

## FRICION LININGS



# WOVEN FRICTION LININGS

## General information

Woven brake linings are designed for all types of brakes and drum clutches in most critical applications. They feature high and stable friction coefficient and guarantee meeting the strictest safety requirements as their design assures resistance to rapid failures.

Such linings are based on highly durable and heat resistant yarns, featuring high friction coefficient. Special patent weave guarantees that the lining does not delaminate, even in the most demanding working conditions. Special oil and synthetic impregnate ensure keeping stable braking conditions in the broad range of temperatures.

Thanks to their undeniable advantages the woven brake linings are used in most critical and demanding applications. Gambit BAC brake lining is the only lining with the admission for use in hoisting machines for transportation of people in the mining sector (issued by Polish State Mining Authority), which is a safety critical application.

### Application:

Woven friction linings are mostly used in drum brakes, in applications where high reliability and braking efficiency is necessary, e.g., in hoisting machines in mine shaft hoists, in stacking machines, stripping shovels and quarrying excavators, in harbour and shipborne cranes and elevators, steelwork overhead cranes or industrial eccentric presses.

### Mounting:

We advise to assemble the brake linings using hollow rivets with mushroom heads on metal surfaces and dowels and glue on wooden surfaces. We recommend "RAKOL" glue for wooden surfaces and "Chester Molecular Super" for metal surfaces. Mounting instruction is included in Operational and Technical Manual provided upon request.

### Placing orders:

The best way is to place an order for linings in sections, thickness and width as required, specified in conformity with the table on the reverse page. If required, specify the minimum length of the section. Manufacturing linings of the dimensions not specified in the table is also possible, after consultation.

All information in this catalogue is based on years of experience in manufacture and use of the discussed products. Since sealing performance in the joint is subject to multiple factors such as mounting method, system parameters, and sealed medium, technical parameters specified herein are of informative nature only and cannot be used as grounds for any claims; any special uses of products are subject to consulting with the manufacturer.



## FRICTION LININGS



Dimensions table for brake linings BAC and ATU-AE

Thickness in mm \ Width in mm	5	6	8	10	12	15	20
30	•	•	•	-	-	-	-
35	•	•	•	-	-	-	-
40	•	•	•	•	•	•	•
45	•	•	•	•	•	•	•
50	•	•	•	•	•	•	•
55	•	•	•	•	•	•	•
60	•	•	•	•	•	•	•
65	•	•	•	•	•	•	•
70	•	•	•	•	•	•	•
75	•	•	•	•	•	•	•
80	•	•	•	•	•	•	•
85	•	•	•	•	•	•	•
90	•	•	•	•	•	•	•
95	•	•	•	•	•	•	•
100	•	•	•	•	•	•	•
105	•	•	•	•	•	•	•
110	•	•	•	•	•	•	•
115	•	•	•	•	•	•	•
120	•	•	•	•	•	•	•
130	•	•	•	•	•	•	•
140	•	•	•	•	•	•	•
150	•	•	•	•	•	•	•
160	•	•	•	•	•	•	•
170	•	•	•	•	•	•	•
180	•	•	•	•	•	•	•
190	•	•	•	•	•	•	•
200	•	•	•	•	•	•	•
210	•	•	•	•	•	•	•
220	•	•	•	•	•	•	•
230	•	•	•	•	•	•	•
240	•	•	•	•	•	•	•
250	•	•	•	•	•	•	•
260	•	•	•	•	•	•	•
270	•	•	•	•	•	•	•
280	•	•	•	•	•	•	•
290	•	•	•	•	•	•	•
300	•	•	•	•	•	•	•
320	•	•	•	•	•	•	•
350	•	•	•	-	-	-	-

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## Woven brake lining BAC

### Design of the brake lining BAC:

Brake lining BAC is a woven lining of ceramic yarns with very thin monofilaments reinforced with brass wire. The wire acts as mechanical reinforcement and a medium carrying off heat from the working area. Special multi-layered weave prevents delamination of lining under high loads while braking. Such a woven lining is soaked with top quality composition of natural and synthetic resins, which results in manufacturing a reliable and highly homogeneous friction material.

### Application:

Woven asbestos-free brake lining BAC is designed for application in drum brakes of heavy machinery, wherever large braking forces are essential, at high temperatures and at places where high reliability of friction material is required.

### Technical characteristics:

Acceptable working parameters of woven brake lining BAC:

- maximum unit pressure for lining adhesion to brake raceway - **1,2 MPa**
- maximum tangential velocity of braking raceway - **20 m/s**
- maximum temperature under continuous operation - **350 °C**
- minimum kinetic friction coefficient - **0,40**

**Caution:** in order to evaluate the temperature correctly, not only the ambient temperature in which the brake lining is assembled, but also the growth of temperature due to friction heat emission in working area should be taken into account. In case of intense braking, the temperature can increase by as much as 200 °C.

### Approvals and admissions:

Brake lining BAC has admission no. GM-15/12 issued by Polish State Mining Authority (WUG) for application in hoisting machines used in mine shaft hoists.

Brake lining BAC is also certified by Germanischer Lloyd.







## FRICTION LININGS



### Woven brake lining ATU-AE

#### Design of the brake lining ATU-AE:

Brake lining ATU-AE is a woven lining of aramide yarns reinforced with copper wire. The wire acts as mechanical reinforcement and a medium carrying off heat from the working area. Special multi-layered weave prevents delamination of lining under high loads while braking. Such a woven lining is soaked with top quality composition of natural and synthetic resins, which results in manufacturing a reliable and highly homogeneous friction material, featuring high working culture and low aggressiveness towards mated parts.

#### Application:

Woven asbestos-free brake lining ATU-AE is designed for application in drum brakes of heavy machinery, wherever large braking forces are required, at high temperatures during operation and at places where high reliability of friction material and low wear of mated drum raceways is required. It is also recommended for use in equipment with high braking frequency.

#### Technical characteristics:

Permissible working parameters of woven brake lining ATU-AE:

- maximum unit pressure for lining adhesion to brake raceway - **1,2 MPa**
- maximum tangential velocity of braking raceway - **20 m/s**
- maximum temperature under continuous operation - **280 °C**
- minimum kinetic friction coefficient - **0,40**

**Caution:** in order to evaluate the temperature correctly not only the ambient temperature in which the brake lining is assembled, but also the growth of temperature due to friction heat emission in working area should be taken into account. In case of intense braking the temperature can increase by as much as 200 °C.

