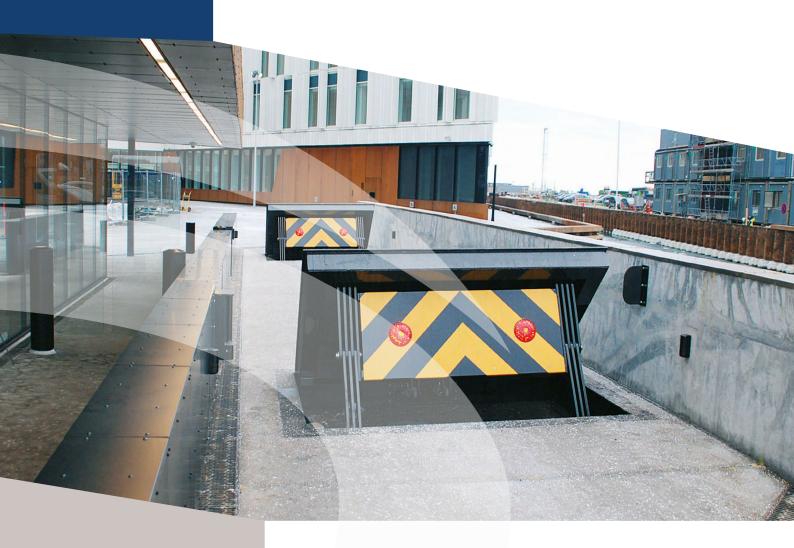


PPG High Security Range

Certified products made in Germany!





Reliable High Security products made in Germany

security concepts in critical other innovations, PPG offers cannot enter.

PPG High Security products environments! The state-of- the shallowest foundations in are made in Germany art portfolio ranges vehicle the world and therefore can and certainly the best barriers, crash gates to implement security solutions choice for comprehensive bollards. Along with many in environments that others



ABOUT US



Local partner with global competence

As a manufacturer of products companies in five countries and security concepts. And we meet With over 66 years of experience, products through to complete

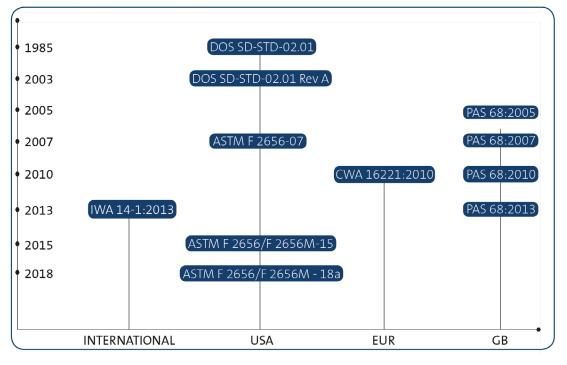
and systems for perimeter worldwide distributors it's our the highest demands - this is security we offer our customers aim to offer everything from our promise to our customers! solutions for a variety of areas. one source - from individual



Real crash tests for real security

Today the High Security market required crash rating is often But only a real crash test can is facing increasing competition given by presenting a self- ultimately prove the resistance from manufacturers of certification on the basis of to the applied impact load and non-crash tested products. static calculations instead of thus ensure compliance as per Evidence of compliance with a valid crash test certification. the required level of security!

International crash-test programme



CRASH TESTS



Crash-rated anti-terrorist equipment

PPG High Security products with British standard PAS 68 are also tested at a lower

highest level in accordance 80 km/h). Some bollard types next page.

reliably prevent unauthorised (7.5 t at 80 km/h) or American level (K4/M30). Please find a or violent vehicle access. All standard ASTM F 2656/ DOS (6.8 t complete overview of all of our products are certified to the at 80 km/h) or IWA 14-1 (7.2 t at product certifications on the



