

**FEIN. Unverwüstliche
Elektrowerkzeuge.**



Cost-effective pipe machining with FEIN.

The FEIN pipe milling cutters and pipe saws with good cutting performance.



Powerful professionals.

The pipe cutting industry the world over is familiar with FEIN pipe milling machines. They can be used for everything from cutting to length before laying to cutting pipes which have already been laid. FEIN pipe milling cutters produce reliable and precise work on cast or steel pipes for oil, gas and water as used in pipelines, public supply networks, power plants, industrial systems and tank construction. Optimised technology ensures good cutting performance.



Tried and tested technology for perfect results.

The system comes into its own under tough conditions, e.g. pipe fractures. Adapting to different pipe materials by selecting the right

gear ratio produces ideal cutting and feed speeds, enabling the cost-effective use of HSS and carbide tools.

At a glance:

- ▶ Powerful, robust compressed air and three-phase motors for use even under extreme conditions.
- ▶ Electric motors can also be used at very low sub-zero temperatures.
- ▶ Electric pipe milling machines with feed and return (return only in load-free operation).
- ▶ For pipes with a diameter of between 250 and 3000 mm.
- ▶ Profile and separating cuts with form cutter or saw blade.
- ▶ Precise directional stability and exact cut thanks to the two-chain system, adjustable track setting and double chain tension.
- ▶ Crack-free pipe ends.
- ▶ Easy installation thanks to optimised handling.
- ▶ Available in 2 gearbox variants, with different feed and speed levels for cutting speeds to suit the material in question.
- ▶ Feed and miller drive connected by gearbox.
- ▶ Gearbox overload protection through slipping clutch.
- ▶ Extensive FEIN accessories range.

FEIN electric pipe milling machines:

- ▶ Protection class I.
- ▶ Protection code IP X4.
- ▶ In conjunction with the controlgear combination:
 - Self-start lock ensures safe operations.
 - Overload protection for the three-phase motor.
- ▶ Produced and tested in accordance with EN 61029.

RSG 18:

- ▶ Three-phase motor with explosion and dampness protection (EExelIT3 version) for universal use.

RSG Ex 18:

- ▶ Three-phase motor with explosion and dampness protection (EExelIT3 version), with additional switch with explosion protection (EExdelICT6 version), particularly well suited to cutting work on oil and gas pipes not transporting material.

FEIN compressed air pipe milling machines:

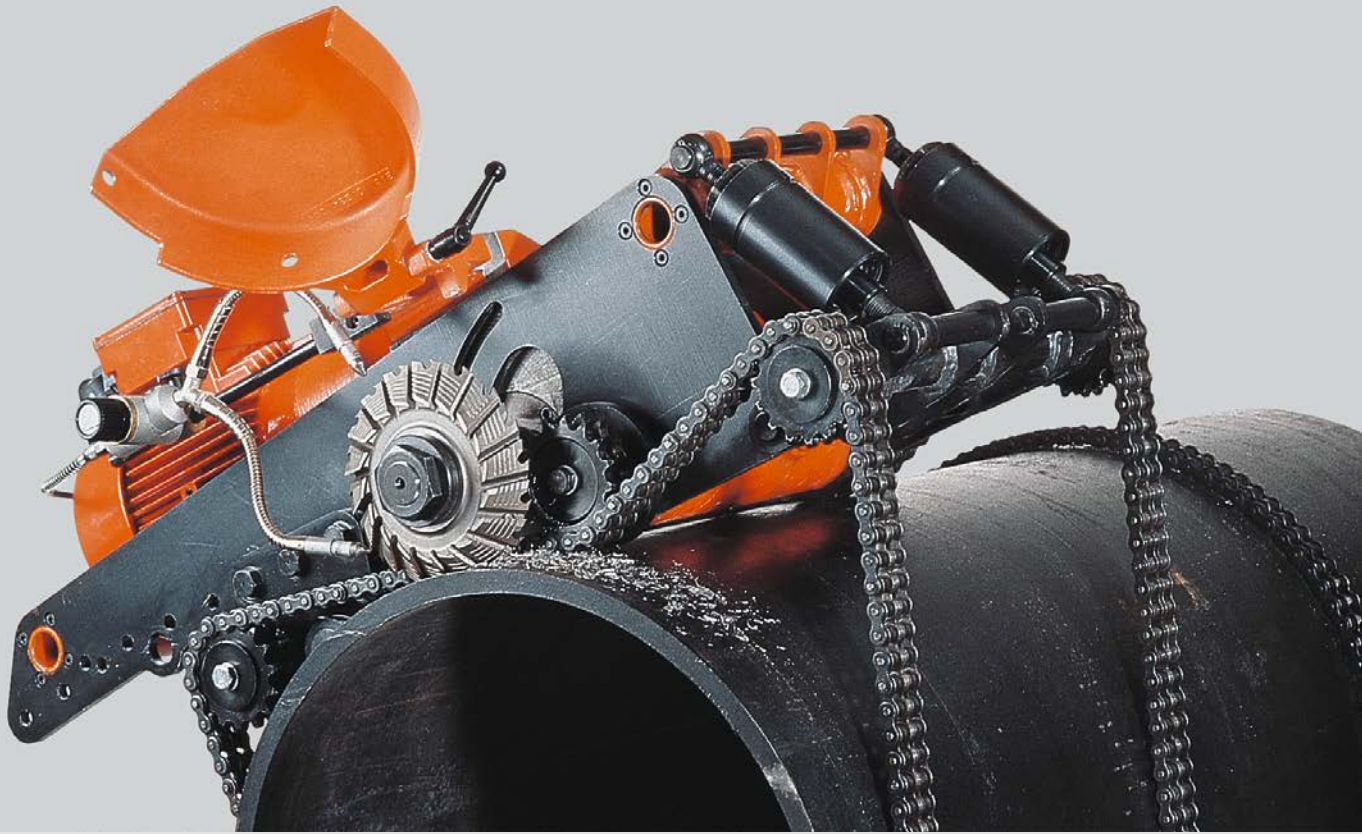
RDG 18-3:

