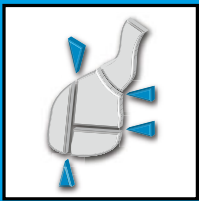
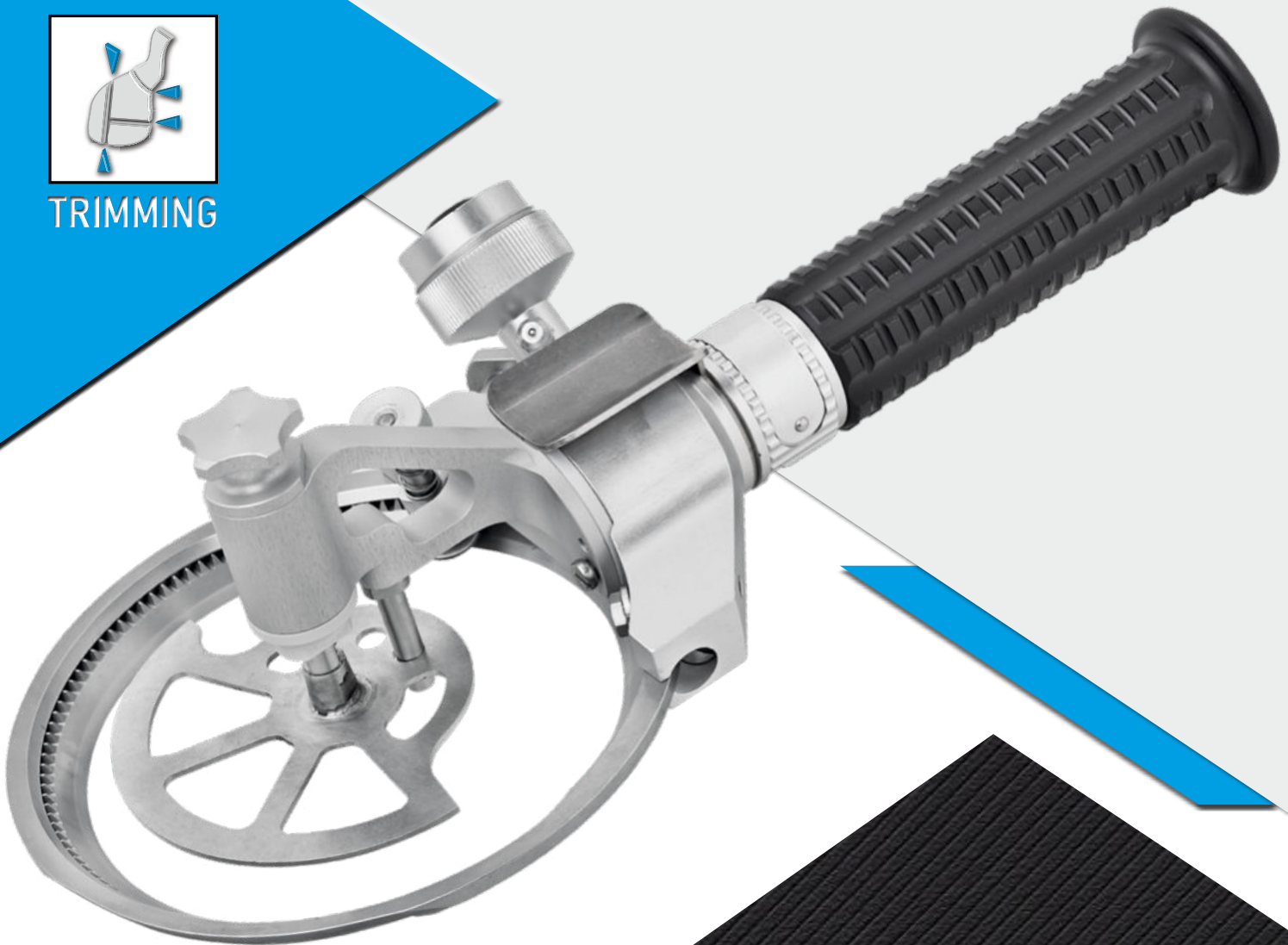


