

## Model Guide

### Application: ALUMINIUM & PVC Profiles

Important notes about **ASCONA** technology for models **Promex Basic Fast, Advanced Fast, Expert Back Light & Expert Front Light**

#### A) Type of illumination

##### A.1) Back-light

Back light models are primarily suitable for Plastic & PVC profiles, but they can serve aluminum profiles as well.

The sample must be deburred on both sides since the illumination is located behind the sample, and therefore, the camera measures the “shadow” of the profile.

For models Basic Fast and Advance Fast, a 90° cut of the profile is mandatory; otherwise, an additional error will occur during measurement.

##### A.2) Front-light

Front light models are only suitable for Aluminium profiles.

The sample must be deburred on one side, as the camera and illumination are in front of the sample. Camera measures the actual part.

#### B) Flip Function

The Flip Function allows the measurement of samples larger than the actual viewing range of the camera. This is accomplished by measuring the sample in 2 phases and then “stitching” the 2 images together.

#### C) Accuracy - "The golden rule of metrology"

According to this rule, maximum permissible error (MPE) of the measuring equipment must not exceed 10% of the tolerance to be inspected.

For example, if the tightest tolerance is  $\pm 0.2\text{mm}$ , then the accuracy of the measuring equipment should be 10 times better i.e  $\pm 0,02\text{mm}$  or  $\pm 20\mu\text{m}$

Promex Basic























Promex Advanced





















Promex Expert Back & Front Light



Model	Measuring field size	Measuring accuracy	Type of illumination		Recommended location to be used		Recommended field of application		Equipped with Flip Function?	Need for 90° cut?	No of sides to be deburred	Sample length	
			Front light	Back Light	Lab	By the Press	Aluminum	Plastic & PVC					
<b>BASIC FAST 190/135</b>	190 x 135 mm	± 20 µm		●	●			☹️	😊	No	Yes	2	Max. 50mm
<b>BASIC FAST 190/135 F</b>	190 x 210 mm or 135 x 300 mm	± 20 µm ≤ 190 x 135 mm ± 40 µm > 190 x 135 mm		●	●			☹️	😊	Yes	Yes	2	Max. 50mm
<b>ADVANCED FAST 190/135</b>	190 x 135 mm	± 20 µm		●		●		☹️	😊	No	Yes	2	Max. 50mm
<b>ADVANCED FAST 190/135 F</b>	190 x 210 mm or 135 x 300 mm	± 20 µm ≤ 190 x 135 mm ± 40 µm > 190 x 135 mm		●		●		☹️	😊	Yes	Yes	2	Max. 50mm
<b>EXPERT 115/95 K RLC</b>	115 x 95 mm	± 20 µm		●		●		☹️	😊	No	No	2	65-80mm
<b>EXPERT 115/95 KRLC F</b>	170 x 95 mm or 115 x 130 mm	± 20 µm ≤ 115 x 95 mm ± 40 µm > 115 x 95 mm		●		●		☹️	😊	Yes	No	2	65-80mm
<b>EXPERT 175/145 KRLC</b>	175 x 145 mm	± 25 µm		●		●		☹️	😊	No	No	2	65-80mm
<b>EXPERT 175/145 KRLC F</b>	290 x 145 mm or 175 x 230 mm	± 25 µm ≤ 175 x 145 mm ± 50 µm > 175 x 145 mm		●		●		☹️	😊	Yes	No	2	65-80mm
<b>EXPERT 180/120</b>	180 x 120 mm	± 10 µm	●			●		😊	☹️	No	No	1	100-400mm
<b>EXPERT 180/180</b>	180 x 180 mm	± 10 µm ≤ 180 x 120 mm ± 20 µm > 180 x 120 mm	●			●		😊	☹️	No	No	1	100-400mm