	TI-TERRORIST EQUIPMENT	
PRODUCT	CERTIFICATION	
Bollard K4 SP 275-900 (discontinued)	DOS: K4/L3 PAS 68 V/7500[N2]/48/90:0.0/0.0 PAS 68 V/7500[N2]/64/90:3.0/5.8	
Bollard M30	PAS 68 V/7500[N2]/48/90:0.0/0.0 IWA 14-1 V/7200[N2A]48/90:0.4	
Fixed Bollard M30	Vehicle impact simulation M30/P1 (triple unit)	
Bollard K12 SP 275-1100 (discontinued)	DOD: K12/L2 PAS 68 V/7500[N3]/80/90:3.3/17.7	
Bollard M50 Enables pedestrians to pass through unobstructed while effectively stopping heavy vehicles at high speed.	ASTM F 2656-07 M50/P2 PAS 68 V/7500[N3]/80/90:5.2/7.8 IWA 14-1 V/7200[N3C]/80/90:5.5 PAS 68 V/7500[N3]/80/90:0.4/15.4	
Fixed Bollard M50	IWA 14-1 V/7200[N3C]/80/90:0.8 ASTM F2656-07 M50/P1 (triple unit)	
Wedge Barrier K12 Effectively closes off the road within 3 seconds, decreasing to 1 second via optional accumulator. Also suitable for installation in city centres due to shallow foundation of only 400 mm.	DOS: K12/L3 PAS 68 V/7500[N3]/80/90:0.0/18.0 tested with 4 m blocking width	
Wedge Barrier K12 with safety skirt Effectively blocks the road within 3 seconds, decreasing to 1 second via optional accumulator. Also suitable for installation in city centres due to shallow foundation of only 400 mm.	DOS: K12 listed PAS 68 D/7500/80/90/1852	
Wedge II with or without safety skirt Effectively blocks the road within 3 seconds, decreasing to 1 second via optional accumulator. Also suitable for installation in city centres due to shallow foundation depth of only 300 mm.	PAS 68 V/7500[N3]/80/90:0.0/20.7 IWA 14-1 V/7200[N3C]/80/90:0.0 tested with 4 m blocking width ASTM F2656-15 M50/P1 tested with 2 m blocking width	
Road Blocker DSP[®] K12 Blocks the road within 2-4 seconds and is designed to remain functional after impact.	DOS: K12/L3 PAS 68 V/7500[N3]/80/90:0.0/18 tested with 4 m blocking width	
Tracked Sliding Gate TG M50 A solid gate that closes off the site and effectively stops heavy vehicles travelling at high speed.	ASTM F 2656-07 M50/P1 PAS 68 V/7500[N3]/80/90:0.0/4.3 tested with 7 m clear opening	
Quick Folding Gate EntraQuick® PU30 Fast operating single leaf quick folding gate with self- locking arrestor system designed to prevent forceful entry of unauthorised vehicles.	Vehicle impact simulation PU30/P1	
Barrier Lift System BLS K4/Barrier Lift System BLS K12 A boom barrier that quickly rises out of the ground and blocks the entire width of the road within 5 seconds. Completely destroys the chassis of a vehicle trying to gain access by force.	DOS: K4/L3 upto 6 m: DOS: K12/L3 upto 10 m: DOD: K12/L2 PAS 68 V/7500[N3]/80/90:0.0/31.0 tested with 6 m clear opening	
Tyre Killer Tyre killer with pointed spikes that effectively block a road within 2 seconds and completely destroy the tyres, axles and suspension of a vehicle trying to gain access by force.	No certificates!	
Tyre Killer SHARK Tyre killer with pointed spikes that effectively block a road within less than 1 second and completely destroy the tyres of a vehicle trying to gain access by force.	No certificates!	

