

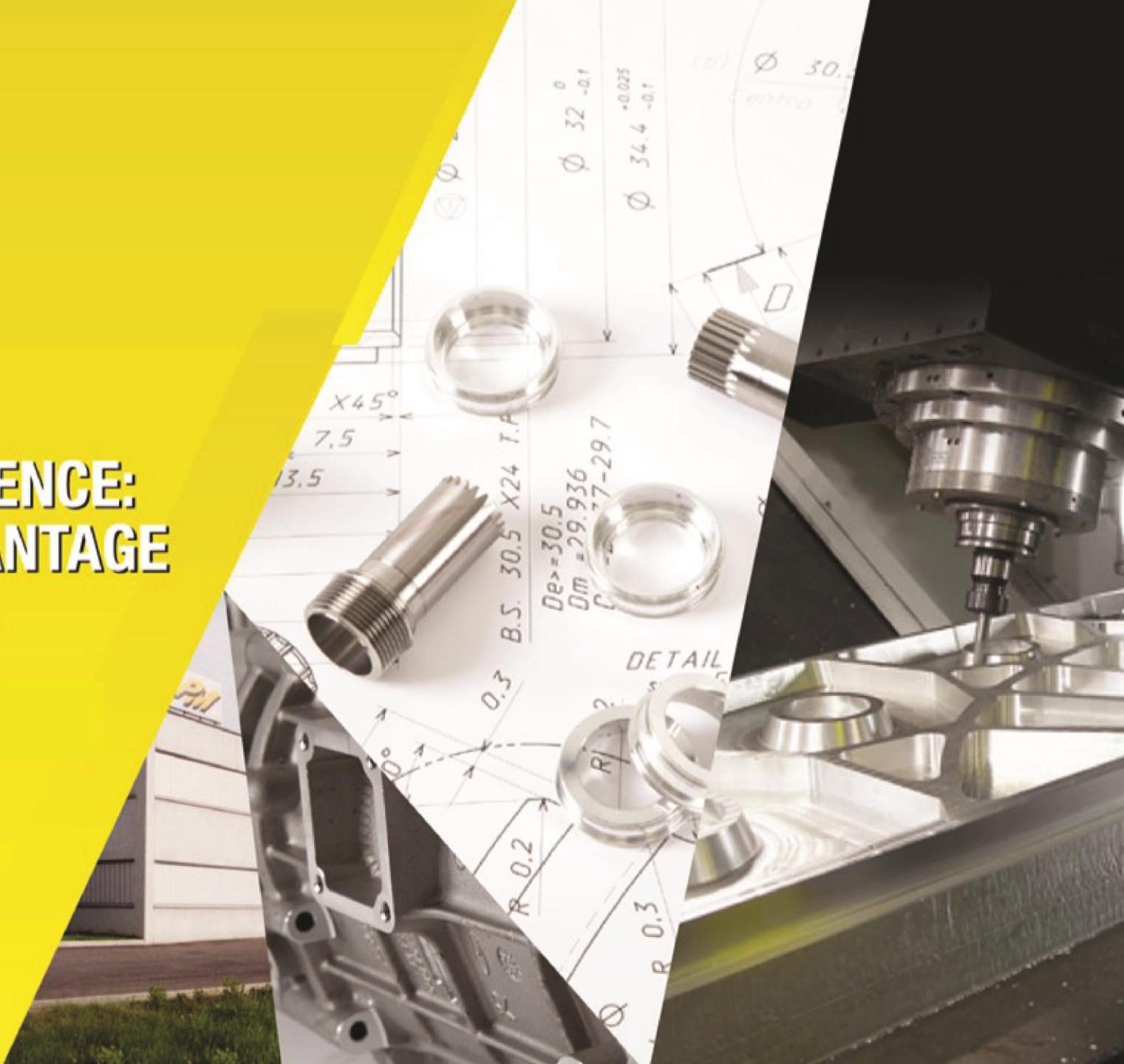




**PM**  
S.p.A.



# OUR COMPETENCE: AN ADVANTAGE FOR YOU

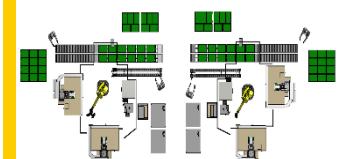


# HISTORY TIMELINE



## PURCHASE THE 1<sup>ST</sup> HORIZONTAL MULTIPALLET

The Company strategy moves to the FMS machining centers to open up to the series production.



## AUTOMOTIVE SUPPLY

First orders for the Automotive market; new certifications, special systems and dedicated investments: change of corporate culture.



## NEW HEADQUARTER

Till now, the company has 7 independent production plants. The new headquarter covers an area of 20,000 sqm, of which 11,000 are covered.

1976

## THE BEGINNINGS

The Company was born from a small family business engaged in turning with manual and numerical control machines.



1994

## NEW MEMBERS

The company shares are extended to more experienced staff for a strategic collaboration in the medium-long term.



2000

2006

## NEW MARKET

New customers in different sectors: diversification of the business; expansion of the market prospects.



2013

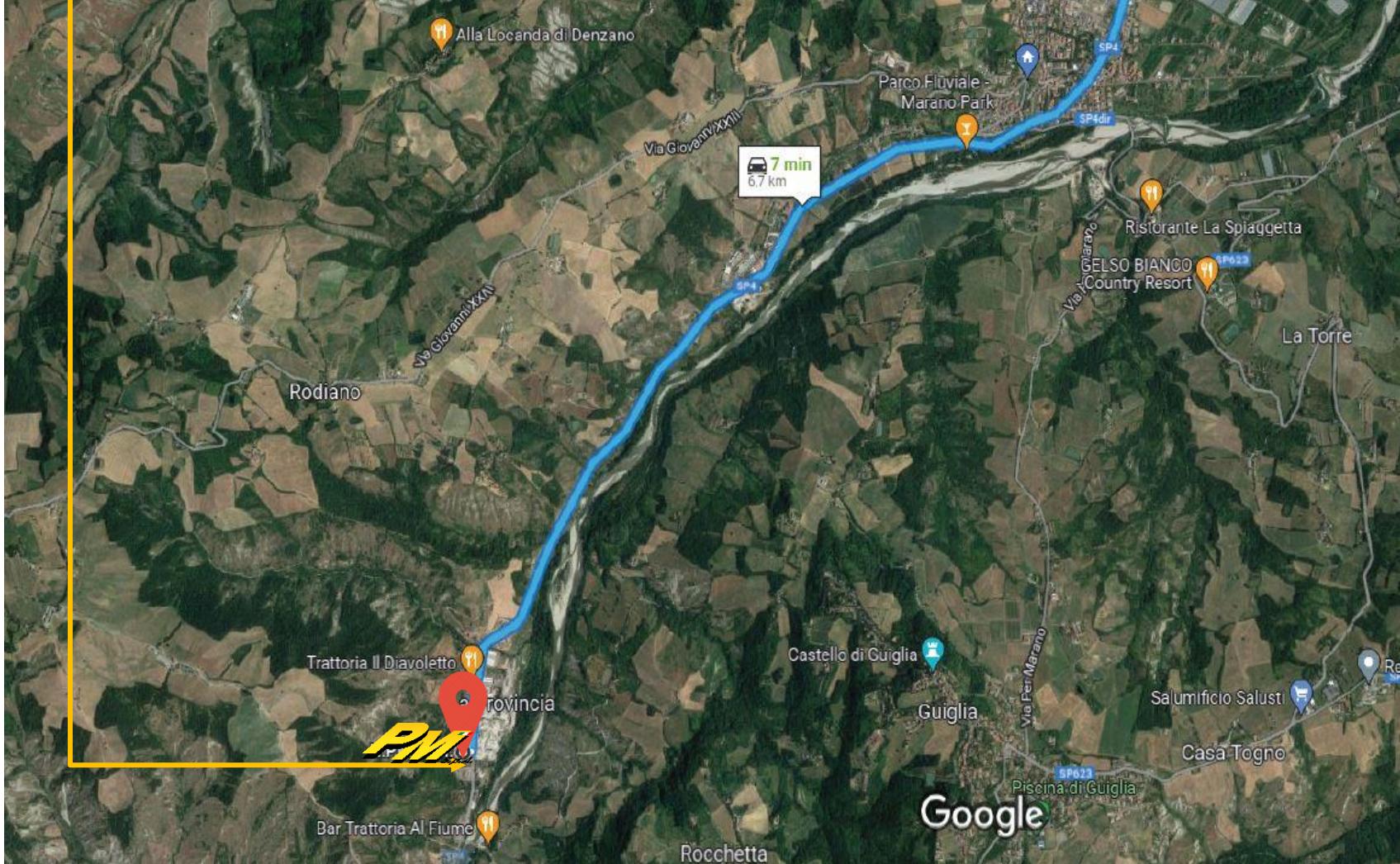
2021

# PM'S PRODUCTION PLANTS IN MARANO SUL PANARO (ITALY)

The Company consists of 7 independent production plants for an operating area of 12'000 sqm. The new building extending the main headquarters over an area of 20'000 sqm of which 11'000 are covered.

