

# SA-BC820v2H3-TC840R1 D series

## SS316L dual head PTZ camera station

- ✓ Two independent cameras for day and night vision
  - 640x512 Intelligent radiometric thermal camera
  - 3 Megapixel 30x zoom IP camera
- ✓ Variable pan and tilt speed
- ✓ Corrosion protected 316L stainless steel
- ✓ Complete range of thermal lenses available
- ✓ ONVIF profile S compliant



### Description

The stainless steel dual head camera station is a combination of an HD visible light camera and an intelligent night vision thermal camera, providing remote surveillance 24/7. The housing is constructed from electro-polished 316L stainless steel for maximum corrosion protection and is fitted as standard with wiper, sunshield and thermostatically controlled heater element.

### Integrated thermal camera

The Siquira TC840R1 is fitted with a highly sensitive uncooled microbolometer. It detects temperature differences as small as 50 mK. It can spot heat sources invisible to the naked eye, such as burning butane, overheated transformers, slipping brakes, or smouldering coal piles. The thermal image can be shown in ten different colour palettes. The thermal imager is “plug-and-play” and configuration is made easy by its self-explanatory web interface.

### Integrated HD zoom camera

Fitted as standard, the dual headed PTZ is equipped with a 30x optical zoom 3 Megapixel (2048x1536), IP day/night camera. The 30x zoom realizes the optimum field of view in any situation.

### Analytics

The intelligent thermal camera automatically and instantaneously can detect hotspots in a region of interest, like small fires, smouldering dust or overheated machinery. Specially for flare monitoring the TC840R1 is fitted Flare off detection and flare too large detection.

### Multi-stream

Both cameras have their own IP -address and has multi-stream capability for simultaneous streaming of H.264/H.264 or H.264/MJPEG. Multiple combinations of resolution and frame rate can be configured to satisfy different live viewing and recording scenarios.

### Security Solution

In combination with Sense, TKH Security Solutions Video Management System, the SA cameras create a versatile CCTV solution for hazardous areas. Compatibility with other video management systems is realized by the camera's ONVIF Profile S compliance.

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## Camera housing

Ingress protection rating	IP66/ IP67
Body material	Electro-polished 316L stainless steel
Rotation	+170° to -170° (±5°) no continuous rotation
Tilt angle	+90° to -90° (±5°)
Variable speed	up to 40°/sec pan and 20°/sec tilt (peak)
Max Torque	80 Nm pan, 107 Nm tilt
Backlash	<0.1°
Preset accuracy	0.04°
Sunshield	Standard
Internal demister/heater	Standard
Wiper	Standard
Washer system	Optional
Operating temperature	-20 °C to +60 °C
"Dry heat" test	+75 °C, 2 days
Weight	38 kg

## Electrical

Supply voltage	24 V~ 50/60 Hz; Optional 115 V~ 50/60 Hz; 230 V~ 50/60 Hz
Power consumption	80 W max
Electrical connections	Internal terminal block

## Network

Interface(s)	2x 10/100 Mb Ethernet (4-wires 0.5 mm <sup>2</sup> from conduit). Each camera its own interface and IP-address
Protocols	IPv4, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, UPnP, IGMP, SNMP, QoS, ONVIF
Password levels	User and Administrator
Supported browsers	Internet Explorer (6.0+), Chrome, Firefox, Safari
User accounts	20

## BC820v2H3 Full-HD IP camera

### camera

Image sensor	1/2.8" Progressive scan CMOS
Effective pixels	2048 (H) x 1536 (V)
Shutter speed	1 - 1/10000 s
Minimum scene illumination	0.04 lux (colour), 0.002 lux (b/w), F/1.6
Dynamic range (WDR)	120 dB (in WDR-2: dual exposure mode)
Lens	30x Optical zoom, F/1.6 (W), F5 (T); 10x digital zoom
Lens focal length	4.3 mm (W) - 129 mm (T)
Horizontal field of view	67.4° (W) - 2.6° (T)
Features	Back light compensation, auto/manual white balance, (3D/2D) noise, IR light compensation
Exposure	Auto (iris or shutter priority) / Manual
Day/Night (IR-cut filter)	Auto/night/day/smart (with adjustable threshold levels)

