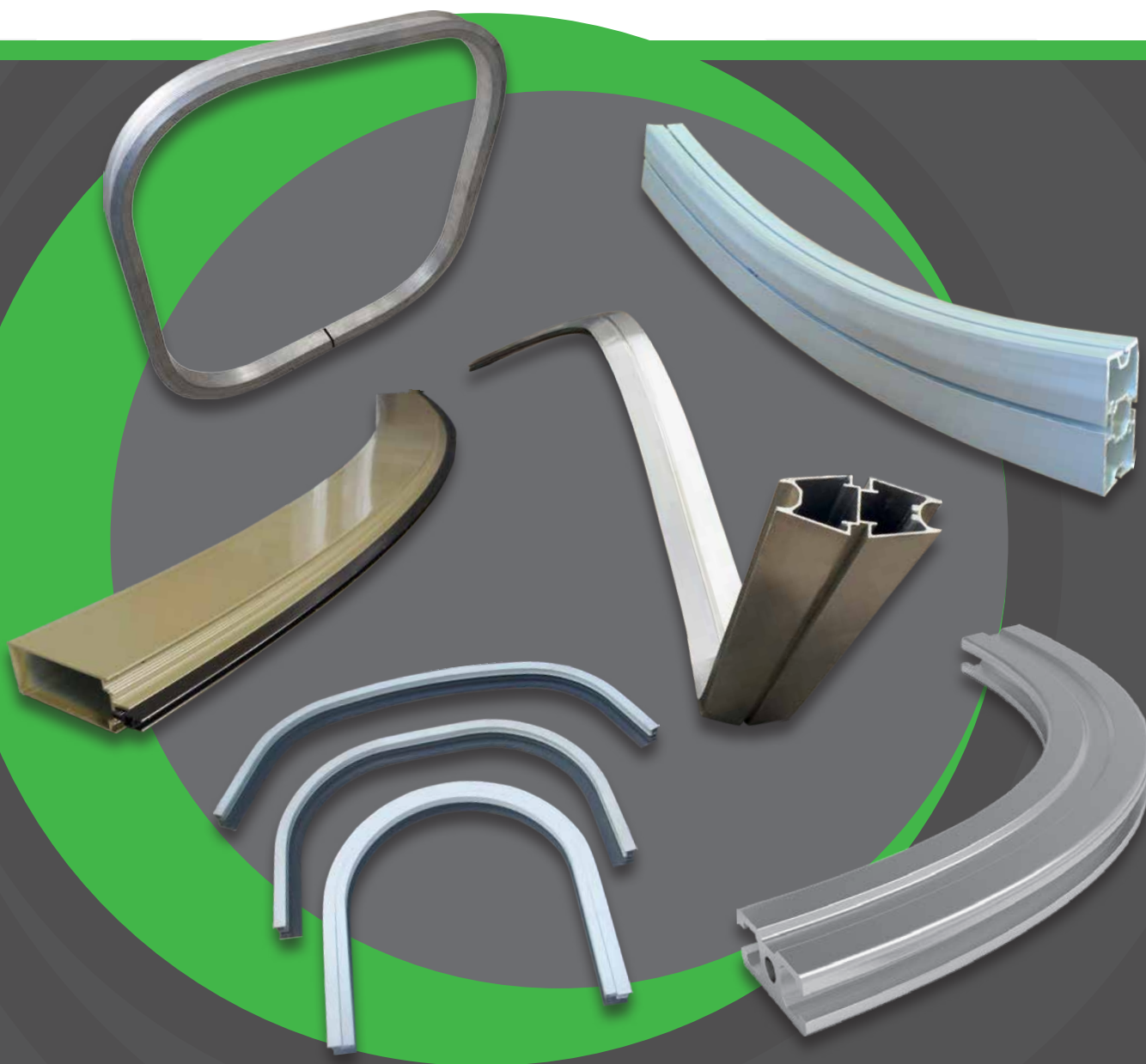


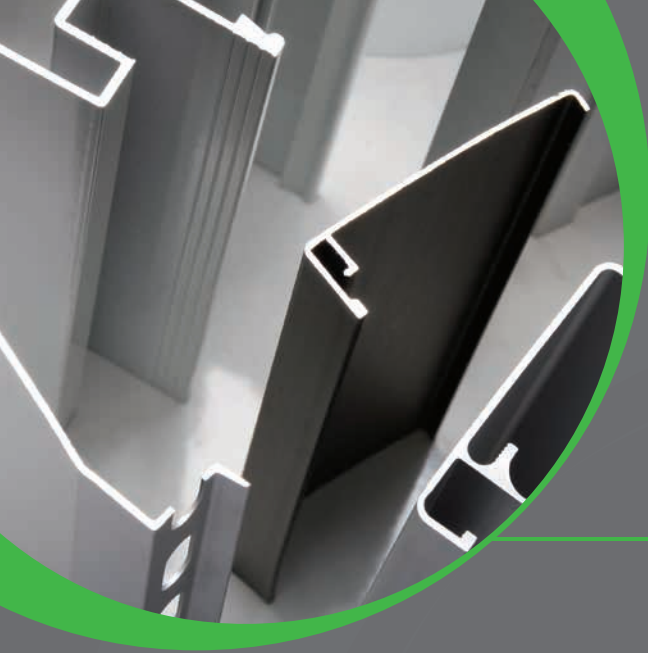


FLEXIBLE CNC

BENDING MACHINES

2018
Capacity

- extrusions curved in 3 dimensions
- curved and twisted sections
- window profile bending
- automotive and aerospace part forming



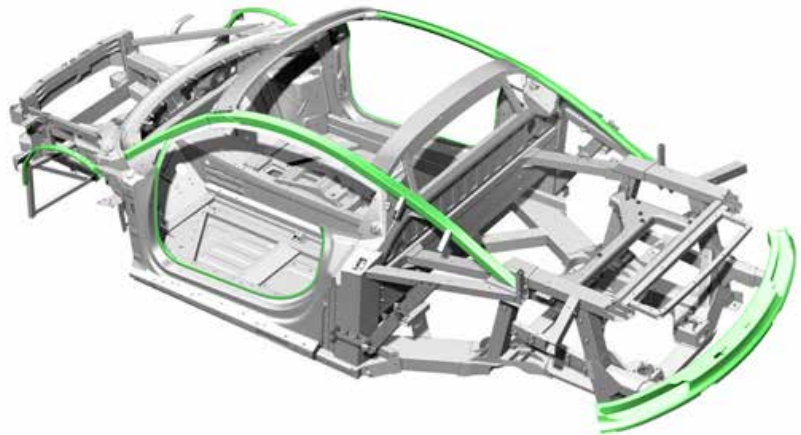
Introduction

- The leading supplier of complete aluminium bending solutions