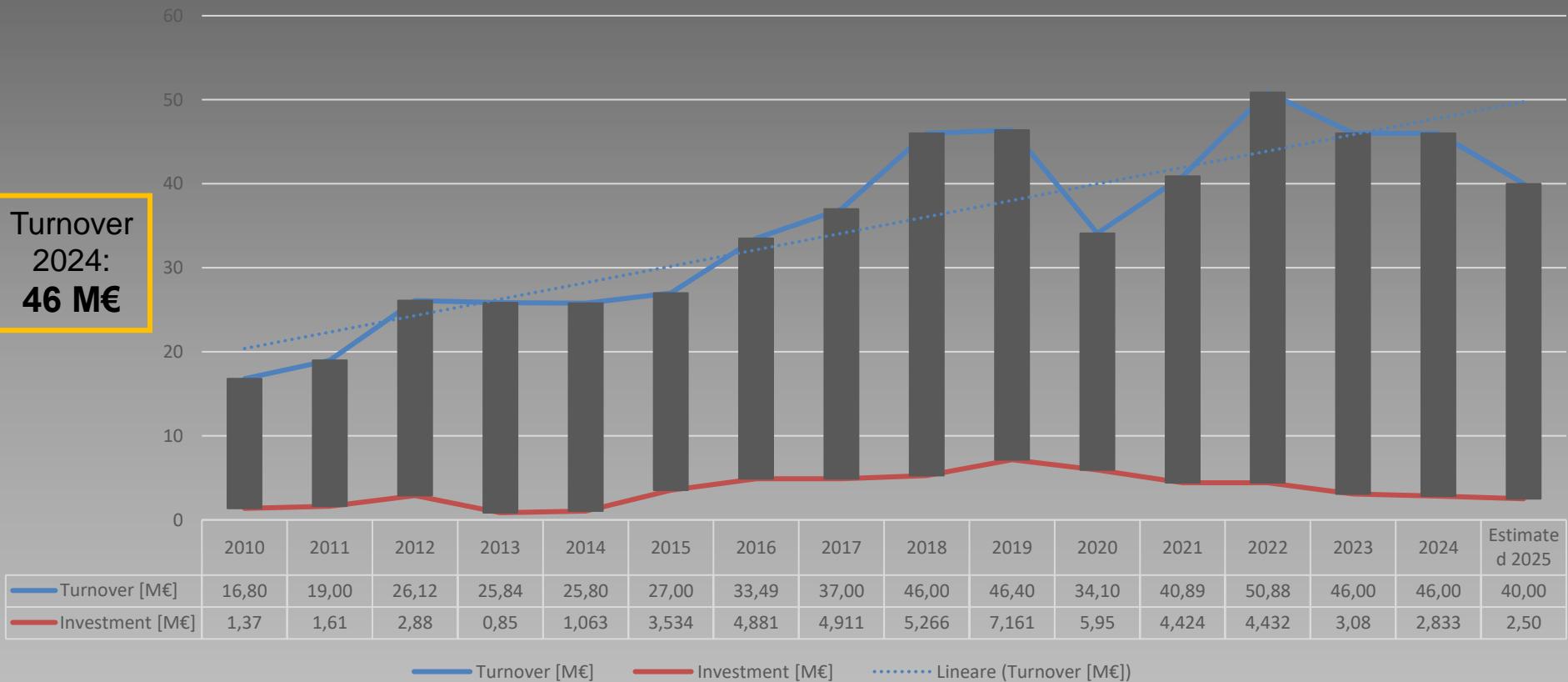


# PM'S PRODUCTION PLANT IN CASONA (ITALY)





## INVESTMENTS VS TURNOVER

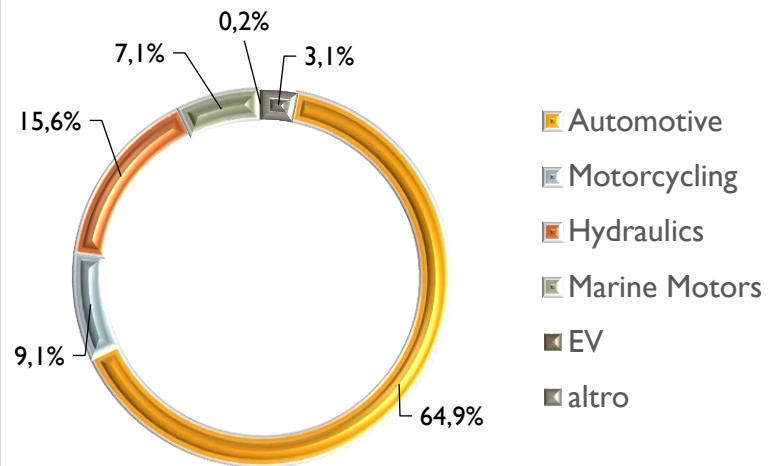




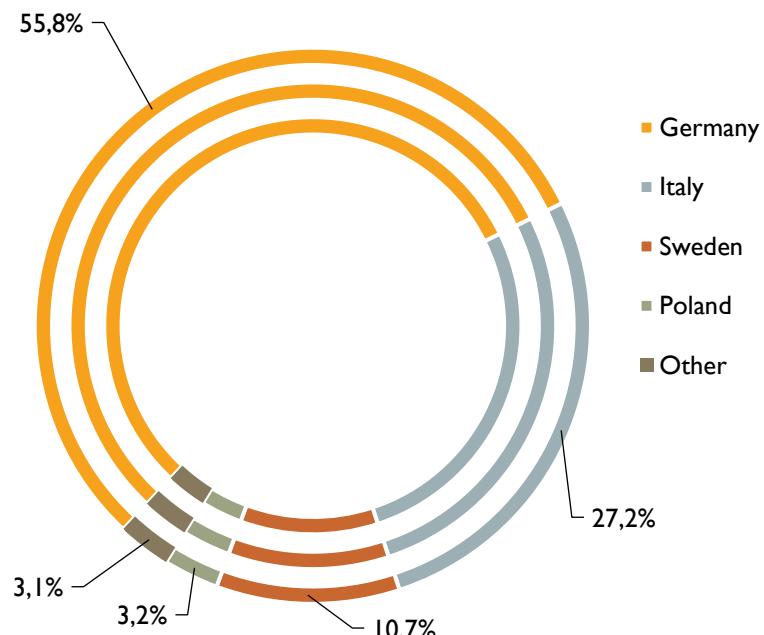
## STAFF HUMAN & TECHNICAL RESOURCES

The staff consists of 180 employees: 145 of those in manufacturing, 12 dedicated to the laboratories, quality, environment and safety, 10 in the technical-logistics-production area, 13 dedicated to purchasing, sales and administration processes.

