

Таблица за различните твърдоти

Сила на огъване	Vickers твърдост	Brinell твърдост	Rockwell твърдост							
755	235	223								
770	240	228	98,1	114,3	20,3	60,7	40,3	63,6	41,7	19,9
785	245	233			21,3	61,2	41,1	70,1	42,5	21,1
800	250	238	99,5	115,1	22,2	61,6	41,7	70,6	43,4	22,2
820	255	242			23,1	62,0	42,2	71,1	44,2	23,2
835	260	247	101		24,0	62,4	43,1	71,6	45,0	24,3
850	265	252			24,8	62,7	43,7	72,1	45,7	25,2
865	270	257	102		25,6	63,1	44,3	72,6	46,4	26,2
880	275	261			26,4	63,5	44,9	73,0	47,2	27,1
900	280	266	104		27,1	63,8	45,3	73,4	47,8	27,9
915	285	271			27,8	64,2	46,0	73,8	48,4	28,7
930	290	276	105		28,5	64,5	46,5	74,2	49,0	29,5
950	295	280			29,2	64,8	47,1	74,6	49,7	30,4
965	300	285			29,8	65,2	47,5	74,9	50,2	31,1
995	310	295			31,0	65,8	48,4	75,6	51,3	32,5
1030	320	304			32,2	66,4	49,4	76,2	52,3	33,9
1060	330	314			33,3	67,0	50,2	76,8	53,6	35,2
1095	340	323			34,4	67,6	51,1	77,4	54,4	36,5
1125	350	333			35,5	68,1	51,9	78,0	55,4	36,5
1155	360	342			36,6	68,7	52,8	78,6	56,4	39,1
1190	370	352			37,7	69,2	53,6	79,2	57,4	40,4
1220	380	361			38,8	69,8	54,4	79,8	58,4	41,7
1255	390	371			39,8	70,3	55,3	80,3	59,3	42,9
1290	400	380			40,8	70,8	56,0	80,8	60,2	44,1
1320	410	390			41,8	71,4	56,8	81,4	61,1	45,3
1350	420	399			42,7	71,8	57,5	81,8	61,9	46,4
1385	430	409			43,6	72,3	58,2	82,3	63,7	47,4
1420	440	418			44,5	72,8	58,8	82,8	63,5	49,4
1485	460	437			46,1	73,6	60,1	83,6	64,9	50,4
1520	470	447			46,9	74,1	60,7	83,9	65,7	51,3
1555	480	456			47,7	74,5	61,3	84,3	66,4	52,2
1595	490	466			48,4	74,9	61,6	84,7	67,1	53,1
1630	500	475			49,1	75,3	62,2	85,0	67,7	53,9
1665	510	485			49,8	75,7	62,9	85,4	68,3	54,7

ВЯРНО С  
ОРИГИНАЛА



Таблица за различните твърдоти

Сила на огъване	Vickers твърдост	Brinell твърдост	Rockwell твърдост							
1700	520	494			50,5	76,1	63,5	85,7	69,0	55,6
1740	530	504			51,1	76,7	64,4	86,3	70,0	57,0
1810	550	523			52,3	77,0	64,8	86,6	70,5	57,8
1845	560	532			53,0	77,4	65,4	86,9	71,2	58,6
1880	570	542			53,6	77,8	65,8	87,2	71,7	59,3
1920	580	551			54,1	78,0	66,2	87,5	72,1	59,9
1955	590	561			54,7	78,4	66,7	87,8	72,7	60,5
1995	600	570			55,2	78,6	67,0	88,0	73,2	61,2
2030	610	580			55,7	78,9	67,5	88,2	73,7	61,7
2070	620	589			56,3	79,2	67,9	88,5	74,2	62,4
2105	630	599			56,8	79,5	68,3	88,8	74,6	63,0
2145	640	608			57,3	79,8	68,7	89,0	75,1	63,5
2189	650	519			57,8	80,0	69,0	89,2	75,5	64,1
	660				58,3	80,3	69,4	89,5	75,9	64,7
	670				58,8	80,6	69,8	89,7	76,4	65,3
	680				59,2	80,8	70,1	89,8	76,8	65,7
	690				59,7	81,1	70,5	90,1	77,2	66,2
	700				60,1	81,3	70,8	90,3	77,6	66,7
	720				61,0	81,8	71,5	90,7	78,4	67,7
	740				61,8	82,2	72,1	91,0	79,1	68,6
	760				62,5	82,6	72,6	91,2	79,7	69,4
	780				63,3	83,0	73,3	91,5	80,4	70,2
	800				64,0	83,4	73,8	91,8	81,1	71,0
	820				64,7	83,8	74,3	92,1	81,7	71,8
	840				65,3	84,1	74,8	92,3	82,2	72,2
	860				65,9	84,4	75,3	92,5	82,7	73,1
	880				66,4	84,7	75,7	92,7	83,1	73,6
	900				67,0	85,0	76,1	92,9	83,6	74,2

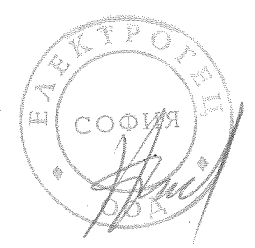
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Приложение № 9

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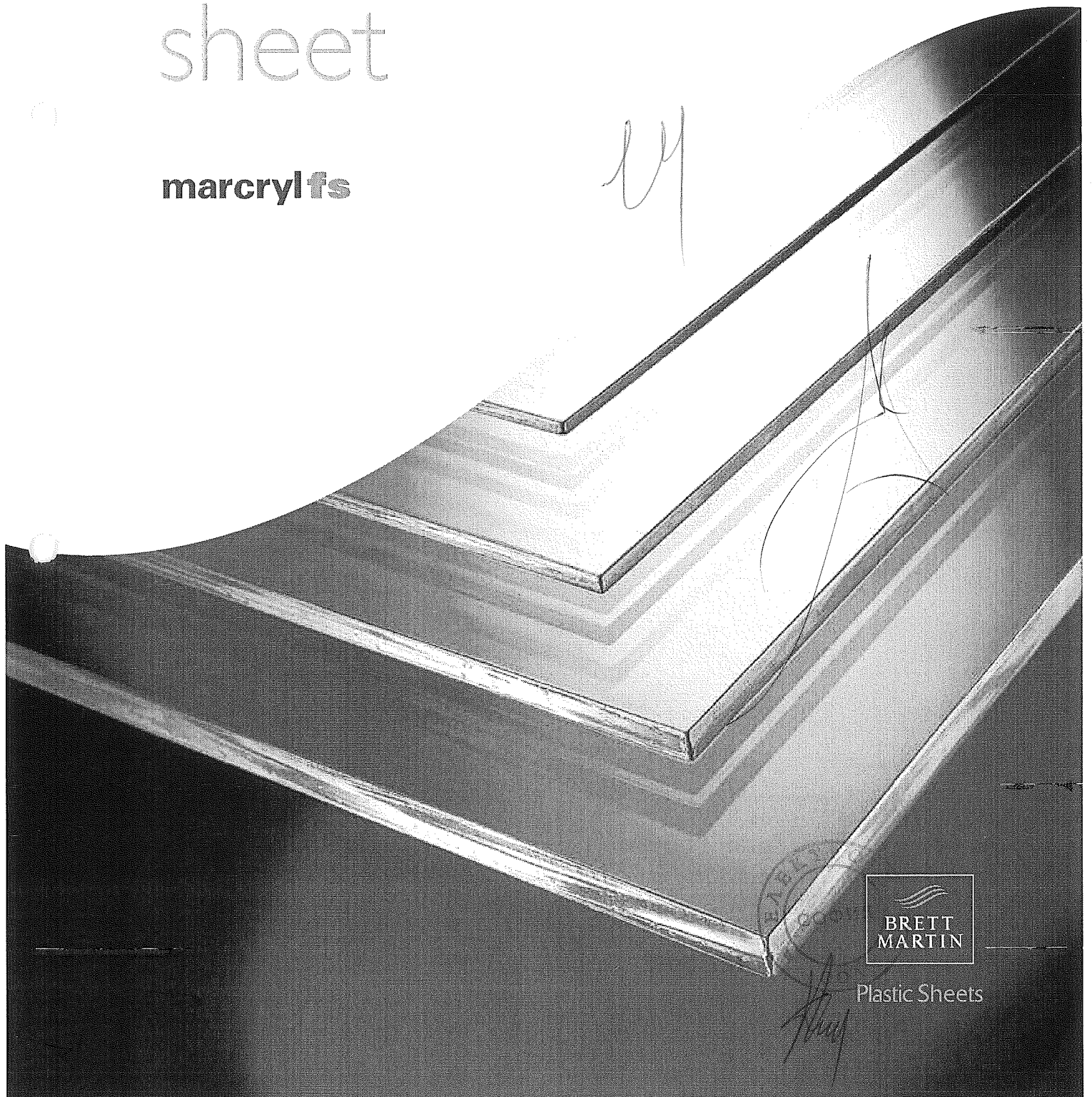
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ACRYLIC SHEET

**marcryl** 

Solid acrylic sheet

**marcrylfs**



  
**BRETT  
MARTIN**

Plastic Sheets



The versatility, ease of fabrication and scratch resistance of Marcryl FS acrylic sheet make it the perfect choice for use in interior design, point of sale and display applications.

