



TUBE CUTTING & FACING

HIGH PURITY

Weld Preparation Tools



WACHS

TSE

TUBE FACING MACHINE .250" (6.35MM) TO 1.0" (25.4MM) O. D.



- LINEAR FEED WITH INDEX
ALLOWS LENGTH
CONTROL OF $\pm .002$.
- STAINLESS STEEL CLAMPING....
STANDARD.
- 180° CUTTER WINDOW
PROVIDES SAFE....CLEAR VIEW
DURING OPERATION .



WACHS

FSE

MICROFITTING FACING MACHINE .125" (3.2MM) TO 1.0" (25.4MM) O. D.



- LINEAR FEED WITH INDEX
ALLOWS LENGTH
CONTROL OF $\pm .002$.
- STAINLESS STEEL CLAMPING....
STANDARD.
- 180° CUTTER WINDOW PROVIDES
SAFE....CLEAR VIEW DURING
OPERATION .





TFS

**TUBE AND FITTING FACING MACHINE
.500" (12.7MM) TO 4.5" (114.5MM) O. D.**



- LINEAR FEED WITH INDEX ALLOWS LENGTH CONTROL OF $\pm .002$.
- INTERCHANGEABLE CLAMPING HEAD PROVIDES FLEXIBILITY IN SIZE RANGE, CLEARANCE AND ECONOMY.
- STAINLESS STEEL CLAMPING..... STANDARD.
- 180° CUTTER WINDOW PROVIDES SAFE...CLEAR VIEW DURING OPERATION.



TC 4.5

TUBE CUT-OFF SAW
.500" (12.7MM) TO 4.5" (114.3MM) O. D.



- **CAST IRON CONSTRUCTION WEIGHS ONLY 63 LBS.**
- **INBOARD AND OUTBOARD CUTTER PROVIDES TUBE AND FITTING CUTOFF.**
- **STANDARD STORAGE CASE WITH WHEELS.**



— TL 2.0 & 4.0 —

TUBE CUT OFF LATHE
.250" (6.35MM) TO 4.0" (101.6MM) O. D.



- *SPLIT FRAME ALLOWS MACHINE TO BE USED "IN-PLACE".*
- *STAINLESS STEEL CLAMPING...STANDARD.*
- *STARWHEEL DRIVEN AUTOMATIC TOOL IN-FEED.*





TQ 1.0

TUBE WELD SAMPLING MACHINE
.125" (3.2MM) TO 1.0" (25.4MM) O. D.



- *HIGH QUALITY...ACCURATE, AND SAFE WELD SAMPLING.*
- *BUILT IN VACUUM PORTS.*
- *SAW BLADE ONLY .030" WIDE.*





HIGH PURITY

FACING BITS & SAW BLADES

- **FACING TOOL GEOMETRY...**
CHANNELS CHIPS AWAY FROM
ELECTRO-POLISHED TUBE I.D.

- **HIGH SPEED STEEL TOOL BITS...**
CUT ALL STAINLESS
STEEL AND EXOTIC ALLOY
MATERIALS.



- **STAG-R-TOOTH.... SAW BLADE**
DESIGNED FOR
MAXIMUM LONGEVITY.

- **COMMON BIT & BLADE**
SIZING....WITH LISTED
MANUFACTURES.



**USE EXCLUSIVE WACHS TOOLING ON
OTHER MACHINE TOOLS**

FACING TOOL BITS (CROSS REFERENCE CHART)				
WACHS #	TRI-TOOL®	DURABIT™	OTTO	HPPT/RICCI
18-701-00	99-1506	DURABIT 1	TB-1506	3020-1001
18-701-01 ZRN	99-1506	DURABIT 1	TB-1506	3020-1001
18-701-02 TIN	99-1506	DURABIT 1	TB-1506	3020-1001
18-701-03	99-1506	DURABIT 1	TB-1506	3020-1001
18-701-04	99-1445	DURABIT 1	TB-1445	N/A
18-701-05	99-2448	DURABIT 2	TB-2448	N/A

SAW BLADES (CROSS REFERENCE CHART)		
WACHS #	GEORGE FISHER	OTTO TOOL
30-600-01	041036	QC-100
30-600-02	041035	QC-70
30-600-03	041048	QC-40