Model	Measuring field size	Measuring accuracy	Type of illumination		Recommended location to be used		Recommended field of application		Equipped with Flip Function?	Need for 90° cut?	No of sides to be deburred	Sample length
			Front light	Back Light	Lab	By the Press	Aluminum	Plastic & PVC				
<b>EXPERT 220/180 LC</b>	220 x 180 mm	± 20 µm	●			●			No	No	1	100-400mm
<b>EXPERT 220/180 K RLC</b>	220 x 180 mm	± 30 µm		●		●			No	No	2	65-80mm
<b>EXPERT 220/180 K RLC F</b>	360 x 180 mm or 220 x 280 mm	± 30 µm ≤ 220 x 180 mm ± 60 µm > 220 x 180 mm		●		●			Yes	No	2	65-80mm
<b>EXPERT 220/300 LC</b>	220 x 300 mm	± 20 µm ≤ 220 x 180 mm ± 40 µm > 220 x 180 mm	●			●			No	No	1	100-400mm
<b>EXPERT 220/500 LC</b>	220 x 500 mm	± 20 µm ≤ 220 x 180 mm ± 40 µm > 220 x 180 mm	●			●			No	No	1	100-400mm
<b>EXPERT 220/700 LC</b>	220 x 700 mm	± 20 µm ≤ 220 x 180 mm ± 40 µm > 220 x 180 mm	●			●			No	No	1	100-400mm
<b>EXPERT 260/170</b>	260 x 170 mm	± 10 µm	●			●			No	No	1	100-400mm
<b>EXPERT 260/300</b>	260 x 300 mm	± 10 µm ≤ 260 x 170 mm ± 20 µm > 260 x 170 mm	●			●			No	No	1	100-400mm
<b>EXPERT 260/500</b>	260 x 500 mm	± 10 µm ≤ 260 x 170 mm ± 20 µm > 260 x 170 mm	●			●			No	No	1	100-400mm
<b>EXPERT 260/700</b>	260 x 700 mm	± 10 µm ≤ 260 x 170 mm ± 20 µm > 260 x 170 mm	●			●			No	No	1	100-400mm

MODEL	Measuring field size	Measuring accuracy	Type of illumination		Recommended location to be used		Recommended field of application		Equipped with Flip Function?	Need for 90° cut?	No of sides to be deburred	Sample length
			Front light	Back Light	Lab	By the Press	Aluminum	Plastic & PVC				
<b>EXPERT 300/300 LC</b>	300 x 300 mm	± 20 µm ≤ 220 x 180 mm ± 40 µm > 220 x 180 mm	●			●			No	No	1	100-400mm
<b>EXPERT 300/500 LC</b>	300 x 500 mm	± 20 µm ≤ 220 x 180 mm ± 40 µm > 220 x 180 mm	●			●			No	No	1	100-400mm
<b>EXPERT 300/700 LC</b>	300 x 700 mm	± 20 µm ≤ 220 x 180 mm ± 40 µm > 220 x 180 mm	●			●			No	No	1	100-400mm
<b>EXPERT 340/500</b>	340 x 500 mm	± 10 µm ≤ 260 x 170 mm ± 20 µm > 260 x 170 mm	●			●			No	No	1	100-400mm
<b>EXPERT 340/700</b>	340 x 700 mm	± 10 µm ≤ 260 x 170 mm ± 20 µm > 260 x 170 mm	●			●			No	No	1	100-400mm
<b>EXPERT 380/500 LC</b>	380 x 500 mm	± 20 µm ≤ 220 x 180 mm ± 40 µm > 220 x 180 mm	●			●			No	No	1	100-400mm
<b>EXPERT 380/700 LC</b>	380 x 700 mm	± 20 µm ≤ 220 x 180 mm ± 40 µm > 220 x 180 mm	●			●			No	No	1	100-400mm
<b>EXPERT 420/500</b>	420 x 500 mm	± 10 µm ≤ 260 x 170 mm ± 20 µm > 260 x 170 mm	●			●			No	No	1	100-400mm
<b>EXPERT 420/700</b>	420 x 700 mm	± 10 µm ≤ 260 x 170 mm ± 20 µm > 260 x 170 mm	●			●			No	No	1	100-400mm