TRIMMER



TRIMMING



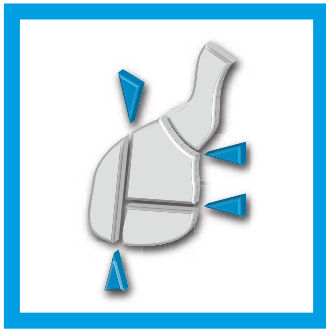
TRADITION
+ INNOVATION
FUTURE





TRIMMING

TRIMMER_evo2



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

CONTENTS

| | |
|--|-------|
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| ▶ Trimmer-features | 6-7 |
| ▶ Bearing plastic design | 8 |
| ▶ Ring blade selection & application | 10-11 |
| ▶ Trimmer with protein scaber | 12-17 |
| ▶ Trimmer - variants with vacuum suction | 18-21 |
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| 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 (standard)

*Figure also shows trimmer Ø 35 mm



Handle variant D34 (optionally)



Handle variant D34 knurled (optionally)

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

CONNECTOR UNIT EF2

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



TRIMMERS



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

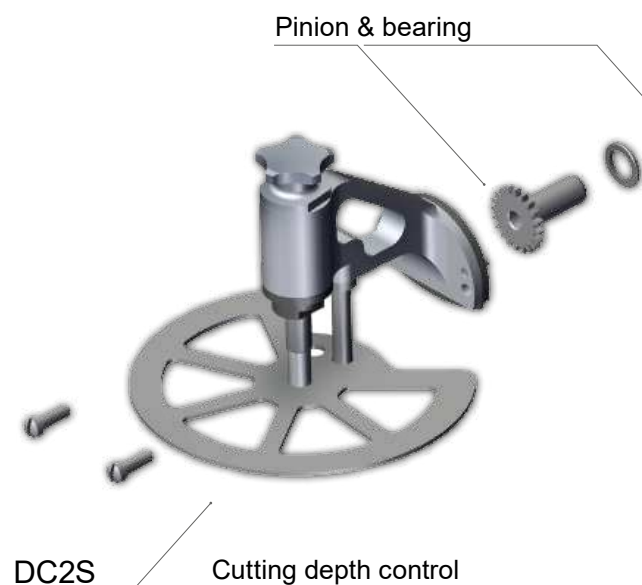
TRIMMER



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)

