BLOBEL®
ENVIRONMENTAL ENGINEERING

Flood Water Barriers – Inflow Protection

Flood Protection Barrier BL-HWS-K

Blobel Environmental Engineering
State of the Art Flood Protection Systems

In recent years, we have experienced more and more extreme weather conditions which have caused severe environmental damage and devastation.

BLOBEL has reacted to this trend. For over 10 years we have been a leading European business in the containment of contaminated fire fighting water and spill control. By developing simple and effective flood protection systems, both permanent and mobile, we have set standards in the market. The operating and sealing technologies we have implemented are now the basis of many new products in the market. Our flood protection systems are internationally approved.

On-site engineer consultation, installation and after sales service are, of course, part of our overall package.

Flexible and Reliable

Whether you require fast protection from flash flooding, or walls to protect your assets from rising water, our brand products convince through simple installation and handling. Our systems incorporate advanced fast closing mechanisms and light barrier sections which are handled with ease and can be stored where limited space is available. BLOBEL Flood Protection Systems are ideal to protect private and industrial assets. Through the simple design the barriers can be universally applied for doors, gates, windows and fields. All systems can be incrementally expanded.

Maximum Quality

Our flood barriers are known for the high quality of material used and their robustness. We apply the same high safety and quality standards for our flood protection products as we do for our emergency containment systems. The sealing technology is highly chemical resistant and can safely be used with uneven floors and rendered walls. All our products are subject to continuous quality assurance measures in keeping with DIN ISO 9001.

Product information
BL/HWS-K

1. BL/HWS-K

1.1 Product description

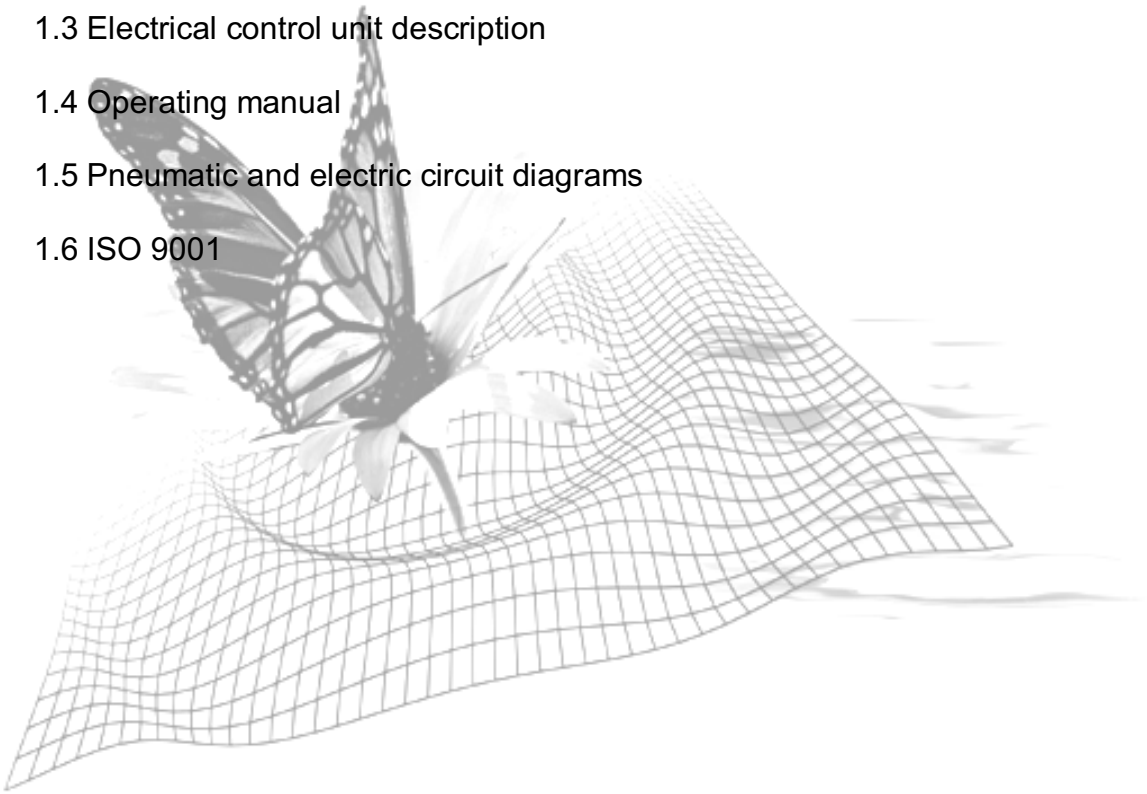
1.2 Drawings

1.3 Electrical control unit description

1.4 Operating manual

1.5 Pneumatic and electric circuit diagrams

1.6 ISO 9001



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BLOBEL Environmental Engineering LLC, 270 Presidential Drive, Wilmington, DE, 19807, USA

1. Automatic Flood Barrier BL/HWS-K

Article root number: 560

Barrier – horizontal recessed in floor/ground
Pneumatically controlled - fully automatic

Dimensions:		
Standard height		100 to 1500 mm
Special situations	up to	2000 mm
Standard length	up to	3000 mm
Special situations	up to	5000 mm

1.1 Description

The automatic Flood Barrier BL/HWS-K is suitable for a wide range of situations. Depending on its design it can accommodate frequent day to day traffic and heavy vehicles.

A compressible, highly durable seal is mounted horizontally within the flood barrier system. Vertical Sealing posts ensure a leak tight seal against the facility The Flood Barrier is made from galvanised steel or stainless steel 304.

