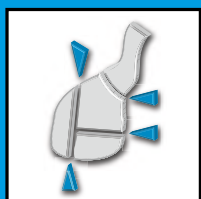
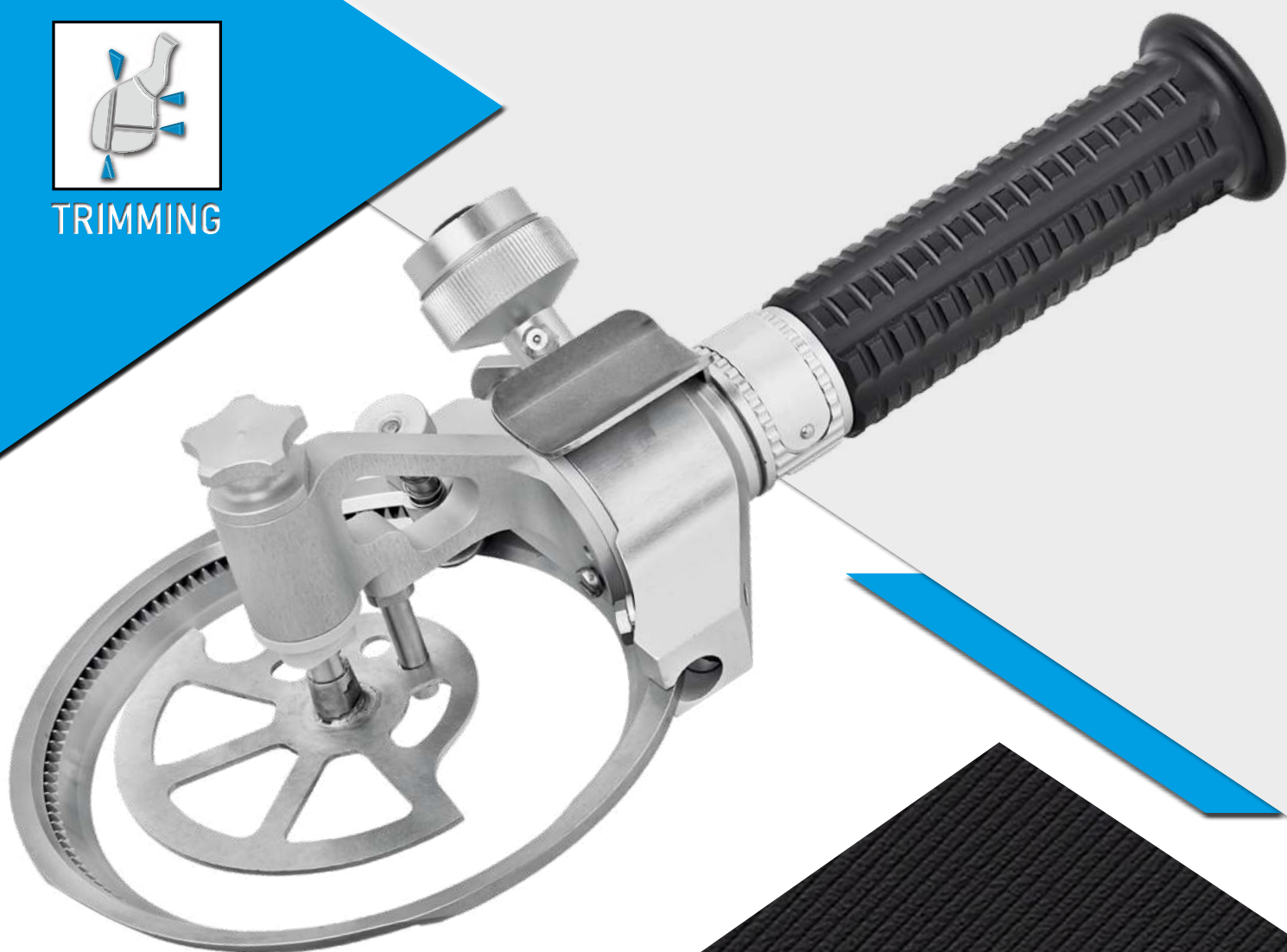


TRIMMER



TRIMMING

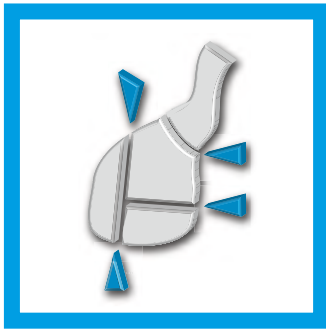


TRADITION
+ INNOVATION
= FUTURE





Series 2 TRIMMER



CONTENTS

In modern meat processing, the type, efficiency and quality of the tools used have a significant influence on the quality of the end product and on the achievable yields.