**marcryl fs**



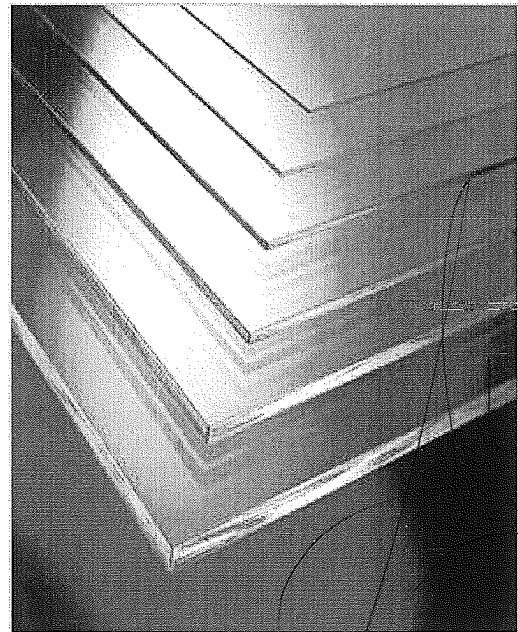
Plastic Sheets

MARCRYL FS IS A TOP QUALITY ACRYLIC SHEET, WITH A HIGH GLOSS FINISH THAT OFFERS A COMBINATION OF EXCELLENT OPTICAL CLARITY AND WEATHERABILITY AT ONLY HALF THE WEIGHT OF GLASS. STRICT PRODUCTION AND QUALITY CONTROL ENSURE A HIGHLY CONSISTENT PREMIUM PRODUCT SUITABLE FOR A WIDE VARIETY OF APPLICATIONS IN THE DISPLAY, FABRICATION AND BUILDING INDUSTRIES.

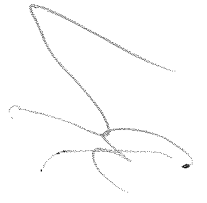
## marcryl fs

SOLID ACRYLIC SHEET

Marcryl FS high gloss acrylic sheet offers a combination of excellent optical clarity and weatherability at only half the weight of glass.



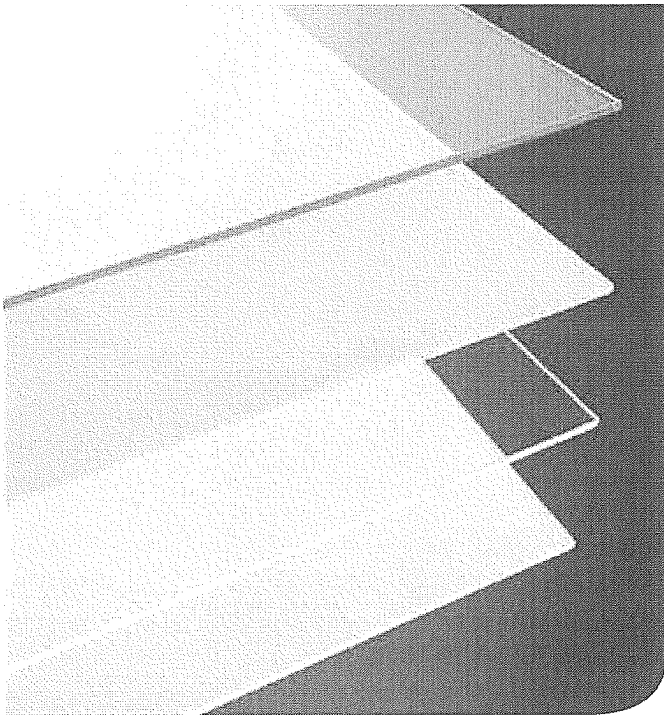
marcryl



# marcryl fs

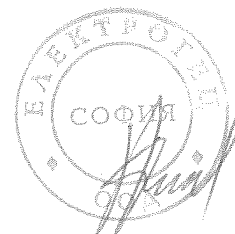
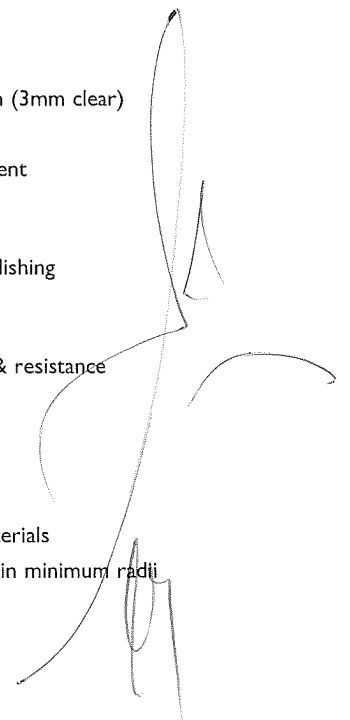
## Solid Acrylic Sheet

MARCRYL FS INCLUDES A PORTFOLIO OF CLEAR TRANSPARENT, OPAL AND SILICA GREEN ACRYLIC SHEETS IN A RANGE OF DIFFERENT THICKNESSES TO SUITE ENDLESS APPLICATION POSSIBILITIES IN THE SIGN & DISPLAY AND BUILDING INDUSTRIES. THE MATERIAL OFFERS EXCELLENT IMPACT STRENGTH AND HAS A GOOD STRETCH RESISTANCE, YET IT IS LIGHT IN WEIGHT AND EASY TO HANDLE.



### MAIN BENEFITS

- Up to 92% light transmission (3mm clear)
- Good light diffusion (opal)
- Easy to fabricate with excellent thermoforming capabilities
- Easy to mount
- Good scratch resistance, polishing removes scratches easily
- UV stable
- Outstanding weatherability & resistance to high temperatures
- Weight savings over glass
- Good thermal insulation
- High gloss finish
- Inert to many corrosive materials
- Can be cold curved to certain minimum radii
- High break resistance
- Limited 10 year warranty



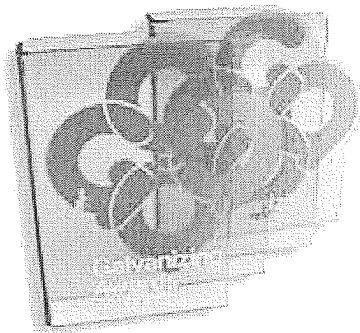
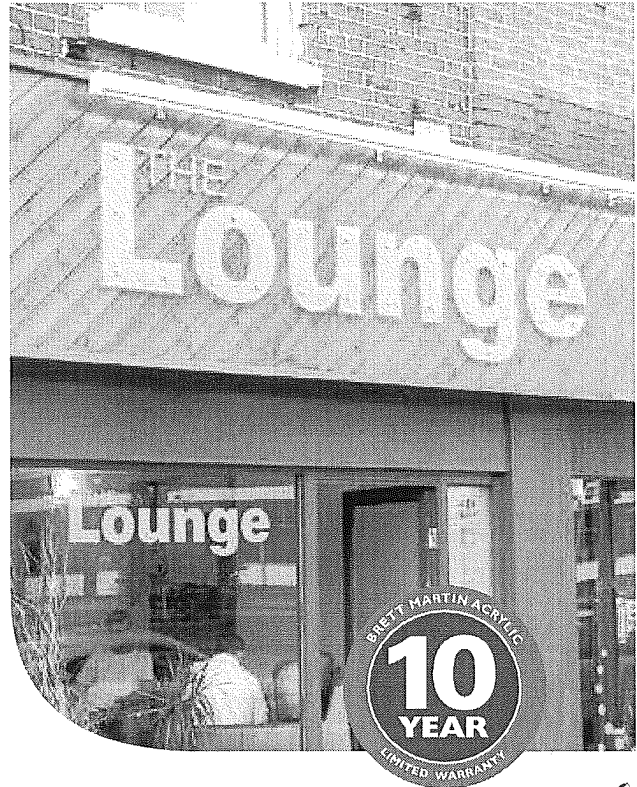
Plastic Sheets



Key benefit is the exceptional optical clarity it provides, offering a light transmission of 92%. Combined with a high quality surface, Marcryl FS is particularly suitable for those projects that require high transparency and impact strength including glazing, machine guards, poster covers, partition walls and interior design projects. In addition, the high light transmission make the product ideal for use in the retail sector, especially for point of sale displays.