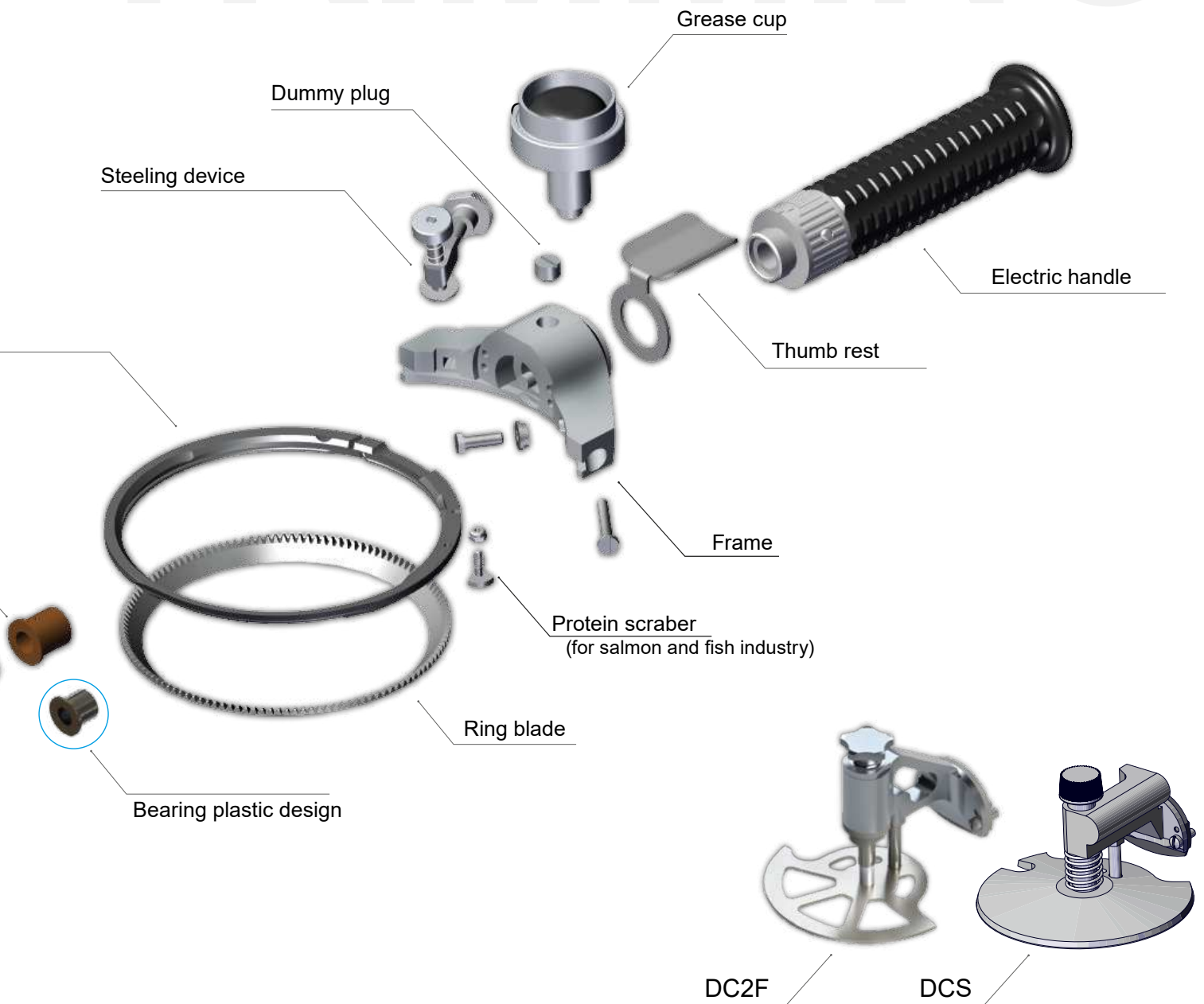
Blade housing



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

TRIMMING

TRIMMER ELECTRIC



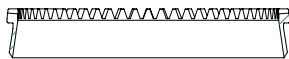
Exploded view
TRIMMER Ø 90mm
pneumatic

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

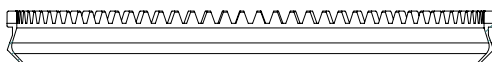
RING BLADE SELECTION & APPLICATION

RING BLADE SELECTION

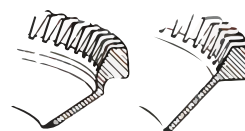
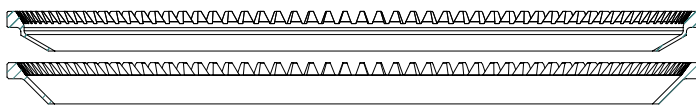
| TYPE | Ø (MM) | 35 | 52 | 69 | 90 | 128 |
|----------------|--------|----|----|----|----|-----|
| A (straight) | | • | • | • | • | |
| B (hook) | | • | • | | • | |
| C (short flat) | | | | | • | • |
| D (long flat) | | | | | | • |



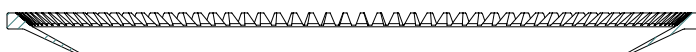
■ A (straight)



■ B (hook)



■ C (short flat)
30° / 45°



■ D (long flat)

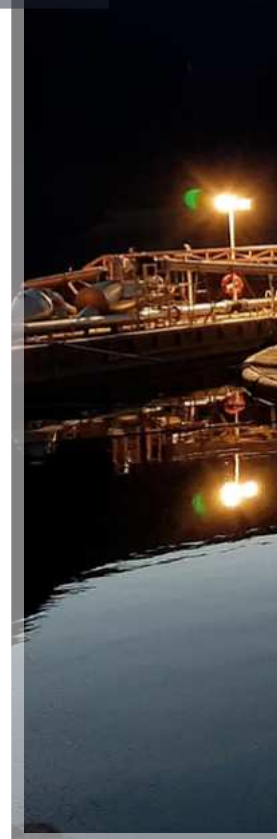
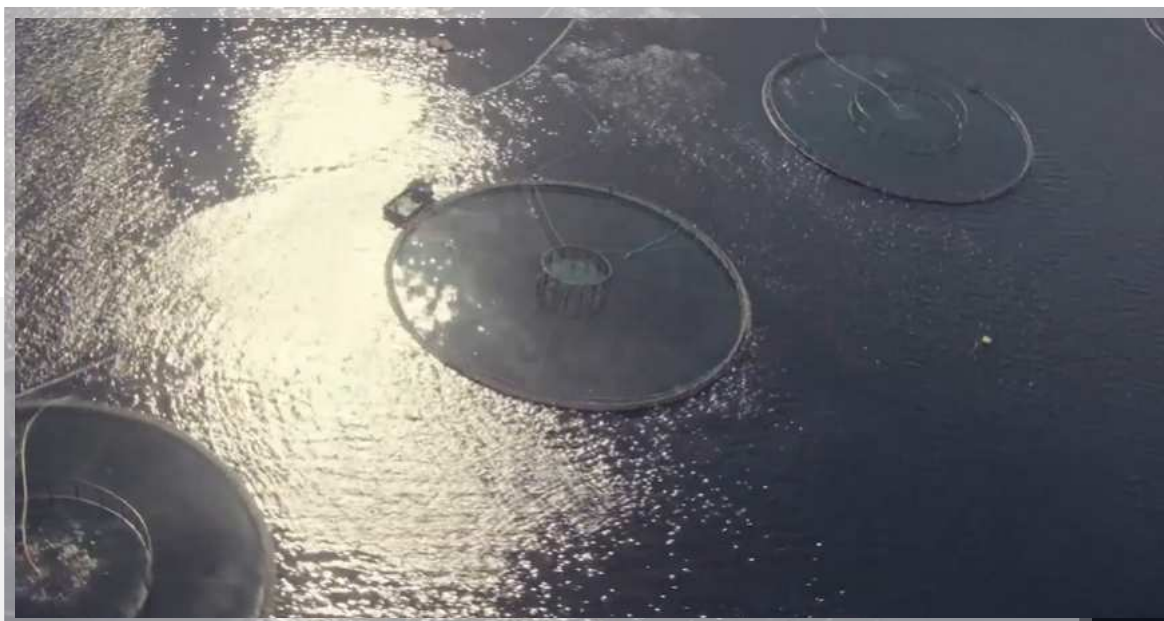


