

autoVimation

building machine vision

much more than
camera enclosures...

.... But a complete solution for installing camera systems in any environment!”



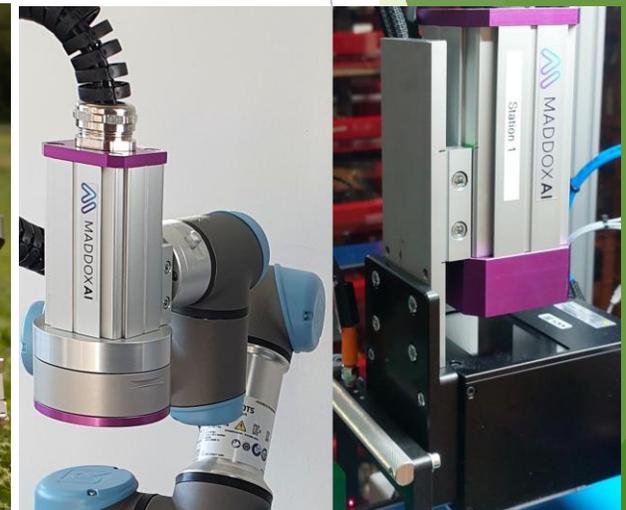
Hot / Dirty



Outdoor / Maritime



Outdoor / Agricultural



Industrial

autoVimation GmbH

Company Overview

- ▶ Founded in November 2008 by Peter Neuhaus since 2025 part of the Exaktera Group
- ▶ Based in Rheinstetten, Baden-Wuerttemberg, Germany

Core Competencies

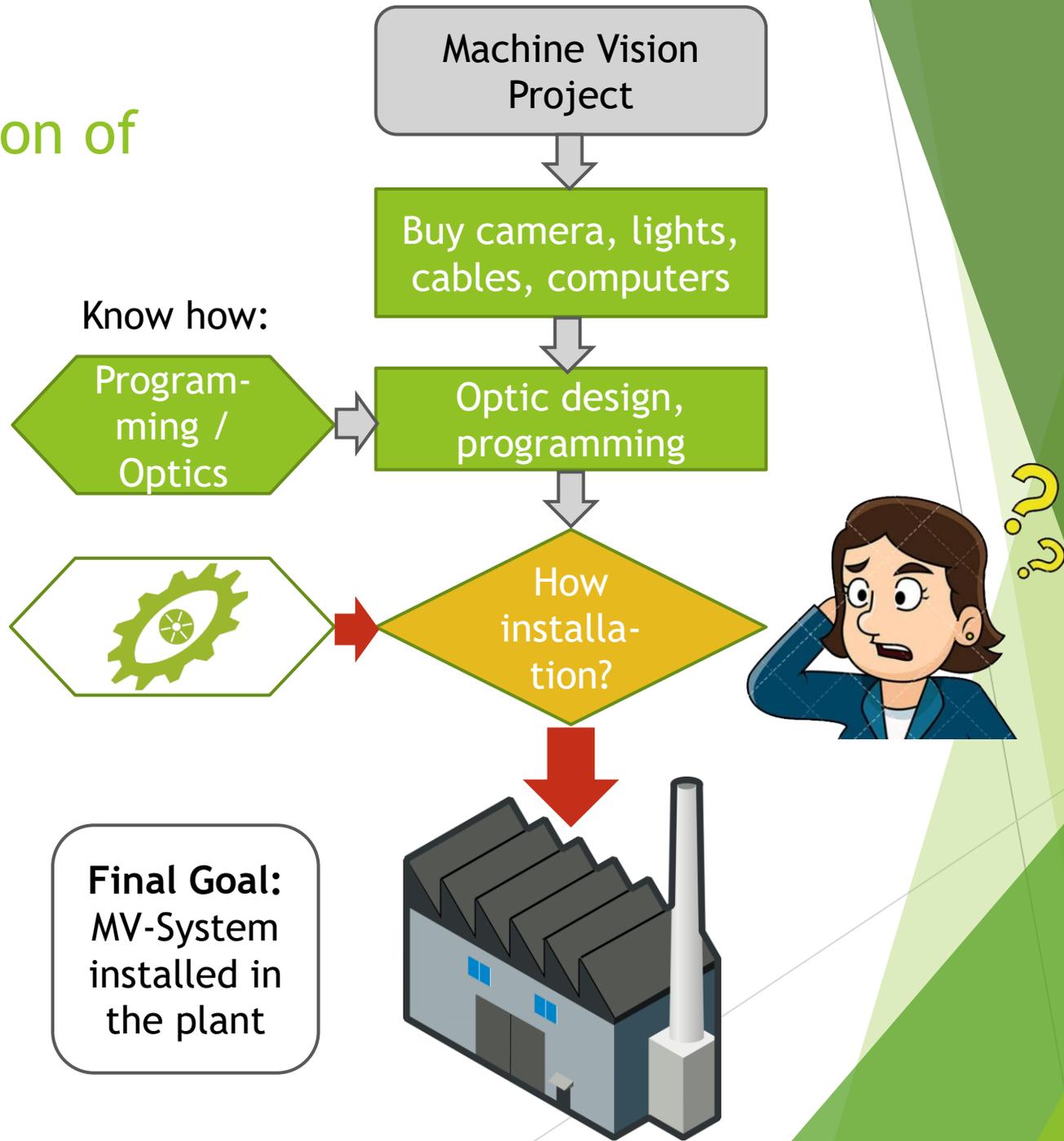
- ▶ autoVimation provides protective camera enclosures and a wide range of accessories that allows the use of vision systems in any environment.

Worldwide Distributor Network

OUR NETWORK FOR YOU



The automation idea: Easy and quick installation of vision systems with our *MV-Building Kit*



- ▶ Easier installation of MV-components
- ▶ No machine builder required
- ▶ Focusing on SW-development!