It is not uncommon for high demands to be placed on such tools. This can result in maintenance-related downtimes and considerable servicing costs.

For this reason, developers of modern trimmers have the task of creating a product that is not only powerful and economical, but also low-wear and therefore cost-efficient. This is exactly the approach that we take here at FREUND.

With our latest Series 2 trimmers, we have created a product that - thanks the use of proven components and high-quality materials - is a low-maintenance to the trimmers widely available on the market

▶ Trimmer-motors	5
▶ Trimmer-features	6-7
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▶ Ring blade selection & application	10-11
▶ Trimmer with protein scraber	12-17
▶ Trimmer - variants with vacuum suction	18-21
▶ Ring blades sharpening	22-23
SPARE PARTS	24-25

TRIMMING

QUALITY TRIMMER



TRIMMER

- Optionally powered electrically or pneumatically
- Further enhanced trimmer blade surface
- Less downtime and lower servicing costs thanks to low-wear quality components
- Ergonomic handle with robust and abrasion-free plastic design
- Patented quick-change blade system for toolless trimmer blade change
- Significant improvement of user safety thanks to optional start-stop safety system
- Quiet operation minimises vibrations on the handle
- Four different measurement types A, B, C and D in diameters Ø 35, 52, 69, 90 and 128 mm
- Optionally available with depth control in different user-oriented designs

TECHNICAL DATA

	PNM2	TM-E6001 EF2_evo2
Weight (kg)	0,6	16
Revolutions (rpm)	up to 6500	up to 6500
Protection class		IP 65
Drive type	pneumatic	electric, 1 phase
Input air pressure	6 bar 470 l/min	
Power		550 Watt (100Hz)/VA 0,5 hp (100Hz)/VA



PNEUMATIC MOTOR PNM2

- Handle with integrated pneumatic motor for compressed air operation with 6 bar
- Handle variants D34 and D34 knurled with 34mm diameter for better handling, are optionally available
- Can be used with all FREUND trimmer
- Start-stop safety system with stop lever
- Non-slip handle
- Available with pneumatic connecting kit including service unit and couplings (recommended)



ELECTRIC MOTOR TM-E6001 EF2_evo2

- Integrated handle suspension
- Adjustable to 6500rpm
- Less downtime thanks to low-wear operation
- Compact and lightweight aluminium housing
- Hygienic design
- Handles and trimmers (except Trimmer_evo3) can be used individually

CONNECTOR UNIT EF2

- Enables conversion from EF1 to EF2 (part no. 028-010-015)





THE RIGHT MACHINE FOR EVERY APPLICATION

From defatting degreasing of meat, poultry and fish products to precision cutting of wafer-thin salmon slices – with our optionally electrically or pneumatically powered trimmers, we offer you the right tool for the diverse requirements of your plant. At the same time, the modular design of our trimmers gives you the option of choosing from four different blade types in five diameters (35, 52, 69, 90 and 128 mm) and countless optional features such as an ergonomic thumb rest, depth control in a robust and hygienic stainless steel design and many other features.

DEPTH CONTROL

- Even cutting depth (individually adjustable)
- Higher yield thanks to lower number of rejects
- Especially suited to cutting & filleting salmon in variant DCS (plastic) and DC2S (stainless steel)
- Especially suited for degreasing hard and cold meat in variants DCF (plastic) and DC2F (stainless steel)

THUMB REST

- Ergonomically shaped to enable fatigue-free working
- Freely adjustable for right- and left-handers
- Significant increase in user safety

TRIMMER HANDLES

- Ergonomically shaped, abrasion-free and hygienic
- Optimal handling thanks to different handle shapes
- Available in handle diameters 31, 34 and 38 mm

CONNECTING KITS EF1 / EF2 / ADAPTIVE

- Low-maintenance thanks to integrated coupling sleeve
- Compatible with all FREUND handles
- Also available as a special ADAPTIVE version to enable further use of your existing trimmer motor¹