APPLICATION

| | 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 |



TRIMMER IN THE FISH INDUSTRY



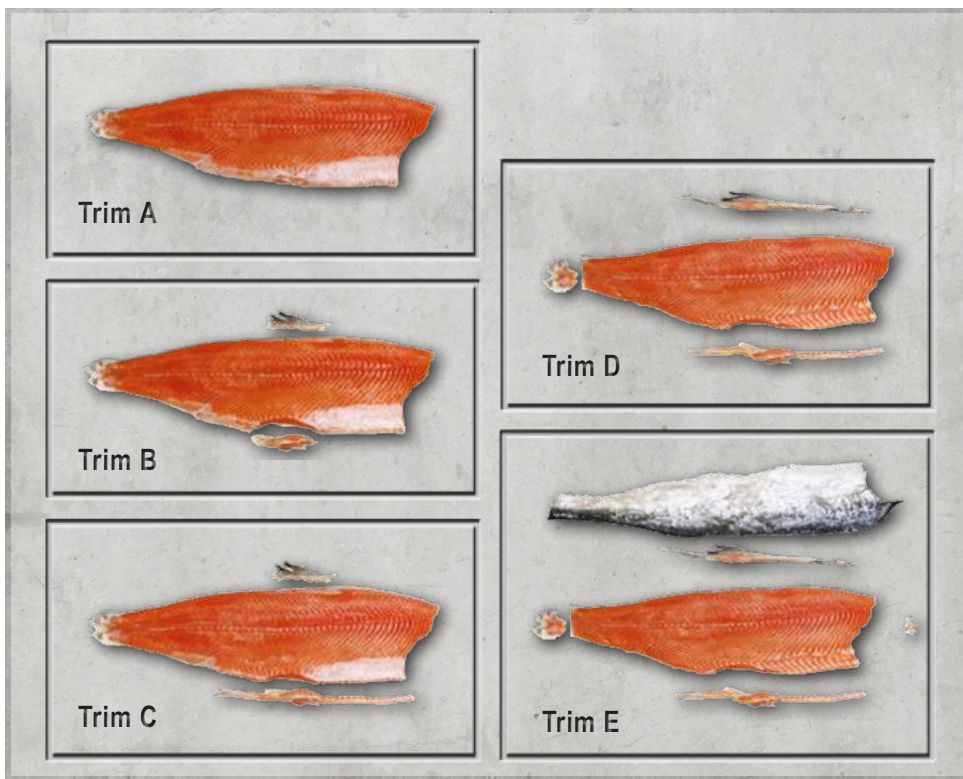
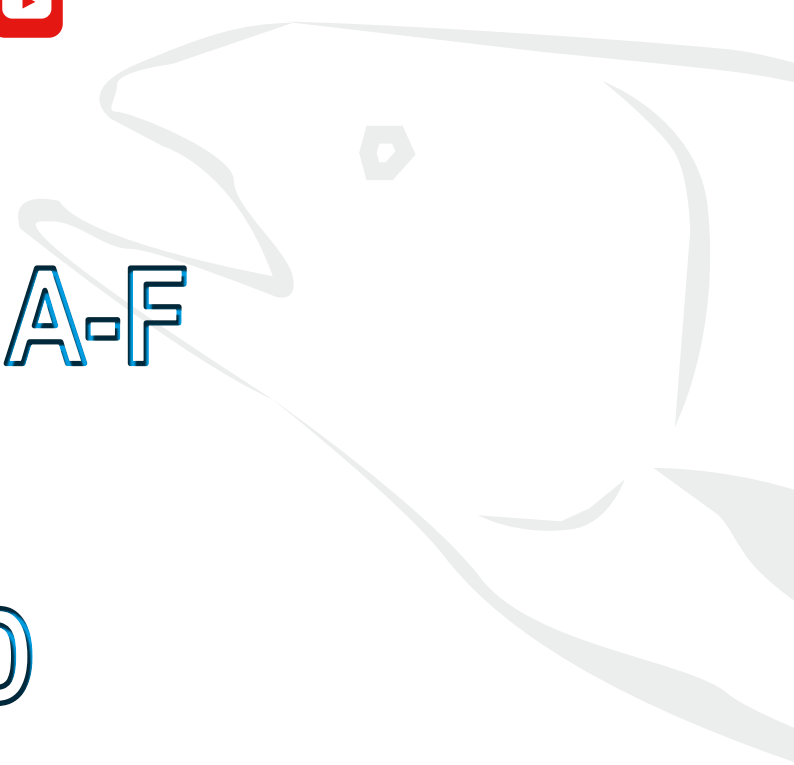


