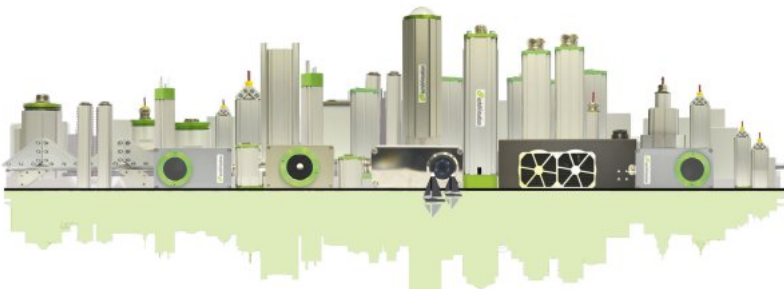




Camera Enclosures - Mounting Solutions - Accessories



# Product Catalogue 2018

Valid until further notice

## **Protect your vision system!**

autoVimation's aim is to provide simple to use products to make it possible to use machine vision cameras in any environment. Maintenance trips can be expensive, so protecting the sensitive camera equipment from damage or just manipulation is equally important.

## **Buildt your vision system!**

The second motivation for autoVimation's products was to allow simpler installation of camera systems in a manufacturing environment - "plug and play" also for mechanics. Once the camera is mounted in an enclosure, it can be easily adjusted and robustly installed on the machine, using our mounting kits and brackets as well as our range of matching dovetail profiles. This can avoid expensive, time-consuming manufacturing of dedicated mounting frames and brackets.

What we advise both orally and in writing with regard to technical application is based on our experience and to the best of our belief; this should, however, be understood as a pointer without obligation.

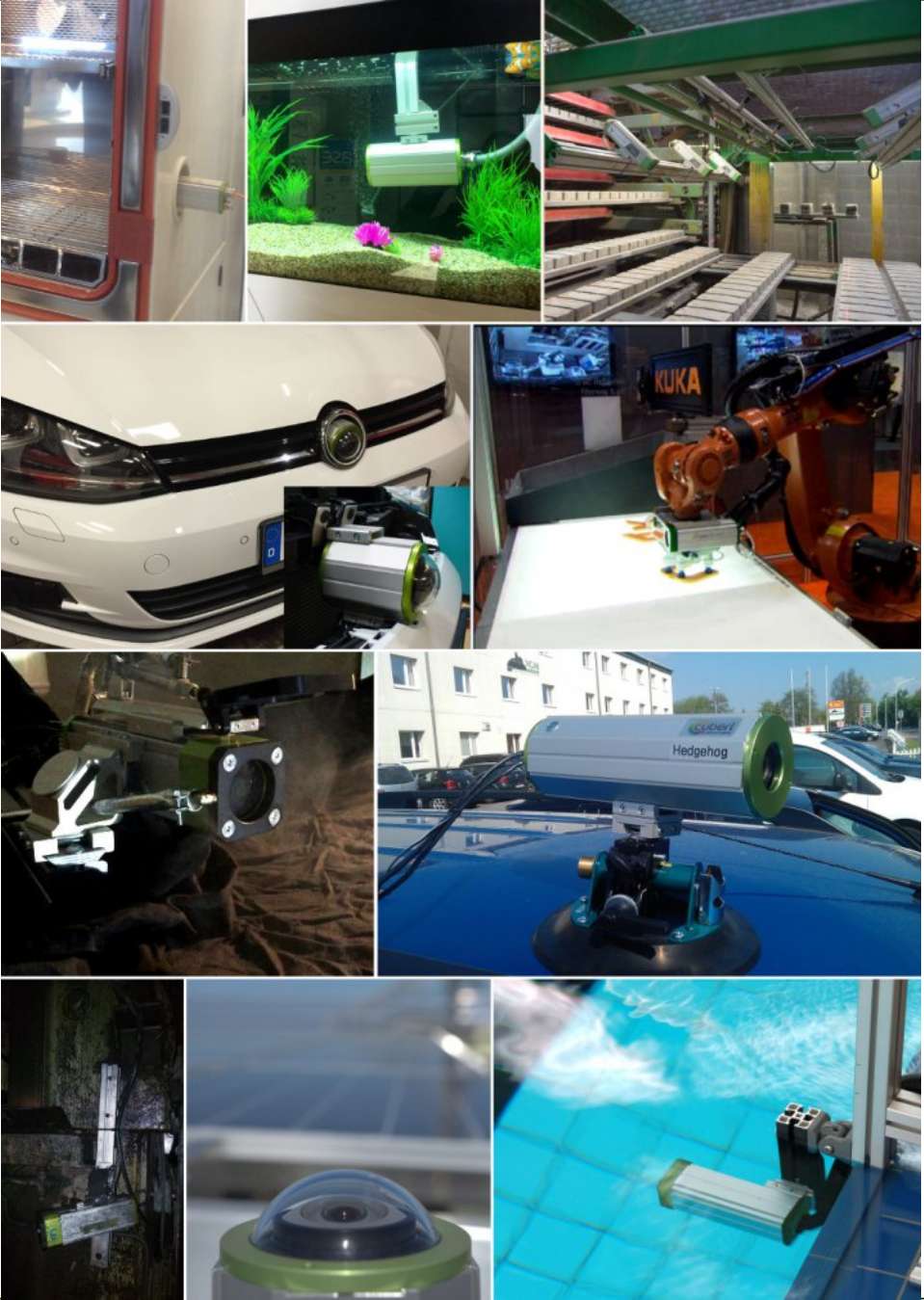
Feedback welcome! Please send us an email to [sales@autovimation.com](mailto:sales@autovimation.com), in case you will find any errors or a subject requiring more explanation!

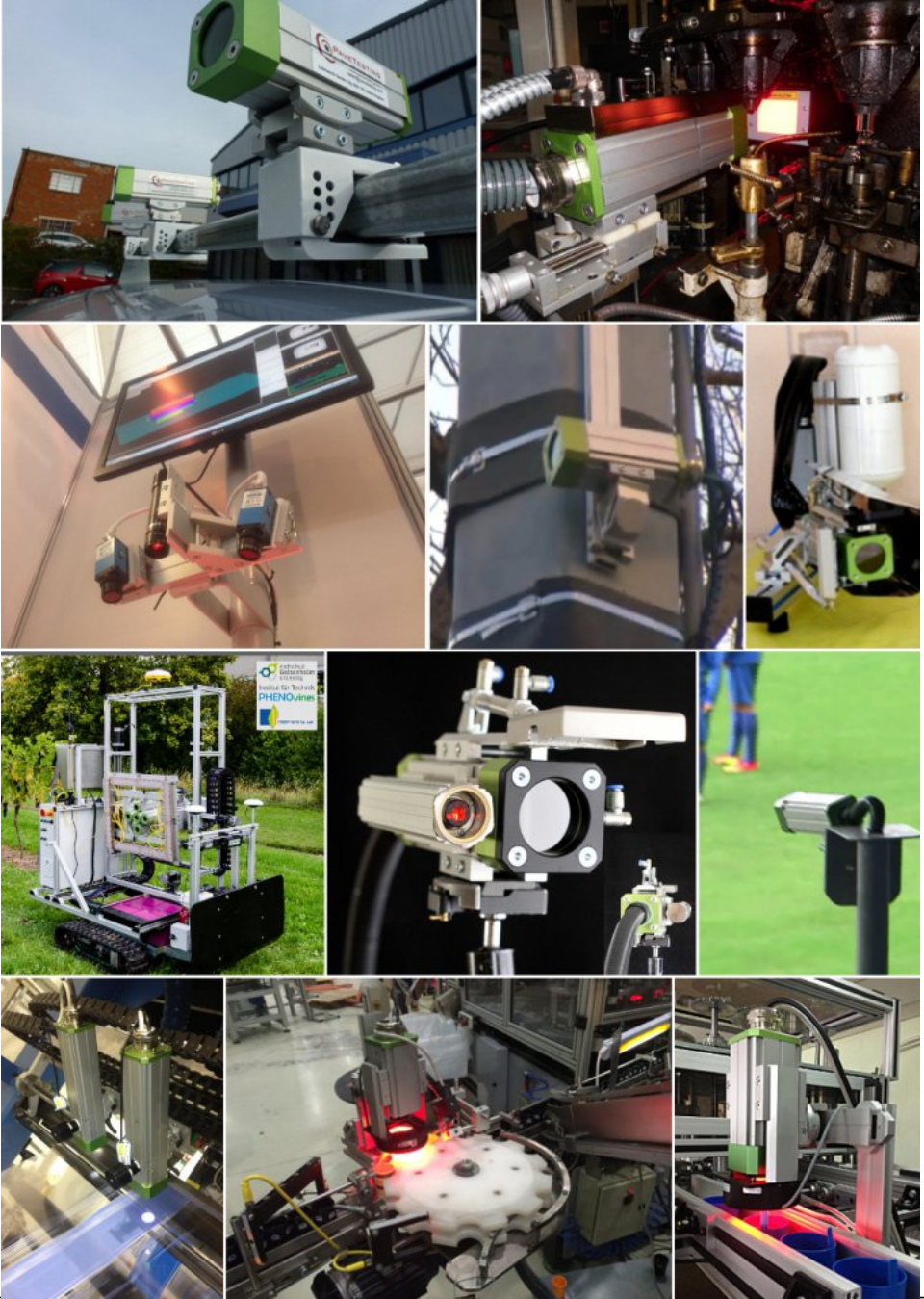
Subject to change without prior notice!



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# ! Application Examples







# Why autoVimation



## Faster completion of projects

By eliminating the time-consuming manufacture of mechanical components.



## Lower project costs

Using cost-efficient off-the-shelf items individually tailored to suit your applications.



## Plug & Play

Installation and adjustment of camera systems within minutes - Easy assembly like IKEA furniture!



## High reliability

All components are extremely robust and especially designed for rough industrial conditions.

## Why autoVimation Enclosures and Mounting Solutions?



## Excellent heat dissipation

Thanks to the patented Heat-Guide/ Quick-Lock mounting system.



## Flexible camera positioning

Within the housing the camera can be moved up to the front window.



## Easy orientation

Thanks to dovetail profiles on several sides its easy to adjust the working distance or to rotate the image.



## High IP protection and chemical resistance

Thanks to high quality sealing materials.



## Mechanical robustness

The enclosures consist of aluminium extrusion profiles.



## Compact dimensions

Easy to integrate into existing machines.



## For nearly all environment conditions

Thanks to a large range of accessories.



## Flexible mounting and positioning

Thanks to universally combinable parts.



## Vibration-proof assembly

The brackets resist displacement forces up to 2000N.



## Compatible to 3rd party accessories

Because of flexible adapters.



## Limited Warranty

The original autoVimation product is covered by a limited warranty of 24 months for defect free delivery according to EU regulations. autoVimations warranty refers to the constant quality of the products falling in line with the specifications according to the general terms of delivery and payment. autoVimation presuppose correct handling and treatment of the function and condition, particularly observance of the product specifications and assembly- and operating manuals. Limitations of use published, such as temperatures, are based on measurements made under the testing conditions and can therefore only serve as an indication for an actual application.

Working conditions and varying application conditions outside the sphere of influence of autoVimation shall preclude any warranty claims. autoVimation would recommend verifying whether the product is suitable for the purpose of application intended. The way the products are applied, used and processed is not a matter autoVimation is able to control, and for this reason lies solely in the customers area of responsibility. Should there nevertheless be a case for liability, it shall be restricted to the value of the product supplied by autoVimation and used by the customer for all and any damage incurred.

The suitability of the product for the user's application which regard to load capacity (long term application), conforming with temperature limits of 3rd party equipment used, the chemical durability or ageing of sealing materials, as well as the correct mechanical or electrical installation must be checked and ensured by the customer under the particular practical conditions concerned. If, within the warranty period, the product is determined to be defective (at the date of original purchase) due to improper materials or workmanship, autoVimation GmbH or their service partners will, without charge for labor or parts, repair or (at the discretion of autoVimation GmbH) replace the product or its defective parts.

The following cases are not covered by the above warranty:

- Consumable parts and parts subject to wear and tear
- Minor faults or deviations in the quality of a product which do not affect the product's value or fitness for its intended purpose
- Faults resulting from improper use (e.g. operating errors, mechanical damage, incorrect voltage)
- Any modification of autoVimation products effected by the customer or a third party, unless autoVimation has given its prior written consent to the nature and extent of the modification
- Faults due to force majeure
- Faults of which the purchaser was already aware at the time of purchase

All warranty claims become void if the product is tampered with by unauthorized persons or repair shops. Further, this warranty is voided by removal or alteration of identification labels, serial numbers or safety labels on the product or its parts. Warranty claims can be enforced in any country throughout the world in which the statutory rights of the country concerned are not in conflict with the warranty regulations. No other warranty claims or claims over and above the rights stated in these terms and conditions will be accepted.

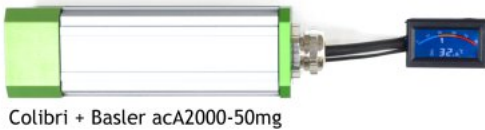
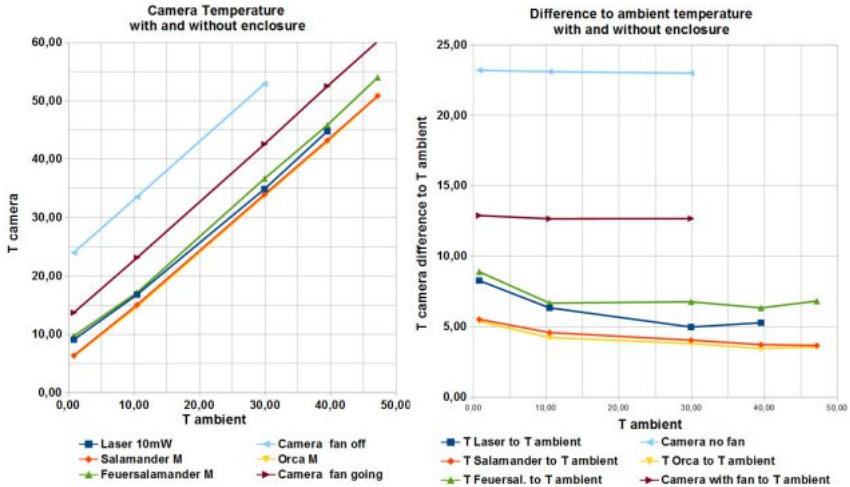
Consumers may be entitled to statutory rights in their own countries which are not restricted by these warranty terms and conditions, as the warranty is governed by the laws of the country in which the autoVimation product was purchased by the consumer. The provisions of the UN Convention on the International Sale of Goods do not apply to this service.