¹) compatible with common trimmer motors

OPTIONS

Ø (MM)	35	52	69	90	128
A (straight)	•	•	•	•	
B (hook)	•	•		•	
C (short flat)				•	•
D (long flat)					•
Depth control				DCF / DCS	DCS / DC2F / DC2S
Pinion gear and bearing	small	small	small	large	large
Thumb rest	•	•	•	•	•
Grease cup	small/large	small/large	small/large	small/large	small/large
Steeling device only				•	•
Pneumatic motor PNM2	•	•	•	•	•
Start-stop safety system	•	•	•	•	•
Grease fitting and vacuum suction system	•	•			



TRIMMING

TRIMMER



Blade housing

BEARING PLASTIC DESIGN

- All saleable trimmer handles can be fitted with the newly configurable plastic plain bearing
- Available without an extra charge
- High endurance
- Additional lubrication of the pinion is not necessary
- The daily greasing of the plain bearing is no longer necessary
- Minimal weight reduction of the handle
- The handle is supplied without grease nipple and grease bushing (a blind plug is fitted)

Pinion & bearing



DC2S

Cutting depth control



Exploded view TRIMMER Ø 35mm
variant with vacuum suction,
electric and pneumatic

TRIMMING

TRIMMER ELECTRIC



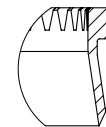
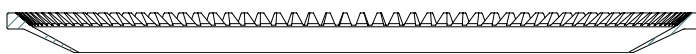
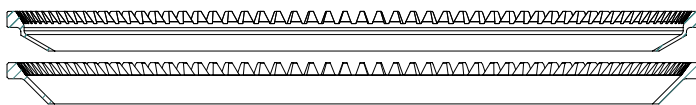
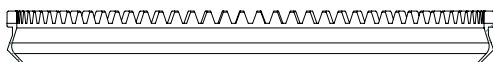
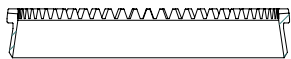
Exploded view
TRIMMER Ø 90mm
pneumatic

*Figure shows one of the configuration possibilities for the electric TRIMMER Ø128mm

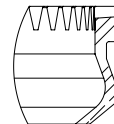
RING BLADE SELECTION & APPLICATION

RING BLADE SELECTION

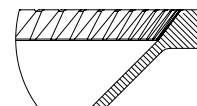
TYPE	Ø (MM)	35	52	69	90	128
A (straight)		•	•	•	•	
B (hook)		•	•		•	
C (short flat)					•	•
D (long flat)						•



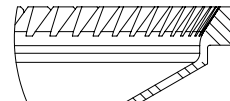
■ A (straight)



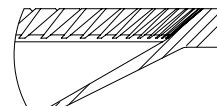
■ B (hook)



■ C (45°) short



■ C (30°) flat



■ D (long flat)



APPLICATION

Ø (MM)	35	52	69	90	128
Deboning / cleaning					
Bones	A	A	A		
Heads	A	A	A	A	
Chicken thighs	A	A			
Ribs from belly	A				
Removal					
Cheeks			A	A	
Chicken breast		B		B	
Spinal cord		A / B			
Remaining skin				C	C
Veins and glands	A	A			
Pig eyes	A				
Pork fillet			A	A	
Lean meat from fat					C
Tuna				C	C
Degreasing / trimming					
Skins				C	C
Warm fat trimming				C	C
Hard fat trimming				B	D
Ham / shoulder / cutlet				B / C	C
Slicing					
Salmon					C
Gyros / doner kebab				C	C