The Barrier body, firmly bolted in hinges, is reinforced and includes mounting eyes for pneumatic cylinders. The cylinders are linked to unique mounts, which are likewise securely mounted to the barrier frame.
The Flood Barrier BL/HWS-K is actuated by the push of a button or triggered automatically by an optical water sensor. The optical sensor is preset and monitors rising water levels. When actuated, the Flood Barrier closes fully automatically or travels back into the standby position. The barrier is designed to be failsafe. Loss of power or air will automatically trigger the system.

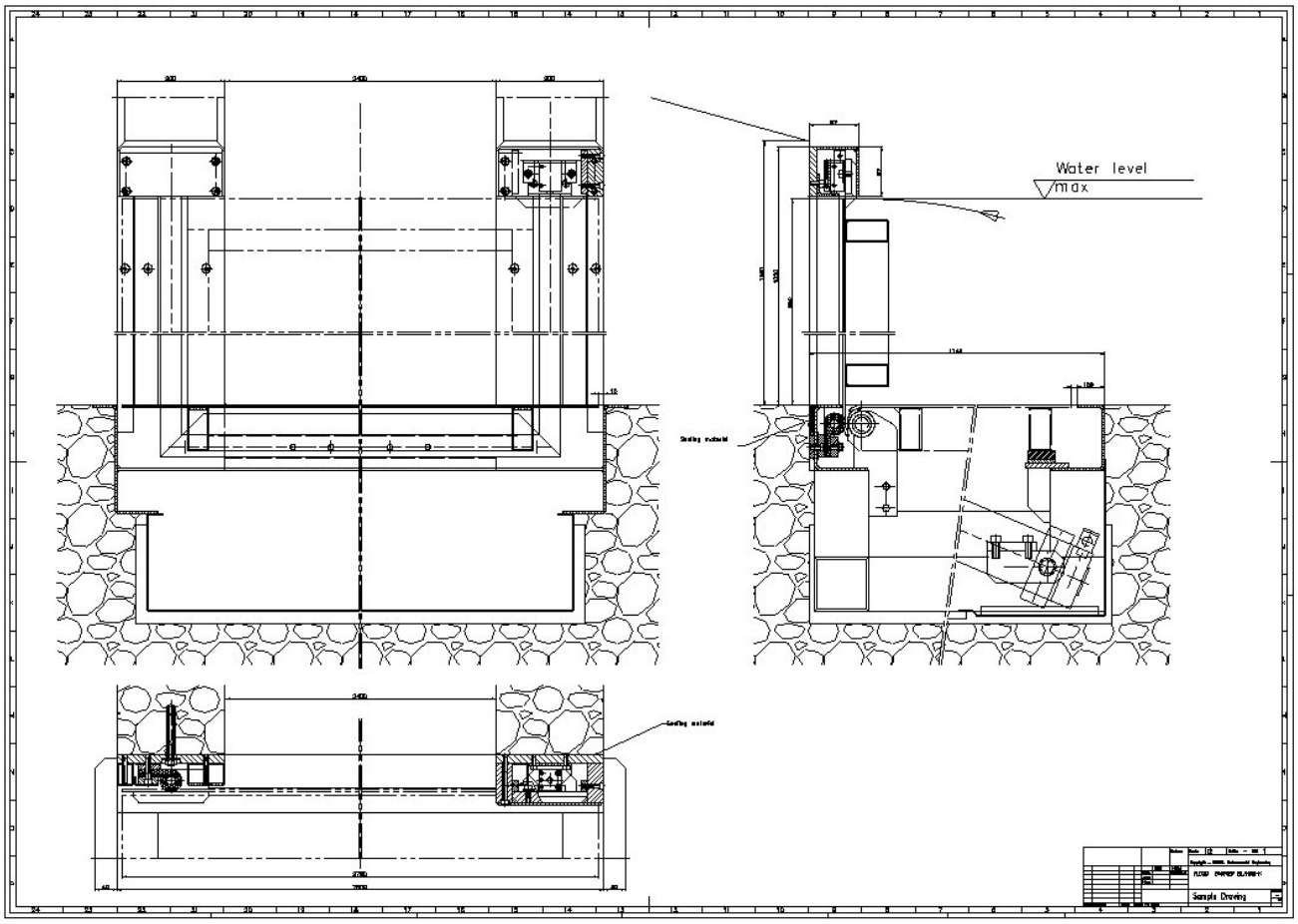
The required operating pressure is 4 - 10 bars. To meet safety requirements, the flood barrier is fitted with an acoustic warning signal. A visual warning light can be included to signal traffic or personnel that the barrier is in operation.

