

CATALOGUE

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E.H. WACHS EUROPE CUTTING & BEVELING

Portable weld prep machine tools for industrial applications



E.H. WACHS®

Superior Equipment. Complete Support.™

ITW | ORBITAL
CUTTING & WELDING

New products.



LDSF | Large Diameter Split Frame

Designed for cold cutting, beveling, facing and counterboring on large diameter pipes, vessels and flanges. It's been engineered to incorporate multiple advancements designed to make it stronger, faster to set up, faster to operate and even more versatile than our class leading HDSF models.

Advantages:

- All new design for large and very large diameter pipes and vessels
- Four standard LDSF sizes cover a 60" to 120" OD range (DN1500-3000)
- 15" (381 mm) diameter range between the four standard LDSF models
- Splits into quadrants for easier storage, transport and set-up

[...more on page 17](#)

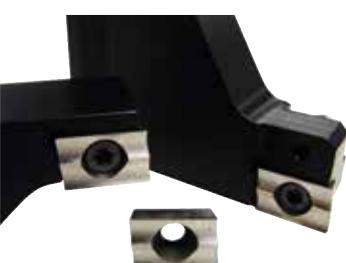
EPD | Electric Power Drive

Self contained, compact electric drive system that's an alternative to traditional pneumatic and hydraulic drives for larger field portable machine tools. Lightweight and easily transportable the WACHS EPD is powerful enough for all but the most demanding applications.

Advantages:

- Premium construction for durability
- Maintenance free brushless design
- Moisture and dust resistant to IP65
- High torque output at low speed

[...more on page 55](#)



DuoEdge | Insert Tooling

System of portable machine tool holders and inserts designed to replace larger, more expensive traditional single edge tooling. It offers considerable cost savings over traditional tooling without sacrificing the longevity of the cutting edge or the quality of the finished prep.

Advantages:

- Two cutting edges instead of one, for minimal work interruption
- Each cutting edge costs on average one third the cost of a traditional bit
- No need to resharpen tooling, saving time, labor and shipping

[...more on page 39](#)

Order hotline: +49 (0) 77 31 792-0

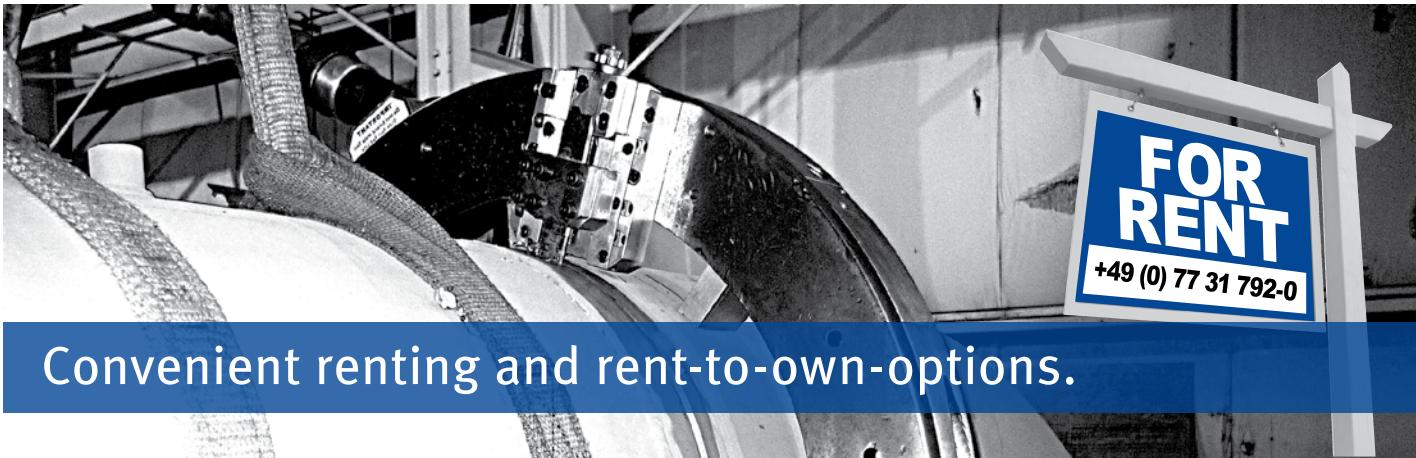


Superior equipment. Complete support.

Pipe Cutting and Beveling Machines LCSF.....	5	Clamping chains	32
LCSF Low Clearance Split Frames.....	6	Guide tracks.....	32
Individual Low Clearance Split Frames.....	9	Miscellaneous accessories and spare parts.....	32
Example for an individual LCSF configuration	9	Hydraulic Power Pack.....	33
Rotating ring sets (Split Frames)	9	Cutting lubrication KSS-TOP	33
Drive motors and equipment.....	9		
Tool slide assemblies.....	10		
Worm slide assemblies	10		
OD tracking slides	11		
Pinion housing assemblies.....	11		
Trip Assembly.....	11		
Single size extension leg sets.....	11		
Universal counterbore slide assemblies	12		
Bridge slide assemblies	12		
Bridge slide templates	13		
NEW DuoEdge insert tooling	13		
Bridge slide tooling.....	13		
Cutting tooling	14		
Bevel tooling	14		
Compound bevel tooling.....	15		
Counterbore tooling	15		
Cutting lubrication.....	15		
Overview tooling.....	16		
Pipe Cutting and Beveling Machines LDSF.....	17		
LDSF Large Diameter Split Frame	18		
Pipe Cutting and Beveling Machines SDSF	20		
SDSF Small Diameter Split Frame.....	21		
SDSF Small Diameter Split Frame kits.....	23		
Split Frames	23		
Aluminum collets and collet accessories	24		
Tool slide and trip assemblies	25		
Motors and miscellaneous accessories	26		
Universal tooling	27		
Recommended accessories for SDSF 1.0 to SDSF 6.0	27		
Cutting lubrication.....	27		
Portable Milling Machines Trav-L-Cutter	28		
Trav-L-Cutter.....	29		
Accessories for Trav-L-Cutters	31		
Saw blades.....	31		
Bevel cutters	31		
Combination possibilities of saw blades and bevel cutters for Trav-L-Cutters	31		
		Clamping chains	32
		Guide tracks.....	32
		Miscellaneous accessories and spare parts.....	32
		Hydraulic Power Pack.....	33
		Cutting lubrication KSS-TOP	33
		Pipe End Preparation Machines EP 424.....	34
		EP 424 Bevelers	35
		EP 424 single point speed prep upgrade.....	36
		Form tool EP 424 facing tooling.....	37
		Form tool EP 424 beveling tooling	37
		Form tool EP 424 counterbore and ID tooling	38
		Previous EP 424 single point tooling	39
		NEW DuoEdge insert tooling	39
		Hydraulic Power Pack.....	40
		Air Control Module.....	40
		Cutting lubrication.....	40
		Pipe End Preparation Machines SDB and FF	41
		SDB Small Diameter Bevelers	42
		Hydraulic Power Pack.....	43
		Air Control Module	43
		Cutting lubrication	43
		FF Flange Facing Machines	44
		Conversion kits SDB/FF	45
		Mandrels	46
		Facing/Beveling/Counterboring tools	47
		Flange facing tools	49
		Hydraulic Power Pack	49
		Air Control Module	50
		Cutting lubrication	50
		Portable Pipe Saws Guillotine	51
		Guillotine	52
		Accessories for Guillotine	54
		Saw blades	54
		Miscellaneous accessories and spare parts	54
		Hydraulic Power Pack	54
		Cutting lubrication	54
		Power Drive Systems	55
		Electric Power Drive EPD	55
		Hydraulic Power Pack SafeQuip	58
		Air Control Module ACM for pneumatic motors	61

Contents

(3)



Convenient renting and rent-to-own-options.

More efficiency, more reliability, more performance.

We supply equipment over a short and long term rental condition – a cost effective alternative to purchasing. We take care of our rental equipment so it is in top condition for you and we can help you to match the right rental equipment to your specific projects. Renting from Orbitalum is the ideal opportunity to try out a model you're thinking of purchasing. Ask about our convenient renting and rent-to-own-options:

Call **+49 (0) 77 31 792-0** or e-mail to **tools@orbitalum.com**
For the UK call **+44 (0) 1606 861 423**

Your benefits of renting:

- Reducing need for storage
- Eliminating repair costs
- Conserving your capital
- Having the most up-to-date technology
- Minimizing down-time

Our rental and used machine service includes:

- Weekly rental charges
- Hire purchase
- Long-term rental

Easy handling – safe operation.

We as Orbitalum emphasize on the safe operation of our equipment as it has the utmost priority. We generally recommend a product safety and user training to clearly understand the proper usage of the equipment and in order to avoid any possible dangers and accidents.

We offer:

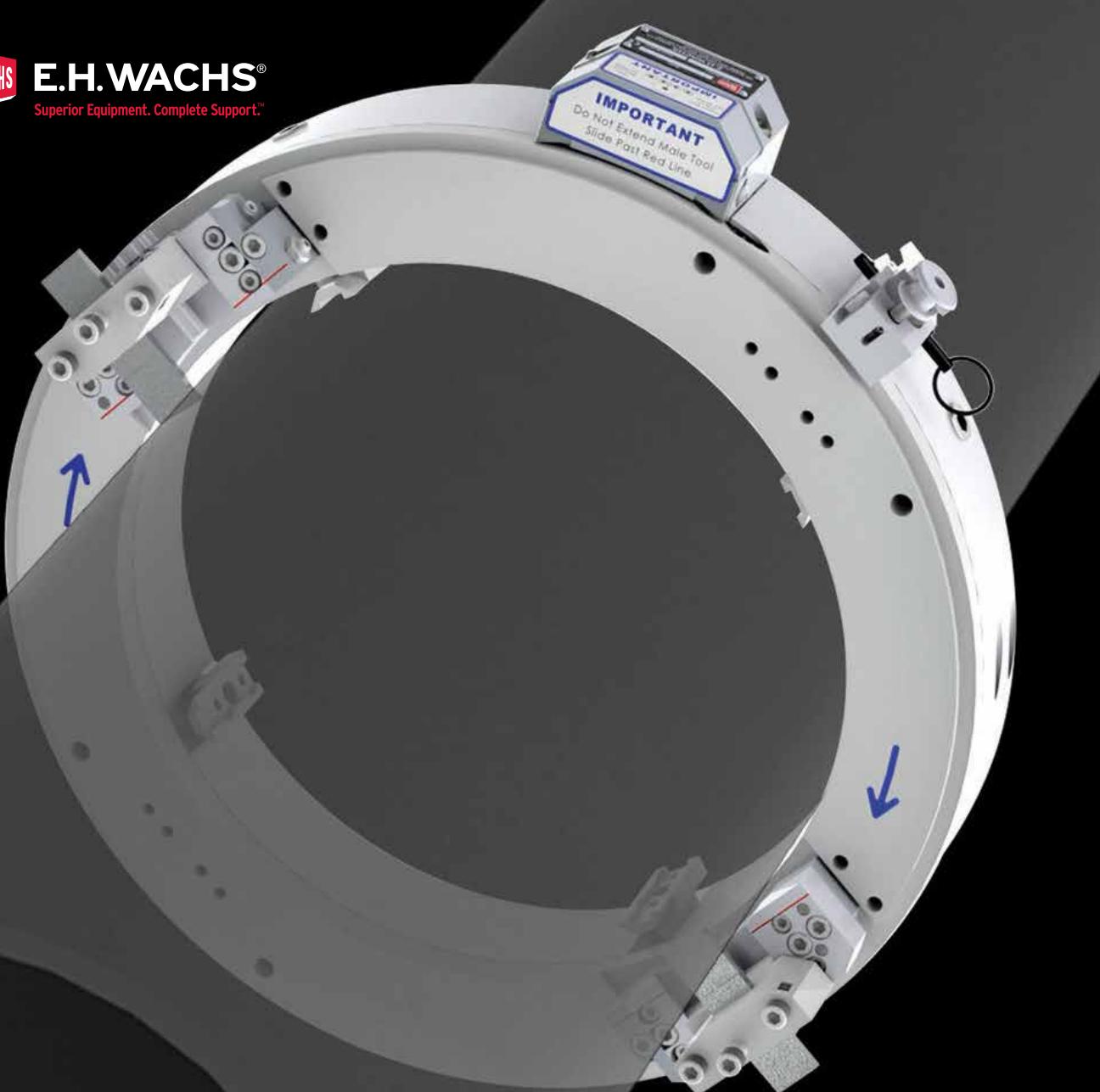
- Training on daily or weekly basis
- At any location
- Skilled trainers
- Certification after successful participation
- Fully equipped training centre in Singen
- State-of-the-art training equipment





E.H. WACHS®

Superior Equipment. Complete Support.™



Externally mounted portable pipe cutting and beveling system.



Optional "Bridge Slide" for heavy wall pipe. Bevel, compound bevel and J prep.



All "Low Clearance Split Frames" are designed for portability and are applicable even where space is limited.



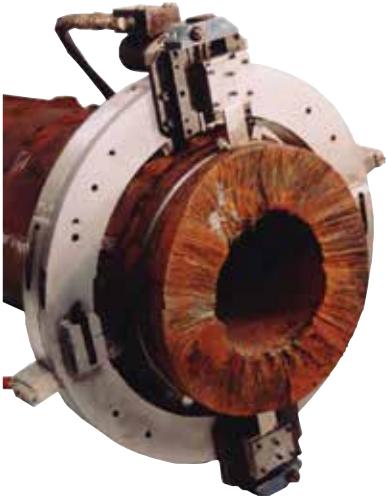
"Counter bore Attachment", fits all models. Mounts securely to tool slide.



14 units available for 2" to 48" pipe or tube.

Pipe Cutting and Beveling Machines LCSF

⑤



Portable Pipe Cutting and Beveling Machines

- Twelve LCSF basic models cover OD from DN 50 to DN 1200 (2" - 48")
- Low clearance design requires minimal space for setup and operation
- Designed to split open to mount around the OD of inline pipe
- Fully enclosed bearings and drive gears for safety and durability
- Tool slides and accessories are interchangeable between many LCSF sizes

LCSF Low Clearance Split Frames

WACHS LCSF Low Clearance Split Frame is the world's most versatile and comprehensive line of lightweight split frame, clamshell style portable machine tools on the market today. Designed to cut, bevel, single point, counterbore and face flanges on pipe and tubing ranging from OD DN 50 to 1200 (OD 2" - 48") on most wall thicknesses and materials, WACHS slim yet rugged LCSF design is ideal where radial and axial clearances are restricted.

Safe cold cutting

The LCSF is ideal for all types of pipe cutting, beveling and end prepping. The Split Frames are named for their ability to split in half at the frame or "break open" and bolt back together again. This allows them to open and mount around the OD of inline piping or they can be slipped closed over open ended pipe. The LCSF has been engineered to apply precise, consistently square cuts and bevels on pipe, tube and casing the first time, every time.

Like all WACHS cutting machines, the LCSF Split Frame utilizes a cold cutting machining process, a safe, clean operation that minimizes the risk of explosion. Hot torch cutting and grinding typically creates a heat affected zone (HAZ) and introduces airborne contaminants into the environment, unacceptable in many worksites and a potential health hazard.

Complete machining system

The LCSF is the foundation of a complete machining system, a system that includes multiple drive options, hydraulic power units, bridge slides, counterbore attachments and a wide range of tooling and tool slides. These include low clearance slides, extended and super extended slides, worm gear slides for heavy wall applications and out-of-round tracking slides that minimize setup and machining time. The LCSF is able to handle virtually any cutting and beveling application encountered in the field, including tight clearances, heavy wall pipe or high alloy material. WACHS allows you to take on the most challenging prep with confidence, as the correct power source, drive, tool slides and tooling are never more than a phone call away.

WACHS LCSF's are offered as complete kits, with your choice of pneumatic, hydraulic or, by special order electric drive, or as basic ring sets. Kits are the more popular choice, as they include the components typically required including drive, tool slides, trips, hand tools and more. But if you already own WACHS drive motors and tool slides, individual ring sets can economically expand your split frame range. Ideal for a wide range of industries, the LCSF is found in fossil, co-gen and nuclear power plants for outages, steam generator replacements and general plant maintenance. They're used in oil, gas and petrochemical to minimize the risk of explosion and anywhere that safe, high quality, repeatable weld preps are required. It's the most complete pipe cutting and beveling machining system available today.

Like all WACHS machines, the LCSF is built to last. Steel gear sets, fully enclosed for safety and durability, ride on full roller bearings to handle the rigors of today's demanding preps on today's demanding materials. Strong yet light, the LCSF machines with a speed and precision others can't match.



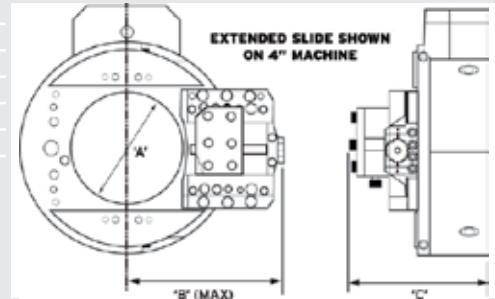
LCSF Low Clearance Split Frames



Heavy duty storage case

IMPORTANT: For a safe operation of the LCSF machines a product training is required. Please contact Orbitalum Tools for training details.

Specifications LCSF	206/3	408/3	612/3	814/3	1016/3	1420/3	1824/3	2228/3	2632/3	3036/3	3642/3	4248/3
Machine capacity												
Pipe OD Metric [mm]	50.8-168.4	92.2-219.2	139.7-323.85	196.85-355	247.65-406.4	324-508	425-610	527-711	629-813	730-914	883-1067	1035-1219
Pipe NPS [inch]	2 - 6	4 - 8	6 - 12	8 - 14	10 - 16	14 - 20	18 - 24	22 - 28	26 - 32	30 - 36	36 - 42	42 - 48
Dimensions												
A dimension [mm]	174.75	225.55	330.20	361.95	412.75	514.35	622.30	723.90	825.5	927.1	1079.50	1231.90
[inch]	6.88	8.88	13.0	14.25	16.25	20.25	24.50	28.50	32.50	36.50	42.50	48.50
Extended tool slide tool stroke 38.1 mm (1.5") using slide 960 415 000 or 960 416 000												
B dimension [mm]	163.83	216.15	277.88	290.83	322.58	373.38	422.40	473.20	524.00	574.80	651.3	727.5
[inch]	6.45	8.51	10.94	11.45	12.70	14.70	16.63	18.63	20.63	22.63	25.64	28.64
C dimension [mm]	152.40	152.40	152.40	152.40	152.40	152.40	177.80	177.80	177.80	177.80	177.8	177.8
[inch]	6.00	6.00	6.00	6.00	6.00	6.00	7.00	7.00	7.00	7.00	7.00	7.00
Super extended tool slide tool stroke 50.8 mm (2") using slide 960 437 000 or 960 438 000												
B dimension [mm]	-	-	-	-	-	-	482.60	533.40	584.20	635.00	711.20	787.40
[inch]	-	-	-	-	-	-	19.00	21.00	23.00	25.00	28.00	31.00
C dimension [mm]	-	-	-	-	-	-	177.80	177.80	177.80	177.80	177.80	177.80
[inch]	-	-	-	-	-	-	7.00	7.00	7.00	7.00	7.00	7.00
Weights												
Machine [kg]	16.78	19.50	28.57	33.11	39.91	46.72	79.38	90.72	104.32	117.93	140.60	163.29
[lbs]	37	43	63	73	88	103	175	200	230	260	310	360
Shipping [kg]	43.5	43.5	57	64	75	87.5	226	235	244	239.5	271	304
[lbs]	96	96	125	141	165	193	499	520	538	528	597	670
Shipping dimensions												
Without accessories [cm]	31x81x53	31x81x53	31x81x53	61x81x51	48x107x61	61x81x51	61x122x74	64x122x74	64x122x74	61x122x74	81x152x97	79x155x97
[inch]	12x32x21	12x32x21	12x32x21	24x32x20	19x42x24	24x32x20	24x48x29	25x48x29	25x48x29	24x48x29	32x60x38	31x61x38
Standard equipment for complete machines:												
Rotating ring set, heavy drive (pneumatic, hydraulic or electric), self squaring mounting system, set of extension legs, parting tool slide, beveling tool slide, star wheel feed mechanism, fitted storage case, operating hand tools, operating manuals.												
LCSF 206/3 up to 814/3 contain 1.1 kW pneumatic motor. LCSF 1016/3 up to 4248/3 contain 1.8 kW pneumatic motor.												
LCSF 206/3 up to 1420/3 contain extended (1.5 inch) parting and beveling tool slides. LCSF 1824/3 up to 4248/3 contain super extended (2 inch) parting and beveling tool slides.												
Clamp pads												
Rotating ring set	206	408	612	814	1016	1420	1824	2228	2632	3036	3642	4248
Self squaring mounting system [jaws]	4	4	4	4	4	4	8	8	8	8	8	8
Extension legs [set of]	4 each	4 each	4 each	4 each	4 each	4 each	8 each	8 each	8 each	8 each	8 each	8 each
	12.7	25.4	25.4	25.4	12.7	25.4	25.4	25.4	25.4	25.4	25.4	25.4
	38.1	50.8	50.8	76.2	38.1	50.8	50.8	50.8	50.8	50.8	50.8	50.8
	50.8				63.5	63.5	76.2	76.2	76.2	76.2	76.2	76.2
[mm]	0.5	1.0	1.0	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	1.0	2.0	2.0	2.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
	1.5	2.0	3.0	2.5	2.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	2.0											
Optional equipment												
Bridge slide for single point beveling of heavy wall pipe, low clearance tool slides, extended tool slides, worm gear tool slides, pneumatic, hydraulic or electric drive options, extension legs for pipe, elbows and fittings and thin wall applications, tooling for all prep configurations.												
Other specifications												
Cutting tool surface speed	18 m/min (60 ft/min)											
Drive options	Pneumatic, hydraulic or electric											
Air requirements	1.7 m ³ /min at 6.2 bar (65 ft ³ /min at 90 psi)											
Hydraulic requirements	31 l/min at 104 bars (8 gal/min at 1,500 psi)											
Feed method	Star wheel											
Feed rate	Fixed at 0.066 mm (0.0026 inch) per trip											
Finish	Hard chrome plating											