...Solutions for easy Installation of MV-Components in any Environment

- ▶ Standard Machine Vision Building Kit



- ▶ Hygienic MV Building kit



- ▶ Heating and Cooling



- ▶ Dirt Protection



- ▶ Mechanical Protection



- ▶ Illumination



Machine Vision Building Kit

▶ Profiles



▶ Mounting Kits



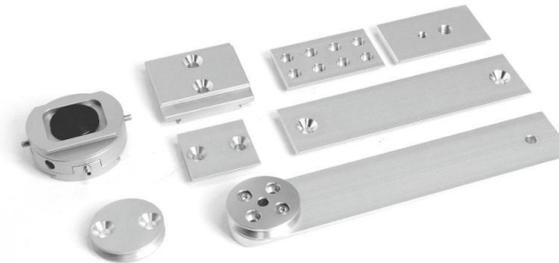
▶ Brackets and angles



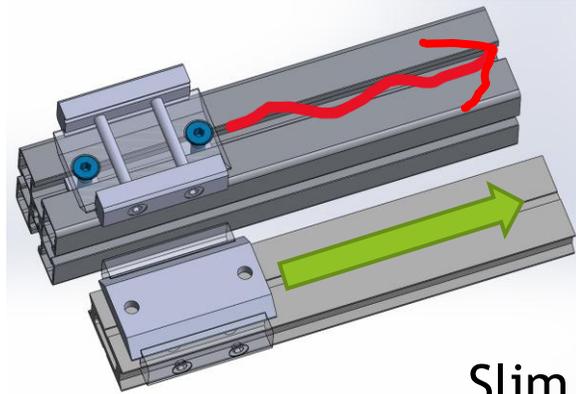
▶ Light mounts



▶ Adapter Plates

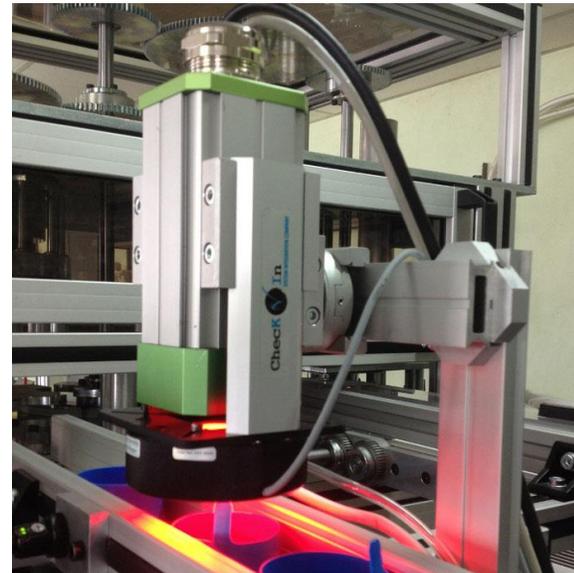


Advantages Machine Vision Building Kit

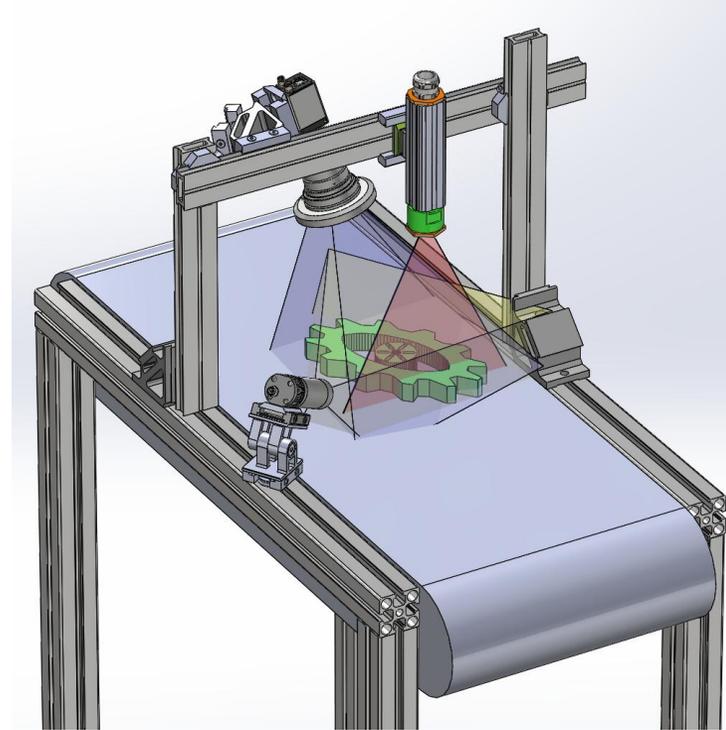
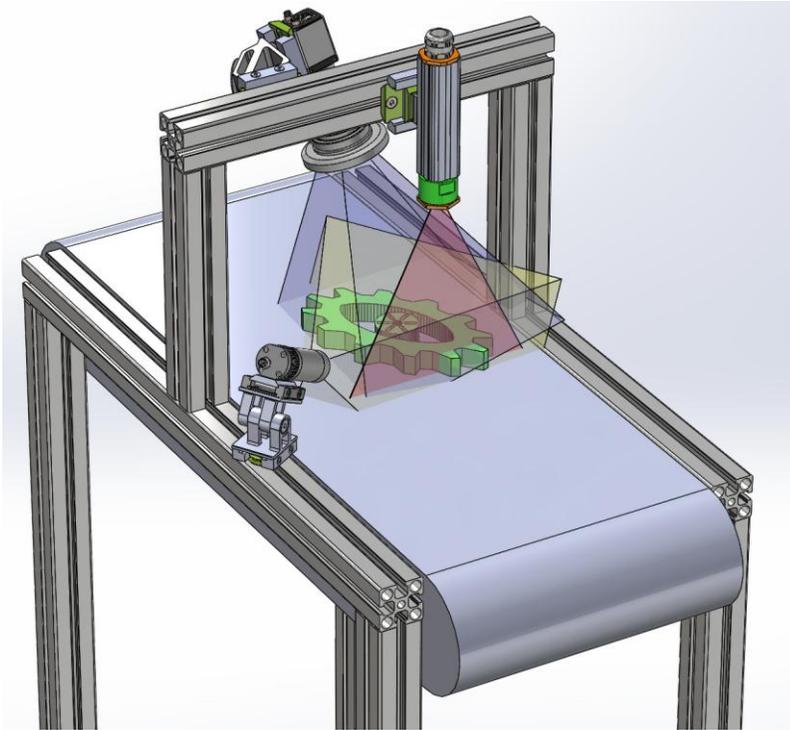


- ▶ More flexible
- ▶ More precise
- ▶ More robust
- ▶ Saves design time

Slim and accurate:
dovetail profiles for MV-components



Mounting Kit versus Building Kit



Interface: Mounting Kits:

- ▶ Mount enclosures separately on T-Slot frame

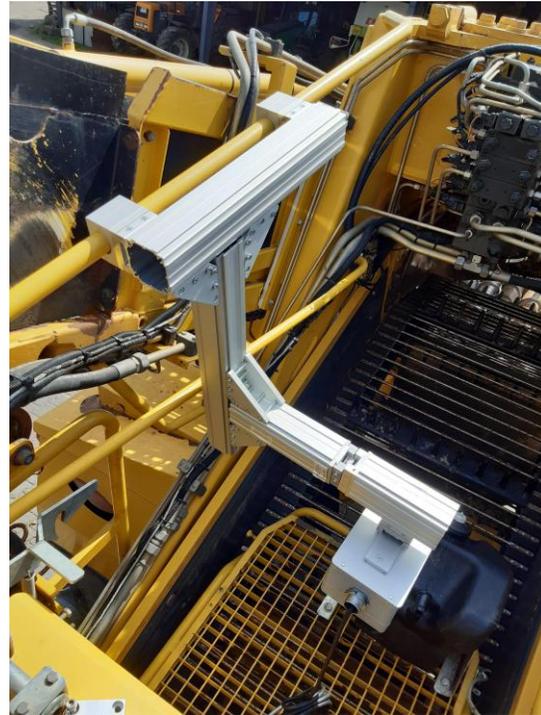
Interface: dovetail profiles:

- ▶ Mount every component to dovetail frame
- ▶ More robust and flexible solution!

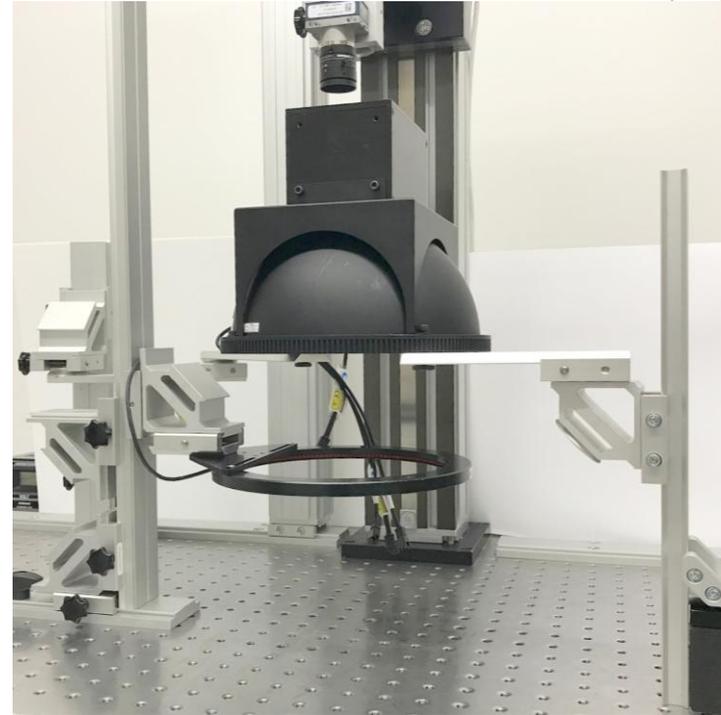
Further MV-Building Kit examples



- ▶ Tripod for automotive application



- ▶ Camera mount for harvesting machine



- ▶ Machine Vision Lab

- ▶ *More than an enclosure mount, but the adaptation of your Vision System to the machine!*

Enclosures - Increasing variety



- ▶ Range of autoVimation enclosures sizes
- ▶ Range of protection IP65/IP66/IP67/IP68/IP69K

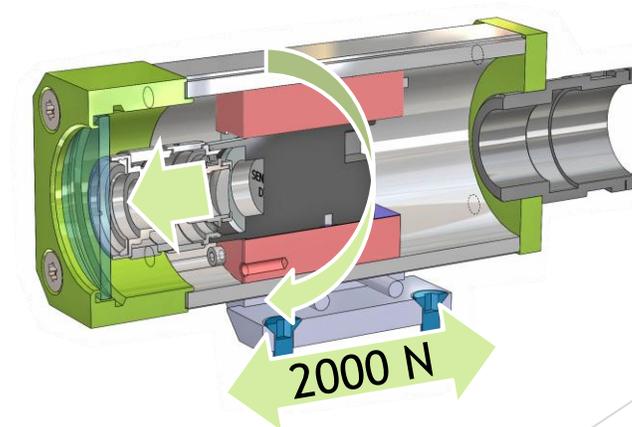
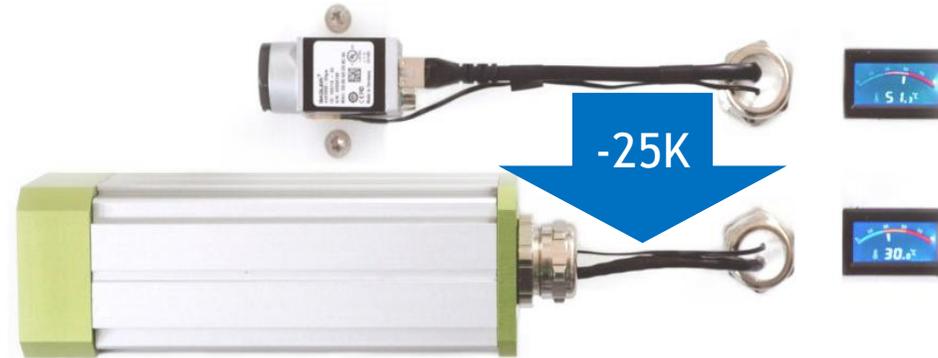
Enclosures - Increasing variety