Another key benefit is the easy of fabrication and excellent thermoforming capabilities it offers. The material can be easily bent and formed into shapes to meet different design requirements. The gloss and shiny finish gives the material a bright feel, whilst visual stunning effects can be achieved by polishing the edges. This combination of attributes make Marcryl FS the perfect choice for product displays, point of purchase displays, store fixtures, shelving, furniture and interior design projects.

In addition to the clear transparent finish, Marcryl FS is also available in an opal and silica green finish. The gloss, opal surface provides excellent light transmission and can be used for dramatic lighting effects. The silica green option comes with a green edge which looks like tempered glass, especially after edge polishing.



### TYPICAL APPLICATIONS

- |  |  |
|--|--|
| <p>Print &amp; Display</p> <ul style="list-style-type: none"> <li>• Illuminated &amp; non-illuminated signage</li> <li>• Displays</li> <li>• Point of purchase/sale</li> <li>• Poster covers</li> <li>• Menu boards</li> <li>• Store fixtures</li> <li>• 3-Dimensional signs &amp; displays</li> </ul> | <p>Fabrication</p> <ul style="list-style-type: none"> <li>• Glazing</li> <li>• Light fittings</li> <li>• Decoration</li> <li>• Furniture</li> <li>• Interior design projects</li> <li>• Picture framing</li> <li>• High traffic acoustic barriers</li> </ul> |
|--|--|

### OPTIONS

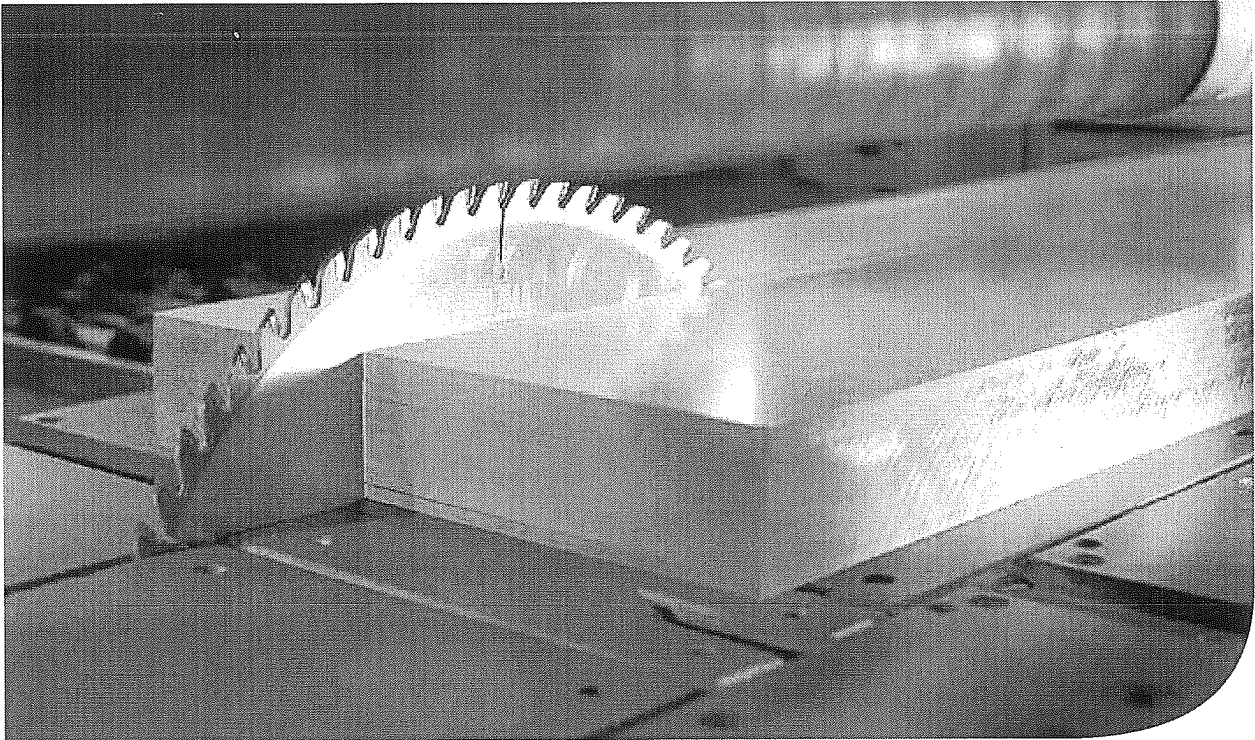
Colours and tints:	Clear and specials including Opal & Silica Green
Widths:	Up to 2050mm
Thicknesses:	2, 3, 4, 5, 6, 8 & 10mm
Options*:	Special options are available on request

\*Subject to request. Minimum order quantities may apply. Please contact Brett Martin for further information.



**marcryl**

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## Fabrication Guidelines

### MACHINING & MILLING

Marcryl FS is easy to work with using most standard workshop equipment and can be machined on conventional high-speed milling machines. To ensure the best quality results, tool speed should be kept at the optimum level possible without causing the sheet to overheat (cooling measures can also be taken, such as an air jet directed at the cutting edge), with cutting tools always kept sharp.

When these are being used, it is advisable to grind small flat areas on to two cutting edges and use a slower speed and feed rate. Always ensure the material is well clamped to prevent movement.

### SAWING & CUTTING

Hand, band, circular and jigsaws can be used to cut Marcryl FS.

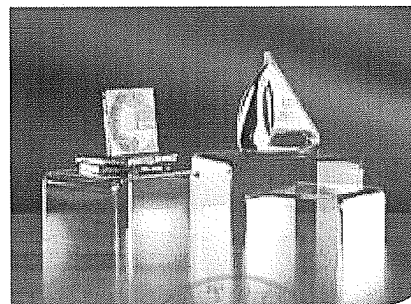
- **Hand saw** - It is difficult and time-consuming to produce good edge finishes with a hand saw but it is possible.
- **Band saw** - Useful tool for cutting Marcryl FS before final finishing, or to cut thick sheets.
- **Circular saw** - Accurate and smooth edges are possible, with the material being fed through slowly.
- **Laser cutting** - Allows complex shapes to be cut accurately to produce a finish product, with little or no need for any final polishing.

### BENDING & ANNEALING

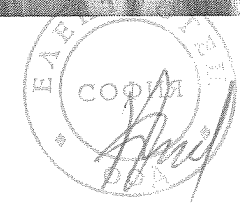
Straight line bends are possible using electrical strip heaters applied locally along the bend line, then allowing the sheet to cool naturally in its new shape. Before any further processes such as printing occur, annealing in an air circulation oven may be required to relieve internal stresses.

### DRILLING

Drill bits specially designed for acrylic are recommended but any commercially available drill for wood or metal can also be used.



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Plastic Sheets

### THERMOFORMING

Marcryl FS can be highly stretched at relatively low temperatures. The forming process can occur more slowly, as it is of a rubbery nature and the surface quality of the semi-finished material is largely retained.

Methods of thermoforming used on Marcryl FS include:

- **Vacuum forming**  
A versatile method of forming, generally used for simple shapes.
- **Drape forming**  
Can be used to produce designs of greater depth than vacuum forming.
- **Mould forming**  
Uses two moulds, producing more accurate shapes.
- **Free forming**  
No mark-off is created with this method.

When using thermoplastic moulding techniques the material should be heated to 140 - 170°C, some experimentation may be required to maintain the good optical quality of the surface.

**IT IS RECOMMENDED THAT THE PROTECTIVE FILM IS REMOVED BEFORE PRE-DRYING OR THERMOFORMING AS HEATING MAY RESULT IN IT ADHERING TO THE SHEET.**

- It may be possible to dispense with pre-drying if the protective film remains intact and the material has been stored correctly.
- Pre-drying is not normally required when line bending or if fast, effective heating is used.
- If required, pre-drying at 75-80°C for 24 hours is adequate.
- Thermoforming should be carried out as soon as possible after pre-drying, as re-absorption of moisture will occur.
- Material should be heated to 140-170°C - some experimentation may be required to maintain the good optical quality of the surface.
- Material should be heated for as short a time and to the lowest temperature practicable – the material begins to degrade at temperatures above 200°C, which can lead to flammable gases.
- Uniform heating over the whole sheet will help achieve good results.
- Stress can be generated by thermoforming at too low a temperature or poor mould design.
- Inherent stress can be relieved by heating the component from room temperature slowly (18°C per hour) to 70-85°C.
- This temperature should be maintained for 1 hour up to 3mm thickness, 2 hours up to 6mm thickness and 3 hours up to 12mm thickness.
- The component should then be cooled slowly (12°C per hour) to room temperature.

