	307 mm (12.09 in)
Net weight	38 kg (83.80 lb)

## RAILS AND BRIDGES

/ The high quality spring steel rails can be used on flat, curved or round objects. There are 3 different bridges for fixing the rails to the objects. Rails and bridges can be configured for various diameters. The FlexTrack fits any rail configuration perfectly.

### / FLEXIBLE RAILS

/ Can be mounted on curved or flat surfaces – min. inside radius 1500 mm (59.1 in) / min. outside radius 1100 mm (43.3 in).



/ Can be also mounted on tubes as ring rails for inside\* and outside welding. Different segment lengths (1130/1695/1884 mm 44.5/66.7/74.2 in) provide a wide diameter range.



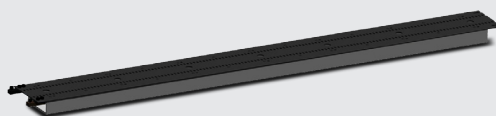
\* Inside diameter on request!

SEGMENT TYPE	LENGTH
I	1130 mm (44.5 in)
II	1695 mm (66.7 in)
III	1884 mm (74.2 in)

DIAMETER	SEGMENTS	BRIDGES
1560 - 1740 mm (61.4 - 68.5 in)	3x type I 1x type II	18
1740 - 1920 mm (68.5 - 75.6 in)	3x type III 1x type I	18
1920 - 2100 mm (75.6 - 82.7 in)	3x type III 1x type II	20
2100 - 2280 mm (82.7 - 89.8 in)	3x type III 2x type I	21
2280 - 2460 mm (89.8 - 95.9 in)	5x type II	25
2460 - 2640 mm (95.9 - 103.9 in)	3x type III 2x type II	25
2640 - 2820 mm (103.9 - 111 in)	5x type II 1x type I	25
2820 - 3000 mm (111 - 118.1 in)	6x type II	28
3000 - 3180 mm (118.1 - 125.2 in)	3x type III 3x type II	30
3180 - 3360 mm (125.2 - 132.3 in)	6 x type III	30
3360 - 6060 mm (132.3 - 238.6 in)	on request	

### / RIGID RAILS

/ Straight rigid rail with aluminium profile for vertical and horizontal applications.

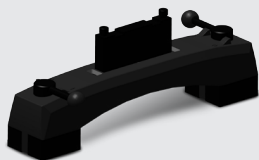


/ Ring rails with rigid aluminium profiles. The rails are connected with hinge and catch for fast and easy setup.



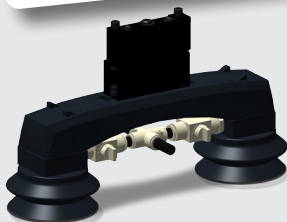
DIAMETER	SEGMENTS	BRIDGES
200 - 300 mm (7.9 - 11.8 in)	2	3
300 - 480 mm (11.8 - 18.9 in)	2	4
480 - 660 mm (18.9 - 26 in)	2	6
660 - 840 mm (26 - 33.1 in)	2	8
840 - 1020 mm (33.1 - 40.2 in)	3	9
1020 - 1200 mm (40.2 - 47.2 in)	3	12
1200 - 1380 mm (47.2 - 54.3 in)	3	15
1380 - 1560 mm (54.3 - 61.4 in)	4	16

### / MAGNETIC BRIDGE



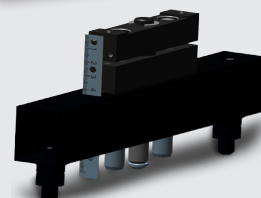
/ For work pieces that are magnetic. Heat resistant up to 180 °C (356 °F). Adjustable magnetic force.

### / VACUUM BRIDGE



/ Mostly used for non-magnetic work pieces with smooth surfaces like aluminium or stainless steel. Temperature range 0 to 120 °C (248 °F). Optional -30 to 250 °C (-22 to 482 °F).

### / SCREW FEET BRIDGE



/ Recommended for rigid ring rails up to 840 mm (33.1 in) diameter.

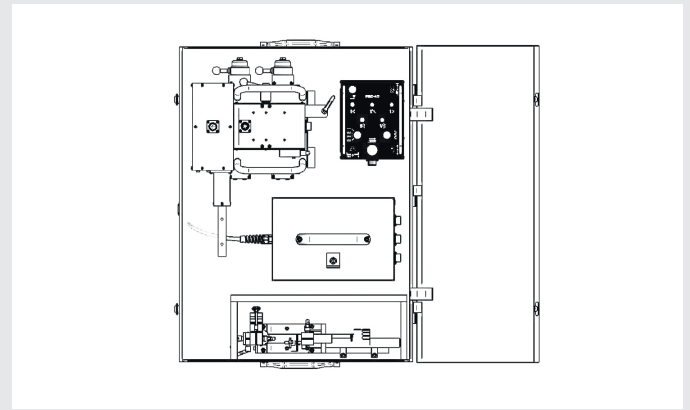
All bridges contain adjustment units with a metrical scale and a distance block.