- ▶ Compressed air drive protection for work on water, oil and gas pipes not transporting material.
- ▶ Motor drive parts made from stainless material. The compressed air motor's fins are resistant to swelling. Can even run dry for brief periods. Suitable for use in potable water applications.

Important information:

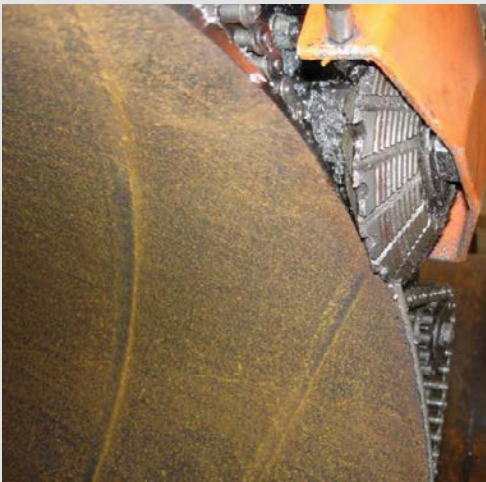
EC Directive 94/9/EC ATEX (Explosive Atmospheres). We would like to point out that the RDG/RSG/RSGex FEIN pipe milling machines are not approved for use in areas at risk of explosion and that these machines do not have an EC type examination certificate in compliance with Directive 94/9/EC.

(For the RSGex pipe milling machine, only two ATEX-compliant components are fitted, i.e. the electric motor and additional switch.)



Examples of use of FEIN pipe milling cutters and pipe saws.

In pipeline construction.



For steel pipes.



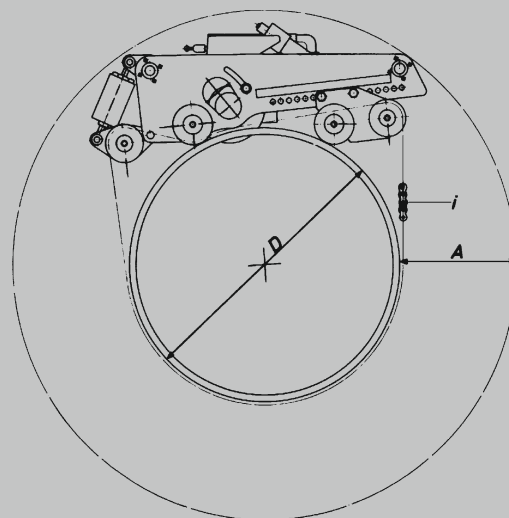
For pipes featuring cement centrifugal coatings.