TRIMS FROM A-F

EFFECTIVE

CONTROLLED

MAXIMUM YIELD



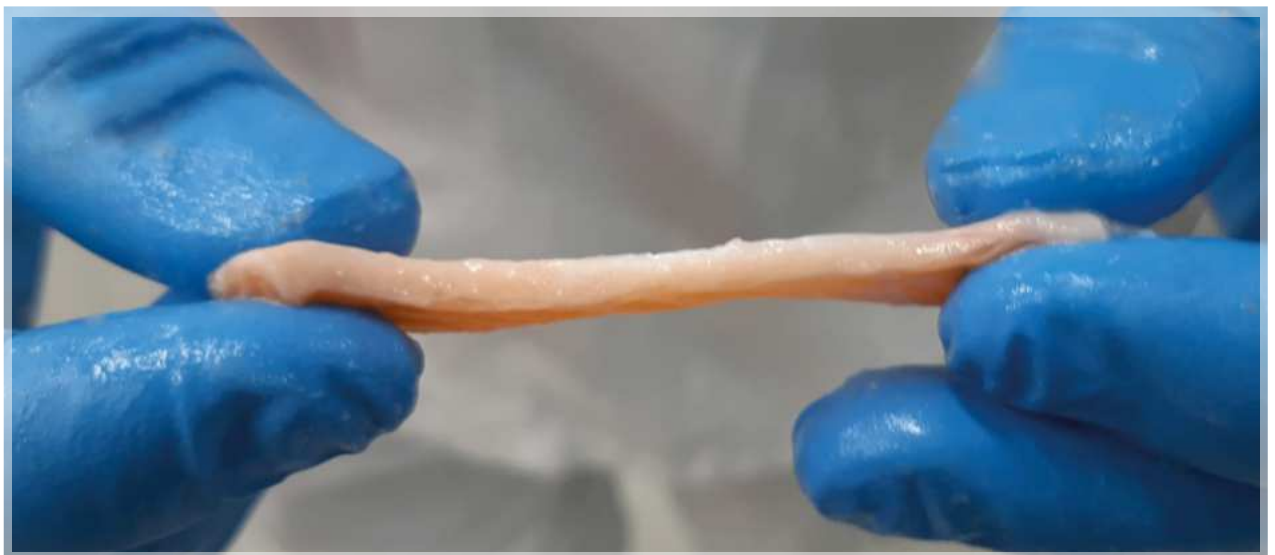
SUITABLE FOR ALL TYPES OF TRIM!

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.

