



## You haue an idea.

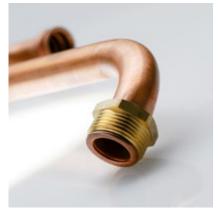
Find the machine you need right here.



## For the variety of your products.

Put your ideas into practice – with transfluid®.

Individual solutions for any challenge.









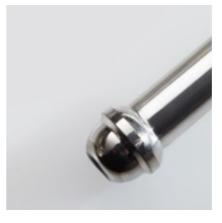














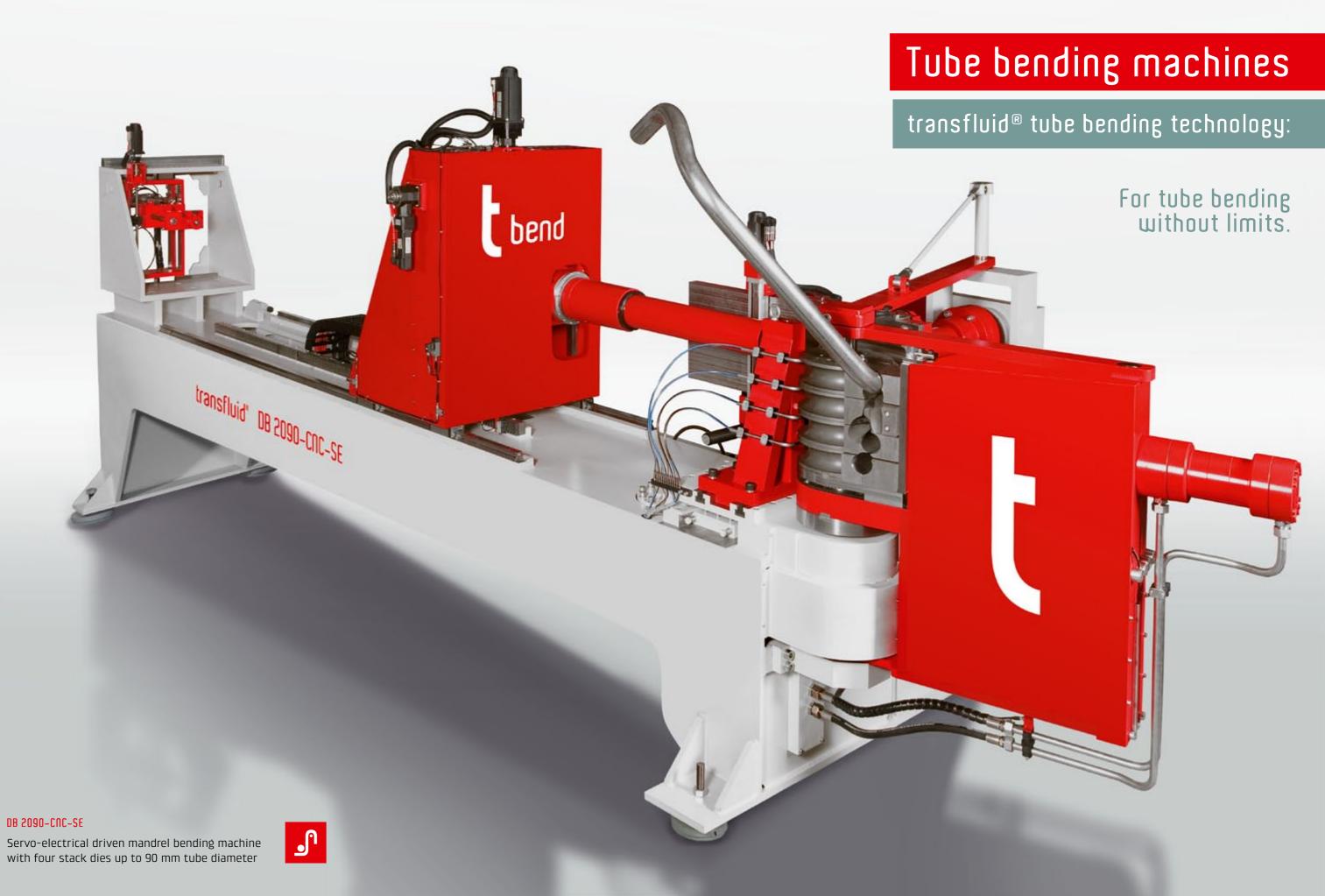














MB 642

MB 2060

MB 3080

MB 30115

MB 30168

#### Mobile bending machines

Uncompromising, versatile and simply good: Whether you need a pure bending machine or the MB 642 with optional functionality for pipefitting on side Internal or external deburring, assembly unit for all conventional connection systems (cutting rings, flaring con-

nections, etc.), also circular metal saw. Any integrated or add-on equipment is also available as stand-alone device.



6-42 mm Ø

6-60 mm Ø

30-80 mm Ø

30-115 mm Ø

30-168 mm Ø





Mobile bending machine with integrated tube deburring and cutting ring pre-assembly system



#### Compact mandrel bending machines

DB 642K 6-42 mm Ø DB 2060K 20-60 mm Ø DB 2076K 20-76 mm Ø 20-101 mm Ø DB 20101K

Compact, powerful, economical: Our fully hydraulic mandrel bending machine offers excellent bend quality and is very easy to operate. Optionally with hydraulic saw, deburrer and cutting ring pre-assembly.



DB 642 K

With integrated hydraulic saw, tube deburrer and cutting ring pre-assembly







#### Stationary mandrel bending machines

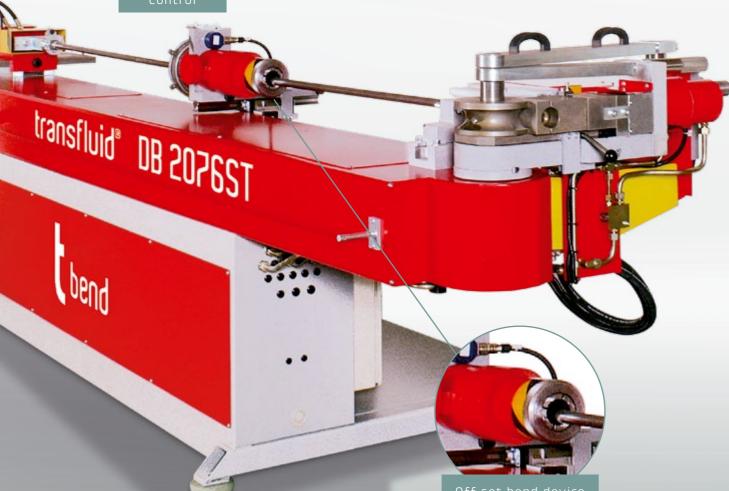
DB 630ST 6−30 mm Ø
DB 650ST 6−50 mm Ø
DB 2076ST 20−76 mm Ø
DB 2090ST 20−90 mm Ø

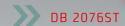
Simple and powerful for impressive bending results: Our semi-automatic bending machines for small and medium series production allow bending without limitations. With accessories to suit your requirements.