Errors and technical alterations are reserved. Reprints or any kind of electronic reproduction shall only be permitted with our approval in writing. This catalogue supersedes all previous documents which herewith lose their validity.

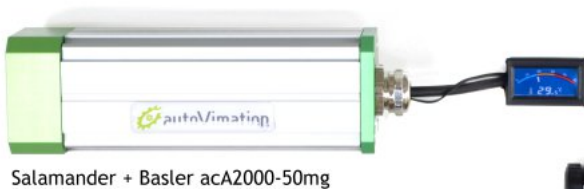
# Passive Cooling

Tests have shown that autoVimation's patented Heat-Guide system significantly reduces the camera temperature:

- Without enclosure the camera temperature has been ~18°C higher than the ambient temperature.
- Installed in a Salamander enclosure the camera temperature is only a few degree above ambient temperature.
- The other enclosures show a similar cooling effect – and that from 0°C to 50°C ambient temperature.



Ambient temperature  
Umgebungstemperatur



Basler acA2000-50mg







Other tests with a Point Grey Black Fly inside an Orca M enclosure have shown that even at 38° ambient temperature the camera temperature was only 2.50°C higher.

That means autoVimation's enclosures can significantly extend the temperature range cameras can be used in! The cooling effect depends on the camera type and the installation conditions.



autoVimations patented Quicklock/Heatguide mounting system for Colibri, Salamander and Orca enclosures provides excellent heat dissipation. The complete enclosure body is used as an additional heat sink.

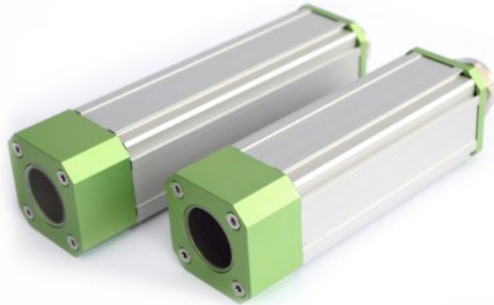
## Custom Solutions

autoVimations provides also custom solutions for small series starting from 10pcs. Often we can find also an option for a single enclosure, if we will be able to customize it out of existing components. Please ask, if you will have any request!



### Benefits:

- For cameras up to 30 x 30mm cross section
- Robust construction
- Compact size
- Small dead weight
- High IP protection class
- Flexible camera positioning
- High chemical resistance
- Vibration-proof mounting
- Camera mount included
- Excellent heat dissipation
- Front and back side camera assembly possible



### Technical Details:

<b>Camera Size</b>	29 x 29mm 30 x 30mm
<b>Max. Lens Diameter</b>	39mm
<b>Inner Length</b>	146mm (Size S) 176mm (Size M)
<b>Enclosure Dimensions</b> (w x h x l, without cable gland)	50 x 50 x 156mm (Size S) 50 x 50 x 186mm (Size M)
<b>Window Aperture</b>	28mm
<b>Window Material</b>	Borosilicate, BK7
<b>Window Coating</b>	Double sided AR
<b>Window Seal</b>	Hytel
<b>Protection Class</b>	IP66 (Nema 4)

<b>Weight</b> (incl. camera mount)	Approx. 420g (Size S) Approx. 465g (Size M)
<b>Enclosure Material</b>	Anodized Aluminum
<b>Enclosure Seals</b>	NBR
<b>Cable Gland Aperture</b> (max. connector size)	20mm (Rear Wall A) 16.5mm (Rear Wall B) 20.5mm (Rear Wall C)
<b>Cable Diameter</b>	4-6.5mm (Rear Wall B) Self drilling (Rear Wall C)
<b>Cable Gland Seal</b>	TPE



The camera mount guarantees excellent heat dissipation

**Order Numbers:**

Colibri S			Colibri M		
Camera Height	Rear Wall	Order Number	Camera Height	Rear Wall	Order Number
29mm	A	22.900.120	29mm	A	22.900.150
	B	22.901.120		B	22.901.150
	C	22.902.120		C	22.902.150
30mm	A	23.000.120	30mm	A	22.900.150
	B	23.001.120		B	23.001.150
	C	23.002.120		C	23.002.150

**Accessories:**

Product	Image	Order Number	Product	Image	Order Number
Colibri Air Nozzle		50.100.023	Mounting Kit 24		5.240.000
90° Deflection Mirror + Adapter required		20.020.004 + 10.062.979	Mounting Kit 26		5.260.000
30mm to 40mm Adapter Bracket		10.062.979	Mounting Kit 27		5.270.000
Corrugated Tube 28mm		20.000.006	Mounting Kit 28		5.280.000
Mounting Kit 21		5.210.000	Mounting Kit 29		5.290.000



### Benefits:

- For cameras up to 40 x 40mm cross section
- Robust construction
- Compact size
- Small dead weight
- High IP protection class
- Flexible camera positioning
- High chemical resistance
- Vibration-proof mounting
- Camera mount included
- Excellent heat dissipation



### Technical Details:

<b>Max. Camera Size (w x h)</b>	40 x 40mm 29 x 47mm	<b>Weight</b> (without camera mount)	Approx. 660g (Size XS) Approx. 850g (Size S) Approx. 1070g (Size M) Approx. 1200g (Size L)
<b>Max. Lens Diameter</b>	55mm (in profile) 52mm (in front lid)	<b>Enclosure Material</b>	Anodized Aluminum
<b>Inner Length</b>	94 (Size XS) 136 (Size S) 189 (Size M) 219 (Size L)	<b>Enclosure Seals</b>	NBR
<b>Enclosure Dimensions</b> (w x h x l, without cable gland)	66 x 66 x 108mm (Size XS) 66 x 66 x 150mm (Size S) 66 x 66 x 203mm (Size M) 66 x 66 x 233mm (Size L)	<b>Cable Gland Aperture</b> (max. connector size)	22mm (Rear Wall A) 13.5mm (Rear Wall B) 16.5mm (Rear Wall B) 26.5mm (Rear Wall C)
<b>Window Aperture</b>	45mm	<b>Cable Diameter</b>	4-6.5mm (Rear Wall B) Self drilling (Rear Wall C)
<b>Standard Window</b>	BK7, double sided ARC	<b>Cable Gland Seal</b>	TPE
<b>IR Mirror</b>	Order Number: 20.000.010		
<b>Saphire</b>	Order Number: 20.000.016		
<b>Germanium</b>	Order Number: 20.000.017		
<b>Acrylic, uncoated</b>	Order Number: 20.000.027		
<b>Acrylic, double sided ARC</b>	Order Number: 20.000.029		
<b>Window Seal</b>	FPM		
<b>Protection Class</b>	IP66 (Nema 4) IP67 (Nema 6)		

The mount guarantees excellent heat dissipation



## Order Numbers:

Product ID	Camera Height	Camera Length	Enclosure Type	Rear Wall Type	Length
2	29: 0   30: 1   31: 2 32: 3   33: 4   34: 5 35: 6   36: 7   38: 8 40: 9	< 50mm: 3 < 74mm: 5 < 92mm: 7	1	A: 0 B: 1 C: 2 D: 3	XS: 070 S: 139 M: 192 L: 222

## Accessories:

Product	Image	Order No.	Product	Image	Order No.	Product	Image	Order No.
Air Nozzle		50.100.025	Cooling Module		60.100.010	Mounting Kit 2		5.020.000
2" Wind Curtain		50.100.010	El. Heating Plate		70.100.010	Mounting Kit 6		5.060.000
Pneumatic Shutter		50.200.020	Sun Roof Size S		20.010.001	Mounting Kit 7		5.070.000
Deflection Mirror 90°		20.020.004	Sun Roof Size M		20.010.002	Mounting Kit 9		5.090.000
30mm Extension		15.015.030	Sun Roof Size L		20.010.003	Mounting Kit 15		5.150.000
60mm Extension		15.015.060	Corrugated Tube 28mm		20.000.006	Mounting Kit 16		5.160.000
Position Ring		20.020.003	Mounting Kit 1		5.010.000	Mounting Kit 17		5.170.000



### Benefits:

- Electro-polished V4A stainless steel AISI 316L
- For cameras up to 40 x 40mm cross section
- Robust construction
- Compact size
- High IP protection class
- Flexible camera positioning
- High chemical resistance
- Vibration-proof mounting
- Camera mount included
- Good heat dissipation
- Easy window replacement



### Technical Details:

<b>Max. Camera Size (w x h)</b>	40 x 40mm 29 x 47mm	<b>Weight</b> (without camera mount)	Approx. 1700g (Size S) Approx. 2200g (Size M)
<b>Max. Lens Diameter</b>	55mm (in profile) 52mm (in front lid)	<b>Enclosure Material</b>	Electro-polished V4A stainless steel AISI 316L
<b>Inner Length</b>	101 (Size S) 151 (Size M)	<b>Enclosure Seals</b>	EPDM
<b>Enclosure Dimensions</b> (d x l, without cable gland)	69 x 110mm (Size S) 69 x 160mm (Size M)	<b>Cable Gland Aperture</b> (max. connector size)	20mm
<b>Window Aperture</b>	45mm	<b>Cable Diameter</b>	Self drilling
<b>Standard Window</b>	BK7, double sided ARC	<b>Cable Gland Seal</b>	TPE
<b>IR Mirror</b>	Order Number: 20.000.010		
<b>Sapphire</b>	Order Number: 20.000.016		
<b>Germanium</b>	Order Number: 20.000.017		
<b>Acrylic, uncoated</b>	Order Number: 20.000.027		
<b>Acrylic, double sided ARC</b>	Order Number: 20.000.029		
<b>Window Seal</b>	EPDM		
<b>Protection Class</b>	IP66 (Nema 4) IP67 (Nema 6)		



The mount guarantees good heat dissipation



Front Lid

Profile S

Profile M

RearWall

Mount

Order Numbers:

Product ID	Camera Height	Camera Length	Enclosure Type	Length
2	29: 0   30: 1   31: 2 32: 3   33: 4   34: 5 35: 6   36: 7   38: 8 40: 9	< 50mm: 3 < 74mm: 5 < 92mm: 7	30	S: 110 M: 160

Accessories:

Product	Image	Order No.	Product	Image	Order No.	Product	Image	Order No.
Position Ring		20.020.003	Mounting Tool		90.000.004	Mount		5.120.000
2" Wind Curtain		50.100.010						



### Benefits:

- V4A stainless steel AISI 316L
- Consequent hygienic design
- IP69K protection class
- Compact size
- Flexible camera positioning
- High chemical resistance
- Vibration-proof mounting
- Camera mount included
- Good heat dissipation



### Technical Details:

<b>Protection class</b>	IP69K
<b>Window aperture</b>	45mm

<b>Enclosure material</b>	V4A stainless steel AISI 316L
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### Dolphin:

<b>Max. camera cross section (w x h)</b>	40 x 40mm 29 x 47mm
<b>Max. lens diameter</b>	55mm
<b>Inner length</b>	138mm (S) 188mm (M) 218mm (L)
<b>Dimensions (d x l, without gland and 100mm handle)</b>	63 x 151mm (S) 63 x 201mm (M) 63 x 230mm (L)
<b>Standard window</b>	BK7, double sided AR
<b>IR mirror</b>	Order No.: 20.000.010
<b>Saphire</b>	Order No.: 20.000.016
<b>Germanium</b>	Order No.: 20.000.017
<b>Acrylic, uncoated</b>	Order No.: 20.000.027
<b>Acrylic, double sided AR</b>	Order No.: 20.000.029

### Shark:

<b>Max. camera cross section (w x h)</b>	62 x 62mm (depending on edge radius)
<b>Max. lens diameter</b>	85mm
<b>Inner length</b>	130mm (S) 180mm (M) 250mm (L)
<b>Dimensions (d x l, without gland and 100mm handle)</b>	93 x 147mm (S) 93 x 197mm (M) 93 x 267mm (L)

The mount guarantees good heat dissipation







### Dolphin Order Numbers:

ID	Camera Height	Camera Length	Exit	Cable Gland	Length
2	29: 0   30: 1   31: 2 32: 3   33: 4   34: 5 35: 6   36: 7   38: 8 40: 9	< 50mm: 3 < 74mm: 5 < 92mm: 7	back: 7 side: 8	M25 hygiene IP69K: 0 M32 hygiene IP69K: 1 M25 standard IP68: 2 M25 extended IP68: 3	S: 138 M: 188 L: 218

Example: 20.370.188 - Dolphin, cam height =29mm, length <50mm, M25 hygiene gland back exit, size M (left image)