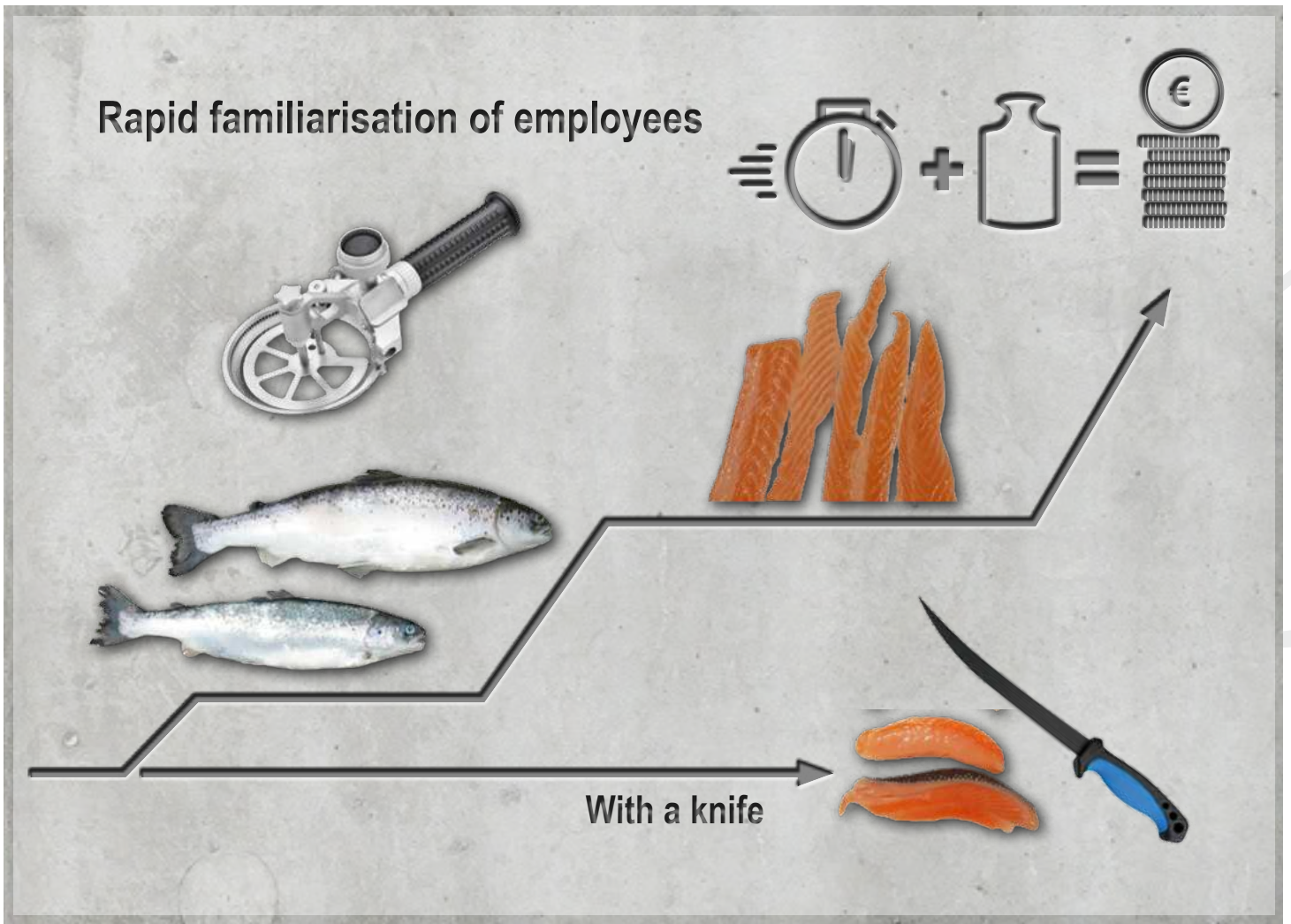
With a choice of electrically or pneumatically operated trimmers, we offer you the right hand tool for the diverse requirements on your farm.



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



MORE PROFIT THROUGH HIGHER YIELD!



TRIMMER ELECTRIC OR PNEUMATIC

Trimmer electric

Handle variants for smaller hands



Protein scruber
(for the salmon
and fish industry)

DCF

DC2S



Pneumatic motor PNM2



*Figure also shows
Trimmer Ø 35mm

Standard

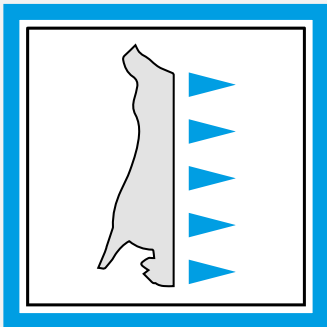


Handle version D34
(optionally)



Handle version D34 knurled
(optionally)