Pipe Cutting and Beveling Machines LCSF

(7)



LCSF Low Clearance Split Frames – Complete Machines

Article	Version	Pipe OD		Code	WACHS Ref.-no.		
		Metric [mm]	NPS [inch]				
LCSF 206/3	Pneumatic	50.8 - 168.4	2 - 6	960 247 060	60-AIR-06		
LCSF 206/3	Hydraulic	50.8 - 168.4	2 - 6	960 493 060	60-HYD-06		
LCSF 206/3	Electric	50.8 - 168.4	2 - 6	on request	on request		
LCSF 408/3	Pneumatic	92.2 - 219.2	4 - 8	960 247 080	60-AIR-08		
LCSF 408/3	Hydraulic	92.2 - 219.2	4 - 8	960 493 080	60-HYD-08		
LCSF 408/3	Electric	92.2 - 219.2	4 - 8	on request	on request		
LCSF 612/3	Pneumatic	139.7 - 323.85	6 - 12	960 247 120	60-AIR-12		
LCSF 612/3	Hydraulic	139.7 - 323.85	6 - 12	960 493 120	60-HYD-12		
LCSF 612/3	Electric	139.7 - 323.85	6 - 12	on request	on request		
LCSF 814/3	Pneumatic	196.85 - 355	8 - 14	960 247 140	60-AIR-14		
LCSF 814/3	Hydraulic	196.85 - 355	8 - 14	960 493 140	60-HYD-14		
LCSF 814/3	Electric	196.85 - 355	8 - 14	on request	on request		
LCSF 1016/3	Pneumatic	247.65 - 406.4	10 - 16	960 247 160	60-AIR-16		
LCSF 1016/3	Hydraulic	247.65 - 406.4	10 - 16	960 493 160	60-HYD-16		
LCSF 1016/3	Electric	247.65 - 406.4	10 - 16	on request	on request		
LCSF 1420/3	Pneumatic	324 - 508	14 - 20	960 247 200	60-AIR-20		
LCSF 1420/3	Hydraulic	324 - 508	14 - 20	960 493 200	60-HYD-20		
LCSF 1420/3	Electric	324 - 508	14 - 20	on request	on request		
LCSF 1824/3	Pneumatic	425 - 610	18 - 24	960 247 240	60-AIR-24		
LCSF 1824/3	Hydraulic	425 - 610	18 - 24	960 493 240	60-HYD-24		
LCSF 1824/3	Electric	425 - 610	18 - 24	on request	on request		
LCSF 2228/3	Pneumatic	527 - 711	22 - 28	960 247 280	60-AIR-28		
LCSF 2228/3	Hydraulic	527 - 711	22 - 28	960 493 280	60-HYD-28		
LCSF 2228/3	Electric	527 - 711	22 - 28	on request	on request		
LCSF 2632/3	Pneumatic	527 - 711	26 - 32	960 247 320	60-AIR-32		
LCSF 2632/3	Hydraulic	527 - 711	26 - 32	960 493 320	60-HYD-32		
LCSF 2632/3	Electric	527 - 711	26 - 32	on request	on request		
LCSF 3036/3	Pneumatic	730 - 914	30 - 36	960 247 360	60-AIR-36		
LCSF 3036/3	Hydraulic	730 - 914	30 - 36	960 493 360	60-HYD-36		
LCSF 3036/3	Electric	730 - 914	30 - 36	on request	on request		
LCSF 3642/3	Pneumatic	883 - 1067	36 - 42	960 247 420	60-AIR-42		
LCSF 3642/3	Hydraulic	883 - 1067	36 - 42	960 493 420	60-HYD-42		
LCSF 3642/3	Electric	883 - 1067	36 - 42	on request	on request		
LCSF 4248/3	Pneumatic	1035 - 1219	42 - 48	960 247 480	60-AIR-48		
LCSF 4248/3	Hydraulic	1035 - 1219	42 - 48	960 493 480	60-HYD-48		
LCSF 4248/3	Electric	1035 - 1219	42 - 48	on request	on request		

Example for a standard tooling:

Parting tool, e.g. lenght: 5" (Code 943 711 010).
For further "Cutting tooling" see page 13.

Bevel tool, e.g. 30°, length: 5" (Code 953 703 010).
For further "Bevel tooling" see page 14.

Individual Low Clearance Split Frames

Example for an individual LCSF configuration:

Basic machine parts, necessary for usual cutting and beveling:

- Rotating ring set: Version LCSF 1420/3 (Code 960 000 200)
- Right angle air drive (Code 960 423 010)
- ACM (Code 960 420 000) + LCSF air throttle (Code 960 376 000)
- Parting tool, e.g. length: 5" (Code 943 711 010)
- Bevel tool, e.g. 30°, length: 5" (Code 953 703 010)
- Extended (1.5 inch) tool slide set (Code 960 422 010)



Rotating ring set

Rotating ring sets (Split Frames)

Add slides and drive for complete machine. Leg extensions for full clamping range now included with ring.

Includes:

- Self squaring mounting system (4- or 8-jaw)
- Pinion housing assembly
- Operating hand tools
- Carrying case
- Operating manual

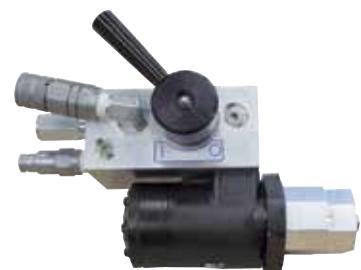
Article	Version	Pipe OD		Jaws	Code	WACHS Ref.-no.	
		Metric [mm]	NPS [inch]				
Rotating ring set	LCSF 206/3	50.8 - 168.4		2 - 6	4	960 000 060	60-000-06
Rotating ring set	LCSF 408/3	92.2 - 219.2		4 - 8	4	960 000 080	60-000-08
Rotating ring set	LCSF 612/3	139.7 - 323.85		6 - 12	4	960 000 120	60-000-12
Rotating ring set	LCSF 814/3	196.85 - 355		8 - 14	4	960 000 140	60-000-14
Rotating ring set	LCSF 1016/3	247.65 - 406.4		10 - 16	4	960 000 160	60-000-16
Rotating ring set	LCSF 1420/3	324 - 508		14 - 20	4	960 000 200	60-000-20
Rotating ring set	LCSF 1824/3	425 - 610		18 - 24	8	960 000 240	60-000-24
Rotating ring set	LCSF 2228/3	527 - 711		22 - 28	8	960 000 280	60-000-28
Rotating ring set	LCSF 2632/3	629 - 813		26 - 32	8	960 000 320	60-000-32
Rotating ring set	LCSF 3036/3	730 - 914		30 - 36	8	960 000 360	60-000-36
Rotating ring set	LCSF 3642/3	883 - 1067		36 - 42	8	960 000 420	60-000-42
Rotating ring set	LCSF 4248/3	1035 - 1219		42 - 48	8	960 000 480	60-000-48



*NEW: Electric Power Drive (EPD),
see page 56*



Air drive motor



Hydraulic drive motor

Drive motors and equipment

Add one of the following to rotating ring:

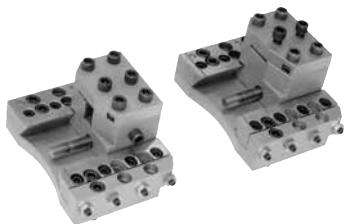
Article	For LCSF models	Code	WACHS Ref.-no.	
Right angle air drive. 1.1 kW (1.5 hp).	206/3 to 814/3	960 423 000	60-423-00	
Right angle air drive. 1.9 kW (2.5 hp).	1016/3 to 4248/3	960 423 010	60-423-01	
Hydraulic drive.	204/3 to 4248/3	960 424 010	60-424-01	
Hydraulic motor. For usage of LCSF Split Frames operating with Orbitalum hydraulic power pack SafeQuip (see page 59).	204/3 to 4248/3	960 424 020	60-424-02	
Air Control Module ACM (see page 61).	For all models	960 420 000	60-420-00	
Hydraulic hoses. 1 pair, Length: 15 m (49.2 ft)	For all models	790 500 510	-	
Front drive pinion housing.	408/3 to 1420/3	960 425 030	60-425-03	
Front drive pinion housing.	1824/3 to 4248/3	960 425 040	60-425-04	
Air treatment module (DWE10).	For all models	790 093 060	-	
Air hoses. 1 pair.	For all models	on request	-	
Compressed air drive 2.5 HP complete, reversibel	For all models	960 401 001	60-4010-01	
EPD Electric Power Drives for LCSF, see page 56.	-	-	-	

Pipe Cutting and Beveling Machines LCSF

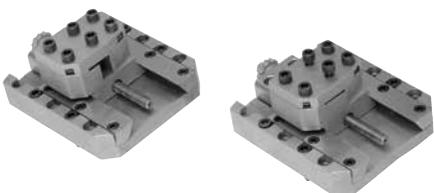
(9)

Tool slide assemblies

Add one of the following tool slide assemblies to the rotating ring:



LCSF extended tool slide set



LCSF super extended tool slide set

Article	Code	WACHS Ref.-no.		
Low clearance tool slide set. For LCSF 206/3 to LCSF 1420/3. Includes: <ul style="list-style-type: none">• 1 low clearance parting tool slide (Code 960 402 040)• 1 low clearance beveling tool slide (Code 960 403 040)• 1 star wheel feed trip mechanism (Code 960 401 000)	960 421 040	60-421-04		
Extended (1.5 inch) tool slide set. For LCSF 206/3 to LCSF 1420/3 and low clearance slides for LCSF 1824/3 to LCSF 4248/3. Includes: <ul style="list-style-type: none">• 1 extended (1.5 inch) parting tool slide (Code 960 415 000)• 1 extended (1.5 inch) beveling tool slide (Code 960 416 000)• 1 star wheel feed trip mechanism (Code 960 401 000)• 2 star wheel feed extension blocks (Code 960 417 000)	960 422 010	60-422-01		
Super extended (2 inch) tool slide set. For LCSF 1824/3 to LCSF 4248/3. Includes: <ul style="list-style-type: none">• 1 super extended (2 inch) parting tool slide (Code 960 437 000)• 1 super extended (2 inch) beveling tool slide (Code 960 438 000)• 1 star wheel feed trip mechanism (Code 960 434 000)• 2 star wheel feed extension blocks (Code 960 439 000)	960 440 000	60-440-00		

Worm slide assemblies

For LCSF 1824/3 up to LCSF 4248/3.

Recommended for heavy wall applications > 38.1 mm (1.5").



Worm gear slides for thick-walled pipes from approx. 70 mm/2.759 inch wall thickness

Article	Code	WACHS Ref.-no.		
Worm slide starter kit "parting". Includes: <ul style="list-style-type: none">• 1 worm slide kit (Code 960 430 000)• 1 worm slide heavy wall parting holder kit (Code 960 433 000)• 2 heavy wall carbide insert tooling kit (Code 960 712 000)• 10 insert tool bits 8 mm/0.313" (Code 960 713 000)	900 002 008	–		
Worm slide kit. Includes: <ul style="list-style-type: none">• 1 parting slide (Code 960 430 010)• 1 bevel slide (Code 960 430 020)• 2 trip assemblies (Code 960 431 000) with• 2 extension blocks (Code 960 432 000)• spare fasteners. Utilizes all standard LCSF parting and beveling blades. Note: heavy wall parting > 38.1 mm (1.5") requires parting tool holder kit (Code 960 433 000) and carbide parting tooling kit (Code 960 712 000).	960 430 000	60-430-00		
Worm slide heavy wall parting holder kit. Includes: <ul style="list-style-type: none">• 1 each low and high insert holder• 1 cover• fasteners. Utilizes carbide insert holders (Code 960 712 000).	960 433 000	60-433-00		
Heavy wall carbide insert tooling kit. Includes: <ul style="list-style-type: none">• 1 insert holder• 1 insert (Code 960 713 000)• 1 insert extractor. Used with the worm slides (Code 960 430 000) or spring slides (Code 960 446 000). For 609.6 - 1219.2 mm (24" - 48") LCSF machines.	960 712 000	60-712-00		
Insert tool bit 8 mm (0.313"). For use with tooling kit (Code 960 712 000).	960 713 000	60-713-00		



LCSF with worm slide assembly

OD tracking slides

OD tracking module.



Out of round slides

Article	For LCSF models	Code	WACHS Ref.-no.		
OD tracking tool slide set. Includes: • 2 OD tracking tool slides: • 1 tool slide parting (960 446 010) and 1 tool slide parting/beveling (960 446 020) • 1 trip assembly with corrosion protection (Code 960 446 030) • Fasteners	1824/3 - 4248/3	960 446 000	60-446-00		
Parting tool slide, OD tracking.	1824/3 - 4248/3	960 446 010	60-446-01		
Beveling tool slide, OD tracking.	1824/3 - 4248/3	960 446 020	60-446-02		
OD tracking trip.	1824/3 - 4248/3	960 446 030	60-446-03		
OD tracking tool slide set.	610/3 - 1420/3	960 451 000	60-451-00		



Pinion housing assembly

Pinion housing assemblies

Included in LCSF ring sets.

Article	For LCSF models	Code	WACHS Ref.-no.		
Pinion housing assembly.	LCSF 206/3 to LCSF 1420/3	960 412 000	60-412-00		
Pinion housing assembly.	LCSF 1824/3, LCSF 2228/3, LCSF 2632/3, LCSF 3036/3, LCSF 3642/3, LCSF 4248/3	960 409 000	60-409-00		
Front drive pinion housing.	408/3 to 1420/3	960 425 030	60-425-03		
Front drive pinion housing.	1824/3 to 4248/3	960 425 040	60-425-04		



Front drive pinion housing

Trip Assembly

Upgrades LCSF Split Frame Machines for safer operation (included in tool slide sets, see page 10).

Article	For LCSF models	Code	WACHS Ref.-no.		
Trip Assembly.	LCSF 206-1420	960 401 000	60-401-00		
Trip Assembly.	LCSF 1824-4248	960 434 000	60-434-00		



Trip Assembly

Single size extension leg sets

LCSF 206/3 up to LCSF 1420/3: 1 set of 4 each.
LCSF 1824/3 up to LCSF 4248/3: 2 sets of 4 each.

Article	Dimension		Code	WACHS Ref.-no.		
	[mm]	[inch]				
Single size extension leg set	12.7	1/2	960 408 050	60-408-05		
Single size extension leg set	19.1	3/4	960 408 070	60-408-07		
Single size extension leg set	25.4	1	960 408 100	60-408-10		
Single size extension leg set	38.1	1 1/2	960 408 150	60-408-15		
Single size extension leg set	50.8	2	960 408 200	60-408-20		
Single size extension leg set	63.5	2 1/2	960 408 250	60-408-25		
Single size extension leg set	76.2	3	960 408 300	60-408-30		



Single size extension leg set

Universal counterbore slide assemblies

Max. axial travel: 44.5 mm (1 3/4"). Mounts to bevel tool slide.



Universal counterbore slide

Article	Code	WACHS Ref.-no.		
Universal counterbore slide module for WACHS LCSF.	960 405 820	60-405-UC		
Counterbore tool bit taper 4:1 (14°) for use with counterbore slide module (Code 960 405 820)	960 700 040	60-700-04		

Bridge slide assemblies

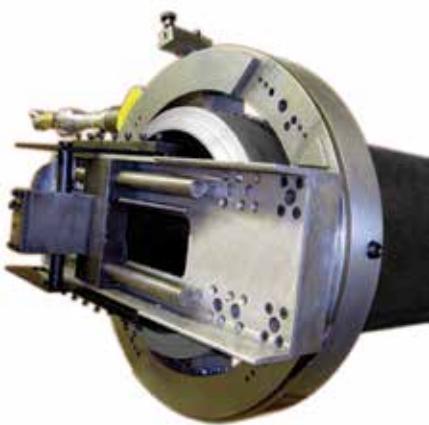
For single point beveling applications over 32 mm (1.25") wall and counterboring.

Max. axial travel for counterboring: 38.1 mm (1 1/2").

Includes:

- 1 storage case (bridge slide assembly 12-20 only)
- 1 operating manual
- 1 counterbore tool holder (Code 960 708 000)
- 1 single point tool holder (Code 960 707 000)
- 1 counterbore tool (4:1 taper) (Code 960 700 040)
- 1 single point tool bit (Code 952 701 010)
- operating hand tools

Additional template required.



Bridge slide for thick-walled welding preparations

Article	Size	To use with	Code	WACHS Ref.-no.		
Bridge slide assembly for thick-walled preparations	12 LC	LCSF 612/3	960 428 120	60-428-12		
Bridge slide assembly for thick-walled preparations	12-14	LCSF 612/3, LCSF 814/3	960 428 140	60-428-14		
Bridge slide assembly for thick-walled preparations	12-16	LCSF 612/3, LCSF 814/3, LCSF 1016/3	960 428 160	60-428-16		
Bridge slide assembly for thick-walled preparations	12-20	LCSF 612/3, LCSF 814/3, LCSF 1016/3, LCSF 1420/3	960 428 200	60-428-20		
Bridge slide assembly for thick-walled preparations	24 LC	LCSF 1824/3	960 428 240	60-428-24		
Bridge slide assembly for thick-walled preparations	24-28	LCSF 1824/3, LCSF 2228/3	960 428 280	60-428-28		
Bridge slide assembly for thick-walled preparations	32 LC	LCSF 2632/3	960 428 320	60-428-32		
Bridge slide assembly for thick-walled preparations	32-36	LCSF 2632/3, LCSF 3036/3	960 428 360	60-428-36		
Bridge slide assembly for thick-walled preparations	42 LC	LCSF 3642/3	960 428 420	60-428-42		
Bridge slide assembly for thick-walled preparations	42-48	LCSF 3642/3, LCSF 4248/3	960 428 480	60-428-48		

Bridge slide templates

Please specify when ordering customized templates:

Beveling angles (primary/secondary), OD, transition diameter.

Article	Beveling angle [°]	Code	WACHS Ref.-no.		
Bridge slide template	37.5	953 409 020	53-409-02		
Bridge slide template	30	953 409 030	53-409-03		
Bridge slide template	20	953 409 050	53-409-05		
Bridge slide template	10 x 37.5	953 409 110	53-409-11		
Bridge slide template	10 x 30	953 409 120	53-409-12		
Bridge slide template	10 x 20	953 409 130	53-409-13		
Customized bridge slide templates					
Custom bridge slide templates. 2 single angle templates included.	–	on request	60-SPP-01		
Custom bridge slide templates. 2 compound angle templates included.	–	on request	60-SPP-02		



Bridge slide template for thick-walled welding preparations

NEW DuoEdge insert tooling

E.H. WACHS DuoEdge Insert Tooling is a system of portable machine tool holders and inserts designed to replace larger, more expensive traditional single edge tooling. It offers considerable cost savings over traditional tooling without sacrificing the longevity of the cutting edge or the quality of the finished prep.

For LCSF and EP424 inserts and holder, see page 39.



NEW DuoEdge LCSF insert and holder

Bridge slide tooling

Please specify when ordering customized tools:

OD, wall, finished bore, depth, lead-in angle, marking, radius.