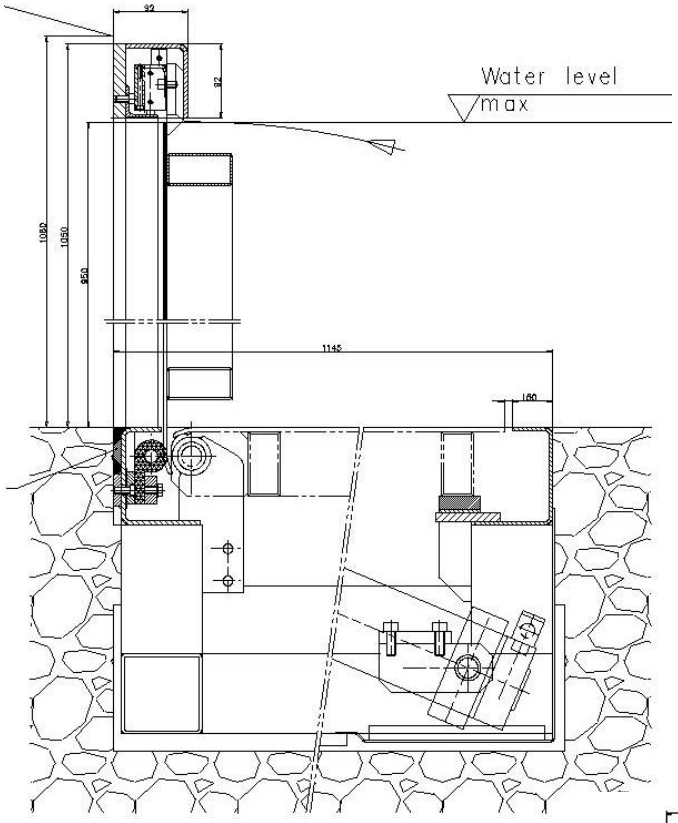
Pneumatic cylinders used are suitable for outdoor installations.

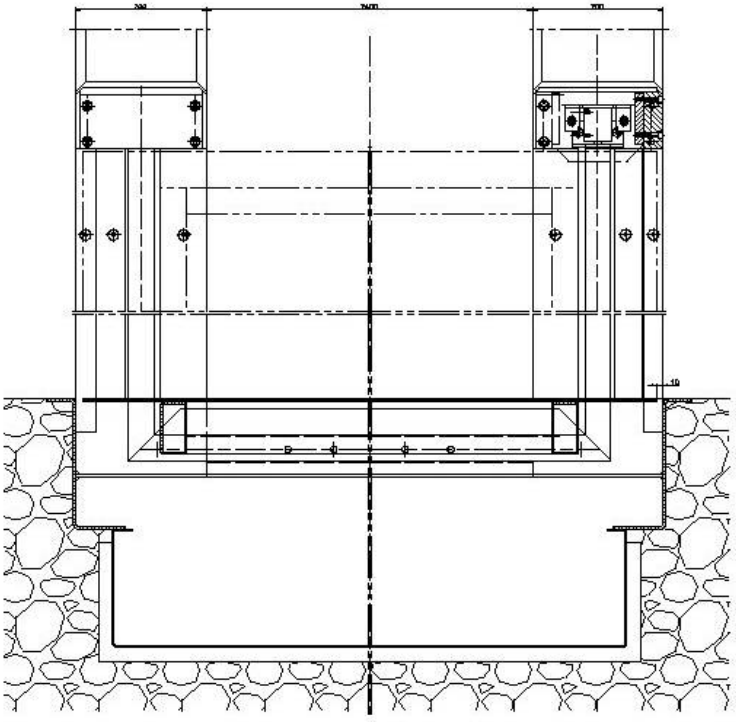
Features:

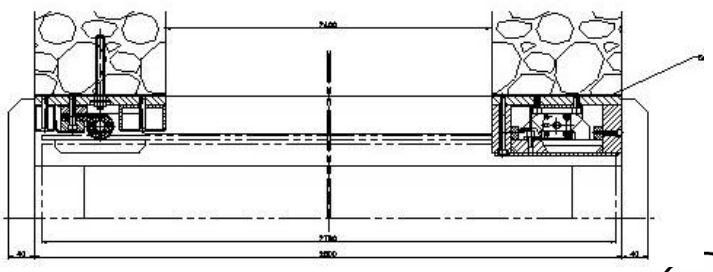
- **Uncomplicated operation and variable**
- **Design-tested as basic model BED (LGA, Trade Supervision Department - Bavaria, Germany)**
- **Quality-monitored as basic model BED (LGA, Materials Testing Department - Nuremberg, Germany)**
- **Tested by the fire-fighting industry as basic model BED (IdF, Fire Brigade Institute, Heyrothsberge, Germany)**