PRODUCT RANGE



Our vehicle security barriers

- *Movable and fixed bollards*
- Tracked Gates
- Quick Folding Gates
- Medge Barriers
- Barrier Lift Systems
- Road Blockers
- 🦱 Tyre Killers

Typical application areas

- Airports
- *Communities* & *public places*
- *—* Embassies & governmental buildings
- Financial sector
- 🦱 Harbours
- 🦱 Industrial sites
- 🦱 Military
- Powerplants
- Prisons & forensics
- 🦱 Stadiums
- *Other critical infrastructures*





PPG crash bollards - High Security with blocking effect

requirements, PPG different movable or fixed can be used in inner city offer reliable operation and bollards for sites, where surroundings for city security are of course low maintenance. pedestrians may unhindered but vehicle traffic come along with fast operating position according to bridge is to be stopped. All bollards times and shallow foundations. class SLW 60. feature robust construction Ready-to-install bollard units with heavy gauge material and with separate control box allow

Depending of the security high tensile steel. Due to their quick and easy installation in offers modern design the bollards enter and traffic management. They They are traversable in lowered

all climate zones. PPG bollards



BOLLARDS



MOVABLE BOLLARD M50	CERTIFICATION	ASTM F 2656-07 M50/P2 PAS 68 V/7500[N3]/80/90:5.2/7.8 IWA 14-1 V/7200[N3C]/80/90:5.5
	BLOCKING HEIGHT	1100 mm
ARD	DIAMETER	Ø 355 mm
BOLI	OPERATING TIME	Raising: approx. 5-6 sec., lowering: approx. 3-4 sec.
ABLE	EFO (OPTIONAL)	approx. 2-3 sec.
VOV	DRIVE UNIT	Integrated in blocking element
<	INSTALLATION DEPTH	500 mm - 1950 mm incl. 100 mm road covering
	OPTIONS	Stainless steel sleeve, top lighting, EFO + RO1
FIXED BOLLARD M50	CERTIFICATION	PAS 68 V/7500[N3]/80/90:0.4/15.4 IWA 14-1 V/7200[N3C]/80/90:0.8 ASTM F 2656-07 M50/P1 (triple unit)
LAR	BLOCKING HEIGHT	1100 mm
BOL	DIAMETER	Ø 355 mm
FIXED	INSTALLATION DEPTH	500 mm incl. 100 mm road covering
	OPTIONS	Stainless steel sleeve, top lighting
0	CERTIFICATION	PAS 68 V/7500[N2]/48/90:0.0/0.0 IWA 14-1 V/7200[N2A]/48/90:0.4
DM	BLOCKING HEIGHT	1000 mm
LLAR	DIAMETER	Ø 355 mm
MOVABLE BOLLARD M30	OPERATING TIME	Raising: approx. 5-6 sec., lowering: approx. 3-4 sec.
VABL	EFO (OPTIONAL)	approx. 2-3 sec.
MO	DRIVE UNIT	Mounted to installation frame
	INSTALLATION DEPTH	500 mm - 1900 mm incl. 100 mm road covering
	OPTIONS	Stainless steel sleeve, top lighting, EFO + RO1
FIXED BOLLARD M30	CERTIFICATION	Vehicle Impact Simulation M30/P1 (triple unit)
	BLOCKING HEIGHT	1000 - 1100 mm
OLL/	DIAMETER	Ø 355 mm
IXED B(INSTALLATION DEPTH	500 mm incl. 100 mm road covering
	OPTIONS	Stainless steel sleeve, top lighting





Tracked Gate M50 - designed to stop all threats

infrastructure with unrivalled reliability and security high speed opening and closing vulnerable to hostile vehicle times that are impossible attacks. Its robust construction

The internationally crash- to achieve with other drive with heavy gauge material tested Tracked Gate M50 principles. It is fully compatible affords impact protection and with all access control is therefore ideal for all critical systems and its advanced maintenance. Quick and easy applications technology combined with its installation in all climate zones or other designated high risk application flexibility, provides is possible. There is an override areas. It boasts a tracked design a total solution for all perimeter facility for manual operation access

and high tensile steel offers reliable operation and is low points available.