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Video				
Compression algorithm(s)	H.264 (baseline / main / high profile); MJPEG			
Supported resolutions	2048x1536; 1920x1080 (1080p); 1280x1024; 1280x720 (720p); 1024x768; 800x600; 720x576 (D1); 640x480; 352x288 (CIF)			
Quad streaming:	Stream 1	Stream 2	Stream 3	Stream 4
H.264 instances in 50/60 fps (best resolution setting at 50/60 fps; higher resolution at lower frame rate possible)	1920x1080 1920x1080 1920x1080	- 720x576 640x480 (30fps)	- - 342x288 (30fps)	- - -
H.264 instances in 25/30 fps (best resolution setting at 25/30 fps; higher resolution at lower frame rate possible)	2048x1536 1920x1080 2048x1536 2048x1536 2048x1536 1920x1080	- 1920x1080 1280x1024 1280x1024 1280x720 1280x1024	- - - 352x288 720x576 1280x720	- - - - 352x288 352x288
H.264 instances in 25/30 fps in WDR-2 (best resolution setting at 25/30 fps; higher resolution at lower frame rate possible)	1920x1080 1920x1080 2048x1536 1920x1080	- 1920x1080 352x240 1280x720	- - - 720x480	- - -
MJPEG	One of the above resolution formats in each instance can be MJPEG instead of H.264 if the resolution is lower than or equal to 1920x1080			
Compression bit rate control	Constant bit rate (CBR), variable bit rate (VBR)			
Output bit rate (per H.264 stream)	Up to 20480 kb/s			
Number of video output streams	Up to 20 (RTSP)			
Total output data rate (max)	50000 kb/s			
Video frame rate	1 to 60 fps / 1 to 50 fps			

## TC840R1 Thermal imager

Thermal imager							
Imager	Uncooled micro-bolometer						
Pixel pitch	17 µm						
Resolution	640 x 512 pixels						
Focal length	7.5mm	9 mm	13 mm	19 mm	25 mm	35 mm	50 mm
Field of view	90°x69°	69°x56°	45°x37°	32°x26°	25°x20°	18°x14°	12.4°x9.9°
f-number	f/1.4	f/1.4	f/1.25	f/1.25	f/1.1	f/1.5	f/1.2
Spectral bandwidth	7.5 µm to 13.5 µm (LWIR)						
Frame rate	8.3 fps (xx-S version) Optional: 30 fps (xx-F version)						
Sensitivity (NEdT)	< 50 mK @ f/1.0						
Time to image	Instantaneous						
Digital zoom	No						

Video	
Number of video streams	2x H.264/MJPEG
Max resolution	720 x 512 @ 25/30fps (up-sampled)
Number of output streams	Up to 20 (RTSP)
Compression algorithm(s)	H.264 (H.264/MPEG-4 AVC), MJPEG
Encoder bit rate control	Constant bit rate (CBR), variable bit rate (VBR)
Output bit rate (per H.264 stream)	Up to 6 Mbit/s
Total output data rate	Up to 32 Mbit/s
Video overlay	3x Text, 1x bitmap (BMP, GIF); PID Object data (blue blob), event data (red box);

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## Analytics

Freeform zones or detection lines	2x in stand-alone (Web configured)
Event type	“Hot object detected” or “Hot object disappeared”
Event time	0 to 10 s
Event output	generic ONVIF, digital I/O, SPI
Measuring range	-40°C to 160 °C or -40 °C to 550°C
Accuracy	+/- 5 °C (T< 100 °C) or +/- 5% (T> 100 °C)

## Accessories

SA wall mounting bracket PTZ 316L wall mounting bracket for SA PTZ camera housings



