

Friction solutions²

We deliver unique products and optimised friction solutions.



Innovated by Rydahls



www.rydahls.com

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We are experts at brake and friction solutions in the manufacturing industry.

There are very few standard solutions available in industrial friction. A brake and friction solution for a lift differs, for example, significantly from one that will work in a winch or a crane.

That's why we prefer to get onboard in the design stage. If we can get to know at an early stage in the process which requirements are set for braking times, braking power and braking torque, then we can always deliver a completely unique and optimised solution – Innovated by Rydahls. The process will also be quicker and more cost-efficient, both for you and for us.

Try us! We can promise you friction solutions and fully committed service.

We want to do more, it's as simple as that!



Innovated by Rydahls

Top class experience and materials

When you bring us into a project you bring in competence that has been built up since 1916. We are a company that has our roots in brake and friction solutions and how you combine and apply different materials to achieve the required effect. There is a wide range of friction materials intended for use in industrial applications, such as brake linings, clutch linings and brake bands, and we are somewhat of a world champion in this field. You will find our solutions in large and small products from manufacturers all over the world.

Innovated by Rydahls

In almost every new project we face the development of a unique product solution. We don't need to invent the wheel every time, but in general innovations are the rule rather than the exception. Throughout the years we have produced friction solutions, brakes and brake linings for trucks, lifts, cranes, anchor winches, washing machines, lawn mowers and other mechanical devices. We could make the list much longer. There are still lots of unexplored areas where friction solutions signed Innovated by Rydahls would make torque and braking torque more flexible, more user-friendly, and more reliable than existing solutions.

Long-term sustainability

We aim to run our business so that we can achieve maximum sustainability. Primarily this means what we can actually control – the consumption of energy, recycling, and modes of transport etc. But we also take the policies of our suppliers into consideration and as far as possible choose partners who share our view of long-term sustainability.

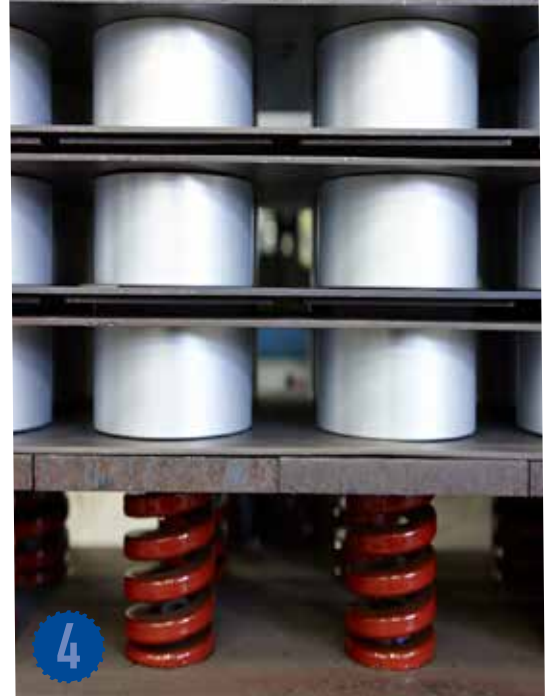
From your need to a friction free delivery



1
Reviewing customer needs and technical data.



2
In-house design and development.



4
Bonding with controlled pressure and temperature.



3
Water jet cutting of details.

1
PRE-STUDY

2
DESIGN

3
WATER JET CUTTING

4
BONDING



Machining of parts with very tight tolerances.



Quality control throughout the production process.



Deliveries all across the world.

