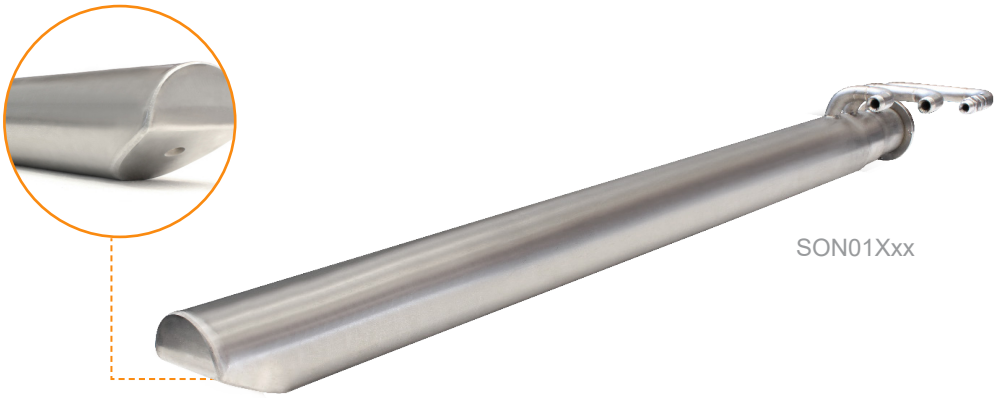
HIGH TEMPERATURE CAMERA

sondatec high temperature camera housing

Water and air cooled high temperature vision systems



IR Housing

AIR + H_2O

AISI 316L

Hastelloy C276

IP67

SONDATEC Series

Operational description

SONDATEC housing is designed for video surveillance in industrial high temperature applications such as glass production, iron & steel, cement industry and power plants. Telea Tecnovision's high temperature camera provides clear and crisp image of the combustion process in the boilers, furnaces, kilns, incinerators and any combustion chambers. With the real-time video stream provided, operators and engineers are able to monitor the status of flame and combustion and also the progress of the products. Using cameras to supervise the process will makes it easy to identify the source of problem when a faulty event occurs, this can consequently save time and money. But the camera can serve other satisfactory roles too, such as emission reduction (by the possibility of supervising the quality of combustion), and increase the safety of the process and security for the operators.

SONDATEC housing is available in different lengths, from 300 mm to 4000 mm based on the application with available diameters equal to 101.6 mm or 89 mm.

SONDATEC housing is "pressurized": an integrated compressed air circuit supplies clean air (or any appropriate gas) for cooling and particulate removal from the lens. So the lens does not require any expensive protection glass. A constant supply of clean air is essential for proper camera operation and protection: GFATEC series represent an effective air fliter unit able to remove contaminants and to provide high quality clean air in industrial environments.

Knowing very well the industry the high temperature cameras are to be used, Telea Tecnovision has designed and successfully tested a new version of housing with inclined vision. In this case the camera does not have an axial vision, but the centerline of camera's angle of view is inclined.

The housing is air and/or water cooled based on the operating temperature. To make the housing susceptible of working in temperatures up to 2200°C (4000°F) a triple-wall laminar water cooling circuit is applied; while when camera must work up to 700°C (1300°F) an air cooling circuit can be sufficient.

SONDATEC housing is designed to be mounted directly on the wall of the furnace but to make the life time of the camera longer and provide a protection when a problem with water or air resource occurs, the SONDATEC will be supplied with OUTEC or INTEC.

OUTEC series is consisted of a plate which will be mounted on the exterior side of the furnace's wall, which is endowed with a protective shutter; the shutter's opening/closing is managed by a pneumatic cylinder. The shutter protects the camera form breaking by closing the porthole.

INTEC series is used when penetration inside the wall of furnace is required. In this case SONDATEC housing will be provided with a retraction device. Using INTEC in case of a failure, thanks to the pneumatic cylinder, the SONDATEC will automatically be pulled out from the furnace, and the furnace porthole closes, to protect the camera.

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HIGH TEMPERATURE CAMERA

Technical specification

Dimensions

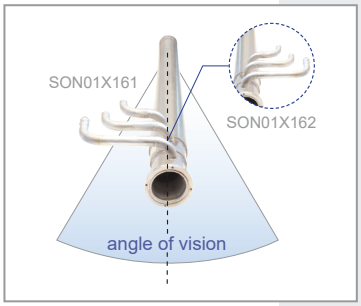
Diameter:	89 mm
Length:	1000 mm (other on request)
Angle of sonda inclination:	120°
Camera:	CAMTEC series
Electric connections:	multipolar Connector MIL_STD0
Material:	AISI316L** or HASTELLOY C276 **On request available version in AISI310S

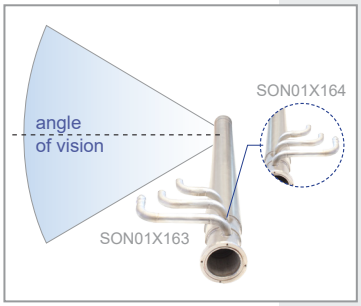
Water cooling

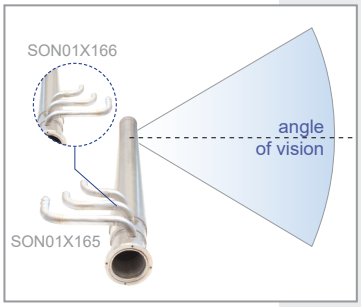
Connection:	1/2" M BSPP
Temperatures IN:	35°C max
Temperatures OUT:	ΔT = 15°C max (3*)
Flow:	from 4 l/min to 16 l/min (1*)
Pressure entry:	from 2 bar to 6 bar (2*), maximum 8 bar
Quality:	pH 6-8, suspensions max 10 mg/l

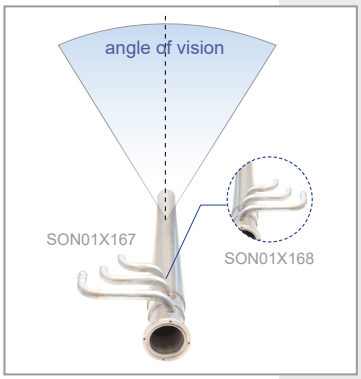
Air for cooling and cleaning lens

Connection:	3/8" M BSPP (other on request)
Temperatures IN:	40°C max
Consumption:	around 3 Nm³/h (3*)
Pressure entry:	from 1 bar to 3 bar, maximum 4 bar (3*)
Quality:	Instrumental Air ISO 8573-1 Classe 1.7.2









Available models

Product code	Field of vision	Air and water connectors placed on the: (rear view, as the drawings below)	
		left	right
SON01X161	bottom	x	
SON01X162	bottom		x
SON01X163	left	x	
SON01X164	left		x
SON01X165	right	x	
SON01X166	right		x
SON01X167	up	x	
SON01X168	up		x
SON01X069	up	--	--

* product code ending with "H" = made of Hastelloy C276

Correlated products

CAM12X1_	CAMTEC high temperature television camera
INT02X_	INTEC retraction device

Notes

(1*) Data are indicative and depend on process' temperature and application. 16 l/min is referred to temperature >2000°C (3650°F)
(2*) Data are indicative and depend on process' temperature and application. 6 bar is referred to application with positive inclination of the housing relative to horizontal plane.
(3*) Data are indicative and depend of process' temperature and application. For more information, please contact our engineers.

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