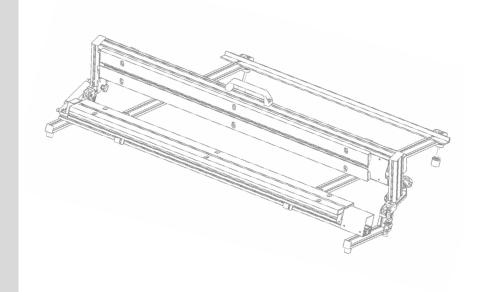


Heating & edging machines











Heating & edging machines

This brochure is intended to help you with selecting the devices or machines that suit your requirements best.

Our product range includes everything needed for heating and edging thermoplastic panels with a material thickness from 0.25 to 20.0 mm from the small entry-level model to the professional machine.

Hot forming or thermoforming comprise the forming of thermoplastic semi-finished products such as panels and films using directed heating.

When heated up, thermoplastics lose their solidness so they can be bended easily.

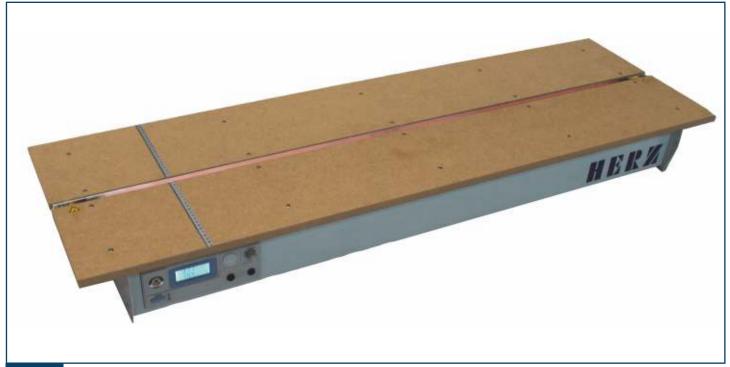
Different formats, forming temperatures and behaviours when heated up as well as the intended application determine the respective bending machines that suit the most.

Material	Panel strength (mm)	Recommended machines for heating	Recommended machine for bending
PMMA (e.g. acrylic glass, plexiglass, etc.), PS, PETG	up to 6 up to 12 up to 15 up to 20	TG, TGG TGMO TGMOD HBR, HBR-K, MHT	TBS TBS, AB AB AB
PC Polycarbonate (e.g. Macrolon®, Lexan®, etc.)	up to 6 up to 10 up to 12	TGmO-PC TGmOD-PC HBR, HBR-K, MHT	TBS, AB AB AB
Hard foam (e.g. Forex®, etc.)	up to 6 up to 12 up to 15 up to 20	TG TGmO TGmOD HBR, HBR-K, MHT	TBS TBS, AB TBS, AB AB
PP	up to 8	TGm0 with slip-on blade	AB
	up to 15	TGm0 with heating blade	AB
	up to 20	HBR, HBR-K, MHT	AB
PVC	up to 6	TG, TGG	TBS
	up to 12	TGMO	TBS, AB
	up to 15	TGMOD	AB
	up to 20	HBR, HBR-K, MHT	AB
PE	up to 8	TGm0 with slip-on blade	AB
	up to 15	TGm0 with heating blade	AB
	up to 20	HBR, HBR-K, MHT	AB
Twin-wall panels	up to 10	TGm0 with slip-on blade	TBS, AB
	up to 15	TGm0 with heating blade	TBS, AB
	up to 20	HBR, HBR-K, MHT	TBS, AB



TGG30/TGG125

- Even heating of thermoplastics
- Available with 30 cm or 125 cm working width
- · Allows bending of fairly tight radiuses
- Recommended material strength of 0.5 4 mm (depending on material)
- Integrated overload protection preserves the heating wire
- For subsequent bending, we recommend the table-top bending template TBS



TGG125

Item number		TGG 30	TGG 125
Device width	mm	460	1360
Device depth	mm	320	430
Device height	mm	140	150
Supply voltage	V	230	230
Frequency	Hz	50 - 60	50 - 60
Connection power	kW	0,2	0,5
Device weight	kg	6,5	14,5
Conformity mark		CE	CE



TGG30

Table-top heating boards from the TG range





Table-top heating board incl. supplementary equipment

The T**G table-top heating board** is made from aluminium profile and, such as all of our devices and machines, has a heating system that consists of black radiators. The heating temperature is adjusted and monitored by a digital temperature controller. This ensures an exact and reproducible heating of all thermoplastics