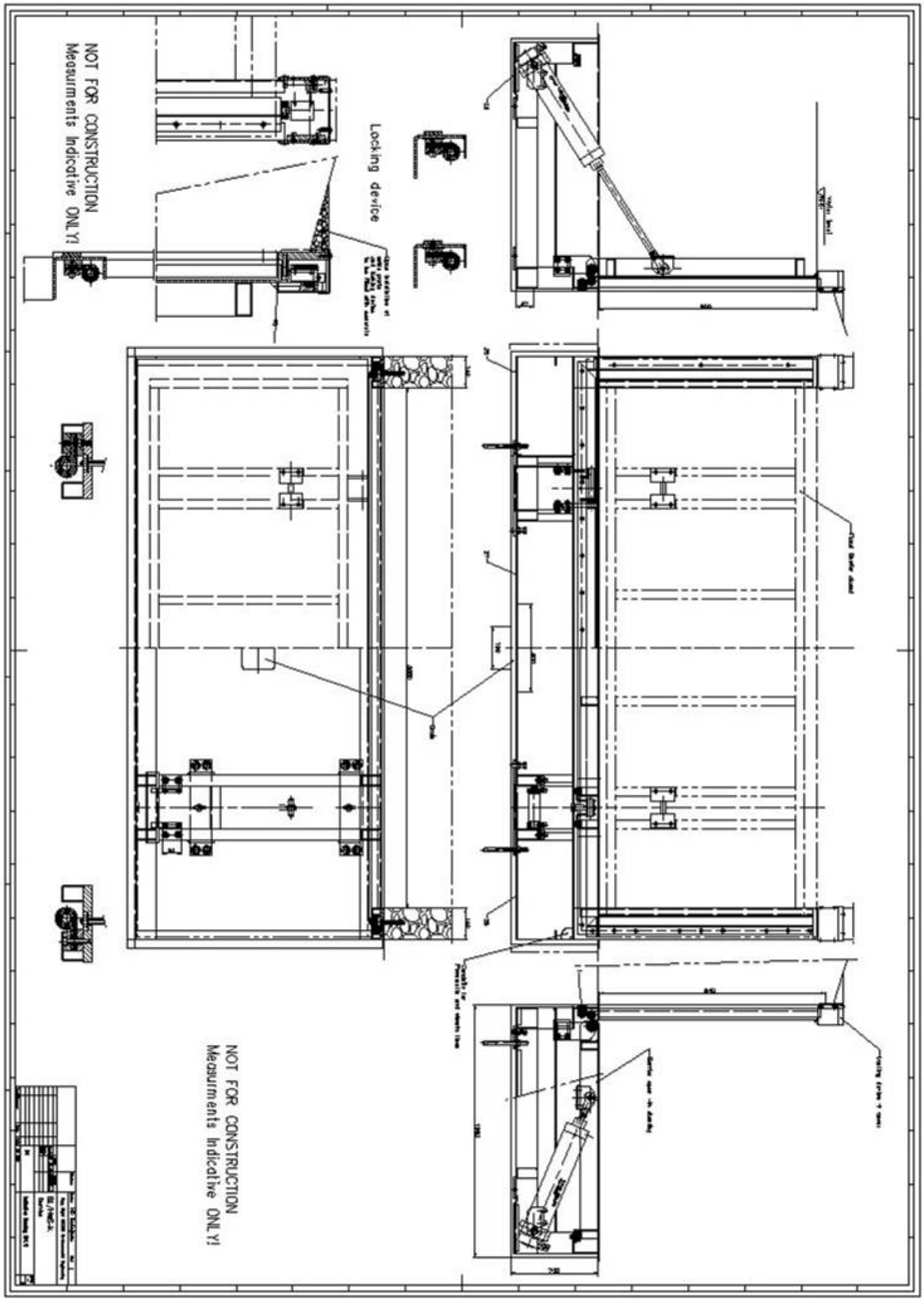
1.2 Drawing overview




92
92
Water level
max
1082
1050
850
1145
150






NOT FOR CONSTRUCTION
Measurements Indicative ONLY!
Locking device
NOT FOR CONSTRUCTION
Measurements Indicative ONLY!

1.3 Description for Electrical Control Unit ©

The electrical control unit housing has the following dimensions, 380 x 380 x 230mm however, the dimensions can vary. Usually a Rittal housing is used.

The units main input is 110V/60Hz max 10A or 230V/50Hz max 10A pre fuse.
The unit is designed to take 3 normally closed contacts, which are classified as S100, main contact from fire control system, 24VDC max 4A, S101 reserve 24V DC max 4A, S102 reserve 24VDC max 4A. (3x1mm2)

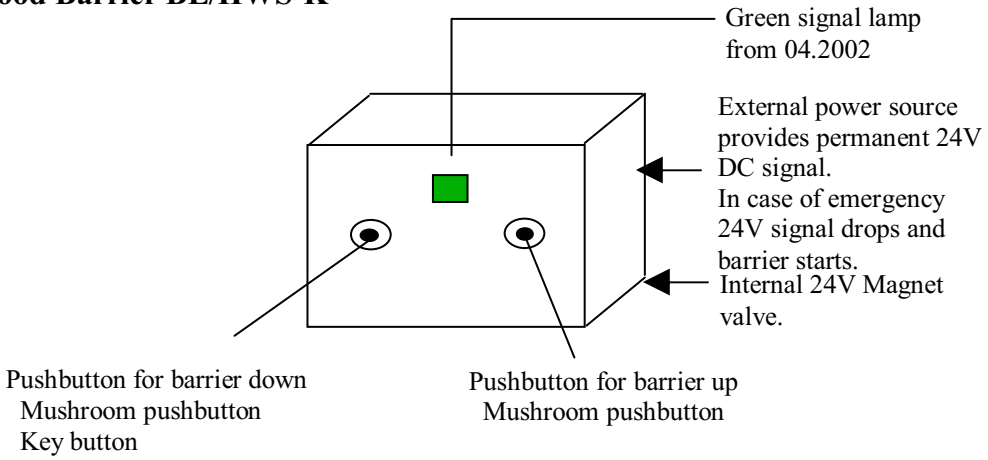
The E-Box relays and transforms the input signal or signal's from the fire control switch board or any leakage detector to a permanent 24V signal. This signal is applied to the 24V DC solenoid valve in the pneumatic control unit. Once the unit receives a command from the from the fire control system or water sensor, it will then drop the permanent connection to the solenoid. This will then trigger the pneumatic barrier.
The system is designed to be failsafe. Should the permanent 24V signal to the pneumatic control unit be interrupted, e.g. through a power failure, this will initiate and close the barrier.

The electric control unit does not provide or handles any feedback signals from when the barriers are closed. The unit is designed to manage various input signals and put these forward to the pneumatic operated barrier.

FEAS power back up. (if provided)
This back up provides the power for the electronic control unit for up to 2 – 3 hours. If not in use, the power back up is being recharged.

1.4 Operating manual:

Blobel Flood Barrier BL/HWS-K



Closing

Manual

Push mushroom push button

Automatic

Permanent 24V signal drops

- Automatic closure of Barrier
- Compressing of seal
- Automatic locking
- Opening is sealed

Barrier closed

Opening

Upon manual closure

3. Push button barrier down and hold!

Tension device opens

4. **After 4 sec.** release push button barrier up through turning right.