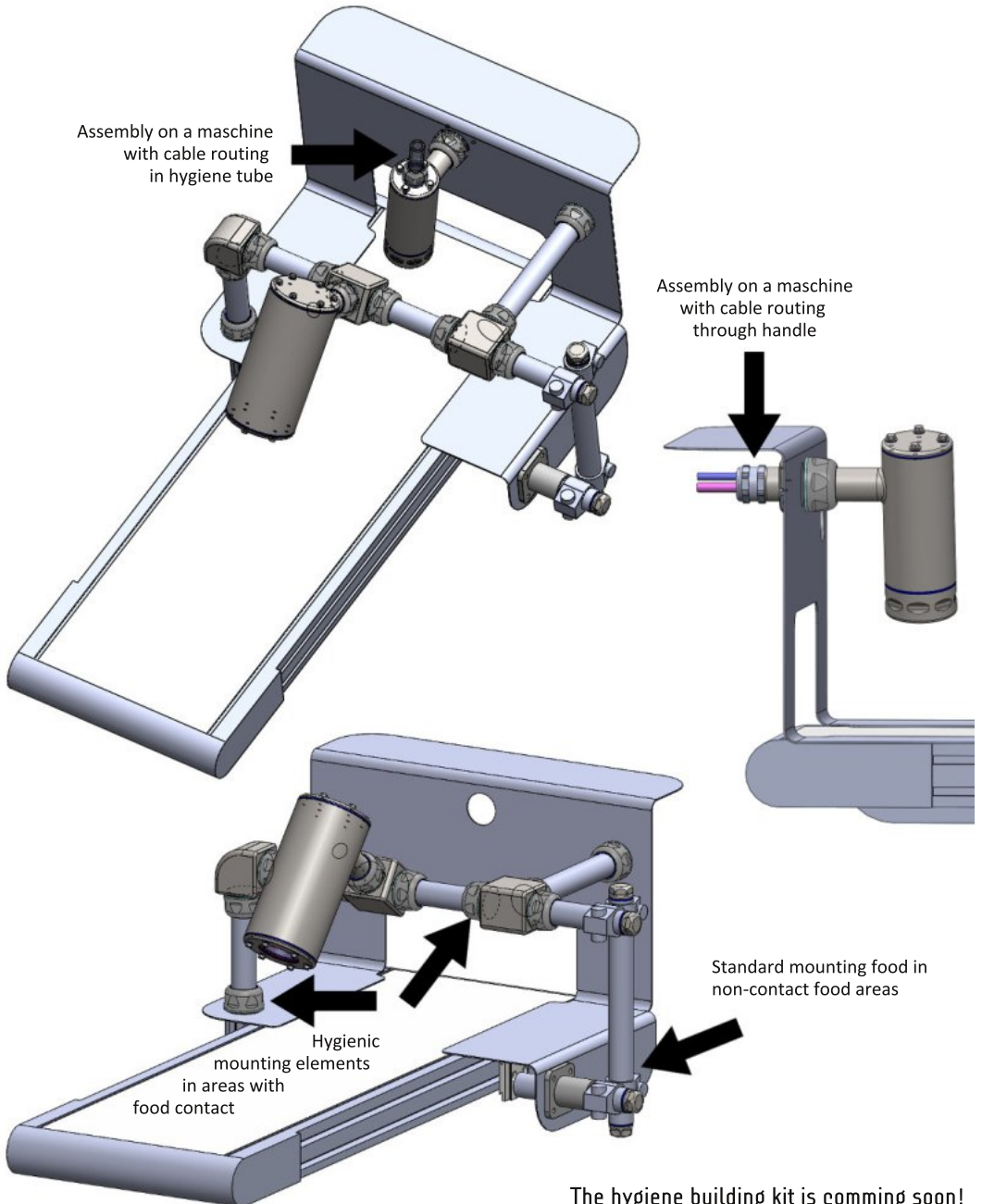
### Shark Order Numbers (please specify camera type for order numbers):

ID	Camera Height in cm	Exit	Cable Gland	Length
2	X.X (max. 6.2cm)	back: 7 side: 8	M25 hygiene IP69K: 0 M32 hygiene IP69K: 1 M25 standard IP68: 2 M25 extended IP68: 3	S: 130 M: 180 L: 250

Example: 25.081.130 - Shark, camera height =50mm, M25 hygiene cable gland side exit, size S (left image)

### Accessories (further mounting equipment coming soon!)

Product	Image	Order No.	Product	Image	Order No.	Product	Image	Order No.
Mount standard		80.006.006	M40 gland hygiene		80.006.004	M40 nut stainless st.		80.005.008
M32 gland hygiene		80.005.004	M25 gland hygiene		80.005.003	M25 Adapter		80.005.002
18x13 PUR tube		80.007.001	25x19 PUR tube		80.007.002	M32 Adapter		80.005.002
Rear Mount for M40		80.006.000				Dolphin Tool		80.006.100






### Benefits:

- For Flir Ax5 (new and old version)
- For Vision Components VC4XXX
- Compact size
- Small dead weight
- High IP protection class
- Flexible camera positioning
- High chemical resistance
- Vibration-proof mounting
- Camera mount included
- Good heat dissipation



### Technical Details:

<b>Max. Camera Size (w x h)</b>	39 x 53mm	<b>Weight</b> (without camera mount)	Approx. 660g (new Ax5) Approx. 660g (Size XS) Approx. 850g (Size S) Approx. 1070g (Size M)
<b>Max. Lens Diameter</b>	55mm (in profile) 52mm (in old front lid)	<b>Enclosure Material</b>	Anodized Aluminum
<b>Inner Length</b>	162 (Size XS, for new Ax5) 174 (Size XS) 233 (Size S) 268 (Size M)	<b>Enclosure Seals</b>	NBR
<b>Enclosure Dimensions</b> (w x h x l, without cable gland)	66 x 66 x 180mm (new Ax5) 66 x 66 x 188mm (Size XS) 66 x 66 x 218mm (Size S) 66 x 66 x 283mm (Size M)	<b>Cable Gland Aperture</b> (max. connector size)	22mm (Rear Wall A) 13.5mm (Rear Wall B) 16.5mm (Rear Wall B) 26.5mm (Rear Wall C)
<b>Window Aperture</b>	45mm	<b>Cable Diameter</b>	4-6.5mm (Rear Wall B) Self drilling (Rear Wall C)
<b>Standard Window</b> <b>IR Mirror</b> <b>Saphire</b> <b>Germanium</b> <b>Acrylic, uncoated</b> <b>Acrylic, double sided ARC</b>	BK7, double sided ARC Order Number: 20.000.010 Order Number: 20.000.016 Order Number: 20.000.017 Order Number: 20.000.027 Order Number: 20.000.029	<b>Cable Gland Seal</b>	TPE
<b>Window Seal</b>	FPM		
<b>Protection Class</b>	IP66 (Nema 4)		

Special mount for the new Flir Ax5 camera  
with lenses from 7.5mm to 19mm focal length



Front Lid Profile XS

S

M

RearWall A

B

C

Gecko XS V2016 for new Ax5

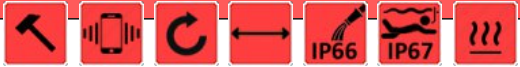
## Order Numbers:

Product ID	Camera Height in cm	Rear Wall	Length
2	X.X	A: 20 B: 21 C: 22	XS: 188 S: 218 M: 268

Product Description	Order Number
Gecko XS V2016, Germanium Window, Rear Wall C, for Flir Ax5 (new version)	24.020.155

## Accessories:

Product	Image	Order No.	Product	Image	Order No.	Product	Image	Order No.
Air Nozzle		50.100.025	Sun Roof Size S		20.010.001	Mounting Kit 6		5.060.000
2" Wind Curtain		50.100.010	Sun Roof Size M		20.010.002	Mounting Kit 7		5.070.000
Pneumatic Shutter		50.200.020	Sun Roof Size L		20.010.003	Mounting Kit 9		5.090.000
Deflection Mirror 90°		20.020.004	Corrugated Tube 28mm		20.000.006	Mounting Kit 15		5.150.000
Cooling Module		60.100.010	Mounting Kit 1		5.010.000	Mounting Kit 16		5.160.000
El. Heating Plate		70.100.010	Mounting Kit 2		5.020.000	Mounting Kit 17		5.170.000



### Benefits:

- For cameras up to 62 x 62mm cross section
- Robust construction
- High IP protection class
- Flexible camera positioning
- High chemical resistance
- Vibration-proof mounting
- Excellent heat dissipation
- Integration of ring lights possible
- Dome window option



### Technical Details:

<b>Max. Camera Size (w x h)</b>	62 x 62mm (depending on edge radius)
<b>Max. Lens Diameter</b>	85mm (in profile) 78mm (in front lid)
<b>Inner Length</b>	130mm (Size S) 180mm (Size M) 250mm (Size L) 335mm (Size XL)
<b>Enclosure Dimensions</b> (w x h x l, without cable gland)	96 x 96 x 144mm (Size S) 96 x 96 x 194mm (Size M) 96 x 96 x 264mm (Size L) 96 x 96 x 349mm (Size XL)

<b>Window Aperture</b>	45mm (2" window) 65mm (3" window)
<b>Standard Window</b>	BK7, double sided ARC
<b>2" IR Mirror</b>	Order Number: 20.000.010
<b>2" Sapphire</b>	Order Number: 20.000.016
<b>2" Germanium</b>	Order Number: 20.000.017
<b>3" Germanium</b>	Order Number: 20.000.018
<b>2" Acrylic, uncoated</b>	Order Number: 20.000.027
<b>2" Acrylic, double sided AR</b>	Order Number: 20.000.029
<b>3" Acrylic, double sided AR</b>	Order Number: 20.000.033
<b>Window Seal</b>	EPDM

<b>Protection Class</b>	IP66 (Nema 4) IP67 (Nema 6)
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<b>Weight</b> (without camera mount)	Approx. 1050g (Size S) Approx. 1200 (Size M) Approx. 1550g (Size L) Approx. 2050g (Size XL)
<b>Enclosure Material</b>	Anodized Aluminum
<b>Enclosure Seals</b>	EPDM

<b>Cable Gland Aperture</b> (max. connector size)	22mm (Rear Wall A) 26.5mm (Rear Wall C)
<b>Cable Diameter</b>	Self drilling (Rear Wall C)
<b>Cable Gland Seal</b>	TPE



The mount guarantees excellent heat dissipation



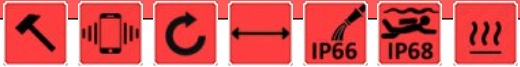
2" Lid    3" Lid    Dome Lid    Profile S    Profile M    Profile L    RearWall A    RearWall C    RearWall D    RearWall E

Order Numbers (please specify the camera type for each order!):

Product ID	Camera Height (cm)	Enclosure ID	2" Window	Rear Wall Type	3" Window	Length
2	standard: <b>4.0 - 6.2</b> <4.0 add surcharge <b>20.040.001</b>	4	A: 0 C: 1 D: 2		A: 5 C: 6 D: 9	S: 130 M: 180 L: 250 XL: 335

#### Accessories:

Product	Image	Order No.	Product	Image	Order No.	Product	Image	Order No.
Air Nozzle		50.100.025	Position Ring		20.040.002	Mounting Kit 1		5.010.000
2" Wind Curtain		50.100.010	Cooling Module		60.100.010	Mounting Kit 2		5.020.000
3" Wind Curtain		50.100.011	El. Heating Plate		70.100.010	Mounting Kit 6		5.060.000
Pneumatic Shutter 2"		50.200.020	Sun Roof Size S		20.011.001	Mounting Kit 7		5.070.000
Pneumatic Shutter 3"		50.200.021	Sun Roof Size M		20.011.002	Mounting Kit 9		5.090.000
Dome Window		20.040.015	Sun Roof Size L		20.011.003	Mounting Kit 15		5.150.000
30mm Extension		15.030.030	Rear Wall E		20.040.014	Mounting Kit 16		5.160.000
60mm Extension		15.030.085	Deflection Mirror 90°		20.020.004	Mounting Kit 17		5.170.000
M72 Front Lid		20.040.018	Corrugated Tube 28mm		20.000.006	Mounting Tool		90.000.004



### Benefits:

- For cameras up to 62 x 62mm cross section
- Perfect for underwater use
- IP68 protection class
- Double seal system
- Robust construction
- Flexible camera positioning
- High chemical resistance
- Vibration-proof mounting
- Camera mount included
- Excellent heat dissipation
- Integration of ring lights possible
- Tested 10h in 10m water depth



### Technical Details:

<b>Max. Camera Size (w x h)</b>	62 x 62mm (depending on edge radius)	<b>Weight (without camera mount)</b>	Approx. 1400g
<b>Max. Lens Diameter</b>	85mm (in profile) 78mm (in front lid)	<b>Enclosure Material</b>	Anodized Aluminum
<b>Inner Length</b>	172mm	<b>Enclosure Seals (double)</b>	EPDM
<b>Enclosure Dimensions (w x h x l, without cable gland)</b>	96 x 96 x 194mm	<b>Inner Tube Diameter (max. connector size)</b>	16mm
<b>Window Aperture</b>	65mm	<b>Cable Gland Seal</b>	TPE
<b>Standard Window</b>	BK7, double sided ARC		
<b>3" Germanium</b>	Order Number: 20.000.018		
<b>3" Acrylic, double sided AR</b>	Order Number: 20.000.033		
<b>Window Seal</b>	EPDM		
<b>Protection Class</b>	IP66 (Nema 4) IP68 (Nema 6)		



The mount guarantees excellent heat dissipation





3" Front Lid

Profile











RearWall

Protective Tube

Order Number (please specify the camera type for each order!):

Enclosure Description	Rear Wall	Order Number
IP68 enclosure with 3" window, 5m protective tube, front and back lid with double O-ring seals	M32 cable gland for protective tube system	2X.X50.200

### Accessories:

Product	Image	Order No.	Product	Image	Order No.	Product	Image	Order No.
Air Nozzle		50.100.025	Cooling Module		60.100.010	Mounting Kit 6		5.060.000
3" Wind Curtain		50.100.011	El. Heating Plate		70.100.010	Mounting Kit 7		5.070.000
Pneumatic Shutter		50.200.021	Sun Roof Size M		20.011.002	Mounting Kit 9		5.090.000
Deflection Mirror 90°		20.020.004	Mounting Tool		90.000.004	Mounting Kit 15		5.150.000
Position Ring		20.040.002	Mounting Kit 1		5.010.000	Mounting Kit 16		5.160.000
Protective Tube (1m)		20.000.005	Mounting Kit 2		5.020.000	Mounting Kit 17		5.170.000



### Benefits:

- For cameras up to 90 x 150mm cross section
- Robust construction
- High IP protection class
- Flexible camera positioning
- High chemical resistance
- Vibration-proof mounting
- Camera mount included
- Excellent heat dissipation
- Integration of ring lights possible
- Dome window option