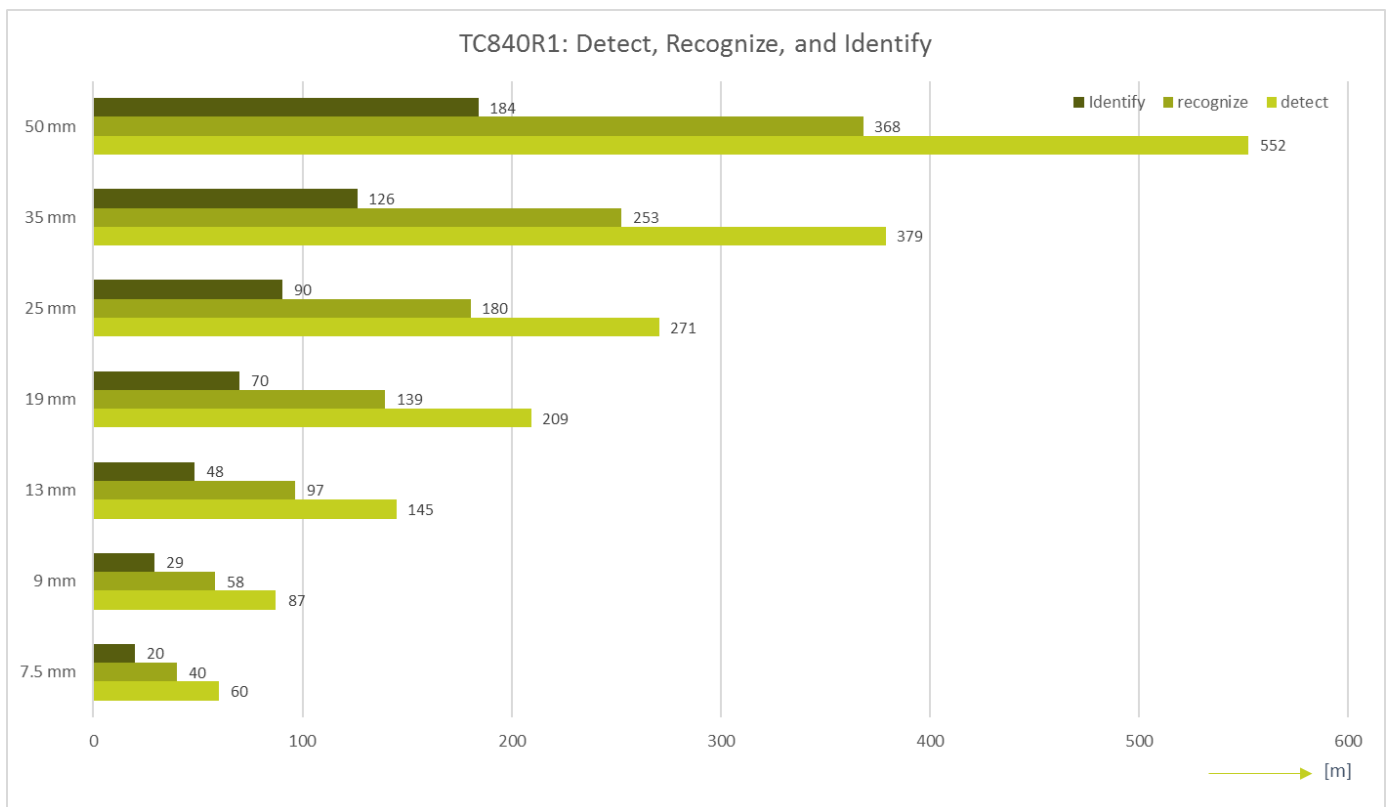
SA-WP10-10m-VSF-24 v2

10 litre washer tank, pump 10 m delivery head, 316L frame, 24 Vac



## Maintenance & replacement kits

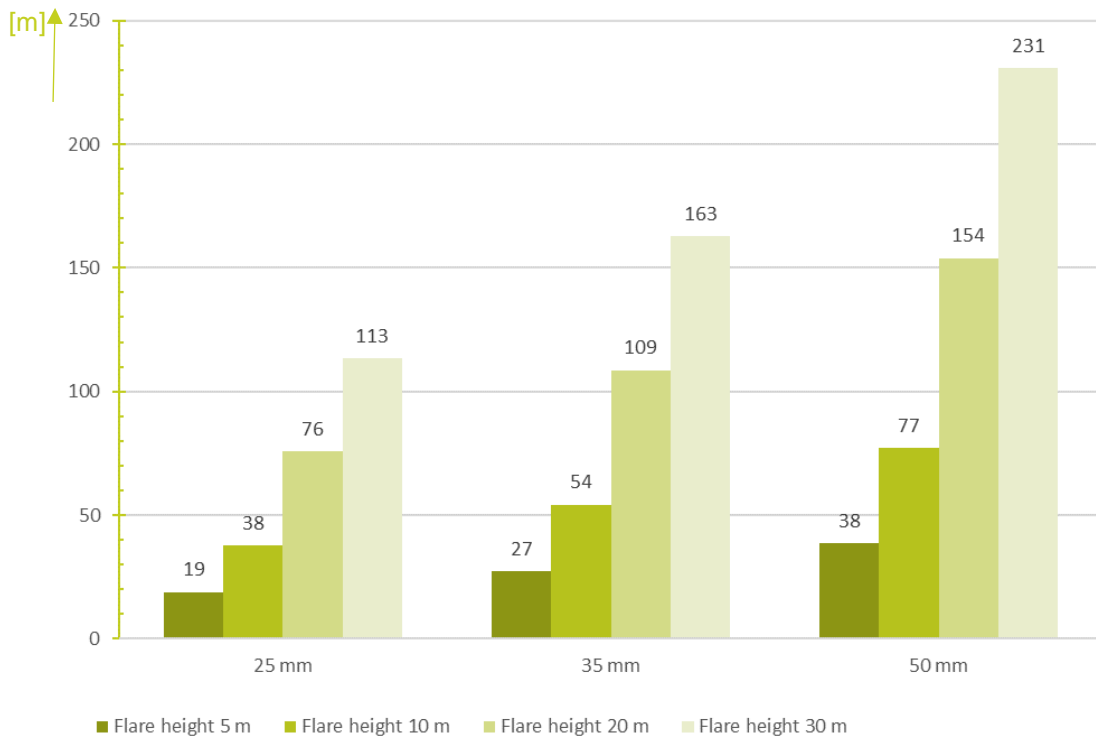
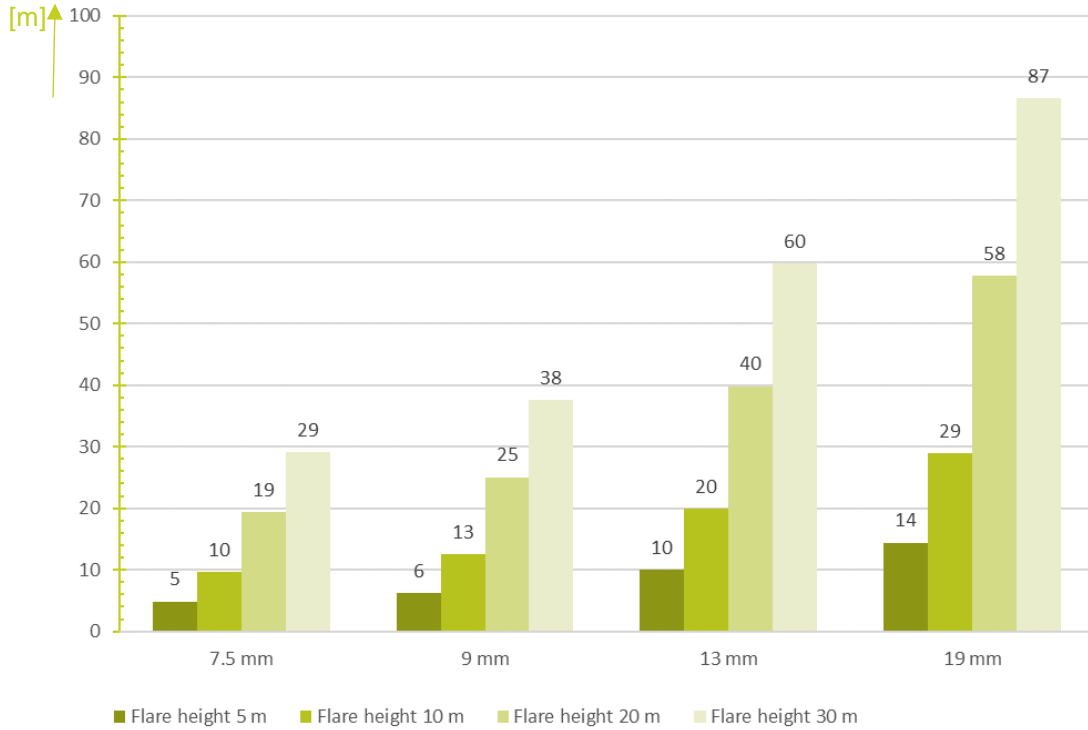
EX/SA-MK Wiper	Maintenance kit for the wiper: Rubber blade and support
EX/SA-Wiper	Replacement for Stainless steel wiper (complete assembly)
SA-MK PTZ	Maintenance kit SA PTZ camera: O-Ring, screws, desiccant bags
SA-MK PTZ controller	Telemetry controller for (SA) PTZ camera station, RS485, PELCO D protocol



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The tables below give an overview of the distance from the flare, per lens type and for a flare height of 5, 10, 20, or 30 metres. At the given distance, the flare will cover 75% of the image height. The distances are in metres.