Family	IP Rating	Enclosure Material	Max Camera Cross-Section	Max. Lens Diameter	Notable Use /Notes
Colibri	IP66	Anodized Aluminium	≈30×30 mm	39 mm	For small cube cameras
Salamander	IP66/IP67	Anodized Aluminium	Up to ≈40×40 mm	52 mm	For standard cameras
Gecko	IP66	Anodized Aluminium	Up to ≈39 x 53 mm	52 mm	For standard plus cameras
Feuersalamander	IP66/IP67	V4A / AISI 316L Stainless	Up to ≈40×40 mm	52 mm	Good chemical resistance
Dolphin	IP69K	V4A / AISI 316L Stainless	Up to ≈40×40 mm	55 mm	Hygienic Design
Shark	IP69K	V4A / AISI 316L Stainless	Up to ≈61×61 mm	85 mm	Hygienic Design
Chameleon M Hygienic	IP69K	V4A / AISI 316L Stainless	Height: Up to ≈80mm and 110mm	85 mm	Hygienic Design cameras with 90° viewing direction
Orca	IP66/IP67	Anodized Aluminium	Up to ≈61×61 mm	78 mm	For large cameras Option:Twin Window Ge/BK7 for Flir A50/70
Nautilus	IP68	Anodized Aluminium	Up to ≈61×61 mm	78 mm	Underwater camera enclosure
Megalodon	IP66/IP67	Anodized Aluminium	Up to ≈62×62 mm	87 mm	For large cameras Option:Twin Window Ge/BK7 for Flir A400-700
Stingray	IP66	Anodized Aluminium	Up to ≈75×75 mm	78 mm	Also for lage cameras
Elefant	IP66/IP67	Anodized Aluminium	Up to ≈100×100 mm	120 mm	For very large cameras
Chameleon model series	IP66/IP67	Powder Coated Aluminium Stainless steel version in IP69K is also available.	For various camera dimensions with 90° viewing direction	Up to ≈85	For Cameras with 90° viewing direction. Various housing dimensions available, see details on our website. Model FX with Peltier Cooling.
Laser Enclosure	IP66	Anodized Aluminium	Laser Diameter 19 or 29mm		Laser mount included, good heat dissipation
Piranha	IP69K	V4A / AISI 316L Stainless	Laser Diameter 19 or 29mm		Hygienic Design

- ▶ Range of autoVimation enclosures sizes
- ▶ Range of protection IP65/IP66/IP67/IP68/IP69K

Advantages autoVimation's enclosures

- ▶ Flexible camera mounting
- ▶ Passive cooling of up to -25K!
- ▶ Built-in working distance adjustment and image rotation
- ▶ Full MV-BK compatibility
- ▶ Modular design meets any requirements
- ▶ Extensive range of accessories allows installation in nearly any environment



Hygienic Building Kit



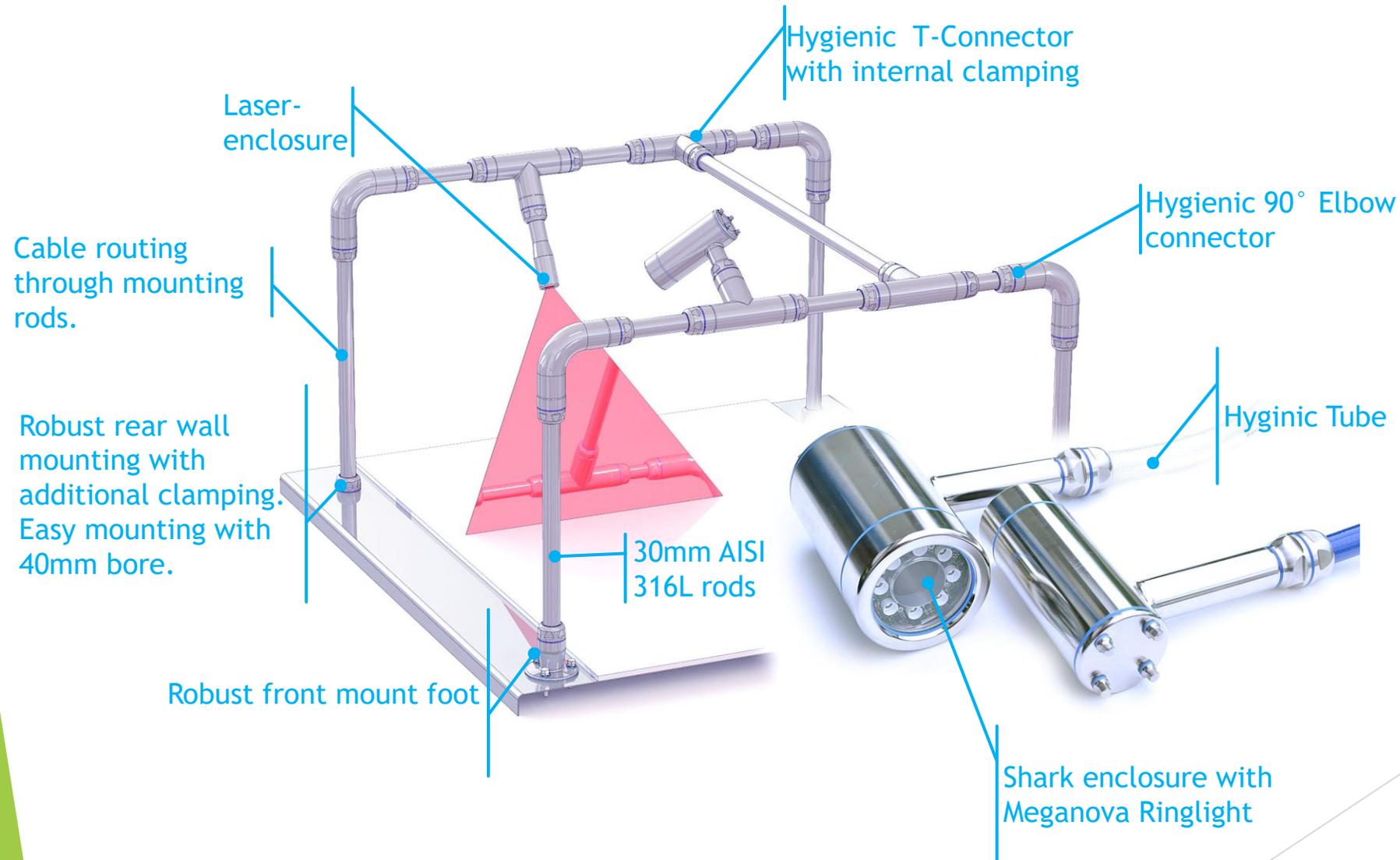
- ▶ Camera- and laser IP69k enclosures according to strict EHEDG hygienic design requirements
- ▶ Complete matching building kit with 90° elbows and T-conector pieces for complete food safe vision system installations
- ▶ Cables feed trough a rod system or hygienic tubes - no food grade cables required
- ▶ All plastic windows and elastomer seals with FDA approval