### Technical Details:

<b>Max. Camera Size (w x h)</b>	90 x 150mm
<b>Max. Lens Diameter</b>	90mm (in profile) 78mm (in front lid)
<b>Inner Length</b>	199mm (Size M) 259mm (Size L) 309mm (Size XL)
<b>Enclosure Dimensions (w x h x l, without cable gland)</b>	173 x 113 x 207mm (M) 173 x 113 x 277mm (L) 173 x 113 x 327mm (XL)

<b>Window Aperture</b>	45mm (2" window) 65mm (3" window)
<b>Standard Window</b>	BK7, double sided ARC
<b>2" IR Mirror</b>	Order Number: 20.000.010
<b>2" Sapphire</b>	Order Number: 20.000.016
<b>2" Germanium</b>	Order Number: 20.000.017
<b>3" Germanium</b>	Order Number: 20.000.018
<b>2" Acrylic, uncoated</b>	Order Number: 20.000.027
<b>2" Acrylic, double sided AR</b>	Order Number: 20.000.029
<b>3" Acrylic, double sided AR</b>	Order Number: 20.000.033
<b>Window Seal</b>	EPDM

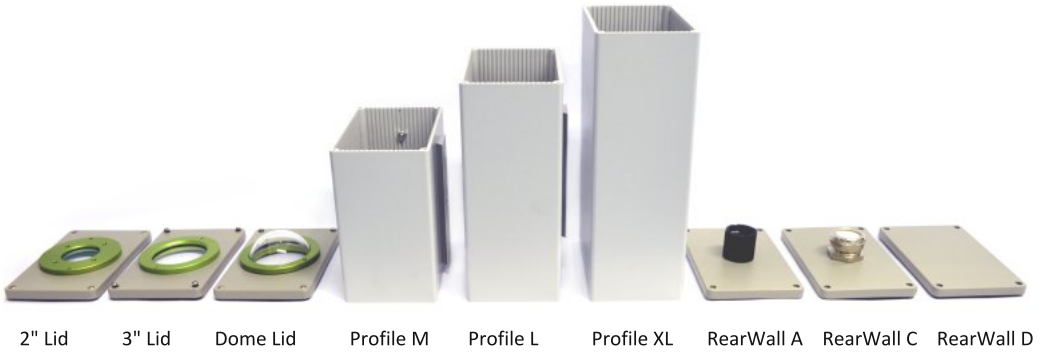
<b>Protection Class</b>	IP65
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<b>Weight (without cable gland)</b>	Approx. 2300g (Size M) Approx. 2650g (Size L) Approx. 2900g (Size XL)
<b>Enclosure Material</b>	Powder Coated Aluminum
<b>Enclosure Seals</b>	NBR

<b>Cable Gland Aperture (max. connector size)</b>	22mm (Rear Wall A) 26.5mm (Rear Wall C)
<b>Cable Diameter</b>	Self drilling (Rear Wall C)
<b>Cable Gland Seal</b>	TPE



The mount provides good heat dissipation



Order Numbers (please specify the camera type for each order!):

Enclosure Size	Rear Wall	Order Number	Enclosure Size	Rear Wall	Order Number
M, 3" Window	A	2X.X65.180	L, 3" Germanium Window, for e.g. Flir A600	C	2X.X68.250
	C	2X.X66.180			
	D	2X.X67.180			
L, 3" Window	A	2X.X65.250	XL, 3" Window	A	2X.X65.300
	C	2X.X66.250		C	2X.X66.300
	D	2X.X67.250		D	2X.X67.300

### Accessories:

Product	Image	Order No.	Product	Image	Order No.	Product	Image	Order No.
2" Wind Curtain		50.100.010	Cooling Module		60.100.020	Mounting Kit 7		5.070.000
3" Wind Curtain		50.100.021	Corrugated Tube 28mm		20.000.006	Mounting Kit 9		5.090.000
Dome Window		20.040.015	Mounting Kit 1		5.010.000	Mounting Kit 15		5.150.000
30mm Extension		15.030.030	Mounting Kit 2		5.020.000	Mounting Kit 16		5.160.000
60mm Extension		15.030.085	Mounting Kit 6		5.060.000	Mounting Kit 17		5.170.000
M72 Front Lid		20.040.018				Mounting Tool		90.000.004



### Benefits:

- Perfect for cameras with 90° viewing direction
- Robust construction
- High IP protection class
- High chemical resistance
- Vibration-proof mounting
- Camera mount included



### Technical Details:

<b>Inner Width</b>	68mm
<b>Inner Length</b>	150mm
<b>Max. Camera Height</b> [incl. lens]	36mm [42mm] (S) 36mm [72mm] (ST)
<b>Enclosure Dimensions</b> (w x h x l, no cable gland)	175 x 80 x 62mm (S) 175 x 80 x 92mm (ST)
<b>Window Aperture</b>	45mm (2" window)
<b>Standard Window</b>	BK7, double sided ARC
<b>2" IR Mirror</b>	Order Number: 20.000.010
<b>2" Sapphire</b>	Order Number: 20.000.016
<b>2" Germanium</b>	Order Number: 20.000.017
<b>2" Acrylic, uncoated</b>	Order Number: 20.000.027
<b>2" Acrylic, double sided AR</b>	Order Number: 20.000.029
<b>Window Seal</b>	EPDM
<b>Protection Class</b>	IP66 (Nema 4) IP67 (Nema 6)

<b>Weight</b>	Approx. 710g (S) Approx. 880g (ST)
<b>Enclosure Material</b>	Powder Coated Aluminum
<b>Enclosure Seals</b>	Polyurethane
<b>Cable Gland Aperture</b> (max. connector size)	20mm
<b>Cable Diameter</b>	Self drilling
<b>Cable Gland Seal</b>	TPE



The mount provides good heat dissipation

Order Numbers (please specify the camera type for each order!):

<b>Chameleon S</b>	20.100.062
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<b>Chameleon ST</b>	20.100.092
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## Benefits:

- Electro-polished V4A stainless steel AISI 316L
- Hygienic design
- Optimized for Sick Inspector
- Perfect for cameras with 90° viewing direction
- Robust construction
- High IP protection class
- High chemical resistance
- Vibration-proof mounting
- Camera mount included



## Technical Details:

<b>Inner Width</b>	79mm
<b>Inner Length</b>	188mm
<b>Max. Camera Height (incl. lens)</b>	38mm
<b>Enclosure Dimensions (w x h x l, no cable gland)</b>	198 x 89 x 71.5mm
<b>Window Aperture</b>	37mm
<b>Standard Window</b>	BK7, double sided ARC
<b>Window Seal</b>	FDA approved
<b>Protection Class</b>	IP66 (Nema 4) IP67 (Nema 6)

<b>Weight</b>	Approx. 3000g
<b>Enclosure Material</b>	Electro-polished V4A stainless steel AISI 316L
<b>Enclosure Seals</b>	FDA approved
<b>Cable Gland Aperture (max. connector size)</b>	26.5mm
<b>Cable Diameter</b>	Self drilling
<b>Cable Gland Seal</b>	TPE (TPEV or hygienic cable glands on request)

## Order Number (please specify the camera type!):

<b>Chameleon M</b>	20.102.047
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The mount provides good heat dissipation



### Benefits:

- Robust construction
- High IP protection class
- High chemical resistance
- Vibration-proof mounting
- Camera mount included
- Perfect for cameras with 90° viewing direction
- Integration of ring lights possible
- Dome window option



### Technical Details:

<b>Inner Width</b>	111mm
<b>Inner Length</b>	204mm
<b>Max. Camera Height</b> (incl. lens, +30mm or +60mm with extension)	48mm (L65) 58mm (L75) 63mm (L80) 73mm (L90)
<b>Enclosure Dimensions</b> (w x h x l, without cable gland)	220 x 120 x 65mm (L65) 220 x 120 x 75mm (L75) 220 x 120 x 80mm (L80) 220 x 120 x 90mm (L90)

<b>Window Aperture</b>	45mm (2" window) 76mm (3" window)
<b>Standard Window</b>	BK7, double sided ARC
<b>2" IR Mirror</b>	Order Number: 20.000.010
<b>2" Sapphire</b>	Order Number: 20.000.016
<b>2" Germanium</b>	Order Number: 20.000.017
<b>3" Germanium</b>	Order Number: 20.000.018
<b>2" Acrylic, uncoated</b>	Order Number: 20.000.027
<b>2" Acrylic, double sided AR</b>	Order Number: 20.000.029
<b>3" Acrylic, double sided AR</b>	Order Number: 20.000.033
<b>Window Seal</b>	EPDM

<b>Protection Class</b>	IP66 (Nema 4) IP67 (Nema 6)
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<b>Weight</b>	Approx. 1500g (L65) Approx. 1600g (L75) Approx. 1700g (L80) Approx. 1800g (L90)
<b>Enclosure Material</b>	Powder Coated Aluminum
<b>Enclosure Seals</b>	Polyurethane

<b>Cable Gland Aperture</b> (max. connector size)	20mm
<b>Cable Diameter</b>	Self drilling
<b>Cable Gland Seal</b>	TPE



The mount guarantees good heat dissipation



The components can be combined in multiple variations to adapt to the height of the camera/lens combination

Order Numbers (please specify the camera type!):

Chameleon L	
Enclosure Type	Order Number
L65	20.105.065
L75	20.105.075
L80	20.105.080
L90	20.105.090



Accessories:

Product	Image	Order No.	Product	Image	Order No.	Product	Image	Order No.
2" Wind Curtain		50.100.010	Moun. Plate Crosswise		20.105.998 for L only	Mounting Kit 7		5.070.000
3" Wind Curtain		50.100.021 for L only	Moun. Plate Lengthwise		20.105.999 for L only	Mounting Kit 9		5.090.000
Dome Window		15.030.085 for L only	Mounting Plate S		20.105.997 for S only	Mounting Kit 15		5.150.000
30mm Extension		15.030.03 for L only	Mounting Kit 1		5.010.000	Mounting Kit 16		5.160.000
60mm Extension		15.030.085 for L only	Mounting Kit 2		5.020.000	Mounting Kit 17		5.170.000
M72 Front Lid		20.040.018 for L only	Mounting Kit 6		5.060.000	Mounting Tool		90.000.004 for L only



### Benefits:

- Robust construction
- High IP protection class
- High chemical resistance
- Vibration-proof mounting
- Camera mount included
- Nine separate windows prevent reflections of the LED lights into the lens
- Tested and approved by BASLER
- Good heat dissipation thanks to heat conductive tape between camera and enclosure
- Manufacturers glare shield not required



### Technical Details:

<b>Dimensions</b> (w x h x l, without cable gland and dovetail profiles)	220 x 120 x 90mm
<b>Weight</b> (without dovetail profiles)	Approx. 1800g

<b>Window Material</b>	BK7, double sided ARC
<b>Window Diameter</b>	16.5mm
<b>Window Seal</b>	Hytrell

<b>Colour</b>	Light grey, RAL 7001 other colours on request
<b>Enclosure Material</b>	Powder Coated Aluminum
<b>Enclosure Seals</b>	Polyurethane

<b>Options</b>	- Dovetail profiles - Pressure equalising valve for outdoor use
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<b>Temperature Range</b>	-40 to +100°C
<b>Protection Class</b>	IP66 (Nema 4) IP67 (Nema 6)

<b>Cable Gland Aperture</b> (max. connector size)	16.5mm
<b>Cable Diameter</b>	4-6.5mm
<b>Cable Gland Seal</b>	TPE



The mount guarantees good heat dissipation





Only a few components form the enclosure for the Basler Time-of-Flight camera

Accessories:

Product	Image	Order No.	Product	Image	Order No.
Mounting Kit 1		5.010.000	Mounting Kit 9		5.090.000
Mounting Kit 2		5.020.000	Mounting Kit 15		5.150.000
Mounting Kit 6		5.060.000	Mounting Kit 16		5.160.000
Mounting Kit 7		5.070.000	Mounting Kit 17		5.170.000

Order Numbers:

Chameleon TOF	
Enclosure Type	Order Number
Without dovetail profiles	20.105.190
Including dovetail profiles	20.105.191





### Benefits:

- Robust construction
- High IP protection class
- High chemical resistance
- Vibration-proof mounting
- Camera mount included
- BK7 or acrylic windows available
- Good heat dissipation thanks to heat conductive tape between camera and enclosure
- Easy assembly



### Technical Details:

<b>Dimensions</b> (l x w x h, without cable gland and dovetail mounting plate)	230 x 200 x 111mm
<b>Weight</b> (without dovetail profiles)	Approx. 3000g

<b>Window Materials</b>	BK7, double sided ARC Acrylic, double sided ARC
<b>Window Aperture</b>	45mm
<b>Window Seal</b>	Hytrek (BK7) FKM (acrylic)

<b>Colour</b>	Light grey, RAL 7001 other colours on request
<b>Enclosure Material</b>	Powder Coated Aluminum
<b>Enclosure Seals</b>	Polyurethane

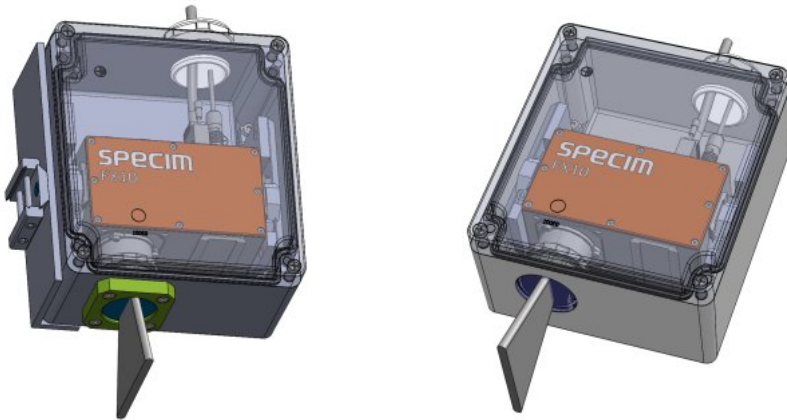
<b>Options</b>	- Dovetail mounting plate - Pressure equalising valve for outdoor use
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<b>Temperature Range</b>	-40 to +100°C
<b>Protection Class</b>	IP66 (Nema 4) IP67 (Nema 6)

