

## Plastic welding technology





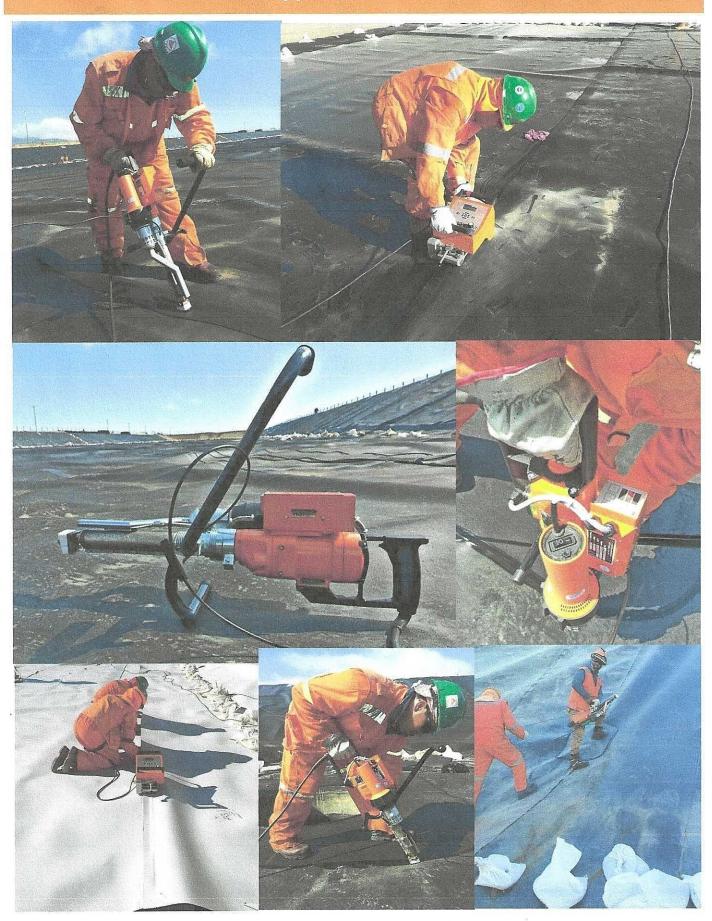
#### **USA DEALERS**

Larry Rowold Plastic Welding Equipment and Consulting/Training 1010 Vermont Ave The Villages, FL 32159

cell 630-319-3480 email: larowold@gmail.com Chip Klinck Naiad of New Hampshire Inc. 11 Gibson Rd Hillsboro, NH 03244

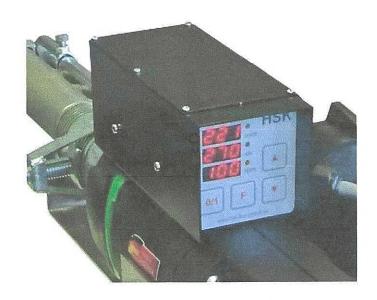
603-464-4622 office 603-848-7153 cell email: cklinck@comcast.net

## applications



The hand welding extruders of the HSK 18 RSX to HSK 60 DE series can be equipped with digital recording.

Digital recording oft he welding temperature, ambient temperature, the speed and the welding times on SD-Card. Various welder programmed with its own SD-Card. Pre-programmable welding and building materials on SD-Card. Evaluated logs and charts on Excel.



Digital temperature controllers mass and air temperature standard version.



Extruder Typ	HSK 10 DE
welding capacity	1,0 kg/h Ø 4 mm
max. diametre rod	Ø 3/4 mm PE/PP
dimension	460 x 170 x 220 mm
heating extruder	300 W
drive	500 W
hot air blower	1500 W
voltage	230 V / 50 Hz
weight	4,4 kg
welding shoe blank	Art.Nr.:
	01006



Melt temperature digital and air temperature adjustable via potentiometer



Extruder Typ	HSK 10.2 DE
welding capacity	1,0 kg/h Ø 4 mm
max. diametre rod	Ø 3/4 mm PE/PP
dimension	430 x 125 x 300 mm
heating extruder	300 W
drive	500 W
hot air blower	1500 W
voltage	230 V / 50 Hz
weight	4,4 kg
welding shoe blank	Art.Nr.: 01006/10.2