TRIMMING

TRIMMER IN THE FISH INDUSTRY



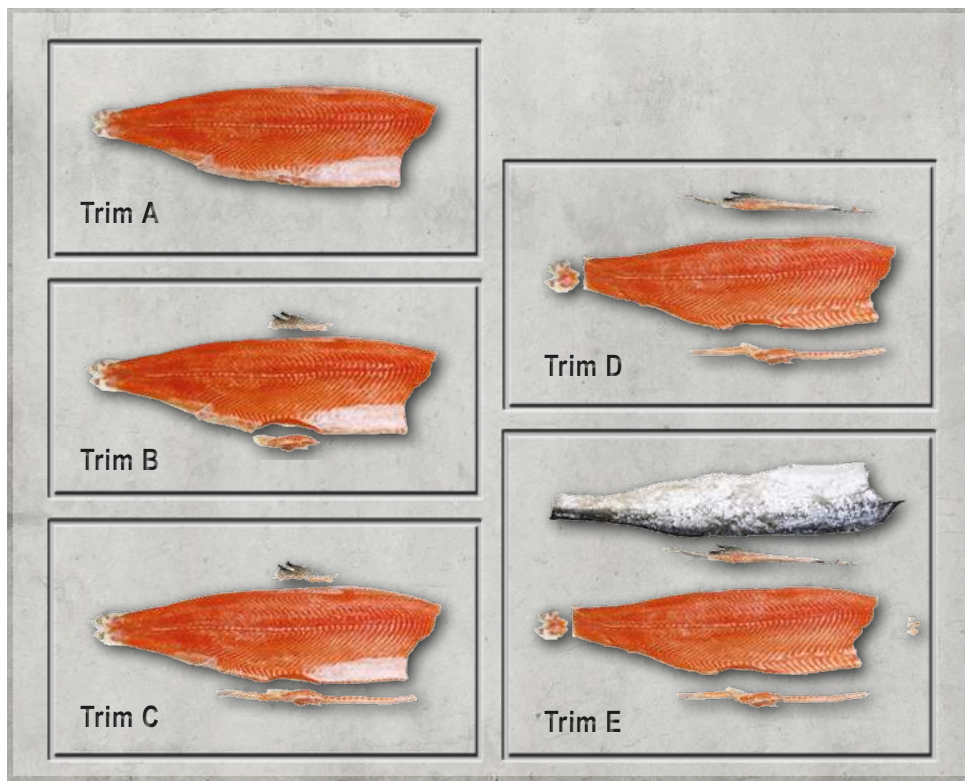


TRIMS FROM A-F

EFFECTIVE

CONTROLLED

MAXIMUM YIELD



SUITABLE FOR ALL TYPES OF TRIM!

With our trimmers you can perform any trim with high yields on the fillet. Winter damage can be removed effectively, cleanly, quickly and with minimal loss.

With a choice of electrically or pneumatically operated trimmers, we offer you the right hand tool for the diverse requirements on your farm.