Article	Code	WACHS Ref.-no.		
DuoEdge LCSF single point holder single pack (see page 39).	960 718 000	60-718-00		
Counterbore tool holder. 25.4 mm (1") square shank. For use with counterbore tool bit (Code 960 700 040).	960 708 000	60-708-00		
Counterbore tool (4:1 taper). For use with WACHS LCSF/3 machines.	960 700 040	60-700-04		
Single point tool holder (SW tool, 3/8" x 3/8"). 25.4 mm (1") square shank. For use with single point tool bit (Code 952 701 010).	960 707 000	60-707-00		
Single point tool bit. For facing, beveling and flange facing. Standard HSS tool bit 9.5 x 9.5 mm (3/8" x 3/8"). For use with EP 424, LCSF/3, FF, SWR and SDSF machines.	952 701 010	52-701-01		
Customized tools				
Custom counterbore tool bit (HSS). For LCSF 204/3 to LCSF 1420/3 counterbore slide. 6.35 x 31.75 mm (1/4" x 1 1/4") stock.	on request	60-SPT-14		
Custom single edge radiusing tool bit (HSS). 9.5 x 9.5 mm (3/8" x 3/8") square stock.	on request	60-SPT-15		



Previous single point tool holder
(SW tool, 3/8" x 3/8")



Counterbore tool holder



Previous single point standard HSS tool bit
9.5 x 9.5 mm

Pipe Cutting and Beveling Machines LCSF

(13)

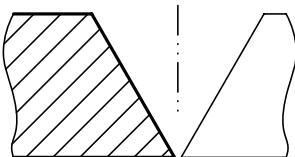


Parting blade

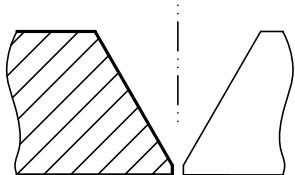


Parting blade Premium (coated)

V- Seam



Y- Seam



Bevel tool inside 30°



Bevel tool outside 30°



Bevel tool double 30°

Cutting tooling

Article	Width		Length		Made from	Code	WACHS Ref.-no.	
	[mm]	[inch]	[mm]	[inch]				
Insert holder for parting insert	4.8	3/16			Carbide	943 704 000	43-704-00	
Parting insert	4.8	3/16			Carbide	943 705 000	43-705-00	
Insert holder for parting insert	6.4	1/4			Carbide	947 701 000	47-701-00	
Parting insert	6.4	1/4			Carbide	947 702 000	47-702-00	
Parting blade	4.8	3/16	87.3	3.44	HSS	943 711 000	43-711-00	
Parting blade	4.8	3/16	127	5	HSS	943 711 010	43-711-01	
Parting blade Premium (coated)	4.8	3/16	127	5	HSS	943 711 019	43-711-01P	
Parting blade for use with all slides including worm slides (Code 960 430 000).	6.4	1/4	152.4	6	HSS	960 711 000	60-711-00	
Insert holder kit for heavy walls. Includes: • 1 insert holder • 1 insert (Code 960 713 000) • 1 insert extractor. Used with worm slides (960 430 000) or spring slides (960 446 000). For 609.6 - 1219.2 mm (24" - 48") LCSF machines.					Carbide	960 712 000	60-712-00	
Insert 8 mm (0.313"). Used with insert holder kit (Code 960 712 000).					Carbide	960 713 000	60-713-00	
Customized parting blades								
Custom parting blade	4.8	3/16	127	5	HSS	on request	60-SPT-11	
Custom parting blade	6.4	1/4	127	5	HSS	on request	60-SPT-12	
Custom parting blade for bevel slides	12.7	1/2	19.05	3/4	HSS	on request	60-SPT-13	

Bevel tooling

To utilize up to wall thicknesses of 32 mm (1 1/4 inch).

Please specify when ordering customized tools: OD, wall, primary angle, land.

Article	Beveling angle		Length		Code	WACHS Ref.-no.	
	[°]	[mm] [inch]	[mm]	[inch]			
Bevel tool inside	30	79.4	3.125	943 702 050	43-702-05		
Bevel tool outside	30	79.4	3.125	943 707 050	43-707-05		
Bevel tool double	30	79.4	3.125	943 709 050	43-709-05		
Bevel tool inside	30	127	5	953 703 010	53-703-01		
Bevel tool inside Premium (coated)	30	127	5	953 703 019	53-703-01P		
Bevel tool outside	30	127	5	943 707 060	43-707-06		
Bevel tool double	30	127	5	943 709 060	43-709-06		
Bevel tool inside	37.5	79.4	3.125	943 703 050	43-703-05		
Bevel tool outside	37.5	79.4	3.125	943 708 050	43-708-05		
Bevel tool double	37.5	79.4	3.125	943 710 050	43-710-05		
Bevel tool inside	37.5	127	5	953 703 000	53-703-00		
Bevel tool outside (replaces 953 707 000)	37.5	127	5	943 708 060	43-708-06		
Bevel tool double (replaces 953 708 000)	37.5	127	5	943 710 060	43-710-06		
Customized tools		Width		Length stock		Code	WACHS Ref.-no.
		[mm]	[inch]	[mm]	[inch]		
Custom bevel tool bit single angle (HSS)		19.05	3/4	87.3	3.438	on request	60-SPT-01
Custom bevel tool bit single angle outside (HSS)		38.1	1 1/2	87.3	3.438	on request	60-SPT-03
Custom bevel tool bit double (HSS)		38.1	1 1/2	87.3	3.438	on request	60-SPT-05
Custom bevel tool bit single angle (HSS)		19.05	3/4	127	5	on request	60-SPT-02
Custom bevel tool bit single angle outside (HSS)		38.1	1 1/2	127	5	on request	60-SPT-04
Custom bevel tool bit double (HSS)		38.1	1 1/2	127	5	on request	60-SPT-06

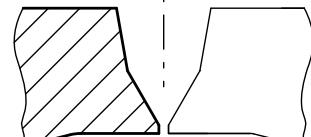
Compound bevel tooling

Please specify when ordering customized tools:

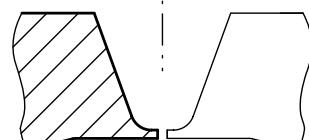
OD, wall, primary angle, secondary angle, land, land extenstion, transition, radius.

Article	Bevel angle		Length		Code	WACHS Ref.-no.		
	[°]	[mm]	[mm]	[inch]				
Bevel tool inside.	10 x 37.5	101.6	4	943 712 010	43-712-01			
Bevel tool outside.	10 x 37.5	101.6	4	943 712 020	43-712-02			
Bevel tool inside. Max. wall. 31.75 mm (1 1/4") or 30 mm (1.188") when used with parting slides 960 416 000 or 960 437 000.	10 x 37.5	127	5	953 705 000	53-705-00			
Bevel tool inside. Max. wall. 54 mm (2.125").	10 x 30	127	5	953 704 000	53-704-00			
Customized tools	Width		Length stock		Code	WACHS Ref.-no.		
	[mm]	[inch]	[mm]	[inch]				
Custom bevel tool bit compound (HSS).	19.05	3/4	127	5	on request	60-SPT-07		
Custom bevel tool bit single angle "J" (HSS).	19.05	3/4	127	5	on request	60-SPT-08		
Custom bevel tool bit compound angle "J" (HSS).	19.05	3/4	127	5	on request	60-SPT-09		

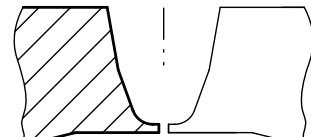
Compound Bevel



J- Bevel



Compound J- Bevel



Counterbore tooling

Please specify when ordering customized tools:

OD, wall, finished bore, depth, lead-in angle, marking.

Article	Code	WACHS Ref.-no.		
Counterbore tool (4:1 taper). For use with WACHS LCSF/3 machines.	960 700 040	60-700-04		
Customized tools Custom counterbore tool bit (HSS). For LCSF 204/3 to LCSF 1420/3 counterbore slide 6.35 x 31.75 mm (1/4" x 1 1/4") stock.	on request	60-SPT-14		



Compound tool



J-bevel tool

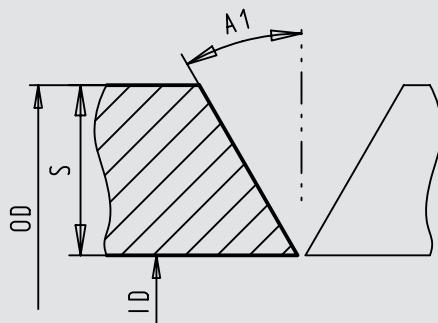


Counterbore tool taper 4:1 (960 700 040)

Pipe Cutting and Beveling Machines LCSF

Overview tooling

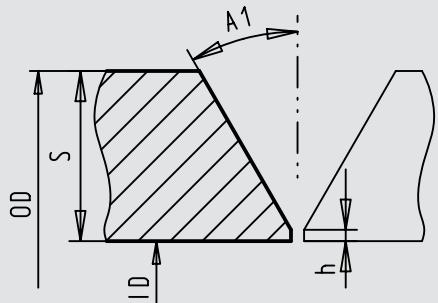
Please specify when ordering customized tools:



Required:

OD:
(ID):
S:
A1:

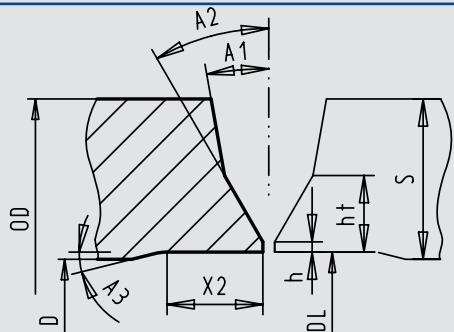
V-Seam



Required:

OD:
(ID):
S:
A1:
h:

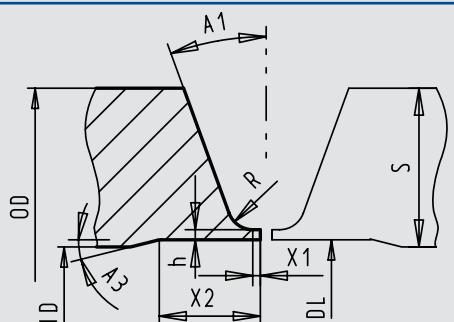
Y-Seam



Required:

OD: h:
(ID): ht:
S: X2:
A1: A3:
A2: DI:

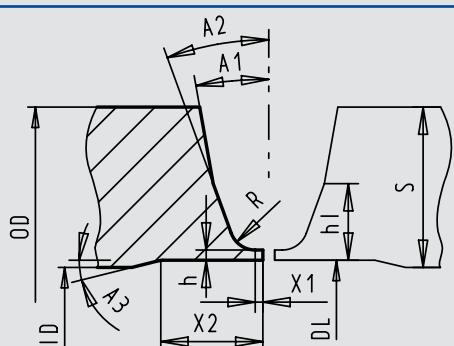
Compound Bevel



Required:

OD: h:
(ID): X2:
S: A3:
A1: DI:
R: X1:

J-Bevel



Required:

OD: h:
(ID): ht:
S: X2:
A1: A3:
A2: DI:
R: X1:

Compound J-Bevel



E.H. WACHS®

Superior Equipment. Complete Support.™

Designed for large and very large diameter pipes and vessels.



Four standard LDSF sizes cover a range of 60" to 120" (DN1500-3000) OD with a 15" (381 mm) capacity between sizes.



LDSF splits into quadrants for ease of transport, setup and storage.



Designed to split into quadrants without sacrificing rigidity, swing bolts and a ratcheting hinge mechanism speeds assembly and mounting.



LDSF is standard with dual hydraulic drive motors and dual pinion housings to ensure long life and smooth power for big jobs.

Pipe Cutting and Beveling Machines LDSF

(17)



NEW

LDSF Split Frame

Mobile and splitable Pipe Cutting and Beveling Machines (low range)

E.H. WACHS LDSF Large Diameter Split Frame is designed for cold cutting, beveling, facing and counterboring on large diameter pipes, vessels and flanges. It's been engineered to incorporate multiple advancements designed to make it stronger, faster to set up, faster to operate and even more versatile than our class leading HDSF models. Picking up where our midsize split frames leave off, four standard LDSF sizes will cover a range from 60" to 120" OD (DN1500-DN3000). Each machine covers a 15" (381 mm) diameter range and will simultaneously cut and bevel most wall thicknesses and materials.

- All new design for large and very large diameter pipes and vessels
- Four standard LDSF sizes cover a 60" to 120" OD range (DN1500-3000)
- 15" (381 mm) diameter range between the four standard LDSF models
- Splits into quadrants for easier storage, transport and set-up
- All steel construction for durability and rigidity
- Common size, fully captivated fasteners used throughout
- Quick release, adjustable height setup legs, 3 per quadrant
- Self squaring mounting system features axially adjustable clamping legs with micro adjustment
- Rigging blocks with multi-axial lifting eyes allow horizontal or vertical lifting
- Available remote control trip actuation

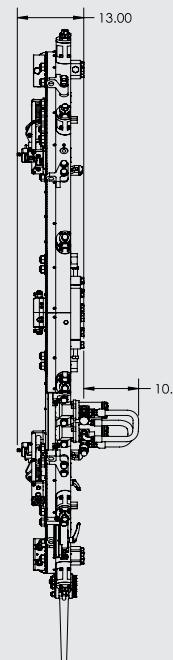
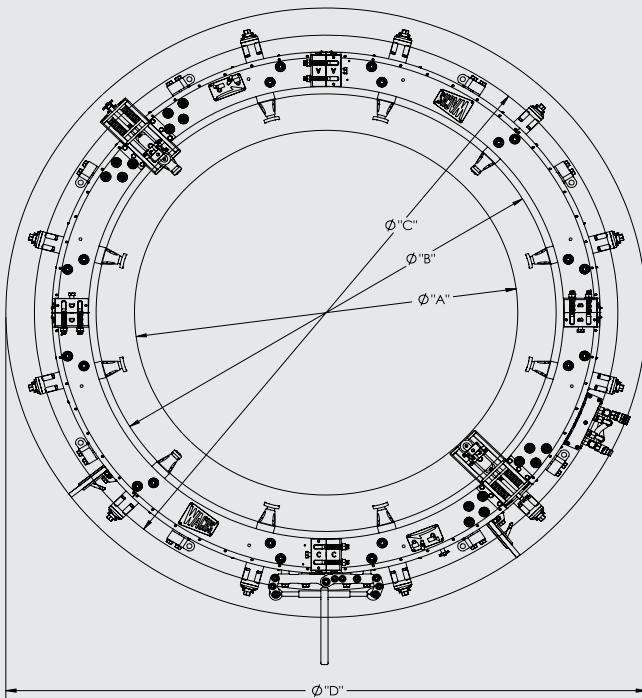
LDSF Large Diameter Split Frame

The internal, full bearing construction contributes to the LDSF's smooth operation and long service life. Spring loaded OD tracking slides for irregularly shaped or out-of-round pipe and vessels are standard, and allow the tooling to maintain continuous contact, producing precision weld preps with consistent lands. A new patent pending CRBM Counterboring and Reverse Bevel module counterbores in vertical orientation, and reverse bevels in angled orientation. The LDSF takes corrosion protection to a new level with virtually every surface treated. Its attractive red powder coated finish proudly reflects E.H. WACHS famous red and black corporate colors.

Additional Features:

- Reinforcing stiffener blocks at the split lines offer increased rigidity
- Hinged open/close mechanism to simplify machine mounting
- Frame fastening swing bolts holds ring frames in place during assembly
- Dual hydraulic drive motors require less clearance than one large motor
- Drive motors utilize WACHS new universal quick mount drive assembly
- Fully adjustable mounting legs replace traditional bolt on spacer feet
- Legs offer both ID and OD clamping options
- Optional Counterboring module for perpendicular and angled counterbores
- Designed to use a minimum number of hand tools
- New trip design with breakaway trip mount helps prevent crashes

Specifications	LDSF 75	LDSF 90	LDSF 105	LDSF 120
Machine capacity range (Nominal Pipe Size)	[mm] DN 1500 - 1875 [inch] 60 - 75	[mm] DN 1875 - 2250 [inch] 75 - 90	[mm] DN 2250 - 2625 [inch] 90 - 105	[mm] DN 2625 - 3000 [inch] 105 - 120
Dimension "C" pinion clearance	[mm] 2216.2 [inch] 87.25	2597.2 102.25	2978.2 117.25	3535.35 135.25
Dimension "D" slide clearance	[mm] 2355.9 [inch] 92.75	2736.9 107.75	3117.9 122.75	3498.9 137.75
Machine height	[mm] 330.2* [inch] 13*	330.2* 13*	330.2* 13*	330.2* 13*
Hydraulic motor height	[mm] 271.8** [inch] 10.7**	271.8** 10.7**	271.8** 10.7**	271.8** 10.7**



The LDSF includes heavy duty O.D. tracking slides to compensate for out of round pipe and vessels and setup



All new trip design features a breakaway mount to prevent frame damage. Remote control feed trip is optional



Optional patent pending counterbore and reverse beveling module bolts to tracking slides to deliver perfect preps

System function	Split Frame machine tool designed to part, bevel and counterbore large diameter pipes and vessels.
System capacity	Machines large diameter pipes and vessels from 60" to 120" OD (DN 1500 - 3000), varies by model number.
Drive options	Hydraulic
Cutting tool surface speed	Adjustable, 60 surface ft/min (18.28 m/min)
Hydraulic power requirements	14 gpm at 1800 PSI (53 lpm at 124 bar)
Feed method	Positive mechanical starwheel
Feed rate	Fixed trip rate .0030" (.0762 mm) per trip
Construction	<ul style="list-style-type: none"> • Alloy steel stationary and rotating rings • Alloy mounting legs • High capacity bearings • Dual heavy duty pinion housings • Ratcheting hinge mechanism • Powder coated corrosion resistant finish
Standard equipment	<ul style="list-style-type: none"> • Dual hydraulic drive motors • Heavy duty OD tracking tool slides • Breakaway single trip assembly • Lifting hooks for vertical or horizontal mounting • Ratcheting mechanism for hinging assembled machine open and closed • Self squaring mounting system with axially adjustable clamping legs • Sealed dual pinion housings • Custom wood storage case and quadrant end protectors • Operating hand tools and manual
Optional equipment	<ul style="list-style-type: none"> • Counterbore and Reverse Bevel Module • Cantilever Tool Slide • Remote Control Kit • Genuine Wachs Tooling

* Reduction of available envelope is possible by removing stiffening blocks.

** Standard drive motor configuration. Reduced clearance options available.

Article	Version	Code	WACHS Ref.-no.		
LDSF 75	Hydraulic	on request	-		
LDSF 90	Hydraulic	on request	-		
LDSF 105	Hydraulic	on request	-		
LDSF 120	Hydraulic	on request	-		

Pipe Cutting and Beveling Machines LDSF

(19)



WACHS E.H.WACHS®
Superior Equipment. Complete Support.™

Optimized for low-clearance environments.



Axial slide for socket weld removal.



Wheel Cutting Module for FME cutting.



Counterbore attachment fits all models. Mounts securely to tool slide.



Drive pinion housing.

(20)

Pipe Cutting and Beveling Machines SDSF

Mobile and splitable Pipe Cutting and Beveling Machines (low range)

- SDSF quickly splits open to mount around the OD of inline pipe
- Machines carbon steel, stainless steel and alloys, e.g. Hastelloy™, Inconel™ and other high-performance materials
- Cuts and bevels up to 11.1 mm (0.438") wall thickness
- Low clearance design requires minimal space for setup and operation
- Self-squaring pipe clamping system, using either collets or integrated, close tolerance legs with wide feet stability
- Low friction adjustable bearing system provides maximum stability and extended machine life
- Fully enclosed bearing and drive gear system for operational safety
- Infinite motor positioning
- Modular tool slides
- Lever type trip actuation for safety
- Spring loaded axial trip for crash resistance
- Improved radial trip geometry for crash resistance and durability
- Improved bearing adjustment design
- Improved durability in pinion gear bearing arrangement
- Easier assembly and disassembly of frame halves
- Improved sealing for chip exclusion
- Captive fasteners used for all accessories
- Reduced fastener count for simplified inventory. Only 3 hex wrench sizes required to operate machine
- All pipes DN 15 - 150 (1" - 6") can mount, depending on sizes, using collets or clamp feet



SDSF Split Frame



SDSF Small Diameter Split Frame

E.H. WACHS® SDSF Small Diameter Split Frames are the smallest and most compact member of the WACHS split frame family and are designed for cutting, beveling and counterboring pipe and tubing from OD DN 15 - 150 (0.5" - 6"). Like all WACHS split frame, clamshell style machines the SDSF is designed to "split" in half to fit over inline pipe, or can be slipped closed over open ended pipe. Six models are available in 25.4 mm (1") increments, with additional sizes available by special order.

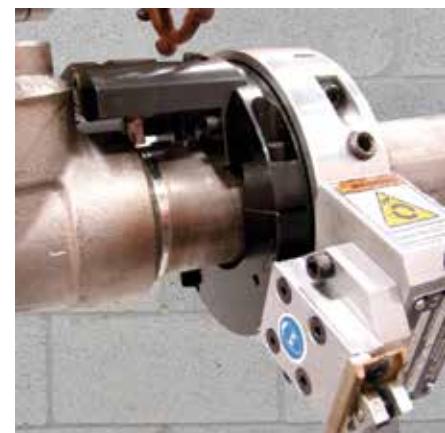
Small size, big capabilities

The SDSF is ideal anywhere pipe and tube are arrayed in tight places and finds many uses in power generation, oil and gas and the shipbuilding industries. The SDSF operates on air or electric power using standard WACHS motors and adaptors and is part of a complete system that includes a broad range of tool slides and accessories for maximum versatility. As with all E.H. WACHS products, the Small Diameter Split Frame is built with WACHS legendary quality and durability for years of reliable service.

The SDSF, like all WACHS split frames, is designed to simultaneously cut and bevel pipe and tube with WACHS parting and beveling tool slides. It's also the basis of WACHS specialized Socket Weld Removal kits, in both axial and radial configurations. The FME (Foreign Material Exclusion) chipless cutting module makes the SDSF the perfect split frame for the high purity market. So while the SDSF is WACHS smallest split frame, it's big in capabilities.