<b>Cable Gland Aperture</b> (max. connector size)	42mm
<b>Cable Diameter</b>	Self-drilling
<b>Cable Gland Seal</b>	TPE



The mount guarantees good heat dissipation



The enclosure is in two versions available, with acrylic or BK7 window

### Order Numbers:

Chameleon FX			
Enclosure Type	Order Number	Enclosure Type	Order Number
FX10 BK7 window	20.105.290	FX17 BK7 window	20.105.292
FX10 acrylic window	20.105.291	FX17 acrylic window	20.105.293
Dovetail mounting plate	20.105.995		

### Accessories:

Product	Image	Order No.	Product	Image	Order No.
Mounting Kit 1		5.010.000	Mounting Kit 9		5.090.000
Mounting Kit 2		5.020.000	Mounting Kit 15		5.150.000
Mounting Kit 6		5.060.000	Mounting Kit 16		5.160.000
Mounting Kit 7		5.070.000	Mounting Kit 17		5.170.000





## Benefits:

- For cylindrical laser with 19 and 20mm diameter
- Robust construction
- Compact size
- Small dead weight
- High IP protection class
- High chemical resistance
- Vibration-proof mounting
- Laser mount included
- Good heat dissipation



## Technical Details:

<b>Laser Diameter</b>	19mm 20mm
<b>Inner Length</b>	120mm 150mm 180mm
<b>Enclosure Dimensions</b> (w x h x l, incl. cable gland)	34 x 34 x 150mm 34 x 34 x 180mm 34 x 34 x 210mm
<b>Window Aperture</b>	28mm
<b>Standard Window</b> <b>Saphire</b>	BK7, double sided ARC Order Number: 20.000.041
<b>Window Seal</b>	Hytrel
<b>Protection Class</b>	IP66 (Nema 4)

<b>Weight</b> (incl. laser mount)	Approx. 240g Approx. 270g Approx. 300g
<b>Enclosure Material</b>	Anodized Aluminum
<b>Enclosure Seals</b>	EPDM
<b>Cable Gland Aperture</b> (max. connector size)	13.5mm
<b>Cable Diameter</b>	4-6.5mm
<b>Cable Gland Seal</b>	TPE














The mount guarantees good heat dissipation



Front Lid    Extension    120mm    150mm    180mm    RearWall  
                                  Profile            Profile            Profile

## Order Numbers:

## Accessories:

Product	Image	Order Number	Product	Image	Order Number
20mm to 40mm Adapter Bracket, to use laser with standard profiles		10.049.051	13mm Adapter, laser and Orca (orthogonal bracket) in the same optical axis		40.001.007
Vertical Laser Mount, to fix the enclosure vertical to a 40mm profile		40.001.005	29mm Adapter, laser and Orca (rotary mount) in the same optical axis		40.001.008
Rotary Laser Mount, to fix the enclosure rotary to a 40mm profile		40.001.006	25mm Enclosure Extension, enables focussing, while attached in the housing		40.010.025
20mm Bracket		10.049.049	Quicklock mount to fix a 19mm laser in the Gecko enclosure		40.010.012
28 x 28mm Adapter Plate, for 2x M4 csk screws		40.001.009	Cooling Module for Laser Enclosures		40.010.012
Air Nozzle for Laser Enclosures		10.100.020			

# Enclosure Extensions

## Benefits:

- Enables easier lens access
- Extension of standard enclosure length
- For Salamander and Orca enclosures
- Front or backside assembly possible
- 30mm or 60mm length
- IP protection class is conserved



## Technical Details:



30mm Extension for Salamander	
Seal	NBR
Dimensions (w x h x l)	66 x 66 x 30mm 55mm (inner diameter)
Weight	116g
Order Number	15.015.030

60mm Extension for Salamander	
Seals	NBR
Dimensions (w x h x l)	66 x 66 x 60mm 55mm (inner diameter)
Weight	234g
Order Number	15.015.060



30mm Extension for Orca, Mammoth and Chameleon	
Seal	EPDM
Dimensions d x l, without thread)	96 x 30mm 78mm (inner diameter)
Weight	158g
Order Number	15.030.030

60mm Extension for Orca, Mammoth and Chameleon	
Seals	EPDM
Dimensions (d x l, without thread)	96 x 60mm 78mm (inner diameter)
Weight	290g
Order Number	15.030.085



## Benefits:

- Precise re-positioning after camera disassembly
- The ring remains inside the enclosure and "remembers" the exact position
- For Salamander, Orca, Nautilus, Dolphin und Shark
- Easy handling



## Technical Details:



Position Ring for Feuer-/Salamander/Dolphin	
Dimensions (d x l, without screws)	55 x 13mm
Weight	26g
Order Number	20.020.003

Position Ring for Orca/Nautilus/Shark	
Dimensions (d x l, without screws)	85 x 10mm
Weight	38g
Order Number	20.040.002

## Benefits:

- Allows image acquisition at limited space
- Suitable for mid and long focal lenses
- Avoids costly prisms
- 4-6λ surface mirror, reflection >90%



## Technical Details:



Deflection Mirror	
Reflection (visible light)	>90%
Dimensions (l x w x h)	168 x 56 x 85mm
Weight	458g
Order Number	20.020.004

# Pneumatic Shutter

## Benefits:

- Seals the front window completely
- Can be used in combination with a Wind Curtain
- Compact size
- Robust construction
- For Salamander, Gecko and Orca enclosures



## Technical Details:



For Salamander and Gecko enclosures	
<b>Pneumatic Connector</b>	4mm
<b>Max. Pressure</b>	10bar
<b>Seals</b>	EPDM
<b>Operating Temperature</b>	-10° to +60°C
<b>Operating Range</b>	Approx. 85mm
<b>Dimensions (l x w x h, flap open)</b>	240 x 74 x 64mm
<b>Weight</b>	284g
<b>Order Number</b>	50.200.010

For Orca enclosures	
<b>Pneumatic Connector</b>	4mm
<b>Max. Pressure</b>	10bar
<b>Seals</b>	EPDM
<b>Operating Temperature</b>	-10° to +60°C
<b>Operating Range</b>	Approx. 110mm
<b>Dimensions (l x w x h, flap open)</b>	267 x 96 x 64mm
<b>Weight</b>	330g
<b>Order Number</b>	50.200.021







## Benefits:

- Extends cleaning intervals
- Compact size
- Easy handling
- Robust construction
- Extremely economical
- Can minimize dust or light mist on the front window



Wind Curtain for 2" windows (old)	
Connector	4mm
Pressure Range	-0.2 to 10bar
Air consumption	~160l/min@5bar
Operating Temp.	-10° to +60°C
Dimensions (l x w x h)	86 x 66 x 10mm
Weight	75g
Order Number	50.100.009

Wind Curtain for 2" windows	
Connector	4mm
Pressure Range	-0.2 to 10bar
Air consumption	~160l/min@5bar
Operating Temp.	-10° to +60°C
Dimensions (l x w x h)	85 x 65 x 13mm
Weight	65g
Order Number	50.100.010

Wind Curtain for 3" windows	
Connector	4mm
Pressure Range	-0.95 to 20bar
Air consumption	~250l/min@5bar
Operating Temp.	0 to +120°C
Dimensions (l x w x h)	110 x 95 x 13mm
Weight	115g
Order Number	50.100.011

Air Nozzle for 20mm profile (Laser)	
Connector	4mm
Pressure Range	-0.2 to 10bar
Air consumption	~160l/min@5bar
Operating Temp.	-10° to +60°C
Dimensions (l x w x h)	90 x 28 x 35mm
Weight	50g
Order Number	50.100.020

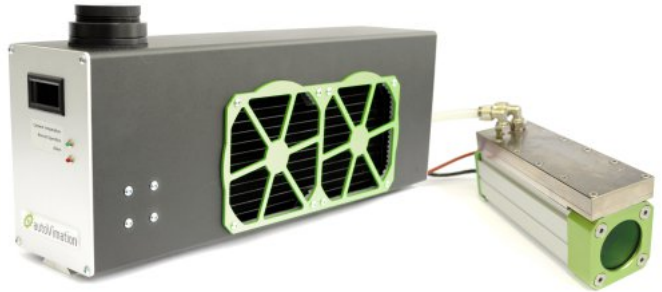
Air Nozzle for 30mm profile (Colibri)	
Connector	4mm
Pressure Range	-0.2 to 10bar
Air consumption	~160l/min@5bar
Operating Temp.	-10° to +60°C
Dimensions (l x w x h)	115 x 44 x 36mm
Weight	80g
Order Number	50.100.023

Air Nozzle for 40mm profile	
Connector	4mm
Pressure Range	-0.2 to 10bar
Air consumption	~160l/min@5bar
Operating Temp.	-10° to +60°C
Dimensions (l x w x h)	115 x 64 x 40mm
Weight	140g
Order Number	50.100.025

# Water Cooling System

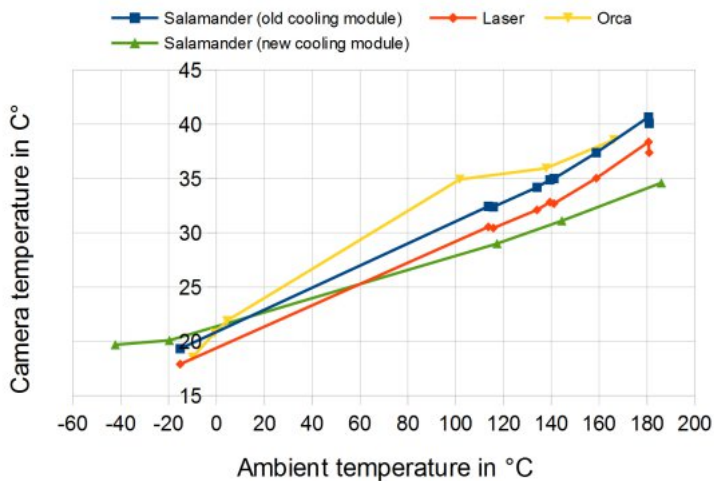
## Benefits:

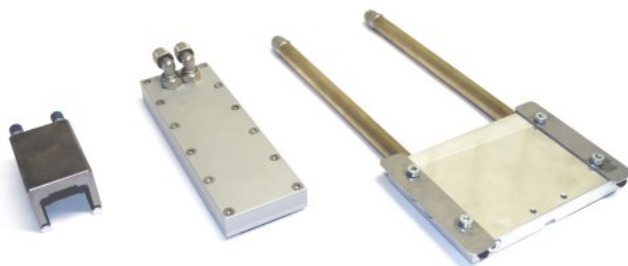
- Extends the temperature range for the use of cameras up to  $-50^{\circ}\text{C}$  to  $+200^{\circ}\text{C}$
- Automatic cooling and heating therefore perfect for the use in clima chambers
- High efficiency
- Cooling or heating of up to five enclosures with one single Cooling Unit
- Manifold safety features
- No cooling liquid is pumped through the enclosure (expection: Mammoth cooling module)
- Easy handling



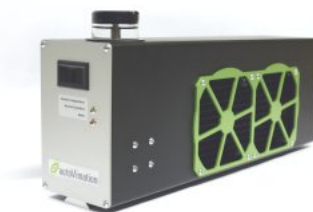
## Camera and Laser temperature with water cooling

all values valid for our testing conditions only!





Laser Cooling Module		Standard Cooling Module		Mammoth Cooling Module	
<b>Tube Connectors</b>	4mm	<b>Tube Connectors</b>	1/4" (~8mm)	<b>Tube Connectors</b>	1/4" (~8mm)
<b>Filling Capacity</b>	Approx. 10ml	<b>Filling Capacity</b>	Approx. 40ml	<b>Filling Capacity</b>	Approx. 40ml
<b>Dimensions (l x w x h)</b>	90 x 28 x 35mm	<b>Dimensions (l x w x h)</b>	115 x 44 x 36mm	<b>Dimensions (l x w x h)</b>	115 x 64 x 40mm
<b>Weight</b>	Approx. 150g	<b>Weight</b>	Approx. 650g	<b>Weight</b>	Approx. 1250g
<b>Order Number</b>	60.100.030	<b>Order Number</b>	60.100.010	<b>Order Number</b>	60.100.020

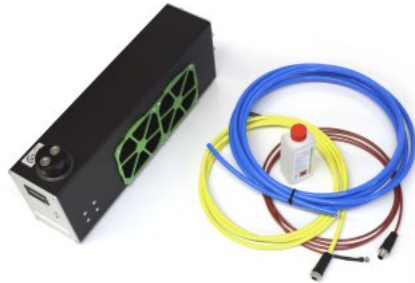


Water Cooling Unit	High Power
<b>Tube Connectors</b>	1/4" (~8mm)
<b>Max. Flow</b>	15l/min
<b>Max. Camera Distance</b>	20m
<b>Max. Pumping Height</b>	5.7m
<b>Input Voltage</b>	12V/DC
<b>Filling Capacity</b>	Approx. 400ml
<b>Max. Power Consumption</b>	Approx. 25W
<b>Max. Switching Power</b>	Approx. 5W
<b>Safety Features (incl. alarm function)</b>	Constant monitoring of: - Camera temperature - Flow and fan
<b>Dimensions (l x w x h)</b>	456 x 105 x 203mm
<b>Weight</b>	Approx. 5.40kg
<b>Order Number</b>	60.101.520







# Water Cooling System

Included in the system:

- Water Cooling Unit
- 250ml cooling concentrate
- 6m Polyurethane tube
- 3m high temp. thermometer cable incl. sensor
- 3m DC power cable