- We are World leaders in metal forming knowledge
- Our customers are World leaders in their sector
- We have solutions for all markets





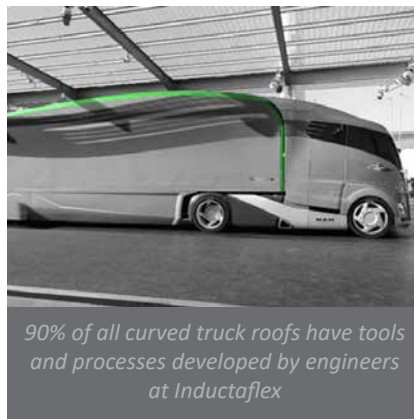
Curved louvre blades



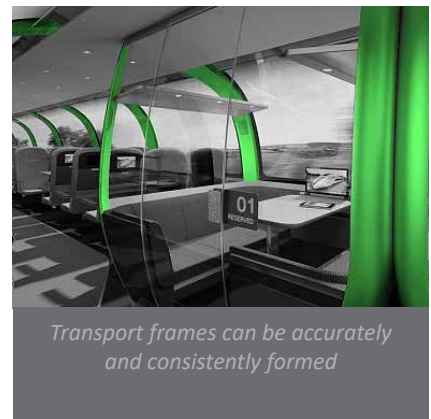
Automotive frames



All transport system sections can be formed



90% of all curved truck roofs have tools and processes developed by engineers at Inductaflex

