





# **COMBICLICK®** quick-mounting system General information

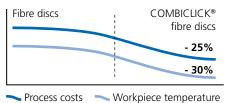
# The patented guick-mounting and cooling system is recommended with fibre, non-woven and felt discs.

The COMBICLICK® system consists of a specially developed backing pad and a rugged mounting system at the back of the disc. The backing pad allows COMBICLICK® discs to be used on most available angle grinders.

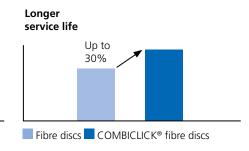
The special geometry of the cooling slots ensures high air throughput, which considerably reduces the thermal load on the abrasive material and the

The guick-mounting system, rugged fixture, secure attachment of the disc and optimized cooling system help to provide up to 30% lower workpiece temperature, up to 25% increased stock removal, up to 30% longer disc life and improved utilization of the abrasive.

#### Lower process costs and workpiece temperature



# Higher stock removal rate Up to 25% Fibre discs COMBICLICK® fibre discs



# **Advantages:**

### System



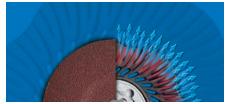
Very easy and comfortable.

### Clamping mounting system



Extremely fast and easy disc changing reduces process costs.

Cooling effect



Very good cooling of the disc and workpiece.

# Flexible grinding



Soft and flexible grinding performance in facedown grinding with 5 inch diameter fibre discs.

### COMBICLICK® allows a very flat grinding angle!





With COMBICLICK®, scratches caused by protruding clamping parts are prevented and very high utilization of the available abrasive is attained.

# **PFERD**VALUE®

**PFERD**ERGONOMICS® recommends COMBICLICK® as an innovative product solution to sustainably reduce vibration, noise and dust levels produced by discs, and to improve working comfort.









**PFERD**EFFICIENCY® recommends COMBICLICK® for long, fatigue-free and resource-saving work in the shortest possible time. The patented quick-mounting system reduces disc changes and setup times.









# Fibre discs



The wide range of COMBICLICK® fibre discs offers the best product for any grinding application, from coarse to fine.

# **Advantages:**

- Innovative quick-mounting system guarantees convenient handling and cool grinding.
- High productivity due to long service life and very high stock removal rate.
- Consistent surface finish resulting from highquality abrasives.

# **Applications:**

- Leveling
- Deburring
- Surface work
- Work on edges
- Work on weld seams
- Step-by-step fine grinding

#### **Recommendations for use:**

Use COMBICLICK® fibre discs with COMBICLICK® backing pads on commercially available angle grinders.

# **Compatible power tools:**

- Angle grinders
- Cordless angle grinders

# **Ordering notes:**

Order COMBICLICK® backing pads separately. Detailed information and ordering data for backing pads can be found on page 18.

# **Safety notes:**

- The maximum permitted peripheral speed is 15,800 SFPM.
- For safety reasons, it is imperative to remain within the stated maximum permitted rotational speed at all times.







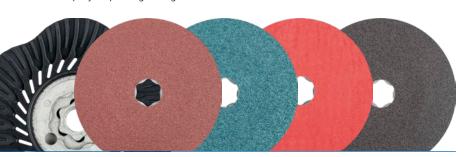












# **Quick product selection guide**

Material gro  ▼	oup	Abrasive	Aluminum oxide	Zirconia Alumina Z	Ceramic oxide CO	Silicon carbide SiC	Aluminum oxide A-COOL	Ceramic oxide CO-COOL
Non-hardened, non-heat-treated Steel, steels		Construction steels, carbon steels, tool steels, non-alloyed steels, cast steel	•	0	•			
cast steel	Hardened, heat-treated steels	Tool steels, tempering steels, alloyed steels, cast steel	0	•	•			
Stainless steel (INOX)	Rust- and acid- resistant steels	Austenitic and ferritic stainless steels		О			•	•
	Soft non-ferrous	Soft aluminum alloys	0				•	0
	metals, non-ferrous metals	Brass, copper, zinc	•	O	0			
Non-ferrous metals	Hard non-ferrous	Hard aluminum alloys	•	О	О	0		
metais	metals	Bronze, titanium		O	О	•		•
	High-temperature- resistant materials	Nickel-based and cobalt- based alloys		О	О			•
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite, with nodular graphite cast iron, white annealed cast iron, black cast iron	•	0	•			
Plastics, other materia	als	Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	•			•		

● = highly recommended

O = recommended

Fibre discs

# **Aluminum oxide A**

For universal grinding work from coarse to fine grinding in industry and professional trades.