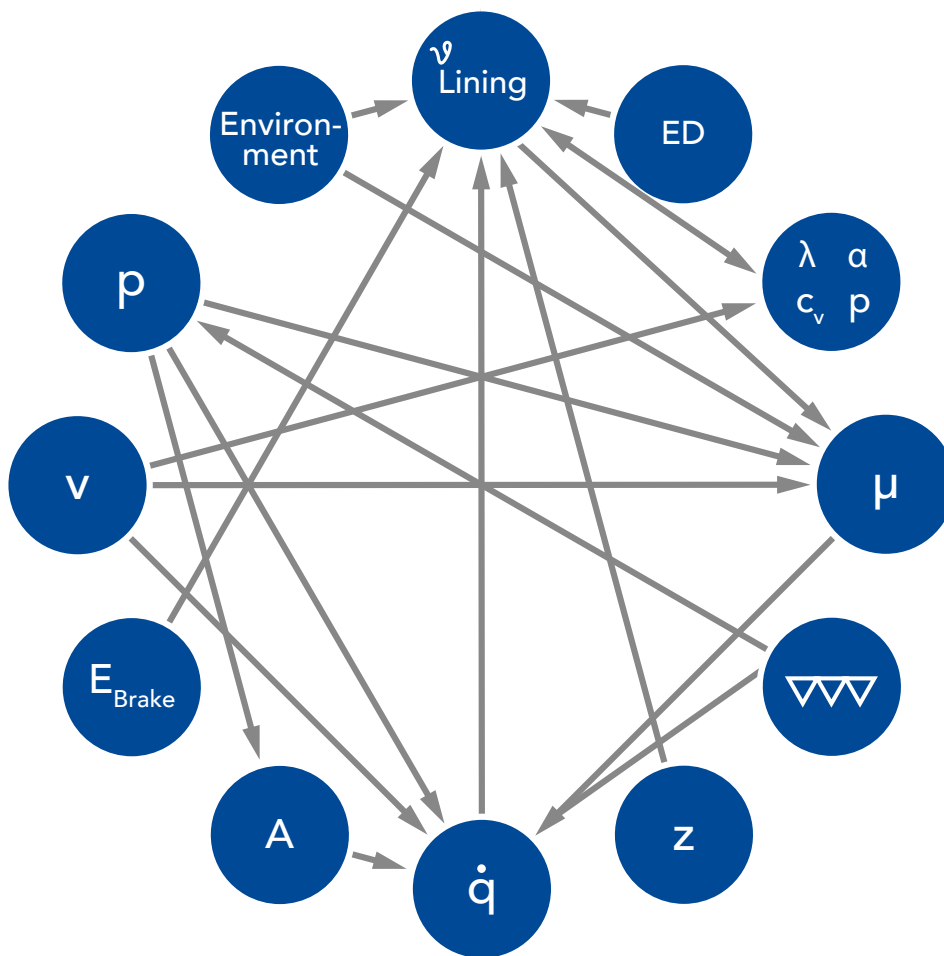


Choice of materials

There is a wide range of friction materials intended for use in industrial applications, such as brake linings, clutch linings and brake bands, and we are somewhat of a world champion in this field.

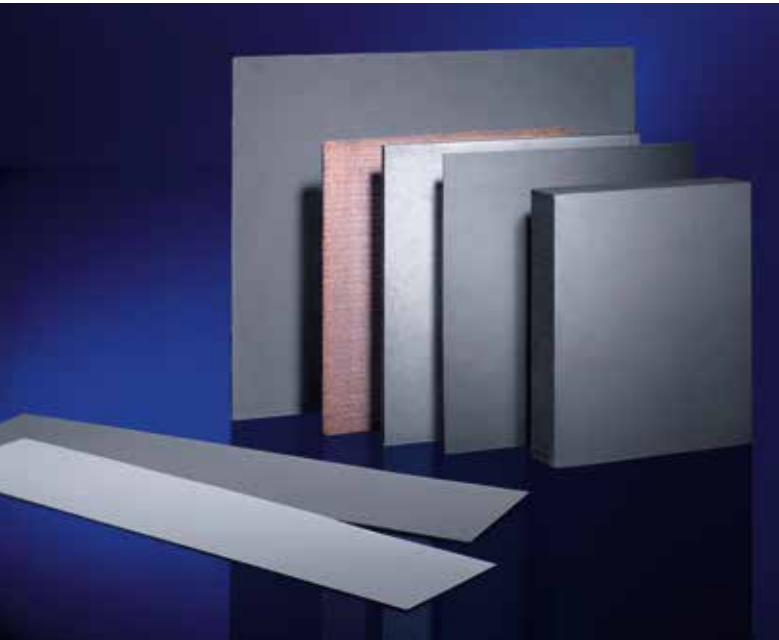
Friction materials that make a difference