## Accessories:

Product	Image	Order Number
8 x 1mm Polyurethane (PU) water tube, -20 to +80°C, filling capacity ~50ml/m, price per meter		60.101.478
6.35 x 9.5mm Polyurethane (PU) water tube, drag chain usable, -20 to +60°C, filling capacity ~40ml/m, price per meter		60.101.474
8 x 1mm Teflon high temperature water tube, -40 to +200°, filling capacity ~50ml/m, price per meter		60.101.477
Fitting to connect two 8 x 1mm water tubes		60.100.501
Quick disconnect coupling for two 8 x 1mm water tubes, 0 – 71°C, max. 8.3bar		60.101.480
Pressure control valve (TÜV safety valve) with connectors		60.101.479
Divider for parallel cooling of camera (8mm tube) and laser (4mm) enclosures		60.100.071
4 x 1mm Polyethylene (PE) water tube (Laser), -20 to +60°C, price per meter		60.101.476
250ml cooling concentrate		60.101.333
Thermometer cable extension (>3m), price per meter		60.100.500
Power supply 12V/DC, 40W, Din rail mount		60.101.422

**Benefits:**

- Controlled heating
- No overheating possible
- Up to two plates with one controller
- Easy handling
- Usable in combination with the sun roof

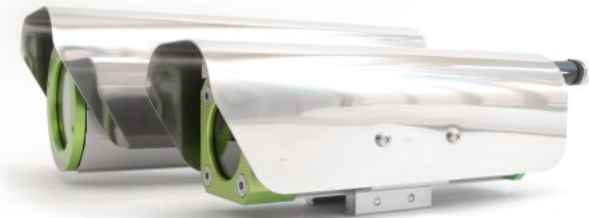


Product	Image	Order Number
Controlled heating plate for Orca/Gecko/Salamander from size M, IP65, incl. controller, temperature sensor and 5m cable, heats to max. 20°C, 39W, 24V/DC		70.100.011
Set of two heating plates for Orca/Gecko/Salamander from size M, IP65, with one controller and temperature sensor, heats to max. 20°C, 78W, 24V/DC		70.100.012

## Sun Roof

**Benefits:**

- Highly reflective stainless steel
- Insulated to enclosure
- Easy assembly
- Adjustable position
- Usable in combination with electric heating plate

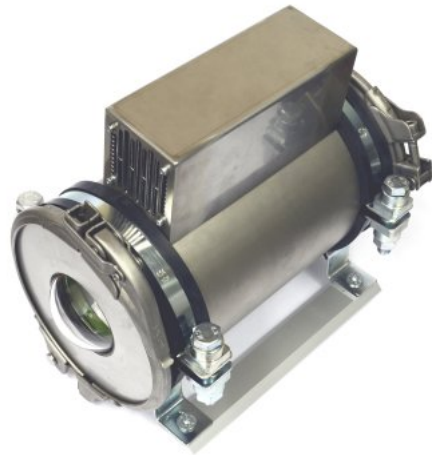


	Sun roof for Salamander and Gecko			Sun roof for Orca		
Size	S	M	L	S	M	L
<b>Length</b>	192mm	245mm	275mm	187mm	237mm	307mm
<b>W x H</b>	108 x 78mm	108 x 78mm	108 x 78mm	140 x 90mm	140 x 90mm	140 x 90mm
<b>Weight</b>	400g	480g	550g	490g	600g	770g
<b>Order Number</b>	20.010.001	20.010.002	20.010.003	20.011.001	20.011.002	20.011.003



### Benefits:

- Fully automatic operation, heating or cooling
- Only DC voltage required
- For camera operation in up to 50°C ambient temperature with 350W/m<sup>2</sup> sun radiation
- For camera operation in up to 70°C ambient temperature without sun radiation
- Permanent temperature control
- Robust, stainless steel outer enclosure
- Good UV and ageing resistance
- IP67 (inner enclosure)/IP54 (outer enclosure)
- Easy handling
- Proven over years in the Mojave desert



### Technical Details:

<b>Max. Camera Size (w x h)</b>	60 x 60mm
<b>Max. Lens Diameter</b>	85mm 78mm (lid)
<b>Inner Length</b>	277mm (Size M) 335mm (Size L)
<b>Enclosure Dimensions (w x h x l, without cable gland)</b>	215 x 252 x 300 (Size M) 215 x 252 x 500mm (Size L)

<b>Cable Gland Aperture (max. connector size)</b>	26.5mm
<b>Cable Diameter</b>	Self drilling
<b>Cable Gland Seal</b>	TPE

<b>Protection Class</b>	
Outer Enclosure	IP54
Inner Enclosure	IP66/IP67 (Nema 4 and 6)

<b>Weight (incl. camera mount)</b>	Approx. 6.70kg (Size M) Approx. 7.80kg (Size L)
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<b>Material</b>	
Outer Enclosure	V2A Stainless Steel
Inner Enclosure	Anodized Aluminum
<b>Enclosure Seals</b>	EPDM

<b>Window Aperture</b>	65mm
<b>Standard Window</b>	BK7, double sided ARC
<b>3" Germanium</b>	Order Number: 20.000.018
<b>3" Acrylic, double sided AR</b>	Order Number: 20.000.033
<b>Window Seal</b>	EPDM



The mount guarantees excellent heat dissipation

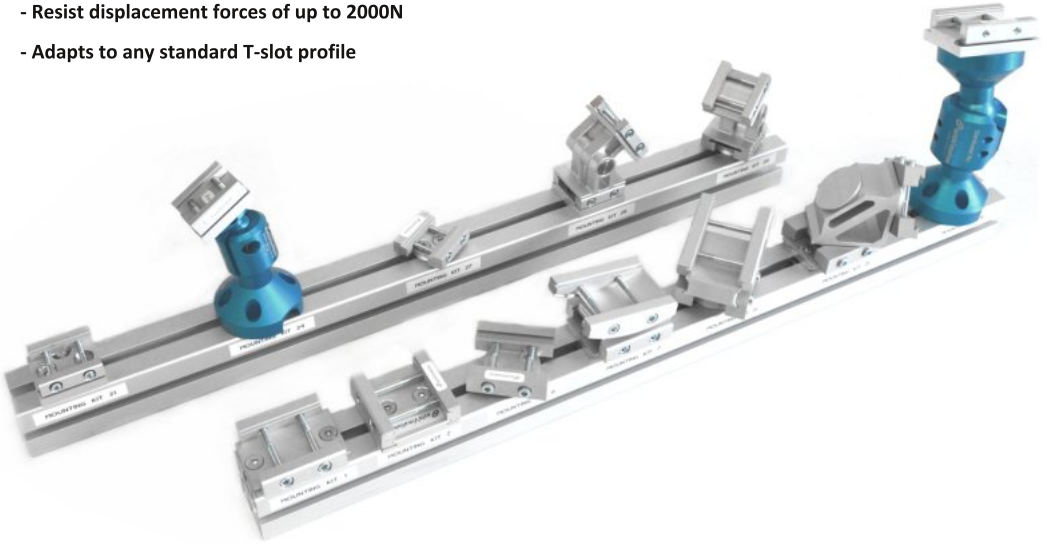



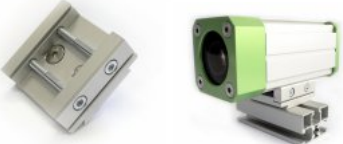
Product	Order Number
<b>Turtle M</b> Enclosure with up to 70W cooling and 90W heating power, BK7 window with 65mm aperture diameter, outer enclosure stainless steel, wall mounting brackets, 5m thermometer and power supply cable (External Peltier controller and power supply required).	70.300.242
<b>Turtle MD</b> Enclosure with up to 70W cooling and 90W heating power, dome window for fisheye lenses, outer enclosure stainless steel, wall mounting brackets, 5m thermometer and power supply cable (External Peltier controller and power supply required).	70.300.245
<b>Turtle L</b> Enclosure with up to 70W cooling and 90W heating power, BK7 window with 65mm aperture diameter, outer enclosure stainless steel, wall mounting brackets, 5m thermometer and power supply cable (External Peltier controller and power supply required).	70.300.250
<b>Turtle LG</b> Enclosure with up to 70W cooling and 90W heating power, G window with 65mm aperture diameter, outer enclosure stainless steel, wall mounting brackets, 5m thermometer and power supply cable (External Peltier controller and power supply required).	70.300.260
<b>Peltier Controller</b> Din rail mount, 16A max. current, digital display, programmable heating- and cooling levels, temperature control with emergency shut down function, max. ambient temperature, external 24V/DC power supply required.	70.300.270
<b>Power supply for Turtle enclosure</b> 24V/DC, 150W, Din rail mount.	70.200.253

# Mounting Kits

## Benefits:

- Easy assembly and 90° image rotation
- Flexible adjustment of working distance and orientation
- Robust construction out of anodized aluminum
- Vibration proof
- Resist displacement forces of up to 2000N
- Adapts to any standard T-slot profile



Product	Images	Order Number
<b>Mounting Kit 1</b> - Parallel mounting pattern - 90° image rotation - Working distance adjustment		5.010.000
<b>Mounting Kit 2</b> - Vertical mounting pattern - 90° image rotation - Working distance adjustment		5.020.000





Product	Image	Order Number
<b>Mounting Kit 6</b> <ul style="list-style-type: none"><li>- 360° pan</li><li>- 90° image rotation</li><li>- Working distance adjustment</li></ul>		5.060.000
<b>Mounting Kit 7</b> <ul style="list-style-type: none"><li>- +/- 8° tilt</li><li>- 90° image rotation</li><li>- Working distance adjustment</li></ul>		5.070.000
<b>Mounting Kit 9</b> <ul style="list-style-type: none"><li>- 360° pan</li><li>- +/- 8° tilt</li><li>- 90° image rotation</li><li>- Working distance adjustment</li></ul>		5.090.000
<b>Mounting Kit 15</b> <ul style="list-style-type: none"><li>- 360° pan</li><li>- 360° tilt</li><li>- 90° image rotation</li><li>- Working distance adjustment</li></ul>		5.150.000

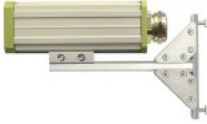






# Mounting Kits

Product	Image	Order Number
<b>Mounting Kit 16</b> - 360° pan - >120° tilt - 90° image rotation - Working distance adjustment		5.160.000
<b>Mounting Kit 17</b> - 360° pan - >120° tilt - 90° image rotation - Working distance adjustment - Adapts to 40mm dovetail profile		5.170.000
<b>Mounting Kit 18</b> - 360° pan - >30° tilt - 90° image rotation - Working distance adjustment		5.180.000
<b>Mounting Kit 19</b> - 360° pan - >30° tilt - 90° image rotation - Working distance adjustment - Adapts to 40mm dovetail profile		5.190.000
<b>Clamp Handle for Knuckle</b> - Tool-free adjustment - Perfect for laboratory use		10.100.001
<b>V2A Cylinder Head Screw UNC 10-24 3/4"</b> - for Mounting Kit 16 and 17 - Recommended for outdoor use		40.043
<b>V2A Cylinder Head Screw UNC 10-24 1/2"</b> - for Mounting Kit 18, 19, 24 and 26 - Recommended for outdoor use		40.044



Product	Image	Order Number
<p><b>Mounting Kit 21</b></p> <ul style="list-style-type: none"> <li>- Parallel mounting pattern</li> <li>- Vertical mounting pattern</li> <li>- 90° image rotation</li> <li>- Working distance adjustment</li> <li>- For Colibri enclosures</li> </ul>		<p>5.210.000</p>
<p><b>Mounting Kit 24</b></p> <ul style="list-style-type: none"> <li>- 360° endless pan</li> <li>- &gt;35° tilt</li> <li>- 90° image rotation</li> <li>- Working distance adjustment</li> <li>- For Colibri enclosures</li> </ul>		<p>5.240.000</p>
<p><b>Mounting Kit 26</b></p> <ul style="list-style-type: none"> <li>- 360° endless pan</li> <li>- &gt;35° tilt</li> <li>- 90° image rotation</li> <li>- Working distance adjustment</li> <li>- For Colibri enclosures</li> </ul>		<p>5.260.000</p>
<p><b>Mounting Kit 27</b></p> <ul style="list-style-type: none"> <li>- 360° endless pan</li> <li>- 90° image rotation</li> <li>- Working distance adjustment</li> <li>- For Colibri enclosures</li> </ul>		<p>5.270.000</p>
<p><b>Mounting Kit 28</b></p> <ul style="list-style-type: none"> <li>- +/- 90° tilt</li> <li>- 90° image rotation</li> <li>- Working distance adjustment</li> <li>- For Colibri enclosures</li> </ul>		<p>5.280.000</p>
<p><b>Mounting Kit 29</b></p> <ul style="list-style-type: none"> <li>- 360° endless pan</li> <li>- +/- 90° tilt</li> <li>- 90° image rotation</li> <li>- Working distance adjustment</li> <li>- For Colibri enclosures</li> </ul>		<p>5.290.000</p>

# Wall Mounts

Product	Components	Image	Order Number
<b>Wall Mount 101</b> (without enclosure) - Parallel mounting - 90° image rotation - Working distance adjustment	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 10.040.201		7.101.XXX Arm length (mm)
<b>Wall Mount 102</b> (without enclosure) - Vertical mounting - 90° image rotation - Working distance adjustment	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 10.044.984		7.102.XXX Arm length (mm)
<b>Wall Mount 106</b> (without enclosure) - 360° endless pan - 90° image rotation - Working distance adjustment	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 10.040.860		7.106.XXX Arm length (mm)
<b>Wall Mount 107</b> (without enclosure) - +/- 8° tilt - 90° image rotation - Working distance adjustment	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 10.054.638		7.107.XXX Arm length (mm)
<b>Wall Mount 109</b> (without enclosure) - 360° endless pan - +/- 8° tilt - 90° image rotation - Working distance adjustment	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 10.054.638 1x 10.040.860		7.109.XXX Arm length (mm)
<b>Wall Mount 115</b> (without enclosure) - 360° endless pan - 360° endless tilt - 90° image rotation - Working distance adjustment	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 2x 10.040.202 1x 10.045.852		7.115.XXX Arm length (mm)
<b>Wall Mount 117</b> (without enclosure) - 360° endless pan - >120° tilt - 90° image rotation - Working distance adjustment	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 5.170.000		7.117.XXX Arm length (mm)