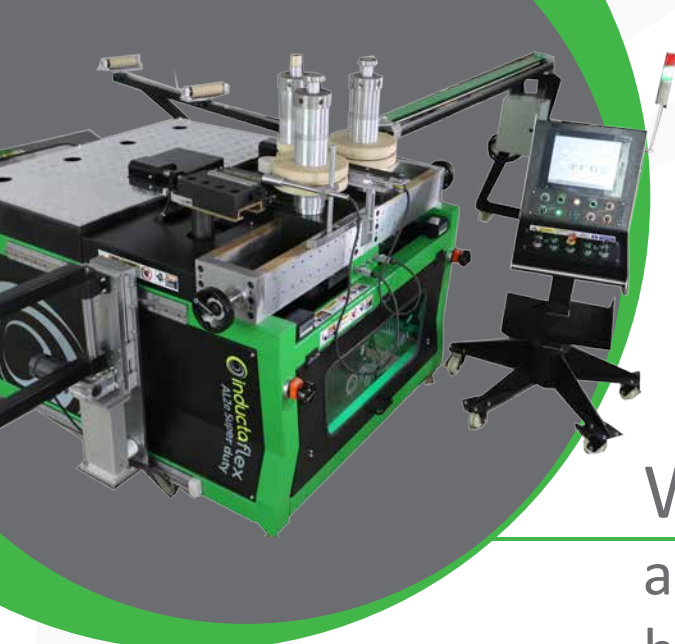


Transport frames can be accurately and consistently formed



Exhibition Frames





World's most advanced aluminium extrusion bending machines

- No one has more experience bending metal profiles
- Servo electric and servo hydraulic
- CE, UL or CSA approved by world leading quality assurance group, TÜV
- Up to 15 controllable axes
- User friendly CNC, advanced but simple to learn
- 3-dimensional bending of profiles
- On site training package to ensure your investment pays off

Machine Capacity:

Section	Drawing	AL-1e	AL-2e	AL-3e	AL-4	AL-5s
Tube		76.1 x 2 3" x 1/8"	168 x 3mm 6" x 1/8"	219 x 3 8" x 1/8"	323 x 3 12" x 1/8"	323 x 5 12" x 13/64"
Rectangle Easy way		100 x 50 4" x 2"	125 x 75 x 3 5" x 3"	200 x 50 8" x 2"	300 x 100 12" x 4"	500 x 125 20" x 5"
Rectangle Hard way		80 x 40 x 3 3" x 1/2"	125 x 75 x 3 5" x 3"	150 x 75 x 3 6" x 3"	250 x 100 x 3 10" x 4"	450 x 125 18" x 5"
Square Tube		70 2 1/2"	125 5"	150 6"	175 7"	250 10"
Channel Easy way		100 x 50 4" x 2"	150 x 75 6" x 3"	250 x 75 x 5 10" x 3"	300 x 100 x 3 12" x 4"	300 x 100 x 3 12" x 4"
Channel Hard way		75 x 25 3" x 2"	100 x 50 4" x 2"	200 x 100 8" x 4"	250 x 100 10" x 4"	300 x 100 12" x 4"
Glazing section		100mm wide 4"	125mm wide 5"	150mm wide 6"	250mm wide 10"	250mm wide 10"
Truck Cant rails		90 x 90 3 1/2"	150 x 150 6"	200 x 200 8"	300 x 300 12"	300 x 300 12"
Solar shading		75mm 3"	150mm 6"	200mm wide 8"	300mm 12"	400mm 16"
Frame sections		60mm 2.36"	80mm 3.15"	125 5"	150 6"	200 8"
Stainless Steel Tube		76.1 3"	114 4"	168 6"	273 10"	323 12"

Due to work hardening certain sections may need more power to bend. Subsequently a larger machine may be needed. Chart is based upon T4 bendable grade material. Harder grades / anodized material may need a heat treatment cycle to be suitable for bending.