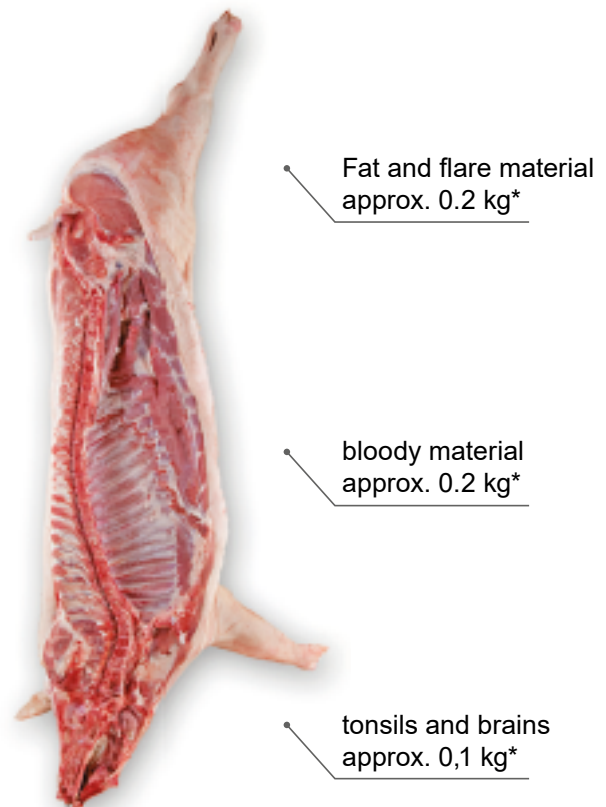
TRIMMER - VARIANTS WITH VACUUM SUCTION



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.



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

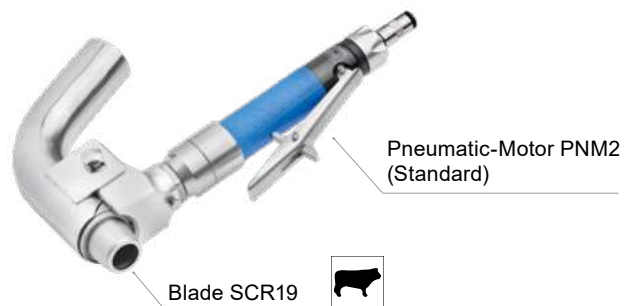
TRIMMING

EFFICIENCY AND QUALITY



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



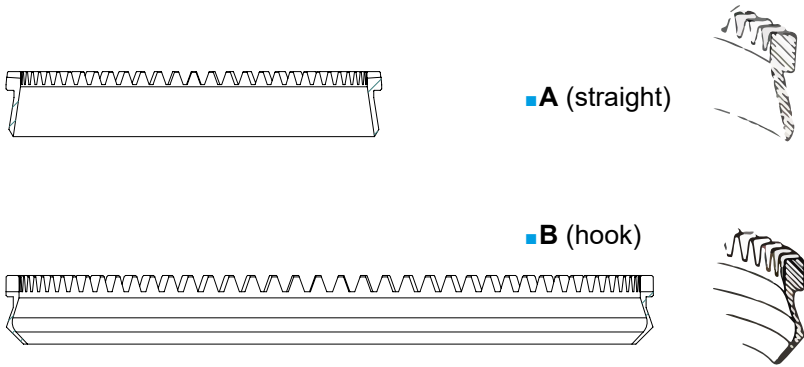
- Easy handling thanks to spherical suction head (only for Trimmer 52)

TRIMMER 52 - VARIANT WITH VACUUM SUCTION

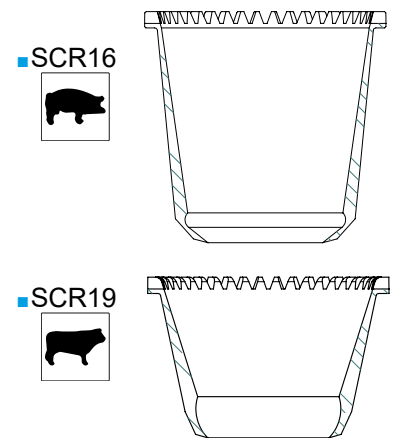
- Various applications possible, e.g. suctioning of flare fat, suctioning of breast/heart fat, suctioning of stitch meat and bone cleaning
- Application-optimised design
- Various blade types (straight ring blade, hook ring blade)
- Minimal downtime and servicing costs thanks to low-wear quality components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