It's basically about an extensive knowledge of different friction materials and their properties. Today we have access to several hundred different material qualities, both woven and moulded, in several dimensions. We know which materials we should use, in which combination with others, so that the solution you are looking for will have precisely the right function.



v_{Lining}	Temperature of friction layer	q	Thermal flow density
ED	Duty cycle time	A	Surface area of friction pad
λ, α, c_v, p	Specific variables of Brake disc	E_{Brake}	Braking energy
μ	Coefficient of friction	v	Relative friction speed
$\nabla\nabla\nabla$	Surface condition	p	Specific contact pressure
z	Frequency of engagements	Environment	All other influences resulting of the environment

Different types of friction materials



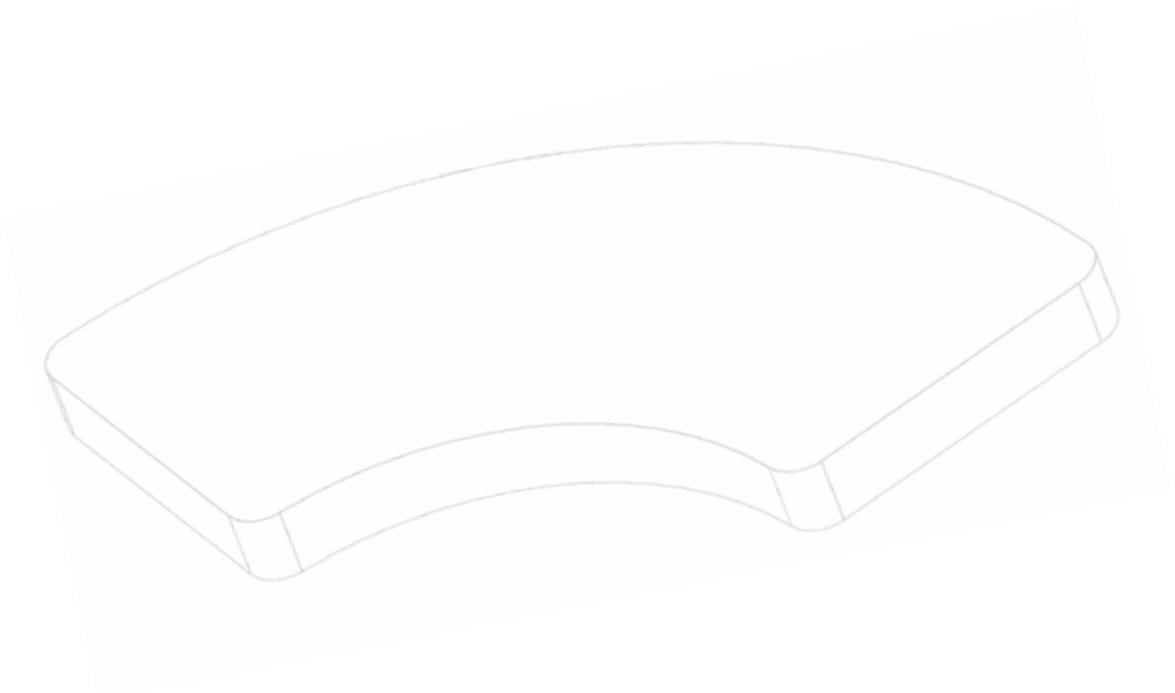


Blocks, segments and rings

Solid materials in all imaginable formats.

Block, segments and discs

Rydahls produces and sells solid products, both from organic and inorganic friction materials or with sinter. If you need to exchange friction blocks that are worn out or when you hear a squeaking sound from your press - contact us and we will help you immediately. Or maybe you need sintered friction discs or facings for a clutch, a machine or a wet brake? Try us, we produce parts to a competitive price.