#### **Equipment options:**

- » Radii from 1.5 x to 2.5 x D
- » load lengths from 3.000 to 6.000 mm
- » angle pre-selectable via touch panel
- » input data saving
- » off set bend device
- » digital displays









# Fully automatic CNC controlled mandrel bending machine

Accurate, powerful and fast, with easy to operate and freely programmable CNC touch panel control. The compact, state of the art design of our transfluid® CNC bending machines offers you unlimited freedom of bending. Extremely short set up times offer maximum flexibility. Fully or partially electrically powered, these machines meet the most exacting demands.

Individual customisation creates optimal benefit for top results.

#### **Equipment options:**

- » multiple bending levels
- » push bending
- » centerline booster
- » automatic loading, seam detectioning and positioning

DB 415-CNC 4-15 mm Ø partially / fully electrical
DB 622-CNC 6-22 mm Ø partially / fully electrical
DB 630-CNC 6-30 mm Ø partially / fully electrical
DB 642-CNC 6-42 mm Ø partially / fully electrical
DB 2060-CNC 20-60 mm Ø partially / fully electrical
DB 2090-CNC 20-90 mm Ø partially / fully electrical







## CNC mandrel bending machines for large tube diameters

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## Equipment options for all transfluid® CNC pipe bending machines

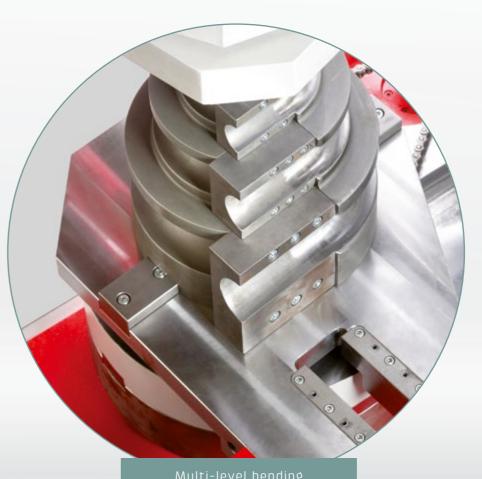
These machines are for large diameter tubes, providing impressive stability and power.

Tubes made of all types of material, with thin or thick walls and with radii of 1.5 x pipe diameter or smaller may be accurately processed. This is made possible by sophisticated machine and control technology. Extremely short set-up times – less than 10 minutes – improve both flexibility and economy.

DB 40120-CNC 20-120 mm Ø partially / fully electrical partially electrical DB 40139-CNC 40-140 mm Ø DB 40168-CNC 40-168 mm Ø partially electrical DB 40220-CNC 40-220 mm Ø partially electrical DB 60275-CNC 60-275 mm Ø partially electrical DB 80330-CNC 80-325 mm Ø partially electrical

A centreline booster ensures minimum wall thinning and short clamping lengths. Flange connections may be welded onto the pipe prior to bending. This translates to extreme efficiency improvements. Automatic retooling systems offer optimised and tailored bending processes.







Automatic tool changer



Mandrel bending machines for tubes up to 220 mm, both thin walled and for wall thicknesses up to 20 mm, with very simple tool changing system







### Mobile bending machines



Max. capacity steel tube (mm)

Steel pipe

Square section (mm)

Max. radius (mm)

Section modulus (cm³)

Max. capacity stainless steel tube (mm)

Rectangular (mm) – bending axis A

Rectangular (mm) – bending axis B

## Compact mandrel bending machines

DB 2076 K

76,1 x 3,0

76,1 x 2,0

2 1/2" SCH 10

50 x 5,0

40 x 60 x 3,0

60 x 40 x 3,0

150

12,1

DB 20101 K

101,6 x 3,5

101,6 x 2,0

3 1/2" SCH 10

80 x 4,0

60 x 80 x 5,0

80 x 60 x 5,0

205

26,2

Machine model	MB 642	MB 2060	MB 3080	MB 30115	MB 30168
Max. capacity steel tube St 37 (mm)	38 x 6 / 42 x 4	60,3 x 15	88,9 x 20	115 x 20	168 x 20
Max. capacity stainless steel tube St 52 (mm)	38 x 5 / 42 x 3	60,3 x 12,5	88,9 x 15	115 x 15	168 x 15
Max. radius (mm)	between 2xD and 3xD	between 2xD and 3,5xD	between 2xD and 3,5xD	between 2xD and 3,5xD	between 2xD and 4xD
Power (kW)	2	3	5	7	7,5
Weight (kg)	85	350	1000	2000	3500
L x W x H (mm)	850 x 500 x 1100	1000 x 1000 x 1200	1800 x 1350 x 1200	2000 x 2000 x 1100	3600 x 2250 x 1500
Bending direction	max. 150°	max. 150°	max. 150°	max. 150°	max. 150°
Bending drive	<b>→</b>	<b>→</b>	→ 11·	<b>→</b>	<b>→</b>
Available equipment options					
Tube deburrer	<b>~</b>	×	×	×	×
Cutting ring pre-assembly	<b>~</b>	×	×	×	×
37° flares	<b>~</b>	×	×	×	×
Saw	<b>~</b>	×	×	×	×

### Assembly equipment

Machine model	HA 642	RE 642	RE 2060
Max. capacity steel tube (mm)	6-42	6-42	20-60
Steel pipe	1/4-1 1/4"	1/4-1 1/4"	1/2"-2"
Power (kW)	1,1	0,55	0,75
Weight (kg)	75	28	40
L x W x H (mm)	650 x 450 x 500	300 x 400 x 250	500 x 600 x 300
Available equipment options			
cutting ring pre-assembly system	<b>~</b>	×	×
37° flares	~	×	×