Melt temperature digital and air temperature adjustable via potentiometer

Extruder Typ	HSK 10 DE
welding capacity	1,0 kg/h Ø 4 mm
max. diametre rod	Ø 3/4 mm PE/PP
dimension	460 x 170 x 220 mm
heating extruder	300 W
drive	500 W
hot air blower	1500 W
voltaae	230 V / 50 Hz
weiaht	4,4 kg
welding shoe blank	Art.Nr.: 01006



brushless blower motor

Extruder Typ	HSK 18 RSX
welding capacity	1,8 kg/h Ø 4 mm
max. diametre rod	Ø 3/4 mm PE/PP
dimension	550 x 190 x 280 mm
heating extruder	500 W
drive	750 W
hot air blower	2200 W
voltaae	230 V / 50 Hz
weiaht	6,7 kg
welding shoe blank	Art.Nr.:
	01007



Mass- and air temperature digital

Picture shows: HSK18RSX with welding shoe 360 ° rotatable



Extruder Typ	HSK 18 E
welding capacity	1,8 kg/h Ø 4 mm
max. diametre rod	Ø 3/4 mm PE/PP
dimension	570 x 140 x 280 mm
heating extruder	=
drive	750 W
hot air blower	2200 W
voltage	230 V / 50 Hz
weight	6,0 kg
welding shoe blank	Art.Nr.: 01005

Air heated extruder (no display and no separate temperatures adjustable)

Extruder Typ	HSK 18 GSX
welding capacity	1,8 kg/h
Granulat , granules	PE/PP
dimension	570 x 190 x 430 mm
heating extruder	500 W
drive	750 W
hot air blower	2200 W
voltage	230 V / 50 Hz
weiaht	7,5 kg
welding shoe blank	Art.Nr.:
	400154



Extruder Typ	HSK 22 RSX
welding capacity	2,3 kg/h Ø 4 mm
max. diametre rod	Ø 3/4 mm PE/PP
dimension	640 x 180 x 215 mm
heating extruder	700 W
drive	1150 W
hot air blower	2200 W
voltage	230 V / 50 Hz
weight	8,4 kg
welding shoe blank	Art.Nr.: 400119



Mass- and air temperature digital



Extruder Typ	HSK 26 GSX
weldina capacity	2,5 kg/h
granules	PE/PP
dimension	640 x 180 x 400 mm
heating extruder	700 W
drive	1150 W
hot air blower	2200 W
voltage	230 V / 50 Hz
weight	9,0 kg
welding shoe blank	Art.Nr.: 400093

Mass- and air temperature digital

. Extruder Typ	HSK 28 RSX
welding capacity	3,0 kg/h Ø 5 mm
max, diametre rod	Ø 4/5 mm PE/PP
dimension	640 x 180 x 215 mm
heating extruder	700 W
drive	1150 W
hot air blower	2200 W
voltage	230 V / 50 Hz
weight	8,4 kg
welding shoe blank	Art.Nr.: 400082



Extruder Typ	HSK 40 RSX
welding capacity	3,8 kg/h Ø 5 mm
max. diametre rod	Ø 4/5 mm PE/PP
dimension	643 x 180 x 215 mm
heating extruder	700 W
drive	1150 W
hot air blower	2200 W
voltage	230 V / 50 Hz
weight	8,8 kg
welding shoe blank	Art.Nr.:
	01026



Masse- und Lufttemperatur digital , Mass- and air temperature digital



Extruder Typ	HSK 40 E
welding capacity	3,8 kg/h Ø 5 mm
max. diametre rod	Ø 4/5 mm PE/PP
dimension	643 x 140 x 230 mm
heating extruder	Ε.
drive	1150 W
hot air blower	2200 W
voltage	230 V / 50 Hz
weight	8,0 kg
welding shoe blank	Art.Nr.:
	01011

Air heated extruder (no display and no separate temperatures adjustable)



Extruder Typ	HSK 60 DE
welding capacity	6,0 kg/h Ø 5 mm
max. diametre rod	Ø 4/5 mm PE/PP
dimension	770 x 160 x 340 mm
heating extruder	1200 W
drive	2000 W
hot air blower	3300 W
voltage	400 V(3x230V) / 50 Hz
weight	12,0 kg
welding shoe blank	Art.Nr.: 400056