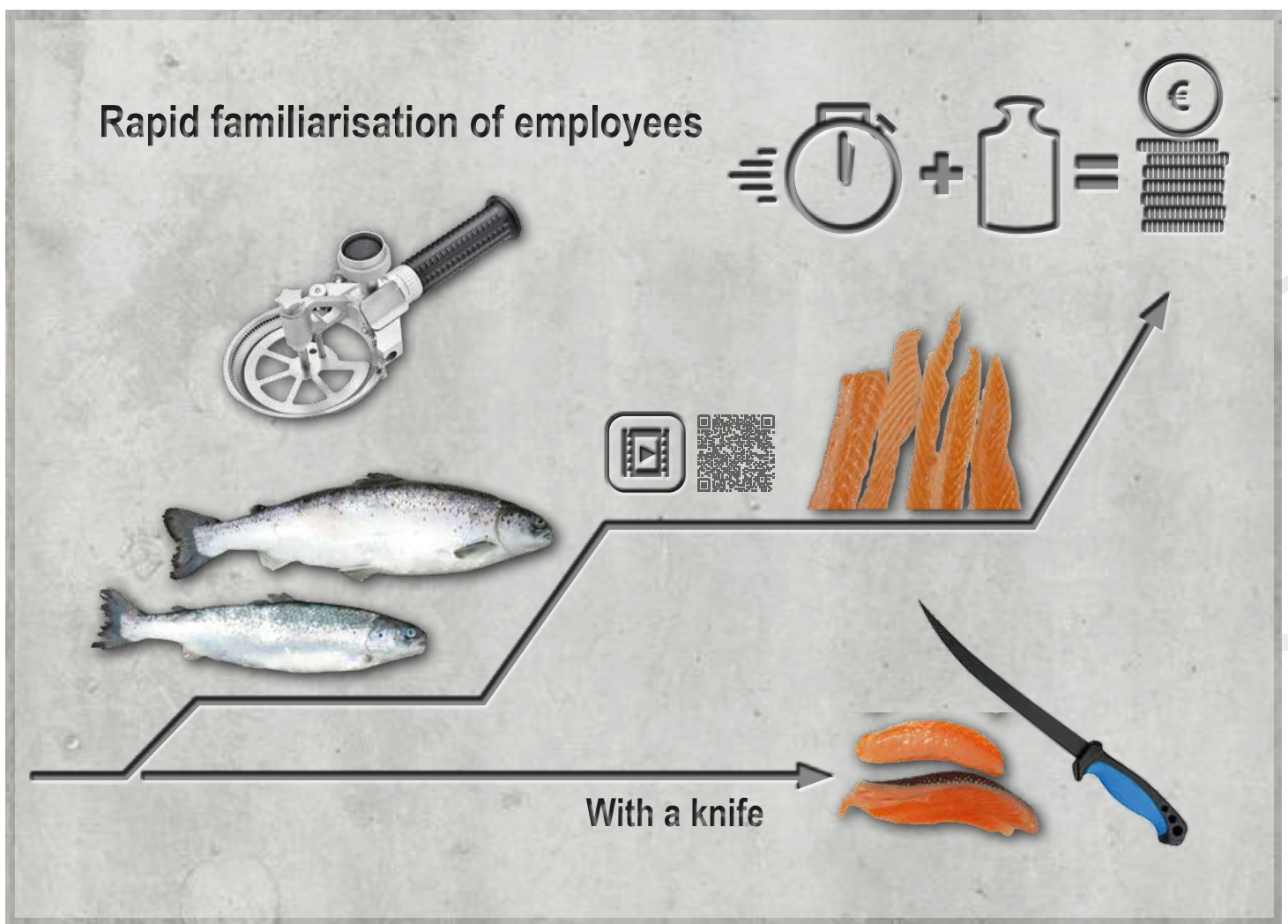


**CLEAN & TIDY CUT
DUE TO DEPTH CONTROL**



TRIMMING

MORE PROFIT THROUGH HIGHER YIELD!



TRIMMER ELECTRIC OR PNEUMATIC

Trimmer electric

Handle variants for smaller hands



Protein scrubber
(for the salmon
and fish industry)

DCF

DC2S



Pneumatic motor PNM2



Standard

*Figure also shows
Trimmer Ø 35mm



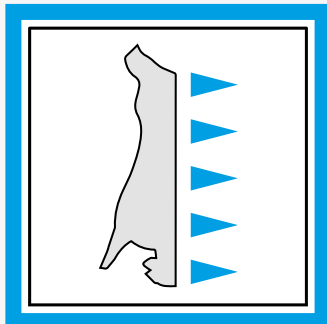
Handle version D34
(optionally)



Handle version D34 knurled
(optionally)

TRIMMER -

VARIANTS WITH VACUUM SUCTION



With the use of our FREUND trimmer variants with vacuum extraction the slaughtering in your plant will be even more profitable for you.

Often materials that should be removed remain in the carcass. With our FREUND trimmer variants with vacuum suction these can be removed and vacuumed away. Hugely increasing carcass yield.

Among other things, up to 0.5 kg of material can be removed from the carcass per half pig. For 1,000 pig halves, this amounts to up to 500 kg of material.



Fat and flare material
approx. 0.2 kg*

bloody material
approx. 0.2 kg*

tonsils and brains
approx. 0,1 kg*

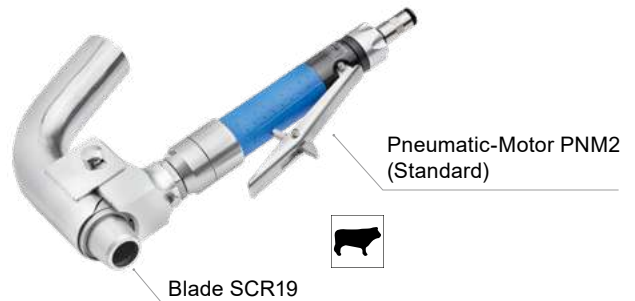
*material to be removed from the carcass.
Data per pig half.

EFFICIENCY AND QUALITY SLAUGHTERING



TRIMMER 35 - VARIANT WITH VACUUM SUCTION

- Various applications possible, e.g. suctioning of flare fat, suctioning of breast/heart fat, suctioning of stitch meat and bone cleaning
- Application-optimised design
- Various blade types (straight ring blade, hook ring blade, SCR16, SCR19)
- Minimal downtime and servicing costs thanks to low-wear quality components
- Ergonomic handle with robust and abrasion-free plastic design
- Quiet operation minimises vibrations on the handle
- Optionally powered electrically or pneumatically



TRIMMER 35 - VARIANT SCR SPINAL CORD REMOVAL

- The modern way of removing spinal cord in which the risk material is completely isolated
- The spinal cord strand is suctioned by means of a vacuum (VSS vacuum system => accessories). The internal cutting edge separates the spinal ganglia without harming the spinal cord skin
- ▶ Available in 2 different blade sizes:
SCR16 for pigs
SCR19 for cattle