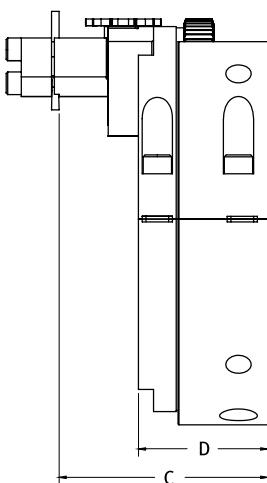
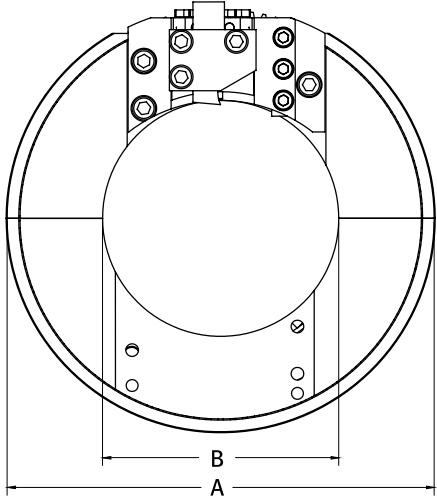
Socket weld removal

SDSF split frames are the building block of WACHS socket weld removal machines. They're designed to remove couplers and elbows from existing piping systems by machining away the weld material that joins them. This is done without sacrificing the base material – a



Pipe Cutting and Beveling Machines SDSF

21



vital consideration in the repair or modification of complex process systems. These machines are all new designs incorporating all that we've learned from years of socket weld removal experience. They're the easiest to use and most productive socket weld removal machines offered anywhere.

Foreign material exclusion (FME)

WACHS FME (Foreign Material Exclusion) is a chipless wheel cutting module designed for use with the SDSF. FME is critical in high purity and process applications where the introduction of chip debris cannot be tolerated. Examples include the food, dairy and pharmaceutical industries and the highly disciplined and controlled power generation field.

Specifications	SDSF 1.0	SDSF 2.0	SDSF 3.0	SDSF 4.0	SDSF 5.0	SDSF 6.0
Machine capacity OD	The machine capacity depends on the mounting system and on the operating method. Please contact Orbitalum Tools (tools@orbitalum.com).					
Dimension A [mm]	127	144.5	174.5	198.5	227	252.4
Machine OD [inch]	5.000	5.688	6.871	7.812	8.938	9.938
Dimension B [mm]	39.7	66.7	95.25	120.7	149.3	174.7
Machine ID [inch]	1.562	2.626	3.750	4.750	5.875	6.875
Dimension C [mm]	88.1	88.1	88.1	88.1	88.1	88.1
Parting line [inch]	3.468	3.468	3.468	3.468	3.468	3.468
Dimension D [mm]	64.3	54.7	54.7	54.7	54.7	54.7
Machine thickness [inch]	2.530	2.155	2.155	2.155	2.155	2.155
System function	Part off, bevel and counterbore pipe and tube; radial and axial socket weld removal; wheel cutting					
Cutting tool surface speed	10 m/min, 2" 40 sf/m 4"					
Drive options	Pneumatic or electric					
Air requirements	[m³/min]	1 at 6.2 bar				
	[ft³/min]	35 at 90 psi				
Electrical requirements	230/120 Volt					
Feed method	Star wheel					
Feed rate	Fixed at 0.079 mm (0.0031") per trip					
Construction	Alloy steel					
Tool slide	Radial or axial feed, cut and bevel, counterbore, FME module					
Tool stroke	11.9 mm (0.468")					
Finish	Hard chrome coating					
Tooling	Axial or radial socket weld removal tooling, cut/bevel tooling. High speed steel or carbide					
Packaging	Heavy duty carrying case					
Standard equipment	Self squaring mounting system, pinion housing, heavy duty watertight carrying case, operating hand tools, operating manuals					
Optional equipment	Electric drive, tooling, axial feed tool slide, radial feed tool slide set, bench mount, front drive pinion housing, counterbore attachment, fme tool slide, aluminum collet sets, clamp pads sets, radial socket weld slide					

Add frames, slides, collets or legs, drive, collet nut and spanner wrench for complete machine. See individual ring size accessory listings on the following pages.

SDSF Small Diameter Split Frame kits

For socket weld removal.

Standard equipment	<ul style="list-style-type: none"> Frame assemblies DN 25 and DN 50 (1" and 2") Axial and/or radial feed socket weld removal tool slides DN 25 and DN 50 (1" and 2") Aluminum collets for pipes with Ø: 12.7 / 19.05 / 25.4 / 31.75 / 38.1 / 50.8 mm (0.5" / 0.75" / 1" / 1.25" / 1.5" / 2") Clamp foot and extension leg kit for 50.8 mm (2") frame 1 Air drive Spare fastener kit Storage case Operating hand tools Manual
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* Machine 25.4 (1") is collet only.

Article	Version	Pipe OD		Code	WACHS Ref.-no.		
		[mm]	[inch]				
SDSF Kit "Axial Feed"	Pneumatic	12.7 - 50.8	0.5 - 2	on request	80-0000-AX		
SDSF Kit "Radial Feed"	Pneumatic	12.7 - 50.8	0.5 - 2	on request	80-0000-RA		



Axial slide for socket weld removal



Wheel cutting module for FME cutting



Counterbore attachment fits all models.
Mounts securely to tool slide.

Split Frames

Add slides, collets or legs, drive, collet nut and spanner wrench for complete machine.
See individual ring size accessory listings on the following pages.

Standard equipment:

- Individual Split Frame*
- Pinion housing
- Storage case
- Spare fastener kit
- Hand tools
- Manual

Article	Pipe OD		Code	WACHS Ref.-no.		
	[DN]	[inch]				
SDSF Split Frame 1.0*	25	1	980 400 010	80-4000-10		
SDSF Split Frame 1.5* / **		1.5	980 400 015	80-4000-15		
SDSF Split Frame 2.0	50	2	980 400 020	80-4000-20		
SDSF Split Frame 2.5**		2.5	980 400 025	80-4000-25		
SDSF Split Frame 3.0	80	3	980 400 030	80-4000-30		
SDSF Split Frame 3.5**		3.5	980 400 035	80-4000-35		
SDSF Split Frame 4.0	100	4	980 400 040	80-4000-40		
SDSF Split Frame 5.0**	125	5	980 400 050	80-4000-50		
SDSF Split Frame 6.0**	150	6	980 400 060	80-4000-60		

* Machines 25.4 (1") and 38.1 (1.5") is collet only.

** Special sizes on request.

Pipe Cutting and Beveling Machines SDSF

(23)



Aluminum collet



Collet nut for SDSF



Spanner wrench for SDSF



Radial feed tool slide kit

Aluminum collets and collet accessories

Please specify when ordering customized tools:

Pipe/tube true OD, material (aluminum, delrin, stainless), collet size markings (mm or inch).

Collets require collet nut and spanner wrench when purchased with individual SDSF machine.

Article	Code	WACHS Ref.-no.		
Customized aluminum collets for SDSF 1.0 to SDSF 3.5	on request	–		
Customized aluminum collets for SDSF 4.0 to SDSF 6.0	on request	–		
Collet kit for SDSF 1.0 Includes: <ul style="list-style-type: none">• aluminum collets for pipe OD: 12.7, 19.05, 25.4 mm (0.5", 0.75", 1")• 1 collet nut• 1 spanner wrench	980 520 110	80-5201-10		
Collet kit for SDSF 1.5 Includes: <ul style="list-style-type: none">• aluminum collets for pipe OD: 25.4, 31.75, 38.1 mm (1", 1.25", 1.5")• 1 collet nut• 1 spanner wrench	980 520 115	80-5201-15		
Collet kit for SDSF 2.0 Includes: <ul style="list-style-type: none">• aluminum collets for pipe OD: 31.75, 38.1, 50.8 mm (1.25", 1.5", 2")• 1 collet nut• 1 spanner wrench	980 520 120	80-5201-20		
Collet kit for SDSF 2.5 Includes: <ul style="list-style-type: none">• aluminum collets for pipe OD: 38.1, 50.8, 63.5 mm (1.5", 2", 2.5")• 1 collet nut• 1 spanner wrench	980 520 125	80-5201-25		
Collet kit for SDSF 3.0 Includes: <ul style="list-style-type: none">• aluminum collets for pipe OD: 50.8, 63.5, 76.2 mm (2", 2.5", 3")• 1 collet nut• 1 spanner wrench	980 520 130	80-5201-30		
Collet kit for SDSF 3.5 Includes: <ul style="list-style-type: none">• aluminum collets for pipe OD: 63.5, 76.2, 88.9 mm (2.5", 3", 3.5")• 1 collet nut• 1 spanner wrench	980 520 135	80-5201-35		
Collet kit for SDSF 4.0 Includes: <ul style="list-style-type: none">• aluminum collets for pipe OD: 76.2, 88.9, 101.6 mm (3", 3.5", 4")• 1 collet nut• 1 spanner wrench	980 520 140	80-5201-40		
Collet kit for SDSF 5.0 Includes: <ul style="list-style-type: none">• aluminum collets for pipe OD: 101.6, 127.0 mm (4", 5")• 1 collet nut• 1 spanner wrench	980 520 150	80-5201-50		
Collet kit for SDSF 6.0 Includes: <ul style="list-style-type: none">• aluminum collets for pipe OD: 127.0, 152.4 mm (5", 6")• 1 collet nut• 1 spanner wrench	980 520 160	80-5201-60		
Collet nut for SDSF 1.0	980 000 710	80-0007-10		
Collet nut for SDSF 1.5	980 000 715	80-0007-15		
Collet nut for SDSF 2.0	980 000 720	80-0007-20		
Collet nut for SDSF 2.5	980 000 725	80-0007-25		
Collet nut for SDSF 3.0	980 000 730	80-0007-30		
Collet nut for SDSF 3.5	980 000 735	80-0007-35		
Collet nut for SDSF 4.0	980 000 740	80-0007-40		
Collet nut for SDSF 5.0	980 000 750	80-0007-50		

Article	Code	WACHS Ref.-no.		
Collet nut for SDSF 6.0	980 000 760	80-0007-60		
Spanner wrench for SDSF 1.0 to SDSF 2.5	990 800 780	90-800-78		
Spanner wrench for SDSF 3.0 to SDSF 4.0	990 800 790	90-800-79		
Spanner wrench for SDSF 5.0 to SDSF 6.0	990 800 800	90-800-80		



Axial socket weld removal slide

Used with the SDSF for removal of socket welds, the axial slide requires less radial clearance. The tooling is advanced axially along the pipe to remove the weld material. Also available as a complete axial socket weld removal kit.



Radial Socket Weld Removal Slide

Used with the SDSF for removal of socket welds, the radial slide requires less axial clearance. The tooling is advanced to the pipe center line (radially) to remove the weld material. Also available as a complete Radial Socket Weld Removal Kit.



Universal counterbore tool slide

Designed for perfect counterboring of the pipe or tube inside diameter, the universal counterbore fits all WACHS SDSF ring set. Utilizes a simple and effective hand advance to precisely control the counterbore.

Tool slide and trip assemblies

Article	Code	WACHS Ref.-no.		
Tool slide and trip assemblies for SDSF 1.0				
Radial feed parting tool slide.	980 410 110	80-4101-10		
Radial feed beveling tool slide.	980 410 210	80-4102-10		
Radial feed tool slide trip assembly. For SDSF 1.0 to SDSF 6.0.	980 410 300	80-4103-00		
Radial feed tool slide kit. Includes: <ul style="list-style-type: none">• 1 parting slide• 1 beveling slide• 1 trip assembly	980 510 110	80-5101-10		
Radial feed socket weld removal tool slide.	980 410 010	80-4100-10		
Axial feed socket weld removal tool slide.	980 410 410	80-4104-10		
Axial feed tool slide trip assembly. For SDSF 1.0 to SDSF 6.0.	980 410 500	80-4105-00		
Axial feed tool slide kit. Includes: <ul style="list-style-type: none">• 1 axial slide• 1 trip assembly	980 510 210	80-5102-10		
Universal counterbore slide. For SDSF 1.0 to SDSF 6.0.	980 410 700	80-4107-00		
Tool slide and trip assemblies for SDSF 1.5, SDSF 2.0 and SDSF 2.5				
Radial feed parting tool slide (Standard).	980 410 120	80-4101-20		
Radial feed beveling tool slide (Standard).	980 410 220	80-4102-20		
Radial feed tool slide trip assembly (Standard). For SDSF 1.0 to SDSF 6.0.	980 410 300	80-4103-00		
Radial feed tool slide kit (Standard). Includes: <ul style="list-style-type: none">• 1 parting slide• 1 beveling slide• 1 trip assembly	980 510 120	80-5101-20		
Radial feed socket weld removal tool slide (Standard).	980 410 020	80-4100-20		
Axial feed socket weld removal tool slide (Standard).	980 410 420	80-4104-20		
Axial feed tool slide trip assembly (Standard). For SDSF 1.0 to SDSF 6.0.	980 410 500	80-4105-00		
Axial feed tool slide kit. Includes: <ul style="list-style-type: none">• 1 axial slide• 1 trip assembly	980 510 220	80-5102-20		
Universal counterbore slide (Standard). For SDSF 1.0 to SDSF 6.0.	980 410 700	80-4107-00		
Tool slide and trip assemblies for SDSF 3.0, SDSF 3.5 and SDSF 4.0				
Radial feed parting tool slide (Standard).	980 410 140	80-4101-40		
Radial feed beveling tool slide (Standard).	980 410 240	80-4102-40		
Radial feed tool slide trip assembly (Standard).	980 410 300	80-4103-00		
Radial feed tool slide kit (Standard). Includes: <ul style="list-style-type: none">• 1 parting slide• 1 beveling slide• 1 trip assembly	980 510 140	80-5101-40		
Trip assembly (Standard).	980 410 440	80-4104-40		
Axial feed tool slide trip assembly (Standard). For SDSF 1.0 to SDSF 6.0.	980 410 500	80-4105-00		
Axial feed tool slide kit (Standard). Includes: <ul style="list-style-type: none">• 1 axial slide• 1 trip assembly	980 510 240	80-5102-40		
Universal counterbore slide (Standard). For SDSF 1.0 to SDSF 6.0.	980 410 700	80-4107-00		

Pipe Cutting and Beveling Machines SDSF

Article	Code	WACHS Ref.-no.		
Tool slide and trip assemblies for SDSF 5.0 and SDSF 6.0				
Radial feed parting tool slide (Special).	980 410 160	80-4101-60		
Radial feed beveling tool slide (Special).	980 410 260	80-4102-60		
Radial feed tool slide trip assembly (Standard).	980 410 300	80-4103-00		
For SDSF 1.0 to SDSF 6.0.				
Radial feed tool slide (Special). Includes: • 1 parting slide • 1 beveling slide • 1 trip assembly	980 510 160	80-5101-60		
Axial feed socket weld removal tool slide (Special).	980 410 460	80-4104-60		
Axial feed tool slide trip assembly (Standard). For SDSF 1.0 to SDSF 6.0.	980 410 500	80-4105-00		
Axial feed tool slide kit (Special). Includes: • 1 axial slide • 1 trip assembly	980 510 260	80-5102-60		
FME (foreign material exclusion) slide (Special).	980 410 660	80-4106-60		
FME cutting wheel.	980 005 300	80-0053-00		



Universal right angle air drive motor



Electric motor for SDSF



Clamp foot and extension leg set

Motors and miscellaneous accessories

Article	To utilize with SDSF							Code	WACHS Ref.-no.	
	1.0	1.5	2.0	2.5	3.0	3.5	4.0			
Universal right angle air drive motor.	x	x	x	x	x	x	x	980 400 400	80-4004-00	
Electric motor. For SDSF 120 V - 1500 W	x	x	x	x	x	x	x	900 002 015	-	
Electric motor. For SDSF 230 V - 1500 W	x	x	x	x	x	x	x	900 002 002	-	
Front drive pinion housing assembly.	x							980 400 310	80-4003-10	
Front drive pinion housing assembly.		x						980 400 315	80-4003-15	
Front drive pinion housing assembly.			x					980 400 320	80-4003-20	
Front drive pinion housing assembly.				x				980 400 325	80-4003-25	
Front drive pinion housing assembly.					x			980 400 330	80-4003-30	
Front drive pinion housing assembly.						x		980 400 335	80-4003-35	
Front drive pinion housing assembly.							x	980 400 340	80-4003-40	
Front drive pinion housing assembly.								980 400 350	80-4003-50	
Front drive pinion housing assembly.								980 400 360	80-4003-60	
Universal spare fastener kit.*	x	x	x	x	x	x	x	980 550 000	80-5500-00	
Clamp foot and extension leg set. Includes: • 4 each clamp foot (980 400 100) • 4 each extension legs 7.9 mm (0.31") (980 007 800) • 4 each extension legs 14.2 mm (0.56") (980 007 801)		x	x	x	x	x	x	980 500 100	80-5001-00	
Axial feed tool slide trip assembly.	x	x	x	x	x	x	x	980 400 330	80-4003-30	
Universal manual.	x	x	x	x	x	x	x	980 626 010	80-MAN-01	

* Kit BOM's subject to change based on current production configuration.

Universal tooling

Cutting, bevel, counterbore, radial and axial socket weld removal.

Article	Dimensions		Length		Code	WACHS Ref.-no.		
	[mm]	[inch]	[mm]	[inch]				
Parting Tooling								
Low clearance	3.2 x 12.7	1/8 x 1/2	41.4	1.63	980 700 101	80-7001-01		
Standard	3.2 x 12.7	1/8 x 1/2	54.1	2.13	980 700 102	80-7001-02		
Extended reach	3.2 x 12.7	1/8 x 1/2	66.8	2.63	980 700 103	80-7001-03		
Bevel Tooling								
Standard 37.5°	9.5 x 12.7	3/8 x 1/2	54.1	2.13	952 710 020	52-710-02		
Extended reach 37.5°	9.5 x 12.7	3/8 x 1/2	66.8	2.63	952 710 030	52-710-03		
Extended reach 30°	9.5 x 12.7	3/8 x 1/2	67.8	2.67	952 705 010	52-705-01		
Extended reach 45°	9.5 x 12.7	3/8 x 1/2	67.8	2.67	952 705 030	52-705-03		
Low clearance 37.5°, outside	9.5 x 25.4	3/8 x 1	41.4	1.63	980 700 801	80-7008-01		
Standard 37.5°, outside	9.5 x 25.4	3/8 x 1	54.1	2.13	980 700 802	80-7008-02		
Universal Counterbore Tool								
Counterbore tool taper 4:1 (14°)	—	—	—	—	980 700 301	80-7003-01		
Socket Weld Removal Tooling, Radial Feed								
Standard, radial	—	—	—	—	980 700 601	80-7006-01		
Extended reach, radial	—	—	—	—	980 700 602	80-7006-02		
Low clearance, radial	—	—	—	—	980 700 603	80-7006-03		
Socket Weld Removal Tooling, Axial Feed								
Standard, axial	9.5 x 9.5	3/8 x 3/8	50.8	2.0	980 700 702	80-7007-02		
Standard, HSS tool bit, axial. For single point facing, beveling and flange facing. For use with EP 424, LCSF/3, FF, SWR and SDSF machines.	9.5 x 9.5	3/8 x 3/8			952 701 010	52-701-01		
Standard, axial. Offset dogleg. With 25.4 mm (1") extension.	9.5 x 9.5	3/8 x 3/8	38.1	1.5	952 701 020	52-701-02		
Standard, carbide, axial.	9.5 x 9.5	3/8 x 3/8	25.4	1.0	952 702 010	52-702-01		
Extended reach, axial	9.5 x 9.5	3/8 x 3/8	63.5	2.5	980 700 703	80-7007-03		
Extended reach, axial. Offset dogleg. With 31.8 mm (1 1/4") extension.	9.5 x 9.5	3/8 x 3/8			952 701 030	52-701-03		
FME cutting wheel. For chipless cutting.					980 005 300	80-0053-00		



Parting tooling standard



Bevel tooling extended reach 30°



Counterbore tool taper 4:1



FME cutting wheel

Recommended accessories for SDSF 1.0 to SDSF 6.0

Article	Code	WACHS Ref.-no.		
ATM house.	980 420 200	80-4202-00		
Wrench 11.1 mm (7/16") hex through torque.	990 800 840	90-800-84		
Bevel slide cover assembly. For use with outside bevel tooling.	980 410 800	80-4108-00		

Cutting lubrication

Cutting lubrication "KSS-TOP", see page 33.

Pipe Cutting and Beveling Machines SDSF



E.H.WACHS®

Superior Equipment. Complete Support.™

Safe cold cutting, compact design, easy set-up.



Horizontal and vertical cutting.



Fast and accurate.



Operates anywhere.



All pipe diameter including tanks.

(28)

Portable Milling Machines Trav-L-Cutter

Portable Milling Machines

- Safe cold cutting
- Simultaneously cutting and beveling
- Compact design, easy set-up
- Horizontal and vertical cutting
- Wide dimension range

Trav-L-Cutter

Model E (Pneumatic), Model HE (Hydraulic)

The WACHS Trav-L-Cutter is a portable milling machine capable of cold cutting and beveling simultaneously on all machinable pipe materials, pipe schedules and pipe sizes from 152.4 up to 1829 mm OD (6" up to 72" OD).

Fixed by its own tensioning chain, the Trav-L-Cutter drives itself around the pipe as it machines.

Fast and accurate

WACHS high-performance cutters remove 4.8 mm (3/16") of metal while cutting, leaving the pipe end with a smooth, machined finish. The chain feed system maintains continuous out-of-round compensation while providing constant drive under all conditions for accurate cuts. By using an optional guide track and special guide track wheels, higher accuracy can be maintained. This cutting method facilitates section removal in the field where new sections, pre-cut by the same method, can be easily dropped into place.

Operates anywhere

In pneumatic or hydraulic driven models, the Trav-L-Cutter will operate on horizontal or vertical pipe, in the field or the shop.