In tank construction.



Always the right chain length for perfect mounting.



FEIN pipe milling machines are adjusted by changing the wheel base to the various pipe diameters. The machine is mounted using two removable link chains. The table below shows the number of chain pieces needed and the necessary working space.

Technical data												
Position Running axle	Outer pipe diameter "D" mm	Free space around pipe "A" mm	Chain required per side mm	Total chain length mm	Number of chain pieces to order 3 02 31 013 02 7	Position Running axle	Outer pipe diameter "D" mm	Free space around pipe "A" mm	Chain required per side mm	Total chain length mm	Number of chain pieces to order 3 02 31 013 02 7	
I	250	452	1427	2854	5	VI	1300	293	4355	8710	14	
	300	452	1525	3050	5		1400	295	4651	9302	15	
	350	450	1632	3264	6		1500	297	4950	9900	16	
	400	448	1744	3488	6		1600	298	5250	10 500	17	
II	400	414	1782	3564	6		1700	299	5553	11 106	18	
	450	413	1898	3796	7		1800	300	5857	11 714	19	
	500	412	2019	4038	7		1900	301	6162	12 324	20	
	550	411	2144	4288	7		2000	301	6468	12 936	21	
	600	409	2273	4546	8		2100	302	6775	13 550	22	
III	600	383	2302	4604	8		2200	303	7083	14 166	23	
	650	383	2433	4866	8		2300	303	7391	14 782	24	
	750	381	2702	5404	9		2400	303	7700	15 400	25	
	800	379	2840	5680	9		2500	304	8009	16 018	26	
IV	800	356	2862	5724	10		2600	304	8319	16 638	27	
	850	355	3001	6002	10		2700	305	8629	17 258	28	
	900	355	3142	6284	10		2800	305	8940	17 880	29	
	950	354	3284	6568	11		2900	305	9251	18 502	30	
	1000	354	3428	6856	11		3000	305	9562	19 124	31	
V	1000	312	3464	6928	11		Free space around the pipe = working space when cutting tool is fully retracted. Item number 3 02 31 013 02 7 comprising 10 chain pieces with a total length of 635 mm.					
	1050	312	3607	7214	12		To achieve optimum chain pre-tension, you may need to use the half chain pieces provided in the tool case (length 31.75 mm)					
	1100	313	3751	7502	12	Ordering example: Pipe diameter 400 mm = order 6 x 3 02 31 013 02 7!						
	1150	313	3896	7792	13							
	1200	313	4062	8124	13							
	1300	314	4338	8676	14							

Well-engineered and effective. FEIN compressed air cooling lubrication.

The high cutting and feed speeds of the FEIN pipe milling machines place very demanding requirements on the lubrication and cooling – especially with tools for machining steel. FEIN uses its tried and tested compressed air cooling lubrication for all pipe milling machines. This extends the service life of the tool and ensures above-average durability. The functional principle of compressed air cooling lubrication:

The coolant tank is pressurised through a constant supply of compressed air so that the air and coolant are sprayed onto the tool's cutting edges through two adjustable nozzles. The mist droplets produced evaporate instantly and therefore remove heat from the tool. The greasy components in the coolant provide lubrication by sticking to the tool's cutting edges. Since such low levels of spray are consumed, the ground is not contaminated.



Compressed air cooling lubrication

Technical data

Tank capacity	dm ³	2.5
Max. cooling lubrication fluid	dm ³	1.8
Max. internal tank pressure	bar	7
Max. pressure of feed compressor	bar	10
Opening pressure of safety valve	bar	7
Recommended operating pressure	bar	0.5-7
Air consumption up to approx.	Nm ³ /min	0.02-0.05
Spray consumption up to approx.	dm ³ /h	0.3
Net weight	kg	8.5

Order number 9 12 01 002 00 4

Compressor

The compressor is needed to operate the cooling lubrication with the RSG/RSG Ex 3-phase power variants. Protection class I; protection code IP 42; including suction hose with filter.