SPECIFICATIONS

TSE TUBE FACING MACHINE

Capacity:	.250" (6.35mm) to 1" (25.4mm) O.D. Tube
Tube Wall:	.020" (.5mm) min. to .120" (3mm) max.
Material:	Stainless Steel / High Alloy
Clamping:	Stainless steel collets
Clearance:	1.5" (38.1mm) from tube centerline
Feed System:	Manual advance, .400" (10.1mm) total, with index gauge
Weight:	8 lbs.
Finish:	Hard anodize and stainless steel
Motor:	Milwaukee or Metabo, 110V or 220v Milwaukee controls, On-Off 0 to 600 RPM Metabo controls, On-Off, dial speed control, load sensing speed stabilization, safety clutch
Speed:	Variable
Dimensions:	15" L x 7" H x 3" W
Standard:	TSE Machine, operating tools and manual
Optional:	Stainless steel collets, storage case, benchmount and cutting tool bits

FSE MICROFITTING FACING MACHINE

Capacity:	.250" (6.35mm) to 1" (25.4mm) O.D. Tube
Tube Wall:	.020" (.5mm) min. to .120" (3mm) max.
Material:	Stainless Steel / High Alloy
Clamping:	Stainless steel clamp shoes, .250" (6.35mm) wide
Clearance:	1.5" (38.1mm) from tube centerline
Feed System:	Manual advance, .400" (10.1mm) total, with index gauge
Weight:	8 lbs.
Finish:	Hard anodize and stainless steel
Motor:	Milwaukee or Metabo, 110V or 220V Milwaukee controls, On-Off 0 to 600 RPM variable speed Metabo controls, On-Off, dial speed control, load sensing speed stabilization, safety clutch
Dimensions:	14" L x 7" H x 3" W
Standard:	FSE Machine, operating tools and manual
Optional:	Stainless steel clamp shoes, storage case, bench mount and cutting tool bit

TFS TUBE FITTING FACING MACHINE

Capacity:	.5" (12.7mm) to 4.5" (114.3mm) O.D. Tube
Tube Wall:	.030" (.762mm) min. to .120" (3mm) max.
Material:	Stainless Steel / High Alloy
Clamping:	Stainless steel clamp shoes 2.5" Head: 1" (25.4mm) wide 4.5" Head: 1.375" (35mm) wide
Feed System:	Manual advance, .400" (10.1mm) total, with index gauge
Weight:	TFS 2.5: 14 lbs. w/o clamp shoes, TFS 4.5: 18 lbs. w/o clamp shoes
Finish:	Hard anodize and stainless steel
Motor:	Metabo 110v or 220v , On-Off, dial speed control, load sensing speed stabilization, safety clutch
Dimensions:	TFS 2.5: 8.3" (210mm) L x 6.7" (170mm) H x 5.8" (147.3mm) W TFS 4.5: 8.3" (210mm) L x 8.7" (221mm) H x 7.8" (198mm) W
Standard:	TFS machine, bench mount, storage case, operating tools and manual
Optional:	Stainless steel shoes for any size from .5" - (12.7mm) to 6.625" (168.3mm) O.D. and tool bits



SPECIFICATIONS

TC 4.5 TUBE & PIPE CUTOFF SAW

Capacity:	.5" (12.7mm) to 4.5" (114mm) O.D. Tube
Tube Wall:	.030" (.762mm) min. to .120" (3mm) max.
Material:	Stainless Steel / High Alloy
Clamping:	Vertical jaws with hand-operated vise
Mounting:	5" min. inboard, 9.5" min. outboard
Feed System:	Manual 360 deg. Rotation
Weight:	63 lbs. (29 kg.)
Finish:	Safety yellow powder coat and zinc plating
Motor:	Metabo 110v or 220v , On-Off, dial speed control, load sensing speed stabilization, safety clutch
Motor Speed:	10 to 200 RPM variable with 2 speed gearbox (10 to 80 RPM low range) (30 to 200 RPM high range)
Dimensions:	15" D x 20" H x 9" W
Standard:	TC 4.5 machine, bench mount, storage case, Operating tools and manual
Optional:	Saw blades and cord swivel (export only)