Dolphin and Shark - Hygienic Building Kit

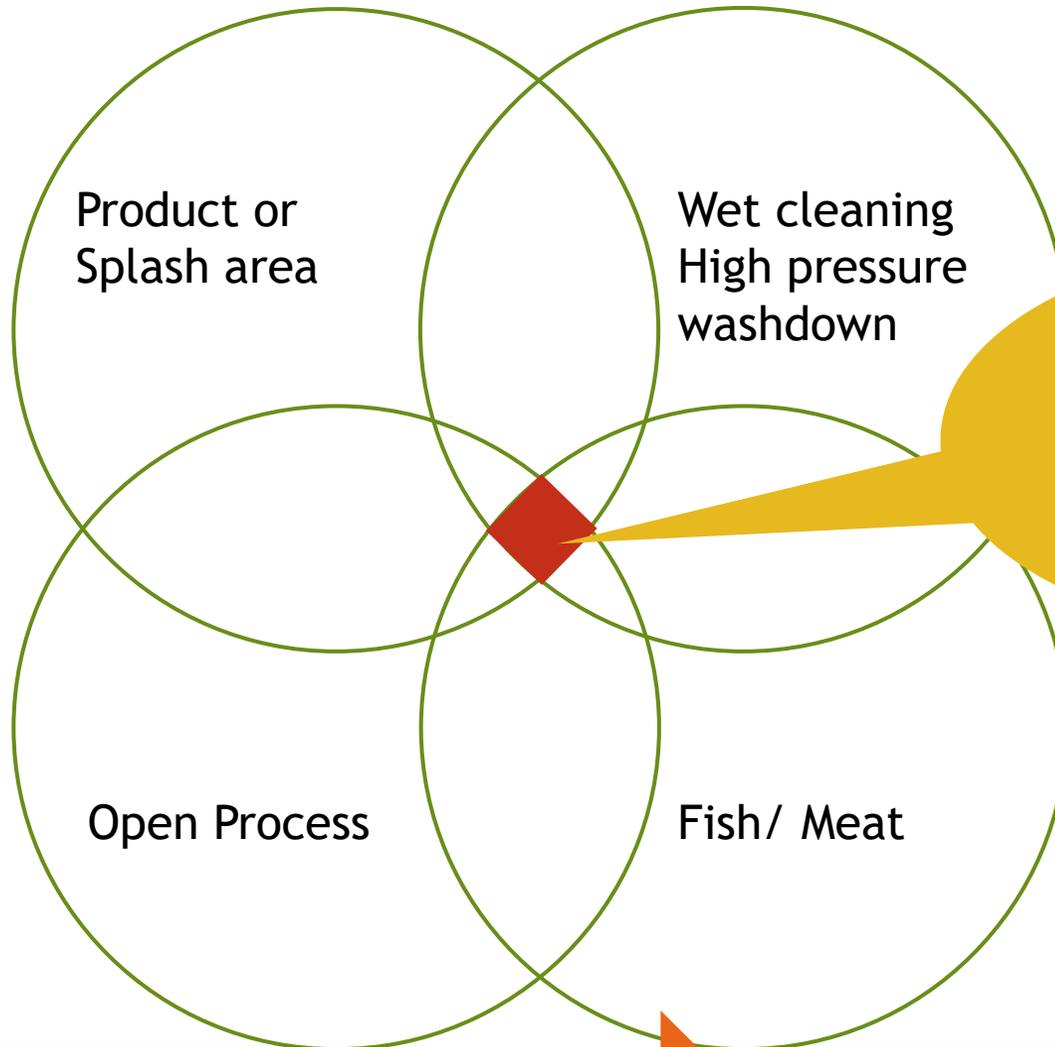
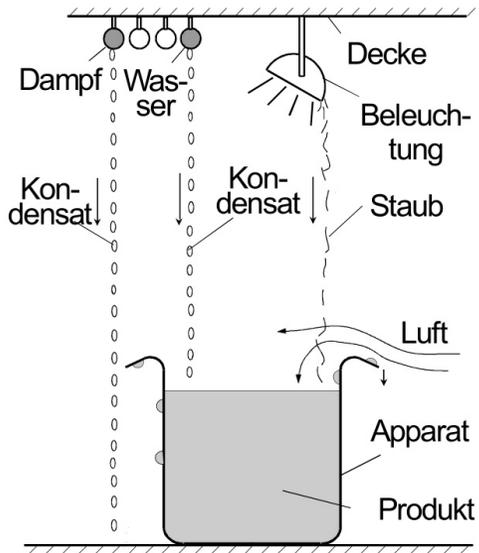
- ▶ Only enclosures on the market that fulfill the EHEDG requirements for the mount as well
- ▶ IP69k for high pressure washdown
- ▶ High adjustability
- ▶ Excellent heat dissipation
- ▶ High chemical resistance AISI 316L stainless steel & EPDM seals
- ▶ Easy to replace front window and seals
- ▶ Curved back lid - no water can accumulate
- ▶ Simple camera installation



autoVimation's Hygienic Building Kit



When is strict hygienic design required?