### BONDING

Marcryl FS sheets can be joined together using a variety of methods and tools. These include solvents, cements and adhesives. The sheets can also be welded using many of the standard methods - nuts, bolts and screws are also frequently used to join sheets.

### ROUTING, ENGRAVING & SANDING

Excellent results can be achieved on Marcryl FS with routing and engraving techniques, and sanding will easily and effectively remove any scratches that occur during the fabrication process.

### POLISHING

Various methods of polishing can be used on Marcryl FS. This can simply be abrasive or hand polishing to restore Marcryl FS' high gloss appearance after fabrication or sanding, or more intensive machine polishing. Flame polishing creates a bright, shiny edge finish and is particularly effective on silica green material.

### PRINTING & VINYL APPLICATION

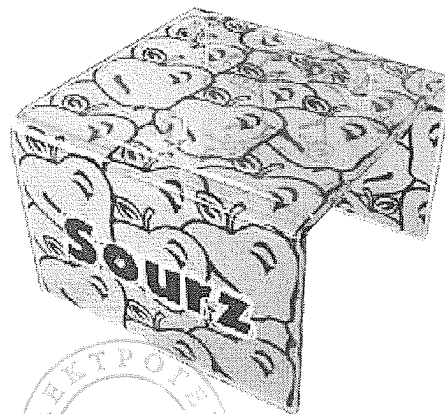
Screen printing is a common method of printing on flat surfaces of Marcryl FS sheets which gives clear, bright colours and which still allows the sheets to be thermoformed afterwards. As the ink will not soak into the sheets as it would with paper or boards, the printing can be damaged by scratching and abrasion and it is recommended that a light coat of clear lacquer is used to protect the surface print. Only inks and varnishes suitable for acrylic should be used. This also applies to the use of adhesive vinyls, and care should be taken to prepare the sheet surface correctly before proceeding.

### INSTALLATION

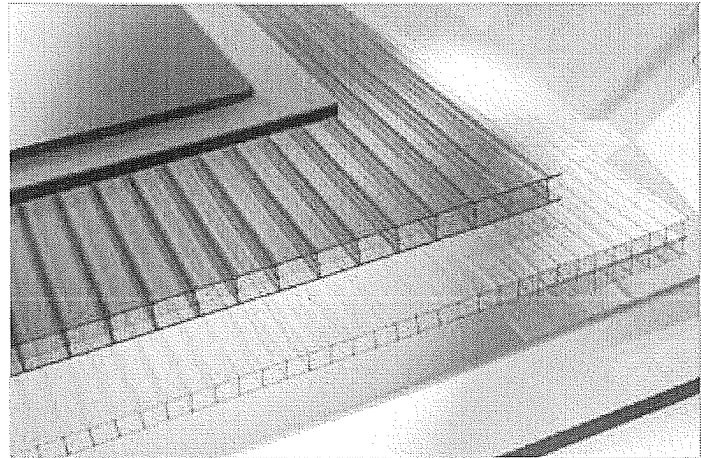
Marcryl FS sheets are often mounted into frames and care must be taken to avoid breakage or distortion. The sheets have a high coefficient of thermal expansion and therefore sufficient space must be left for expansion, both of the sheet itself and any fixing holes needed.

### STORAGE

The edges of Marcryl FS sheets can be quite sharp and gloves should be worn when handling. Sheets should be kept in a dry storage area and preferably covered, to avoid any absorption of moisture. Although they can be stored on their edges, it is recommended that they are kept flat on their delivery pallets.







Brett Martin's plastic sheets product range includes extensive options in foam PVC, polycarbonate, PVC, acrylic, aPET, PETg, SAN and styrene.

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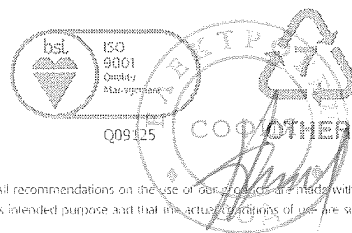


## Plastic Sheets

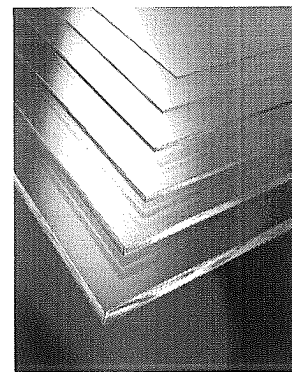
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MATERIAL PROPERTIES

TYPICAL PROPERTIES OF MARLON POLYCARBONATE RESINS						
	TEST METHOD			VALUE	UNIT	
	DIN	ASTM	ISO			
<b>PHYSICAL</b>						
Density	53479	D 792	R 1183	1.19	g/cm <sup>3</sup>	
Water absorption	53495: A		62	30	mg	
<b>OPTICAL</b>						
Transmittance (3mm thick material in the visible range)	5036 Part 3			92	%	
Haze		D 1003		1-3	%	
Refractive index (n <sub>D</sub> )			489	1.491		
<b>THERMAL</b>						
Heat distortion temperatures Method B (0.45 MPa)	53461	D 648	75	95	°C	
Heat distortion temperatures Method A (1.81 MPa)	53461	D 648	75	90	°C	
Specific heat				1.47	J/kg.K	
Thermal conductivity	52612	C 177		0.19	W/K.m	
Coefficient of thermal expansion	53752-A			0.07	mm/m°C	
Vicat softening point (B/50)	53460		306	102	°C	
<b>FLAMMABILITY RATINGS</b>						
Material thickness > 1.5mm	4102			B2		
<b>MECHANICAL</b>						
Tensile strength a) -40°C	53455	D 638	R 527	100	MPa	
Tensile strength b) 23°C	53455	D 638	R 527	72	MPa	
Tensile strength b) 70°C	53455	D 638	R 527	35	MPa	
Elongation at break	53455	D 638	R 527	4.5	%	
Flexural strength	53452	D 790	178	105	MPa	
Compressive yield stress	53454	D 695	R 604	103	MPa	
Izod Impact strength, standard			180	1.6	kJ/m <sup>2</sup>	
Izod Impact strength, impact modified			180	2.6	kJ/m <sup>2</sup>	
Charpy impact strength, standard			179/1eA	0.94	kJ/m <sup>2</sup>	
Charpy impact strength, impact modified			179/1eA	2.7	kJ/m <sup>2</sup>	
Charpy notched impact strength, 23°C			179	50	kJ/m <sup>2</sup>	
Ball indentation hardness (H961/30)			2039/2	175	MPa	
Taber abrasion resistance (100rev.;5.4N;CS-10F)			9352	20-30	% haze	
<b>ELECTRICAL</b>						
Dielectric strength, 1mm sample thickness	VDE 0303 pt 2			30	kV/mm	
Volume resistivity	VDE 0303 pt 3	IEC 93		>10 <sup>15</sup>	Ω/cm	
Dissipation constant at 50 Hz	VDE 0303 pt 4	IEC 250		0.06		
Dissipation constant at 0.1 kHz	VDE 0303 pt 4	IEC 250		0.03		
Surface resistivity	VDE 0303 pt 3	IEC 93		5.10 <sup>13</sup>	Ω	
Tracking CTI, 2 mm	VDE 0303 pt 1	IEC 112		KC>600		

Product Liability Clause: This information and our technical advice – whether verbal, in writing or by way of trials – are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to verify the information currently provided – especially that contained in our safety data and technical information sheets. Brett Martin has no control over the use to which others may put the material, it does not guarantee that the same results as those described herein will be obtained. Each user of the material should make his own tests to determine the material's suitability for his own particular use. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility.

НА ОСНОВАНИЕ ЧЛ. 2 ОТ 33ЛД



Brett Martin Ltd. pursues a policy of continuous product development and reserves the right to amend specifications without notice.

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REF COD  
26.08.2011



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Приложение № 10

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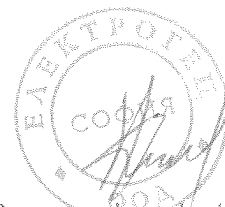




Product brochure

# ABB Fusegear EasyLine

Fuse switch disconnecter



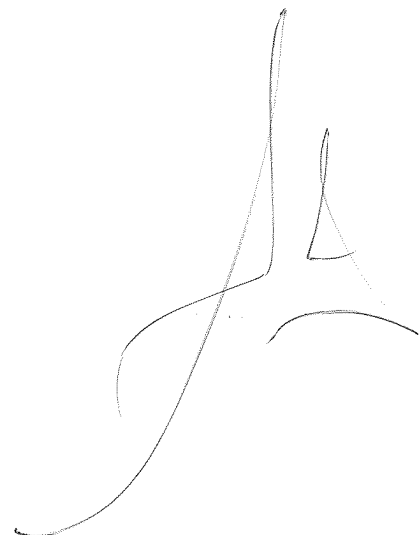
Power and productivity  
for a better world™

The ABB logo, consisting of the letters 'ABB' in a bold, sans-serif font.