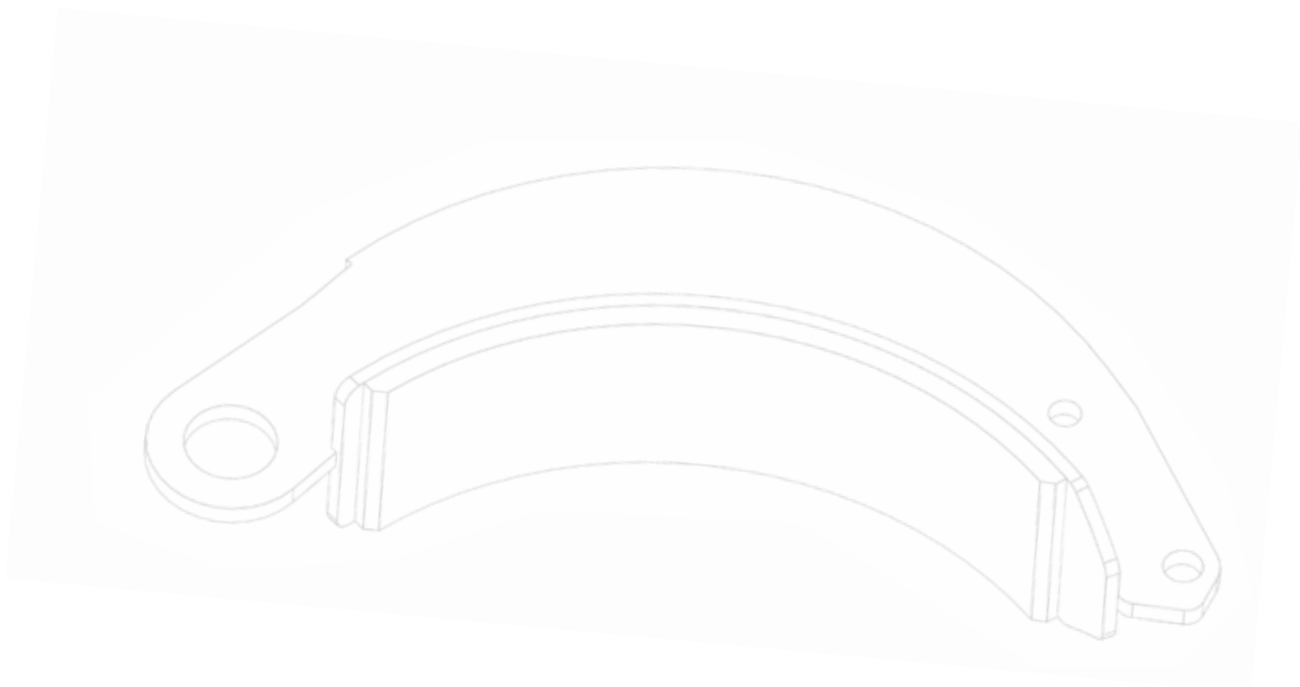


Bonded friction discs

Bonded friction discs to everything rotating out there.

Bonded friction discs

In our own production, we cut out rings, facings or segments and produce friction linings for clutches and rotators as well as customer-unique electric locks, doors and lifts etc. The areas of use are countless!



