



Beta-Ray Gauging System

The **BYTASCAN** uses the principle of Beta ray transmission through the material to measure its density, weight and thickness usually indicated in g/m^2 or μm .

OPERATING PRINCIPLE

The beta-ray source is fixed inside the transmitter housing, while another housing contains the receiver which is positioned above the transmitter at a known distance (gap). When a material is positioned between the transmitter and receiver, part of the energy emitted by the source is absorbed by the material. The missing part, captured by the receiver, is proportional to the density of the measured film. Once the width and density are known, the system can calculate both weight and thickness.



MAIN FEATURES

RADIOACTIVITY REGULATIONS

BYtascan is equipped with a Kripton85 active source enclosed in a lead container and fitted with all safety measures; it is now undergoing final verification to be classified as a 'recognized source' with residual radiation emitted below the safety level, according to the international standards such as EURATOM.

WIDESPREAD APPLICATIONS

BYtascan can be used for various production processes such as cast/sheet flat die extrusion lines, coating lines, lamination lines, PVC and/or rubber calendering lines.

PERFORMANCE LIMITS

The solid frame provides excellent resistance to deflections and guarantees perfect measurement stability.

SCANNER STRUCTURE

The solid structure offers excellent resistance to deformations and guarantees perfect measurement stability.

EASY ACCESS FOR MAINTENANCE

The BYtascan is designed to provide quick and easy access for maintenance operations.

EASY INSTALLATION

Installation takes less than 2 hours.

STABLE AND PRECISE

The BYtascan measurement is very stable and accurate; repeatability down to 0.1 microns with a maximum drift of 0.15 microns in 12 hours without characterization. The emitter and receiver housings are temperature-controlled, and transfer compensation is balanced via an inductive sensor.

AUTOMATIC PROFILE CONTROL

Available as an option, BYtascan can be interfaced to SYntrolgauge to automatically control the thermal bolts of the flat die, adjust the film or sheet thickness, or change the heaters in automatic air rings heaters in blown film extrusion lines.

INDUSTRY 4.0 & IoT

All SYncro machines are ready to be integrated with third party supervisory controls and ERP systems using the latest generation of OPC-UA protocols as standard.



TECHNICAL DATA



Model	W max Film width (mm)	X h. Film (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	i (mm)	L (mm)	Max Thickness (µm)	Power (kW)	Weight (kg)
1000	1000	663,5	2460	400	1200	1790	855	2677		360	1733	504	1500	0,8	475
1200	1200		2580			1910	915	2797	945		1853				495
1400	1400		2820			2150	1035	3037			2093				535
1600	1600		3060			2390	1155	3277,5			2333				570
1800	1800		3180			2510	1215	3397			2453				595
2000	2000		3420			2750	1335	3637,5			2693				630
2200	2200		3680			2990	1455	3897			2933	514			680
2400	2400		3800			3110	1515	4017			3053				700
2600	2600		4040			3350	1635	4257			3293				740
2800	2800		4280			3590	1755	4497			3533				780
3000	3000		4400			3710	1815	4617			3653				800
3200	3200		4640			3950	1935	4857,5			3893				855
3600	3600		4880			4190	2085	5097			4133				880
4000	4000		5480			4790	2355	5697			4733				980
4400	4400		5840			5150	2535	6057			5093				1040
4800	4800		6200	1		5510	2715	6417,5			5453				1095
1 Commur	nication interface;	2 Power s	upply; 3	Compress	ed air inle	et.									

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