# Content

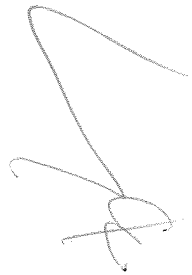


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# Fuse protection

## Easy and reliable



The fuse is a superior short circuit protection element regarding the maximum allowed cut-off current (peak let through current) and energy value.

This is more important the higher the voltage and prospective fault levels are. The SlimLine switch disconnector fuse fulfil the highest requirements for modern switch fuses with a total safety concept. The switch fuses are tested according to the EN 60947-3 standard with more stringent requirements for isolation, making, performance and safety. The fuse rails are tested according to IEC 60269-2-1.

The melting curves and current limiting diagrams for NH fuse links are given in the IEC 269-2 standard. The standardised fuse characteristics and high degree of current limitation ensure that there is a simple and effective co-ordination with fuse links and other devices.

Fuse links provide a simple procedure for selecting the right fuse type for your installation, without complicated calculations or calculation tools. Fuses prevent "blackouts". Only the fuse nearest a fault trips without upstream fuses (feeders or mins) being affected. Fuses thus provide selective coordination.

When more power is needed in an installation, more feeders can be added without changing the present structure or any new selectivity calculations. Fuse links will assure selectivity in the installation by 1,6:1 difference in the rated current.

### Economical installation

Lifetime costs of fuse systems are low. Fuse links which can withstand a high fault level and a fault current, are available at economical prices.

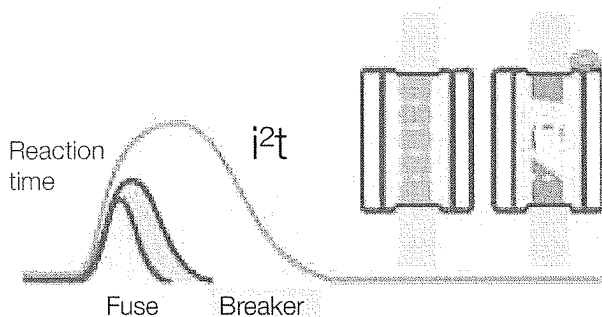
After fuse operation, only the fuse link has to be changed. Because the fuse links can be rapidly and easily replaced, plant down time and maintenance are substantially reduced with a fuse link system.

Because the fusing elements operate in a cylinder, they are not affected by their surroundings. Thus their protecting characteristics remain stable year after year. The dynamic stress on the network and its equipment is dependent of the let through energy ( $i^2t$ ) at a short circuit. The fuse link provides the best protection compared to other solutions, at high short circuit currents.

As the fuse link body is filled with quartz sand, there will be no emission of gases or arcs when a short circuit occurs. This again leads to less stress on the network and a higher degree of personal safety.

### Fuse protection - Easy and reliable

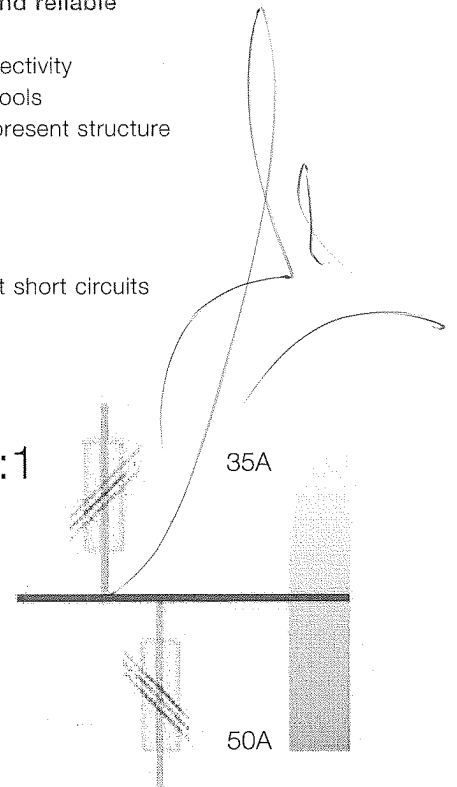
- Economical installation
- Easy and economical selectivity
- No need for calculation tools
- No need to change the present structure when power is needed
- No moving parts
- No extra operation time
- No arc space
- No emission of gasses at short circuits



- No moving parts
- No extra operation time

35	40
40	50
50	63
63	80
80	100
100	125
125	160
160	200
200	250
250	315
315	400
400	500
500	630
630	

1,6:1



- No need for calculation tools
- Easy and economical selectivity





# Technical Data

## EasyLine - Fuse Switch Disconnecter



### 3 - pole

Type		XLP000			XLP00			XLP1		XLP2		XLP3	
For NH fuse links acc. to IEC60269-2-1		000 max width = 21mm			00			1		2		3	
Rated operational voltage $U_e$	(V)	400	500	690	400	500	690	500	690	500	690	500	690
Rated operational current $I_n$	(A)	80	100	50	125	160	125	250	200	400	315	630	500
Thermal current with fuse link $I_{th}$	(A)	100			160			250		400		630	
Rated insulation voltage $U_i$	(V)	690			1000			1000		1000		1000	
Rated impulse withstand voltage $U_{imp}$	(kV)	6			8			8		8		8	
Fuse protected short circuit making	(kArms)	50			50			50		50		50	
Rated making and breaking capacity		AC23B	AC22B	AC21B	AC23B	AC22B	AC21B	AC23B	AC22B	AC23B	AC22B	AC23B	AC22B
Rated frequency	(Hz)	50 - 60			50 - 60			50 - 60		50 - 60		50 - 60	
Power loss at $I_n$ without fuse link/per phase	(W)	1,4W			3,5W			7,5W		13W		24W	
Electrical durability		300			200			200		200		200	
Mechanical durability		1700			1400			1400		800		800	
Degree of protection from the front acc. to IEC60529 *)	Open	IP20			IP20			IP20		IP20		IP20	
	Closed	IP30			IP30			IP30		IP30		IP30	

### 4 - pole

Type		SLP00		SLP-K1		SLP-K2		SLP-K3	
For NH fuse links acc. to IEC60269-2-1		00		1		2		3	
Rated operational voltage $U_e$	(V)	400		400		400		400	
Rated operational current $I_n$	(A)	160		250		400		630	
Rated insulation voltage $U_i$	(V)	1000		1000		1000		1000	
Rated impulse withstand voltage $U_{imp}$	(kV)	8		8		8		8	
Fuse protected short circuit making	(kArms)	50		50		50		50	
Rated making and breaking capacity		AC22B		AC22B		AC22B		AC22B	
Rated frequency	(Hz)	50 - 60		50 - 60		50 - 60		50 - 60	
Degree of protection from the front acc. to IEC60529 *)	Open	IP20		IP20		IP20		IP20	
	Closed	IP30		IP30		IP30		IP30	

The products are designed and tested in accordance with IEC / EN 60947-3



# General Product presentation



## Properties of the EasyLine - XLP:

- Compact XLP000
- Typetested according to EN IEC 60947-3
- Fullfills BGV A2
- Easy to recycle / EN ISO 14001 standards
- Quick-make operation device
- Integrated IP 20 cable termination
- IP 30 degree of protection from the front
- Replacement compatible to similar types in the market
- Voltage measuring from the front
- V-0 plastic materials