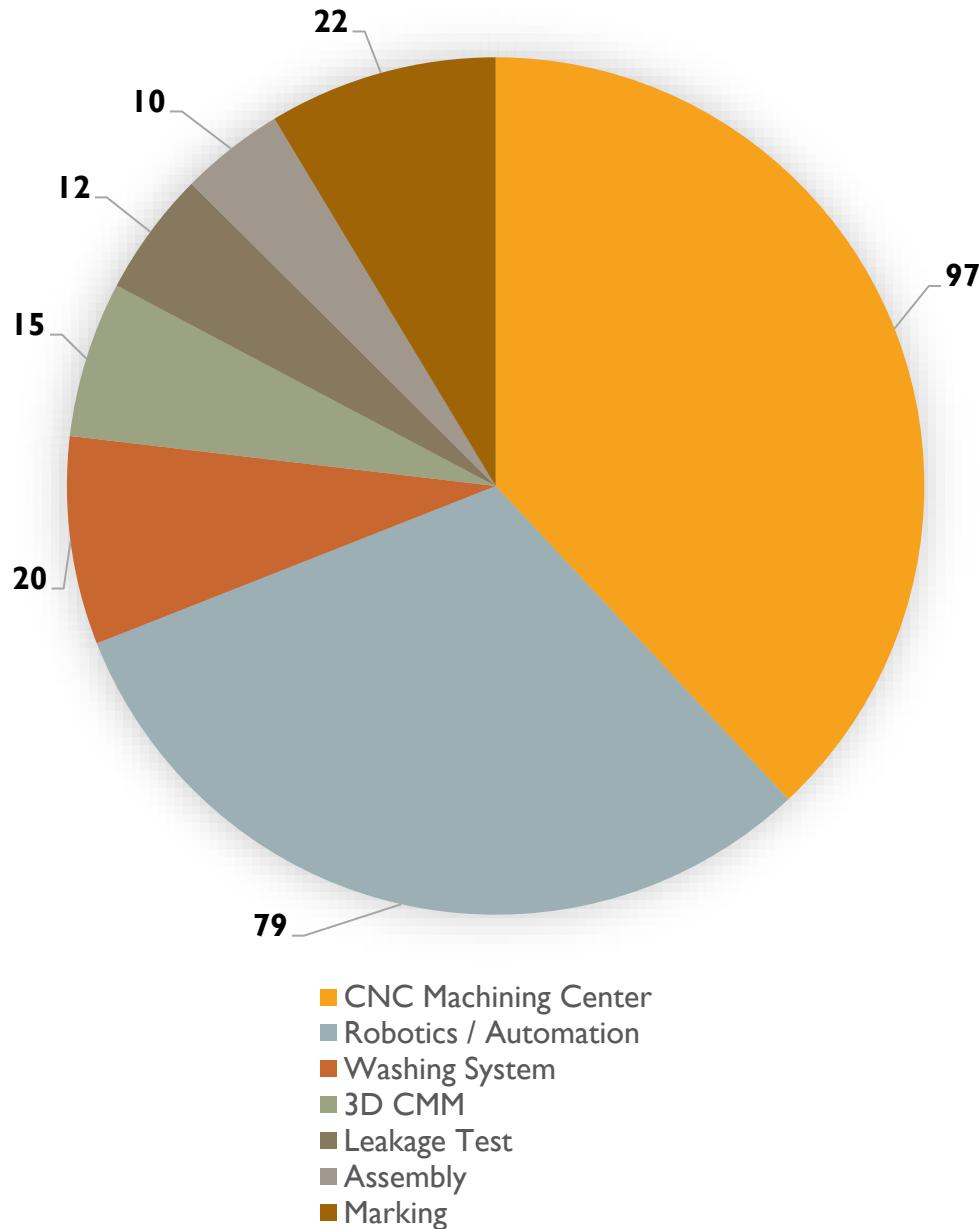
## REVENUE BY MARKETS



## REVENUE BY REGION



## MACHINES & TECHNOLOGY

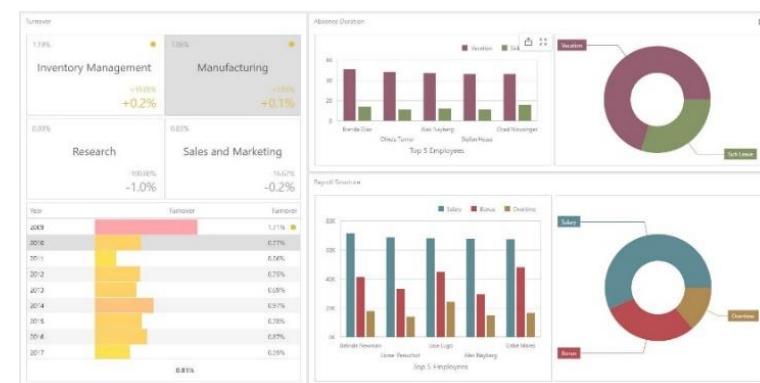


# INDUSTRY 4.0



In the last 4 years PM has strongly invested in the field of digital transformation, developing within it an integrated management system extended to all organizational processes with the aim of:

- **To have a centralized and complete control** on quality, environment and safety systems in compliance with the most up-to-date laws and specific requirements.
- **Optimize** timing: management, monitoring and analysis.
- **Standardization** of control logics of departments, offices and plants.
- **Improve** efficiency towards customers and suppliers.
- **Sharing** data between the business units of the co even more allowing access to external strategic partners also.



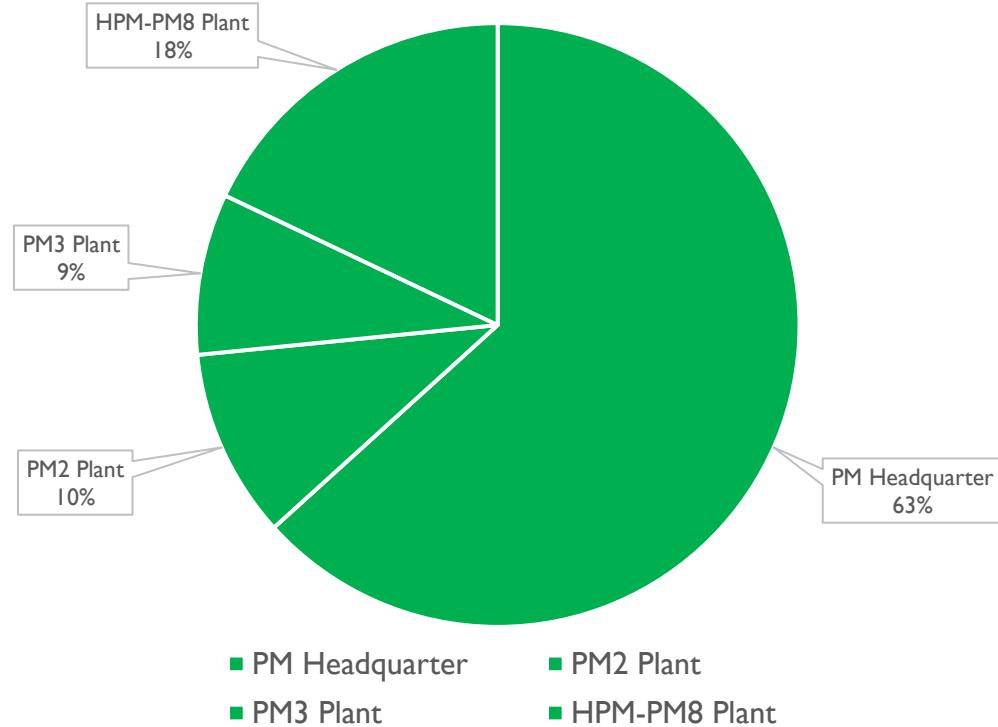


## COMPANY PV SYSTEM

- PM Headquarter: 862,125 kW
- PM2 Plant: 138 kW
- PM3 Plant: 117,7 kW
- HPM-PM8 Plant: 244,375 kW

Company PV System:

**1362,2 kW**



# CERTIFICATIONS



PM is **DNV** certified for the Management System Certification

PM is **TÜV Italia** certified for the Environmental Management System



In 2024 we have got the update of the certifications of the whole group to the standards **IATF 16949:2016**, **9001:2015** **14001:2015**.



# CUSTOMERS



DAIMLER



*Campagnolo*



**MAGNA**



**GRAZIANO**®

*Transmission Systems*



**brevini**

*Fluid Power Systems*

**BUCHER**



**LORD**



EVOMEK

**SAMP**



**Bonfiglioli**

**EATON**

**SHW**

**STILL**  
**KION**  
GROUP

**SIRA**  
INDUSTRIE



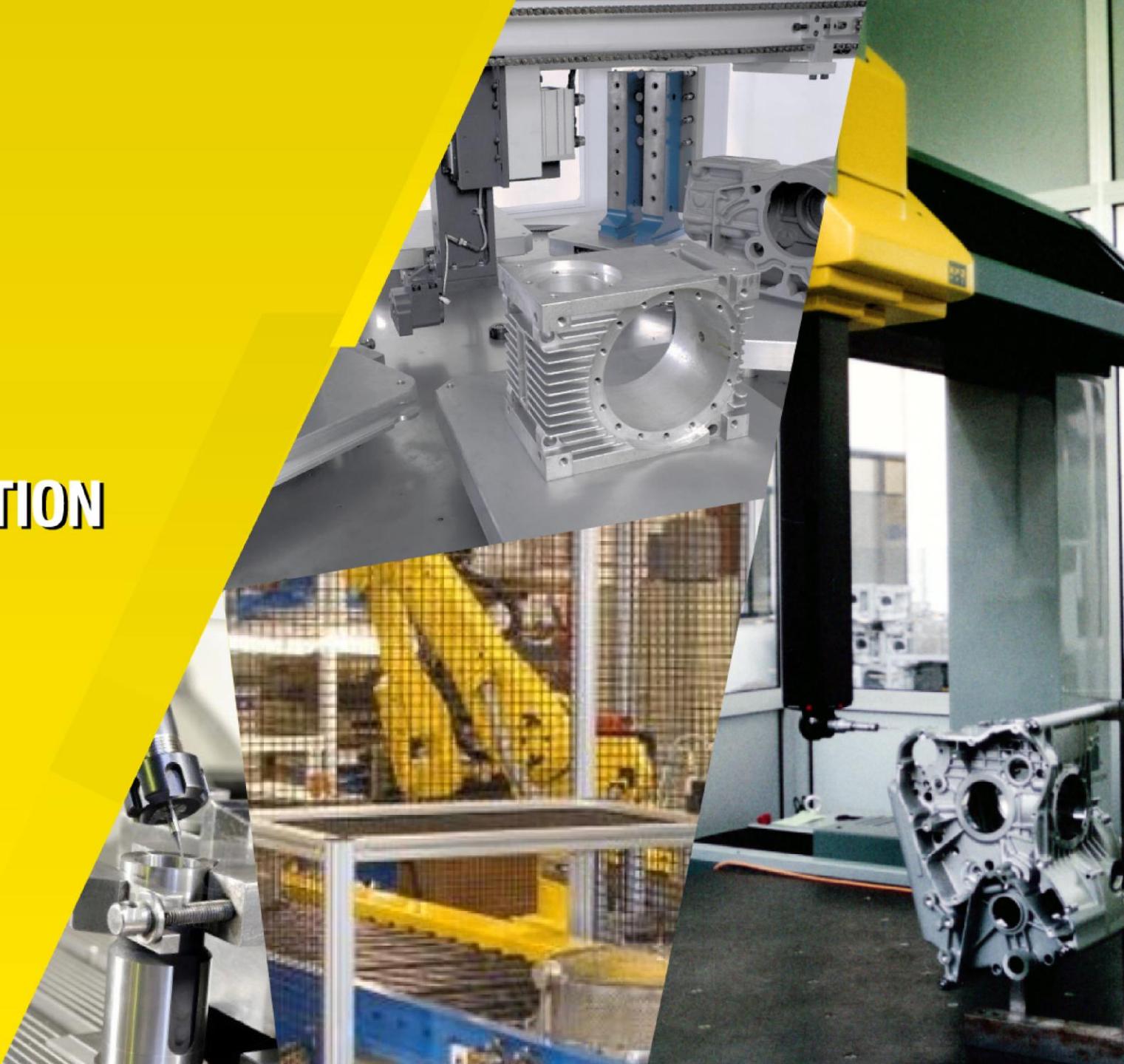
**atos**®



**SIRTEC**  
POLO DI DOSSO

**FONDERIA**  
**GATTELLI**  
since 1963  
Aluminium Gravity Die Casting

# PRODUCTION



# PRODUCTION PROCESSES



CO-DESIGN  
ROUGH  
PROTOTYPING  
TESTING  
MANUFACTURING  
ASSEMBLY

**- CO-DESIGN:** Engineering process, with definition of characteristics, such as piece pickup, dimensional tolerances, and geometric tolerances, to adapt the product and its characteristics (rough configuration, machining, assembly requirements, heat and surface treatments) in a perspective of feasibility and cost optimization.