Upon automatic closure

1. Press reset on electrical control unit.
   *Or apply 24V DC signal
2. Push button barrier down
3. **Push button barrier down and hold!**

Barrier travels back into stand by position

Attention:

1. Barrier operating area has to be clear of obstacles
2. Free movement of barrier has to be guaranteed. No clamping, or chaining.

*The permanent 24V DC signal, which drops in case of an emergency, is supplied by an electrical control unit. Is the signal provided directly from a fire control box, then the control unit is not needed.

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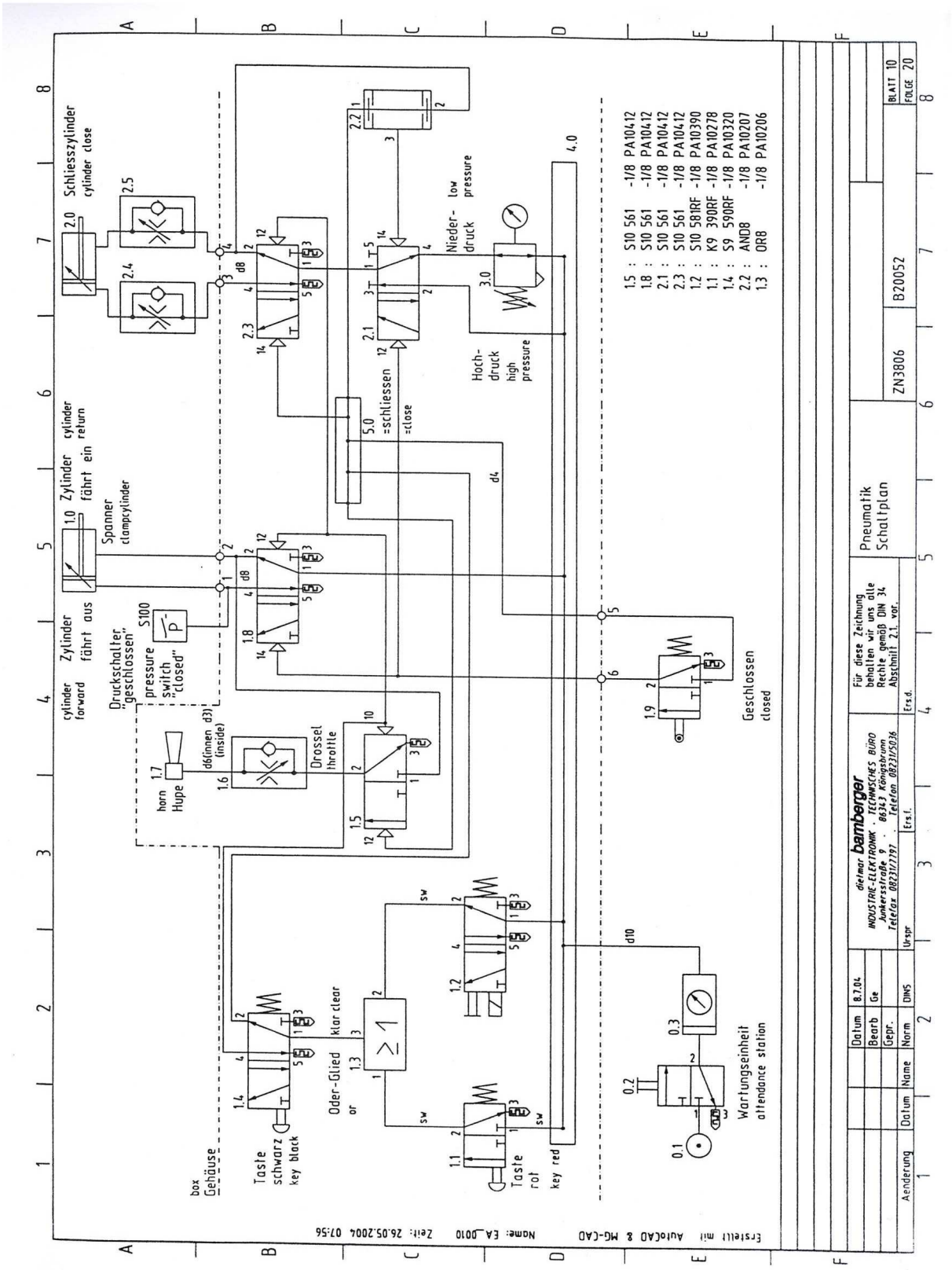
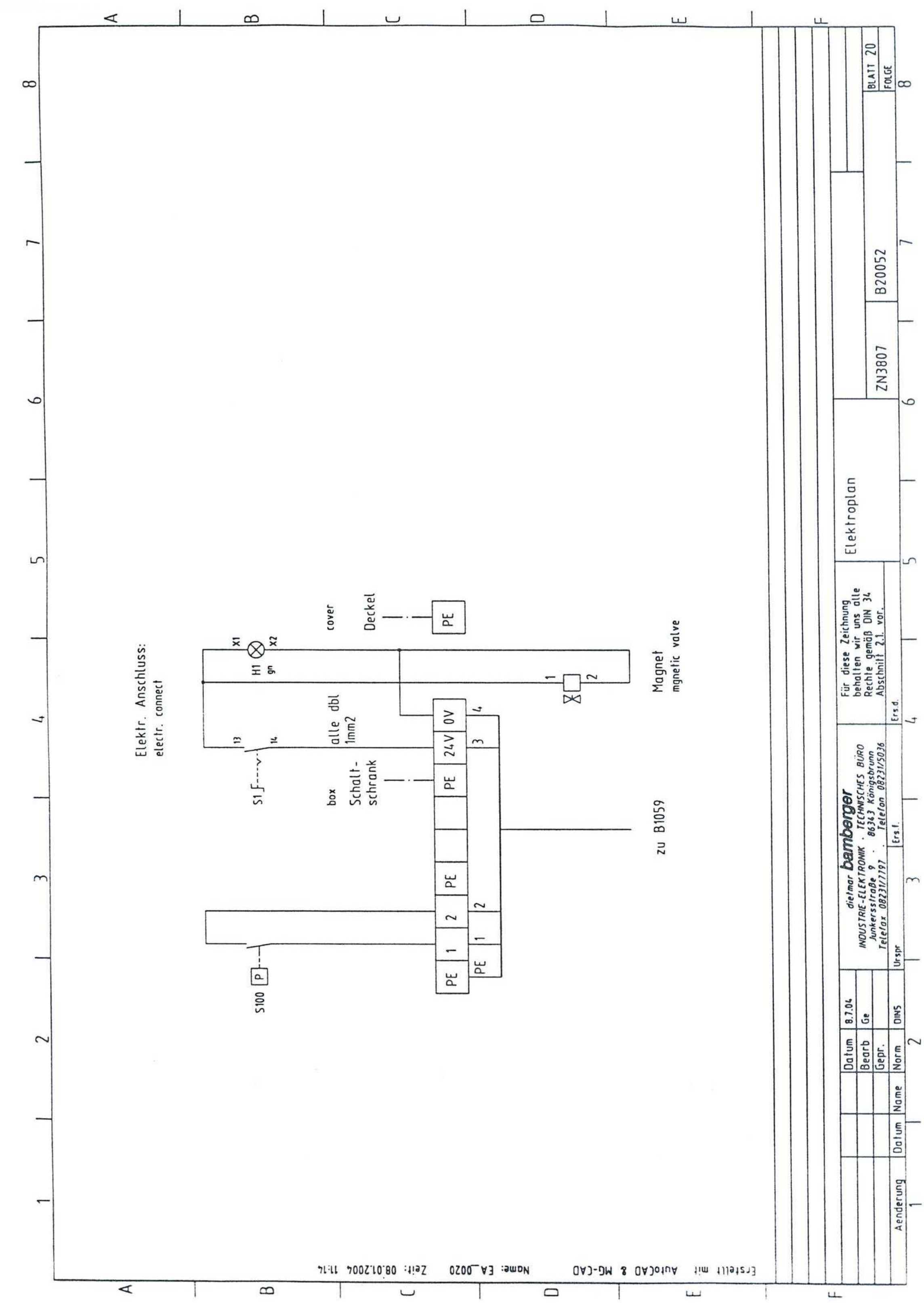
1.5 Pneumatic and electric circuit diagrams




