



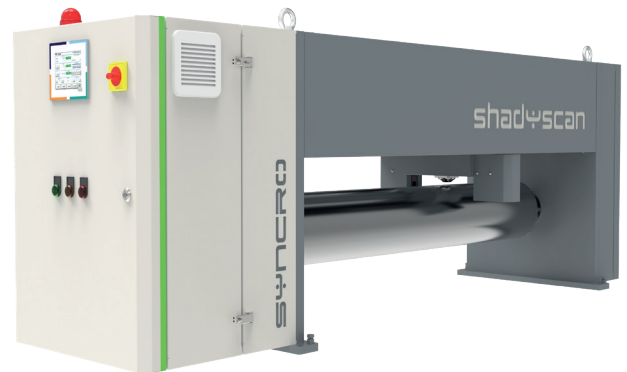
shadyscan

Laser Shadow & Eddy-Current Scanner

SHADYSCAN a non-contact profile thickness measuring system that combines the signal of a through-beam sensor with the signal of an inductive eddy current sensor. SHADYSCAN has many applications. In particular it is suitable to measure the thickness of expanded sheets that cannot be measured with absorption systems such as X-rays and Beta rays.

PRINCIPLE OF OPERATION

The light beam is aimed tangentially to the surface of the film and redirected over the measurement roller. The through-beam is collected by a CCD camera which monitors the increase and decrease of the shadow generated by the film. This measurement depends on the relative movement between the roller and the sensing beam, as well as the variation of the film thickness. In order for the variation of the shadow to be proportional only to the variation of the film thickness, it is necessary to compensate for any mechanical displacement between the parts. This is achieved by means of an inductive eddy current sensor that constantly detects the distance between the camera and the roller along the thickness axis.



MAIN FEATURES

LIMITLESS PERFORMANCES

Calibration is not required as the measuring process is not affected by material composition, colour, or transparency.

HEAVY DUTY STRUCTURE

The structure is designed and built to ensure maximum structural stiffness essential for precise measurement under all operating conditions.

DIMENSIONS

The frame of the machine is compact and has an integrated electrical panel and control panel. Installation is quick and easy (plug and play).

MOTORISED ROLL

SHADYSCAN uses a motorised roller to eliminate the risk of material slipping. The motor is synchronized with the line speed to maintain surface speeds and eliminate drag friction.

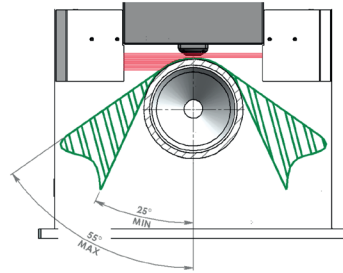
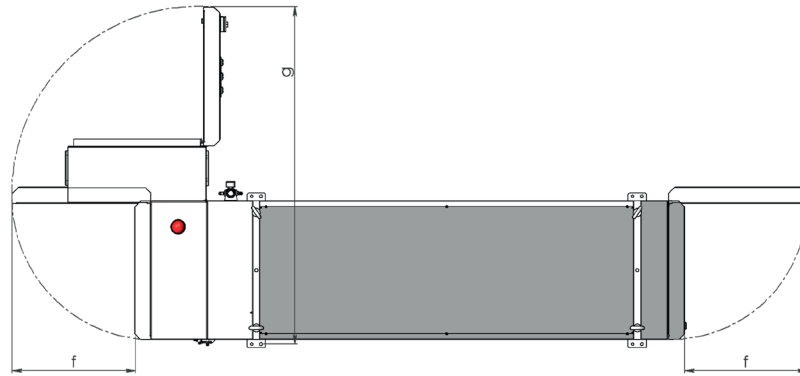
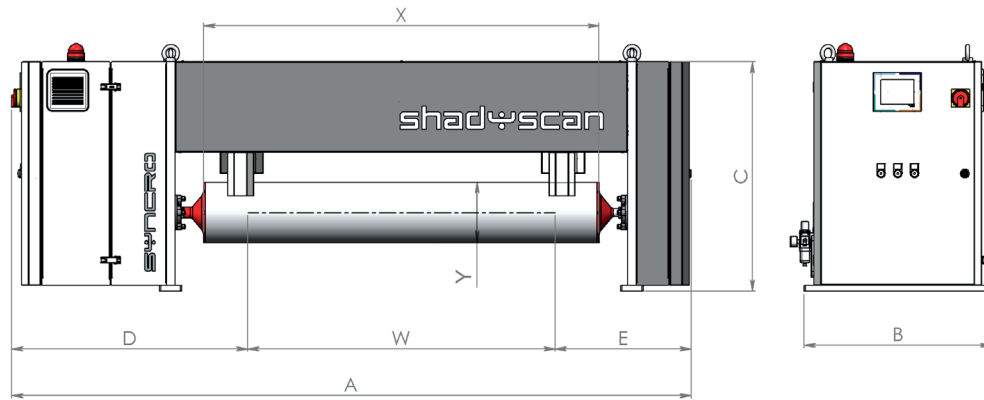
INDUSTRY 4.0 & IoT

SHADYSCAN is prepared with OPC-UA protocol for Industry 4.0.

EASY ACCESS FOR MAINTENANCE

SHADYSCAN has been designed to ensure easy access to all parts requiring maintenance. A pneumatic control allows the entire sensor to be moved away from the measuring roller.

TECHNICAL DATA



Model	W (mm)	A (m)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	X (mm)	Y (mm)	Linearity	Max Thickness	Resolution	Gap Sensor-Roll	Transversal speed	Power (kW)	Weight (kg)
900	900	2200	670	820	850	480	900	1200	Ø215	≤3 micron	3.5mm	0,5 micron	5,5mm	100 mm/sec	1.38	375
1100	1100	2400					1100	1400								400
1300	1300	2600					1300	1500								425
1500	1500	2800					1500	1800								450
1700	1700	3000					1700	2000								475
1900	1900	3200					1900	2200								500
2100	2100	3400					2100	2400								525
2300	2300	3600					2300	2600								550
2500	2500	3800					2500	2800								575
2700	2700	4000					2700	3000								600