TL 2.0 & 4.0 TUBE CUTOFF LATHE

Capacity:	TL 2.0: .250" (6.35mm) to 2" (50.8mm) O.D. tube TL 4.0: 1" (25.4mm) to 4" (101.6mm) O.D. tube
Tube wall:	.020" (.5mm) min. to .120" (3mm) max.
Material:	Stainless steel / high alloy
Clamping:	Stainless steel clamp shoes
Feed system:	Starwheel autofeed TL 2.0: .001" per revolution TL 4.0: .002" per revolution
Weight:	TL 2.0: 18 lbs. TL 4.0: 24 lbs.
Finish:	Stainless steel and corrosion resistant plating
Motor:	Metabo 110v or 220v, On-Off, dial speed control, load sensing speed stabilization, safety clutch
Standard:	TL 2.0 & 4.0 machine, bench mount, storage case, operating tools and manual.
Optional:	Stainless steel clamp shoes, tool bits, facing tool slide, right angle drive

TQ 1.0 TUBE WELD SAMPLING MACHINE

Capacity:	.125" (3.18mm) to 1" (25.4mm) O.D. tube
Tube wall:	.020" (.5mm) min. to .065" (1.65mm) max.
Material:	Stainless Steel / High Alloy
Feed system:	Manual with adjustable depth stop
Blade width:	.030" (.76mm)
Motor:	Metabo 110v or 220v
Motor speed:	Locked at 100rpm
Weight:	10 lbs.
Standard:	TQ 1.0 machine, bench mount, storage case, Operating tools and manual
Optional:	Saw blades



ORDERING INFORMATION

TQ 1.0 TUBE WELD SAMPLING MACHINE

The TQ 1.0 Tube Weld Sampling Machine (Covers tube from .125" to 1" OD)
Includes machine, motor, bench mount, storage case, operating tools and manual.

Part#	Description
12-000-01	TQ 1.0, 110v 50/60hrz Metabo
12-000-02	TQ 1.0, 220v 50/60hrz Metabo

TSE TUBE FACING MACHINE

The TSE Tube Facing Machine - (Covers tube from .250" to 1.0") - Includes machine motor, operating tools and manual.

Part#	Description	Stainless Steel Collets	
18-000-01	TSE 1.0, 110v 60 hrz Milwaukee	18-404-02	.250" collet
18-000-02	TSE 1.0, 220v 50 hrz Milwaukee	18-404-04	.375" collet
18-000-05	TSE 1.0, 110v 50/60hrz Metabo	18-404-06	.500" collet
18-000-06	TSE 1.0, 220v 50/60hrz Metabo	18-404-08	.625" collet
		18-404-10	.750" collet
		18-404-14	1.00" collet

FSE MICROFITTING FACING MACHINE

The FSE Microfitting Facing Machine (Covers microfittings and tube from .125" to 1.0") - Includes machine, motor, operating tools and manual.

Stainless Steel Shoes

18-403-00	.125" shoes	18-403-36	6mm shoes	18-403-20	.125" microfitting shoes
18-403-01	.187" shoes	18-403-38	8mm shoes	18-403-21	.250" microfitting shoes
18-403-02	.250" shoes	18-403-40	10mm shoes	18-403-22	.375" microfitting shoes
18-403-04	.375" shoes	18-403-42	12mm shoes	18-403-23	.500" microfitting shoes
18-403-06	.500" shoes	18-403-44	14mm shoes		
18-403-08	.625" shoes	18-403-46	16mm shoes		
18-403-10	.750" shoes	18-403-48	18mm shoes		
18-403-14	1.00" shoes	18-403-50	20mm shoes		

Part #	Description
18-000-03	FSE, 110v 60 hrz Milwaukee
18-000-04	FSE, 220v 50 hrz Milwaukee
18-000-07	FSE, 110v 50/60 hrz Metabo
18-000-08	FSE, 220v 50/60 hrz Metabo

TSE / FSE ACCESSORIES

Part #	Description
18-401-00	Custom storage case
18-402-00	Bench stand



ORDERING INFORMATION

TFS TUBE & FITTING FACING MACHINE

The TFS Tube and Fitting Facing Machine (Covers tube and fittings from .5" to 4.5") - Includes machine, motor, bench stand, head assembly, storage case, operating tools and manual.