Elektr. Anschluss:
electr. connect
S1
13
14
alle dbl
1mm2
box
Schalt-
schrank
X1
X2
H1
gn
cover
Deckel
PE
24V
0V
Magnet
mgnetic valve
zu B1059
S100
P
Elektroplan
ZN3807
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BLATT 20
FOLGE
Für diese Zeichnung behalten wir uns alle Rechte gemäß DIN 34 Abschnitt 2.1. vor.
dietmar bamberger
INDUSTRIE-ELEKTRONIK · TECHNISCHES BÜRO
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Telefax 08231/7797 · Telefon 08231/5036
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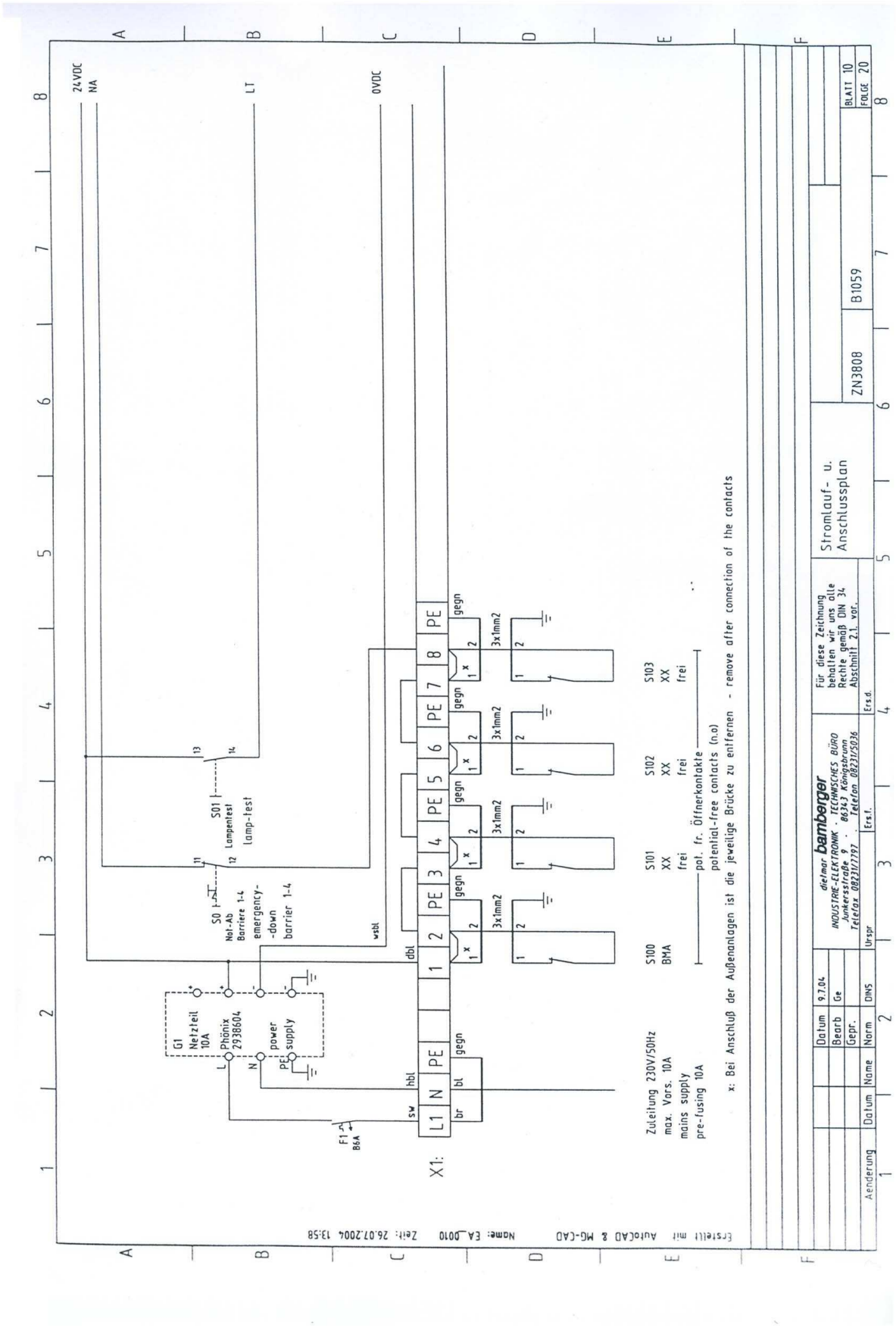
24VDC
NA
0VDC
LT
G1 Netzteil 10A Phönix 2938604
power supply
S01 Lampentest lamp-test
S0 Not-Ab Barriere 1-4 emergency-down barrier 1-4
X1:
L1 N PE 1 2 PE 3 4 PE 5 6 PE 7 8 PE
F1 B6A
Zuleitung 230V/50Hz
max. Vors. 10A
mains supply
pre-fusing 10A
S100 BMA
S101 XX frei
S102 XX frei
S103 XX frei
pol. fr. Öffnerkontakte
potential-free contacts (n.o)
x: Bei Anschluß der Außenanlagen ist die jeweilige Brücke zu entfernen - remove after connection of the contacts
dielmar bamberger
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Junkersstraße 9 · 86343 Königsbrunn
Telefax 08231/7797 · Telefon 08231/5036
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Stromlauf- u. Anschlussplan
ZN3808
B1059
BLATT 10
FOLGE 20
Erstellt mit AutoCAD & MG-CAD
Name: EA_D010
Zeit: 26.07.2004 13:58