Technical data

Voltage / type of current	V	230/~
Power consumption	W	520
Intake quantity	l/min	132
Max. pressure	bar	3.8
Height	mm	340
Length	mm	400
Width	mm	168
Cable with plug	m	2.8
Weight	kg	18.3

Order number 9 26 01 023 02 3

Accessories

Replacement cooling lubricant

1 litre	on request
5 litres	on request

Order number

Coupling sleeve

to connect the compressed air cooling lubrication to the maintenance unit.

Order number 4 11 36 005 01 9

The FEIN range of pipe milling cutters for flexible use.

Depending on application and possible energy supplies, specifically tailored electric and compressed air versions of the FEIN pipe milling machines can be selected.

The added extra: the electric motors with explosion protection meet the same safety requirements as compressed air motors. They are therefore ideally suited to work on gas and oil pipes (not transporting material).

Electric pipe milling machines

Model		RSG, Ex18a	RSG, 18a	RSG, Ex18b	RSG, 18b
Voltage	Volts	400	400	400	400
Frequency	Hz	50	50	50	50
Type of current		3 ~	3 ~	3 ~	3 ~
Idling speed of motor	rpm	2860	2860	2860	2860
Idling speed of saw blade and/or cutter	rpm	35	35	70	70
Max. cutting depth	mm	45 ¹⁾	45 ¹⁾	45 ¹⁾	45 ¹⁾
Cutting speed	m/min	19.7 ²⁾	19.7 ²⁾	39.5 ²⁾	39.5 ²⁾
Feed	mm/min	40	40	80	80
Power consumption	W	2000	2000	2000	2000
Power output	W	1500	1500	1500	1500
Cable with plug	m	10 ³⁾	10 ³⁾	10 ³⁾	10 ³⁾
Approx. net weight	kg	95	95	95	95
Included in price:		1 transport tank, 1 metal tool case, 1 hand crank, 10 splitting wedges (RSGex 18a, b with 5 splitting wedges, no sparks), 20 bolts, 20 circlips, 10 chain pieces (length 31.75 mm), 1 set of wrenches, 1 controlgear with motor protection switch, 1 CEE coupling, 2 transport straps, 1 plate 32433027017 fitted			
Order number		360 06	360 09	360 07	360 10

Range of accessories

Circular saw blades, form 1

HSS, for gearbox type: a, b – for machining steel pipes.



Diameter mm	Width mm	Weight kg	Teeth (quantity)	Max. cutting depth mm	Order number
160	4	0.5	50	25	6 35 02 022 00 6
180	4	0.7	60	35	6 35 02 037 00 8
200	4	0.9	64	45	6 35 02 053 00 7
220	5	1.3	70	55	6 35 02 041 00 1

Circular saw blades, form 2

HSS, for gearbox type: b – for machining cast pipes.



Diameter mm	Width mm	Weight kg	Teeth (quantity)	Max. cutting depth mm	Order number
160	4	0.5	40	25	6 35 02 050 00 1
180	4	0.7	46	35	6 35 02 098 00 0
200	4	0.9	50	45	6 35 02 099 00 4

Circular saw blades, form 3

HSS, with carbide teeth, for gearbox type: b – for machining cast iron pipes (including those with cement chucks) and for machining non-alloyed steel pipes up to 400 N/mm².



Diameter mm	Width mm	Weight kg	Teeth (quantity)	Max. cutting depth mm	Order number
160	4	0.5	40	25	6 35 02 080 00 8
180	4	0.7	44	35	6 35 02 061 00 9
200	4	0.9	50	45	6 35 02 084 00 2

Feather key	Width mm	Height mm	Length mm	Order number
	6	6	32	4 02 21 044 00 0
	8	7	32	4 02 21 050 00 5

Splitting wedges

made from steel	Order number
	6 33 05 006 00 8
no sparks	6 33 05 013 00 2

Replacement bolts

Order number
3 02 17 216 00 4

Transport container	Width mm	Height mm	Length mm	Order number
	800	395	1000	3 39 01 114 00 7

Exact tracking, clean cuts.

The two-chain system with separate spring tension pots and the adjustable track setting make possible distortion-free and exact cuts of between 250 and 3000 mm in diameter. The chain tension ensures the system runs without leaving any marks, making FEIN pipe milling machines suitable for work on high-pressure pipes for example. The cutting and removal process ensures clean pipe ends. The appropriate tools can be used to produce profile cuts for V- or U-shaped welded grooves in addition to smooth cuts. All this with simple installation and easy handling.