All pipe diameter including tanks

Materials such as carbon steel, ductile iron, cast iron and most alloys in all pipe sizes from 152.4 - 1829 mm (6" to 72") can be cold cut and beveled simultaneously.

Hydraulic Trav-L-Cutter

Hydraulic models offer the inherent advantages of a completely sealed and self-lubricating closed loop system. The Model HE is particularly suited to field machining operations under the type of hostile conditions often found on offshore drilling rigs, pipelines and other construction work. Corrosion from constant exposure to salt water can be minimized with a stainless steel accessory package including special bearings, seals and anti-corrosive metal coatings.

Specifications	Trav-L-Cutters
Machining capacity	153 - 1829 mm (6" - 72")
Cutter drive	Pneumatic: 2.9 kW (4 hp) governed air motor coupled with worm gearbox. Hydraulic: As above, with hydraulic motor.
Cutter speed	Pneumatic: Adjustable from 35 - 55 rpm for use on work-hardened alloys. Hydraulic: Adjustable from 0 - 60 rpm.
Feed	Pneumatic: 0.56 kW (3/4 hp) air motor coupled through overload clutch, gearbox and chain reduction to final machine drive sprocket. Hydraulic: 2.9 kW (4 hp) hydraulic motor.
Feed method	Positive, nonslip chain drive
Air requirements	2.8 m ³ /min (100 cfm at 90 psi)
Hydraulic requirements	55 l/min (15 gal/min at 1500 psi)
Work speed	76.2 mm (3") of surface feed per minute, max. Provides cutting time of 1 min/inch of pipe diameter. 254 mm (10") = 10 minutes. Over 12.7 mm (1/2") wall as well as most alloys require reduced feed rate.
Clearance	Radial: 254 - 305 mm (10" - 12") Axial: 508 mm (20")



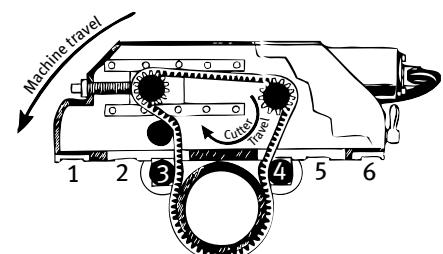
Model E Pneumatic



Model HE Hydraulic



Steel storage case



Portable Milling Machines Trav-L-Cutter

(29)

Specifications	Trav-L-Cutters
Controls (model E and HE)	Cutter on-off, feed on-off, with interlock to prevent machine feed unless cutter is turning, adjustable feed control. Flow control valves (Model HE only). Separate controls provide adjustable spindle speed and cutter speed. Forward/reverse valve governs machine travel direction.
Weight	Operating: 97.5 kg (215 lbs) Shipping: 189.6 kg (418 lbs)
Finish	Paint
Dimensions (LxWxH)	61 cm x 51 cm x 28 cm 24" x 20" x 10.75"
Standard equipment	<ul style="list-style-type: none"> • Twin drive motors (air or hydraulic) • Air line lubricator (air only) • Filter (air only) • Speed control (hydraulic only) • Operating manual and isometric parts list • Operating tools • Spare chain • Connecting pins • Basic mounting chain for 152.4 - 1219.2 mm (6" - 48") dia. pipe • Steel storage case • Reversible feed motor • 6' whip hose without liner (air only)
Optional equipment	<ul style="list-style-type: none"> • Additional chain for any diameter pipe • Additional cutter blades • Guide track and wheels to fit all pipe sizes up to 1829 mm (72") for vertical cutting multiple pass cutting or high accuracy cutting • Long cutter spindle for use with grooving cutters • Corrosion resistant package

Article	Model	Version	Pipe OD		Code	WACHS Ref.-no.		
			[mm]	[inch]				
Trav-L-Cutter	E	Pneumatic	152.4 - 1829*	6 - 72*	902 000 010	02-000-01		
Trav-L-Cutter	HE	Hydraulic	152.4 - 1829*	6 - 72*	902 000 020	02-000-02		

* Standard equipment includes a basic mounting chain for OD 152.4 - 1219.2 mm (6" - 48") only.
Chain assembly for OD 1371.6- 1829 mm (54"- 72") sold separately.

Accessories for Trav-L-Cutters

Saw blades

Article	Made from	Saw blade Ø		Saw blade thickness		For pipe materials		Wall thickness max.		Code	WACHS Ref.-no.		
		[mm]	[inch]	[mm]	[inch]			[mm]	[inch]				
Saw blade	HSS	152.4	6	4.8	3/16	Steel		25.4	1	902 601 000	02-601-00		
Saw blade*	HSS	177.8	7	4.8	3/16	Steel		38.1	1 1/2	902 602 000	02-602-00		
Saw blade**	HSS	177.8	7	7.1	9/32	Steel		38.1	1 1/2	902 603 000	02-603-00		
Saw blade	HSS	203.2	8	4.8	3/16	Steel		54.0	2 1/8	902 604 000	02-604-00		
Saw blade	Diameter carbide tipped	152.4	6	4.8	3/16	Ductile, cast iron		25.4	1	902 605 000	02-605-00		
Saw blade	Diameter carbide tipped	177.8	7	4.8	3/16	Ductile, cast iron		38.1	1 1/2	902 606 000	02-606-00		
Saw blade	Diameter carbide tipped	203.2	8	4.8	3/16	Ductile, cast iron		54.0	2 1/8	902 607 000	02-607-00		
Saw blade	Hi-Grain carbide tipped***	152.4	6	4.8	3/16	Ductile, cast iron, alloys		25.4	1	902 653 010	02-653-01		
Saw blade	Hi-Grain carbide tipped***	177.8	7	4.8	3/16	Ductile, cast iron		38.1	1 1/2	902 653 020	02-653-02		

Bevel cutters

Article	Version	Bevel cutter Ø		Bevel cutter thickness		Beveling angle	Wall thickness max.		Code	WACHS Ref.-no.		
		[mm]	[inch]	[mm]	[inch]		[°]	[mm]	[inch]			
Bevel cutter	Left hand (inside)	127.0	5	12.70	1/2	30	19.05	3/4	902 608 540	02-608-LH		
Bevel cutter	Right hand (outside)	127.0	5	12.70	1/2	30	19.05	3/4	902 608 740	02-608-RH		
Bevel cutter	Left hand (inside)	127.0	5	12.70	1/2	37.5	15.88	5/8	902 609 540	02-609-LH		
Bevel cutter	Right hand (outside)	127.0	5	12.70	1/2	37.5	15.88	5/8	902 609 740	02-609-RH		
Bevel cutter	Left hand (inside)	152.4	6	19.05	3/4	30	25.40	1	902 610 540	02-610-LH		
Bevel cutter	Right hand (outside)	152.4	6	19.05	3/4	30	25.40	1	902 610 740	02-610-RH		
Bevel cutter	Left hand (inside)	152.4	6	19.05	3/4	37.5	22.23	7/8	902 611 540	02-611-LH		
Bevel cutter	Right hand (outside)	152.4	6	19.05	3/4	37.5	22.23	7/8	902 611 740	02-611-RH		

Combination possibilities of saw blades and bevel cutters for Trav-L-Cutters

Example: Cutting and bevelling up to 19.05 mm (3/4") wall thickness:

Article	Version	Blade Ø		Blade thickness		Beveling angle	Wall thickness max.		Code	WACHS Ref.-no.		
		[mm]	[inch]	[mm]	[inch]		[°]	[mm]	[inch]			
Saw blade	HSS	152.4	6	4.8	3/16	–	25.4	1	902 601 000	02-601-00		
Bevel cutter	Left hand (inside)	127.0	5	12.70	1/2	30	19.05	3/4	902 608 540	02-608-LH		
Bevel cutter	Right hand (outside)	127.0	5	12.70	1/2	30	19.05	3/4	902 608 740	02-608-RH		

Example: Cutting and bevelling up to 25.4 mm (1") wall thickness:

Article	Version	Blade Ø		Blade thickness		Beveling angle	Wall thickness max.		Code	WACHS Ref.-no.		
		[mm]	[inch]	[mm]	[inch]		[°]	[mm]	[inch]			
Saw blade**	HSS	177.8	7	7.1	9/32	–	38.1	1 1/2	902 603 000	02-603-00		
Bevel cutter	Left hand (inside)	152.4	6	19.05	3/4	30	25.40	1	902 610 540	02-610-LH		
Bevel cutter	Right hand (outside)	152.4	6	19.05	3/4	30	25.40	1	902 610 740	02-610-RH		
Spacer Kit	3/16, 11/16, 3/4	–	–	–	–	–	–	–	902 500 030	02-500-03		

* For parting only.

** For use with 6" bevel cutter.

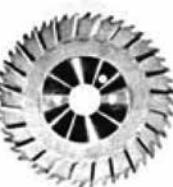
*** Hi-grain carbide is a micrograin carbide with higher strength for tough materials.

Portable Milling Machines Trav-L-Cutter

(31)



Slitting blade



Slitting blade



Bevel cutter



Bevel cutter



Bevel cutter and slitting saw combination

Clamping chains

Article	Pipe OD		Accumulated chain length		Code	WACHS Ref.-no.		
	[mm]	[inch]	[mm]	[inch]				
Clamping chain	– per linear inch –				on request	–		
Chain assembly	152.4 - 1219.2	6 - 48	4394	173	902 450 480	02-450-48		
Chain assembly	1371.6 - 1828.8	54 - 72	1702	67	902 450 720	02-450-72		
Connecting pin					902 158 000	02-158-00		

Guide tracks

Guide tracks require purchase of guide track wheel (Set of two, Code 902 429 000).

Article	[mm]	[inch]	Code	WACHS Ref.-no.		
Guide track assembly	108.3	6	902 428 060	02-428-06		
Guide track assembly	219.1	8	902 428 080	02-428-08		
Guide track assembly	273.1	10	902 428 100	02-428-10		
Guide track assembly	323.9	12	902 428 120	02-428-12		
Guide track assembly	355.6	14	902 428 140	02-428-14		
Guide track assembly	406.4	16	902 428 160	02-428-16		
Guide track assembly	457.2	18	902 428 180	02-428-18		
Guide track assembly	508.0	20	902 428 200	02-428-20		
Guide track assembly	558.8	22	902 428 220	02-428-22		
Guide track assembly	609.6	24	902 428 240	02-428-24		
Guide track assembly	660.4	26	902 428 260	02-428-26		
Guide track assembly	711.2	28	902 428 280	02-428-28		
Guide track assembly	762.0	30	902 428 300	02-428-30		
Guide track assembly	812.8	32	902 428 320	02-428-32		
Guide track assembly	863.6	34	902 428 340	02-428-34		
Guide track assembly	914.4	36	902 428 360	02-428-36		
Guide track assembly	965.2	38	902 428 380	02-428-38		
Guide track assembly	1016.0	40	902 428 400	02-428-40		
Guide track assembly	1066.8	42	902 428 420	02-428-42		
Guide track assembly	1219.2	48	902 428 480	02-428-48		
Guide track assembly	1371.6	54	902 428 540	02-428-54		
Guide track assembly	1524.0	60	902 428 600	02-428-60		
Set of 2 guide track wheels	–	–	902 429 000	02-429-00		
Guide track bolt (2 required per guide track)	–	–	902 209 000	02-209-00		

Miscellaneous accessories and spare parts

Article	Code	WACHS Ref.-no.		
Hydraulic hose set 13.9 m (45 ft 5/8"). Includes 4 sets M/F quick disconnects. For use with WACHS Model HE Trav-L-Cutter.	902 408 000	02-408-00		
Hydraulic female disconnect.	909 025 000	09-025-00		
Hydraulic male disconnect.	909 026 000	09-026-00		
Dust cover, plug-cap.	909 027 000	09-027-00		
Set of 2 guide track wheels.	902 429 000	02-429-00		
Long cutter spindle*	902 073 020	02-073-02		
Spare parts kit.**	902 500 010	02-500-01		
Spare parts kit with air motor (includes both air motors).**	902 500 020	02-500-02		
Spare parts kit for 902 000 040 (atmospheric).**	902 500 040	02-500-04		
Chain connecting pin.	902 158 000	02-158-00		

Article	Code	WACHS Ref.-no.		
Steel wedges.	902 175 000	02-175-00		
Trav-L-Cutter manual. Electronic version via e-mail available free upon request.	902 626 010	02-MAN-01		

* If purchased in place of standard spindle: add \$125.00 to machine price.
 ** Kit BOM's subject to change based on current production configuration.

Hydraulic Power Pack

Hydraulic Power Pack "SafeQuip", see page 59.

Cutting lubrication KSS-TOP

The water soluble, fully synthetic cooling fluid extends the tool life of the tool bits.
 Contains no hazardous substances (no labeling requirements according to GefStoffV1) and is well corrosion resistant. Developed conforming to drinking water requirements according to DVGW work sheet W521 (thread cutting compounds for drinking water installations) and basically complies with these specifications. Is biologically degradable (OECD 302 B).

Article	Version	Code	kg
Cutting lubrication KSS-TOP	Pump sprayer with 500 ml	790 060 226	0.630
Cutting lubrication KSS-TOP refill canister	Canister with 10 l	790 060 227	11.000



Cutting lubrication KSS-TOP

Portable Milling Machines Trav-L-Cutter

(33)



E.H.WACHS®

Superior Equipment. Complete Support.™

Machines perfect preps from OD DN 100 - 600 (4" - 24").



EP 424 application



Auto feed angle generator by
"SpeedPrep"



Hydraulic, Electric or
Pneumatic drive options



Compact flange facer

(34)

Pipe End Preparation Machines EP 424

Pipe End Preparation Machines

- Machines perfect preps from OD DN 100 - 600 (4" - 24")
- Safe cold cutting process, eliminates heat affected zone
- Lathe machining process delivers precise compound bevels and consistent lands
- Speed Prep design feeds automatically in the radial and axial planes
- Hydraulic, Electric or Pneumatic drive options
- EP 424 eliminates the need for accessory templates or external tool slides
- Features fast setup and prep times with quick deploy mandrel legs
- Hardened steel components, large cross section, larger gear sets
- Lightweight yet rigid aluminum housing and mainshaft to enhance portability
- Low friction bearing system provides maximum stability and eliminates chatter

EP 424 Bevelers

The WACHS EP 424 with the patent pending new speed prep feed system is a precision ID mount end prep machine tool designed to bevel, compound bevel, J prep, face and counterbore pipe, fittings and valves. Utilizing WACHS revolutionary new mechanism that feeds simultaneously in the axial and radial planes, it's able to machine any bevel or compound bevel without templates, incline tool slides or work stoppage. The EP 424 is powerful enough to form tool from DN 100 - 350 (4" - 14") and single point from DN 200 - 600 (8" - 24") up to a 165 mm (6.5") wall thickness.

EP 424 design capabilities

- Form tool from pipe OD DN 100 - 350 (4" - 14")
- Single point machining from OD DN 100 - 600 (4" - 24")
- Hardened alloy steel components, larger gear sets for high work loads
- Full roller bearing construction for durability and stability
- Fully enclosed bearings and drive gears for safety and durability
- Corrosion resistant finishes on all components to withstand harsh environments
- Mounts to ID of pipe with easy to use self centering mandrel system
- Fully modular construction for one man set-up and operation
- All new heavy duty design with patent pending Speed Prep feed system

The EP 424 is an all new design featuring WACHS patent pending Speed Prep feed system. Prior to the EP 424, most end prep machines required a mechanical template or incline tool slide to reproduce the specific and complex preps called for by today's processes. With WACHS speed prep system, it's now possible to dial in the exact prep needed for your application. Select the bevel angle and the land that works best for your application, without work stoppages or additional components. More versatile and powerful to use than any other machine of its kind, the WACHS EP 424 sets the standard in user friendly large diameter end prep machines.



EP 424 with Electric Power Drive EPD
(EPD, see on page 55)

Specifications	EP 424
System function	ID mount end prep machine tool designed to bevel, compound bevel, J prep, face and counterbore pipe, fittings and valves
Machine capacity OD [mm] (varies by tooling)	DN 100 - 600
[inch]	4 - 24
Drive options	Hydraulic, pneumatic or electric
Air requirements	[m ³ /min] 2.7 at 6.2 bar [ft ³ /min] 95 at 90 psi
Hydraulic require- ments	[l/min] 30 at 103 bar [gal/min] 8 at 1500 psi
Feed method	Speed prep feed system with dial control or fully manual
Feed rate	Variable feed rate, user adjustable
Feed stroke (axial)	[mm] 71.1 [inch] 2.8
Construction	Lightweight aluminum housing, oversize hardened alloy steel fully enclosed gear sets, high capacity bearings, rigid mandrel legs, captivated hardware
Finish	Multistage bright red enamel finish plus black oxide and clear coated components
Machine rotating speed [rpm]	0 - 14 (variable)

Pipe End Preparation Machines EP 424

35



Specifications		EP 424							
Tooling		Accepts standard WACHS single point beveling and form tools, high speed steel or carbide tooling							
Tool slots		Form tooling or single point tooling							
Packaging		Heavy duty storage case							
Length (without/ with mandrel)	[mm] [inch]	314 / 680 12.35 / 26.75							
Weight		Full modular construction with each module under 31.75 kg (70 lbs), total weight with storage case 71.67 kg (158 lbs)							
Standard equipment		<ul style="list-style-type: none"> • Form tooling • Heavy drive (pneumatic or hydraulic) • Heavy duty storage case • Standard mandrel (depending on machine version) • Extension leg kit (depending on machine version) • Self squaring mounting system (depending on machine version) • Operating hand tools • Operation manual 							
Optional equipment		<ul style="list-style-type: none"> • Flange facing modules for end prep or form tooling applications • Air Control Module "ACM" for pneumatic drive • Interchangeable tooling mounts • Genuine WACHS tooling 							



EP 424	Pneumatic- Drive	Hydraulic- Drive	Form Tooling, rotating head assembly OD 4 - 16	Single Point Slide ID - OD 4.24 - 24	Overview of equipment included		Independent clamping ID 8.5 - 22.6	Speed- Prep	EPD adapter (EPD to add separately)
					ID 3.27 - 15.96	ID 14.87 - 23.64			
981 000 010	X		X		X				
981 000 020		X	X		X				
981 000 030	X		X	X	X	X	X	X	
981 000 040		X	X	X	X	X	X	X	
981 000 050	X		X	X	X	X		X	
981 000 060		X	X	X	X	X		X	
981 000 070			X		X				X
981 000 080				X	X	X	X	X	X
981 000 090				X	X	X	X	X	X



Article	Version	Pipe OD		Code	WACHS Ref.-no.	
		[mm]	[inch]			
EP 424 form tooling	Pneumatic	DN 100 - 400	4 - 16	981 000 010	81-000-01	
EP 424 form tooling	Hydraulic	DN 100 - 400	4 - 16	981 000 020	81-000-02	
EP 424 form tooling***	Electric***	DN 100 - 400	4 - 16	981 000 070	81-000-07	
EP 424 single point tooling*	Pneumatic	DN 100 - 600	4 - 24	981 000 030	81-000-03	
EP 424 single point tooling*	Hydraulic	DN 100 - 600	4 - 24	981 000 040	81-000-04	
EP 424 single point tooling	Electric***	DN 100 - 600	4 - 24	981 000 080	81-000-08	
EP 424 single point tooling**	Pneumatic	DN 100 - 600	4 - 24	981 000 050	81-000-05	
EP 424 single point tooling**	Hydraulic	DN 100 - 600	4 - 24	981 000 060	81-000-06	
EP 424 single point tooling**	Electric***	DN 100 - 600	4 - 24	981 000 090	81-000-09	

* Single point tooling. Includes standard mandrel and selfsquaring mounting system.

** Single point tooling. Includes only standard mandrel.

*** Includes only an adapter for the Electric Power Drive EPD. Add the EPD separately (see page 55).



EP 424 single point speed prep upgrade

Converts form tool model Code 981 000 010 or Code 981 000 020 to single point model.