Co-design implies deep analysis, often a complete simulation of the production process using programmed software and algorithms, as well as specific three-dimensional modelling software and tools.

**- ROUGH:** The possibility of supplying raw materials (pre-finished) with different surface treatments, such as coating, galvanizing, chroming, cataphoresis and anodizing permits characterising and upgrading the resulting product. The controls dedicated to checking and certifying required technical, chemical and mechanical specifications help guarantee the quality standards to be attained.

The comprehensive know-how acquired over the years involves the use of different raw materials in a whole range of solutions such as aluminium alloys, steel, grey iron, spheroidal iron and titanium and magnesium alloys. The pre-machined products are made using all the casting technologies available today: forging, extrusion, die-casting (including under vacuum), chill casting and sand casting, disamatic.

[www.pm-spa.it](http://www.pm-spa.it)

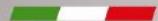
# PRODUCTION PROCESSES



CO-DESIGN  
ROUGH  
PROTOTYPING  
TESTING  
MANUFACTURING  
ASSEMBLY

**- PROTOTYPING:** The company is organized so as to make prototypes and finished sample ranges, inclusive of machining operations and any heat treatments, surface finishes, protective treatments, assemblies and packaging. A process performed in conjunction with the customer, the aim of which, as in the case of co-design, is cost optimization during subsequent mass production. A fundamental service, now quite rightly part and parcel of the production process and which has encountered considerable success in specific sectors such as the automotive and nautical-marine industries.

**- TESTING:** Dedicated areas complete with specific latest-generation instruments for controlling each single work phase, permit checking and complying with required standards. Quality controls on materials, checking contamination parameters, seal tests and automatic selection with class marking, measuring instrument (gauges, P-NP pads, bore meters, micrometers...) and assembly appliance control, are an integral part of the production process.

 [www.pm-spa.it](http://www.pm-spa.it)

# PRODUCTION PROCESSES



## CO-DESIGN

## ROUGH

## PROTOTYPING

## TESTING

## MANUFACTURING

## ASSEMBLY

**- MANUFACTURING:** Mechanical machining operations on various types of plants: the company caters to the operating requirements of both small and medium batches, and of fully-automated processes dedicated to individual automotive applications for mass production in very large numbers.

The available machine inventory consists of 4 and 5-axis machines, most of which in FMS (Flexible Manufacturing System) lines with high-capacity tool magazines and robotized systems for tending the material to be worked, special multi-spindle machines, robotized production islands, washing plants of various kinds (with single drum, multi drum with Cartesian robot and multi drum with anthropomorphic robot and high pressure).

The management of the toolroom, which now counts a total of over 8000 codes, is entrusted to a specific department of the company, equipped with automatic warehouses, tool presetting instruments, heat and hydraulic keying appliances and correct-balancing devices.

**- ASSEMBLY:** To cater to what is an increasingly more focused and discerning market, for some years now the company has completed its services by dedicating various departments and production islands to the assembly of component parts after machining operations, including for complex products or with special characteristics.

A delicate and highly-responsible, but also very rewarding process which has also resulted in building specific machinery and appliances (manual or CNC) for the different types of assembly operations. The assembled products then undergo final testing and once packed and delivered can be installed on their applications.

# MATERIAL AND CASTING PARTNERS



## HPDC (High Pressure Die Casting)



## LPDC (Low Pressure Die Casting)



## FORGING



## GRAVITY DIE CASTING



## EXTRUSION



## SAND CASTING



## DISA



## SHELL CASTING



Materials	Specs
CAST IRON	EN GJS 500-7
CAST IRON	EN GJS 600-3
CAST IRON	EN-GJL-200 / 250
STEEL	I1SMnPb32
STEEL	I1SMnPb37
STEEL	I0SPb20
STEEL	36SMnPb14
STEEL	16CrNi4
STEEL	100Cr6
STEEL	39NiCrMo3
STEEL	C12/C40/C45
STEEL	I6MnCr5
STEEL	20 MnCr5
ALUMINIUM ALLOY	EN AC 42000 / 42100
ALUMINIUM ALLOY	EN AC 46000 / 46400
ALUMINIUM ALLOY	EN AW 6110
ALUMINIUM ALLOY	EN AW 6082
BRASS	CW614N



# SPECIFIC PROCESSES

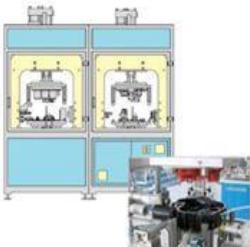


## - WASHING TYPES:

- single rack systems.
- multi-racks systems.
- palletizing system with Cartesian robots at high pressure.
- rotary-racks systems with vacuum air dryer.



**- VERIFICATION OF CONTAMINATION** PM set up a dedicated room for this type of testing.



**- LEAKAGE TEST** Many years of experience into the leakage test in air and water. In collaboration with the Department of Engineering "Enzo Ferrari", PM has also developed the leakage test in vacuum.

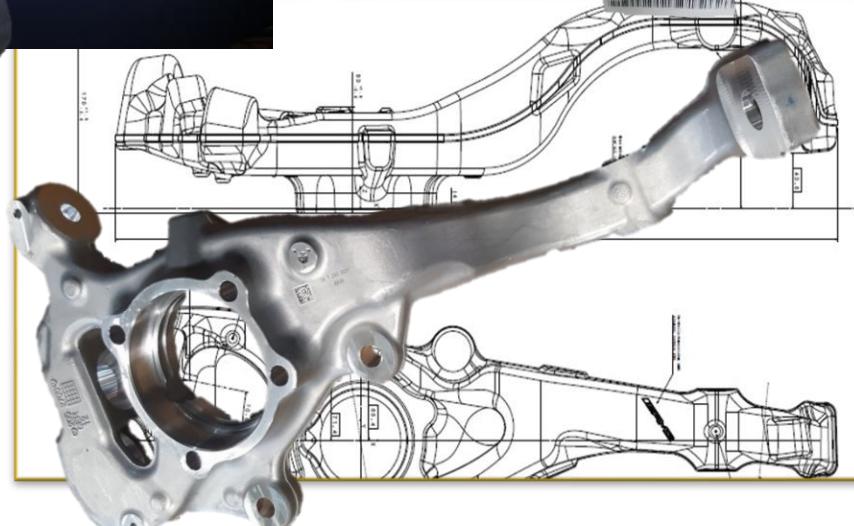
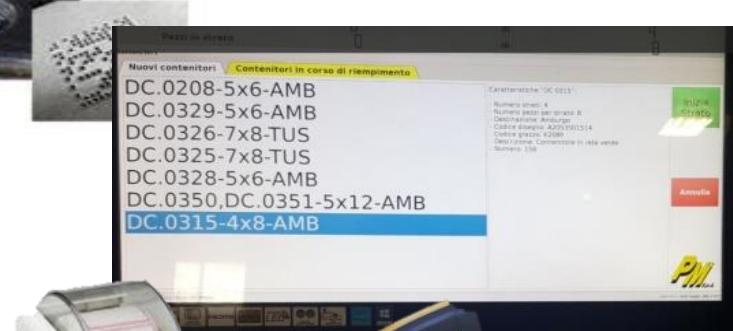


**- VERIFICATION OF MATERIAL** PM uses an instrument called quantometer for the chemical analysis of raw materials.

# SPECIFIC PROCESSES



**TRACKING PRODUCT** Traceability with coding systems evolved. (ex: Data Matrix)



# PRODUCTION FOCUS





Name	Housing
Reference Vehicle	MAN Truck
Material	Aluminium Alloy
Volume	20'000 Pcs/Year

# AUTOMOTIVE

## GEARBOX – TRANSAXLE – CLUTCH – HOUSING DIFFERENTIAL TRANSMISSION CASING



Name	<b>Gearbox &amp; Clutch Housing M66 Project</b>
Material	Aluminium Alloy
Volume	40'000 Pcs/Year



Name	<b>Differential transmission casing Clutch</b>
Material	Aluminium Alloy
Volume	8'000 Pcs/Year



Name	<b>Differential transmission casing Clutch</b>
Material	Aluminium Alloy
Volume	4'000 Pcs/Year --out of production--