TRIMMER 52 - VARIANT WITH VACUUM SUCTION

VSS - VAKUUM-SUCTION-SYSTEM*

- Vacuum tank: VT 110 incl. separator can
- Vacuum pump: VPSC300
- 5m each vacuum pump hose and handpiece hose
- Trolley: VSS



*available on request

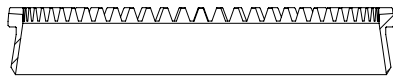


- Easy handling thanks to spherical suction head (only for Trimmer 52)

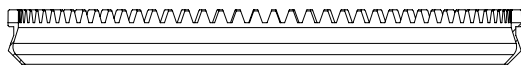
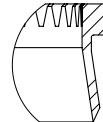
TRIMMER 52 - VARIANT WITH VACUUM SUCTION

- Various applications possible, e.g. suctioning of flare fat, suctioning of breast/heart fat, suctioning of stitch meat and bone cleaning
- Application-optimised design
- Various blade types (straight ring blade, hook ring blade)
- Minimal downtime and servicing costs thanks to low-wear quality components
- Ergonomic handle with robust and abrasion-free plastic design
- Quiet operation minimises vibrations on the handle
- Optionally powered electrically or pneumatically

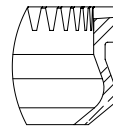
RING BLADE SELECTION



■ A (straight)

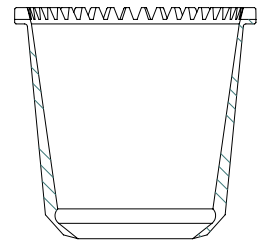


■ B (hook)

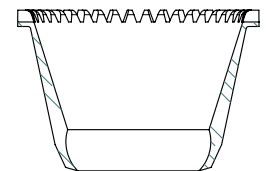


FOR SPINAL CORD REMOVAL

■ SCR16



■ SCR19

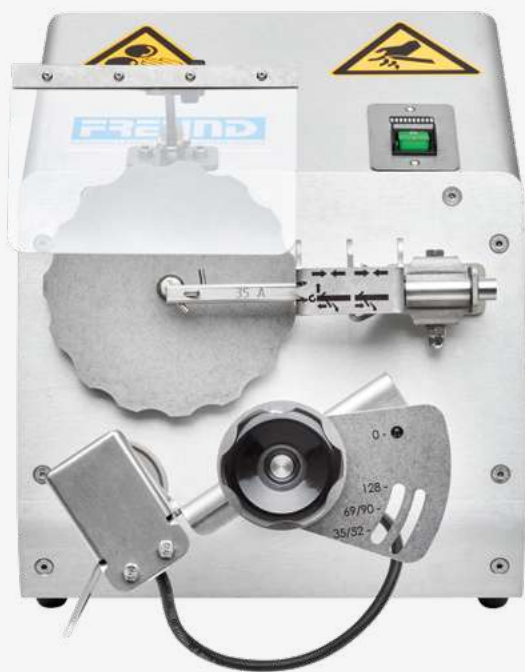


APPLICATION

SLAUGHTERING	Ø 35 MM	Ø 52 MM		CUTTING	Ø 35 MM	Ø 52 MM
Trimming / vacuum suctioning tonsils in head	A 			Trimming / vacuum suctioning auricles	A 	
Trimming / vacuum suctioning spinal hole	A	A 		Trimming / vacuum suctioning eyes	A 	
Cleaning / vacuum suctioning carcasses	A 			Cleaning / vacuum suctioning bones	A 	
Trimming / vacuum suctioning cover fat	A 	B		Deboning / vacuum suctioning long bones	A 	
Trimming / vacuum suctioning chest fat	B			Removing tendons in the shoulder		B
Removing / trimming heart fat		B				
Trimming / vacuum suctioning spinal cord	B	B				
Trimming / vacuum suctioning blood vessels	B	A  / B				
Trimming / vacuum suctioning leaf lard	B	B				
Trimming / vacuum suctioning filets		B 				