2.0 ISO 9001

Every BL/HWS- K is assembled and tested before shipping

Our Field-Proven Barriers are Available in the Following Basic Designs

External Fast Closing Device

In the event of a flood or emergency the barrier bodies are placed into mounts installed either in front of, or within, the opening and then pressed against the ground by means of external tensioning levers.

Fast Closing Devices Mounted on Barrier Body

In the event of a flood or emergency the barrier bodies are placed into mounts installed either in front of, or within, the opening and then pressed against the ground by means of closing devices mounted on the barrier body.

Fast Closing Device Stackable System

Two or more barrier bodies are placed into mounts installed either in front of or within the opening. These are pressed against the guiding rails and the ground by means of closing devices mounted on the barrier body. Guiding rails and barrier bodies are fitted with seals.

Traditionally Bolted

The barrier body is placed into narrow mounting devices and pressed against the ground with tommy screws. Guiding rails and barrier bodies are fitted with seals.

Stackable System Traditionally Bolted

Two or more barrier bodies are placed into narrow mounting devices and pressed against guiding rails and the ground with tommy screws. Guiding rails and barrier bodies are fitted with seals.

Flood Protection Wall Stackable with Tommy Screws

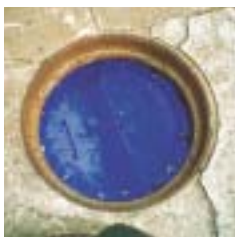
One or more barrier body is placed into mobile or permanently fixed double U-shaped steel columns. The barrier sections are pressed against guiding rails and the ground with tommy screws. Guiding rails and barrier bodies are fitted with seals.

Special Automatic Design

Automatic barrier – operation on a gate-like principle

Channel Inflow Protection

Suitable for Channel inflow or overflow protection. Horizontal or vertical installation.



Window Sealing Plates

Aluminium plate or reinforced steel plate. Force is applied through special pressure rails or tensioning devices fitted on the plate.

Special Cases

Angled alloy or reinforced steel plate. Ideal for windows and doors situated near corners.