TRACKED GATES



7	CERTIFICATION	ASTM F2656-07 M50/P1 tested with 7 m CWO
SIO	GATE HEIGHT	2000, 2500, 3000 mm incl. 100 mm ground clearance
TG M50 ASTM VERSION	CLEAR OPENING WIDTH	3000 mm - 7000 mm in 1000 mm increments
50 AS	OPERATING SPEED	up to 0.4 m/s
N N	EFO (OPTIONAL)	up to 0.8 m/s
Ĕ	DRIVE UNIT	Mounted on compensating frame
	INSTALLATION DEPTH	500 mm incl. 100 mm road covering
	OPTIONS	Anti-climbing device, type of gate infill

z	CERTIFICATION	PAS 68 V/7500[N3]/80/90:0.0/4.3 tested with 7 m CWO
SIO	GATE HEIGHT	2000, 2500, 3000 mm incl. 100 mm ground clearance
M50 PAS 68 VERSION	CLEAR OPENING WIDTH	3000 mm - 7000 mm in 1000 mm increments
O PA	OPERATING SPEED	up to 0.4 m/s
N N	EFO (OPTIONAL)	up to 0.8 m/s
D	DRIVE UNIT	Mounted on compensating frame
	INSTALLATION DEPTH	500 mm incl. 100 mm road covering
	OPTIONS	Anti-climbing device, type of gate infill







EntraQuick® PU30 - ultimate security for vehicle access points

The quick folding EntraQuick[®] PU30 is an innovative single leaf bi-folding gate which unlike traditional access control products such as sliding gates and barriers offers ultimate security for vehicle is designed to prevent forceful access points due to its ability entry of a pickup truck travelling

gate to provide full height perimeter protection paired with very short operating times as well as impact resistance through its unique self-locking arrestor system. The arrestor system

at 50 km/h which is proven by vehicle impact simulation. The gate is designed for continuous operation and is therefore predestined for use at highly frequented locations such as logistic centres or ports.



QUICK FOLDING GATES



	CERTIFICATION	Vehicle Impact Simulation PU30/P1
® PU30	GATE HEIGHT	2050 mm, 2550 mm and 3050 mm incl. 100 mm ground clearance
ENTRAQUICK® PU30	CLEAR OPENING WIDTH	2000 mm – 4000 mm in 500 mm increments
JTRA	OPERATING SPEED	up to 0.5 m/s
Ē	DRIVE UNIT	Mounted to drive post
	INSTALLATION DEPTH	1100 mm incl. 200 mm road covering
	OPTIONS	Anti-climbing device, type of gate infill



Obstruction free passage due to trackless design

a trackless design which heavy and large trucks as there via drive mechanism supported impresses not only with is no track or locking facilities by interlocking of gate leaf and exceptional sturdiness, but in the driveway and no top receiving post through in-feed also with its reliability and low guide rail limiting the passage roller and reception fork. maintenance requirements. height. The gate is securely

The EntraQuick[®] PU30 boasts It is well suited for passage of locked in the closed position



Wedge barriers - security for highly sensitive entry points

PPG wedge maximum security against unauthorised wheeled vehicles of all sizes and weights for highly sensitive entry points. internationally accepted to standards and feature a robust construction with heavy gauge material and high tensile steel. The Wedge Barrier K12 and the Wedge II are designed to

barriers offer guarantee the full level of security and can be installed as a single unit or in combination with other products (e.g. barriers, gates, tyre killer or bollards) in order They are vehicle crash-tested to realise a sluice arrangement forming a vehicle check point. With decreased installation depth and foundation footprint, PPG wedges reduce installation costs significantly and allow installation in areas where foundation depths

are limited due to underground utilities. Installation is easily implemented due to ready-toinstall wedge barrier units and separate drive cabinets. Like all PPG products, the wedge barriers offer reliable operation and are low maintenance. Furthermore, they are traversable in lowered position according to bridge class SLW 60.