Extruder Typ	HSK 60.1 DE Deponie	
welding capacity	6,0 kg/h Ø 5 mm	
max. diametre rod	Ø 4/5 mm PE/PP	
dimension	770 x 160 x 340 mm	
heating extruder	1200 W	
drive	2000 W	
hot air blower	3300 W	
voltage	400 V(3x230V) / 50 Hz	
weight	12,0 kg	
welding shoe blank	Art.Nr.:	
welaing snoe blank	400017	

Mass- and air temperature diaital

Extruder Typ	HSK 60.1 DE-G	
welding capacity	6,0 kg/h	
granules	PE/PP	
dimension	770 x 160 x 440 mm	
heating extruder	1200 W	
drive	2000 W	
hot air blower	3300 W	
voltage	400 V(3x230V) / 50 Hz	
weight	12,0 kg	
welding shoe blank	Art.Nr.:	
werding shoc blank	400056 G	



Mass- and air temperature digital



Extruder Typ	HSK 60.1 DE-G	
	Deponie	
welding capacity	6,0 kg/h	
granules	PE/PP	
dimension	770 x 160 x 340 mm	
heating extruder	1200 W	
drive	2000 W	
hot air blower	3300 W	
voltage	400 V(3x230V) / 50 H:	
weight	12,0 kg	
welding shoe blank	Art.Nr.:	
Weigning Shot Shank	01044	

Stable steel case for hand welding extruder

Typ / Type	Art.Nr./Art.No.
HSK 10/18	100049
HSK 22-40	02079
HSK 60	02077



### Various versions Hand welding extruder



Extruder HSK 10 DE digital with fan overhead



Extruder HSK 28 RSX with fan overhead



Extruder HSK 28 RSX Preheating overhead





Other versions on request

Extruders and devices of the most modern type for processing plastics (thermoplastics) Output of 0.2 kg / h to 50 kg / h. Execution with granules or welding wire.



#### Industrial extruder Type IE 60

for discontinuous welding process welding capacity (PE-granules): 6-7 kg/h

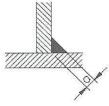
#### Industrial extruder Type IE 150

for discontinuous welding process welding capacity (PE-granules): ca. 15 kg/h

#### Industrial and 3-D extruder

welding capacity (PE-granules/diameter Ø 4mm: ca. 1-4 kg/h













V butt weld

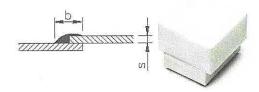


Corner butt weld

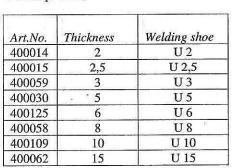
Art.No.	Thickness	Welding shoe
400035	5	A-3,5
400011	8	A-5,6
400007	10	A-7
400037	12	A-8,4
01040	15	A-10,5
400003	20	A-14
400012	25	A-17,5
400074	30	A-21
400107	35	A-24,5

Art.No.	Thickness	Welding shoe
400036	5	V 5
400018	8	V 8
400008	10	V 10
400025	12	V 12
01041	15	V 15
400004	20	V 20
400022	25	V 25
400061	30	V 30
400108	35	V 35

Art.No.	Thickness	Welding shoe
400024	5	E 5
400057	8	E 8
400009	10	E 10
400019	12	E 12
400063	15	E 15
400020	20	E 20
400021	25	E 25



overlap weld





Art.No.	Nozzle blank
400001	30 x 50 mm
400002	40 x 52 mm
400006	90 x 70 mm



Art.No	Nozzle round
400032	20 mm
400031	30 mm
100040	40 mm

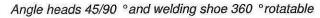
oval tube extension

Oval tube widening

Typ 1 , Art.Nr. 400041

Typ 2, Art.Nr. 400023

Typ 45 , Art.Nr. Typ 80 , Art.Nr. 400000 400005











#### The small and compact welding gun for welding Thermoplastics

- \_ Infinitely adjustable temperature via potentiometer
- Hose package and cable 8 m
- Verv flexible air hose
- Refrigerated protective tube
- Welding nozzles adjustable in any position
- Suitable for screw and plug-in nozzle