Strict hygienic Design +IP69k +highest chemical resistance

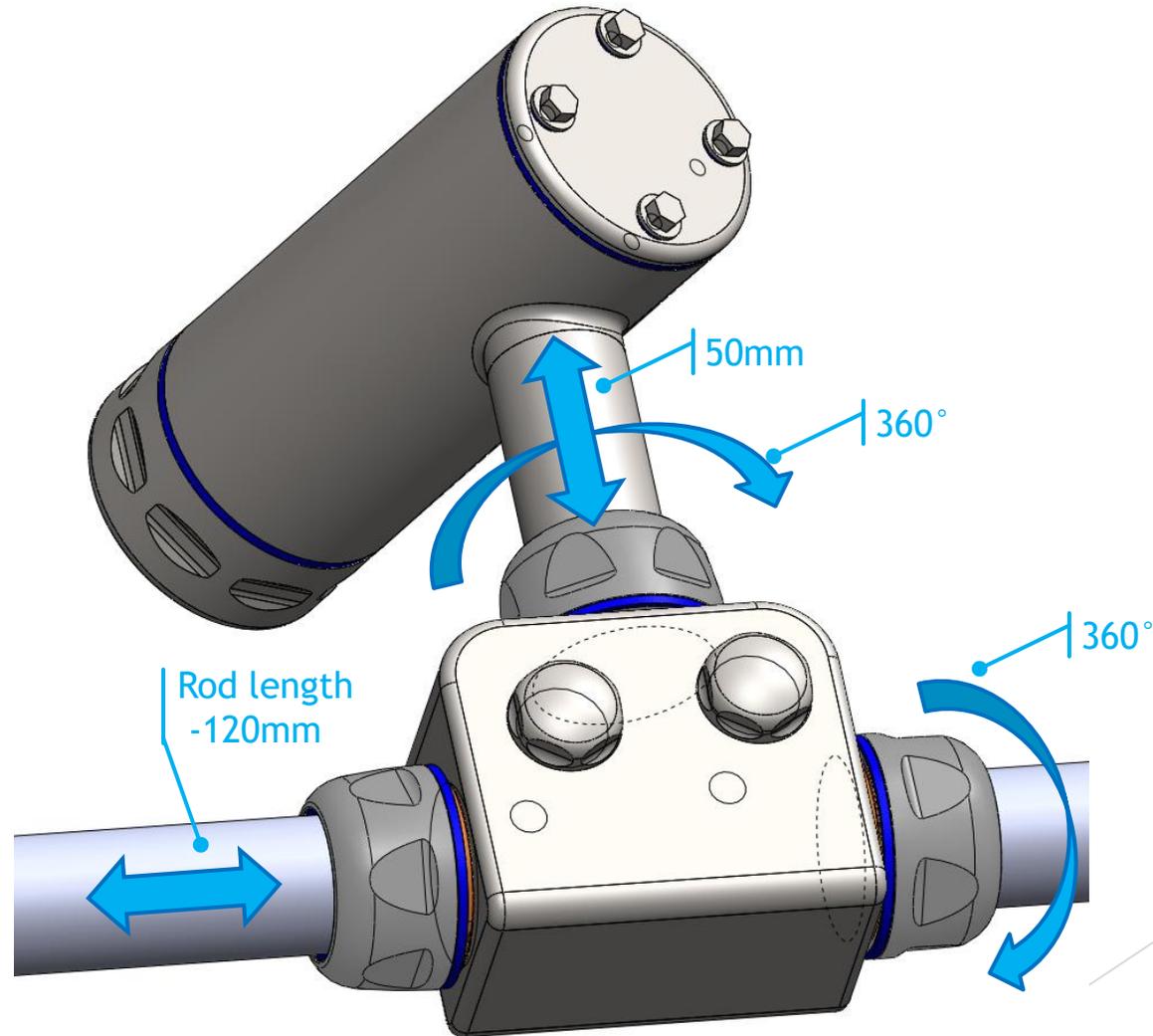


EU machinery directive 2006/42/EG

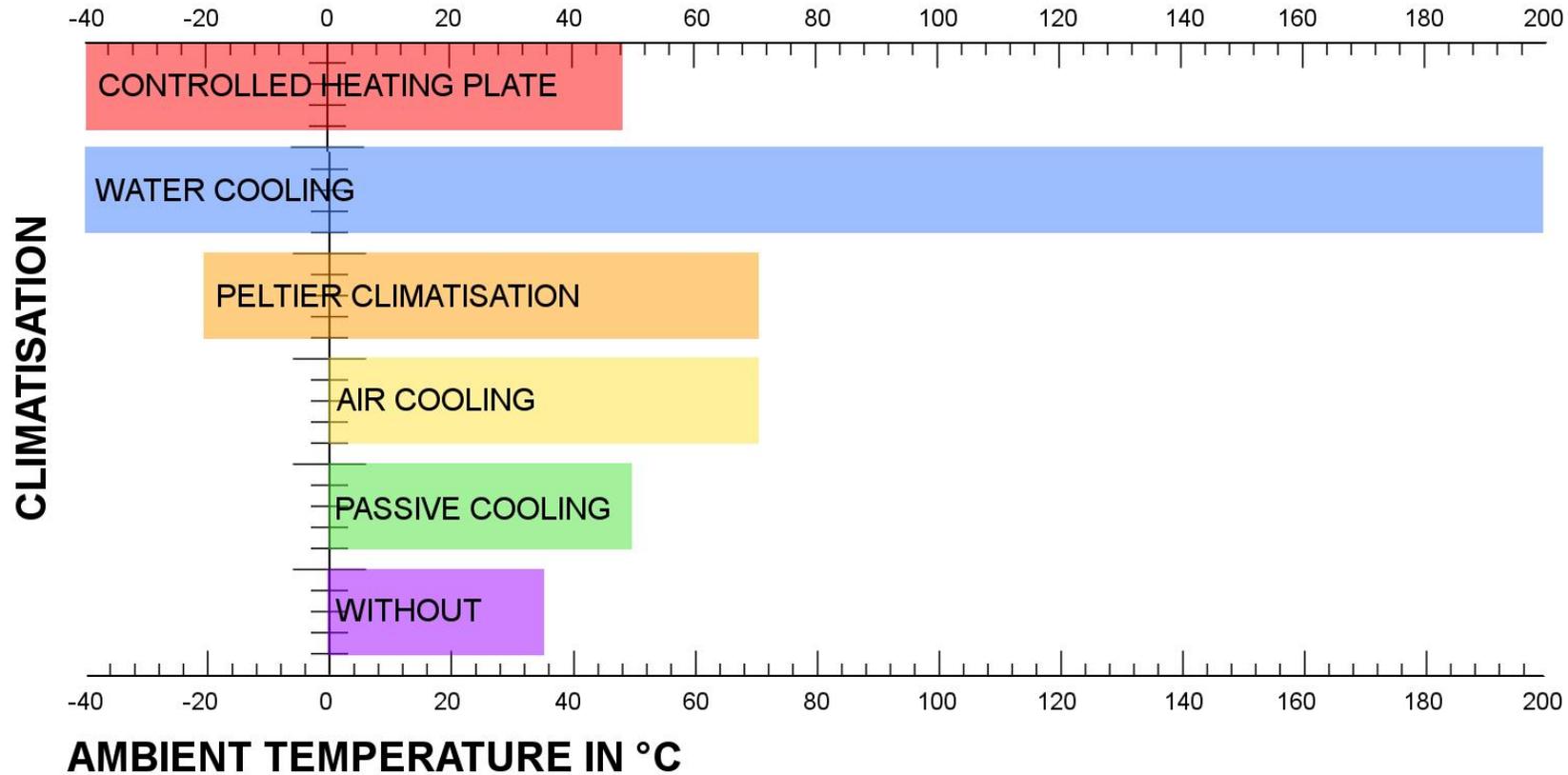
hygienic risk assesment

EN 1672-2:2009 Food processing machinery

Adjustment options



Accessories: Heating and Cooling



- ▶ Extend the temperature range of your vision system with autoVimation's enclosures and accessories!

Extended temperature range solutions



Heating Plate:

- ▶ Down to -40°C
- ▶ Power: 70W
- ▶ Controller set to 20°C
- ▶ Does not over-heat camera



Water Cooling:

- ▶ -40°C to $+200^{\circ}\text{C}$
- ▶ Automatic heating & cooling
- ▶ Up to 20m distance
- ▶ Perfect for climate chamber applications and hot processes



Turtle:

- ▶ Only 24V required
- ▶ Cools camera down to -30K below ambient
- ▶ Automatic Heating & Cooling available!
- ▶ For hot climates