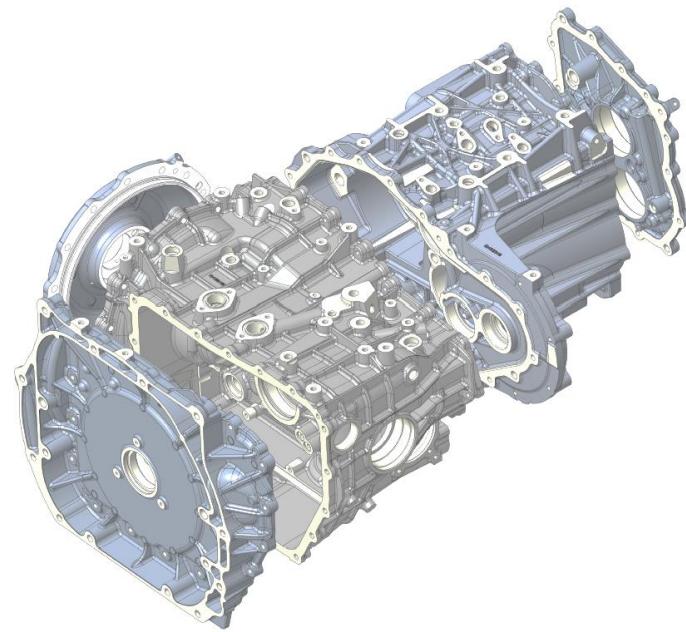
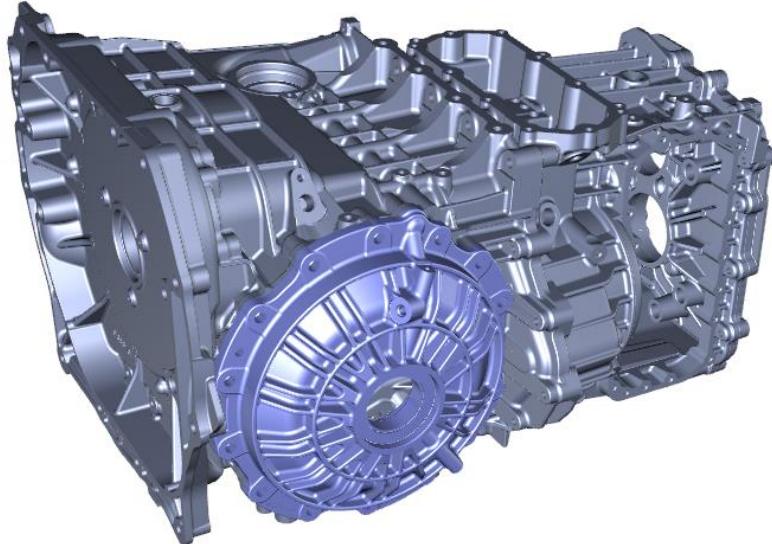


Name	<b>Differential transmission casing</b>
Reference Vehicle	Maserati Granturismo
Material	Aluminium Alloy
Volume	1'000 Pcs/Year



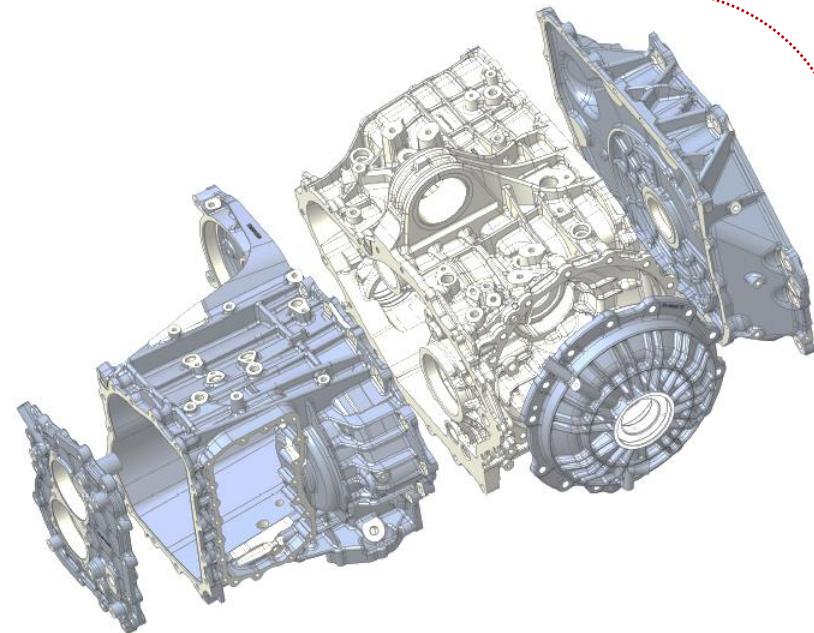
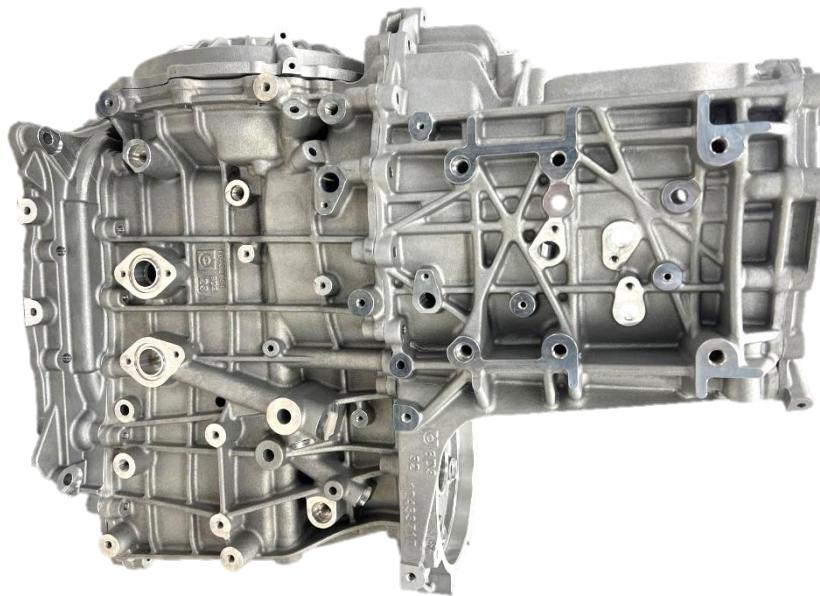
Name	<b>Differential transmission casings</b>
Reference Vehicle	Aston Martin DB11 Aston Martin Vantage
Material	Aluminium Alloy
Volume	7'000 Pcs/Year





Parts Description	Weight [kg]	Dimension	Material	Overall Size	Total Weight Assembly [kg]
DIFFERENTIAL COVER	2,89	315 X 80	AL-SI-MG		
REAR COVER	2,39	265 X 321 X 60	AL-SI-MG		
CLUTCH	20,26	540 X 355 X 300	AL-SI-MG		
GEARBOX	15,4	574 X 338 X 306	AL-SI-MG		
FRONT CASING	5,41	510 X 395 X 51	AL-SI-MG		
				581 X 403 X 683	46,35



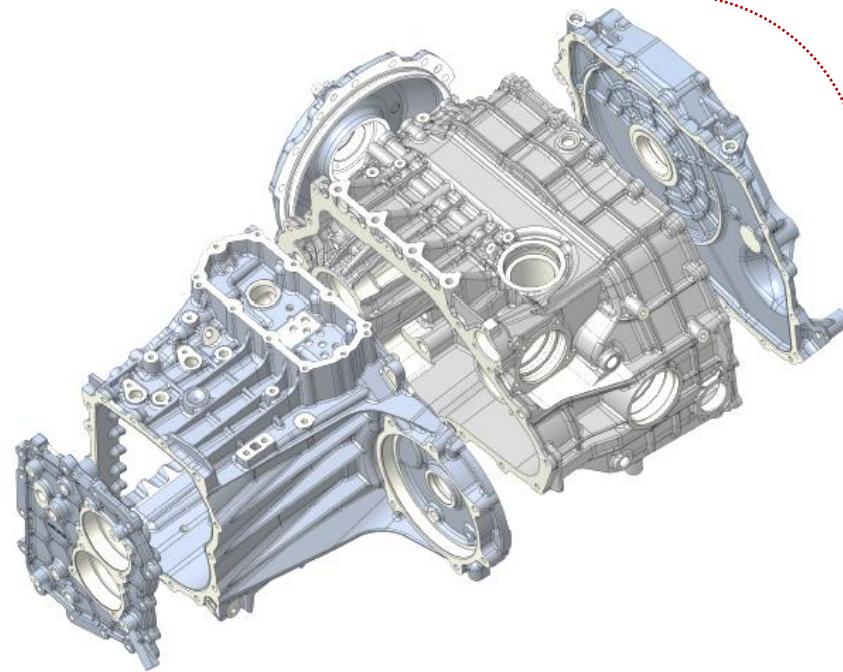
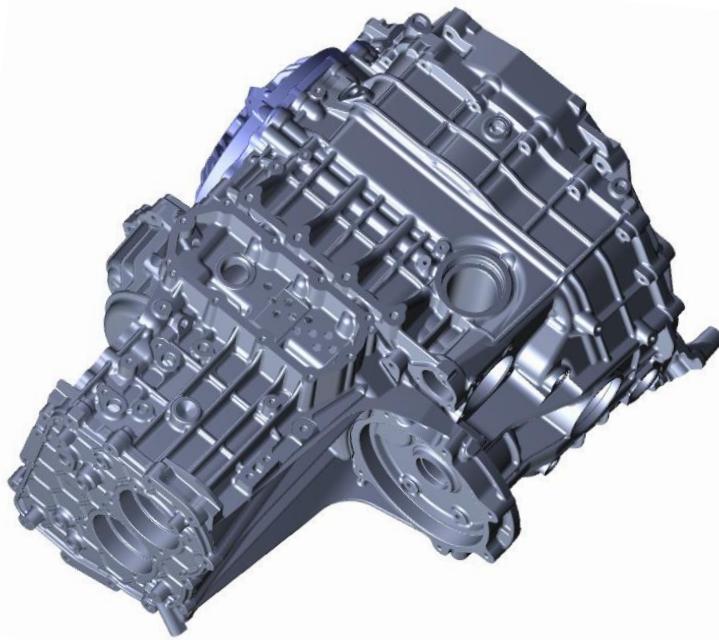