Aluminum oxide A

### Ordering notes:

■ Please order COMBICLICK® backing pad separately.

# PFERDVALUE®:











D			Max.	$\Longrightarrow$				
[Inches]	24	36	50	60	80	120	RPM	
4-1/2	40091	40092	40093	40094	40095	40097	13,300	25
5	40099	40100	40101	40102	40103	40105	12,200	25

# Zirconia alumina Z

For coarse grinding work with a high stock removal rate and a long service life.

#### Abrasive:

Zirconia alumina Z

#### **Recommendations for use:**

■ Use powerful angle grinders in the case of a higher contact pressure.

■ Please order COMBICLICK® backing pad

#### PFERDVALUE®:

















separately.

D			Max.	$\Longrightarrow$				
[Inches]	24	36	50	60	80	120	RPM	
4-1/2	-	40131	40132	40133	40134	40136	13,300	25
5	40137	40138	40139	40140	40141	40143	12,200	25

# Ceramic oxide CO

For aggressive grinding with a very high stock removal rate and very long service life. The ceramic oxide grain is specifically designed for work on hard materials and coatings.

# Abrasive:

Ceramic oxide CO

### **Recommendations for use:**

■ Use with high-powered angle grinders.

#### Ordering notes:

■ Please order COMBICLICK® backing pad separately.

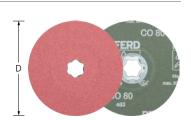












D			Max.	$\longrightarrow$				
[Inches]	24	36	50	60	80	120	RPM	
4-1/2	40697	40698	40699	40700	40701	40703	13,300	25
5	40704	40705	40706	40707	40708	40710	12,200	25

# Fibre discs





# Silicon carbide SiC

For universal grinding work on components made from aluminum, copper, bronze, titanium and fibre-reinforced plastics.

Recommended for use on titanium alloys.

Ideally suited for use in the aerospace industry, especially where SiC is the only approved abrasive, e.g. for use on engine components.

#### Abrasive:

Silicon carbide SiC

#### Ordering notes:

■ Please order COMBICLICK® backing pad separately.

# PFERDVALUE®:









D		Grit and EI		Max.	$\longrightarrow$	
[Inches]	36	60	80	120	RPM	
4-1/2	40021	40022	40023	40024	13,300	25
5	40028	40029	40030	40031	12,200	25



# **Aluminum oxide A-COOL**

For universal grinding work from fine to very fine grinding on materials that do not conduct heat well, e.g. stainless steel (INOX) and aluminum.

Active grinding additives in the coating substantially improve the stock removal rate, prevent loading and result in cooler grinding.

# Abrasive:

Aluminum oxide A-COOL

#### Ordering notes:

Please order COMBICLICK® backing pad separately.

# PFERDVALUE®:











D		Grit and EDP number									
[Inches]	50	60	80	120	150	180	220	RPM			
4-1/2	-	40302	40303	40305	40306	-	40308	13,300	25		
5	40310	40311	40312	40314	40315	40316	40317	12,200	25		



# **Ceramic oxide CO-COOL**

For aggressive grinding with maximum stock removal rate on hard materials that do not conduct heat well. Consistently high performance due to self-sharpening ceramic oxide grain.

Active grinding additives in the coating substantially improve the stock removal rate, prevent loading and result in cooler grinding.

# Abrasive:

Ceramic oxide CO-COOL

# Ordering notes:

■ Please order COMBICLICK® backing pad separately.







D			Max.	$\Longrightarrow$					
[Inches]	24	36	50	60	80	120	RPM		
4-1/2	40725	40726	40727	40728	40729	40731	13,300	25	
5	40732	40733	40734	40735	40736	40738	12,200	25	
7	40746	40747	40748	40749	_	_	8 500	25	



# **Advantages:**

Innovative quick-mounting system guarantees convenient handling and cool grinding.

COMBICLICK® non-woven discs are used for face-down grinding.

