



# PFLÜGER - SAFETY



440  
Vac

## Benefits

- Arc flash protection  
Tested in the Innogy Eurotest centre with the following parameters: 10 kA, 3-phase, 1 sec. Burning duration
- Electrical insulation according to DIN EN 50 365 for work involving live electricity or in close proximity to live equipment up to 1000V AC or 1500V DC
- Maximum conduction of 1.5 mA into inner shell at 3000 V protection against short-term inadvertent contact with live conductors up to 440 volts AC
- Suited for tasks carried out in high ambient temperatures (e.g. furnaces)
- Suited to tasks with exposure to molten metal, for example



DURO  
PLAST



## BOP ENERGY<sup>3000</sup>

### Additional benefits

- High lateral stiffness
- Protective property down to -30°C For use in very low temperatures (e.g. cold storage freezers)
- Retains shape at elevated temperatures
- Chemical resistant
- Improved force absorption for side impacts due to special cushion strip



## Benefits

- Certified according to GS-ET-29 and ANSI
- No electrical conductivity
- No protection restriction with normal signs of use
- Improved colour recognition and enhanced contrast viewing

## ARCSHIELD

### Additional benefits

- Different levels of protection up to < 25 cal/cm<sup>2</sup>
- Protection class 2, optical class 1
- Connection to the MFA-Duro on the BOP Energy 3000
- High degree of load capacity reserves



## BOP ENERGY 3000

<b>Certification</b>	DIN EN 397 and DIN EN 50 365																
<b>Protective properties</b>	<ul style="list-style-type: none"> <li>■ Electrical insulation according to DIN EN 50365</li> <li>■ Electrical insulation according to DIN EN 397</li> <li>■ Temperature up to +150°C</li> <li>■ Metal spatter (MM)</li> <li>■ Lateral deformation (LD)</li> <li>■ Protective property down to -50°C</li> </ul>																
<b>Type</b>	I/79 G-RF																
<b>Special feature</b>	Flame retardant Screw closure																
<b>Webbing</b>	6 point																
<b>Eye protection</b>	-																
<b>Sweatband</b>	Real leather																
<b>Cushion strip</b>	Special																
<b>Height-adjustable</b>	Yes																
<b>Chin strap suspension</b>	2 and 4 point																
<b>Series</b>	-																
<b>Factory fitted option</b>	■ All-round reflective film																
<b>Accessories (+Page 54-61)</b>	<ul style="list-style-type: none"> <li>■ Hairing protection</li> <li>■ Face protection</li> <li>■ Chin strap</li> <li>■ Neck protection</li> <li>■ Sweatbands</li> <li>■ All-round reflective film</li> </ul>																
<b>Size</b>	<table border="1"> <thead> <tr> <th colspan="3">Version</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>Head circumference</td> <td>52-56cm</td> <td>53-61cm</td> <td>59-63cm</td> </tr> <tr> <td>Colours</td> <td>-</td> <td> <ul style="list-style-type: none"> <li>■ RAL 9016</li> <li>■ RAL 1023</li> <li>■ RAL 5017</li> <li>■ RAL 3020</li> </ul> </td> <td>-</td> </tr> </tbody> </table>			Version			1	2	3	Head circumference	52-56cm	53-61cm	59-63cm	Colours	-	<ul style="list-style-type: none"> <li>■ RAL 9016</li> <li>■ RAL 1023</li> <li>■ RAL 5017</li> <li>■ RAL 3020</li> </ul>	-
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<b>Branding</b>	Pad printing																
<b>Item Size</b>	Front 2,3 x 5 cm	Side 9 x 5 cm															
<b>Shape</b>	Straight																
<b>Material</b>	UP-GF (Polyester fibreglass)																
<b>Weight</b>	approx. 475 g																

## TESTING



HELMET TEST  
before arc flash incident



BOP ENERGY 3000  
after arc flash incident



ARC FLASH INCIDENT



FOR COMPARISON:  
thermoplastic electrician's helmet  
and BOP Energy 3000 after the  
arc flash incident



ARCSHIELD  
before arc flash incident



ARCSHIELD  
after arc flash incident



## ARC SHIELD VISOR

<b>Certification</b>	DIN EN 166, EN 170, GS-ET-29:2005 und ANSI		
<b>Type</b>	SH ArcShield CL.2		
<b>Arc flash protection class</b>	2	2	2
<b>ATPV cal/cm<sup>2</sup></b>	6	14	25



# PFLÜGER - SAFETY



## Benefits

- Electrical insulation according to DIN EN 50 365 for work involving live electricity or in close proximity to live equipment up to 1000V AC or 1500 V DC
- Electrical insulation according to DIN EN 397 protection against short-term inadvertent contact with live conductors up to 440 volts AC
- Protective property down to  $-20^{\circ}\text{C}$  for use in low temperatures (e.g. outdoors in very cold conditions)
- Very comfortable to wear and secure fit due to ergonomically formed height-adjustable internal fittings
- Protects in combination with the electrician visor CrossElectric against arc flashes Cl1

440 Vac

$-20^{\circ}\text{C}$

THERMO PLAST

## CROSS®ELECTRIC

### Additional benefits

- Easy handling of the accessories due to MFA-Tech multifunctional adapter
- Very comfortable to wear and secure fit due to ergonomically formed height-adjustable internal fittings
- By default with Welvitex® Z+ sweatband and screw closure



## CROSS®ELECTRIC

<b>Certification</b>	DIN EN 397 und DIN EN 50365		
<b>Protective properties</b>	<ul style="list-style-type: none"> <li>Electrical insulation according to DIN EN 50365</li> <li>Electrical insulation according to DIN EN 397</li> <li>Protective property down to <math>-20^{\circ}\text{C}</math></li> </ul>		
<b>Internal equipment</b>			
Type	I/79 G-R		
Special feature	-		
Webbing	6 point		
Version	With screw cap		
Eye protection	Possible		
Sweatband	Welvitex® Z+		
Cushion strip	Standard		
Chin strap suspension	2 and 4 point		
Varianten-Typ	-		
<b>Helmet features</b>			
<b>Serie</b>	<ul style="list-style-type: none"> <li>MFA-Tech</li> </ul>		
<b>Factory fitted option</b>	<ul style="list-style-type: none"> <li>Eye protection</li> <li>Reflective film (Basic, Advanced)</li> </ul>		
<b>Accessories (-Page 54-81)</b>	<ul style="list-style-type: none"> <li>Eye protection screen</li> <li>Hearing protection</li> <li>Face protection</li> <li>Chin strap</li> <li>Lamps</li> <li>Neck protection</li> <li>Reflective film (Basic, Advanced)</li> <li>Sweatbands</li> </ul>		
<b>Varianten</b>			
<b>Size</b>	1	2	3
Head circumference	52 - 56 cm	53 - 61 cm	59 - 63 cm
<b>Colours</b>	<ul style="list-style-type: none"> <li>RAL 9016</li> <li>RAL 1023</li> <li>RAL 5017</li> <li>RAL 3020</li> <li>RAL 6024</li> <li>RAL 2009</li> <li>Sonder farben</li> </ul>		
<b>Branding</b>	Pad printing		
<b>Item Size</b>	Front 4 x 4 cm bzw. 5 x 3 cm	Side 7 x 1,5 cm	
<b>Parameter</b>			
<b>Shape</b>	Straight		
<b>Material</b>	PP (Polypropylen)		
<b>Weight</b>	approx. 395g		