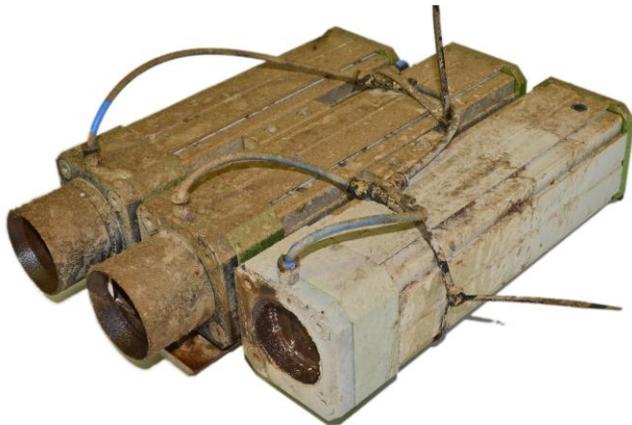
Solutions for dirty environments



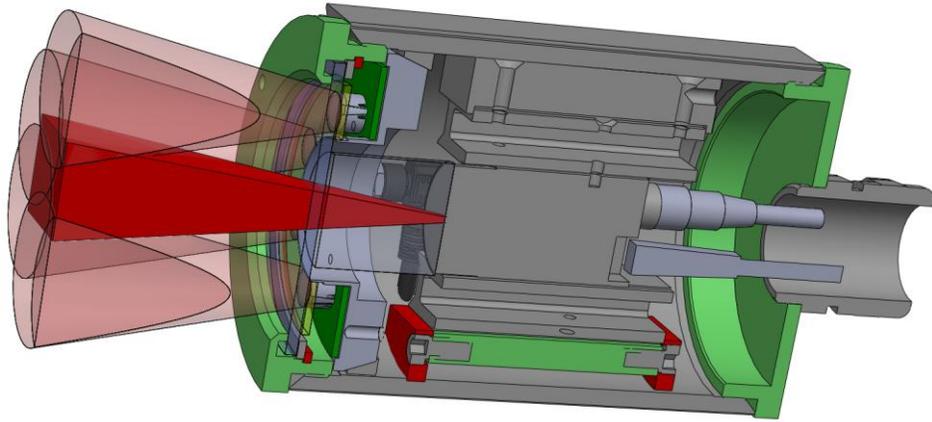
▶ Wind Curtain, Shutter & Tubes



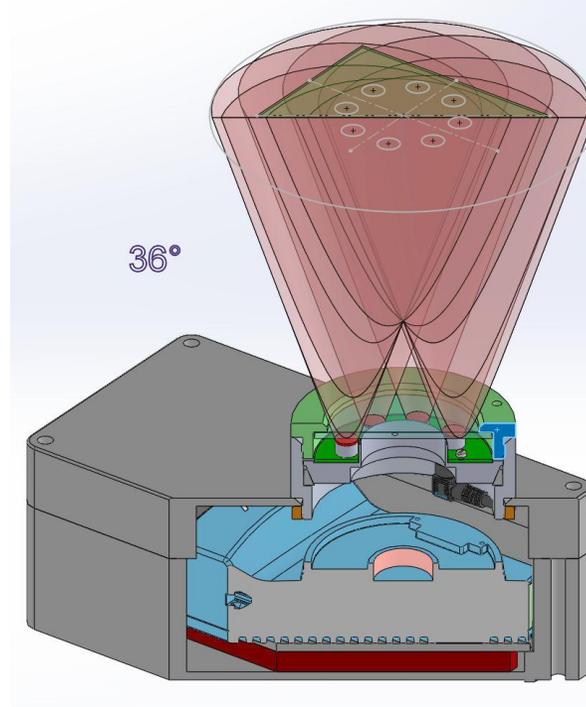
▶ Dragon Air Nozzle



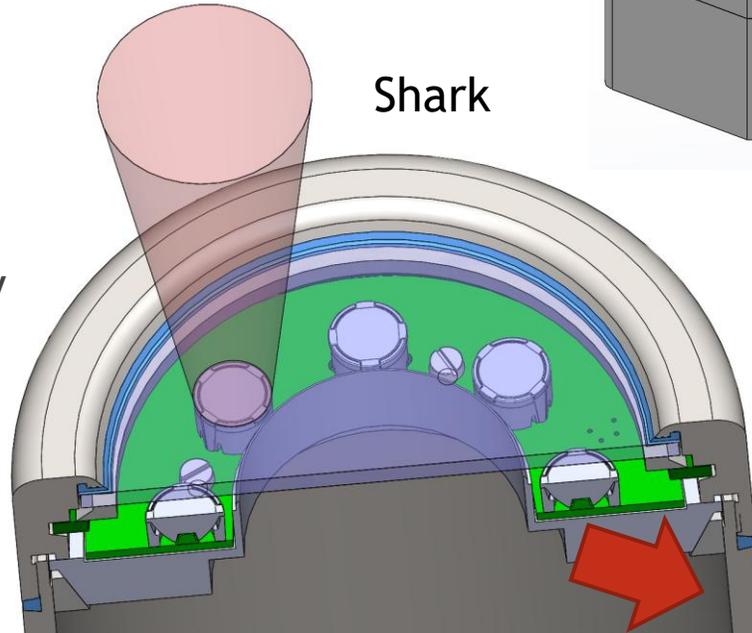
Meganova Ring Light



Orca



Chamäleon

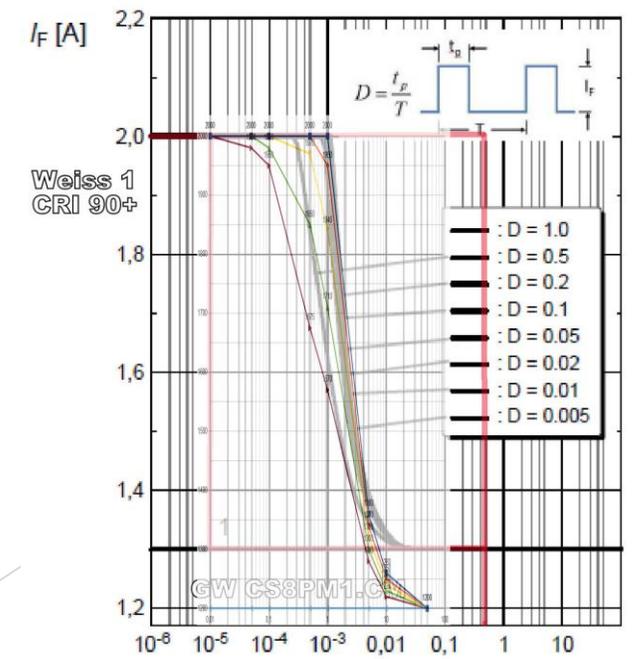
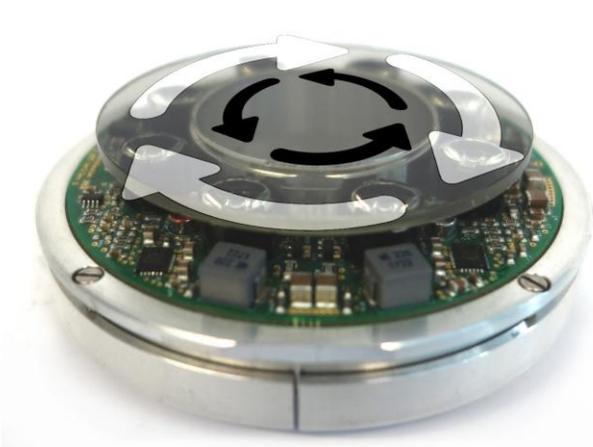
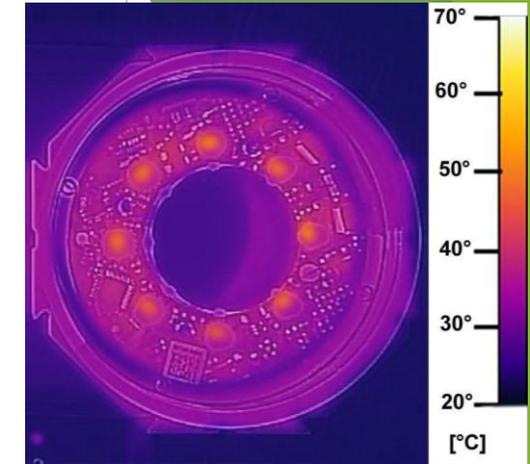


Shark

- ▶ Strobe controller on-board!
- ▶ Fits any enclosure with 3" lid: Orca, Shark, Megalodon Stingray and Elephant flange versions, Chamäleon L
- ▶ Excellent heat dissipation
- ▶ 4 Fan angles, 5 colors available

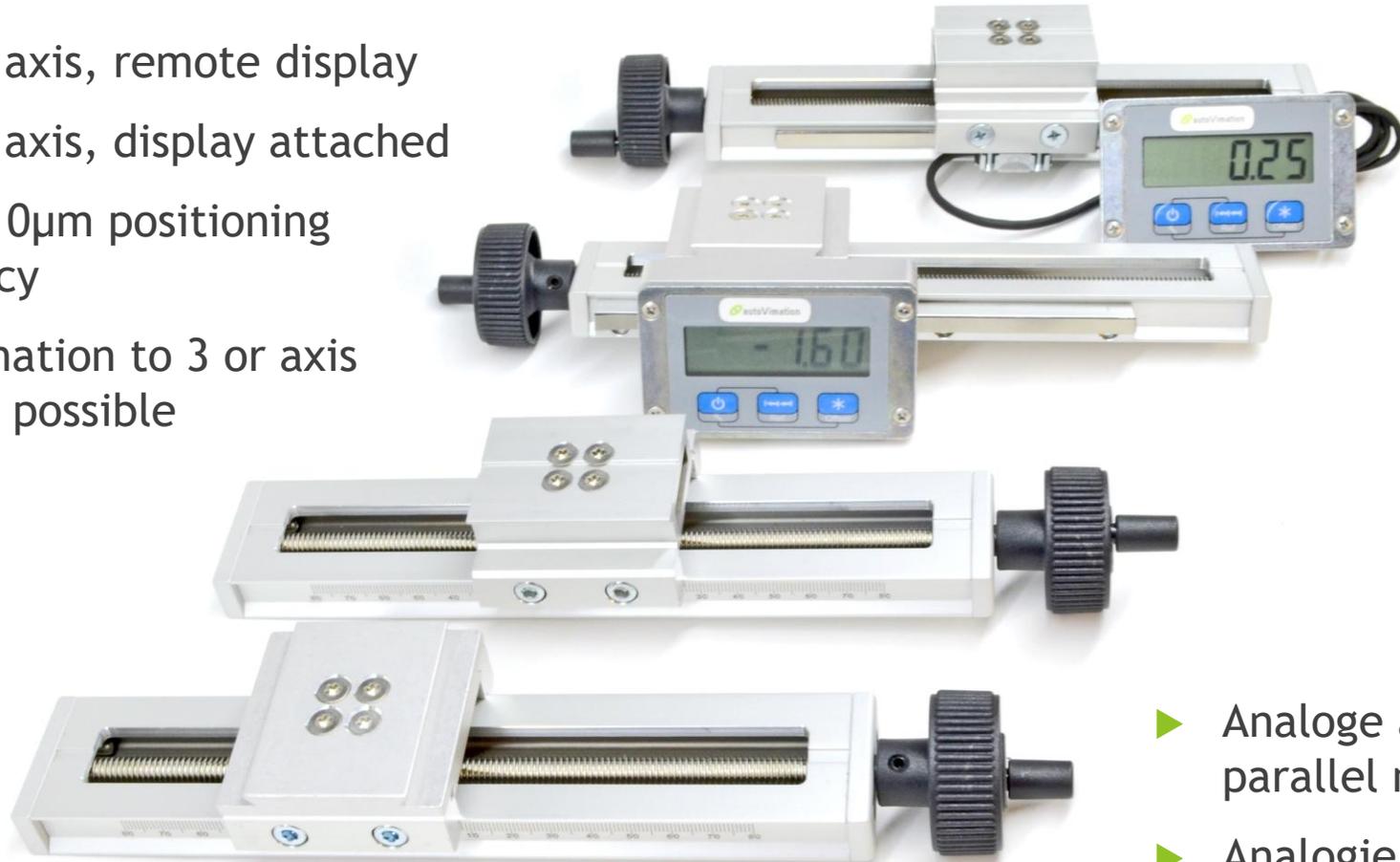
Advantages Meganova

- ▶ Strobe controller on board - direct opto-isolated trigger input 5-24V
- ▶ Up to 10kHz with up to 570% nominal current and 400% brightness
- ▶ Easy to configure with „Lightswitch“ Program
- ▶ 5 trigger modes and extensive range of SW-functions
- ▶ Excellent Heat dissipation to the outer enclosure
- ▶ Cross polarization filter available for reflection elimination
- ▶ Pulse pause ratio up to 1:1 going to the limit but never beyond
- ▶ Optimized for 3" window with 65mm aperture -36mm bore for lenses



Linear Positioning Axis

- ▶ Digital axis, remote display
- ▶ Digital axis, display attached
- ▶ Up to 10 μ m positioning accuracy
- ▶ Combination to 3 or axis system possible



- ▶ Analoge axis, parallel mount
- ▶ Analoge axis, vertical mount

Advantages of linear axis

- ▶ Very compact
- ▶ Fully compatible to autoVimations MV-building kit
- ▶ Accurate positioning
- ▶ For lab and manufacturing line
- ▶ Combines to 3-axis system



What's New: Lizzard

- ▶ Perfect for installations that are difficult to access
- ▶ IP67-protected housing, based in the Salamander Series
- ▶ Same space as Salamander M (internal length 191mm))
- ▶ Fast lens access without tools
- ▶ Allowing the lens to protrude up to 40mm from the housing profile
- ▶ Flexible camera positioning
 - using lenses between 60-70 mm? Simply move the camera further back inside the enclosure.