┢	
L	pend

Usable length (mm)	3048	3048	3048	3048
Extension usable length (mm)	4572/6096	4572/6096	4572/6096	4572/6096
Bending speed (°/sec.)	13	10	10	10
Bending axis repeatibility (°)	+/-0,1	+/-0,1	+/-0,1	+/-0,1
Power (kW)	3	3	3	8
Weight (kg)	1000	1250	1250	3700
L x W x H (mm)	4380 x 900 x 1550	4450 x 900 x 1580	4450 x 900 x 1580	5000 x 1400 x 1500
Bending direction	Č	Č	Č	Č
Bending drive	<b>→</b>	<b>→</b>	<b>→</b> .	<b>→</b>
Ancillary axes drive	<b>→</b>	<b>→</b> .	<b>→</b>	<b>→</b>
Available equipment options				
Off-set bend device	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>
Length stop	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>~</b>
Digital display of the length and rotation	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>
Usable length extension	✓	<b>~</b>	✓	<b>~</b>
Controlled mandrel with drawal	<b>✓</b>	<b>~</b>	<b>✓</b>	<b>~</b>
Mandrel lubrication	<b>✓</b>	<b>✓</b>	✓	<b>~</b>
Following pressure die	×	×	<b>~</b>	<b>~</b>

DB 2060 K

60 x 6,0

60 x 4,0

2" SCH 80

50 x 4,0

40 x 60 x 2,0

60 x 40 x 2,0

150

12,1

DB 642 K

42 x 5,0

42 x 3,0

1 1/4" SCH 80

25 x 3,2

35 x 25 x 3,2

25 x 35 x 3,2

85

4,8







Radius extension

C Right







# Stationary mandrel bending machines



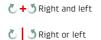
# Fully automatic CNC controlled mandrel bending machine

Machine model	DB 630 ST	DB 650 ST	DB 2076 ST	DB 2090 ST
Max. capacity steel tube (mm)	30 x 2,0	50 x 3,0	76,1 × 3,0	88,9 × 5,0
Max. capacity stainless steel tube (mm)	30 x 1,5	50 x 2,0	76,1 x 2,0	88,9 x 3,0
Steel pipe	3/4" SCH 10	1 1/2" SCH 10	2 1/2" SCH 10	2 1/2" SCH 40
Square section (mm)	20 x 2,5	35 x 2,5	60 x 2,5	75 x 3,0
Rectangular (mm) – bending axis A	25 x 30 x 2,5	25 × 40 × 2,0	60 x 40 x 3,5	75 x 50 x 4,0
Rectangular (mm) – bending axis B	30 x 25 x 2,5	40 × 25 × 2,0	40 x 60 x 3,5	50 x 75 x 4,0
Max. radius (mm)	75	125	190	225
Section modulus (cm³)	1,2	5	12,1	26,2
Usable length (mm)	4572	4572	4572	4572
Extension usable length (mm)	6096	6096	6096	6096
Bending speed (°/sec.)	42	36	29	18
Bending axis repeatibility (°)	+/-0,1	+/-0,1	+/-0,1	+/-0,1
Power (kW)	4	9	11	19
Weight (kg)	2000	2300	3950	6000
L x W x H (mm)	6300 x 1400 x 1300	6300 x 1400 x 1350	7000 × 1700 × 1500	7300 × 2000 × 1500
Bending direction	0 0	<u></u> ٥	<u>ک</u>	<u>ک</u>   ح
Bending drive	<b>→</b>	<b>→</b>	<b>→</b>	<b>→</b>
Ancillary axes drive	<b>→</b>	<b>→</b>	<b>→</b> .	<b>→</b>

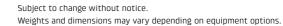
Available equipment options				
Off-set bend device	<b>✓</b>	<b>~</b>	<b>~</b>	<b>~</b>
Length stop	✓	<b>~</b>	<b>~</b>	<b>✓</b>
Digital display of the length and rotation	~	<b>~</b>	<b>~</b>	<b>~</b>
Usable length extension	~	<b>~</b>	<b>~</b>	<b>~</b>
Controlled mandrel withdrawal	~	<b>~</b>	<b>~</b>	<b>~</b>
Mandrel lubrication	<b>✓</b>	<b>~</b>	<b>~</b>	<b>~</b>
Following pressure die	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>
Radius extension	<b>✓</b>	<b>~</b>	<b>~</b>	<b>✓</b>

Maschinen-Typ	DB 415-CNC	DB 415-CNC-VE	DB 415-CNC-R/L	DB 622-CNC	DB 622-CNC-VE	DB 622-CNC-R/L
Max. capacity steel tube (mm)	15 x 1,5	15 x 1,5	15 x 1,5	22 x 2,0	22 x 2,0	22 x 2,0
Max. capacity stainless steel tube (mm)	15 x 1,0	15 x 1,0	15 x 1,0	22 x 1,5	22 x 1,5	22 x 1,5
Steel pipe	1/4" SCH 10	1/4" SCH 10	1/4" SCH 10	1/2" SCH 10	1/2" SCH 10	1/2" SCH 10
Square section (mm)	10 x 1,5	10 x 1,5	10 x 1,5	16 x 1,5	16 x 1,5	16 x 1,5
Max. radius (mm)	40	40	40	55	55	55
Section modulus (cm³)	0,2	0,2	0,2	0,5	0,5	0,5
Usable length (mm)	2000	2000	2000	2000	2000	2000
Extension usable length (mm)	3000	3000	3000	3048	3048	3048
Bending speed (°/sec.)	480	480	480	300	300	300
Speed of front feed (mm/sec.)	2000	2000	2000	1800	1800	1800
Speed of rotation (°/sec.)	650	650	650	600	600	600
Bending axis repeatibility (°)	+/-0,05	+/-0,05	+/-0,05	+/-0,05	+/-0,05	+/-0,05
Longitudinal repeatibility (mm)	+/-0,05	+/-0,05	+/-0,05	+/-0,05	+/-0,05	+/-0,05
Rotational repeatibility (°)	+/-0,05	+/-0,05	+/-0,05	+/-0,05	+/-0,05	+/-0,05
Power (kW)	6	6	6	13	13	13
Weight (kg)	1500	1500	1500	2100	2100	3000
L x W x H (mm)	3375 x 1200 x 1450	3375×1200×1450	3800x1400x2200	4200 x 1200 x 1500	4200×1200×1500	3900 x 1600 x 2200
Bending direction	0 0	0 0	Č+5	0 0	0 0	Č+3
Bending drive	<del>/</del>	4	<del>/</del>	<del>/</del>	<del>/</del>	4
Ancillary axes drive	<b>☆</b> .	<i>*</i>	<u></u> .	<u></u> .	<b>*</b>	
Available equipment options						
Radii changer/changing height (mm) 2-level/3-level	25/45	25/45	25/45	40/80	40/80	40/80
Automatic loading	~	~	~	<b>✓</b>	~	<b>~</b>
Push bending device	×	×	×	×	×	×
Booster	×	×	×	×	×	×