Standard equipment	<ul style="list-style-type: none"> • Single point radial tool slide for ID 108 mm (4.25") to OD 609.6 mm (24") (165 mm (6.5") slide travel) • "Speed Prep" auto axial feed gear box for bevel generation up to 45° • Chuck leg extensions for ID range 377.7 - 600 mm (14.87" - 23.64") • Self squaring mounting system and extensions for ID range 193-574 mm (7.6"-22.6") • Dial indicator system • Operating hand tools • Storage case • Manual
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Article	Code	WACHS Ref.-no.	
EP 424 single point speed prep upgrade	981 400 000	81-400-00	

Accessories for EP 424

Form tool EP 424 facing tooling

Article	Code	WACHS Ref.-no.		
Facing tool insert holders, axial				
Facing tool insert holder (low range). Includes: <ul style="list-style-type: none">• 1 holder (956 198 010)• 2 insert screws (956 190 000)• 1 wrench (956 191 000)	956 708 010	56-708-01		
Facing tool insert holder (high range). Includes: <ul style="list-style-type: none">• 1 holder (956 198 020)• 2 insert screws (956 190 000)• 1 wrench (956 191 000)	956 708 020	56-708-02		
Inserts for facing and beveling				
Premium grade HSS insert (2 sided). For facing and beveling. For use with all WACHS SDB 206, 412 and EP 424 insert holders.	956 711 010	56-711-01		
Carbide 2 sided insert. For facing and beveling. For use with all WACHS SDB 206 and 412 insert holders.	956 712 010	56-712-01		
Facing insert holder kit for axial facing and beveling 37.5°				
Insert holder kit for axial facing and beveling 37.5°. Includes: <ul style="list-style-type: none">• 1 low range facing insert holder (956 708 010)• 1 high range facing insert holder (956 708 020)• 1 bevel insert holder 37.5° (956 709 030) For WACHS models SDB, SDB 412 and EP 424.	956 710 010	56-710-01		
Screw and wrench				
Screw, insert.	956 190 000	56-190-00		
Insert screw torx wrench.	956 191 000	56-191-00		
Customized tools ground to customer specification (specific code to be assigned upon receipt of order)				
Custom HSS facing tool bit (form tool).	on request	56-SPT-02		
Custom form tool or single point insert holder.	on request	56-SPT-10		



Facing tool insert holder (high range)



Premium grade HSS insert (2 sided)

Form tool EP 424 beveling tooling

Article	Code	WACHS Ref.-no.		
Bevel tool insert holder kits				
Bevel tool insert holder kit 30°. Includes: <ul style="list-style-type: none">• 1 holder (956 199 02)• 2 insert screws (956 190 000)• 1 wrench (956 191 000)	956 709 020	56-709-02		
Bevel tool insert holder kit 37.5°. Includes: <ul style="list-style-type: none">• 1 holder (956 199 030)• 2 insert screws (956 190 000)• 1 wrench (956 191 000)	956 709 030	56-709-03		
"J" bevel tool insert holder kit 20° (low range). Includes: <ul style="list-style-type: none">• 1 holder (956 199 010)• 2 insert screws (956 190 000)• 1 wrench (956 191 000) Use with 956 708 010 facing insert holder for 1 mm (0.040") land extension.	956 709 010	56-709-01		



Bevel tool insert holder kit 30°

Pipe End Preparation Machines EP 424

(37)



Premium grade HSS insert (2 sided)



Counterbore tool taper 4:1 (956 713 000)



Counterbore tool taper 4:1 (960 700 040)



Holder kit counterbore

Article	Code	WACHS Ref.-no.		
"J" bevel tool insert holder kit 20° (high range). Includes: <ul style="list-style-type: none">• 1 holder (956 199 050)• 2 insert screws (956 190 000)• 1 wrench (956 191 00) Use with 956 708 010 facing insert holder for 1 mm (0.040") land extension.	956 709 050	56-709-05		
Insert holder kit. Includes: <ul style="list-style-type: none">• 1 low range facing insert holder (956 708 010)• 1 high range facing insert holder (956 708 020)• 1 bevel insert holder 37.5° (956 709 030) For WACHS models SDB 206, SDB 412 and EP 424.	956 710 010	56-710-01		
Compound bevel form tool 10° x 37.5°	956 707 000	56-707-00		
Inserts for facing and beveling				
Premium grade HSS insert (2 sided). For use with all WACHS SDB 206, 412 and EP 424 insert holders.	956 711 010	56-711-01		
Carbide 2 sided insert. For use with all WACHS SDB 206 and 412 insert holders.	956 712 010	56-712-01		
Premium grade HSS 2 sided 3/32 radius "J" bevel insert. For use with 956 709 010 and 956 709 050 insert holders.	956 711 020	56-711-02		
Carbide 2 sided 3/32 radius "J" bevel insert. For use with 956 709 010 and 956 709 050 insert holders.	956 712 020	56-712-02		
Screw and wrench				
Screw, insert	956 190 000	56-190-00		
Insert screw torx wrench	956 191 000	56-191-00		
Customized tools ground to customer specification (specific code to be assigned upon receipt of order)				
Custom HSS bevel tool bit single angle (form tool).	on request	56-SPT-01		
Custom HSS bevel tool bit compound angle (form tool).	on request	56-SPT-03		
Custom HSS bevel tool bit single angle "J" (form tool).	on request	56-SPT-04		
Custom HSS bevel tool bit compound angle "J" (form tool).	on request	56-SPT-05		

Form tool EP 424 counterbore and ID tooling

Article	Code	WACHS Ref.-no.		
ID deburring tools				
ID deburring tool 10°. 3.81 mm (0.150") required between mandrel and ID.	956 702 010	56-702-01		
ID deburring tool 10°. 11.4 mm (0.449") required between mandrel and ID.	956 702 020	56-702-02		
ID deburring tool 10°. 19.4 mm (0.762") required between mandrel and ID.	956 702 030	56-702-03		
Counterbore tools				
Counterbore tool taper 4:1. 8 mm (0.315") required between mandrel and ID.	956 705 010	56-705-01		
Counterbore tool taper 4:1. 22.2 mm (0.875") required between mandrel and ID.	956 705 020	56-705-02		
Counterbore tool taper 4:1. 35 mm (1.375") required between mandrel and ID.	956 705 030	56-705-03		
Counterbore tool taper 4:1; 9.5 x 9.5 mm (3/8" x 3/8"). Use with single point beveling tool holder Code 956 424 000 and 956 424 010.	956 713 000	56-713-00		
Counterbore tool taper 4:1; SF204/3-SF1420/3	960 700 040	60-700-04		
Holder kit counterbore	956 715 000	56-715-00		
Customized tools ground to customer specification (specific code to be assigned upon receipt of order)				
Custom HSS tool bit ID deburring	on request	56-SPT-06		
Custom HSS tool bit counterboring	on request	56-SPT-07		

Previous EP 424 single point tooling

Article	Code	WACHS Ref.-no.		
Tool holders				
Single point beveling tool holder, low range. For OD 108 - 600 mm (4.25"-23.62") for EP 424. For EP 424, FF313 and FF424.	956 424 000	56-424-00		
Single point beveling tool holder, high range. For OD 184 - 609.6 mm (7.25"-24") for EP 424. For EP 424, FF313 and FF424.	956 424 010	56-424-01		
Tool bit				
Standard HSS tool bit 9.5 x 9.5 mm (3/8" x 3/8"). For single point facing, beveling and flange facing. For use with EP 424, LCSF/3, FF, SWR and SDSF machines.	952 701 010	52-701-01		



Previous Single point beveling tool holder



Previous Standard HSS tool bit 9.5 x 9.5 mm

NEW DuoEdge insert tooling

E.H. WACHS DuoEdge Insert Tooling is a system of portable machine tool holders and inserts designed to replace larger, more expensive traditional single edge tooling. It offers considerable cost savings over traditional tooling without sacrificing the longevity of the cutting edge or the quality of the finished prep.

- Two cutting edges instead of one, for minimal work interruption
- Each cutting edge costs on average one third the cost of a traditional bit
- No need to resharpen tooling, saving time, labor and shipping
- Small size of inserts makes them easy to store or carry in your pocket
- Holders are reusable, inserts are interchangeable between holders
- End prep holder is reversible to a high and low range position
- Precision ground, super smooth surface finish
- Reduced friction for longer life
- Chip curl edge designed to clear swarf
- Eliminates expensive and time consuming resharpening of conventional tooling
- Two cutting edges per insert. Conventional tooling has only one cutting edge per tool.
- Less expensive per cutting edge, on average less than 1/3 the cost of conventional tooling
- Optimal mix of sharpness and durability
- Supplied with R0.5" tool radius for stronger edges and a better finish
- Superior to competitors off the shelf repurposed CNC tooling
- Three insert materials offered, HSS, premium coated HSS and carbide steel



NEW DuoEdge insert tooling:
holders and bits



DuoEdge inserts, 10 pack

Article	Application	Material	Code	WACHS Ref.-no.	
DuoEdge Insert Single Pack	Carbon steel	HSS	981 701 010	81-701-01	
DuoEdge Insert 10-Pack	Carbon steel	HSS	981 701 100	81-701-10	
DuoEdge Premium Single Pack	Stainless steel	HSS Premium	981 701 009	81-701-00P	
DuoEdge Premium 10-Pack	Stainless steel	HSS Premium	981 701 109	81-701-10P	
DuoEdge Insert Single Pack	High-temp alloys	Carbide	981 703 010	81-703-01	
DuoEdge Insert 10-Pack	High-temp alloys	Carbide	981 703 100	81-703-10	
DuoEdge J-Prep Insert Single Pack	R 2.4 mm/.094" J-Prep	HSS	981 704 010	81-704-01	
DuoEdge J-Prep Insert Single Pack	R 3.2 mm/.125" J-Prep	HSS	981 705 010	81-705-01	
DuoEdge J-Prep Insert Single Pack	R 4.8 mm/.188" J-Prep	HSS	981 706 010	81-706-01	
DuoEdge J-Prep Insert Single Pack	R 6 mm/.236" J-Prep	HSS	981 707 010	81-707-01	
LCSF Holder Single Pack	LCSF single point	Heat treated steel	960 718 000	60-718-00	
EP424 Holder Single Pack	End prep single point	Heat treated steel	981 702 000	81-702-00	



LCSF DuoEdge reusable holder

Pipe End Preparation Machines EP 424

Hydraulic Power Pack

Hydraulic Power Pack "SafeQuip", see page 59.

Air Control Module

Air Control Module "ACM", see page 61.

Cutting lubrication

Cutting lubrication "KSS-TOP", see page 33.

(40)

Pipe End Preparation Machines EP 424



E.H. WACHS®

Superior Equipment. Complete Support.™

Fast, easy setup – self centering design.



SDB pipe end preparation or
FF flange preparation



FF 3-jaw independent
"short perch" mandrel or
SDB mandrel principle



SDB-pipe end preparation
form tooling up to OD 323 mm



FF flange preparation
up to OD 610 mm

Pipe End Preparation Machines SDB and FF

41

Pipe End Preparation Machines

- Compact, rugged designs for one man operation
- Self centering ID mandrel assures perfect end preps
- Face, bevel, counterbore
- Convertible to FF series with optional flange facing kit

SDB Small Diameter Bevelers

E.H. WACHS® SDB line of small diameter bevelers have been engineered for fast, precise onsite facing, beveling, compound beveling and counterboring of light and heavy wall pipe, tube or casing. Proven workhorses, they set up quickly with a self centering mandrel and chuck assembly mounting to the pipe ID. Their highly productive design means one person can set up, operate and create a perfect weld prep in minutes.

SDB 103/3 handheld beveling machine delivers maximum power and performance for fast, accurate weld preps on pipe and tube from ID 22.2 mm (0.875") to OD 114.3 mm (4.5") and flanges ID 50.8 mm (2") to OD 152.4 mm (6"). Face, bevel and counterbore simultaneously on carbon, stainless and high alloy steels. Extremely versatile, the SDB 103 allows you to machine boiler tubes, heavy wall pipe, thick wall tubing, prep elbows and (with optional FF kit) face flanges.

SDB 206/2 makes fast work of end preps on pipe and tube from ID 48.5 mm (1.91") to OD 168.3 mm (6.625") and flanges from ID 76.2 mm (3") to OD 330.2 mm (13") The SDB 206 is a compact, lightweight design which requires only 57 mm (2.25") of radial clearance – making it the ideal tool for use in tight places. No other machine of this type can perform as many different jobs: face, bevel, counterbore (simultaneously if desired), compound bevel and (with optional FF kit) face flanges.

The **SDB 412/2** is a portable pipe end prep machine designed to face, bevel, counterbore (simultaneously) and compound bevel ID 96.5 mm (3.80") to OD 323.9 mm (12.75") pipe, up to 29 mm (1.125") wall thickness and (with optional FF kit) face flanges ID 101.6 mm (4") to OD 609.6 mm (24"). The heavy duty yet compact design of the SDB 412 requires minimal operating clearances and ease of handling, setup and operation.

Specifications	SDB 103/3	SDB 206/2	SDB 412/2
Machine capacity	22.2 - 114.0 mm 0.875" - 4.500"	48.5 - 168.0 mm 1.910" - 6.625"	96.5 - 323.9 mm 3.800" - 12.750"
Standard equipment	<ul style="list-style-type: none">• Heavy duty drive (air or electric)• Standard mandrel ID 29.5 - 106 mm (1.16" - 4.18")• 7 sets of leg extensions• Operating hand tools• Watertight storage case• Manual	<ul style="list-style-type: none">• Heavy duty drive (air, electric or hydraulic)• Standard mandrel ID 57.7 - 167 mm (2.27" - 6.58")• 10 sets of leg extensions• Operating hand tools• Watertight storage case• Manual	<ul style="list-style-type: none">• Heavy duty drive (air, electric or hydraulic)• Standard mandrel ID 96.5 - 305 mm (3.80" - 12.02")• 8 sets of leg extensions• Operating hand tools• Watertight storage case• Manual
Shipping weight (est.)	18 kg 40 lbs	52 kg 115 lbs	140 kg 308 lbs
Shipping dimensions (est., without accessories)	635 x 558.8 x 228.6 mm 25" x 22" x 9"	305 x 813 x 533 mm 12" x 32" x 21"	635 x 1.194 x 457 mm 25" x 47" x 18"

Article	Version	Pipe ID to OD		Code	WACHS Ref.-no.		
		[mm]	[inch]				
SDB 103/3	Pneumatic	22.2 - 114.0	0.875 - 4.500	916 000 010	16-000-01		
SDB 103/3	Electric 110 V, 50 Hz	22.2 - 114.0	0.875 - 4.500	916 000 020	16-000-02		
SDB 103/3	Electric 220 V, 50 Hz	22.2 - 114.0	0.875 - 4.500	916 000 030	16-000-03		
SDB 206/2	Pneumatic	48.5 - 168.0	1.910 - 6.625	956 000 010	56-000-01		
SDB 206/2	Electric 110 V, 50 Hz	48.5 - 168.0	1.910 - 6.625	956 000 020	56-000-02		
SDB 206/2	Electric 220 V, 50 Hz	48.5 - 168.0	1.910 - 6.625	956 000 040	56-000-04		
SDB 206/2	Hydraulic	48.5 - 168.0	1.910 - 6.625	956 000 030	56-000-03		
SDB 412/2	Pneumatic	96.5 - 323.9	3.800 - 12.750	966 000 010	66-000-01		
SDB 412/2	Hydraulic	96.5 - 323.9	3.800 - 12.750	966 000 030	66-000-03		
SDB 412/2	Electric 220 V, 50 Hz	96.5 - 323.9	3.800 - 12.750	966 000 020	-		

Hydraulic Power Pack

Hydraulic Power Pack "SafeQuip", see page 59.

Air Control Module

Air Control Module "ACM", see page 61.

Cutting lubrication

Cutting lubrication "KSS-TOP", see page 33.

Pipe End Preparation Machines SDB and FF

(43)

Pipe End Preparation Machines

- Fast, easy setup – self centering design
- Simple operation, light-weight and compact
- Record groove, RMS 500, 250, 125
- Convertible to SDB series with optional SDB conversion kit



FF Flange Facer



FF Flange Facing Machines

Now anyone can produce a lathe quality surface finish on flat, raised or recessed face flanges in minutes. Based on the powerful WACHS SDB series ID mount end prep machines, the WACHS FF series flange facers offer a rugged yet lightweight and compact design that allows them to fit into tight quarters. With the addition of the SDB conversion kit, the FF models can be converted into SDB series machines, allowing them to face, bevel, compound bevel and counterbore.

WACHS FF series flange facers are based on the powerful and versatile SDB series of bevelers. Simple to operate, they mount to the pipe ID and are self centering. Specify the SDB conversion kit to add beveling, facing and counterboring capabilities.

Model FF 206: Flange facing machine for facing flat, raised or recessed face flanges from ID 50.8 mm (2") through OD 152.4 mm (6") up to a DN50 (2") 150# flange.

Model FF 313: Flange facing machine for facing flat, raised or recessed face flanges from ID 76.2 mm (3") through OD 320.2 mm (13") up to a DN150 (6") 400# flange.

Model FF 424: Flange facing machine for facing flat, raised or recessed face flanges from ID 101.6 mm (4") through OD 609.6 mm (24") up to a DN400 (16") flange.

Specifications	FF 206	FF 313	FF 424
Machine capacity (pipe ID to OD)	50.8 - 152.4 mm 2" - 6"	76.2 - 330.2 mm 3" - 13"	101.6 - 609.6 mm 4" - 24"
Standard equipment	<ul style="list-style-type: none">• Heavy duty drive (air or electric)• 3-jaw independent "short perch" mandrel ID 49.5 - 104.4 mm (1.95" - 4.11")• 7 sets of leg extensions• Single point flange facing tool slide• Tooling package• Watertight storage case• Operating hand tools• Manual	<ul style="list-style-type: none">• Heavy duty drive (air, electric or hydraulic)• 3-jaw independent "short perch" mandrel ID 76.2 - 256 mm (3" - 10.08")• 18 sets of leg extensions• Single point flange facing tool slide• Tooling package• Watertight storage case• Operating hand tools• Manual	<ul style="list-style-type: none">• Heavy duty drive (air, electric or hydraulic)• 3-jaw independent "short perch" mandrel ID 96 - 508 mm (3.78" - 20")• 23 sets of leg extensions• Single point flange facing tool slide• Tooling package• Watertight storage case• Operating hand tools• Manual
Shipping weight (est.)	21.3 kg 47 lbs	82 kg 180 lbs	
Shipping dimensions (est., without accessories)	635 x 559 x 229 mm 25" x 22" x 9"	305 x 813 x 305 mm 12" x 32" x 12"	

Article	Version	Pipe ID to OD		Code	WACHS Ref.-no.	
		[mm]	[inch]			
FF 206	Pneumatic	50.8 - 152.4	2 - 6	916 000 330	16-000-FF	
FF 206	Electric 110 V, 50 Hz	50.8 - 152.4	2 - 6	on request	on request	
FF 206	Electric 220 V, 50 Hz	50.8 - 152.4	2 - 6	on request	on request	
FF 313	Pneumatic	76.2 - 330.2	3 - 13	956 000 330	56-000-FF	
FF 313	Electric 110 V, 50 Hz	76.2 - 330.2	3 - 13	on request	on request	
FF 313	Electric 220 V, 50 Hz	76.2 - 330.2	3 - 13	on request	on request	
FF 424	Hydraulic	76.2 - 330.2	3 - 13	on request	on request	
FF 424	Pneumatic	101.6 - 609.6	4 - 24	966 000 330	66-000-FF	
FF 424	Electric 110 V, 50 Hz	101.6 - 609.6	4 - 24	on request	on request	
FF 424	Electric 220 V, 50 Hz	101.6 - 609.6	4 - 24	on request	on request	
FF 424	Hydraulic	101.6 - 609.6	4 - 24	966 000 340	66-000-FH	
FF 424	SDB 412/2 + FF 424 (Set)	101.6 - 609.6	4 - 24	966 000 040	66-000-04	

Conversion kits SDB/FF

Article	Code	WACHS Ref.-no.		
Conversion kits for WACHS model SDB 103/3				
Beveler conversion kit. Converts FF 206 to WACHS model SDB 103/3 portable pipe and tube prepping machine to face, bevel, compound bevel and counterbore pipes with Ø 25.4 - 101.6 mm (1"- 4"). Includes: <ul style="list-style-type: none">• 1 standard rotating head• 1 standard mandrel ID 29.5 - 106 mm (1.16" - 4.18")• 7 sets of leg extensions• 1 wiper felt• Fasteners	916 420 000	16-420-00		
Flange facer conversion kit. Converts SDB 103/3 to WACHS model FF 206 flange facing machine for flanges ID 50.8 mm (2") to OD 152.4 mm (6"). Includes: <ul style="list-style-type: none">• 1 single point flange facing tool slide• 1 independent "short perch" mandrel• 7 sets of leg extensions ID 49.5 - 104.4 mm (1.95" - 4.11")	916 421 000	16-421-00		
Conversion kits for WACHS model SDB 206/2				
Flange facer conversion kit. Converts model SDB 206/2 to WACHS model FF 313 flange facing machine. For flanges with ID 76.2 mm (3") to OD 330 mm (13"). Includes: <ul style="list-style-type: none">• 1 single point flange facing tool slide• 3-jaw independent "short perch" mandrel• 18 sets of leg extensions ID 76.2 - 256 mm (3.00" - 10.08")	956 421 000	56-421-00		
Conversion kit FF 313 to SDB 206/6.	956 420 000	56-420-00		
Conversion kits for WACHS model SDB 412/2				
Beveler conversion kit. Converts WACHS model FF 424 to WACHS model SDB 412/2 portable pipe and tube prepping machine to face, bevel, compound bevel and counterbore pipes with Ø 102 - 305 mm (4" - 12"). Includes: <ul style="list-style-type: none">• 1 standard rotating head• 1 standard mandrel ID 96.5 - 305 mm (3.8" - 12.02")• 8 sets of leg extensions• 1 wiper felt• fasteners	966 420 000	66-420-00		
Flange facer conversion kit. Converts WACHS model SDB 412/2 to WACHS model FF 424 flange facing machine. For flanges with ID 101.6 (4") to OD 609.6 mm (24"). Includes: <ul style="list-style-type: none">• 1 single point flange facing tool slide• 3-jaw independent "short perch" mandrel• 23 sets of leg extensions ID 96 - 508 mm (3.78" - 20")	966 421 000	66-421-00		