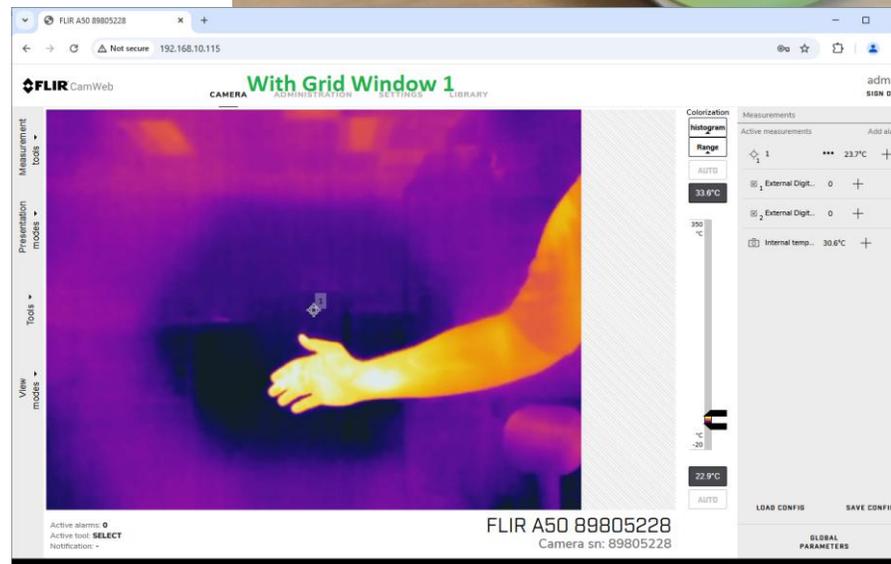
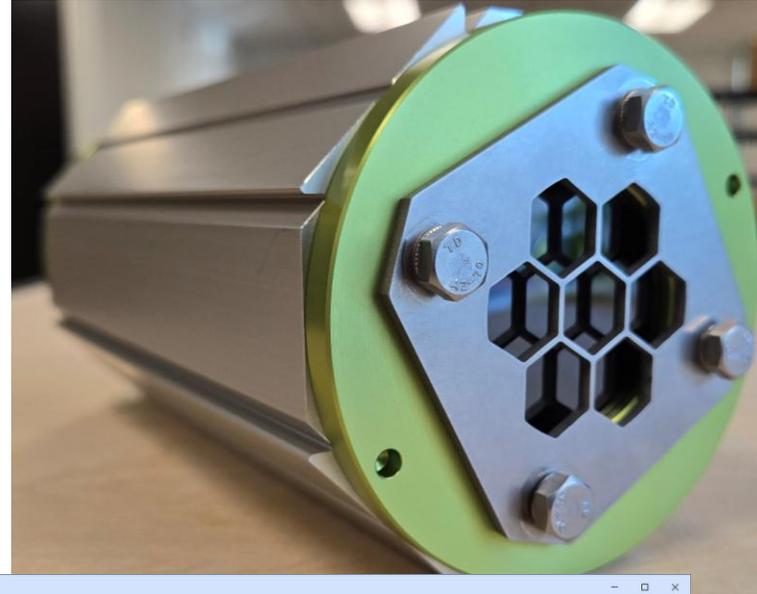
What's New: Chameleon M Hygienic

- ▶ A protective enclosure for right-angled cameras and vision sensors in hygienically demanding applications, protection class IP69k
- ▶ All side walls are inclined at 5 degrees to allow cleaning water to drain easily
- ▶ available in 80 mm and 110 mm heights
- ▶ increased space by adding 30 mm front lid extensions for longer lenses
- ▶ EHEGD-compliant



What's New: Honeycomb grid

- ▶ Honeycomb grid for 2" camera windows
- ▶ reliably protect the window from knocks, impacts and external influences
- ▶ The thin bars ensure a good view



What's New: Air-tight Connectors

- ▶ Reliable protection and high flexibility
- ▶ Airtight even when disconnected
- ▶ RJ45 can handle PoE and up to 10GigE, 250mm highly flexible cable.
- ▶ 6-pin M12 plug connection
- ▶ Fits into all existing rear walls A, B, C for all enclosures with M20, M25 threads



Application Examples



© BrightSource Industries Israel

- ▶ Solar industry

Application Examples



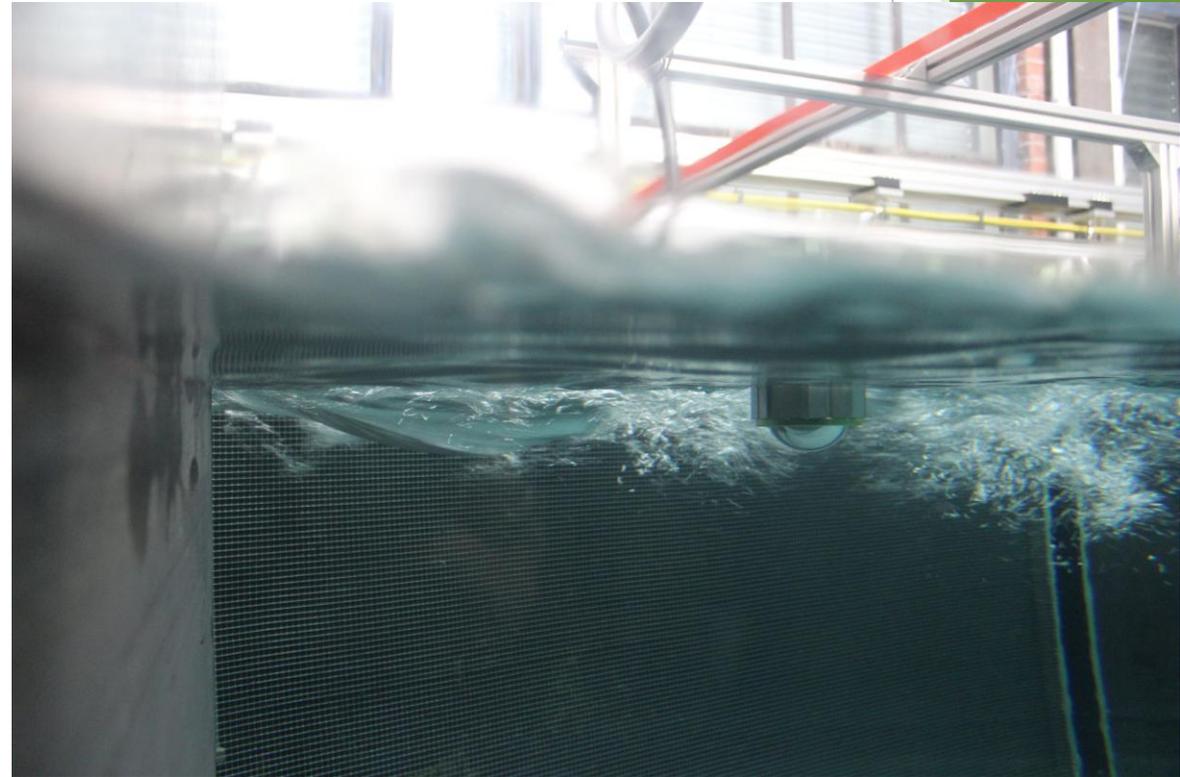
- ▶ Wind Energy (bird protection)

Application Examples



- ▶ Wind Energy (bird protection)