Compressed air pipe milling machines

Model		RDG, 18-3a	RDG, 18-3b
Air pressure	bar	6	6
Air consumption, under load approx.	l/s	72	72
Idling speed of motor	rpm	6000	6000
Idling speed of saw blade and/or cutter	rpm	35	70
Max. cutting depth	mm	45 ¹⁾	45 ¹⁾
Cutting speed	m/min	19.7 ²⁾	39.5 ²⁾
Feed	mm/min	40	80
Power output	kW	2.0	2.0
Approx. net weight	kg	89	89
Included in price:		1 transport tank, 1 metal tool case, 1 hand crank, 10 splitting wedges, 20 bolts, 20 circlips, 10 chain pieces (length 31.75 mm), 1 set of wrenches, 1 can of oil, 1 maintenance unit with hose, 2 transport straps, 1 plate 32433027017 fitted	
Order number		560 23	560 24

¹⁾ with saw blade diameter 200 mm

²⁾ relates to tool diameter 180 mm and depends on the pipe diameter to be machined

³⁾ RSG Ex 18 a b with 20 m cable and switch with explosion protection

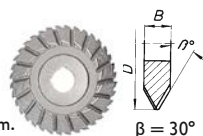
Form cutter, V-form

HSS, for gearbox type:

a – for machining steel pipes, high-alloy.

b – for machining non-alloyed steel and cast pipes,

up to wall thickness of 10 mm and maximum diameter of 1600 mm.



Diameter mm	Width mm	Weight kg	Teeth (quantity)	Max. cutting depth mm	Order number
125	25	1.58	32	7.5	6 35 08 056 00 4
160	30	2.85	36	25	6 35 08 081 00 9
180	42	4.8	36	35	6 35 08 085 00 8

Form cutter, V-form 37.5°

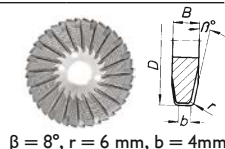
Diameter mm	Width mm	Weight kg	Teeth (quantity)	Max. cutting depth mm	Order number
160	30	3.27	36	25	6 35 08 093 00 0

Form cutter, U-form

HSS, for gearbox type:

a – for machining steel pipes, high-alloy.

b – for machining non-alloyed steel and cast pipes, up to wall thickness of 10 mm and maximum diameter of 1600 mm.

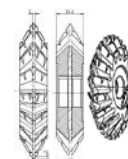


Diameter mm	Width mm	Weight kg	Teeth (quantity)	Max. cutting depth mm	Order number
160	25	2.8	40	25	6 35 08 089 00 7

Special form cutters for other materials and cutting geometries available on request.

Three-piece cutter

For simultaneous sawing (straight 3 mm cut) and profile cutting at 2x 30°.



Diameter mm	Width mm	Weight kg	Teeth (quantity)	Max. cutting depth mm	Order number
154	30.6	5.2	32	25	6 35 08 099 02 0

Chain piece

comprising 10 pieces of 63.5 mm = 635 mm long.

The table is used to determine the number of chain links needed.

Order number	3 02 31 013 02 7
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Individual chain piece (half length)

31.75 mm, for accurately cutting the total chain piece to length.

This produces the optimum chain pre-tension.

Order number	3 02 31 029 00 2
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Replacement circlip

Order number	4 26 34 020 00 5
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Replacement plate for securing manual double valve to pipe milling machines.

Order number	3 24 33 027 01 7
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FEIN. Durable power tools.

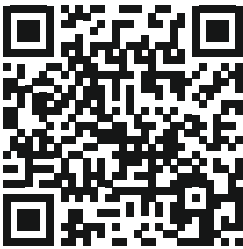
FEIN is the specialist for professional and extremely reliable power tools and special application solutions in the metal, timber and composite materials sectors. As the inventor of the electric hand drill, FEIN has been developing innovative and unbeatably efficient solutions for everyday use which can also stand up to the toughest continuous use in industry and trade for over 150 years.



Find out more and discover the benefits for yourself.

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C. & E. Fein GmbH, Hans-Fein-Str. 81, 73529 Schwäbisch Gmünd-Bargau, Germany
Tel. +49 (0)7173/183-430, fax +49 (0)7173/183-820, www.fein.de