Pipe End Preparation Machines SDB and FF

Accessories for SDB and FF

Mandrels

Article	Code	WACHS Ref.-no.		
Mandrels and accessories for WACHS model SDB 103/3				
Standard mandrel. For ID 29.5 - 106 mm (1.16" - 4.18"). Without leg extension sets.	916 303 000	16-303-00		
Standard mandrel. For ID 29.5 - 106 mm (1.16" - 4.18"). Includes 7 sets of leg extensions.	916 409 000	16-409-00		
3-jaw independent "short perch" mandrel. For ID 49.5 - 104 mm (1.95" - 4.11"). Includes 7 sets of leg extensions. Minimum 3/4" straight run required. To rigid mount on fittings, flanges, elbows and valves.	916 414 000	16-414-00		
Small ID accessory mandrel. For ID 22 - 31.75 mm (0.875" - 1.25"). Includes: <ul style="list-style-type: none">• 1 rotating head 79.5 mm (3.13").• 4 x 6.35 mm (1/4") shank style tool slots.• 2 sets of leg extensions for ID mounting ranges: 22 - 28.6 mm (0.875" - 1.125") and 25.4 - 31.75 mm (1" - 1.25")• 1 mandrel• 1 draw bar nut• 1 drawbar• Fasteners	916 401 000	16-401-00		
Mandrels and accessories for WACHS model SDB 206/2				
Standard mandrel "new style 2009". For ID 58 - 74 mm (2.27" - 2.92"). Without leg extension sets.	956 430 010	56-430-01		
Standard mandrel "new style 2009". For ID 58 - 172 mm (2.27" - 6.77"). Includes 7 sets of leg extensions (Code 956 430 020).	956 430 000	56-430-00		
Standard range leg extension kit For standard mandrel "new style 2009" (Code 956 430 010). For ID 70 - 172 mm (2.75" - 6.77").	956 430 020	56-430-02		
Upgrade for obsolete mandrel 956 401 010. Requires return of the 956 401 010 mandrel and the following items to be in good reusable condition to complete the upgrade: <ul style="list-style-type: none">• 956 188 000• 956 035 000• 956 036 000• 956 024 020• 956 025 000 Estimate for repair will be given for any items not acceptable to complete the conversion.	956 310 000	56-310-00		
Small ID accessory mandrel. For ID 48.5 - 62.5 mm (1.91" - 2.46").	956 402 010	56-402-01		
Extender kit "new style 2009" for mandrel 956 430 000. Includes: <ul style="list-style-type: none">• 4 sets of leg extensions for ID 170 - 229.6 mm (6.71" - 9.04")• 1 rotating head (8").	956 407 020	56-407-02		
Small 3-jaw independent "short perch" mandrel. For ID 50.8 - 82.5 mm (2" - 3.25"). Includes 3 sets of leg extensions. To rigid mount on fittings, flanges, elbows and valves.	956 416 010	56-416-01		
3-jaw independent "short perch" mandrel. For ID 76.2 - 154 mm (3" - 6.08"). Includes 8 sets of leg extensions. Minimum 19.05 mm (3/4") straight run required. To rigid mount on fittings, flanges, elbows and valves.	956 414 010	56-414-01		
Extension adaptor hub. For ID 152.4 - 256.5 mm (6" - 10.1"). Includes 10 sets of leg extensions. For 3-jaw independent "short perch" mandrel 956 414 010.	956 415 000	56-415-00		
Single point flange facing tool slide. For flanges with ID 76.2 mm (3") to OD 330 mm (13").	956 404 000	56-404-00		

Article	Code	WACHS Ref.-no.		
Mandrels and accessories for WACHS model SDB 412/2				
Standard mandrel. For ID 96.5 - 305 mm (3.80" - 12.02"). Without leg extension sets.	966 301 010	66-301-01		
Standard mandrel. For ID 96.5 - 305 mm (3.80" - 12.02"). Includes 8 sets of leg extensions.	966 407 010	66-407-01		
3-jaw independent "short perch" mandrel. For ID 95 - 325 mm (3.75" - 12.80"). Includes 13 sets of leg extensions. Minimum 3/4" straight run required. To rigid mount on fittings, flanges, elbows and valves.	966 414 010	66-414-01		
Extension adaptor hub. For ID 323 - 508 mm (12.72" - 20"). Includes 10 sets of leg extensions. For 3-jaw independent "short perch" mandrel 966 414 010.	966 415 000	66-415-00		
Leg set replacement. Includes: • 3 chuck legs (966 084 000) • 1 complete set of extension leg assemblies from 12.7 - 101.6 mm (0.5" - 4")	966 411 000	66-411-00		

Facing/Beveling/Counterboring tools

Article	Code	WACHS Ref.-no.		
Facing/Beveling/Counterboring tools for WACHS model SDB 103/3				
FF Flange facing tool insert holder.	956 714 010	56-714-01		
FF Flange facing tool insert for holder (956 714 010). Carbide.	960 702 000	60-702-00		
Facing tool (non-wedgelock). For ID 29.5 - 76.2 mm (1.16" - 3").	926 410 020	26-410-02		
Facing tool (non-wedgelock). For ID 58.4 - 106 mm (2.3" - 4.18").	926 410 030	26-410-03		
Facing tool (non-wedgelock). Carbide tipped. Max. wall 19.05 mm (0.75").	926 410 040	26-410-04		
Custom HSS facing tool bit (non-wedgelock). Ground to customer specification.	on request	26-SPT-01		
Bevel tool 37.5° (non-wedgelock). For ID 29.5 - 76.2 mm (1.16" - 3").	926 411 010	26-411-01		
Bevel tool 37.5° (non-wedgelock). For ID 58.4 - 106 mm (2.3" - 4.18").	926 411 020	26-411-02		
Bevel tool 37.5° (non-wedgelock). For ID 54.4 - 68.6 mm (2.14" - 2.7").	926 411 030	26-411-03		
Bevel tool carbide 37.5° (non-wedgelock).	926 411 040	26-411-04		
Bevel tool bit 20° "J" 3/32 radius (non-wedgelock). For ID 34.3 - 101.6 mm (1.35" - 4"). Use with facing tool 926 410 020 for 0.76 mm (0.03") land extension.	926 713 000	26-713-00		
Custom HSS single angle bevel tool bit (non-wedgelock). Ground to customer specification.	on request	26-SPT-02		
Custom HSS "J" bevel tool bit (non-wedgelock). Ground to customer specification.	on request	26-SPT-06		
Universal beveling and facing tool 37.5° (non-wedgelock). For ID 38.1 - 76.2 mm (1.5" - 3").	926 413 010	26-413-01		
Universal beveling and facing tool 37.5° (non-wedgelock). For ID 55.9 - 96.5 mm (2.2" - 3.8").	926 413 020	26-413-02		
Custom HSS combination facing and beveling tool bit (non-wedgelock). Ground to customer specification.	on request	26-SPT-04		
Small ID deburring tool (non-wedgelock). 4.7 mm (0.186") required between mandrel and ID.	926 412 010	26-412-01		
Medium ID deburring tool (non-wedgelock). 10.9 mm (0.43") required between mandrel and ID.	926 412 020	26-412-02		
Large ID deburring tool (non-wedgelock). 17.3 mm (0.68") required between mandrel and ID.	926 412 030	26-412-03		
Combo 30° taper counterbore and facing tool (non-wedgelock) 8.3 mm (0.326") required between mandrel and ID.	926 426 000	26-426-00		
Custom HSS ID deburring tool (non-wedgelock). Ground to customer specification.	on request	26-SPT-03		

Pipe End Preparation Machines SDB and FF



Facing tool insert holder (high range)



Premium grade HSS insert (2 sided)



Bevel tool insert holder kit 37.5°

Article	Code	WACHS Ref.-no.		
Custom HSS counterboring tool bit (non-wedgelock). Ground to customer specification.	on request	26-SPT-05		
Facing/Beveling/Counterboring tools for WACHS model SDB 206/2 and SDB 412/2				
Facing tool insert holder (low range). Includes: <ul style="list-style-type: none">• 1 holder (956 198 010)• 2 insert screws (956 190 000)• 1 wrench (956 191 000)	956 708 010	56-708-01		
Facing tool insert holder (high range). Includes: <ul style="list-style-type: none">• 1 holder (956 198 020)• 2 insert screws (956 190 000)• 1 wrench (956 191 000)	956 708 020	56-708-02		
Premium grade HSS insert (2 sided). For facing and beveling. For use with all WACHS SDB 206, SDB 412 and EP 424 insert holders.	956 711 010	56-711-01		
Carbide 2 sided insert. For facing and beveling. For use with all WACHS SDB 206 and SDB 412 insert holders.	956 712 010	56-712-01		
Insert holder kit. Includes: <ul style="list-style-type: none">• 1 low range facing insert holder (956 708 010)• 1 high range facing insert holder (956 708 020)• 1 bevel insert holder 37.5° (956 709 030) For use with all WACHS models SDB 206, SDB 412 and EP 424.	956 710 010	56-710-01		
Custom HSS facing tool bit (form tool). Ground to customer specification.	on request	56-SPT-02		
Custom facing insert holder. Ground to customer specification.	on request	56-SPT-09		
30° bevel tool insert holder kit. Includes: <ul style="list-style-type: none">• 1 holder (956 199 020)• 2 insert screws (956 190 000)• 1 wrench (956 191 000)	956 709 020	56-709-02		
Bevel tool insert holder kit 37.5°. Includes: <ul style="list-style-type: none">• 1 holder (956 199 030)• 2 insert screws (956 190 000)• 1 wrench (956 191 000)	956 709 030	56-709-03		
"J" bevel tool insert holder kit 20° (low range). Includes: <ul style="list-style-type: none">• 1 holder (956 199 010)• 2 insert screws (956 190 000)• 1 wrench (956 191 000) Use with facing insert holder 956 708 010 for 1 mm (0.04") land extension.	956 709 010	56-709-01		
"J" bevel tool insert holder kit 20° (high range). Includes: <ul style="list-style-type: none">• 1 holder (956 199 050)• 2 insert screws (956 190 000)• 1 wrench (956 191 000) Use with facing insert holder 956 708 010 for 1 mm (0.04") land extension.	956 709 050	56-709-05		
Premium grade HSS insert (2 sided). For facing and beveling. For use with all WACHS SDB 206, SDB 412 and EP 424 insert holders.	956 711 010	56-711-01		
Premium grade HSS insert (2 sided) 3/32 radius "J" bevel insert. For use with 956 709 010 and 956 709 050 holders.	956 711 020	56-711-02		
Carbide insert (2 sided). For facing and beveling. For use with all WACHS SDB 206 and SDB 412 insert holders.	956 712 010	56-712-01		
Carbide insert (2 sided) 3/32 radius "J" bevel. For use with 956 709 010 and 956 709 050 insert holders.	956 712 020	56-712-02		
Compound bevel form tool 10° x 37.5°.	956 707 000	56-707-00		
Insert holder kit. Includes: <ul style="list-style-type: none">• 1 low range facing insert holder (956 708 010)• 1 high range facing insert holder (956 708 020)• 1 bevel insert holder 37.5° (956 709 030) For use with WACHS models SDB 206, SDB 412 and EP 424.	956 710 010	56-710-01		
Previous single point beveling tool holder. For EP 424, FF 313 and FF 424, low range. EP 424 for OD 108 - 600 mm (4.25" - 23.62").	956 424 000	56-424-00		
NEW DuoEdge single point tooling, see on page 39.	-	-		

Article	Code	WACHS Ref.-no.		
Previous single point beveling tool holder. For EP 424, FF 313 and FF 424, high range. EP 424 for OD 184 - 609.6 mm (7.25" - 24").	956 424 010	56-424-01		
Custom HSS single angle bevel tool bit (form tool). Ground to customer specification.	on request	56-SPT-01		
Custom HSS compound angle bevel tool bit (form tool). Ground to customer specification.	on request	56-SPT-03		
Custom single angle "J" bevel tool bit (form tool). Ground to customer specification.	on request	56-SPT-04		
Custom HSS compound angle "J" bevel tool bit (form tool). Ground to customer specification.	on request	56-SPT-05		
Custom bevel angle insert holder. Ground to customer specification.	on request	56-SPT-08		
10° ID deburring tool. 3.8 mm (0.15") required between mandrel and ID.	956 702 010	56-702-01		
10° ID deburring tool. 11.4 mm (0.449") required between mandrel and ID.	956 702 020	56-702-02		
10° ID deburring tool. 19.4 mm (0.762") required between mandrel and ID.	956 702 030	56-702-03		
4:1 Taper counterbore tool. 8 mm (0.315") required between mandrel and ID.	956 705 010	56-705-01		
4:1 taper counterbore tool. 22.2 mm (0.875") required between mandrel and ID.	956 705 020	56-705-02		
4:1 taper counterbore tool. 35 mm (1.375") required between mandrel and ID.	956 705 030	56-705-03		
Custom HSS ID deburring tool bit. Ground to customer specification.	on request	56-SPT-06		
Custom HSS counterbore tool bit. Ground to customer specification.	on request	56-SPT-07		



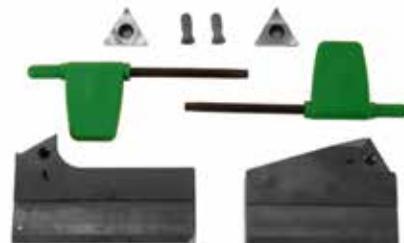
Previous Single point beveling tool holder



Previous Standard HSS tool bit 9.5 x 9.5 mm

Flange facing tools

Article	Code	WACHS Ref.-no.		
Flange facing tools for WACHS model FF 206				
Carbide insert. For beveling and flange facing. For use with insert holder 956 714 010.	960 702 000	60-702-00		
Carbide insert tool holder kit. For single point beveling and flange facing. Includes: <ul style="list-style-type: none">• 1 holder (916 042 000)• 1 flag wrench (956 191 000)• 2 retaining screws (960 231 010)• 5 inserts (960 702 000)	916 701 000	16-701-00		
Flange facing tools for WACHS model FF313 and FF 412				
Flange facing tool kit. Includes: <ul style="list-style-type: none">• 1 low range insert tool holder (956 195 000)• 1 high range insert tool holder (956 194 000)• 2 tool inserts (956 710 000)• 2 insert retaining screws (956 190 000)• 1 screw wrench (956 191 000)	956 418 010	56-418-01		
Tool insert for flange facing (high and low range).	956 710 000	56-710-00		
Custom form tool or single point insert holder. Ground to customer specification.	on request	56-SPT-10		



Flange facing tool kit



Flange facing tool insert

Hydraulic Power Pack

Hydraulic Power Pack "SafeQuip", see page 59.

Pipe End Preparation Machines SDB and FF

Air Control Module

Air Control Module "ACM", see page 61.

Cutting lubrication

Cutting lubrication "KSS-TOP", see page 33.

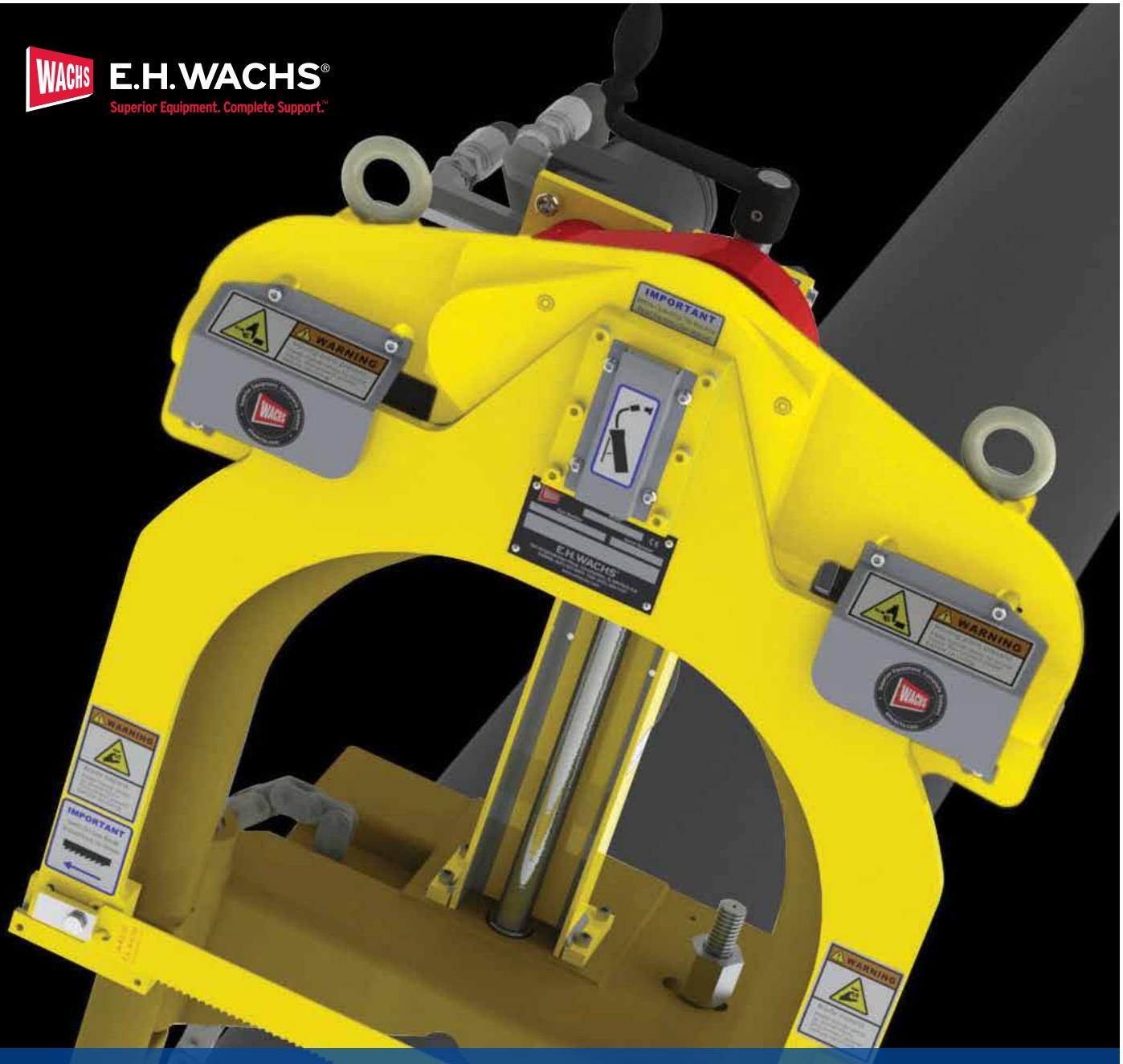
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Pipe End Preparation Machines SDB and FF



E.H. WACHS®

Superior Equipment. Complete Support.™



Fast setup and cutting, both horizontally or vertically.



Easy setup, vertical or horizontal



Quick cold cuts, minimal clearance



Portable, rugged design



Long blade life

Portable Pipe Saws Guillotine

51

Portable Pipe Saws



E.H. WACHS Guillotine

- Rugged yet compact design requires minimal clearances
- Four models cut from DN 50 - 800 (2" - 32")
- Fast setup und cutting, both horizontally or vertically
- Pneumatic, hydraulic and electric drive options
- Optional autofeed and autoclamping on select models

Guillotine

Super C, Model D, Super D, Goliath

E.H. WACHS family of portable Guillotine® pipe saws are designed to cold cut DN 50 - 800 (2" - 32") pipe, as well as solids such as bar stock, rails and beams. Their compact design and easy setup make it the ideal saw for contractors, pipeline operations, refineries, petrochemical and processing plants and anywhere a fast, safe cut is needed. In use virtually everywhere, they're strong yet light, simple to mount, simple to operate and simply bulletproof.

Easy setup, vertical or horizontal

Installation time is approximately 5 minutes! A chain pipe vise clamps the Guillotine Saw to the pipe. The machined cast iron "V"-saddle base assures square cuts at right angles. It can be mounted on horizontal as well as vertical piping, in any position.

Quick cold cuts, minimal clearance

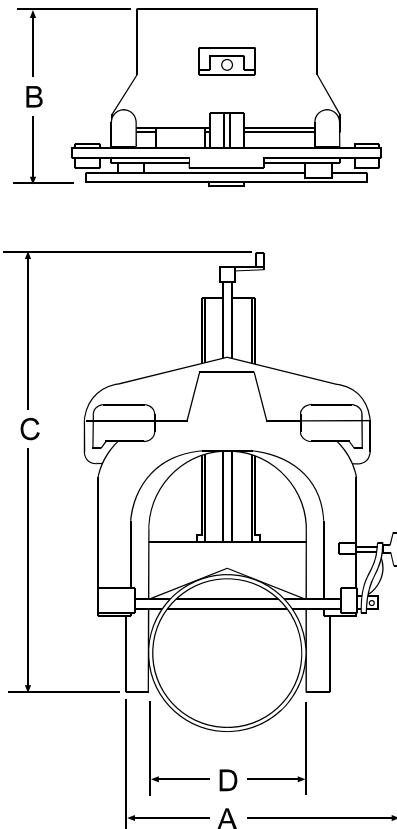
The Guillotine Saws require minimal clearance (the model Super C needs as little as 38.1 mm (1.5") on one side of the pipe). All models feature finger tip feed control. The pipe is cold cut in a matter of minutes. A 152.4 mm (6") standard wall steel pipe is cut in only 6 minutes. A 406.4 mm (16") diameter 12.7 mm (0.5") wall steel pipe is cut in about 20 minutes.

Portable, rugged design

The Guillotine Saws combine compact size and light weight with simple, rugged construction for ease of operation and low maintenance.

Long blade life

The high-speed steel blades are easily changed. The unique Guillotine cutting action lifts the blade from the cut on the return stroke, extending blade life.