- Most sections are curved to internationally acceptable standards like CE and EN1090
- The best temper grades for forming are T0 and T4
- Larger sections are possible if the section is curved to a larger radius
- We aim to bend all sections mark free using the correct procedures and preparation, it may not be possible to do this with certain sections
- Anodised coatings have virtually no elasticity and will 'craze' when the section is formed



	AL-1e	AL-2e	AL-3e	AL-4	AL-5s
Style	All servo	All servo	All servo	Servo / hydraulic	Servo / hydraulic
Drive motors (one per shaft)	3	3	3	3	3
Maximum torque per roller	2500Nm (1844 lb.ft)	4500Nm (3319 lb.ft)	3500Nm (2581 lb.ft)	9000Nm (6638 lb.ft)	11500Nm (8482 lb.ft)
Bending force	10 t	20 t	35 t	50 t	70 t
X-axis travel	200mm (7 7/8")	350mm (13 25/32")	400mm (15 3/4")	500mm (19 11/16")	700mm (27 9/16")
Standard shaft length	200mm (7 7/8")	300mm (11 13/16")	400mm (15 3/4")	400mm (15 3/4")	600mm (23 5/8")
Shaft diameter	50mm (1.97")	80mm (3.15")	105mm (4.13")	130mm (5.19")	150mm (5.91")
Front roller spacing	260 - 500mm (10.24 - 19.69")	400 - 1000mm (15 3/4 - 39 3/8")	475 - 1150mm (18.70 - 45.28")	550 - 1300mm (21.65 - 51.18")	660 - 1500mm (25.98 - 59.06")
Approx. size	1 x 1m (3' 3 3/8" x 3' 3 3/8")	1.4 x 1.4m (4' 7 1/8" x 4' 7 1/8")	1.7 x 1.7m (5' 6 15/16" x 5' 6 15/16")	1.9 x 1.9m (6' 2 13/16" x 6' 2 13/16")	2.2 x 3m (7' 2 5/8" x 9' 10 1/8")
Approx. weight	1,800kg (3,960 lbs)	2,200kg (4,840 lbs)	3,300kg (7,260 lbs)	7,800kg (17,160 lbs)	14,000kg (30,800 lbs)

Machine Range and Specifications:

Machine features

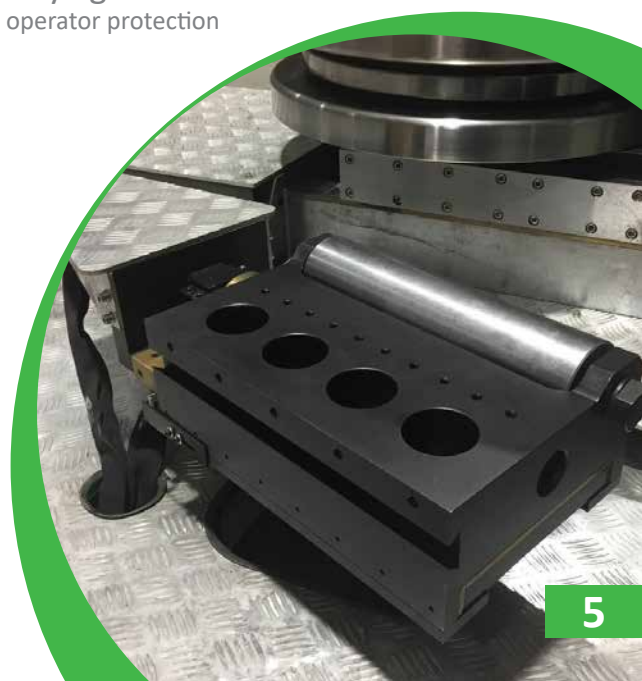
- **Wide maximum centres**
500mm wide sections to be curved accurately.
- **Long shafts**
for greater flexibility; up to 600mm high aluminium extrusions can be curved.



- **Electrically controlled support rolls**
for accuracy and control of twist of asymmetric sections.