## Fully automatic CNC controlled mandrel bending machine



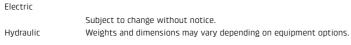
## Fully automatic CNC controlled mandrel bending machine

Machine model	DB 630-3A-CNC	DB 630-CNC	DB 630-CNC-VE	DB 630-CNC-R/L
Max. capacity steel tube (mm)	30 x 2,0	30 x 2,0	30 x 2,0	30 x 2,0
Max. capacity stainless steel tube (mm)	30 x 1,5	30 x 1,5	30 x 1,5	30 x 1,5
Steel pipe	3/4" SCH 40	3/4" SCH 40	3/4" SCH 40	3/4" SCH 40
Square section (mm)	20 x 2,5	20 x 2,5	20 x 2,5	20 x 2,5
Max. radius (mm)	85	85	85	85
Section modulus (cm³)	1,2	1,2	1,2	1,2
Usable length (mm)	3048	3048	3048	3048
Extension usable length (mm)	4572/6096	4572/6096	4572/6096	4572/6096
Bending speed (°/sec.)	65	275	275	275
Speed of front feed (mm/sec.)	400	1800	1800	1800
Speed of rotation (°/sec.)	90	550	550	550
Bending repeatibility (°)	+/-0,2	+/-0,05	+/-0,05	+/-0,05
Longitudinal repeatibility (mm)	+/-0,1	+/-0,05	+/-0,05	+/-0,05
Rotational repeatibility (°)	+/-0,1	+/-0,05	+/-0,05	+/-0,05
Power (kW)	10	22	22	22
Weight (kg)	2600	2600	2600	4500
L x W x H (mm)	4700 × 1400 × 1500	5000 x 1200 x 1450	5000 x 1200 x 1450	5200 x 1500 x 2200
Bending direction	<u>ک</u>	<u>ک</u>	<u>ک</u>	Č+3
Bending drive	<b>→</b>	<del>/</del>	<del>/</del>	<del>/</del>
Ancillary axes drive	<b>→</b>	<b>→</b>	<del>/</del>	<b>→</b>
Available equipment options				
Radii changer/changing height (mm) 2-level/3-level	×	60/120	60/120	60/120
Automatic loading	×	<b>~</b>	<b>✓</b>	<b>~</b>
Push bending device	×	<b>~</b>	~	<b>~</b>
Booster	×	×	×	×

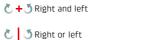
Machine model	DB 642-3A-CNC	DB 642-CNC	DB 642-CNC-VE	DB 642-CNC-R/L
Max. capacity steel tube (mm)	42 x 4,0	42 x 3,0	42 x 3,0	42 x 3,0
Max. capacity stainless steel tube (mm)	42 x 3,0	42 x 1,5	42 x 1,5	42 x 1,5
Steel pipe	1 1/4" SCH 40	1 1/4" SCH 10	1 1/4" SCH 10	1 1/4" SCH 10
Square section (mm)	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5
Max. radius (mm)	105	105	105	105
Section modulus (cm³)	4,25	3,4	3,4	3,4
Usable length (mm)	4572	4572	4572	4572
Extension usable length (mm)	6096	6096	6096	6096
Bending speed (°/sec.)	75	180	180	180
Speed of front feed (mm/sec.)	400	1600	1600	1600
Speed of rotation (°/sec.)	90	450	450	450
Bending axis repeatibility (°)	+/-0,2	+/-0,05	+/-0,05	+/-0,05
Longitudinal repeatibility (mm)	+/-0,3	+/-0,05	+/-0,05	+/-0,05
Rotational repeatibility (°)	+/-0,2	+/-0,05	+/-0,05	+/-0,05
Power (kW)	14	30	30-35	30-35
Weight (kg)	3700	3500	3500	4500
L x W x H (mm)	6500 x 1400 x 1 500	6600 x 1200 x 1500	6600 x 1200 x 1500	7000 x 1600 x 2200
Bending direction	<u>ک</u>	<u>ک</u>	<u>ک</u>   ح	Č+3
Bending drive	<b>→</b> .	<b>→</b>	<del>/</del>	<b>→</b> .
Ancillary axes drive	<b>→</b> .	<b>→</b> .	<b>*</b>	<b>→</b>
Available equipment options				
Radii changer/changing height (mm) 2-level/3-level	×	60/120	60/120	60/120
Automatic loading	×	✓	✓	<b>~</b>
Push bending device	×	<b>~</b>	<b>~</b>	<b>~</b>

















## Fully automatic CNC controlled mandrel bending machine



## Fully automatic CNC controlled mandrel bending machine

Machine model	DB 2060-3A-CNC	DB 2060-CNC	DB 2060-CNC-VE	DB 2060-CNC-R/L
Max. capacity steel tube (mm)	60,3 × 5,0	60,3 × 3,9	60,3 x 3,9	60,3 x 3,9
Max. capacity stainless steel tube (mm)	60,3 x 3,0	60,3 x 2,7	60,3 x 2,7	60,3 x 2,7
Steel pipe SCH 40	2" SCH 40	2" SCH 40	2" SCH 40	2" SCH 40
Square section (mm)	40 x 3,0	40 x 3,0	40 x 3,0	40 x 3,0
Max. radius (mm)	150	150	150	150
Section modulus (cm³)	11,3	9,3	9,3	9,3
Usable length (mm)	4572	4572	4572	4572
Extension usable length (mm)	6096	6096	6096	6096
Bending speed (°/sec.)	35	100	100	100
Speed of front feed (mm/sec.)	400	1400	1400	1400
Speed of rotation (°/sec.)	60	350	350	350
Bending axis repeatibility (°)	+/-0,2	+/-0,1	+/-0,1	+/-0,1
Longitudinal repeatibility (mm)	+/-0,3	+/-0,1	+/-0,1	+/-0,1
Rotational repeatibility (°)	+/-0,2	+/-0,1	+/-0,1	+/-0,1
Power (kW)	20	30-35	30-35	30-35
Weight (kg)	5300	6000	7600	9100
L x W x H (mm)	7000 x 1700 x 1500	7000 x 1800 x 1500	9700 x 1600 x 1800	9700 x 1600 x1 800
Bending direction	<u>ک</u>	<b>७</b> ७	0 0	Č+3
Bending drive	<u>.</u>	<u>.</u> .	4	<u>.</u>
Ancillary axes drive	→.	<b>→</b> .	<i>4</i>	<b>→</b>
Available equipment options				
Radii changer/changing height (mm) 2-level/3-level	×	80/160	80/160	80/160
Automatic loading	×	<b>~</b>	<b>~</b>	<b>~</b>
Push bending device	×	<b>~</b>	<b>~</b>	<b>~</b>
Rooster				