Art.Nr.: 400112 HSK200CI-G with tread M10 oder M14

Art.Nr.: 400111 HSK200CI-S pluggable





Figure shows: Hot gas welding tool HSK200CI-G

Figure shows: Hot gas welding tool HSK200CI-S



Mounting blower HSK-DT 80 Art.Nr.: Product No.: 400116

The ideal air supply for a hot gas welding machine

- Verv quiet
- Long life span
- Low maintenance
- Low cost
- incl.1 socket and carrying handle
- Air flow 80 I/min



Hand welder HSK 300 B digital Art.Nr.: Product No.: 100179

Digital display

Brushless motor

1=310 l/min.

Air flow level

2=340 l/min. 3=370 l/min.

Handle: Ø 48 mm Weight: 810 g

Transport case



Hand welder HSK 300 Oval Art.Nr.: Product No.: 100234

Temperature adjustment via potentiometer

Weight: 1400 g

Suitable for all thermoplastic materials in the Plastic and container construction.



Hand welder HSK 400-S Art.Nr.: Product No.: 03022

The small and compact welding gun HSK200 coupled with hand fan HSK Oval.



Hot air blower HSK 100 Oval Art.Nr.: Product No.: 03064

Hot air blower for heating, deformation, shrink and activate.

heating capacity . 3400 W , 230 V

## Equipment Hot gas welding machine

The second secon	CLEV WITH SECTION AS THE SECTION AS		
Tacking nozzle bent M10 No. 03007	Speed welding nozzle M10 3 mm No. 03060 4 mm No. 03028	Speed welding nozzle with tack nose M10 3 mm No. 100061 4 mm No. 03014	Adapter M10 No. 03073
Tacking nozzle pluggable No. 100019	Speed welding nozzle pluggable 3 mm rund round , No. 100017 4 mm rund round , No. 100011 5 mm rund round , No. 100018	Speed welding nozzle M10 3 mm rund round , No. 03036 4 mm rund round , No. 03042 5 mm rund round , No. 100188	Round nozzle No. 03059
Tacking nozzle M10 No. 03011	dreikant Speed welding nozzle pluggable triangular 5,7 mm , No. 100023 7,0 mm , No. 100074	Speed welding nozzle triangular 5,7 mm , No. 100246 7,0 mm , No. 100347	Round nozzle 5mm , 150mm long No. 03052
Wide slot nozzle 20 mm No. 03008	Wide slot nozzle 40 mm No. 03009	Wide slot nozzle 40 mm perforated No. 4004	Solder nozzle 10 mm round No. 04008
Shrinking nozzle 15 mm round No. 4005	Angle nozzle 20 mm 90° No. 107124	Angle nozzle 20 mm 60° No. 107125	Shrinking reflector No. 4001
Shrinking nozzle 20x5 mm No. 4006	Foot floor nozzle 3 times No. 4001	Wide slot nozzle for HSK100 70x4 mm No. 4031 70x10 mm No.4030	Breitschlitzdüse für HSK100 Wide slot nozzle for HSK100 150x1 mm No. 100007 150x10 mm No. 4022
Wire pull off device No. 03051	Brass brush for SSD 3-5 mm No.03029		

#### Equipment Hot gas welding machine

Pressure roller 45 mm 45° angled No. 100009 Pressure roller 80 mm 2-arms Pressure roller 45 mm 1-arms Pressure roller 45 mm 2-arms No. 03035 No. 03017 No. 03054 No. 100037 kugelgelagert No. 100032 kugelgelagert No. 6996 kugelgelagert No. 6998 kugelgelagert Ball bearings Ball bearings Ball bearings Ball bearings Konvex für innere Kanten Joint moldings incl.5 spare blades für 4-5 mm Runddraht Pressure roller 40 mm (PTFE) Pressure roller (Brass) No. 03001 No. 400027 pressure roller (Brass) for 4-5 mm round wire Convex for inner edges No. 100002 Weld planed No. 13007 Scraper 130 mm Quarter moon Knife Weld seam slide No. 03016 No. 100090 Digitalthermometer Triangular scraper No. 01020 Hand scaper Hand scraper flat Digital thermometer No. 01043 No. 03050 No.02138