## Advantages of the EasyLine - XLP:

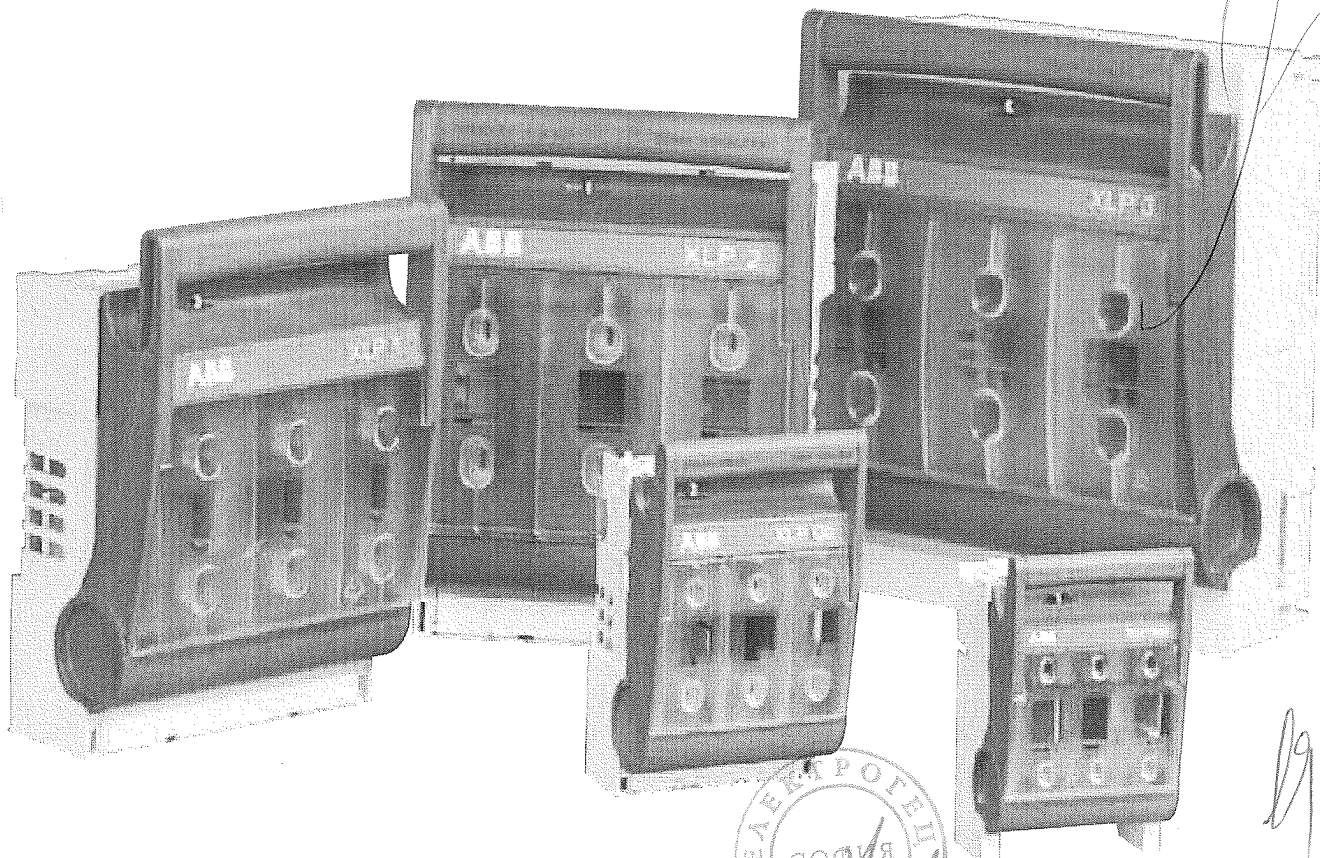
- Easy to install
- Easy to snap on DIN rails
- Easy to operate
- Easy to understand
- Modern cable terminals
- Modern and functional design
- Additional arc protection shroud in front cover - increased personal safety
- Wide range of modern cable clamps and accessories
- Electronic fuse monitoring (EFM)
- Wide range of busbar adapters to 40mm and 60mm

### 3 - pole:

- XLP000 100 Amp
- XLP00 160 Amp
- XLP1 250 Amp
- XLP2 400 Amp
- XLP3 630 Amp

### 4 - pole:

- SLP00 160 Amp
- SLP1 250 Amp
- SLP2 400 Amp
- SLP3 630 Amp

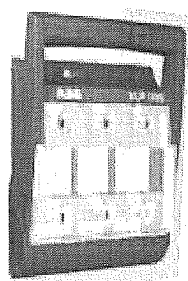


# Apparatus overview XLP000 (3-pole)

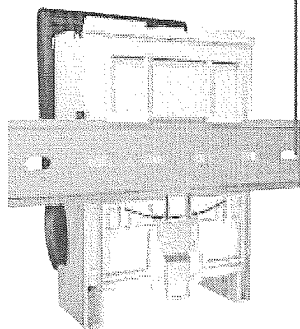
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100 A

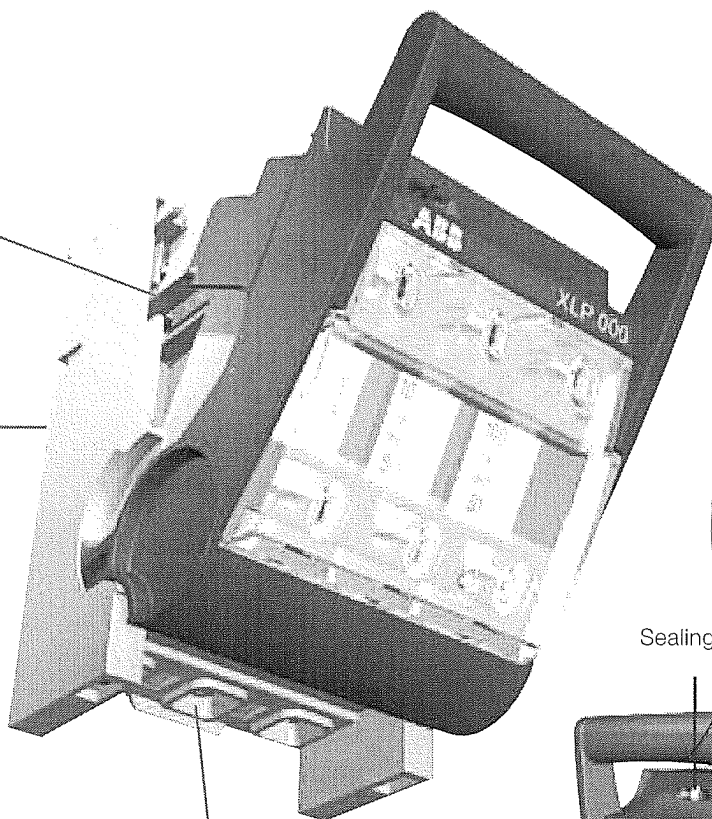
- Compact design for NH 00 compact fuses up to 100 A (width = 21mm)
- Modern integrated cable clamps for 1,5 - 35 mm<sup>2</sup> cables
- Integrated cable shrouds IP 20
- Snap on for DIN rail mounting (accessory)
- Front frames for 1 - 3 apparatus (accessory)
- Micro auxiliary switches, 1 or 2 pcs (accessory)
- Sealing facility