- **Mandrel booster**
for hollow sections and extremely tight bends
- **Safety light curtain**
for operator protection

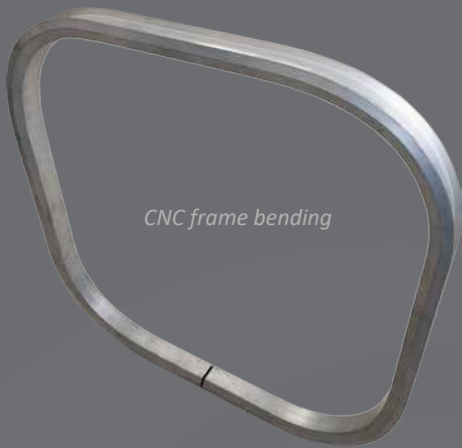




Work smart

Accurate CNC control

- Re-bend parts
- Automatically calculates bend positions
- Up to 16 radii per bar
- Accurate and repeatable
- Advanced manual bending feature
- No CNC or bending experience necessary



CNC frame bending

15 inch touch screen panel to control the operation

Intelligent Software



Ellipse program



U Bend shapes



Control of tangents

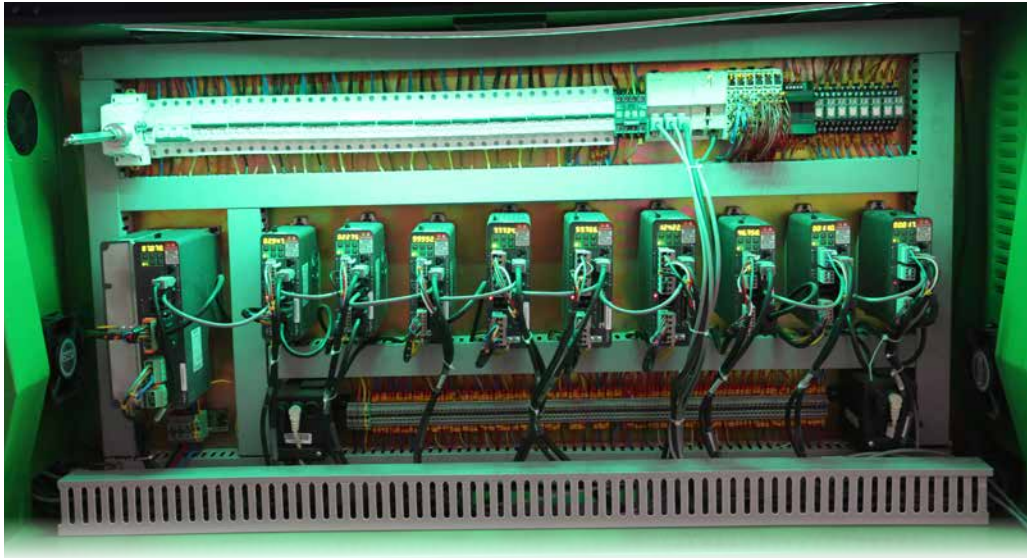
Automatic section detector

Spring back calculator

Advanced manual mode



Moveable control panel to optimise the operator position during bending



Quality components

Our aluminium profile bending machines use Schneider and Panasonic HMI and PLC. We have found these most suitable for our multi axis forming and intelligent processing.



Parts produced by new operators using the Inductaflex CNC controlled machine on the first day of training





Window frame and structural section bending

smart
architectural aluminium


comar
ARCHITECTURAL ALUMINIUM SYSTEMS

SCHÜCO

 **KAWNEER**
AN ALCOA COMPANY

 **REYNAERS**
aluminium

 **TAMBEST**
glass solutions

- All sizes of window profiles can be curved
- Thermal break and bead sections formed accurately
- Multi part window sections formed
- Transoms formed without deformation
- Inductaflex Bio-filler system available to eliminate distortion of complex profiles
- On-site training courses available
- Powder coated sections curved free from marking and damage
- Virtually any system extrusion can be curved