#### Spark Tester



#### Spark Tester HSK PST – 100

- Spark Tester
  - Insulate

Insulated Extension rods Transport case

Art.Nr.: 01015

#### Komplett Set / Complete Set :

- Spark Tester
- Spark gap setter
- Gauze Mesh Electrode
- 3ronze Electrode
- Drum Brush Electrode
- Pointed probe electrode
- Insulated Extension Rods
- Nose Cone
- Transport case

Art.Nr.: 100129



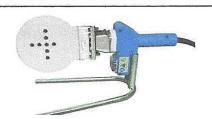




Type HHSW-63-W for spigots and sockets from 20 up to 63 mm. 230V 800W. Working temperature 201 - 279 ℃. weight 1,8 kg. Including: 1 kit, 2 bolt, 1 reinforced wrench, 1 hex key wrench, 1 underpin rack, 1 table - holding devices = board clamp. 1 pc. steel carrying case.

Not including welding sockets, Art.No. 100101
Incl. welding sockets, 20/25/32/40/50/63, Art.Nr.: 100109



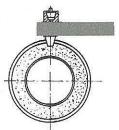


Type HHSW-110-W . for spigots and sockets from 20 - 110 mm. 230V 1200W. Working temperature 201 - 279 °C. weight 2 kg. Including : 1 kit, 2 bolt, 1 reinforced wrench , 1 hex key wrench, 1 underpin rack, 1 table - holding devices = board clamp. 1 pc. steel carrying case.

Not including welding sockets , Art.No. 100100
Incl. welding sockets , 75/90/110 , Art.No. 100104

#### Type for plug welder







Welding tool for closing plugs.
Basic welding tool TYPE HHSW 63
Spigot and socket
Steel box
PE – closing plugs are available

#### Hand wedge welder HSK-HWW 400

Due to its compact design, the hand wedge welder is suitable for all tarpaulins and foils







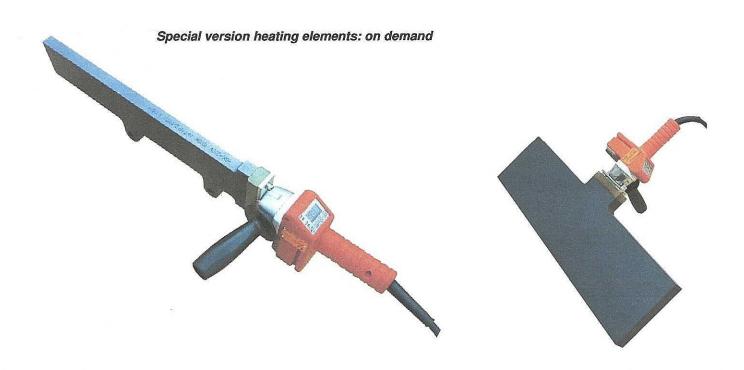
## Heating mirror round execution Control thermostatic or electronic

Von / from; HG 90 (Ø 90 mm) – HG 300 (Ø 320 mm)

#### Heating mirror quadrangular execution Control thermostatic or electronic

Von / from; HGV 100 (100x150mm) - HGV 250 (250x250mm)





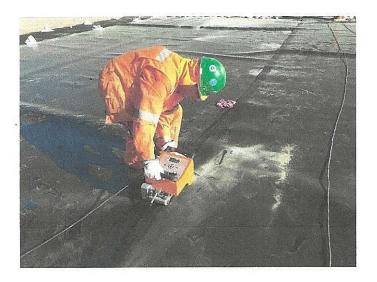
#### Wegde welder HSK-HWW 1000

**HSK**'s wedge welder HWW 1000 enables fast and safe jointing of foils and linings.

Its new HWW 1000 wedge welder is HSK's move into yet another area of plastic jointing automation. Equipments for jointing plastic pipes, which have been a familiar and appreciated sight on the market for decades, have now been added the first heating wedge welder made for jointing foils and lining sheets used in landfill outfitting and hazardous waste processing applications and mines, but also in all storage areas and applications where chemicals sensitive to safety considerations have to be handled.