# **Workpiece materials:**

■ Can be used on nearly all materials.

# **Applications:**

- Roughing
- Deburring
- Surface work
- Cleaning
- Work on weld seams
- Structuring surfaces
- Step-by-step fine grinding

# **Recommendations for use:**

Use COMBICLICK® non-woven discs with COMBICLICK® backing pads on variable speed angle grinders.

### **Compatible power tools:**

Angle grinders

They are available in the following types: finishing-soft type, surface conditioning-hard type, and unitized.

Cordless angle grinders

# **Ordering notes:**

Order COMBICLICK® backing pads separately. Detailed information and ordering data for backing pads can be found on page 18.

# **Safety notes:**

For safety reasons, it is imperative to remain within the stated maximum permitted rotational speed at all times.



**COMBICLICK®** quick-mounting system















# Non-woven discs

# Surface conditioning, hard type

Recommended for universal work on small and medium-sized metal surfaces, e.g. removing rough grinding traces, removing oxidation and light deburring work. Achieve matte and satin-finished surfaces.

# Advantages:

- Little wear due to high tear strength.
- The open structure of the non-woven material prevents loading.

#### Abrasive:

Aluminum oxide A

Available POLIVLIES® grit sizes: 100 C = coarse (yellow-brown) 180 M = medium (red-brown)

240 F = fine (blue)

# Recommendations for use:

■ COMBICLICK® surface conditioning, hard type discs achieve their best performance at a recommended peripheral speed of 3,000–4,000 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and disc wear.

■ The addition of oil or water during grinding results in a finer finish, cooler grinding and longer service life.

# Ordering notes:

■ Please order COMBICLICK® backing pad separately.













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	COMBICUCE*-Vies COVIN 115 A 10 115 mm - 4 1/2 INV codes	

D	(	Grit and EDP number	r	Opt.	Max.	
[Inches]	100 C	180 M	240 F	RPM	RPM	
4-1/2	48100	48101	48103	3,300	10,500	10
5	48110	48111	48113	3,100	9,650	10

Non-woven discs





# Finishing, soft type

Recommended for very fine grinding on small and medium-sized surfaces and contours, and for cleaning metal and painted surfaces. Achieve matte and satin-finished surfaces. Highly open structure.

#### Advantages:

- Can be used for wet and dry grinding.
- The open structure and high flexibility of the non-woven material prevents loading.

#### Abrasive:

Aluminum oxide A Available POLINOX® grit sizes:

100 = medium 180 = fine 280 = very fine

### **Recommendations for use:**

■ COMBICLICK® finishing, soft type discs achieve their best performance at a recommended peripheral speed of 3,000–4,000 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and disc wear.

### Ordering notes:

■ Please order COMBICLICK® backing pad separately.

#### PFERDVALUE®:







D		Grit and EDP number	r	Opt.	Max.	$\Longrightarrow$
[Inches]	100	180	280	RPM	RPM	
4-1/2	48131	48132	48133	3,300	10,500	10
5	48135	48136	48137	3,100	9,650	10



# **Unitized discs**

For achieving a very fine, uniform surface finish which, depending on requirements, is a sufficient preparation for high-gloss polishing. Recommended for work on larger surfaces on components made of stainless steel (INOX).

The different thicknesses/hardnesses of the non-woven material are colour-coded: W (soft) = grey, MW (medium-soft) = light blue, MH (medium-hard) = dark blue, H (hard) = red

#### Advantages:

- High edge strength due to extreme durability.
- Can be profiled as desired, enabling optimal adjustment to the contour.

## Abrasive:

Aluminum oxide A Silicon carbide SiC

# **Recommendations for use:**

COMBICLICK® unitized discs achieve their best performance at a recommended peripheral speed of 3,000–6,900 SFPM.

#### Ordering notes:

■ Further information on unitized products can be found on pages 85–86.