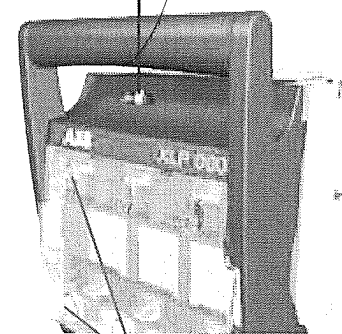
Front frames for 1-3 apparatuses



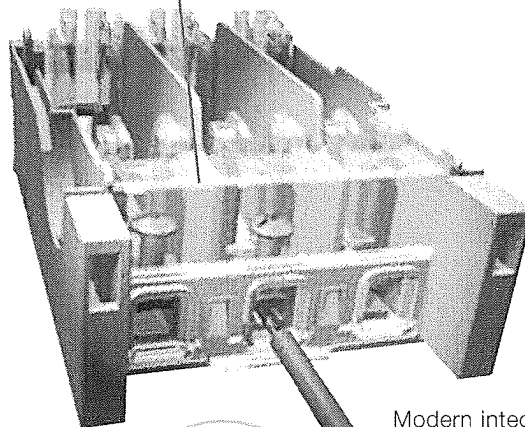
DIN rail mounting



Sealing facility



Voltage measurement



Modern integrated cable clamps for 1,5 - 35 mm<sup>2</sup> cables

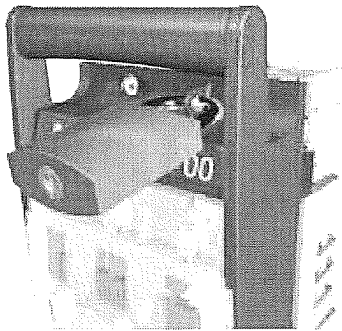


# Apparatus overview XLP00 (3-pole)

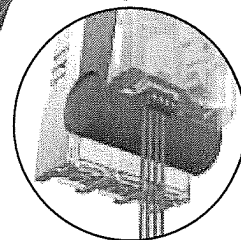
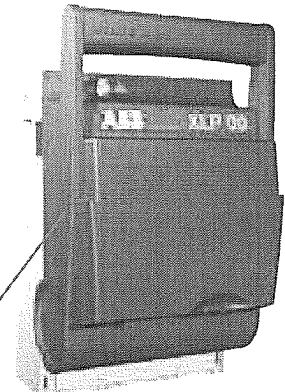
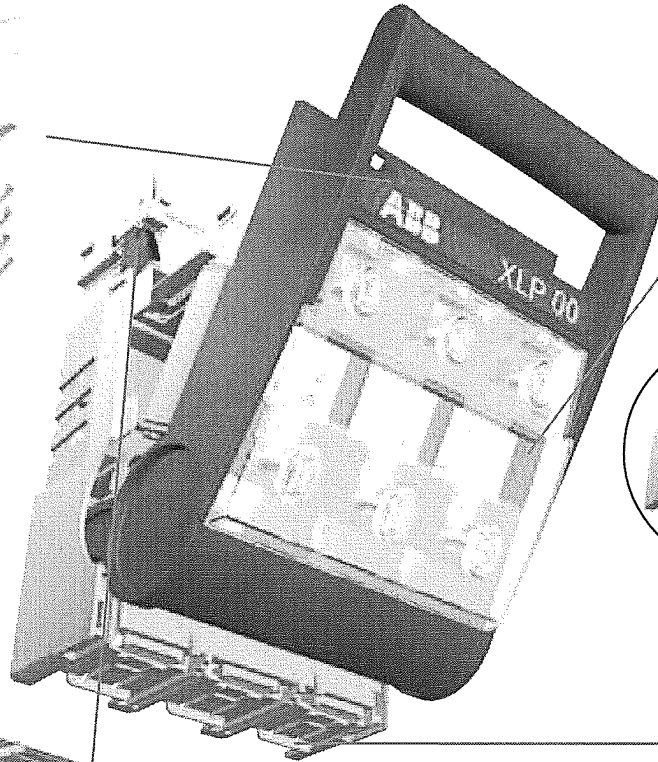
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## 160 A

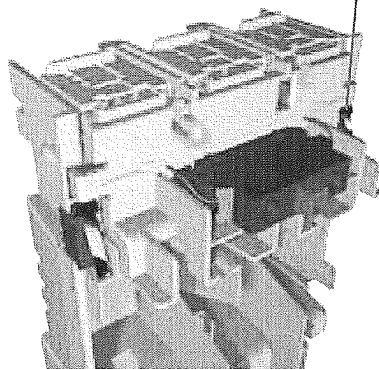
- Electronic fuse monitoring (EFM)
- Micro auxiliary switches, 1 or 2 pcs
- Auxilliary switches, 1 NO or 1 NC acc. to IEC 60947-5-1
- Cable shrouds
- Wide range of cable terminal clamps (See page 14)
- Front frames for 1-3 apparatus
- Kit for double DIN rail mounting
- Adapter for 40 and 60 mm busbar distance.
- Padlocking facility
- Sealing facility



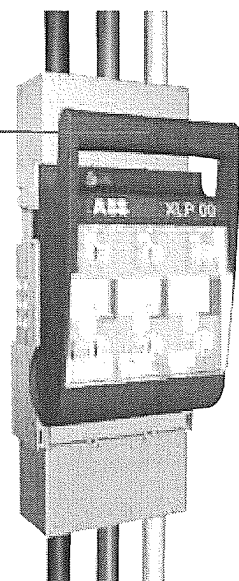
Padlocking and Sealing facilities



Electronic fuse monitoring showing detail for remote signaling



Micro auxiliary switch on the sides.  
Auxiliary switch NO or NC in the front



Cable shrouds



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**EU Declaration of Conformity**  
**EU Konformitätserklärung**  
**Déclaration UE de conformité**  
**Dichiarazione di conformità UE**

**This declaration of conformity is issued under the sole responsibility of the manufacturer**

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller /  
 La présente déclaration de conformité est établie sous la seule responsabilité du fabricant /  
 La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante

**ABB Oy, Protection and Connection**  
**P.O.Box 622, Muottitie 2A**  
**FI-65101 Vaasa**  
**Finland**

**Object of declaration**

Gegenstand der Erklärung / Objet de la déclaration / Oggetto della dichiarazione

**Fuse-Switch-Disconnecter / Sicherungslastschaltleiste / Interrupteur-sectionneur à fusibles /  
 Sezionatori con fusibili**

**Type / Typ / Type / Tipo XLP000, XLP00, XLP1, XLP2, XLP3**

**The object of this declaration is in conformity with the relevant Community harmonisation legislation**

Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen / Harmonisierungsrechtsvorschriften der Gemeinschaft /  
 L'objet de la déclaration décrit ci-dessus est conforme à la législation communautaire d'harmonisation applicable /  
 L'oggetto della dichiarazione di cui sopra è conforme alla pertinente normativa comunitaria di armonizzazione

**Low Voltage Directive / Niederspannungsrichtlinie / Directive basse tension / Direttiva Bassa Tensione**  
**No. 2014/35/EU**

**EMC Directive / EMV-Richtlinie / Directive CEM / Direttiva EMC**  
**No. 2014/30/EU**

**and are in conformity with the following harmonized standards or other normative documents**

nachgewiesen durch die Einhaltung der nachstehend aufgeführten Normen oder anderen normativen Dokumenten /  
 et justifié par le respect des Normes mentionnées ci-dessous ou autres documents normatifs /  
 e sono stati applicati le norme o altri documenti normativi indicati di seguito

**IEC60947-1:2007/A1:2010/A2:2014      EN60947-1:2007/A1:2011/A2:2014**  
**IEC60947-3:2008/A1:2012              EN60947-3:2009/A1:2012**

**Year of CE-marking: 2003**

Jahr der CE-Kennzeichnung / Année d'apposition du marquage CE / Anno in cui è stata affissa la marcatura

**Signed for and on behalf of**

Unterzeichnet für und im Namen von / Signé par et au nom de / Firmato in vece e per conto di

**ABB Oy, Protection and Connection, Vaasa, 12 April** **НА ОСНОВАНИЕ ЧЛ. 2 ОТ ЗЗЛД**

**НА ОСНОВАНИЕ ЧЛ. 2 ОТ ЗЗЛД**

**НА ОСНОВАНИЕ ЧЛ. 2 ОТ ЗЗЛД**

**Antonio Di Vaira**  
**R&D Manager**

**Юрки Коивусаго**  
**Quality Manager**

**ВЯРНО С  
 ОРИГИНАЛА**

Document No.: 1SEP500050P0001 Rev: C (2016-04)

**ABB Oy**



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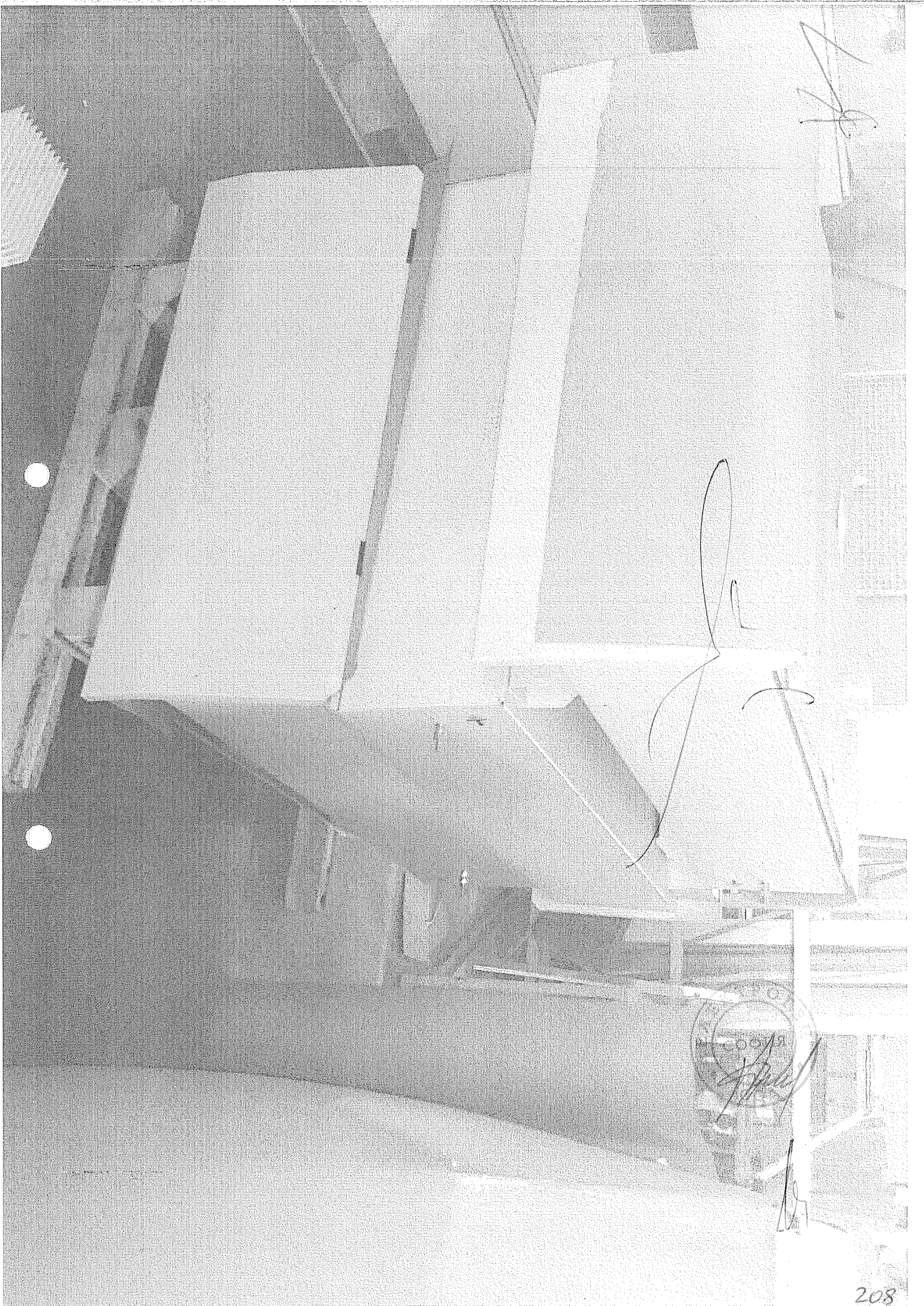
# Приложение № 11