TRIMMING

RING BLADES SHARPENING



*Figure: Standard variant with steeling device for blades Ø 69 -128mm



TSM-E1 - TRIMMER SHARPENING MACHINE

- Precise sharpening of suitable trimmer blades for all FREUND trimmers in all diameters
 - Quick clamp device in two different sizes enables rapid insertion of the trimmer blade with minimal installation effort
 - Spring-loaded deburring lever prevents contact being too forceful
 - Pre-coated precision grinding disc enables optimum sharpening results while, at the same time, ensuring the maximum service life for the grinding unit
 - Integrated overload display indicates potential overload
 - Compact aluminium housing with stable design
 - Drive with up to 8000 rpm
- Steeling device for Ø 35 and 52 mm
OPTIONALLY available

TECHNICAL DATA

	TSM-E1	SHARPENING STEEL	SHARPENING STEEL HOOK	SHARPENING STEEL FOR WORK TABLE
Length (mm)		248	190	160
Diameter (mm)		12,9	6,5	9,5
Weight (kg)	1,380	0,344	0,092	0,270
Revolutions (rpm)	up to 8000			
Protection class	IP32			
Drive type	electrical, 1-phase			
Power	150 Watt (50Hz)			



Sharpening steel



Sharpening steel hook



Sharpening steel for work tables



SHARPENING STEEL / - HOOK

- Precision resharpener of trimmer blades of type A 35 / 52 / 69 mm and trimmer blades of type B, C and D 90 / 128 mm
- Significant improvement of surface thanks to fine removal of material from the blade
- Increased service life for trimmer blades thanks to improved surface
- Design made of resistant chrome/vanadium alloy tool steel

SHARPENING STEEL FOR WORK TABLE

- Precision resharpener of trimmer blades of type B, C and D 90 / 128 mm
- Significant improvement of surface thanks to fine removal of material from the blade
- Increased service life for trimmer blades thanks to improved surface
- Special design enables clamping in screwing device and attachment to work table
- Design made of hardened chrome/vanadium alloy cold work steel



SPARE PARTS

RING BLADE		Type	Item no.
Diameter - shape Blade shapes: A = straight B = hooked C = flat, short D = flat, long		SCR16	028-EL2-223
		SCR19	028-EL2-222
		35A	028-EL2-112
		35B	028-EL2-117
		52A Series 2	028-EL2-205
		52B Series 2	028-EL2-206
		69A	028-EL2-108
		69C	028-300-099
		90A	028-AD2-033
		90B	028-AD2-005
		90C	028-AD2-007
		128C 45°	028-EL2-030
		128C 30°	028-EL2-045
		128D	028-EL2-042
BLADE GUIDES		Type	Item no.
Diameter - shape		35mm	028-EL2-113
		52mm Series 2	028-EL2-207
		69mm	028-EL2-081
		90mm	028-AD2-003
		90mm LE	028-EL2-211
		128mm	028-EL2-040
		128mm LE	028-EL2-119
		128mm PS	028-EL2-044
CUTTING DEPTH CONTROL, 90-128MM ONLY		Type	Item no.
DCS - plastic design		90mm	028-EL2-009
		128mm	028-EL2-051
DCF - plastic design		90mm	028-EL2-008
DC2F - stainless steel design		128mm	028-EL2-146
DC2S - stainless steel design		128mm	028-EL2-170
SPROCKET		Type	Item no.
ENDEAVOUR+ADAPTIVE (Start-Stop)		35 / 52 / 69 mm	028-EL2-109
ENDEAVOUR		90 - 128mm	028-EL2-200
ENDEAVOUR Start-Stop		90 - 128mm	028-EL2-002
ADAPTIVE		90 - 128mm	028-AD2-002
BEARINGS		Type	Item no.
ENDEAVOUR		35 / 52 / 69 mm	028-EL2-115
		90 - 128 mm	028-E84137
	plastic design	35 / 52 / 69 mm	028-EL2-233
	plastic design	90 - 128 mm	028-EL2-232
ADAPTIVE		35 / 52 / 69 mm	028-EL2-115
		90 - 128mm	028-E66502