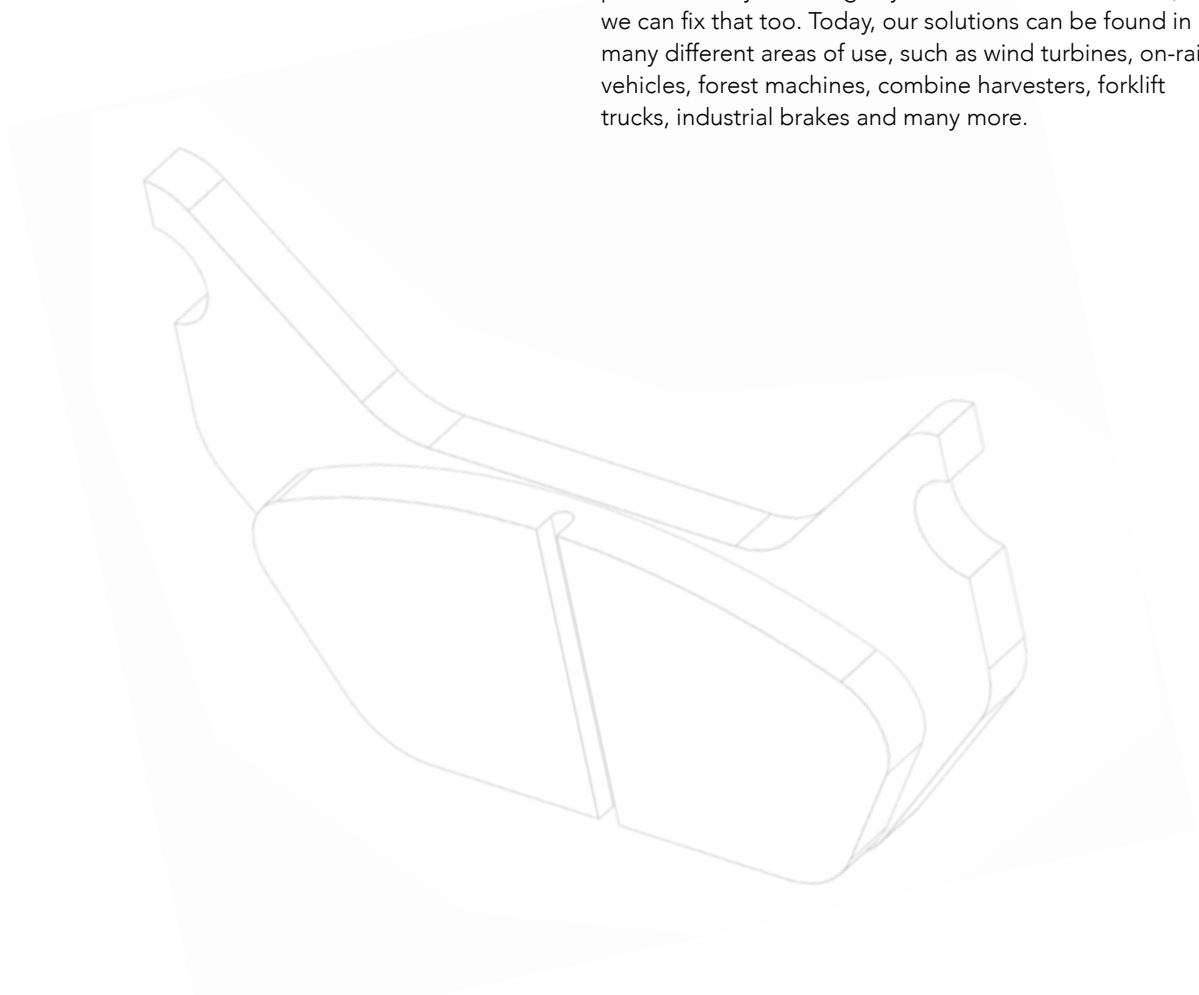


Bonded disc brake pads

*Tailor-made disc brakes or conventional ones
– we can manufacture any brake pad you need.*

Bonded disc brake pads

Rydahls have produced friction solutions for different types of rotating applications for 100 years. Disc brake pads are really our thing. If you also need a brake disc, we can fix that too. Today, our solutions can be found in many different areas of use, such as wind turbines, on-rail vehicles, forest machines, combine harvesters, forklift trucks, industrial brakes and many more.