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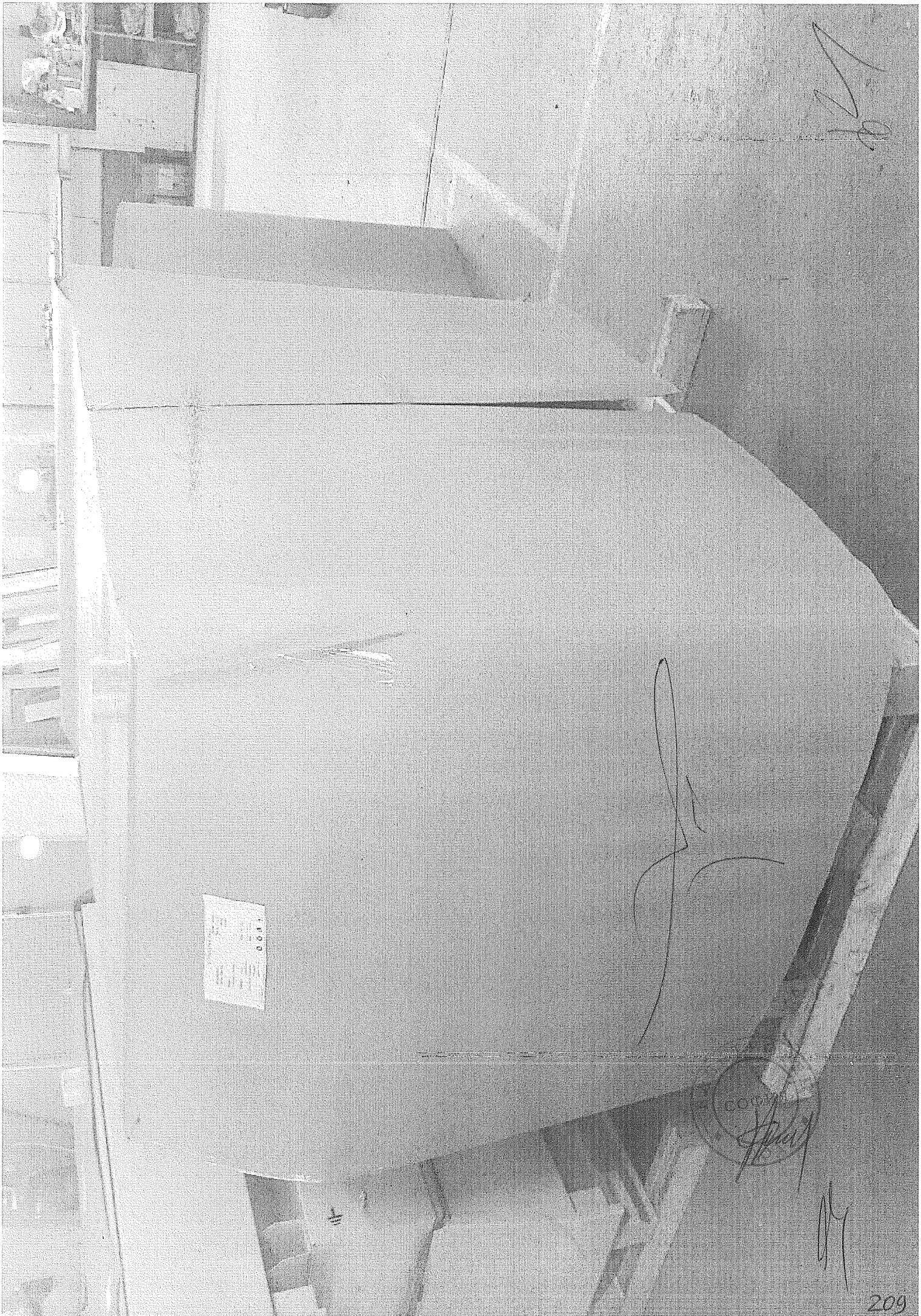


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**ОПАКОВЪЧЕН ЛИСТ**

САП. № 10001502  
Пор. № 17-0217-83  
17-0217-84  
17-0217-85

Тип на таблото:  
СМ11М + IT-36p. 9.5м

КОНТРОЛ  
ИЗГ. Разделение България

Опаковал: И Крумов  
(фамилия и подпис)

Контрольор по качество:  
И Костадинов  
(фамилия и подпис)

Дата: 23.10.2017г.

Дата: 23.10.2017г.



CD-07.01.20.85



## СРОКОВЕ ЗА ДОСТАВКА

№	Наименование	Мярка	Количество със срок на доставка до 7 кал. дни	Количество със срок на доставка до 30 кал. дни
1	2	3	4	5
1	Метално електромерно табло, за стълб с височина - 9,5 m, за директно измерване, 4M/2M+2T;	бр.	10	35
2	Метално електромерно табло, за стълб с височина - 9,5 m, за директно измерване, 9M/8M+1T;	бр.	5	15
3	Метално електромерно табло, за стълб с височина - 9,5 m, за директно измерване, 12M/11M+1T.	бр.	2	5
4	Метално електромерно табло, за стълб с височина - 13 m, за директно измерване, 4M/2M+2T;	бр.	10	35
5	Метално електромерно табло, за стълб с височина - 13 m, за директно измерване, 9M/8M+1T;	бр.	5	15
6	Метално електромерно табло, за стълб с височина - 13 m, за директно измерване, 12M/11M+1T.	бр.	2	5

### Забележки:

- 1/ Срокът на доставките започва да тече от датата на изпращане на поръчката.
- 2/ Количествата в колона 4, със срок на доставка до 7 /седем/ календарни дни, се доставят след SAP поръчка до посочените в обявлението складове на Възложителя за покриване на спешни нужди на Възложителя.
- Възложителят може да поръчва посоченото спешно количество веднъж месечно.
- 3/ В случай, че крайният срок на доставката съвпада с празничен или неработен ден, то доставката се извършва не по-късно от първия работен ден след изтичането на срока.
- 4/ При поръчки на Възложителя на количества в рамките на потвърдените от Изпълнителя и недоставени в посочените срокове, ще бъдат налагани неустойки, съгласно условията на договора.
- 5/ Възложителят може да поръчва количества по-малки от посочените в колони 4 и 5.
- 6/ Възложителят може да поръчва количества по-високи от посочените в колони 4 и 5, като това обстоятелство ще бъде посочено текстово в съответната поръчка изпратена към Изпълнителя. С потвърждението на поръчката, Изпълнителят вписва в същата очаквана дата за доставка на количествата надвишаващи посочените в колони 4 и 5.
- 7/ Количествата за доставка в колони 4 и 5 са отделни и независими едно от друго.
- 8/ Количествата за доставка в колона 5 не включват в себе си количествата за доставка в колона 4.
- 9/ Възложителят има право да направи едновременно поръчки за доставка на количества от колони 4 и 5.

НА ОСНОВАНИЕ ЧЛ. 2 ОТ ЗЗЛД

Дата 10.11.2017 г.

ПОДПИС И ПЕЧАТ:

ГЕОРГИ ГЕ  
(име и

Управител  
(длъжност на представляващия участника)