Maschinen-Typ	DB 2090-3A-CNC	DB 2090-CNC	DB 2090-CNC-VE
Max. capacity steel tube (mm)	88,9 × 5,0	88,9 x 3,05	88,9 × 3,05
Max. capacity stainless steel tube (mm)	88,9 × 2,0	88,9 x 2,11	88,9 x 2,11
Steel pipe	3" SCH 10	3" SCH 10	3" SCH 10
Square section (mm)	50 x 2,5	50 x 2,5	50 x 2,5
Max. radius (mm)	225	225	225
Section modulus (cm³)	26,7	17,4	17,4
Usable length (mm)	4572	4572	4572
Extension usable length (mm)	6096	6096	6096
Bending speed (°/sec.)	21	80	80
Speed of front feed (mm/sec.)	300	1000	1000
Speed of rotation (°/sec.)	45	250	250
Bending axis repeatibility (°)	+/-0,2	+/-0,1	+/-0,1
Longitudinal repeatibility (mm)	+/-0,3	+/-0,1	+/-0,1
Rotational repeatibility (°)	+/-0,2	+/-0,1	+/-0,1
Power (kW)	25	35	35
Weight (kg)	6200	7400	8500
L x W x H (mm)	7300 x 1700 x 1500	7000 x 1800 x 1500	9700 x 1700 x 1600
Bending direction	<u>ک</u> ا ح	<u>ک</u> ا ح	<b>১</b>  ৩
Bending drive	<b>→</b>	<b>→</b>	<del>/</del>
Ancillary axes drive	<b>→</b>	<b>→</b>	<del>/</del>
Available equipment options			
Radii changer/changing height (mm) 2-level/3-level	×	90/180	90/180
Automatic loading	×	✓	<b>~</b>
Push bending device	×	✓	<b>~</b>



















## CNC mandrel bending machines for large tube diameters



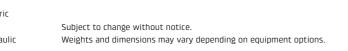
## CNC mandrel bending machines for large tube diameters

Machine model	DB 40120-3A-CNC	DB 40120-CNC	DB 40120-CNC-VE	DB 40139-3A-CNC
Max. capacity steel tube (mm)	120 x 4,0	120 x 4,0	120 x 4,0	140 x 6,0
Max. capacity stainless steel tube (mm)	120 × 3,0	120 × 3,0	120 x 3,0	140 × 4,0
Steel pipe SCH 10	4" SCH 10	4" SCH 10	4" SCH 10	5" SCH 40
Square section (mm)				
Max. radius (mm)	300	300	300	350
Section modulus (cm³)	41,7	41,7	41,7	82,6
Usable length (mm)	6096	6096	6096	6096
Extension usable length (mm)				
Bending speed (°/sec.)	15	30	30	10°
Speed of front feed (mm/sec.)	300	800	800	300
Speed of rotation (°/sec.)	45	75	75	40
Bending axis repeatibility (°)	+/-0,2	+/-0,1	+/-0,1	+/-0,2
Longitudinal repeatibility (mm)	+/-0,5	+/-0,1	+/-0,1	+/-0,5
Rotational repeatibility (°)	+/-0,2	+/-0,1	+/-0,1	+/-0,2
Power (kW)	40	45	45	40
Weight (kg)	14200	14200	14200	17200
L x W x H (mm)	8900 x 2300 x 1800	9000 x 2200 x 1850	9000 x 2200 x 1850	8900 x 2600 x 1900
Bending direction	0 0	0 0	0 0	<u>ک  ح</u>
Bending drive	<u>.</u> .	<u>.</u>	4	<u>.</u> .
Ancillary axes drive	<b>→</b> .	<b>→</b> .	<del>/</del>	<b>→</b>
Available equipment options				
Radii changer/changing height (mm) 2-level/3-level		180/360	180/360	
Automatic loading	×	<b>✓</b>	<b>~</b>	×
Push bending device	×	<b>~</b>	<b>~</b>	×
Booster				()

Machine model	DB 40168-3A-CNC	DB 40220-3A-CNC	DB 60273-3A-CNC	DB 80330-3A-CNC
Max. capacity steel tube (mm)	170 × 8,0	220 x 12,0	273 x 16,0	325 x 20,0
Max. capacity stainless steel tube (mm)	170 × 6,0	220 x 10,0	273 x 14,0	325 × 18,0
Steel pipe SCH 10	6" SCH 40	8" SCH 80	10" SCH 80	12" SCH 80
Square section (mm)	<u></u>	<u></u>		
Max. radius (mm)	425	700	820	950
Section modulus (cm³)	160,4	394	799	1402,8
Usable length (mm)	6096	6096	6096	6096
Extension usable length (mm)				
Bending speed (°/sec.)	7	5	3	2
Bending speed (°/sec.)	300	300	250	200
Speed of rotation (°/sec.)	40	20	20	15
Bending axis repeatibility (°)	+/-0,2	+/-0,3	+/-0,3	+/-0,3
Longitudinal repeatibility (mm)	+/-0,5	+/-0,5	+/-0,5	+/-0,5
Rotational repeatibility (°)	+/-0,2	+/-0,3	+/-0,3	+/-0,3
Power (kW)	60	85	90	90
Weight (kg)	23200	38700	55200	68000
L x W x H (mm)	9500 x 3000 x 2100	10500 x 4750 x 2400	11200 x 5400 x 2450	12300 x 6100 x 2450
Bending direction	<b>১</b>  ৩	<u>ک</u>	<u>ک</u>   ق	<u>ک</u>
Bending drive	<u>.</u> .	<u>.</u>	<b>→</b> .	<u> </u>
Ancillary axes drive	<b>→</b>	<b>→</b> <b>1</b> -	<b>→</b> <b>1</b> 0	<b>→</b> •••
Available equipment options				
Radii changer/changing height (mm) 2-level/3-level		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
Automatic loading	×	×	×	×
Push bending device	×	×	×	×
B				



















# Tube forming machines

transfluid® forming technology:

Where shape is a question of standards.



up to 22 mm diameter

4 seconds

Bending capacity:

Cycle time:

#### Axial forming machines

Accurate, fast and versatile: our type REB axial formgeometries and fast tool changing. A servo motor positions the tools in sequence horizontally or vertically. Almost all demands may be met with up to six forming stages and additionally clamping unit. Rotary forming stations may be integrated for specific forming tasks.