An Overview of our Barriers

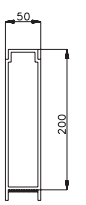
			Design Types														Tensioning					Implementation						Safety			
			Economy	Completely mobile	Mobile barrier bodies	Stationary mounting devices	One barrier body	Several barrier bodies	Flood protection wall	Plane sealing plate	Angled sealing plate	Framed sealing plate	Special automatic design	Profile 200 x 50 mm	Profile 150 x 80 mm	Profile 115 x 50 mm	Traditionally bolted	External fast closing devices	Fast closing, mounted on barrier body	Pressure rails	Directly bolted	Window sealing	Door sealing	In the field	Channel inflow / overflow protection	Extreme conditions	Special design upon request	Design tested *	Field tested	Quality controlled	Ease of handling
Barrier Systems	Slide Insert	BL / HST			●	●	●											●					●				●	●	●	●	●
		BL / HEX			●	●	●											●					●	●		●	●	O	●	●	●
		BL / HTL			●	●	●												●				●				●	●	●	●	●
		BL / HTL-TR			●	●	●												●				●				●	●	●	●	●
		BL / HAP		●	●	●	●																●				●	●	●	●	●
		BL / HAP eco	●	●	●	●	●	●						●			●			●			●					O	●	●	●
	Stackable	BL / HTL-SB			●	●	●	●						●			●		●				●				●	●	O	●	●	●
		BL / HTL-SB vario			●	●		●											●				●				●	●	O	●	●	●
		BL / HAP-SB		●	●	●		●						●	●	●	●			●			●				●	●	O	●	●	●
		BL / HSW-SB		●	●	●		●	●					●	●	●	●			●				●		●	●	●	O	●	●	●
	Fixed	BL / HED				●	●						●					●					●				●	●	●	●	●
		BL / HHS				●	●						●						●				●				●	●	●	●	●
Sealing Plates		BL / FAP-P		●	●					●										●	●	●			●		●		●	●	●
		BL / FAP-PR		●	●					●		●								●	●	●			●		●		●	●	●
		BL / FAP-W		●	●						●									●	●	●			●		●		●	●	●
		BL / FAP-WR		●	●						●	●								●	●	●			●		●		●	●	●
		BL / SAP			●					●											●				●		●	●	●	●	●

* Design-tested: ● Certificaton O Analogous testing

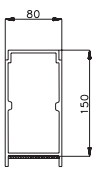
The Right Design for Each Requirement

Flood protection demands real solutions that deliver safety and aesthetics.

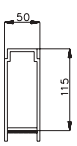
BLOBEL Flood Protection Systems offer several barrier profile dimensions and we will advise you which profile is best suited for your project.



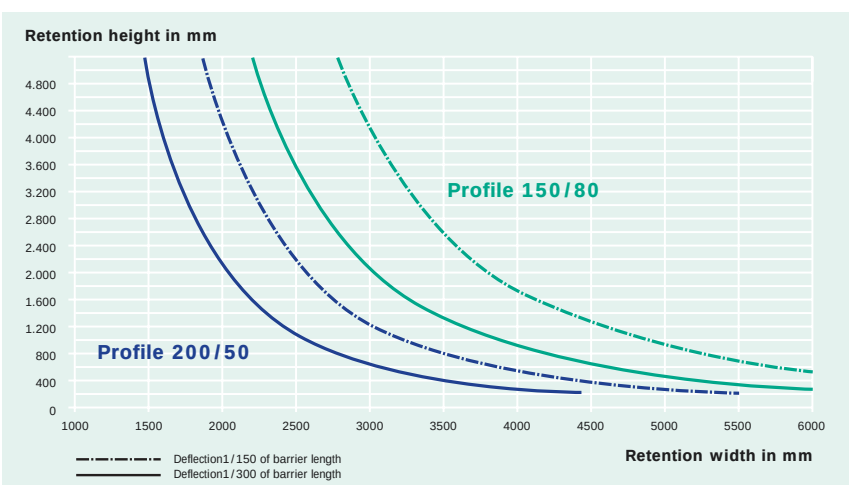
Standard profile
200 x 50 mm



Standard profile
150 x 80 mm



Special profile
115 x 50 mm



Maximum reliability with BLOBEL Flood Protection Systems.

In practise, our special designs have shown stability 1.5 – 3 times above average.

Static requirements are easily checked with the illustrated graph and BLOBEL underlines the high standard and safety of its Flood Protection Systems.

BLOBEL®
ENVIRONMENTAL ENGINEERING

Planning, Installation and Service

Our consultation, planning and design services guarantee your system will comply in all aspects with legal requirements.

Our engineering consultation services include:
- Site analysis and assessment
- Development of strategies for securing private and commercial assets
- Quality assurance and monitoring

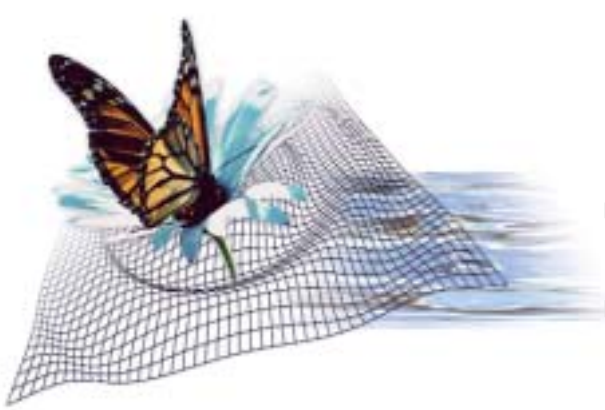
Delivery and installation by our professionals is an integral part of our service.

You will receive all of the necessary certification after each installation.
- Conformity with local building specifications
- Test certificates if required
- Table of resistance for the seals
- CE conformity declaration

Spare Parts

BLOBEL products are known for their highly robust nature. The stocking of spare parts for routine maintenance can therefore be limited primarily to wearing parts such as seals. Spare parts for all older designs are also available.

Our products are coordinated with one another, so special parts can also be integrated in existing product lines. Spare parts are conveniently available from the warehouse or with short notice delivery.



Your service representative

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