Optionally available:

- parallel stop for easy positioning of work pieces
- digital time switch
- Teflon-coated slip-on strip for heating of 0.25 to 1.0 mm films

Table-top heating board		TG 100	TG 150	TG 200	TG 250	TG 300
Max. working width	mm	1000	1500	2000	2500	3000
Max. panel strength	mm	6	6	6	6	6
Device width	mm	1500	2000	2500	3000	3500
Supply voltage	V	230	230	230	230	230
Connection power	kW	1	1,3	1,5	1,6	1,8
Device weight	kg	12	15	18	21	24



Table-top heating boards from the TG range



Table-top heating board with top heater

Table-top heating board TG m0 has the same design as the design as the TG table-top heating board, but it allows for heating panels of up to 12 mm in order to make them flexible since heat is provided from both sides.

Furthermore, it is standard equipped with a digital time switch for sequence control with an audible alarm for removing the work pieces.

Optionally available:

- parallel stop for easy positioning of work pieces
- Teflon-coated slip-on strip for heating of 0.25 to 1.0 mm films
- Teflon-coated heating blade for welding by bending
- TGm0-Duo with double heating elements special version with polycarbonate (PC) allows a significantly more even heating of the sensitive material.

Polycarbonate (PC) version: We recommend TGm0-PC up to a material strength of 6 mm and TGm0-DU0-PC up to a material strength of 10 mm.

Table-top device with bottom and top heater		TG 100m0	TG 150m0	TG 200m0	TG 250m0	TG 300m0
Max. working width	mm	1000	1500	2000	2500	3000
Max. panel strength	mm	12	12	12	12	12
Device width	mm	1500	2000	2500	3000	3500
Supply voltage	V	230	230	230	230	230
Connection power	kW	2	2,6	3,0	3,2	3,6
Device weight	kg	22	28	34	40	46



Mobile heating stage		HBR 100	HBR 150	HBR 200	HBR 250	HBR 300
Max. working width	mm	1000	1500	2000	2500	3000
Max. panel strength	mm	20	20	20	20	20
Machine width	mm	1700	2200	2700	3200	3700
Machine length	mm	1250	1250	1250	1400	1400
Machine height	mm	1200	1200	1200	1200	1200
Height of work stage	mm	920	920	920	920	920
Supply voltage	V	400	400	400	400	400
Connected load	kW	4,5	5,5	6,0	6,8	7,5
Machine weight	kg	90	100	120	130	150

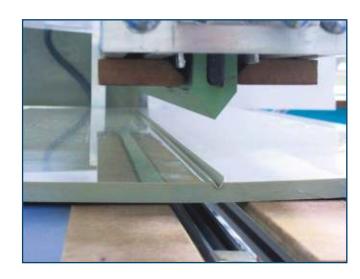
The modular design of the heating stages enables the user to compose a machine that fits their purpose best so that a maximum utilisation can be achieved.

In order to enlarge the heating surface when bending larger radiuses, the machine can be modified within a few seconds.

Furthermore, it is possible to replace the top heater with a heating blade for welding PE or PP panels by bending in almost no time.

Heaters available for the HBR range. All heaters can be replaced in a modular system.

- Simple bottom heater
- Simple top heater
- Double bottom heater
- Double top heater
- Heating blade for PE and PP heating by contact



Heating blade - optional:

Teflon-coated heating blade for contact heating of PE and PP panels up to 20 mm material strength and working width of 3000 mm.



Combined machines from the HBR-K range



Machines of the **HBR-K** range are <u>combined heating and edging machines.</u>

Their compact design makes them very space-saving.

At the same time, the same applications are available to the user as with the conventional HBR and AB machines.

Mobile heating stage with supplementary equipment

Mobile heating stage		HBR 100 K	HBR 150 K	HBR 200 K	HBR 250 K	HBR 300 K
Max. working width	mm	1000	1500	2000	2500	3000
Max. panel strength	mm	20	20	20	20	20
Machine width	mm	1700	2200	2700	3200	3700
Machine length	mm	1450	1450	1450	1450	1450
Machine height	mm	1200	1200	1200	1200	1200
Height of work stage	mm	920	920	920	920	920
Supply voltage	V	400	400	400	400	400
Connected load	kW	1,4	2,0	2,2	3,2	4,0
Machine weight	kg	110	120	140	150	170

Distance between heater and edging device: 700 mm Edging facility for edging panels up to an angle of 130° and a radius of max. 30 mm

Heaters available for the HBR-K range. All heaters can be replaced in a modular system.