Operators in these areas of application have waited long enough and can now make use of the hallmarks for which the HSK brand is known: state-of-the-art technology engineered into equipments that are at home in the rude construction site environment and offer end to-end traceability.





The high-spec micro-controller of the device controls the entire welding process and sets the speed of movement and the heating wedge temperature with maximum precision. It goes without saying for this next generation of systems that relevant parameters are recorded — material, wedge temperature, length of joint, traceability data such as commission number, welder ID code, inventory number or user-defi ned additional data —, which in fact expresses the current state of the art.

For technical data see special brochure

#### WITH REPORT GENERATION

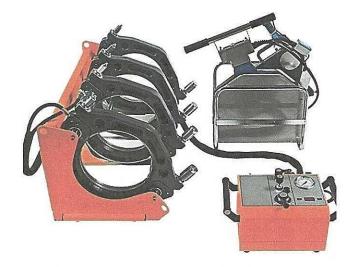
The WhiteLine welders cover all areas of application in electro fusion welding of PE, PP, and PVDF pipes with heater coil fittings. There is no challenge for which you will not find a welder of the series able to take it on successfully.

Whether it is jointing in the safety-sensitive area of gas networks, including accurate recording of geographic data, jointing components with very small diameters (e. g., geothermal or sanitary fitting applications) or very large diameters (e. g., wastewater applications)—the welders will always make a statement by their unyielding reliability that builds on more than 35 years of developing and manufacturing experience.





#### Pipe welding machine



For technical data see special brochure

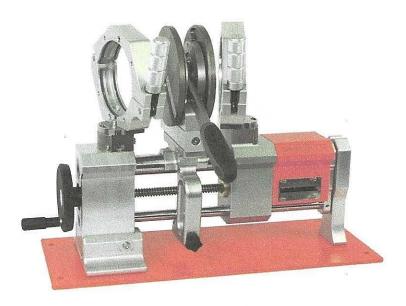
#### HSK Manual Hydraulic

The Manual Hydraulic Series of butt-welding machines in the new WhiteLine generation makes a statement by its superior manufacturing quality and its scalability in the form of an easy upgrade to a data logging-enabled machine with the installation of an SPG 2.0 data logger for welding report generation.

The machine ships with a hydraulic unit that features, as a unique fi rst, a totally integrated enclosure that also is a splash and dirt shield for all components on the inside. The front panel controls, too, are included in the ingress protection according to the IP 54 rating (where IP 64 is possible upon request).

All connections, including an additional power socket free to use for the operator's convenience, are located at the back of the controller. Both the facing tool and the heating element are also connected at the back panel of the hydraulic controller. Therefore, no additional power distribution unit is needed.







The EasyWeld110 is a plastic welding machine for heating element butt welding of PE, PP and PVDF pipes and fittings from OD 20 to OD 110 mm. The basic machine has two large aluminium basic clamping tools which are swivelling up to 15° on each side for the fabrication of segmented bends.

By screwing in 4 small reduction inserts, a double clamping is obtained at the smaller diameters. For fittings with short legs, a small fitting clamping tool is available. Due to the special construction of the pressure build-up device, the machine can be fixed directly at very short pipe ends on walls and sheets.

Due to its light and compact construction as well as due to the horizontal and vertical motion, the machine is ideally suited for use in the pipeline system and for installation work. In the case of stationary use, the machine can be fixed in the vice or at the table support. The light and compact manual planer is operated by means of a ratchet.

The electronically controlled heating element in accordance with DVS 2208 (220 V/600 W) has a working diameter of 140 mm, a anti-stick coating and control lamps for system and interval checking.

For the safe storage of the planer and the heating element, a heat-protected box is available. The sheet steel carrying case serves for the transport and the protected storage of the complete EasyWeld110.

#### Sheet welding machine

#### Butt-Welding Machine S-Hand HSK-MSW 150/200

The hand welding machine is eminently suitable as an introductory model or for portable needs. The welding cycle is hand-executed. This machine is also available, as an option, with a manual 90 ° welding fixture.