Part #	Description		
19-000-02	TFS 2.5, 110v 50/60hrz Metabo		
19-000-04	TFS 4.5, 110v 50/60hrz Metabo		
19-000-06	TFS 2.5/4.5, 110v 50/60hrz Metabo		
19-000-22	TFS 2.5, 220v 50/60 hrz Metabo		
19-000-24	TFS 4.5, 220v 50/60 hrz Metabo		
19-000-26	TFS 2.5/4.5, 220v 50/60 hrz Metabo		
Stainless steel shoes, TFS 2.5		Stainless steel shoes, TFS 4.5	
19-070-05	.500" shoes	19-071-10	2.88" shoes
19-070-07	.750" shoes	19-071-20	3.0" shoes
19-070-10	1.0" shoes	19-071-30	3.5" shoes
19-070-20	1.315" shoes	19-071-40	4.0" shoes
19-070-30	1.5" shoes	19-071-50	4.5" shoes
19-070-40	1.66" shoes		
19-070-50	1.9" shoes		
19-070-60	2.0" shoes		
19-070-70	2.375" shoes		
19-070-80	2.5" shoes		

TC 4.5 TUBE & PIPE CUTOFF SAW

The TC 4.5 Tube and Pipe Cutoff Saw (Covers tube and pipe from .5" to 4.5") - Includes machine, motor, bench mount, storage case, operating tools and manual.

Part #	Description
20-000-01	TC 4.5, 110v 50/60 hrz Metabo
20-000-02	TC 4.5, 220v 50/60 hrz Metabo

TL 2.0 & 4.0 TUBE CUTOFF LATHE

TL 2.0 & 4.0 Tube Cutoff Lathe (Covers tube from .250" to 4.0") - Includes machine, motor, bench mount, storage case, operating tools and manual.

Part#	Description		
21-000-02	TL 2.0, 110v 50/60 hrz Metabo		
21-000-04	TL 4.0, 110v 50/60 hrz Metabo		
21-000-22	TL 2.0, 220v 50/60 hrz Metabo		
21-000-24	TL 4.0, 220v 50/60 hrz Metabo		
Stainless steel shoes, TL 2.0		Stainless steel shoes, TL 4.0	
21-402-10	.250" shoes	21-404-10	1.0" shoes
21-402-20	.375" shoes	21-404-20	1.5" shoes
21-402-30	.500" shoes	21-404-30	2.0" shoes
21-402-40	.750" shoes	21-404-40	2.5" shoes
21-402-50	1.0" shoes	21-404-50	3.0" shoes
21-402-60	1.5" shoes	21-404-60	4.0" shoes
21-402-70	2.0" shoes		



ORDERING INFORMATION

CUSTOM ACCESSORIES

Part #	Description
18-404-SP	TSE: Any size collet
18-403-SP	FSE: Any size clamp shoe
18-031-HO	All machines: "hyp-o-drive" 5:1 speed reducer
19-070-SP	TFS 2.5: any size clamp shoe
19-071-SP	TFS 4.5: any size clamp shoe
19-070-FF	TFS 2.5: "Ferrule Feet"
19-071-FF	TFS 4.5: "Ferrule Feet"
21-031-RA	All machines: right angle drive motor adapter
21-FAC-00	TL 2.0/4.0: Facing attachment

(Consult factory for availability)

REPLACEMENT TOOLING

TSE, FSE, TFS Facing Tool Bits

Part #	Description
18-701-00	Individual standard facing tool bit
18-701-01	10 pack, zirconium coated
18-701-02	10 pack, titanium coated
18-701-03	10 pack, standard facing tool bits
18-701-04	Individual facing tool for hard materials
18-701-05	Individual extended facing tool for microfittings (FS only)

TC 4.5 Saw Blades

Part #	Description
30-600-01	Fine tooth saw for up to .035" wall
30-600-02	Medium tooth saw for up to .080" wall
30-600-03	Coarse tooth saw for up to .120" wall

TL 2.0 & 4.0 Parting Tool Bits

Part #	Description
21-700-01	Double edge parting tool, .065" wide Zirconium coated

TQ 1.0 Saw Blades

Part #	Description
12-700-01	Standard saw blade with cleaning brush

THE E.H. WACHS COMPANY

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