Application Examples



- ▶ Fish pass research, Bundesamt für Wasserbau, Karlsruhe

Application Examples



- ▶ Rotterdam Sea harbor - robotic cranes

Application Examples



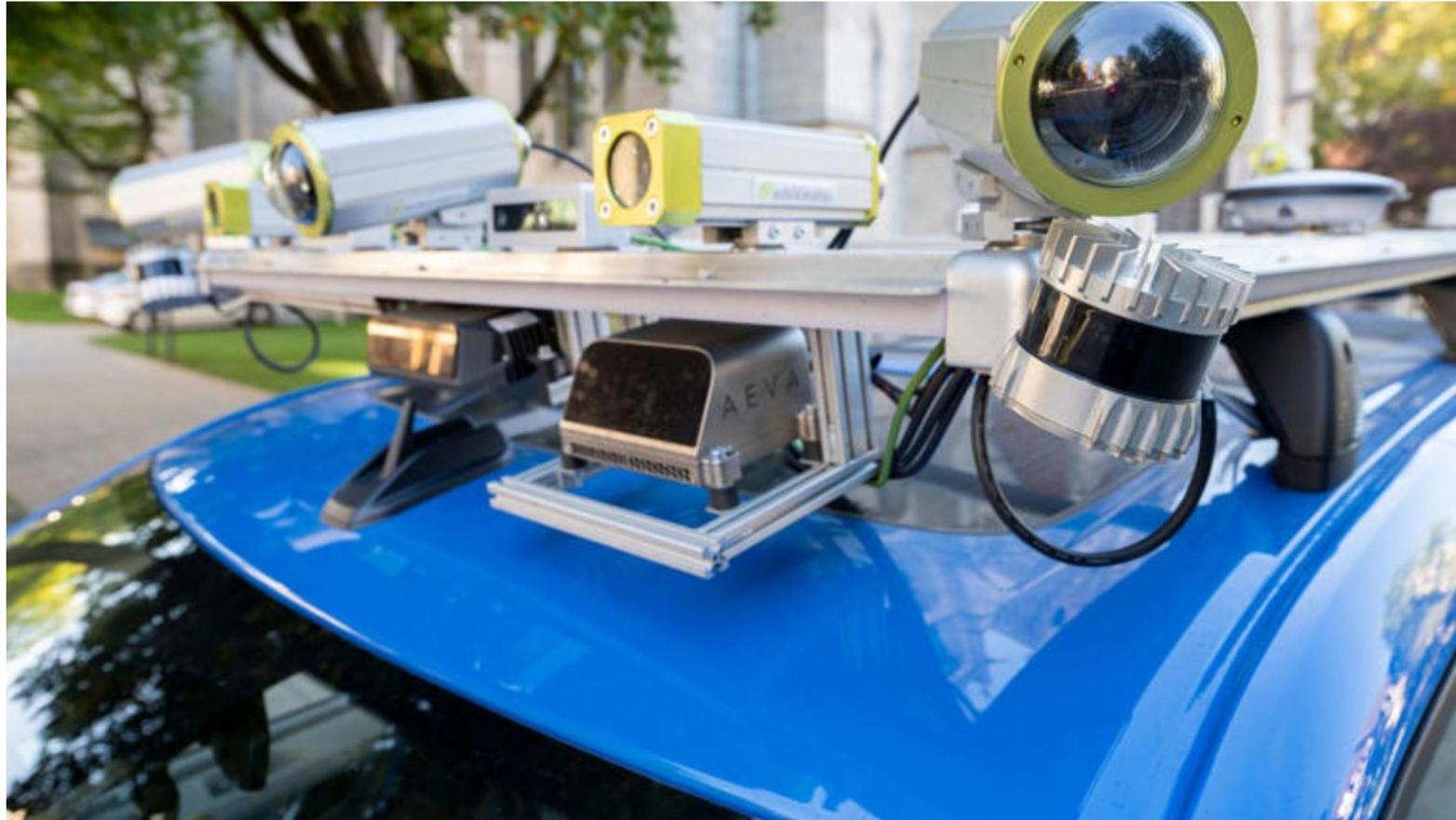
- ▶ Road inspection

Application Examples



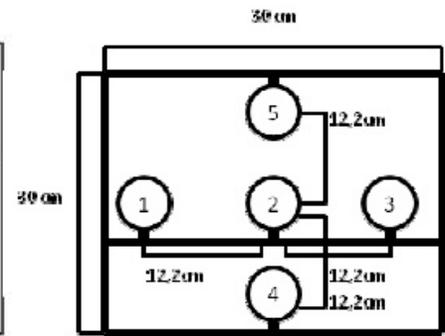
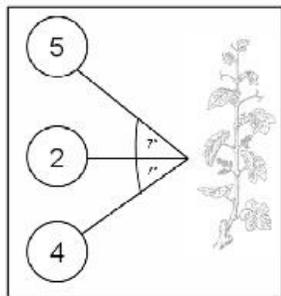
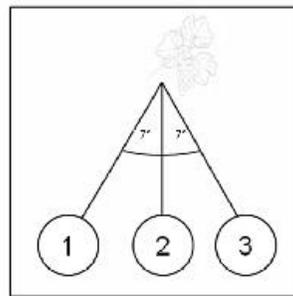
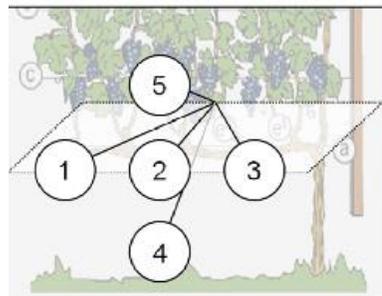
- ▶ Formula 1, Formula E, autonomous driving applications

Application Examples



- ▶ Oktoberfest

Application Examples



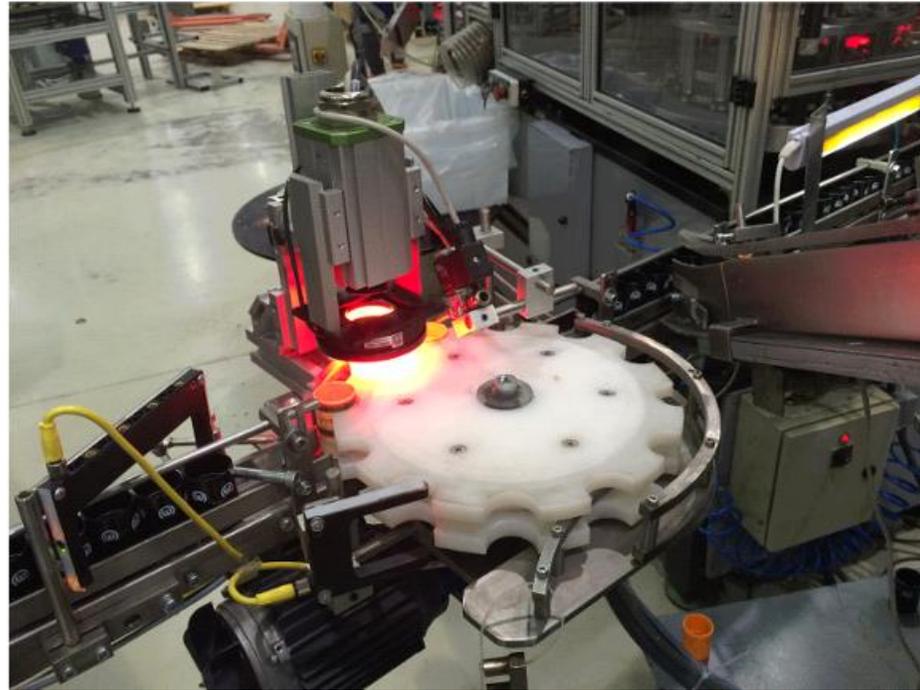
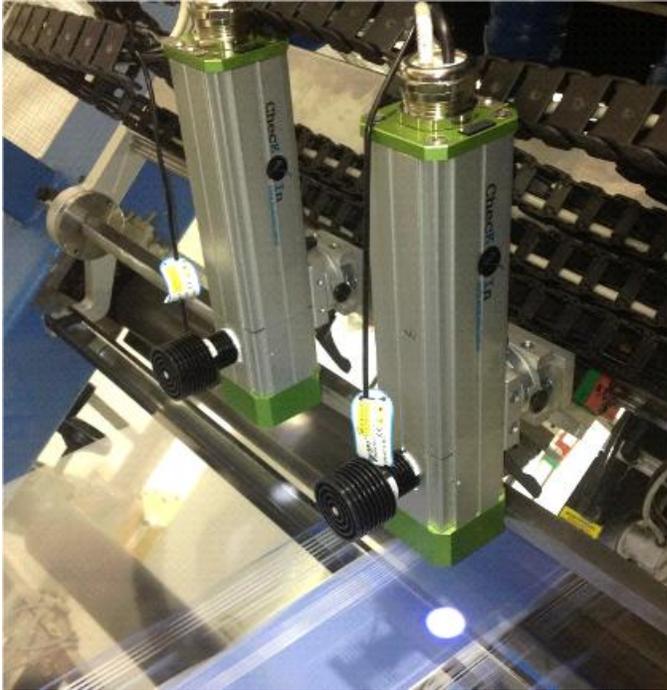
► Horticulture

Application Examples



- ▶ Food production, especially fish and meat

Application Examples



- ▶ Packaging inspection

More informations - contact us:

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www.autovimation.com