Operation is via a touch panel with integrated data ing machines. They offer extreme forming, complex storage. Machine parameters and specific processing sequences may be managed here. transfluid® can also optionally equip these machines with electrical or hydraulic NC drives. For extremely short cycling times, these forming processes may also be performed step by step in transfer systems.

REB 420 4-20 mm Ø Forming power 64 kN REB 632 Forming power 98 kN 6-32 mm Ø Forming power 147 kN REB 645 6-45 mm Ø REB 660 6-60 mm Ø Forming power 240 kN Forming power up to 1.300 kN Customised

Detail view of an axial forming

machine with four forming stages and additional clamping unit.



form





#### Rotary forming machines Type SRM

drives in these machines are servo-electric and with to inside or vice versa, inside to outside.

Our rolling technology offers you completely new CNC control if required. This allows forming indepenforming options. The method is particularly well dent of tooling. All the parameters and settings are suited for the creation of contours with sharp edges stored. This eliminates elaborate adjustments, saving for sealing elements and for perfect surfaces. All the you time. The machines are capable of forming outside

SRM 622 4-22 mm Ø SRM 1550 15-50 mm Ø SRM 40115 40-115 mm Ø SRM 50176 50-176 mm Ø









UMR 628

UMR 642

UMR 30115

UMR 40220

UMR 60325

6 – 28 mm

6 –42 mm

30 -115 mm

40 - 220 mm

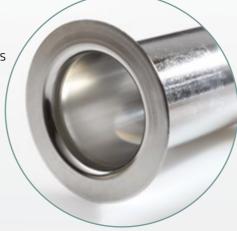
60-325 mm

#### Rotary forming machines Type UMR

This machine will create a perfect sealing surface on flares between 20° and 90° and clamping lengths of approx. 1 x D. Flares up to 90° are produced in a single work step. Tool changing is extremely quick. Given the appropriate tools, the machine can also close pipe ends.

The forming machine for pipe diameters up to 325 mm can work almost independent of tooling, based on a free programmable controlled forming cone.

Perfect quality
flange connections
are simple to
produce with
these machines.





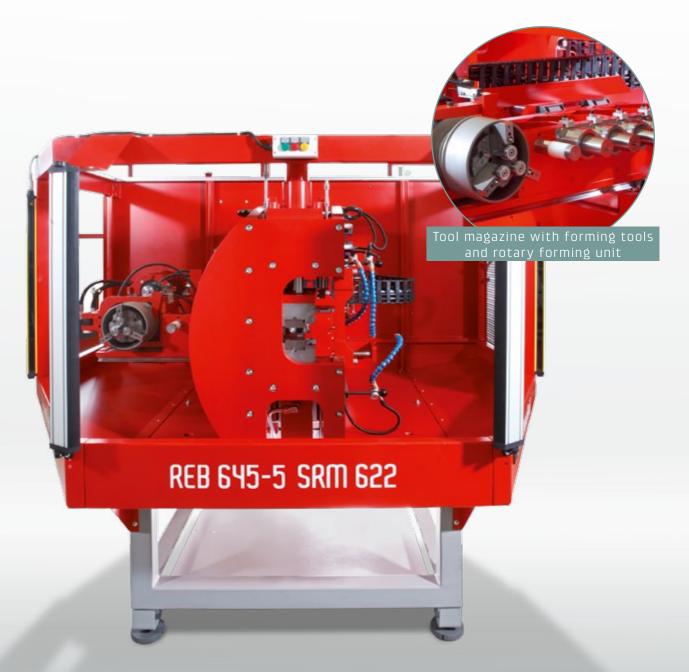


#### UMR 60325

Forming machine for the production of flares up to 90°



To meet your individual requirements, we can combine different advantages of our processing methods, especially axial and rotary forming. We can offer both either in the same machine or as a transfer plant carrying out the processes in sequence.





#### REB 645-5 SRM 622

Combination machine with five axial forming stages and a rotary forming unit







## Axial forming machines



## Rotary forming machines Type SRM

Machine model	REB 420	REB 632	REB 645	REB 660
Max. capacity steel tube (mm)	20	32	45	60
Forming force (kN)	64	98	147	240
Forming length (mm)	60	80	90	180
Clamping force (kN)	64	98	147	240
Clamping force of additional clamping unit (kN)	39	64	98	147
Clamping length	80	150	180	200
Clamping	<b>1</b>	<b>1</b>	<b>1</b>	1
Cycle time of basic machine (sec.)	3	4	6	9
Cycle time for each additional stage (sec.)	2	3	4	5
Cycle time for additional clamping unit (sec.)	3	3	4	5
Power (kW)	5,5	7,5	10	15
Weight (kg)	1000	1500	2200	3200
L x W x H (mm)	2200 x 1410 x 1900	2300 x 2000 x 1900	2500 x 2200 x 2000	2500 x 3000 x 2000
Drive	<u>.</u>	<b>→</b>	<u>→</u>	<b>→</b>
Available equipment options				
Drive	<del>/</del>	<del>/</del>	<del>/</del>	×
Additional forming stages	~	~	~	<b>~</b>
Automatic starting function	<b>~</b>	~	<b>~</b>	<b>~</b>
Safety cover	<b>~</b>	~	<b>~</b>	<b>~</b>
Micro lubrication system	<b>~</b>	<b>~</b>	~	<b>~</b>

Machine model	SRM 622	SRM 1550	SRM 401115	SRM 50176
Max. capacity steel tube (mm)	4-22	15-50	40-115	50-176
Max. wall thickness (mm)	1	1,5	2	3
Steel pipe	3/16-1/2"	5/8-1 1/2"	1 3/4-4"	6"
RPM	300-1000	100-500	80-280	60-180
Cycle time adjustable (sec.)	4-10	8-14	15-50	15-60
Forming length (mm)	40	80	100	120
Clamping length	1,0 × D	1,0 x D	1,0 × D	1,0 × D
Clamping	<b>1</b>	<b>1</b>		<b>1</b>
Power (kW)	8	10	14	22
Weight (kg)	1100	2200	5500	8200
L x W x H (mm)	1700 × 900 × 1800	2300 x 1000 x 2000	2400 x 1200 x 1800	3150 × 1500 × 1800
Available equipment options				
CNC control	<b>✓</b>	×	×	×
Automatic starting function	✓	✓	✓	<b>✓</b>
Safety cover	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
Circulating lubrication	~	<b>✓</b>	<b>✓</b>	<b>✓</b>
Micro lubrication system		<i>y</i>	<i>y</i>	✓