Product	Components	Image	Order Number
<b>Wall Mount 121</b> (without enclosure) - Parallel mounting - 90° image rotation - Working distance adjustment - For Colibri enclosures	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 10.062.979		7.121.XXX Arm length (mm)
<b>Wall Mount 122</b> (without enclosure) - Vertical mounting - 90° image rotation - Working distance adjustment - For Colibri enclosures	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 10.062.979 1x 6.036.199 1x 10.062.830		7.122.XXX Arm length (mm)
<b>Wall Mount 126</b> (without enclosure) - 360° endless pan - >30° tilt - 90° image rotation - Working distance adjustment - For Colibri enclosures	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 5.260.000		7.126.XXX Arm length (mm)
<b>Wall Mount 127</b> (without enclosure) - 360° endless pan - 90° image rotation - Working distance adjustment - For Colibri enclosures	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 10.062.979 1x 6.036.199 2x 10.030.202 1x 10.030.857		7.127.XXX Arm length (mm)
<b>Wall Mount 128</b> (without enclosure) - +/- 90° tilt - 90° image rotation - Working distance adjustment - For Colibri enclosures	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 10.062.979 1x 6.036.201 1x 10.062.830		7.128.XXX Arm length (mm)
<b>Wall Mount 129</b> (without enclosure) - 360° endless pan - +/- 90° tilt - 90° image rotation - Working distance adjustment - For Colibri enclosures	1x 6.041.144 2x 10.059.296 1x 1.020.XXX (length in mm) 1x 10.062.979 1x 6.036.199 2x 10.030.202 1x 10.030.857 1x 6.036.201, 1x 10.062.830		7.129.XXX Arm length (mm)






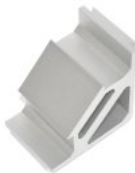
# Mounting Brackets

Product	Image	Order Number
<b>Parallel Slim Bracket</b> <ul style="list-style-type: none"><li>- Parallel assembly of two dovetail profiles</li><li>- For 40mm dovetail profile</li></ul>		10.040.201
<b>Parallel Slim Bracket with Hand Knob</b> <ul style="list-style-type: none"><li>- Parallel assembly of two dovetail profiles</li><li>- Tool-free assembly</li><li>- Perfect for laboratory use</li><li>- For 40mm dovetail profile</li></ul>		10.054.598
<b>Parallel Slim Bracket Short</b> <ul style="list-style-type: none"><li>- Parallel assembly of two dovetail profiles</li><li>- For lighter objects</li><li>- For 40mm dovetail profile</li></ul>		10.041.190
<b>Parallel Wide Bracket</b> <ul style="list-style-type: none"><li>- Parallel assembly of two dovetail profiles</li><li>- For 40mm dovetail profile</li></ul>		10.045.942
<b>Adapter Bracket 30mm to 40mm Dovetail Profile</b> <ul style="list-style-type: none"><li>- Parallel assembly of a 30mm dovetail profile (Colibri) with a 40mm dovetail profile</li></ul>		10.062.979
<b>Adapter Bracket 20mm to 40mm Dovetail Profile</b> <ul style="list-style-type: none"><li>- Parallel assembly of a 20mm dovetail profile (Laser enclosure) with a 40mm dovetail profile</li></ul>		10.049.051



Product	Image	Order Number
<p><b>Repeatable Position Bracket</b></p> <ul style="list-style-type: none"><li>- Accurate re-positioning of camera enclosures</li><li>- Enables the use of one camera in several positions without re-adjustment</li><li>- For 40mm dovetail profile</li></ul>		10.044.421

# Angles

Product	Image	Order Number
<b>Angle Small</b> <ul style="list-style-type: none"><li>- For light mechanical stress</li><li>- For 40mm dovetail profile</li></ul>		10.044.607
<b>Angle Medium</b> <ul style="list-style-type: none"><li>- For medium mechanical stress</li><li>- For 40mm dovetail profile</li></ul>		10.059.296
<b>Angle Large</b> <ul style="list-style-type: none"><li>- For heavy mechanical stress</li><li>- For 40mm dovetail profile</li></ul>		10.059.297
<b>45° Angle</b> <ul style="list-style-type: none"><li>- For medium mechanical stress</li><li>- For 40mm dovetail profile</li></ul>		10.045.241
<b>Adapter Angle M8 to Dovetail Profile</b> <ul style="list-style-type: none"><li>- For heavy mechanical stress</li><li>- For assembly to T-slot profiles or any other environment with M8 screws</li><li>- For 40mm dovetail profile</li></ul>		10.045.715
<b>Adapter Angle 3x Dovetail Profile</b> <ul style="list-style-type: none"><li>- For heavy mechanical stress</li><li>- For 40mm dovetail profile</li></ul>		10.045.716











Product	Image	Order Number
<b>Rotational Adjustment Angle</b> - Multi-axle, endless 360° rotation - Usable in combination with Rotational Bracket Product Number: 10.040.202 - For 40mm dovetail profile		10.045.852

Product	Image	Order Number
<b>40mm Adapter Plate for 2x M6 CSK Screws</b> - 40mm dovetail profile		6.041.142
<b>64mm Adapter Plate for 2x M6 CSK Screws</b> - 40mm dovetail profile		6.041.141
<b>150mm Adapter Plate for 2x M6 CSK Screws</b> - 40mm dovetail profile		6.041.144
<b>90° Mounting Plate</b> - 40mm dovetail profile		6.046.199
<b>90° Mounting Plate for 2x M6 CSK Screws</b> - 40mm dovetail profile		6.046.200

# Adapter Plates/Profiles

Product	Image	Order Number
<b>Tripod Mounting Plate</b> - 1/4" and 3/8" threads - 40mm dovetail profile		6.041.935
<b>Rotational Mounting Disk for 2x M6 CSK Screws</b> - Usable in combination with Rotational Bracket Product Number: 10.040.202		6.042.388
<b>Fine Adjustment Table</b> - +/- 3mm fine adjustment in two axes - Separate locking mechanism - 40mm dovetail profile		6.045.836

Product	Image	Length in mm	Order Number
<b>8 x 40mm Dovetail Profile</b> - Single sided dovetail - Weight: 0.73kg/m - $W_x = 0.32\text{cm}^3$   $W_y = 1.36\text{cm}^3$ - Max. length 2000mm - 40mm dovetail		300	1.010.300
		500	1.010.500
		1000	1.011.000
		2000	1.012.000
		Individual	1.01X.XXX
<b>12 x 56mm Dovetail Profile</b> - Single sided dovetail - Weight: 1.62kg/m - $W_x = 1.04\text{cm}^3$   $W_y = 4.83\text{cm}^3$ - Max. length 2000mm - 40mm dovetail		300	1.050.300
		500	1.050.500
		1000	1.051.000
		2000	1.052.000
		Individual	1.05X.XXX
<b>16 x 40mm Dovetail Profile</b> - Double sided dovetail - Weight: 0.98kg/m - $W_x = 1.03\text{cm}^3$   $W_y = 1.64\text{cm}^3$ - Max. length 2000mm - 40mm dovetail		300	1.020.300
		500	1.020.500
		1000	1.021.000
		2000	1.022.000
		Individual	1.02X.XXX



Product	Image	Length in mm	Order Number
<b>66 x 66mm Light Dovetail Profile</b> - Weight: 2.19kg/m - $W_x = W_y = 13.00\text{cm}^3$ - Max. length 3000mm - 40mm dovetail		300 500 1000 2000  Individual	1.070.300 1.070.500 1.071.000 1.072.000  1.07X.XXX
<b>66 x 66mm Stable Dovetail Profile</b> - Weight: 4.00kg/m - $W_x = W_y = 23.00\text{cm}^3$ - Max. length 3000mm - 40mm dovetail		300 500 1000 2000  Individual	1.040.300 1.040.500 1.041.000 1.042.000  1.04X.XXX
<b>96 x 96mm Stable Dovetail Profile</b> - Weight: 4.77kg/m - $W_x = W_y = 37.82\text{cm}^3$ - Max. length 3000mm - 40mm dovetail		300 500 1000 2000  Individual	1.060.300 1.060.500 1.061.000 1.062.000  1.06X.XXX
<b>Cable Channel</b> - Snap on - Weight: 0.549kg/m - Max. length 2000mm - 40mm dovetail		300 500 1000 2000  Individual	1.080.300 1.080.500 1.081.000 1.082.000  1.08X.XXX

# Adapter Plates and Brackets for 30mm Dovetail

Product	Image	Order Number
<b>180° Joint</b> - +/- 90° tilt - 30mm dovetail profile		6.036.201



Product	Image	Order Number
<b>Front Adapter Colibri with 30mm Dovetail</b> <ul style="list-style-type: none"><li>- 30mm dovetail profile</li><li>- Incl. 4x M5 x 20 Torx screws</li></ul>		6.036.200
<b>Angle Small for 30mm Dovetail Profile</b> <ul style="list-style-type: none"><li>- For light mechanical stress</li><li>- For 30mm dovetail profile</li></ul>		10.034.607
<b>Angle Medium for 30mm Dovetail Profile</b> <ul style="list-style-type: none"><li>- For lmedium mechanical stress</li><li>- For 30mm dovetail profile</li></ul>		10.039.296
<b>10 x 44mm Dovetail Profile</b> <ul style="list-style-type: none"><li>- Single sided</li><li>- Weight: 1.06kg/m</li><li>- <math>W_x = 0.54\text{cm}^3</math>   <math>W_y = 2.51\text{cm}^3</math></li><li>- Max. length 2000mm</li><li>- 30mm dovetail</li></ul>		1.10X.XXX Length in mm
<b>50 x 50mm Dovetail Profile</b> <ul style="list-style-type: none"><li>- Weight: 1.53kg/m</li><li>- <math>W_x = 7.20\text{cm}^3</math>   <math>W_y = 7.20\text{cm}^3</math></li><li>- Max. length 3000mm</li><li>- 30mm dovetail</li></ul>		1.09X.XXX Length in mm

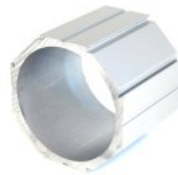
# Mounting Blocks

## Benefits:

- Robust and cost-effective camera mount
- Perfect where no overall IP protection is required
- Good heat dissipation
- Flexible mounting options
- Camera mount included



## Technical Details:



Salamander Mounting Block	
<b>Profile Material</b>	Anodized Aluminum
<b>Dimensions (w x h x l)</b> 60mm Block 100mm Block 164mm Block	66 x 66 x 60mm 66 x 66 x 100mm 66 x 66 x 164mm
<b>Weight</b> 60mm Block 100mm Block 164mm Block (without camera mount)	272g 426g 698g
<b>Order Number</b> 60mm Block 100mm Block 164mm Block (specify camera type)	15.010.060 15.010.100 15.010.164

Orca Mounting Block	
<b>Profile Material</b>	Anodized Aluminum
<b>Dimensions (w x h x l)</b>	96 x 96 x 80mm
<b>Weight</b> (without camera mount)	384g
<b>Order Number</b> (specify camera type)	15.030.080



Assembly example



## Benefits:

- Onboard flash controller
- Designed for the integration into Orca enclosures with 3" window
- Flashing with up to 570% nominal current possible
- Excellent heat dissipation
- Colors: R, G, B, IR, white
- Radiation angles: 14°, 23°, 36°, 76°
- Trigger in-/output
- LED protection due to emergency shut down
- Temperature monitoring possible
- Easy programming due to intuitive application surface



## Technical Details:

<b>Operating voltage</b>	24VDC (+-10%)	<b>Pulse Width</b>	50µs - 650ms 10µs steps
<b>Max. Power @permanent operation</b>	12W	<b>Max. Pulse Frequency</b>	1000Hz
<b>Nominal LED Current</b>	350m@100% amplitude	<b>Max. Pulse Delay</b>	10µs
<b>Amplitude Range</b>	50 - 570% (flash)	<b>Max. Jitter Delay</b>	2µs
<b>Trigger Voltage</b>	5-24VDC	<b>Dimensions (d x l)</b>	84.8 x 31mm
<b>Trigger Input Current</b>	10mA	<b>Inner Diameter</b>	36mm
<b>Programming Interface</b>	rs232@9600Baud (TTL level)	<b>Weight</b>	Approx. 150g

Color	Wave Length	Light Current	Light Efficiency	LED Type
Red	623nm	600mW	59%	OSLON SSL80 LR CQ7P
Green	528nm	90lm	87lm/W	OSLON SSL80 LT CQ7P
Blue	470nm	28lm	25lm/W	OSLON SSL80 LB CQ7P
IR	850nm	770mW@1.65W	n/a	SFH 4715A
White 1	4500K	90lm	100lm/W	OSLON SSL80 LCW CR7P.CC
White 2	4500K	144lm	144lm/W	OSLON SSL80GW CS8PM1.PM



Meganova Control User Interface

Order Numbers:

LED Color	Radiation Angle	Order Number	LED Color	Radiation Angle	Order Number
Red	14°	36.634.014	White 1 - CRI>90 - 100lm/W	14°	36.450.014
	23°	36.634.023		23°	36.450.023
	36°	36.634.036		36°	36.450.036
	76°	36.634.076		76°	36.450.076
Green	14°	36.521.014	White 2 - CRI>70 - 144lm/W	14°	36.452.014
	23°	36.521.023		23°	36.452.023
	36°	36.521.036		36°	36.452.036
	76°	36.521.076		76°	36.452.076
Blue	14°	36.465.014	IR	14°	36.860.014
	23°	36.465.023		23°	36.860.023
	36°	36.465.036		36°	36.860.036
	76°	36.465.076		76°	36.860.076

Cables	Order Number
5m Power/Trigger, angled connector	36.200.010
5m Programming, angled connector	36.200.020
5m Power/Trigger, straight connector	36.200.030
5m Programming, straight connector	36.200.040