- Simple bottom heater
- Simple top heater
- Double bottom heater
- Double top heater
- · Heating blade for PE and PP heating by contact

Special version for Polycarbonate (PC) - allows a significantly more even heating of the sensitive material.



The **multiple heating stage** is particularly suitable for heating two or more edging points at the same time.

In this machines each heater is controlled by a separate digital temperate switch so that the exact regulation of each heating zone can be achieved.

The heating time is controlled by an integrated time switch that automatically opens the machine and releases an acoustic signal as soon as the set heating time has elapsed.

Minimum distance between top heaters: 150 mm

Minimum distance between bottom heaters: 80 mm



Multiple heating stage		MHT 100	MHT 150	MHT 200	MHT 250	MHT 300
Max. working width	mm	1000	1500	2000	2500	3000
Max. working width	mm	1900	2400	2900	3500	3900
Machine depth	mm	1650	1650	1650	1650	1650
Height of work stage	mm	920	920	920	920	920
Height of work stage	٧	400	400	400	400	400
Connected load	kW	depending on machine equipment				
Machine weight	kg	290	350	450	500	600





The **mobile edging bench** is designed for use in tank construction for edging PE or PP panels.

However, it can also be used for edging thermoplastics such as PVC, PMMA, PC and PS.

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Mobile edging bench		AB 100	AB 150	AB 200	AB 250	AB 300
Max. working width	mm	1000	1500	2000	2500	3000
Max. panel strength	mm	20	20	20	20	20
Machine width	mm	1800	2300	2800	3300	3800
Machine depth	mm	1200	1200	1200	1200	1200
Machine height	mm	1100	1100	1100	1100	1100
Height of work stage	mm	920	920	920	920	920
Machine weight	kg	90	100	120	130	150



The special design of the hold-down bar also allows to edge section tubes and then remove them from the machine by opening the hold-down bar on its side (see fig.).

The entire machine is designed in a way that reproducible angles up to 130° and radiuses of up to 30 m can be produced. This ensures high flexibility and versatility.

Table-top bending template TBS

- For bending already warmed thermoplastic panels
- The ideal supplement to the table-top heating board from TGG/TG or TGmO series
- Integrated measuring tape for precise setting
- With two adjustable limit stops
- · Hold-down clamps are adjustable depending material strength
- Continuous angle setting from 30° to 180°
- Maximum adjustable side length 2x430 mm

Item no.: TBS125

1.25 m table-top bending template working width



Multiple bending stages from the MBT range



Bending stage

The machine is particularly recommended for use in the production of:

- any kind of covers, e.g. for instruments, showcases, apparatuses for the electrical and chemical industry
- ventilation systems, e.g. ventilation shafts
- elements for furniture construction, e.g. side tables made of PMMA
- lamps, casings, accessories or brochure displays in the advertising sector

The mobile multiple bending stage particularly excels by its easy and straight-forward handling.

Mobile multiple bending stage		MBT 100	MBT 150	MBT 200
Max. working width	mm	1000	1500	2000
Max. panel strength	mm	12	12	12
Machine width	mm	1600	2100	2600
Machine depth	mm	1100	1100	1100
Machine height	mm	1200	1200	1200
Height of work stage	mm	920	920	920
Machine weight	kg	90	100	120

It allows bending workpieces from PVC, PMMA, PC, PA and other thermoplastics after heating in a reproducible max. angle of 140° or a max. radius of 40 mm.





The **bending template** can be used for easy and quick producing of different U profiles.

Adjustable bending stops allow sides to be continuously adjusted between 25° and 135°.

A travel mechanism allows universal setting of the inner dimensions of the U profiles up to a maximum of 1000 mm.

Avoids time and cost intensive production of templates.

Bending template		BS 120	BS 170	BS 220
Working width	mm	1200	1700	2200
Working depth	mm	1000	1000	1000
Working height	mm	930	930	930



The **manual heating blade** of the HS range is particularly suitable for use at building sites in order to weld PP and PE panels by bending in tank, ventilation and apparatus construction. The temperature of the Teflon-coated heating element is exactly adjusted by a digital temperature controller.

The included rack allows to safely deposit the device when not in use.

Specifications		HS 100	HS 150	HS 200
Working width	mm	1000	1500	2000
Connection power	kW	0,7	1,0	1,1
Supply voltage	V	230	230	230
Weight	kg	7	9	11



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