# Rotary forming machines Type UMR

Machine model	UMR 628	UMR 642	UMR 30115	UMR 40220	UMR 60325
Max. capacity steel tube (mm)	6-28	6-42	30-115	40-220	60-325
Wall thickness (mm)	2,5	4	4	6	8
Steel pipe	1/4-3/4"	1/4-1 1/4"	1 1/4-4"	2-8"	2 1/2-12"
RPM	603	200	170	140	70
Cycle time adjustable (sec.)	4-10	4-15	10-45	15-60	20-90
Forming length (mm)	15	25	50	70	80
Clamping length	1,0 × D	1,0 x D	1,0 x D	1,0 x D	1,0 x D
Clamping	<b>1</b>	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	<b>1</b>
Power (kW)	1,3	4,5	8,5	14	20
Weight (kg)	750	1000	1500	1750	8000
L x W x H (mm)	1000 × 700 × 1600	1100 x 900 x 1700	1400 x 1100 x 1900	2500 x 1300 x 1900	3200 x 1600 x 2500
Available equipment options					
Automatic release	<b>~</b>	<b>~</b>	×	×	×
Safety cover	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>✓</b>
Circulating lubrication	×	×	×	×	×
Micro lubrication system					









# Tube cutting machines

transfluid® cutting technology:



Orbital 6–28 mm Ø tube cutting machine, coil feed with dancer roll and straightening unit

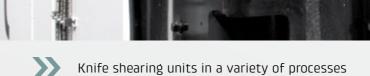




#### Chipless orbital cutting equipment

Our chipless orbital cutting machines offer you acface – without further processing. Since the tubes are curate cutting results – allowing you to directly con- tensioned with a size-dependent force during cutting, tinue processing your tubes. The clean produced cuts they will not deform around the cut. allow you to continue any forming directly on the cut





transfluid

Knife shearing method

RT 622 6-22 mm Knife shearing RT 1040 10 -40 mm Knife shearing Our cutting method is ideal for secondary trimming, allowing precise shearing of the tubes. This creates right angled sharp edged cuts even on extreme pipe geometries. The two chips may be reliably detected in this process. This cutting process may also be used for cutting bent geometries on our bending machines.

Up to three blades may be used if the demands are extreme. The process may furthermore also be optimised with an internal mandrel and modified to enable cutting the tube at an angle.



RTO 628

- » Cutting rate up to 1 600 pieces/hour
- » Cut length optimisation to minimize scrap
- » from the coil, with straightening unit or with tube loading magazine
- » controlled multiple ejection of cut lengths



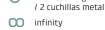


## Tube cutting machine

Machine model	RT 622	RT 1040	RTO 628	RTO 2076
Cutting process	Ŏ4	Ŏ4		<b>▼</b>
Cap. Ø (mm)	6-22	10-40	6-28	20-76
Max. wall thickness (mm) – material-dependent	1,5	1,5	2	3
Shortest cutting length (mm) – pull apart	×	×	55	150
Shortest cutting length (mm) – through cut	7	7	25	70
Max. cutting length (mm)	00	00	00	$\infty$
Min. straight length after bend (mm)	10	10-20	×	×
Length tolerances (mm)	± 0,1	± 0,1	± 0,1	± 0,2
Cycle time (sec.) – depends on material and wall thickness	6	6	2,2-8	6-10
Power (kW)	3	4,5	7,5	15
Weight (kg)	400	550	1700	2500
L x W x H (mm)	1000 × 650 × 1700	1500 × 850 × 1800	2800 × 1030 × 1600	3000 × 1500 × 2000
Drive	<b>→</b>	<b>→</b>	<del>/</del>	<del>/</del>
Area of application				
Straight pipes	~	~	<b>~</b>	<b>~</b>
Bent pipes	<b>~</b>	<b>~</b>	×	×
Available equipment options				
Automated loading from coil or from a straight stock magazine	×	×	<b>~</b>	<b>~</b>
Straightening section	×	×	<b>~</b>	<b>~</b>
Micro lubrication	<b>✓</b>	<b>✓</b>	<b>✓</b>	~
Automatic unloading	×	×	~	~



















# Tube cleaning machines

transfluid® cleaning technology:

for a clean job.





#### RR 001

Pass-through tube cleaning system: with ultrasonic pre-cleaning, flushing section and a drying zone



Iltrasonic feed-in detai



### Tube cleaning systems

As clean as it gets: Our tube cleaning systems will clean your tubes to perfection.

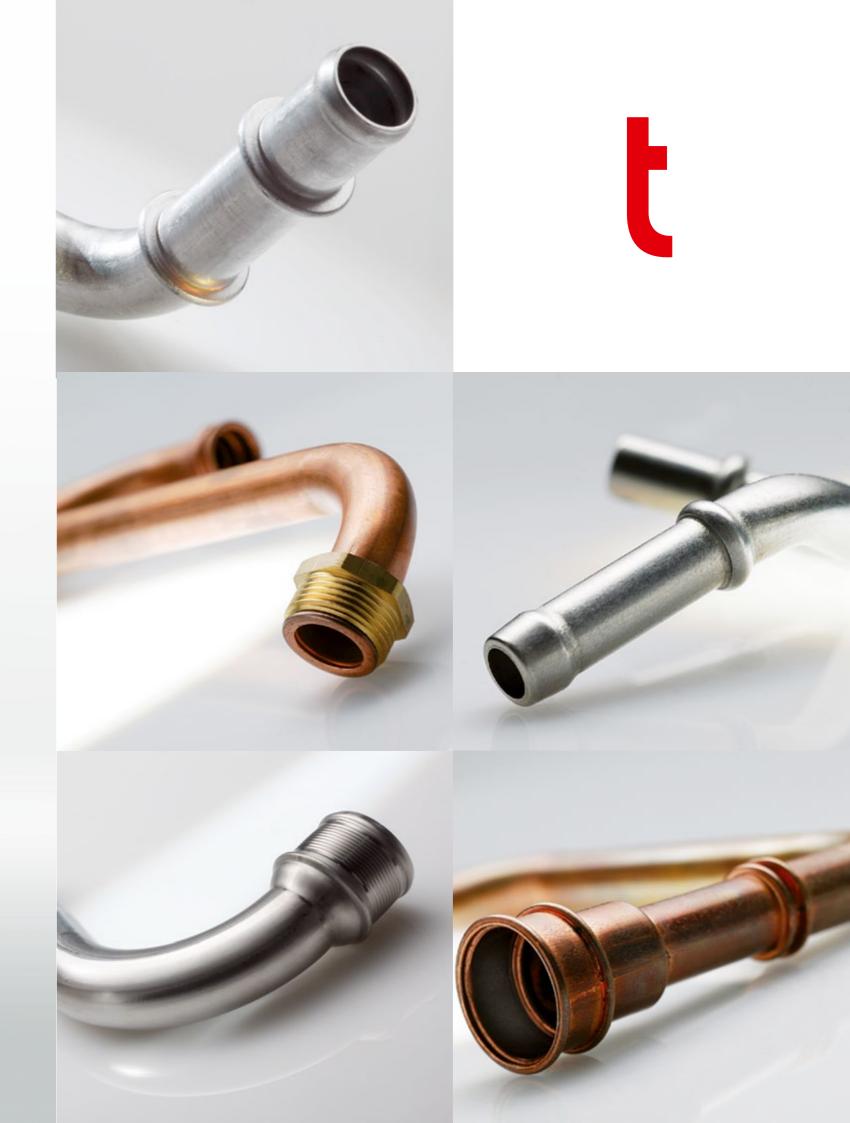
The simplest and quickest method of cleaning bent tubes is pellet cleaning. The process is very effective for single pieces and small series production.