Curved painted window profiles



Curved structural transoms

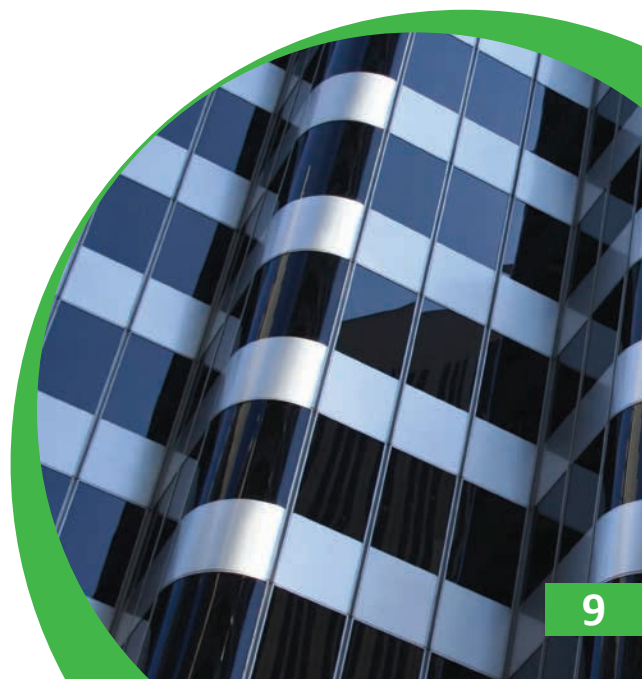
Inductaflex are masters in providing systems for specialist systems fabricators

Some of the hardest sections to bend are found in the curtain walling / fenestration industry. Tall thin wall tall transom sections always look impressive on a frontage, however they are notoriously difficult to bend.

Few companies offer the more difficult bends, tall sections and tight radii. Typically, the inside of the sections concave beyond acceptable norms or ripple without specialist processes being used.



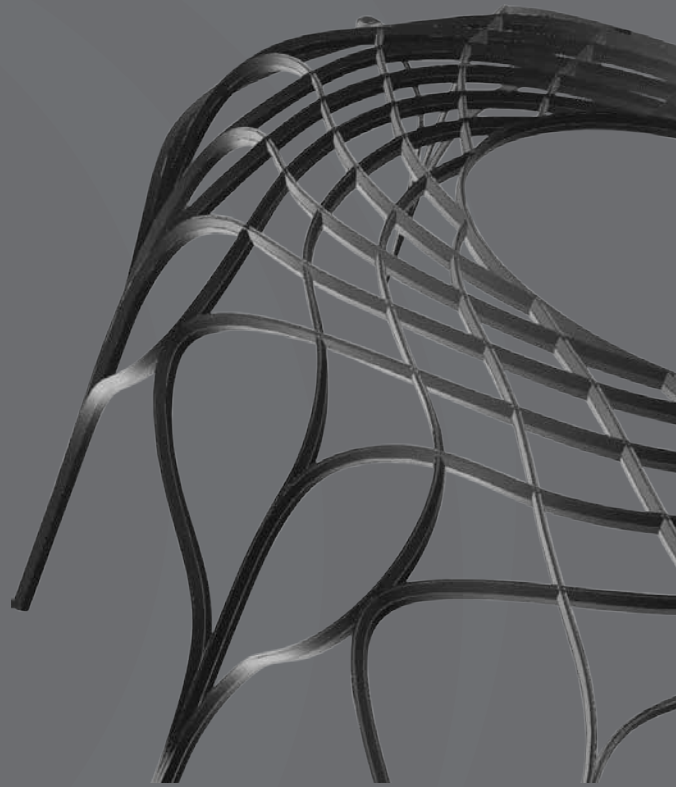
Curved 250 x 100 frame sections. zero distortion using Inductaflex Bio-fler





3 dimensional bending

- Curved and twisted sections
- Sections curved at an angle
- Solar shading curved at various angles from 0 – 90 degrees
- Bends in multiple directions
- Asymmetric sections curved



Level 10 on the metal forming scale but the most difficult of projects can be formed with training on the Inductaflex machine.

Even with automation this is a tricky task but we have all the tools to enable the easiest solution. On-site training is essential and part of the inductaflex package.