This machine comes in the following versions: Working width 1.50 m up to a 20 mm material thickness Working width 2.0 m up to a 15 mm material thickness





#### Butt-Welding Machine S econo

The S econo series has been devised for the middle range of use. An integrated PLC controls the machine. During welding all the times set by the operator can be lengthened or shortened at the touch of a button. Machines of this series are fitted out with a CNC table force controller, including database. They can also be provided with an automatic 90° welding fixture at the customer's request.

This machine can also be optionally equipped with a semiautomatic 90 ° welding fixture.

This machine comes in the following versions: 2 m, 3 m and 4 m or customized Weldable thicknesses: 3 – 25 mm



#### Bending Machine HSK-BH

The manual BH bending machine is the perfect solution as an introductory model or for portable needs. The machine consists of a heating table for heating the material and a bending table for bending the pre-heated material. The angle setting is continuously adjustable from 10°-120°. The bending cycle is hand-executed.

This machine comes in the following versions:

1 m, 2 m, 1.5 m and 2 m working widths Material thickness to be processed

Material thickness to be produp to 12 mm.

#### Bending Machine HSK A-BW

The A-BW is a semi-automatic series. The bending cycle runs automatically. Bending times are set on the display. Any value entered can be changed by the operator. The bending radi are manually set via a bending line correction This permits continuously adjustable 10°-95° bending angles. As heating and bending occur at one position, the machine operates without the usual transfer of sheets. This makes handling the machine that much easier and operator-friendly. This machine comes in the following versions:

1 m, 2 m, 3 m and 4 m working widths Material thickness to be processed of up to 15 mm.

#### Bending Machine HSK A-BA

The A-BA board bending machines represent all-round machines with a flexible field of application. The bending cycle is fully automatic; bending parameters set at the display (preselection of cycle time from database for PE / PP / PVC-U / PVDF). The A-BA model has a positioning drive with a PLC. This includes an automatic sequence of up to 6 bends on a workpiece. Leg lengths are digitally entered via the display. This machine comes in the following versions:

2 m and 3 m Material thickness which can be maximally processed is 15 mm.

#### Roof and plan welding machine

The automatic welding machine **HSK Plast 1000 P2** is the innovative efficient and manoeuvrable device for welding roof, truck tarpaulins, tents, awning materials and advertising banners. It produces optionally 20, 30, 40 and 45 mm wide overlap welds and may also be converted for welding in welting ropes.

The welding machine starts automatically after the weld head has been swivelled in. In addition, the infinitely variable speed adjustment of the modern generation of motors with their performance of up to 18 m/min., in conjunction with the holding-down device for crease-free welding, makes for an optimum welding result. Furthermore, the three-point support ensures a reliable pressure on the tarpaulin.









The welding machine **HSK Plast 1000 D** is for welding suitable for heavy thermoplastic tarpaulins and foils.

The welding machine produces overlap seams with a selectable width of 40 or 45 mm. The heating power of 4000 W, 230 V can be adjusted continuously from 20 − 700 °C and it can therefore be adapted individually to the different materials. The strong hot air fan with the Tube design produces a gigantic air power of 600 l/min and therefore supports the state-of-the-art gear motor powerfully in combination with the proven nozzle generation of the welding machine. A service performance of up to 16 m/min can be achieved thanks to the continuous speed adjustment. In combination with the hold-down device for crease-free welding, the canvas and roof canvas installer obtains an optimal welding result. The device starts automatically after the welding head pivots.

In addition, the three-point placement provides a safe contact pressure for the canvas. It is supported by the weight of the welding machine, which is integrated in the housing of the automatic welding machine and which can be removed if required.

# HSK/PWS

### HSK/PWS North America Inc.

**Manual Welding Extruders** 







hot air welders and welding extruders

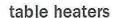






industrial extruders

sheet welding machines





Electro fusion welding



pipe butt welding



wedge welders

Chip Klinck Naiad of New Hampshire Inc. 11 Gibson Rd Hillsboro, NH 03244

603-848-7153 cell email: cklinck@comcast.net Larry Rowold

Plastic Welding Equipment and Consulting/Training 1010 Vermont Ave The Villages, FL 32159 cell 630-319-3480

email: larowold@gmail.com