Various solutions are available for series operation, depending on requirements. Pass-through for straight tubes or in baskets for already bent parts. Pallet transport may also be useful here. Prior ultrasonic cleaning is also possible, depending on the degree of cleanliness required.

Liquid operated cleaning systems may of course also be filled up automatically or they may have a particulate detector. Such systems are designed to suit individual requirements.

DLW Continuous cleaning system RR Basket cleaning system

RL Single tube cleaning system (liquid) RR 42 Single tube cleaning (pellets)



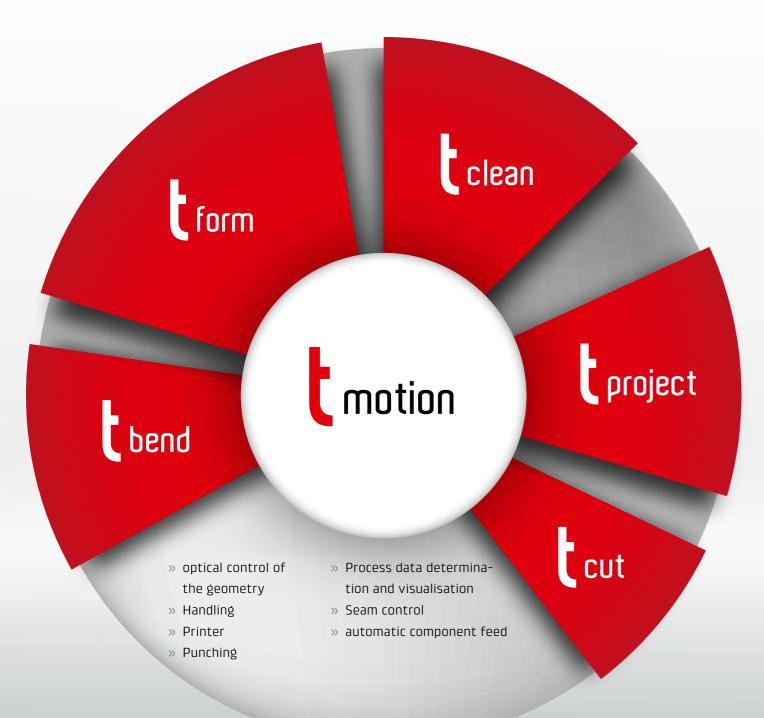




Flexibly matching your requirements.

#### t motion

Not only does automation increase capacity, but it also creates process reliability, ensuring that the quality of the manufactured components is always top notch. Assemble your own production island here: always extremely powerful and accurate.















#### Automation right from the start

#### ₃ M

#### Automatic in-process tool change

#### On request including:

tact camera control systems for 100% control of ge- requirements, including the layout designed to optiometries or surfaces. Brazing and welding units may mise the flow of materials. be integrated here as well as autofrettage.

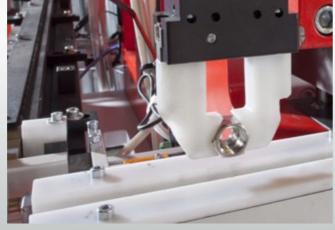
#### We will plan for you:

Product marking, seam detection or optical, non-con- Complete production cells designed to match your









**Motion** 

Plug and Produce! Our automated production cells are ready for immediate large scale series production.

The production cells comprise tried and trusted machines in our range, with storage and loading systems, parts feeders or complete handling systems to complement your processes. Linear or via robots – the choice is yours.



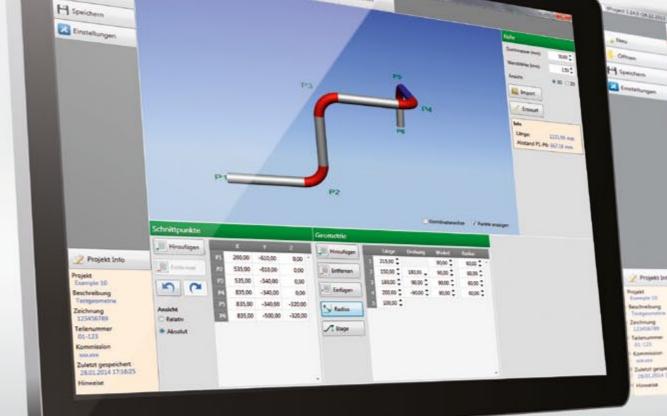




## Powerful software

Your cleuer transfluid® solution.





#### Reliable planning:

Apart from the accurate calculation of cut lengths and the documentation of tube data, our t project software offers especially intuitive reliability of production. This is because the tube geometries may be checked for feasibility already before bending — to avoid collisions in the machine, with tools or other elements.

#### The clever solution:

For left / right bending machines, the software automatically determines which bend to assign to which head. Length increases due to forming processes are automatically included.

The software also calculates the positioning in case of flanges which have been welded to the pipe on both sides before bending. It stands to reason that the software can also handle free forming processes and multi-level machines.

We offer powerful software as an effective on-line solution to reducing the number of steps towards a finished component – to use with the bending machine and most CAD systems.



Locations

23

118

**Engineers** 

Employees

Machines in the market

J&E Machines B.V.

Jacobus Lipsweg 100 3316 BP Dordrecht The Netherlands

Postbus 3086 3301 DB Dordrecht

T: 078 - 61 79 839 (24 uur bereikbaar)

F: 078 - 61 80 645 I: www.jemachines.nl E: info@jemachines.nl