## Benefits:

- Universal plate to mount ring lights into Orca enclosures
- 34mm inner diameter
- For flashing only



## Technical Details:

<b>Spider Ring Light Adapter Plate</b>		<b>Mounting Holes</b>	4x 2.2mm
<b>Dimensions (d x h)</b>	85 x 2mm	<b>Weight</b>	15g
<b>Inner Diameter</b>	34mm	<b>Order Number</b>	30.160.010

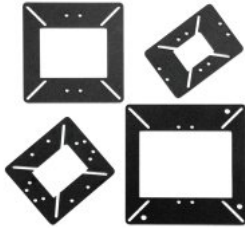
## Benefits:

- Easy working distance adjustment
- Flexibly combinable
- Robust buildt



## Technical Details:

<b>Mounting Arm</b>		<b>Front Threads</b>	2x M4
<b>Dimensions (l x w x h)</b>	175 x 40 x 8mm	<b>Weight</b>	126g
		<b>Order Number</b>	30.009.175



Spider Adapter Plate		
Type	Size	Order Number
Spider 1, M4	70 x 98mm	30.150.011
Spider 2, M4	90 x 98mm	30.150.021
Spider 3, M4	120 x 120mm	30.150.031
Spider 4, M4	144 x 144mm	30.150.041

Spider 1

Spider 2

Spider 3

Spider 4

Aperture: 40 x 30mm

54 x 40mm












80 x 60mm

110 x 80mm

Albatross Adapter Plate		
Type	Size	Order Number
Albatross 1, M4	40 x 58mm	30.200.011
Albatross 2, M4	40 x 128mm	30.200.021
Albatross 3, M4	40 x 158mm	30.200.031



## Tools:

Product	Image	Order Number	Product	Image	Order Number
Allen Key 4mm, - T-handle - Length = 100mm		90.000.002	Mounting Tool with 4mm pins for Orca and Feuersalamander lids		90.000.004
Allen Key 4mm, - T-handle - Length = 150mm		90.000.008	Spreading Pliers, - helpful for cable inserts		90.000.011
Allen Key 3mm, - T-handle - Length = 150mm		90.000.003	Adjustor, tool for fine adjustment of the rotation angle of an enclosure		90.000.005
Allen Key 3mm, - T-handle - Length = 200mm		90.000.006	Ratched Wrench AF10 - 72 teeth - 5° movement		90.000.009
Allen Key 3mm, - T-handle - Length 350mm		90.000.007	TX20H bit, - for tamper-proof screws with Torx pin		90.000.010
Allen Key 2.5mm, - T-handle - Length = 100mm		90.000.012			

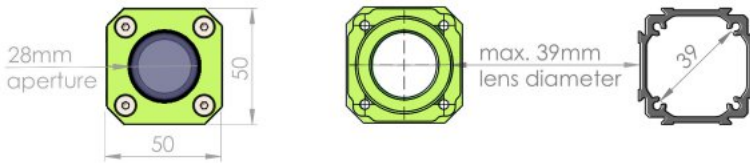
The Adjustor enables fine tuning of the rotary angle of a camera enclosure

The Spreading Pliers are helpful to insert cables into the cable gland insert

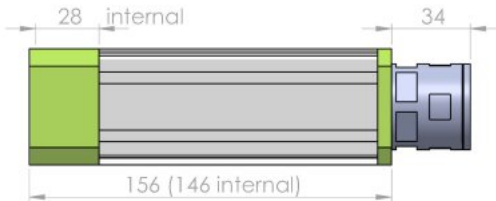
The Mounting Tool helps to tighten the front and back lids



Front Lid



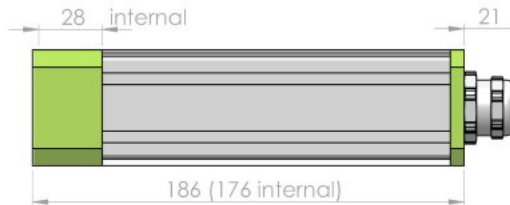
Size S



Rear Wall A



Size M



Rear Wall B



Rear Wall C





Front Lid

Profile

Size XS

Rear Wall A

Size S

Rear Wall B

Size M

Rear Wall C

Size L

Rear Wall D



Front Lid

Profile

Size S

Rear Wall

Size M



Front Lid

Profile

Size XS

Front Lid

Profile

Size XS

Rear Wall A

Size S

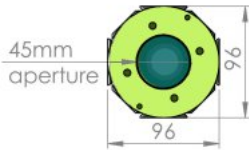
Rear Wall B

Size M

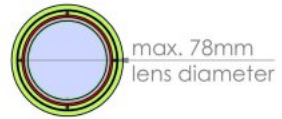
Rear Wall C



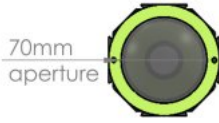
### 2" Front Lid



### 3" Front Lid



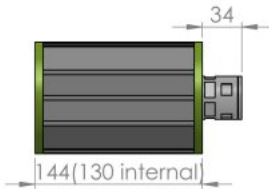
### Dome Front Lid



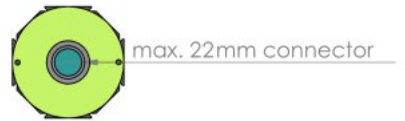
### Profile



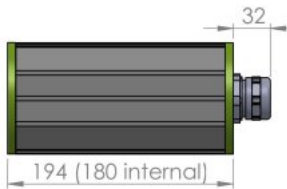
### Size S



### Rear Wall A



### Size M



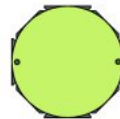
### Rear Wall C



### Size L



### Rear Wall D



### Size XL



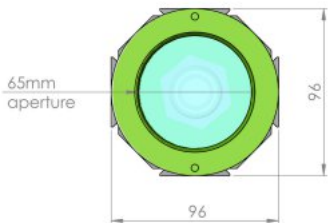
### Rear Wall E



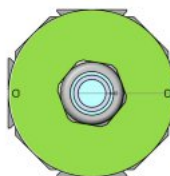
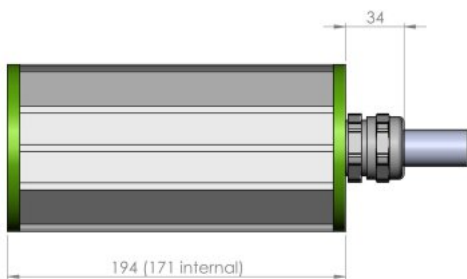




### Front Lid



### Profile

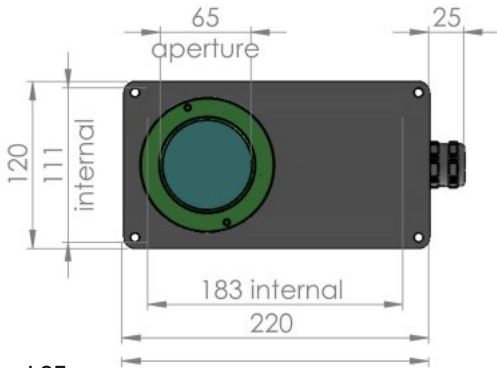




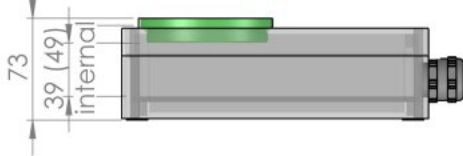


Size S

Size ST

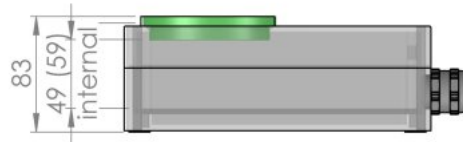


Size L65

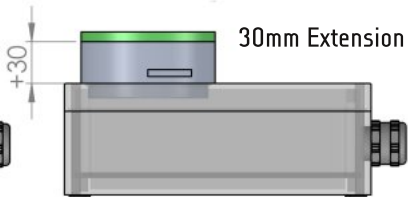


max. 20mm connector  
several cables

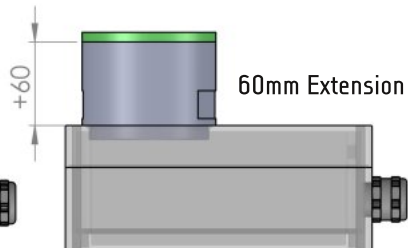
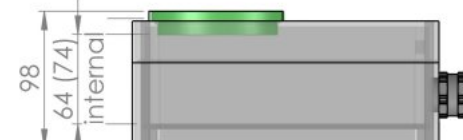
Size L75

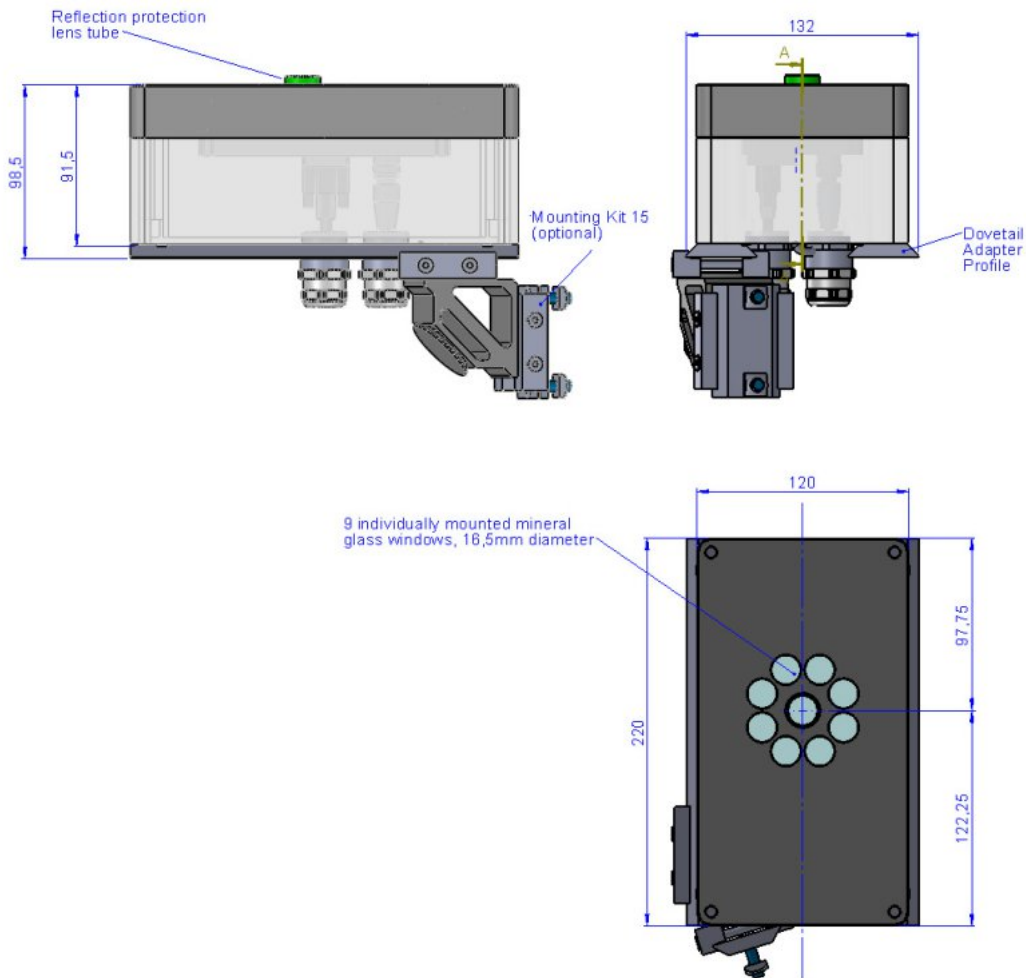


Size L80



Size L90







Acrylic Window Version

BK7 Window Version

## Solid particle protection

The first digit indicates the level of protection that the enclosure provides against access to hazardous parts.

Level (1st digit)	Effective against	Description
5	Dust protected	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment.
6	Dust tight	No ingress of dust; complete protection against contact (dust tight). A vacuum must be applied. Test duration of up to 8 hours based on air flow.

## Liquid ingress protection

The second digit indicates the level of protection that the enclosure provides against harmful ingress of water.

Level (2nd digit)	Effective against	Description
4	Splashing of water	Water splashing against the enclosure from any direction shall have no harmful effect, utilizing either: a) an oscillating fixture, or b) A spray nozzle with no shield, Test duration: 10min.
5	Water jets	Water projected by a nozzle (6.3 mm) against enclosure from any direction shall have no harmful effects. Test duration: 1min/m <sup>2</sup> for at least 3min, 12.5l/min @30kPa at 3m distance.
6	Powerful water jets	Water projected in powerful jets (12.5 mm nozzle) against the enclosure from any direction shall have no harmful effects. Test duration: 1min/m <sup>2</sup> for at least 3min, 100l/min @30kPa at 3m distance.
6K	Powerful water jets with increased pressure	Water projected in powerful jets (6.3 mm nozzle) against the enclosure from any direction, under elevated pressure, shall have no harmful effects (DIN 40050, not IEC 60529). Test duration: 3min, 75l/min@1000kPa at 3m distance.
7	Immersion up to 1m depth	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time. Test duration: 30min, 1m below water surface.
8	Immersion 1m or more depth	The equipment is suitable for continuous immersion in water. Water can enter in such a manner that it produces no harmful effects. Manufacturer specified duration and water depth (>IPx7, 3m typical).
9K	Powerful high temperature water jets	Protected against close-range high pressure/temperature spray downs. Test duration: 30s each of four angles, spray nozzle with 80°C water at 8–10 MPa (80–100 bar) and a flow rate of 14–16 L/min.

**Note:** Lower IP ratings are not automatically included in the higher classes, e.g. IP66 is not part of IP67 and IP68/IP69k do not include any other ratings! Testing time and depth of IP68 is specified by the manufacturer (not unlimited time!). Suitable cables have to be used in combination with the cable glands to fulfil the IP protection class.

# Chemical Resistance of Sealing Materials





Please use the enclosure configurator on our website!

**[www.autovimation.com](http://www.autovimation.com)**