Specifications	Super C	Model D	Super D	Goliath
Machine capacity	[mm] DN 50 - 300 [inch] 2 - 12	DN 150 - 450 6 - 18	DN 250 - 600 10 - 24	DN 400 - 800 16 - 32
Solids through	[mm] 324 [inch] 12.75	473 18.625	622 24.5	838 33
Clearance overall width (on one side min.)	[mm] 711 (63.5) [inch] 28 (2.5)	813 (76) 32 (3)	991 (76) 39 (3)	1.676 66
Weight (operating / shipping)	[kg] 52 / 82 [lbs] 115 / 180	154 / 188 340 / 415	234 / 281 515 / 620	816.5 1800
Dimension A	[mm] 596,9 [inch] 23.5	794 31.25	972 38.25	1676.4 66
Dimension B	[mm] 323,85 [inch] 12.75	368 14.5	368 14.5	635 25
Dimension C	[mm] 800 [inch] 31.5	940 37	1118 44	1943 76.5
Dimension D	[mm] 337 [inch] 13.25	476 18.75	629 24.75	838 33
Stroke	[mm] 51 [inch] 2	51 2	102 4	
Shipping dimensions (estimated)	[cm] 66 x 74 x 56 [inch] 26 x 29 x 22	160 x 119 x 74 63 x 47 x 29		

Specifications		Guillotine, Super C, Model D, Super D, Goliath				
Drive	Air, electric or hydraulic (Goliath only with hydraulic drive)					
Air motor drive	[m ³ /min]	1.4 at 5.0 bar				
	[ft ³ /min]	50 at 85 psi				
Electric drive		15 A, 110 or 220 Volt single phase				
Hydraulic drive	[l/min]	38 at 106 bar				
	[gal/min]	10 at 1500 psi				
Installation time	Approx. 5 minutes					
Controls	Single crank, manual feed. Motor on-off.					
Lubrication	Grease fittings at all wear points					
Finish	Paint					
Standard equipment	<ul style="list-style-type: none"> • Heavy drive (air, electric or hydraulic) • 1 Standard saw blade • Wrench 31.75 mm (1 1/4") • Air lubricator and filter (Air Model) • Steel storage case (Model C and D only) • Lifting eyes (Model D and Super D) • Mounting chains • Manual 					
Optional equipment	<ul style="list-style-type: none"> • Model D transporter truck • Blades: HSS and carbide blades (depending on the machine version) • Lifting frame • Hydraulic bulkhead for remote operation • Autoclamp mechanism • Autofeed 					

Article	Version	Pipe OD		Code	WACHS Ref.-no.		
		[mm]	[inch]				
Guillotine Super C	Electric, 110 V	DN 50 - 300	2 - 12	924 000 010	24-000-01		
Guillotine Super C	Pneumatic	DN 50 - 300	2 - 12	924 000 020	24-000-02		
Guillotine Super C	Hydraulic	DN 50 - 300	2 - 12	924 000 030	24-000-03		
Guillotine Super C Autoclamp	Hydraulic	DN 50 - 300	2 - 12	on request	-		
Guillotine Super C Autoclamp & Autofeed	Hydraulic	DN 50 - 300	2 - 12	on request	-		
Guillotine Model D	Electric, 110 V	DN 150 - 457	6 - 18	904 000 010	04-000-01		
Guillotine Model D	Pneumatic	DN 150 - 457	6 - 18	904 000 020	04-000-02		
Guillotine Model D	Hydraulic	DN 150 - 457	6 - 18	904 000 030	04-000-03		
Guillotine Super D	Pneumatic	DN 250 - 610	10 - 24	925 000 010	25-000-01		
Guillotine Super D	Hydraulic	DN 250 - 610	10 - 24	925 000 030	25-000-03		
Guillotine Super D Autoclamp	Hydraulic	DN 250 - 610	10 - 24	on request	-		
Guillotine Super D Autoclamp & Autofeed	Hydraulic	DN 250 - 610	10 - 24	on request	-		
Guillotine Goliath	Hydraulic	DN 400 - 800	16 - 32	on request	-		
Guillotine Goliath Autoclamp	Hydraulic	DN 400 - 800	16 - 32	on request	-		
Guillotine Goliath Autoclamp & Autofeed	Hydraulic	DN 400 - 800	16 - 32	on request	-		

Portable Pipe Saws Guillotine

(53)

Accessories for Guillotine

Saw blades

Article	Code	WACHS Ref.-no.		
Saw blades for Model C				
Standard blade. For general use (old Code: 1206-6D)	903 405 000	03-405-00		
Saw blades for Model Super C				
Standard blade. For general use.	924 405 000	24-405-00		
Carbide tooth blade. For use on cement lined pipe.	924 405 010	24-405-01		
Saw blades for Model D				
Standard blade. For general use. Old Code: 2306-8D.	904 402 000	04-402-00		
Thin wall blade 4.7 mm (3/16") max. wall. Old Code: 2310-8D.	904 403 000	04-403-00		
Carbide tooth blade. For use on cement lined pipe.	904 405 010	04-405-01		
Saw blades for Model Super D				
Heavy duty blade.	925 402 000	25-402-00		

Miscellaneous accessories and spare parts

Article	To utilize with Guillotine				Code	WACHS Ref.-no.		
	Model C	Super C	Model D	Super D				
Air motor conversion (replaces all obsolete motors)	x				903 414 000	03-414-00		
Lubricator retrofit kit	x	x	x	x	903 500 100	03-500-10		
Spare parts kit	x	x			903 500 010	03-500-01		
Spare parts kit			x		904 500 010	04-500-01		
Spare parts kit				x	925 500 010	25-500-01		
Manual. Electronic version via e-mail available free upon request.	x	x	x	x	903 626 010	03-MAN-01		

Hydraulic Power Pack

Hydraulic Power Pack "SafeQuip", see page 59.

Cutting lubrication

Cutting lubrication "KSS-TOP", see page 33.



E.H. WACHS®

Superior Equipment. Complete Support.™



Lightweight, compact, and easily installed this system makes an excellent compliment to E.H. WACHS Split Frames and End Prep machine tool platforms.



Supplied in a sturdy, wheeled transport and storage case.



EPD (Electric Power Drive) System is available to power WACHS LCSF split frames and EP 424 end prep machines.



Control machine power and rotating speed from distance away with the hand pendant.



Patented quick-clamping; works with LCSF and EP 424 Machines.

Electric Power Drive EPD

55



Power controller is compact and portable



EPM (Electric Power Motor) with quick clamping system and speed independent air cooling



Remote control with speed regulator and power LED

NEW Electric Power Drive EPD

E.H. WACHS Electric Power Drive (EPD) is a self contained, compact electric drive system that's an alternative to traditional pneumatic and hydraulic drives for larger field portable machine tools. Lightweight and easily transportable the WACHS EPD is powerful enough for all but the most demanding applications. Developed in Germany to world class standards the EPD is ideal for the power generation, oil & gas and pipeline distribution industries. Highly efficient, it eliminates the energy loss inherent in converting electric power to pneumatic or hydraulic, requiring less hardware.

Electric Power Motor Features:

- Premium construction for durability
- Maintenance free brushless design
- Moisture and dust resistant to IP65
- High torque output at low speed
- High voltage and current spike protection
- Rated for high continuous operating temperatures
- Over temperature protective thermal switch
- Overload clutch on drive motor

Power Controller Features:

- Small design size by high frequency technology
- Highly portable unit
- Versatile tool-free quick connection for machine mounting
- Runs on 230 V-400 V or 480 V (4KW- 8KW); optionally with 230 V or 400 - 480 V cable
- Moisture and dust resistant to IP65
- Error codes display
- Service reminder for gear, oil, and seal changes
- High torque at low speed
- Over temperature protection

Remote Control Features:

- Emergency Stop
- Speed control
- Hold to run trigger
- Start and Stop control

EPD

WACHS Electric Power Drive is a complete system that includes the electric drive motor, power supply/controller and remote control pendant. Weighing less than 16.5 kg (36 lbs), the electric power box (EPD) controller is housed in a small suitcase sized housing sealed to IP65 moisture and dust resistance standards. The high frequency electric power motor (EPM) is a lightweight (9 kg (19.8 lbs) yet powerful design also protected to IP65 that utilizes a quick, tool free mounting system.

Power Controller (Powerbox):

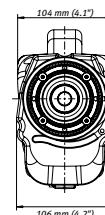
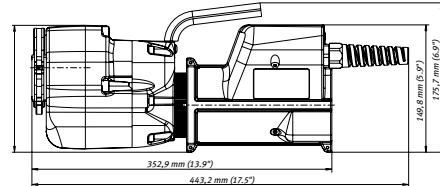
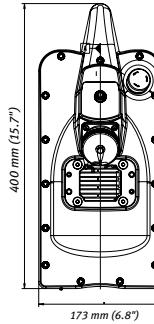
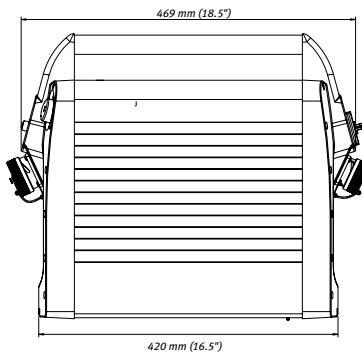
The EPD power controller drives the high frequency electric motor, and is available to cover the most popular voltages: a 230 V single phase - 400 V 3 phase or a 230 V single phase - 480 V 3 phase.

Specifications	Electric Power Drive EPD
System Function	Electric Power Drive for E.H. WACHS LCSF Split Frame Models 206/3 and larger, EP 424 Form Tool and EP 424 Single Point models
Hand Pendant Construction	Black aluminum housing with stop/start, e-stop, motor speed control and hold to run trigger, 16.4 foot (5M) cable.
EPM (Electric Power Motor)	

Specifications		Electric Power Drive EPD
		Powder coated AC high frequency inertia brushless motor with aluminum housing and gear box, high voltage, current spike and over temperature protected. Output speed infinitely variable.
Voltage	230 V (1-phase) 400 V (3-phase) 480 V (3-phase)	
Power	4 - 8 KW (4 kW at 230 V cables, 8 kW at 400 V cables) at 230 V approx. 40% lower speed	
Speed (RPM)	160/250 RPM	
EPM Part #	EPM8	
Frequency	50 - 60 Hz	
Amps	15 - 20 A	
Weight	9.0 kg / 19.8 lbs	
EPB (Electric Power Box) Controller		
16.4 foot (5 m) power cord and motor cables. Power cord ships without wall receptacle, user installation required.		
Voltage	230 V (1-phase) 400 V (3-phase) 480 V (3-phase)	
Power	8 - 12 KW	
EPM Part #	EPB 480	
Frequency	50 - 60 Hz	
Amps	15 - 20 A	
Weight	16.5 kg / 36.38 lbs	
Standard equipment	1 Electric Power Motor EPM 8 1 Electric Power Box EPB 480 1 Remote Control 1 Power supply cable (depending on version) 1 Hard-shell carrying case 1 Operating instructions	

Article	Version	Code	WACHS Ref.-no.		
EPD for LCSF	400 - 480 V	900 007 001	-		
EPD for LCSF	230 V	900 007 002	-		
EPD for EP 424	400 - 480 V	900 007 003	-		
EPD for EP 424	230 V	900 007 004	-		
Retrofit adapter EP 424 pneumatic and hydraulic machines*		981 500 000	81-500-00		

* add EPD for EP424 separately.



Power Drive Systems



E.H.WACHS®
Superior Equipment. Complete Support.™



The "SafeQuip" Hydraulic Power Pack from Orbitalum Tools is the new high-safety standard for industrial prefabrication and maintenance of piping systems.

58

Hydraulic Power Pack SafeQuip

Hydraulic Power Pack

Main functions in combination with LCSF Split Frame and Trav-L-Cutter:

- **Speed Control** by voltage divider for continuous control from lowest to highest speed. It is possible to start at a low, safe speed and increase slowly.
- **Start, Stop, Emergency Stop:** Maximum safety by starting and stopping from distance. Working with Trav-L-Cutters sometimes requires to start and to stop the machine feed and speed during operation. Complying with the European standards and guidelines the emergency stop can be activated from distance remotely, direct from the operator position.
- **Security Quit** to release the emergency stop. If the emergency stop is activated at the control panel it is then required to be released at the main control box of the power pack to prevent accidental restart.
- **Dead Man's Handle:** The speed immediately stops when the dead man's handle is released.
- **Remote Control Panel:** Low weight and easy to handle ergonomic design.

Additional security function for LCSF Split Frame:

- **SafeQuip feed system:** Brand new high-safety system to activate the feed from distance.

SafeQuip

The "SafeQuip-Series" from Orbitalum Tools is the new high-safety standard for industrial prefabrication and maintenance of piping systems with portable E.H. WACHS machines. Current European standards and guidelines necessitate this new solution to save the field operator from danger. The safe operation from distance, by a remote control panel enables the worker to control the main functions.

Additional Features:

- Oil leakage sump for a high standard on conservation and ecological use.
- Transport eyes for diverse lifting usage.
- Oil cooler for longer operating time even at high temperatures.
- IP55 protected against dust and jet water.
- Solid frame prevents the hydraulic hardware against transport damages.
- Hour meter counter for optimization of maintenance control.



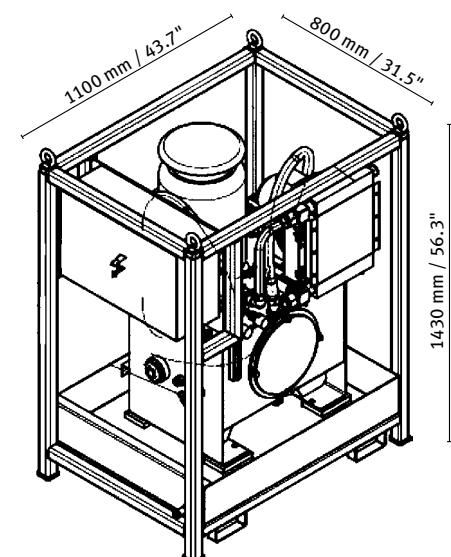
Hydraulic Power Pack



Hydraulic Power Pack – Rear View

Specifications	Hydraulic Power Pack
Remote Control	Start, Stop, Speed control, Safety device, Emergency Stop, applicable for feed control. Cable length: 5 m (16.4 ft)
Pressure	approx. 105 bar
Capacity	0 - 55 l/min
Filtration	10 micron
Oil Cooler	included
Oil tank	100 l
Power	400 V, 50/60 Hz, 32 A, 11 kW

Article	Version	Code	WACHS Ref.-no.		
SafeQuip Hydraulic Power Pack	400 V, 50/60 Hz, 32 A, 11 kW	900 002 011	–		



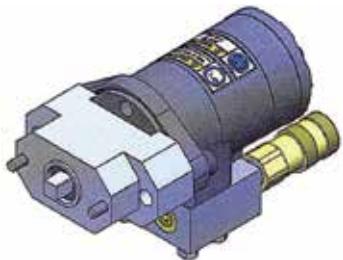
Power Drive Systems



Feeding unit including cable



Set of hydraulic hoses



Hydraulic motor "SafeQuip"

Accessories for Hydraulic Power Pack "SafeQuip"

Miscellaneous accessories

Article	Version	Code	WACHS Ref.-no.		
Feeding unit including cable For LCSF 206 - 1420	15 m (49.2 ft)	on request	-		
Feeding unit including cable For LCSF 1824 - 4248	15 m (49.2 ft)	on request	-		
Extension cable "SafeQuip"	15 m (49.2 ft)	900 002 132	-		
Set of hydraulic hoses	15 m (49.2 ft)	790 500 510	-		
Hydraulic motor "SafeQuip" For LCSF		960 424 020	60-424-02		
Hydraulic motor "SafeQuip" For EP 424		981 310 010	81-310-01		
Hydraulic oil filling	100 l (26.4 gal), biodegradable	900 002 114	-		

Air Control Module ACM for pneumatic motors

For LCSF, SDSF, EP 424 and SDB/FF.

- All air design, with no other power source required
- Compact and self contained, all controls and hoses fit in a strong, watertight case
- Lockable, self contained case with wheels and telescoping handle for easy transport
- Lightweight, ergonomic remote for operator comfort
- 1.8 m (6 foot) remote umbilical provides the operator unencumbered movement and optimum positioning
- Lockable shut-off for supply isolation
- Shut-off vents trapped system pressure
- Pressure regulator lockable at desired pressure, 116 psi (8 bar) maximum setting
- Dual unit pressure gauge for quick visual confirmation of supply pressure
- Emergency stop shuts off and dumps air motor supply
- Vented non-marring quick disconnect with easy push to connect and one handed disconnection
- Operator reset required following main pressure failure or emergency stop activation, preventing dangerous movement
- 6 m (20 foot) air line reaches air motor in any operating position for safety and durability

ACM

New all-in-one air treatment module with remote control.

The E.H. WACHS Air Control Module (ACM) provides remote operation capability for select models of WACHS pneumatic powered split frame and end prep machines. The ACM allows operators to cut and bevel pipe up to 7.9 m (26 feet) away. This feature can significantly reduce fatigue while moving the operator a safe distance from the workpiece, important in highly restricted or potentially hazardous environments. Housed in a strong, watertight wheeled case with a telescoping handle the ACM is extremely portable, simple to set up and easy to use at any job site.

Easy Operation

Everything needed to quickly set up and start operating remotely is contained inside the case. The ACM uses the large "Chicago" style air coupler for our LCSF and End Preps, and includes the required adaptors to control the SDSF and other machines that use the smaller air connector. To enhance portability, the ACM operates solely on compressed air, requiring no external power. For fast removal and user safety the line quick disconnects have a selfventing feature that automatically vents line pressure on shut-off.

All-In-One

The ACM is two products in one, an air treatment module that regulates and conditions the incoming air supply to protect valuable air motors, and a remote control device that allows the operator the freedom to move away from the machine. This all in one capability makes the WACHS ACM a cost effective investment that will pay big dividends in drive motor longevity, operator comfort and versatility.

Safety Features

- Air supply isolation
- Pressure relief system
- Venting trapped pressure
- Emergency Stop
- Hands free operation



Air Control Module ACM
for pneumatic motors



Ergonomic fingertip control for all air functions with safety stop button.



ACM controlling Low Clearance Split Frame



*Air treatment module and remote control
in a rugged light portable package.*



Air Treatment Module ATM

Specifications	Air Control Module ACM for pneumatic motors
System Function	Provides remote operation capability for select WACHS pneumatic split frame and end prep machines to cut and bevel pipe
System Capacity	Operates pneumatically powered E.H. WACHS machine as indicated
Air Power Requirements	ACM - 1.84 m ³ /min at 6.3 bar (65 cfm; 90 - 232 psi) compressed air supply
Packaging	Heavy duty storage case, transport with handle and wheels
Dimensions	457 mm x 500 mm x 305 mm (18.0" X 19.7" X 12.0")
Materials	Rugged ultra high-impact copolymer resin case and steel control panel
Weight	15.4 kg (34 lbs)
Standard equipment	<ul style="list-style-type: none"> • Integrated control module • 1.8 m (6') remote cord • 6 m (20') air hose • Remote hand controller • Heavy Duty Transport/Storage Case • Operating Instructions

Article	Code	WACHS Ref.-no.		
Air Control Module ACM for pneumatic motors	960 420 000	60-420-00		
LCSF Air Throttle	960 376 000	60-376-00		
SDSF Air Throttle	980 376 000	80-376-00		

Air Treatment Module ATM

Article	Code	WACHS Ref.-no.		
Air Treatment Module ATM	926 407 000	26-407-00		



Worldwide customer focus.

Inspiring customer service.

You can count on our comprehensive range of services. Our aim is to offer you inspiring customer service – you can measure us against this promise.

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- Competent contact partners
- Fast, comprehensive delivery service
- Reliable product support
- Practical training programs
- Certified company

Our wide range of services:

Technical support

- Repairs, maintenance, replacement
- Advance cost estimates
- On-site service
- Service training for our customers
- Cost-effective replacement devices on request

Spare parts service

- Approx. 2,000 spare parts always in stock
- State-of-the-art logistics systems

Rental/used machine service

- Weekly rental charges
- Hire purchase
- Long-term rental
- Rental with operator on request

Further support services

- Pick-up service from the customer
- Used machines with warranty

Waste disposal / environmental protection



Disposal of electrical (electronic) devices

(RL 2002/96/EC)

Electrical (electronic) devices which are marked with the symbol above, may not be disposed of with household waste in accordance to the EU directive 2002/96/EC.

By actively using the offered return and collection systems, you actively contribute to the reuse, recycling and utilisation of electrical (electronic) devices.

Electrical (electronic) used devices contain parts which must be handled selectively according to the EU directive. Separate collection and selective treatment is the basis for environment-friendly disposal and the protection of human health. Our products that were sold to you after August 13th, 2005 are taken back and treated according to legal standards. These products have to be sent free of charge.

The return of used devices which pose a health or safety risk for human beings due to contamination during use may be refused.

The legally compliant disposal of electrical (electronic) devices that were placed on the market before August 13th, 2005 are in the responsibility of the end-user.



Returning of batteries

Some of our products work with batteries. Batteries which are marked with the symbol above may not be disposed of together with household waste according to the applicable EU directive 91/157/EEC.

With batteries containing hazardous substances, the chemical symbol for the heavy metal content is indicated below the waste bin.

Cd = Cadmium

Hg = Mercury

Pb = Lead

Service Hotline: +49 (0) 77 31 792-789



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