HANDLES WITH / WITHOUT START-STOP			Item no.
D31	with start-stop		028-EL2-088
	without start-stop		028-EL2-089
D34	with start-stop		028-EL2-202
	without start-stop		028-EL2-125
D38	with start-stop		028-EL2-052
	without start-stop		028-E89113ASSY
ERGONOMIC THUMB REST			Item no.
			028-E85782
SHAFTS AND HOSES FOR ALL FREUND TRIMMERS VERSION EF1 + START-STOP			Item no.
FREUND drive train	Drive train	1,5m	028-003-111E
	Flexible shaft	1,5m	028-E97250B
	Hose	1,5m	028-003-091
SHAFTS AND HOSES FOR ALL FREUND TRIMMERS VERSION EF2 + START-STOP			Item no.
FREUND drive train	Drive train	1,5m	028-003-116
	Flexible shaft	1,5m	028-003-118E
	Hose	1,5m	028-003-117E
SHAFTS AND HOSES FOR ALL FREUND TRIMMERS VERSION EF2 + START-STOP			Item no.
FREUND drive train	Drive train	2,1m	028-003-121
	Flexible shaft	2,1m	028-003-125E
	Hose	2,1m	028-003-124E
SHAFTS AND HOSES FOR ADAPTIVE UN84/ULTRADRIIVE, 90-128 MM ONLY			Item no.
Adaptive drive train	Drive train	1,5m	028-003-112E
	Flexible shaft	1,5m	028-E66499
	Hose	1,5m	028-003-087
GREASE CUP AND GREASE PRESS			Item no.
Grease cup	small		028-E97334
Grease cup	large		028-E93214
Grease cup	filled		028-100-006
CONNECTOR UNIT EF2			Item no.
Connector unit EF2			028-010-015
SHARPENING STEEL			Item no.
Sharpening steel			028-E94295
Sharpening steel hook			028-E35241B
Sharpening steel for work table			028-E93129

All spare parts available via FREUND Assistance (FA) under the serial number



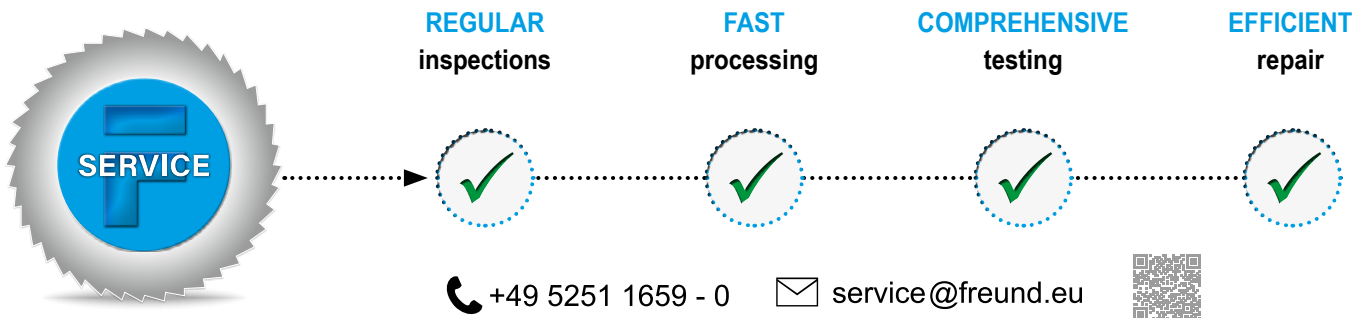
TRIMMING

QUALITY TRIMMER



TECHNICAL SUPPORT

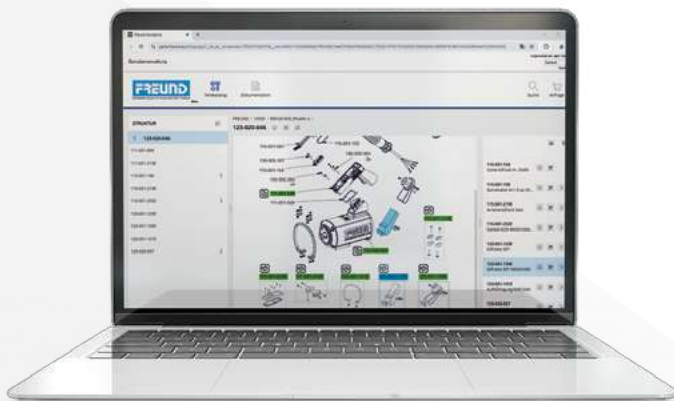
YOUR REQUEST IS OUR MISSION!



Here you will find detailed information about the FREUND technical service.

FREUND ASSISTANCE

EXPERIENCE A NEW KIND OF SERVICE!



With our modern customer portal, we provide you with a tool that not only ensures access to important information and services, but also the next step towards digitalisation.



Access technical documentation and parts catalogues at any time - conveniently and centrally in one place.

Get started - everything you need is just a one click away!

<https://parts.freund.eu>



Here you can find out more about the benefits of FREUND Assistance.

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🌐 www.freund-germany.com



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