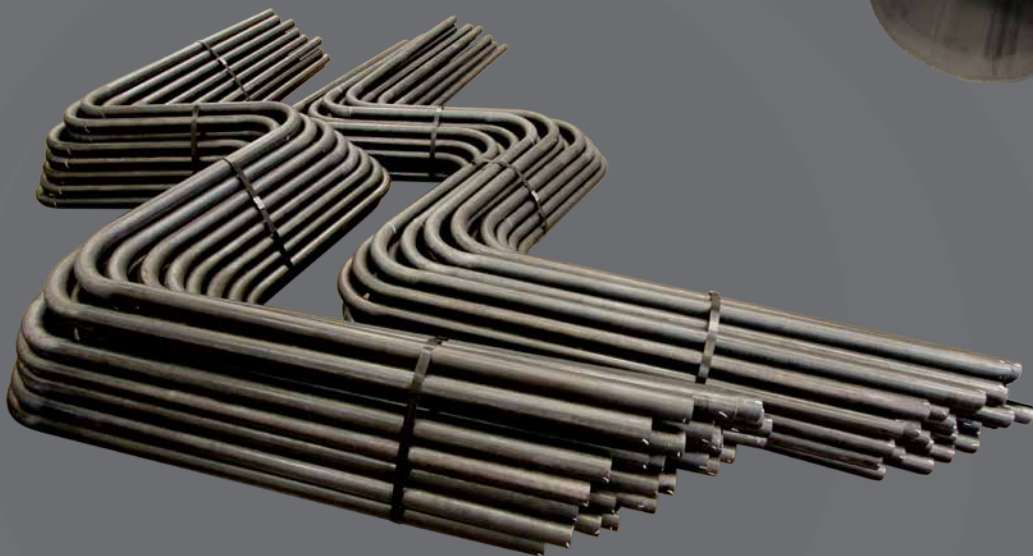
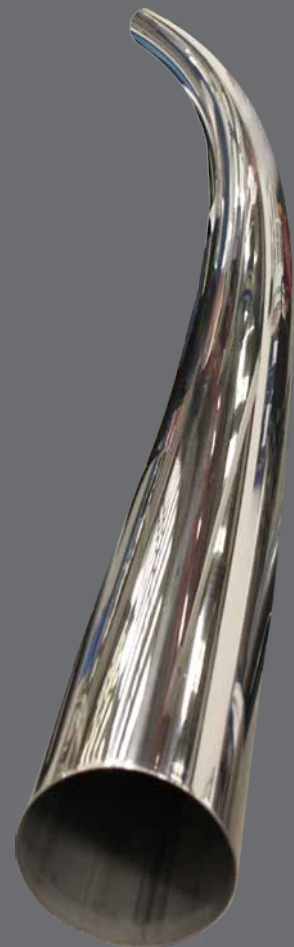
*Mital orbit, bending process and trials
designed by Craig Barnshaw, MD
Inductaflex*





Hollow Sections

- Automated solutions
- 'Bend-to-end' techniques allow a final cut part to be formed
- Specialist machines for 'S' bends
- Forming in a single pass
- Polished sections curved without marking



Transport channels, frames and rails

- Twist free
- No crushing of the channels
- Smooth transition from straight to bend
- Multiple bends and transitions