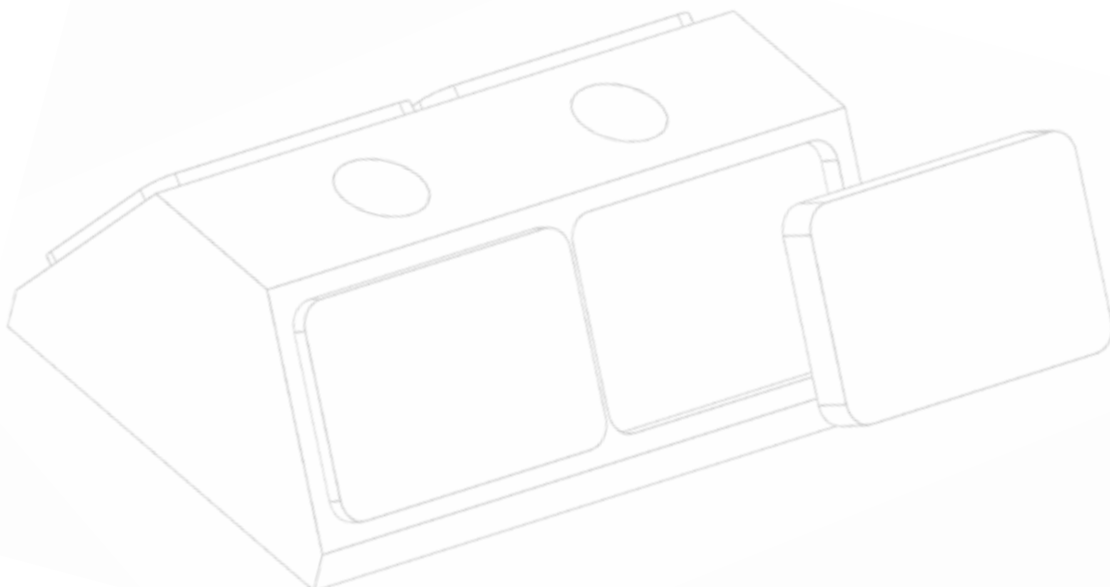


Advanced bonded products

Your unique, and often advanced, product needs equally advanced friction solutions to function optimally.

Advanced friction solutions

Do you need to keep a moving part in the right position or maybe a safety stop? Tough requirements on tolerance? Steel, aluminium, brass or plastic? No matter what the application requires, we always have the competence to design and produce the unique friction solution that is needed. Our solutions can be found in many different areas of use today, such as lifts, electric motors, electric throttles and levers, garden products and many more.





Renovation

At Rydahls we have an extensive knowledge and competence on how to renovate and re-use brake- and clutch discs and brake shoes for industrial applications. We can renew the friction material lining for almost any given application.

Renovation

Is your friction material worn out? Do you need to renovate a disc or a shoe that is expensive and difficult to purchase new? Contact Rydahls for a renovation. We reuse the frame, bond new material and dispose the worn out friction material. If a surface treatment is needed, we take care of that too. It is a cost-efficient and resource-saving way to get the customer's existing friction solution as good as new again. Do you have an industrial brake or clutch that needs renovation? Contact Rydahls for support.



We have the capacity of up to 2,000 mm in diameter.

Overview – friction material types

Selection of applications Moulded and woven	Material-number	Friction-coefficient μ (dry)	Technical data	
			Max temperature a) Continuous operation b) short-term	Recommended stressrange (dynamic) a) p max (da N/cm ²) b) v max (m/s)
Standard quality for semi-hard workload brakes and clutches. Suitable for e.g. cranes, hoists, winches, fork lift trucks	RY256	0,35	a) 250 b) 400	a) 20 b) 36
	RY265	0,35	a) 250 b) 400	a) 20 b) 36
For use in low workload applications where high friction is wanted, e.g. position locks, levers, throttles	RY296	0,40	a) 250 b) 300	a) 10 b) 20
Typically suitable for cranes, winches and band brakes as well as industrial disc brake pads	RY259	0,4	a) 250 b) 450	a) 16 b) 35
For use in high performance clutches and brakes	RY267	0,34	a) 250 b) 450	a) 25 b) 20
Suitable for drilling rigs, cranes, winches, windlass, rollers as well as in other applications that the need high friction in a tough environment (Woven material)	RY250	0,38	a) 250 b) 400	a) 20 b) 24
	RY271	0,40	a) 200 b) 300	a) 13 b) 20
Brakes and clutches for general mechanical engineering, winches, pulp and paper machinery, hoists and cranes, on-rail vehicles a	RY260	0,28	a) 250 b) 400	a) 16 b) 25
	RY258	0,33	a) 250 b) 400	a) 20 b) 25
	RY299	0,28	a) 250 b) 400	a) 20 b) 30
	RY268	0,28	a) 250 b) 400	a) 25 b) 60
Brakes and clutches for general mechanical engineering, e.g. cranes and on-rail vehicles	RY264	0,35	a) 250 b) 450	a) 20 b) 30
Single and multiple disc lamination clutches and brakes for presses, electromagnetic clutches and brakes as well as for brakes and clutches for general mechanical applications	RY258	0,33	a) 250 b) 400	a) 20 b) 25
	RY266	0,42	a) 250 b) 400	a) 20 b) 30
	RY269	0,45	a) 250 b) 400	a) 20 b) 30
Brakes for heavy industrial applications	RY257	0,4	a) 250 b) 400	a) 20 b) 25
	RY272	0,4	a) 250 b) 400	a) 12 b) 35
Brakes and clutches for general and special mechanical engineering	RY263	0,45	a) 350 b) 500	a) 25 b) 50
	RY255	0,35	a) 200 b) 300	a) 12 b) 36