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D [Inches]	Abrasives	Grit size	Hardness	Spec	EDP number	Opt. RPM	Max. RPM	
4-1/2	SiC	fine	W	2SF	48150	5,000	8,350	5
	SiC	fine	MW	3SF	48154	5,000	8,350	5
	SiC	fine	MH	6SF	48158	5,000	8,350	5
	А	fine	Н	8AM	48162	5,000	8,350	5
5	SiC	fine	W	2SF	48166	4,500	7,650	5
	SiC	fine	MW	3SF	48170	4,500	7,650	5
	SiC	fine	MH	6SF	48174	4,500	7,650	5
	А	fine	Н	8AM	48178	4,500	7,650	5







COMBICLICK® felt discs are used for face-down grinding on medium-sized and large surfaces. They are supplied in various diameters.

# **Advantages:**

■ Innovative quick-mounting system guarantees convenient handling with fast disc changes.

# **Workpiece materials:**

■ Can be used on nearly all materials.

# **Applications:**

Polishing

#### **Recommendations for use:**

- Use COMBICLICK® felt discs with COMBICLICK® backing pads on variable speed angle grinders.
- Felt discs achieve their best performance at a recommended peripheral speed of 1,000-2,000 SFPM. This provides an ideal compromise between polishing performance, thermal load on the workpiece and disc wear.
- When changing the polishing paste, employ a new, unused felt disc.

# Compatible power tools:

- Angle grinders
- Cordless angle grinders

# **Ordering notes:**

- Please order COMBICLICK® backing pads separately. More detailed information and ordering data for backing pads can be found on page 18.
- Please order grinding and polishing pastes separately. Detailed information and ordering data for grinding and polishing pastes can be found on pages 121–122.

# **Safety notes:**

For safety reasons, it is imperative to remain within the stated maximum permitted rotational speed at all times.















# Felt discs

# **Felt discs**

Recommended for polishing with polishing paste bars, grinding pastes or diamond polishing pastes in face-down grinding on medium-sized and large surfaces.

### Advantages:

- High productivity due to very long service life.
- Consistent performance over the entire lifespan due to high dimensional stability.











D [Inches]	EDP number	Opt. RPM	Max. RPM	
4-1/2	48705	1,900	10,500	5
5	48706	1,650	9,650	5





# Backing pads





# **Backing pads**

With this backing pad, COMBICLICK® discs can be used on commercially available angle grinders. The different hardnesses are colour-coded:

CC-GT (medium) = black CC-H-GT (hard) = blue

#### Advantages:

- The geometry of the cooling slots significantly reduces the thermal load.
- High productivity due to minimized disc change times.

#### Recommendations for use:

CC-H-GT backing pads is mainly used to work on stainless steel (INOX). It features very high edge strength, which enables a higher contact pressure.

#### Safety notes:

- The maximum approved peripheral speed is 15,800 SFPM.
- For backing pads with a 7 inch diameter, do not apply too high a contact pressure in order to prevent the backing pad from overstretching.

#### PFERDVALUE®:

















Disc diameter [Inches]	Thread	Hardness	EDP number	Max. RPM	
4-1/2 and 5	5/8-11	medium	69470	13,300	1
		hard	69478	13,300	1
7	5/8-11	medium	69474	8,500	1

# Sets



#### **COMBICLICK®** sets

COMBICLICK® sets include a wide variety of coated and non-woven materials to test performance and surface finish results to help determine the right product selections for your applications prior to bulk purchases.

The included discs provide solutions for rough grinding, fine grinding, surface conditioning, prepolish and polishing to a mirror finish.

#### Contents:

- 3 pcs. each of COMBICLICK® fibre discs:
  - CO-COOL 36 grit
  - CO-COOL 120 grit
- A-COOL 220 grit
- 1 pc. each of COMBICLICK® non-woven disc:
- Surface conditioning, hard type, 240 F fine
- Surface conditioning, hard type, 180 M medium
- Surface conditioning, hard type, 100 C coarse
- Finishing, soft type, 280 very fine
- Finishing, soft type, 180 fine
- Finishing, soft type, 100 medium
- Unitized disc SiC W soft
- 1 pc. each of:
  - Universal polishing paste
  - COMBICLICK® felt disc
  - COMBICLICK® backing pad CC-GT 5/8-11

#### Advantages:

- Getting to know and testing the comprehensive system.
- Coordinated selection of the most common products.

#### Abrasive:

Aluminum oxide A Ceramic oxide CO-COOL Silicon carbide SiC















D [Inches]	Thread	EDP number	
4-1/2	5/8-11	48192	1
5	5/8-11	48194	1