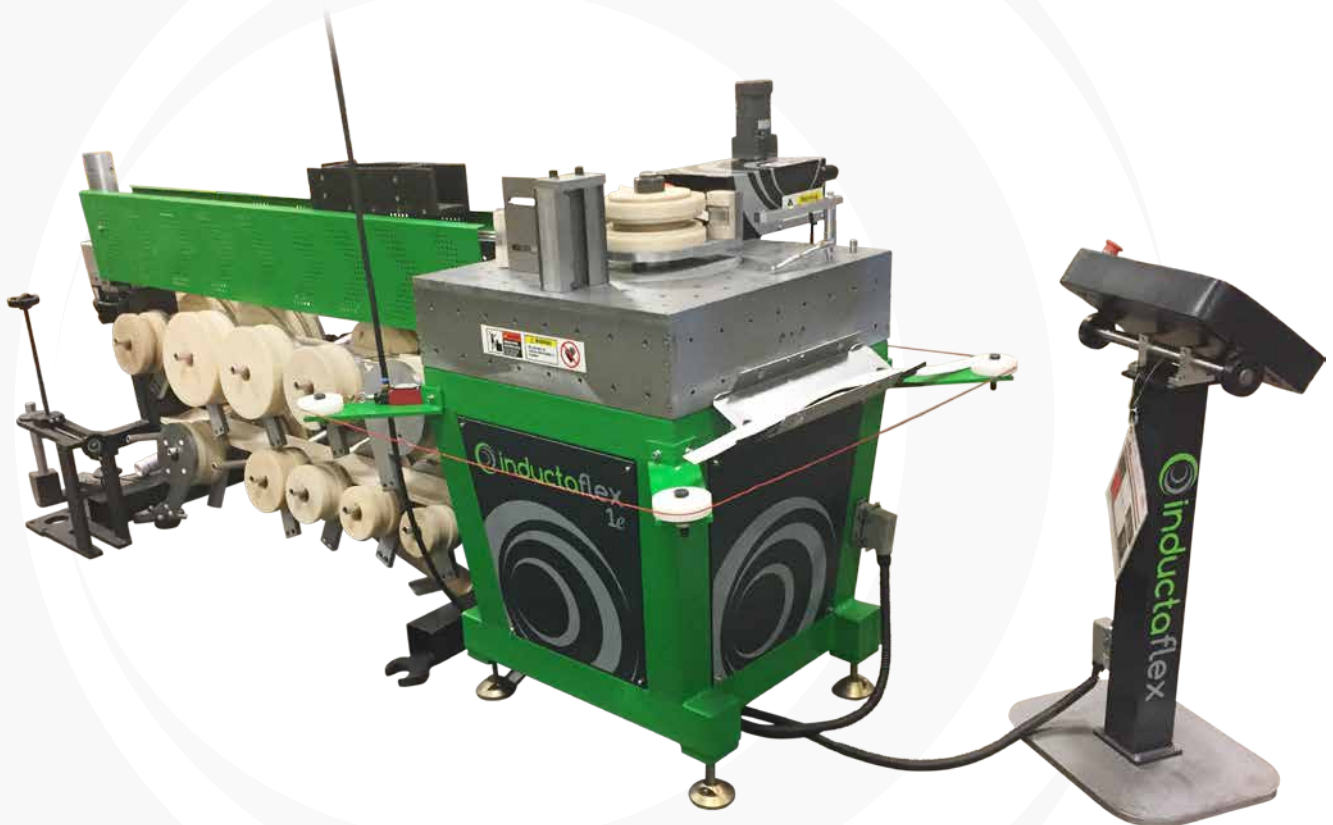
*Curved aluminium
exhibition frames*





Flow Former FL-1e

- Automatic positioning of the section to commence bending
- CNC bending of the section
- Servo electrically controlled Booster to eliminate slipping of the section during bending with a mandrel
- Mandrel device with automatic lubrication
- Automatic movement to the next bend position
- Safety light curtain for operator protection.





Machine Capacity

Section Capacity 4" x 4"x 3/16" (100mm x 100mm x 5)

Frame Capacity 4" wide (100mm)

Pipe Capacity 4" x 1/8" (114mm o/d x 3mm)

The range compliments the roller bending range and matches capacity as such. From the flexible entry size up to the mighty FL-5e.





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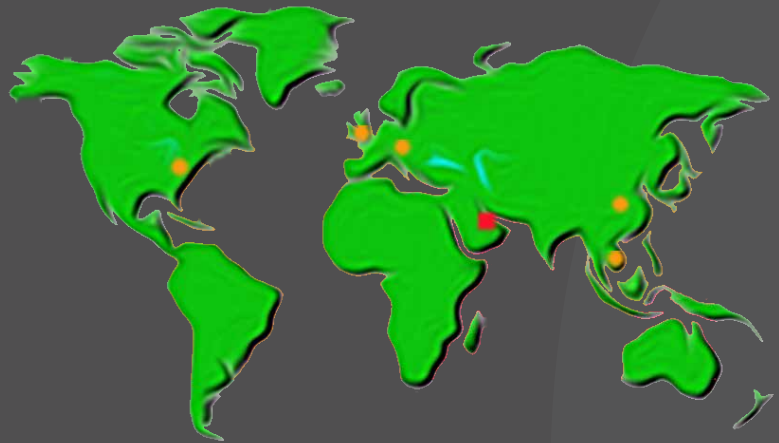
Design and manufacture

Ho Chi Minh City, Vietnam

Opening soon

GCC countries

Dubai - UAE



www.inductaflex.com