Above is a selection of what we can offer – contact us for further information and advice. The maximum permissible loads should not all be applied at once. No guarantees can be given for application function shown above. Please contact us for consultation.

Overview – friction material types

Selection of applications Friction discs and sinter	Material-number	Friction-coefficient μ (dry)	Technical data	
			Max temperature a) Continuous operation b) short-term	Recommended stressrange (dynamic) a) p max (da N/cm ²) b) v max (m/s)
FRICITION DISCS AND FACINGS:				
Standard quality for semi-hard workload brakes and clutches. Suitable for e.g. cranes, hoists, winches, fork lift trucks	RY265	0,35	a) 250 b) 400	a) 20 b) 36
Brakes and clutches for general and special mechanical engineering	RY263	0,45	a) 350 b) 500	a) 25 b) 50
Brakes and clutches for machines and transmissions with low to medium work load	RY287	0,45	a) 250 b) 350	a) 15 b) 25
Brakes and clutches for machines and transmissions with medium to high work load	RY262	0,45	a) 250 b) 350	a) - b) 25
Paper grade with Kevlar suitable for high performance clutches and certain industrial applications	RY253	0,45	a) 360 b) 400	a) 16 b) 35
Single and multiple disc lamination clutches and brakes for presses, electromagnetic clutches and brakes as well as for brakes and clutches for general mechanical applications	RY258	0,33	a) 250 b) 400	a) 20 b) 25
	RY269	0,45	a) 250 b) 400	a) 20 b) 30
SINTER AND BRONZE SPRAY:				
Friction pads for dry heavy duty brakes and clutches with high friction requirement	RY294	0,45	a) 350 b) 700	a) 30 b) 40
Friction pads for dry heavy duty brakes and clutches with a special requirement for high static friction	RY295	0,45	a) 350 b) 700	a) 30 b) 40
Friction discs for motors, transmission and vehicles with wet brakes	RY279	0,10	max oil temp 140	a) 60 b) 30

Above is a selection of what we can offer – contact us for further information and advice. The maximum permissible loads should not all be applied at once. No guarantees can be given for application function shown above. Please contact us for consultation.

Partners

We only cooperate with producers and subcontractors of absolute excellence.

Friction material

We cooperate with several large producers of friction material around the world and can offer almost anything within organic and inorganic friction material.

We are the representative in the Nordic countries for the world's leading producer of friction material Bremskerl, our main partner for many years.

BREMSKERL

Der Spezialist für Brems- und Kupplungsbeläge
The specialist for brake and clutch linings





Scan the code and read more
about our friction solutions.

rydahls.com/en/Industrial-friction

The brake experts²

After one hundred years in the industry we have built up unique experience and competence. We are experts at both individual products and customised brake systems and friction solutions, and offer a very comprehensive range of spare parts, products and materials.

Our customers are primarily active in the engineering, machinery and vehicle industry and in the manufacturing industry. With the needs of customers in full focus, we supply innovative solutions, top class quality, and fully committed service.

Try us! We want to do more, it's as simple as that!

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