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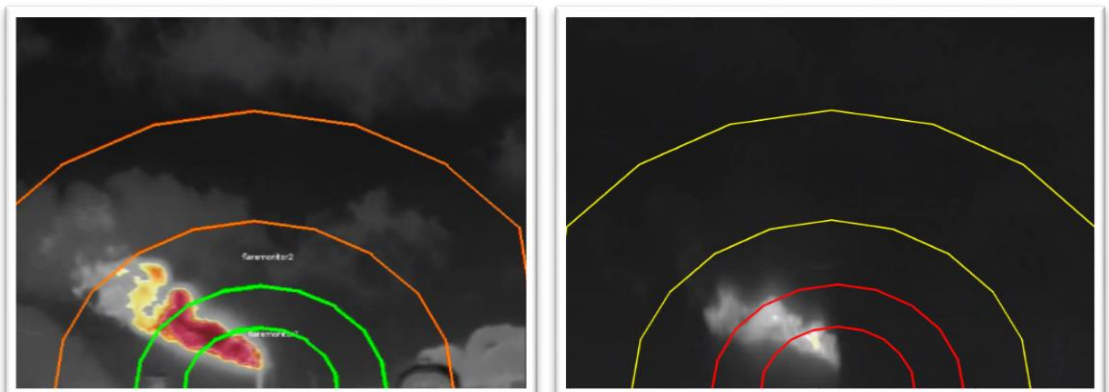
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## Order information

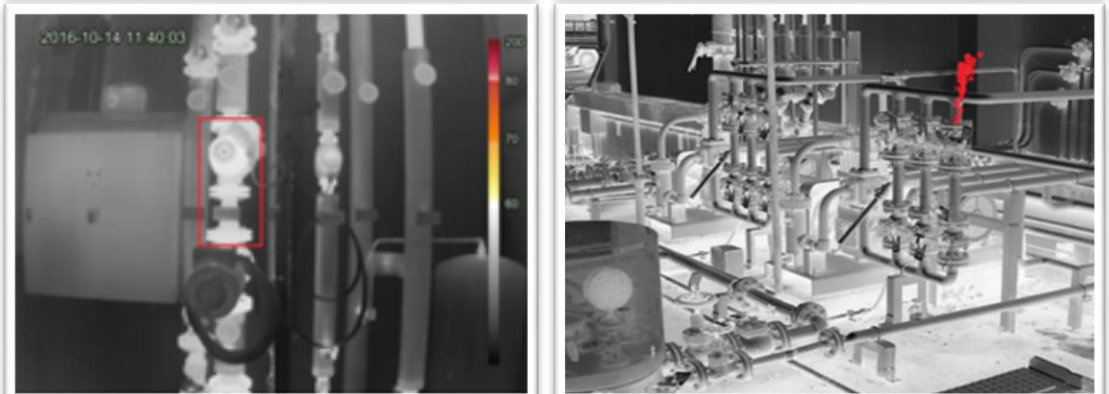
SA-BC820v2H3-TC840R1 7.5-S PTZ 24	Ex 316L PTZ IP Ti 7.5mm 9Hz 336 24Vac
SA-BC820v2H3-TC840R1 <u>7.5-S</u> PTZ 24	Lens type in mm: 7.5, 9.0, 13, 19, 25, 35, or 50
SA-BC820v2H3-TC840R1 7.5- <u>S</u> PTZ 24	'-S' for Slow (8.3 fps) or '-F' for fast (30 fps)
SA-BC820v2H3-TC840R1 7.5-S PTZ <u>24</u>	Replace 24 with 115 or 230 respectively for 115 or 230 Vac power

Please Note: Thermal cameras fall under export restrictions. Please, contact TKH Security Solutions for more information.