WEDGE BARRIERS



	CERTIFICATION	PAS 68 D/7500/80/90/1852
R	BLOCKING HEIGHT	1000 mm
I SKIRT	BLOCKING WIDTH	2000 - 4000 mm in 500 mm increments
WITH	OPERATING TIME	Raising: approx. 3.5 sec., lowering: approx. 3.5 sec.
K12 /	EFO (OPTIONAL)	approx. 1 sec.
	DRIVE UNIT	Installed in separate drive cabinet
WEDGE	INSTALLATION DEPTH	400 mm
	OPTIONS	LED strip lighting, EFO + RO3

ш

WEDGE K12 WITH SKIRT



WEDGE K12 WITH OPTIONAL WARNING PLATE





WEDGE K12 WITH OPTIONAL WARNING PLATE	CERTIFICATION	PAS 68 V/7500[N3]/80/90:0.0/18.0 DOS SD-STD-02.01 Rev. A 03/2003 K12/L3
RNN	BLOCKING HEIGHT	1200 mm
WAI	BLOCKING WIDTH	2000 - 4000 mm in 500 mm increments
DNAL	OPERATING TIME	Raising: approx. 3.5 sec., lowering: approx. 3.5 sec.
DPTIC	EFO (OPTIONAL)	approx. 1 sec.
ITH (DRIVE UNIT	Installed in separate drive cabinet
: K12 W	INSTALLATION DEPTH	400 mm
DG	OPTIONS	Warning plate with LED warning lights,
M		EFO + RO3

		PAS 68 V/7500[N3]/80/90:0.0/20.7
		IWA 14-1 V/7200[N3C]/80/90:0.0
	CERTIFICATION	tested with 4 m blocking width
		ASTM F2656-15 M50/P1 tested with
		2 m blocking width
	BLOCKING HEIGHT	1000 mm
GEII	BLOCKING WIDTH	2000 - 4000 mm in 500 mm increments
WEDGE	OPERATING TIME	Raising: approx. 3.5 sec., lowering: approx. 3.5 sec.
	EFO (OPTIONAL)	approx. 1 sec.
	DRIVE UNIT	Installed in separate drive cabinet
	INSTALLATION DEPTH	300 mm incl. 100 mm road covering
	OPTIONS	Safety skirt, LED strip lighting, EFO + RO3



Barrier Lift System - reliable break-through prevention

The crash rated PPG BLS offers with other PPG products in order maximum security for highly to achieve a sluice arrangement sensitive entry or exit points forming a secure vehicle check position the BLS is completely against unauthorised vehicles point. BLS fulfils the highest unobtrusive and flush with the attempting to break through, security level! Thanks to its road surface. It corresponds to by destroying the chassis high-quality material and the bridge class SLW 60, so that also completely. Even heavy vehicles proven TRI-PROTECT[®] long-term the heaviest vehicles can use with high speeds are stopped corrosion protection, installation the entry. reliably. It can be utilised in all climate zones is possible. individually or in combination Furthermore, it only requires

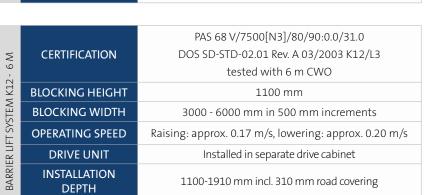
minimal excavation across the roadway. In the lowered



BARRIER LIFT SYSTEMS



10 M	CERTIFICATION	DOD SD-STD-02.01 Rev. A 03/2003 K12/L2 tested with 10 m CWO
K12 -	BLOCKING HEIGHT	1100 mm
Ν×	BLOCKING WIDTH	6000 mm - 10000 mm in 1000 mm increments
SYSTEM	OPERATING SPEED	Raising: approx. 0.17 m/s, lowering: approx. 0.20 m/s
LIFT	DRIVE UNIT	Installed in separate drive cabinet
3ARRIER I	INSTALLATION DEPTH	510 - 1210 mm incl. 310 mm road covering
B	OPTIONS	RO1