Parts Description	Weight [kg]	Dimension	Material	Overall Size	Total Weight Assembly [kg]
DIFFERENTIAL COVER	2,89	315 X 80	AL-SI-MG		
REAR COVER	2,39	265 X 321 X 60	AL-SI-MG		
CLUTCH	21,8	554 X 455 X 300	AL-SI-MG		
GEARBOX	13,7	560 X 306 X 340	AL-SI-MG		
FRONT CASING	2,45	525 X 90,9 X 360	AL-SI-MG		
				581 X 470 X 723	43,23



# AUTOMOTIVE

GEARBOX – TRANSAXLE – CLUTCH – HOUSING  
DIFFERENTIAL TRANSMISSION CASING



Parts Description	Weight [kg]	Dimension	Material	Overall Size	Total Weight Assembly [kg]
DIFFERENTIAL COVER	2,89	315 X 80	AL-SI-MG		
REAR COVER	2,39	265 X 321 X 60	AL-SI-MG		
CLUTCH	20,26	540 X 355 X 300	AL-SI-MG		
GEARBOX	15,4	574 X 338 X 306	AL-SI-MG		
FRONT CASING	5,98	520 X 386 X 62,4	AL-SI-MG		
				588 X 401 X 694	46,92



# AUTOMOTIVE TRANSMISSION AND CLUTCH



Name **Main hub**

Material Steel

Volume Assy stator and oil distribution sleeve + Main hub **group** 10'000 Pairs/Year



Name **Assy stator and oil distribution sleeve**

Material Steel



Name **Transmission Casing**

Material Aluminium

Volume Transmission Housing: 2'500 Pcs/Year

**MAGNA**



Name **Clutch Group**

Reference Vehicle BMW X6 Hybrid  
Mercedes ML Hybrid

Material Cast Iron

Volume 2'000 Pcs/Year  
--out of production--



Name **Plate Reinforce Transmission**

Reference Vehicle Fiat Ducato

Material Die-casting Aluminum

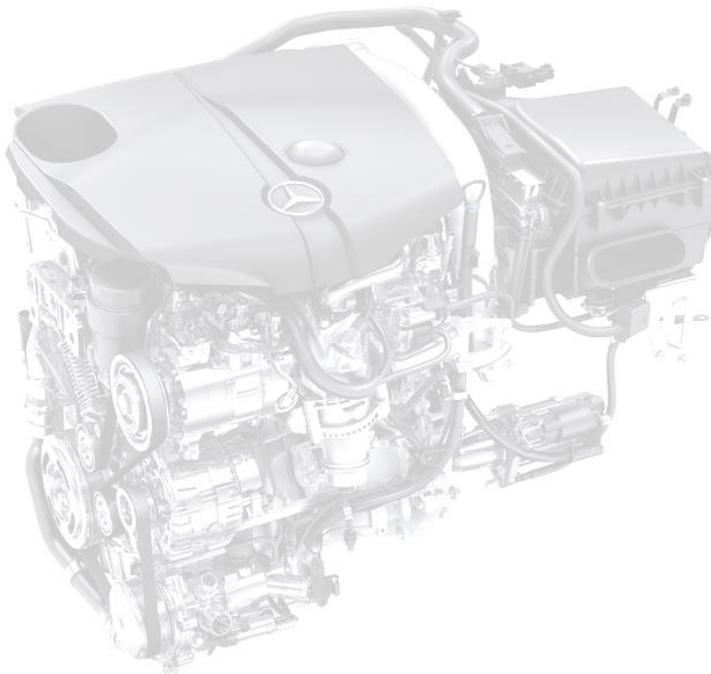
Volume 100'000 Pcs/Year



# AUTOMOTIVE ENGINE COMPONENTS



Name	<b>-OM 654 Diesel Engine Project- Bearing Caps</b>
Reference Vehicle	Mercedes cars
Material	GGG600
Volume	Ca. 2'500'000 Pcs/Year in series



Name	<b>-M256 MOPF Petrol Engine Project- Bearing Caps</b>
Reference Vehicle	Mercedes cars
Material	GGG600
Volume	Ca. 900'000 Pcs/Year



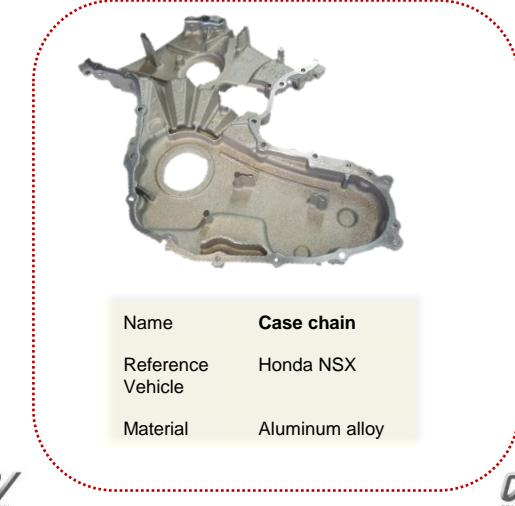
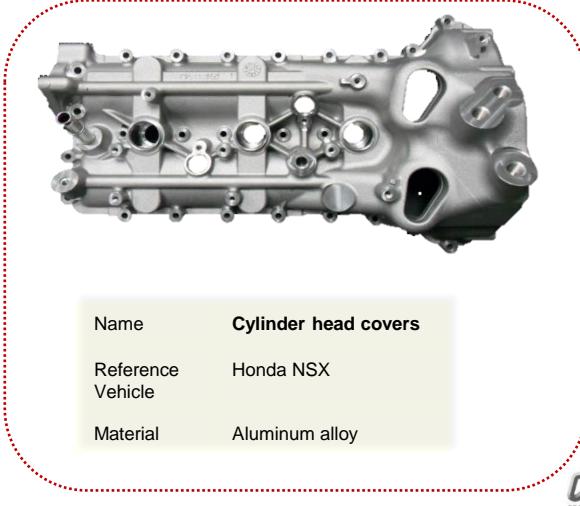
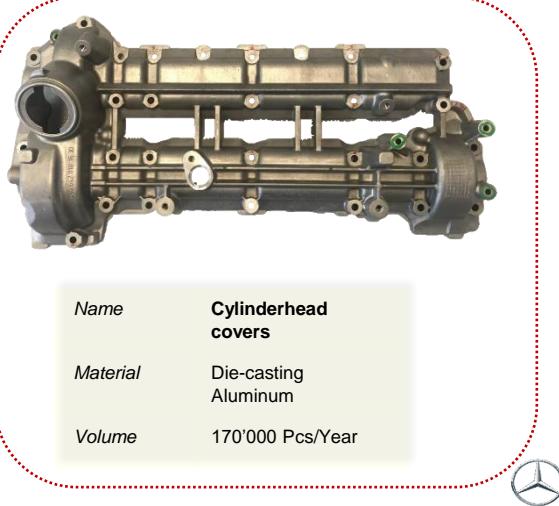
Name	<b>Carrier Mech. and Electr. Träger)</b>
Reference Vehicle	Mercedes cars
Material	Aluminum alloy
Volume	500'000 Pcs/Year



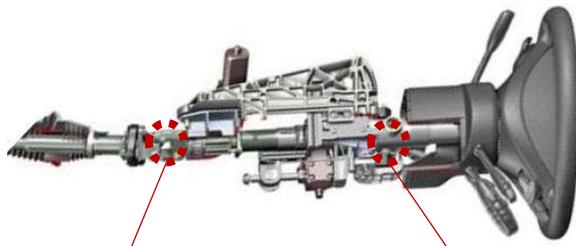
# AUTOMOTIVE

## ENGINE COMPONENTS

### CYLINDERHEAD COVERS – CASE CHAIN



# AUTOMOTIVE STEERING WHEEL – STEERING COLUMN WHEEL HUB PARTS – REAR KNUCKLE



Name	--Steering Wheel--
Reference Vehicle	Mercedes Cars
Material	Aluminum alloy
Volume	150'000 Pcs/Year

Name	--Steering Column--
Reference Vehicle	Mercedes Cars
Material	Aluminum alloy
Volume	100'000 Kits/Year



**Microlino** **CECOMP**



Name	Rear Knuckle
Reference Vehicle	Microlino
Material	Aluminium
Volume	10'000 Pcs/Year

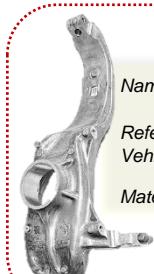
**TAZZARI EY**  
ZERO EMISSION MOBILITY

# AUTOMOTIVE WHEEL HUB PARTS – FRONT & REAR KNUCKLE

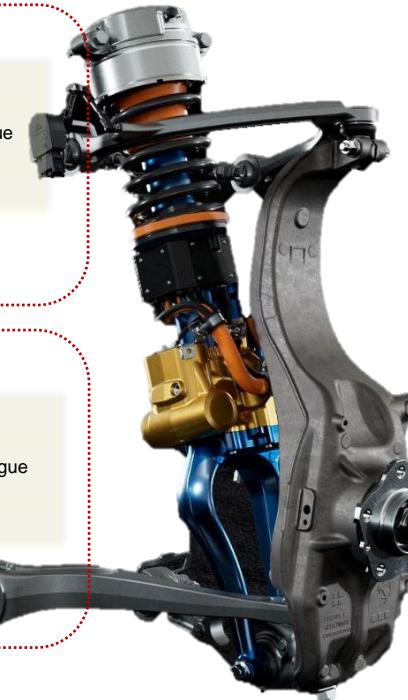


<b>Name</b>	<b>Front Knuckle</b>
<b>Reference Vehicle</b>	AMG Cars
<b>Material</b>	Aluminum alloy
<b>Volume</b>	70'000 Kits/Year