*available on request

RING BLADE SELECTION



FOR SPINAL CORD REMOVAL



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



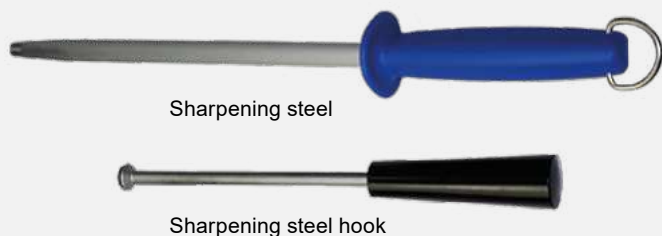
*Figure: Standard variant with steeling device for blades Ø 69 -128mm

TSM-E1 - TRIMMER SHARPENING MACHINE

- Precision sharpening of trimmer blades of 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 (g) | 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 / - HOOK

- Precision resharpening 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 resharpening 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. |
|--|---------------------------------|-----------------|-------------|
| | | 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 |
| Diameter - shape Blade shapes: A = straight B = hooked C = flat, short D = flat, long | | | |
| BLADE GUIDES | | Type | Item no. |
| | | 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 |
| Diameter - shape | | | |
| CUTTING DEPTH CONTROL, 90-128MM ONLY | | Type | Item no. |
| | | 90mm | 028-EL2_009 |
| | DCS - plastic design | 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. |
| | | 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 |
| | | 35 / 52 / 69 mm | 028-EL2-115 |
| | ADAPTIVE | 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 | 028-003-123E |
| | Hose | 2,1m | 028-003-124E |

| SHAFTS AND HOSES FOR ADAPTIVE UN84/ULTRADRIVE, 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



FREUND ASSISTANCE

WE ARE DIGITAL



Mok-Up Designed by zlatko_pilamenov / Freepik

A couple of clicks, no waiting times, using a PC, smartphone or tablet at any time of day or night: our customer portal provides you with information and functions relating to our machines - at any time of day!

We're going digital for you to unite you as a customer with us on one platform – communication and data exchange as you have never experienced it before with FREUND.

Operating manual and login can be found on our website :

www.freund.eu/assistance

ADVANTAGES FOR OUR CUSTOMERS

- Find your FREUND machines and FREUND devices
- You can navigate your way around the respective machine
- Find, view and print a spare parts list
- Operating manuals for our machines/devices
- Installation manuals for our machines/devices
- SRC technical information
- Send order requests by email, done from the customer portal
- Further users (multi-user login) can be created per customer on request

The advantages to the customer are at the forefront of everything we do. Our customer portal is of course available to you free of charge. After all, customer relations is a top priority for FREUND. Please give us a call on

+49 5251 1659-0 .

¹ It should be noted that for reasons of readability only the masculine form is used, but women are of course also addressed.

TECHNICAL SUPPORT

OPTIMUM PLANNING

Excellent service is an important factor for customer loyalty – all of us at FREUND embody this belief. Whether it's maintenance, complaints or repairs – efficient service processes not only ensure satisfied customers, but also set us apart from the competition thanks to the comprehensive and meticulous technical service we offer.

PROFESSIONAL SERVICE

The basis for optimum service is the precise planning and handling of all our service offers. Based on a history of your existing machines, our team members are highly knowledgeable when it comes to your FREUND machines. In compliance with statutory requirements, you will receive a test certificate after any repair work.

ARRANGING AN APPOINTMENT

When a service request is received, our service team members immediately see which equipment is available and when. To ensure operational safety, we provide you with equivalent rental equipment for the duration of the repair work. Service lives are lengthened and downtimes are minimised, which has a positive impact on the life of FREUND machines and ensures a faultless production process. Our collection service will also save you time and effort and guarantees secure packaging for the transport process.

SERVICING

Special tools and decades of industry experience allow for flawless repair work in accordance with technical requirements. Only original parts and auxiliary materials are used - all of which have been approved via our in-house quality control. Thanks to the updates that are directly accounted for in the repair process, your product always complies with the latest technological standards.

Lower your operating costs via regular maintenance and repairs.

DIVERSE SERVICE PORTFOLIO

Multiple tasks can be entered for a service order. Such tasks are assigned to our service team. Our qualified employees provide professional advice and support, which is carried out in a skilful manner, on time and carefully according to our company philosophy.

You can reach our technical service via the following channels.:

Phone: +49 5251 1659-46

E-Mail: service@freund.eu



FREUND Maschinenfabrik GmbH & Co. KG

Schulze-Delitzsch-Str. 38
33100 Paderborn, GERMANY
mail@freund.eu

Fon: +49 5251 1659-0
Fax: +49 5251 1659-75
www.freund-germany.com



GERMAN QUALITY SLAUGHTER-TOOLS



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EN



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