RO1

	CERTIFICATION	DOS SD-STD-02.01 Rev. A 03/2003 K4/L3 tested with 9 m CWO
Κ4	BLOCKING HEIGHT	1100 mm
TEM	BLOCKING WIDTH	3000 mm - 9000 mm in 500 mm increments
LIFT SYSTEM K4	OPERATING SPEED	Raising: approx. 0.17 m/s, lowering: approx. 0.20 m/s
	DRIVE UNIT	Installed in separate drive cabinet
BARRIER	INSTALLATION DEPTH	1110 - 1910 mm incl. 310 mm road covering
	OPTIONS	RO1

OPTIONS



BLS K12 - 6 METER







Road Blocker DSP $^{\circ}$ KI2 - massive blocking effect

offer according to DOS SD-STD-02.01 form a sluice for vehicle check

PPG Road Blockers DSP® K12 Rev. A 03/2003 and PAS 68 with maximum security a 7.5 ton truck travelling at 80 against unauthorised vehicles km/h. The very first impact of all sizes and weights for test was conducted by the TÜV highly sensitive entry points. (German Technical Inspectorate) PPG Road Blockers DSP[®] K12 30 years ago. The Road Blockers are designed to guarantee DSP® K12 can be installed as the full level of security. They single unit or in combination were successfully crash tested with other PPG products to

points. In operation the heavy blocking segment raises in approximately 5 seconds and blocks the road with a height of 1000 mm. The blocking segment is clearly visible due to the flashing lights and optional warning stripes thus ensuring the immediate stopping of approaching vehicles.



ROAD BLOCKERS



12	CERTIFICATION	PAS 68 V/7500[N3]/80/90:0.0/18.0 DOS SD-STD-02.01 Rev. A 03/2003 K12/L3 tested with 4 m blocking width
DSP® K12	BLOCKING HEIGHT	1000 mm
r ds	BLOCKING WIDTH	2000 mm - 4000 mm in 500 mm increments
BLOCKER	OPERATING TIME	Raising: approx. 5 sec., lowering: approx. 4 sec.
) BLC	EFO (OPTIONAL)	approx. 2 sec.
ROAD	DRIVE UNIT	Installed in separate drive cabinet
CZ.	INSTALLATION DEPTH	1550 mm
	OPTIONS	EFO + RO3



High security with traffic functionality

In the lowered position the supporting wheeled vehicles to approximately 2 seconds road blocker is absolutely with a load bearing capacity using an optional accumulator unobtrusive, flush with the up to bridge class SLW 60. The for Emergency Fast Operation road surface and capable of raising time can be reduced (EFO).

Tyre Killers - solid spikes with guaranteed stopping effect

against unauthorised entry or exit of hostile motor vehicles. If a vehicle attempts to break through, its tyres and/or axles will be destroyed depending on the model. Further progress will certainly be prevented. PPG Tyre Killers can be used individually are completely unobtrusive, or in combination with other flush with the road surface and

The PPG Tyre Killer and the PPG products to form a sluice for modular Tyre Killer SHARK offer vehicles. The solid sharp spikes a high degree of protection are clearly visible thanks to garish warning colours thus ensuring the stopping of approaching vehicles in good time. The spikes will raise and block the road with a height of 215 mm to 450 mm, depending on the model. In lowered position the Tyre Killers underground utilities.

capable of supporting wheeled vehicles with a load bearing capacity up to bridge class SLW 60. The "plug and play" Tyre Killers are characterised by a shallow installation depth which makes it particularly suitable for locations with limited available depth due to





TYRE KILLER	BLOCKING HEIGHT	450 mm
	BLOCKING WIDTH	2000 mm - 6000 mm
	OPERATING TIME	Raising: approx. 2 sec., lowering: approx. 2 sec.
	DRIVE UNIT	Installed in separate drive cabinet
	INSTALLATION DEPTH	900 mm
	OPTIONS	RO3



TYRE KILLER SHARK	BLOCKING HEIGHT	215 mm
	BLOCKING WIDTH	2000 mm to 6000 mm in 500 mm increments
	OPERATING TIME	Raising: < 1 sec., lowering: < 1 sec.
	DRIVE UNIT	Installed on the left or right viewed from the outside
	INSTALLATION DEPTH	490 mm incl. 190 mm for drainage pipes