DRIVING PERFORMANCE



<b>Name</b>	<b>Front Knuckle</b>
<b>Reference Vehicle</b>	Ferrari Purosangue
<b>Material</b>	Aluminum alloy



<b>Name</b>	<b>Rear Knuckle</b>
<b>Reference Vehicle</b>	AMG Cars
<b>Material</b>	Aluminum alloy
<b>Volume</b>	30'000 Kits/Year

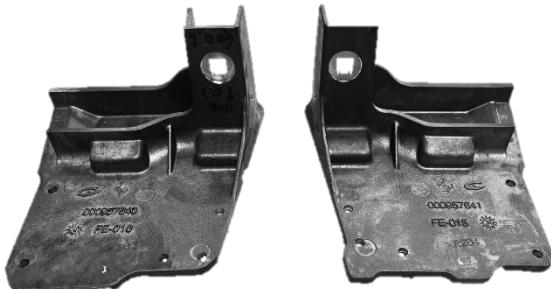
DRIVING PERFORMANCE



<b>Name</b>	<b>Front Knuckle</b>
<b>Reference Vehicle</b>	Ferrari Purosangue
<b>Material</b>	Aluminum alloy



# AUTOMOTIVE FRAME- CHASSIS PARTS



**Name** Frame-Chassis Supports

**Reference Vehicle** Ferrari f167-f169 projects

**Material** Aluminium Alloy

**Volume** 5'000 Pcs/Year on 7 codes

# MOTORCYCLING RACING



PM has been committed for over 20 years to the World Superbike Championship as a partner in development and technical support. PM has been working together with the Ducati Team since the founding of the MotoGP project.

# MOTORCYCLING ENGINE CRANKCASE



Name	<b>Engine Crankcase</b>
Reference Vehicle	Ducati Motor Holding DMH
Material	Die-Cast Aluminium
Volume	20'000 Engine/Year



Water Jacket Case  
inside the engine

Name	<b>Engine crankcase for electric motorcycle</b>
Reference Vehicle	Harley Davidson LiveWire
Material	Aluminium Alloy
Volume	4'000 Kits/Year on 6 codes
	<ul style="list-style-type: none"><li>-Cover Gearbox</li><li>-Housing Gearbox</li><li>-Housing E-Motor</li><li>-Water Jacket Case</li><li>-Housing Inverter</li><li>-Cover Inverter</li></ul>



# MOTORCYCLING

## TIMING LAY SHAFT – ROCKER SHIM WHEEL SPINDLE - REAR SWINGARM



<b>Name</b>	<b>Timing lay shaft</b>
<b>Reference Vehicle</b>	All Ducati models
<b>Material</b>	Tempered steel
<b>Volume</b>	30'000 Pcs/Year

<b>Name</b>	<b>Rocker shim</b>
<b>Reference Vehicle</b>	All Ducati models
<b>Material</b>	Steel
<b>Volume</b>	140'000 Pcs/Year

<b>Name</b>	<b>Wheel spindle – Front wheel shaft</b>
<b>Reference Vehicle</b>	Ducati Monster
<b>Material</b>	Aluminium shell
<b>Volume</b>	8'000 Pcs/Year



<b>Name</b>	<b>Rear swingarm</b>
<b>Reference Vehicle</b>	BMW R1200 GS
<b>Material</b>	Aluminium shell
<b>Volume</b>	20'000 Pcs/Year

# CYCLING PARTS **RACING**



PM as official supplier has contributed to affirming Campagnolo all over the world: a recognized brand of cycle racing.

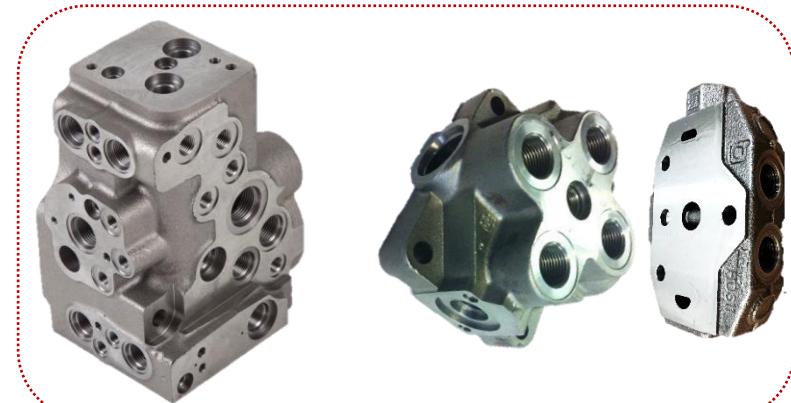
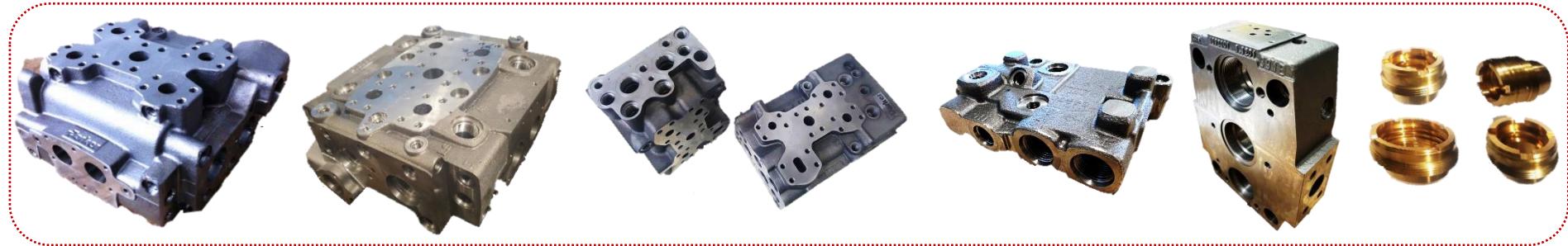


*Campagnolo*

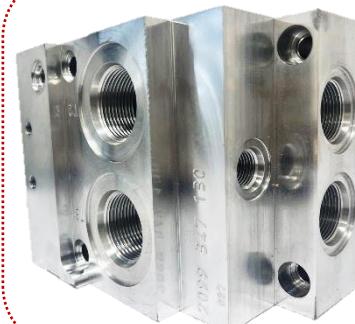
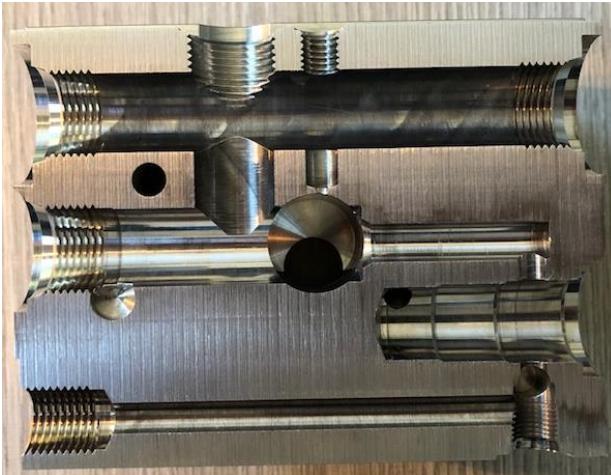


# HYDRAULIC

DISTRIBUTORS – PUMP  
VALVE BODY - BRASS GLANDS



## Critical Tolerances: section parts



We perform the check with:

### Pneumatic Marposs Station

MARPOSS DUO AIR

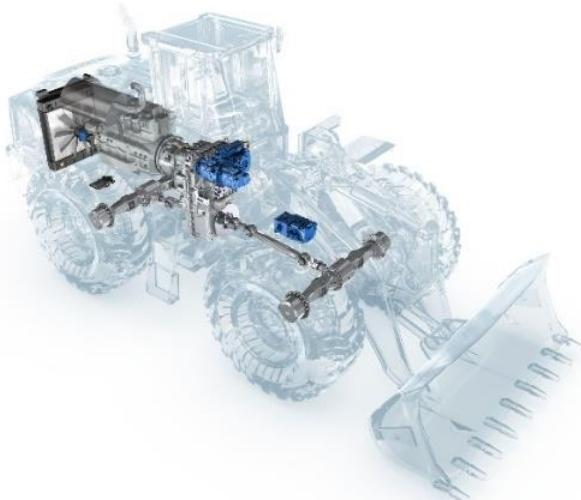


### Roundness Equipment



# HYDRAULICS

## DISTRIBUTORS – VALVES – ARMS



Name	<b>Housing / Valve Body</b>
Reference Vehicle	Earth-Moving Machinery
Material	GJL / GJS
Volume	4'000 Pcs/Year



Name	<b>Valve Body</b>
Reference Vehicle	Earth-Moving Machinery
Material	GJV – Cast Iron
Volume	3'000 Pcs/Year