## TECHNICAL DATA

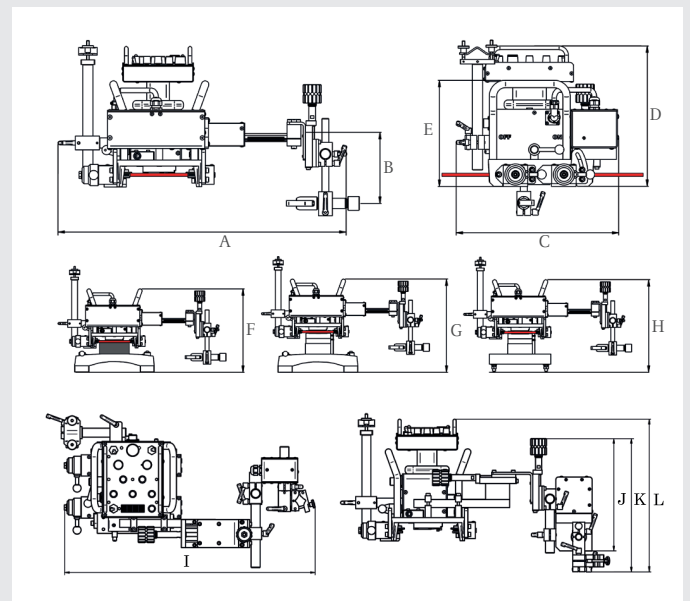
FLEXTRACK 45	
<b>CARRIAGE</b>	
Welding position	PA, PB, PC, PE, PG
Material thickness	min. 4 mm (0.16 in)
Horizontal travel speed	5 - 300 cm/min (1.97 - 118.11 in/min)
Vertical travel speed	5 - 250 cm/min (1.97 - 98.43 in/min)
Endcrater fill time	0 - 5 seconds
Max. load capacity horizontally/vertically	45/30 kg (99.2/66.1 lb)
Weight (without torch holder)	12,5 kg (27.6 lb)
IEC Ingress Protection rating	IP 23
<b>E-CABINET</b>	
Mains voltage 50 - 60 Hz	115/230 V
Power supply	24 V DC
Weight (without cables)	5,3 kg (11.7 lb)
IEC Ingress Protection rating	IP 23
<b>REMOTE CONTROL</b>	
Cable length	10 m (393.7 in)
Weight (without cable)	1,5 kg (3.3 lb)
IEC Ingress Protection rating	IP 23
<b>DIMENSIONS</b>	
A (with linear OSC)	543 - 623 mm (21.4 - 24.5 in)
(without linear OSC)	480 - 560 mm (18.9 - 22 in)
B (with linear OSC)	97 - 201 mm (3.8 - 7.9 in)
(without linear OSC)	119 - 223 mm (4.7 - 8.8 in)
C (with linear OSC)	352 mm (13.9 in)
(without linear OSC)	334 mm (13.1 in)
D	304 mm (12 in)
E	230 mm (9.1 in)
F (overall height rigid straight rail setup)	318 mm (12.5 in)
G (overall height with magnetic bridge)	317 - 415 mm (12.4 - 16.3 in)
H (overall height with screw feet bridge)	317 - 415 mm (12.4 - 16.3 in)
I (with radial OSC)	507 - 628 mm (20 in - 24.7 in)
(without radial OSC)	480 - 560 mm (18.9 - 22 in)
J (with radial OSC)	204 - 280 mm (8 in - 11 in)
(without radial OSC)	119 - 223 mm (4.7 - 8.8 in)
K	333 mm (13.1 in)
L (height)	382 mm (15 in)



/ Watch the video on  
our YouTube channel.



/ Custom fitting metal transport box including a toolkit for  
the entire system (rails separately).



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### WE HAVE THREE DIVISIONS AND ONE PASSION: SHIFTING THE LIMITS OF POSSIBILITY.

/ Whether welding technology, photovoltaics or battery charging technology – our goal is clearly defined: to be the innovation leader. With around 3,300 employees worldwide, we shift the limits of what's possible - our record of over 900 granted patents is testimony to this. While others progress step by step, we innovate in leaps and bounds. Just as we've always done. The responsible use of our resources forms the basis of our corporate policy.

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