Own training and exhibition centres

In our modern exhibition and installed training centres close to our product. Within a total area of branches in Salzkotten, Germany 500 - 550 m², an exhibition area and Roskilde, Denmark we offer for the product portfolio, which our national and international includes among others sliding customers, partners, distributors gates, quick folding gates, fences and employees the opportunity and of course our internationally to be trained hands on with certified PPG High Security

and

operational products. In separate training rooms we provide theoretical knowledge under modern conditions. At regular intervals, events such as in-house exhibitions, specialist seminars or lectures are organised there.





Comprehensive service working closely with our customers

We offer a range of services in the areas of mechanics, trained local partners. tailored to individual customer electronics and hydraulics as special situations, we are also needs and place particular well as skills in the wide field of able to provide additional focus on a smooth process modern planning technology. world wide support through from the very start. To meet all Installation and maintenance our pool of 'flying technicians'. customers` demands, we have are carried out by our a team of trained specialists experienced and intensively

In

Our customer service at a glance

- Guarantee through after-sales-service contracts
- Security for you and your property everything from one source!
- Short lead-times
- Extensive after-sales-service
- Inspection and maintenance according to ASR 1.7
- Professional training and product launches



Perimeter Protection Group

safe 8 secure!



PPG Distributor took home "Product of the Year Award" at Security 2013 in Sydney

"Winners were chosen on the basis of innovation, originality and the potential benefits the product provides to the overall security industry. Ezi Security's Ezi Elkosta M50 Bollard was selected for its unique design and practicality. With the world's first integrated hydraulic drive unit, this is sure to be a game-changing technology that ensures superior quality while minimizing cost and labor overhead traditionally associated with bollards". Kylie Mc Rorie, Exhibition Manager, Security 2013 Exhibition, Sydney, Australia

PPG provides comprehensive security for RWE

"While searching for suitable gate systems for our new pump workshop, the concept of the Perimeter Protection Group was convincing. The PPG gate systems facilitate the flexible adaptation to respective applications. That really met our planning!" Andre Pochert, Project Manager RWE Power

Professional training centres

"I do believe presenting products for your clients to come touch, look and feel the quality of equipment in the high security space like PPG offers in their training centres is imperative for the end users to be able to truly compare products. This definitely shows PPGs pride and commitment to their products." Troy Donnelly, Managing Director of EZI Security Systems from Australia

Worldwide references

- Akershus Castle Oslo
- Allianz Arena, Munich
- 🥱 Aramco, Riyadh
- Australian Embassies
- Bank of Ghana
- Bank of Oman
- Banque de France
- BKS Cash Handling Copenhagen
- British Embassies/High Commissions
- Kuwait Oil Company
- 🥱 Canadian Embassies
- 🥱 Christiansborg Copenhagen
- City Hall Oslo

- 🥱 Dubai Tower (Burj Khalifa)
- Embassies and Ministries in Berlin
- 🥱 Finnish Parliament, Helsinki
- German Embassies
- 🥱 Government Kazakhstan
- Government Norway, Oslo
- 🥱 HBOS Kilmartin, Glasgow
- HBOS Tweed House Edinburgh
- 🦰 Hungarian Parliament
- Ministry of Finance, Oslo
- Norwegian Broadcasting Marienlyst
- Muclear Power Plants France
- Nuclear Power Plants Germany

- Nuclear Power Plants Switzerland
- Nuclear power Plants UK
- 🥱 OMPI Geneva
- 🦱 Qipco Tower, Doha
- Saudi Arabian Embassies
- Swedish Parliament, Stockolm
- 🦱 Uno Wien
 - *S US Airforce Ramstein*
 - *S* US Embassies
 - 🦱 US Military Camp Novo Selo
 - S Military Grafenwöhr
 - CS Patton Barracks, Heidelberg
 - *Shopping Center Wiesbaden*



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