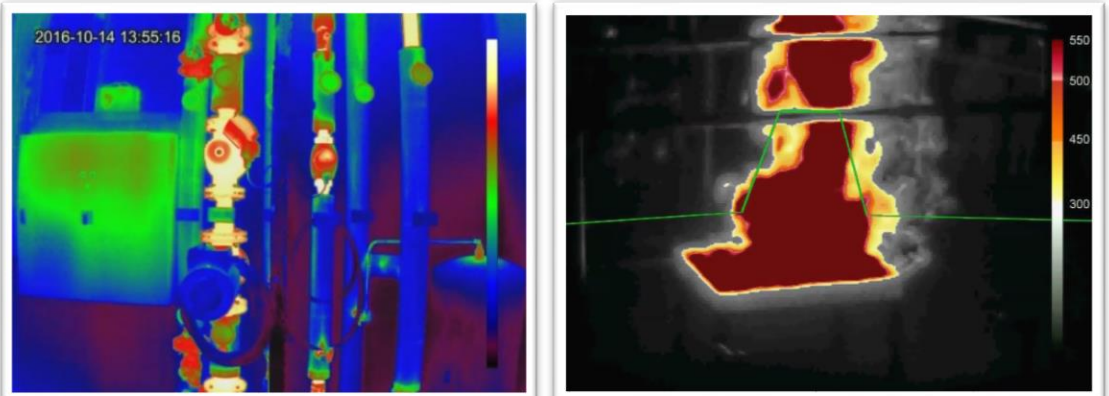
Flare on/off detection



Hot spot and fire detection

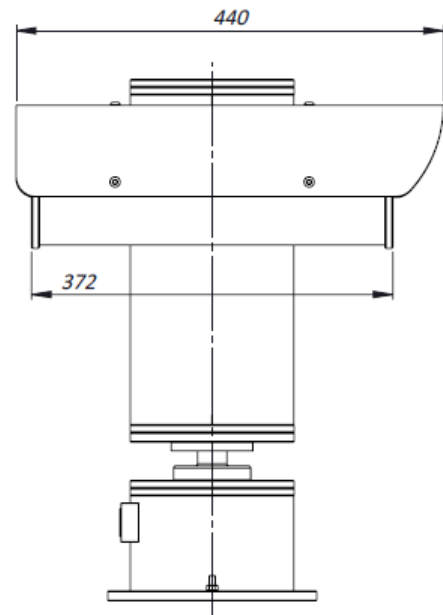
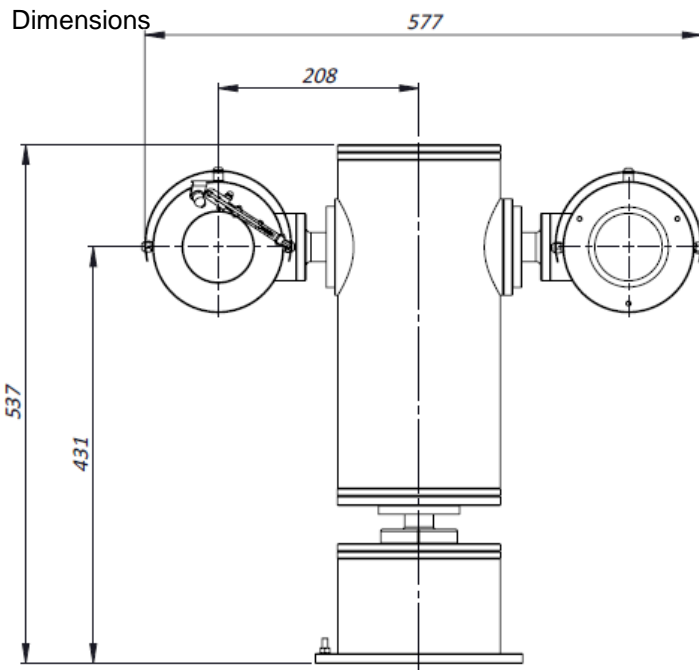


Colour palettes

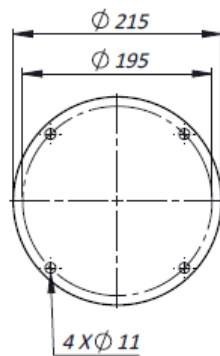


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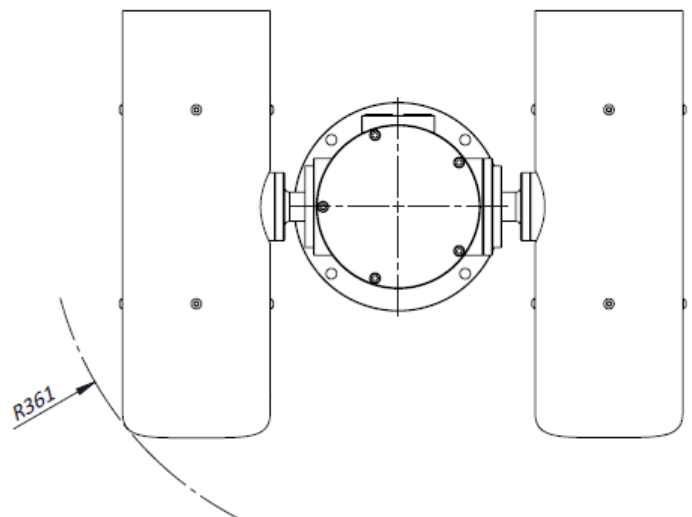
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Mounting pattern:



Top view:



All dimensions in mm



The quality management system used in the development, production, sales, and support of this product is ISO 9001 certified by LRQA.

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