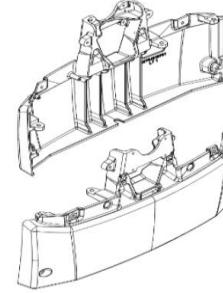
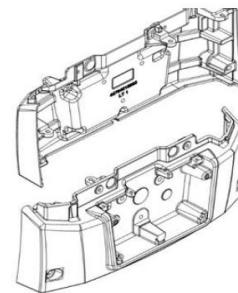
Name	<b>Turned Flange</b>
Reference Vehicle	Earth-Moving Machinery
Material	Aluminium alloy
Volume	20'000 Pcs/Year



Name	<b>Arm – Modular Axle</b>
Reference Vehicle	Earth-Moving Machinery
Material	GJS 500 – Sferoidal Cast Iron
Volume	10'000 Pcs/UYear on 2 codes



# FORKLIFTS



**Name** EXV 14-20

**Reference Vehicle** Transpallet / Lift / Forklifts

**Material** Cast Iron

**Volume** 5'000 Pcs/Year

**Name** EXV 14-20

**Reference Vehicle** Transpallet / Lift / Forklifts

**Material** Cast Iron GJS-400-15

**Volume** 250 Pcs/Year





<b>Name</b>	<b>Arm Tube body assembly</b>
<b>Reference</b>	Industrial Robots Automation Technology
<b>Material</b>	Aluminium alloy
<b>Volume</b>	100 Pcs/Year



<b>Name</b>	<b>Arm Tube</b>
<b>Reference</b>	Industrial Robots Automation Technology
<b>Material</b>	Aluminium alloy
<b>Volume</b>	1'000 Pcs/Year



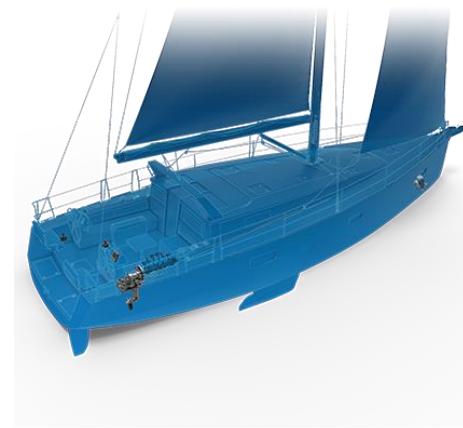
<b>Name</b>	<b>Main Housing &amp; Covers Assembly</b>
<b>Reference</b>	Industrial Robots Automation Technology
<b>Material</b>	Spheroidal Cast Iron EN-GJS 400
<b>Volume</b>	4'500 Pcs/Year



<b>Name</b>	<b>Lower &amp; Upper Gearbox Housings</b>
<b>Reference</b>	Industrial Robots Automation Technology
<b>Material</b>	Aluminium alloy
<b>Volume</b>	600 Pcs/Year

# MARINE TRANSMISSION

ENGINE CONTROL BLOCK  
- STERNDRIVES - HOUSINGS  
AND COVERS



Name	Sterndrives, Housings & Covers, Engine Control Block for Marine Transmission
Reference Vehicle	Yacht Vessel
Material	Aluminium Alloy
Volume	60'000 Pcs/Year on 50 codes





Name	Housing
Reference	Energy Industry
Material	Aluminium
Volume	1000 Pcs/Year



Name	Operating Mechanism Housing
Reference	Energy Industry
Material	Aluminium
Volume	500 Pcs/Year

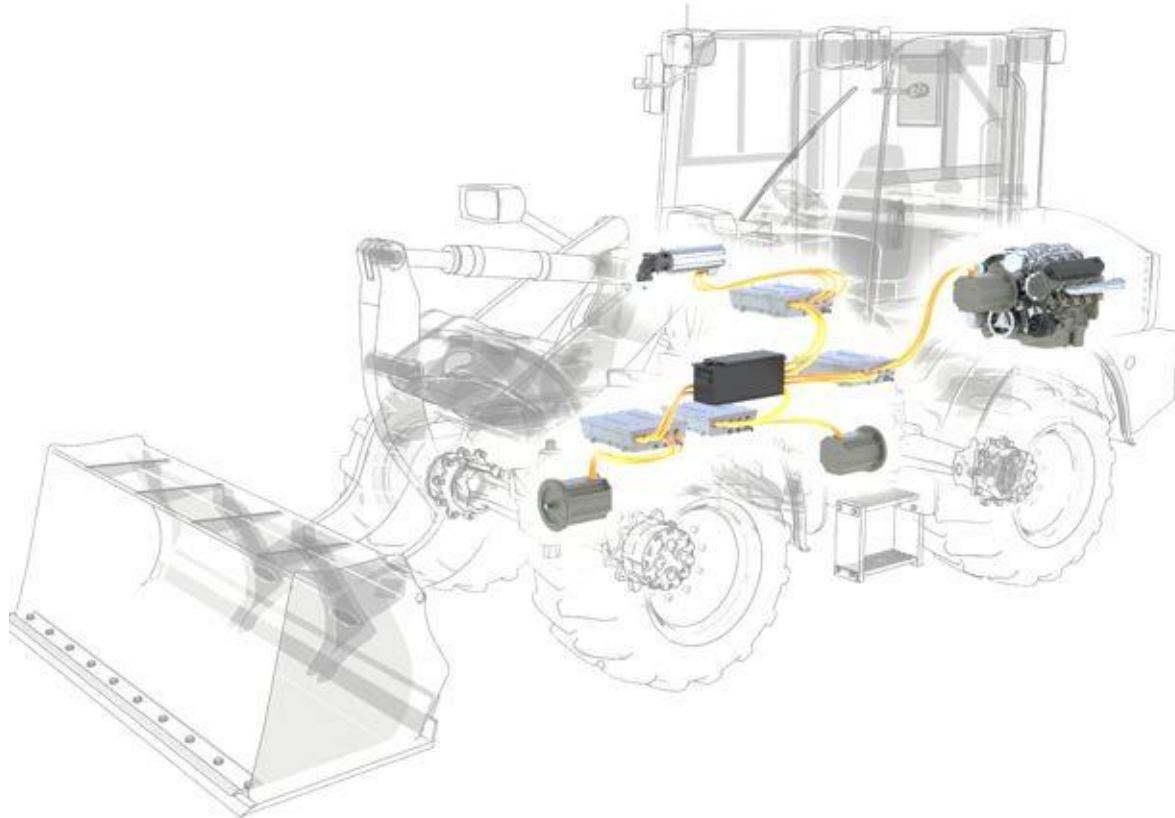


Name	Housing
Reference	Energy Industry
Material	Aluminium
Volume	500 Pcs/Year



# ELECTRIC

PARTS FOR ELECTRIC  
VEHICLES (EVs)

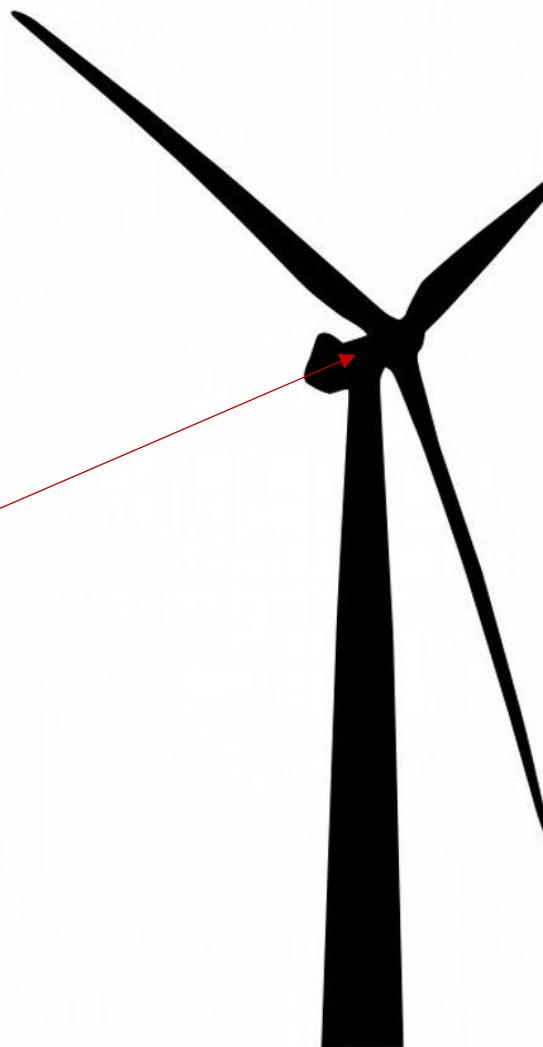


Parker LORD



# WIND ENERGY

ENERGETICS PARTS



Bonfiglioli





<b>Name</b>	<b>Housings for commercial PV Systems</b>
<b>Reference</b>	Solar Power Industry
<b>Material</b>	Aluminium
<b>Volume</b>	150'000 Pcs/Year on 4 codes
<b>Size</b>	L x W x H [mm] 520 x 400 x 280 700 x 500 x 150



# PHILOSOPHY



## **Innovation, Training, Research:** the three pillars of our success.

 [www.pm-spa.it](http://www.pm-spa.it)

Innovation is a crucial factor for maintaining a competitive edge on today's increasingly more global and competitive market. In the metalworking sector, the company boasts the most advanced technologies and the most flexible production systems currently available on the market, to provide high-performance and truly competitive solutions.

Training affects various aspects of our business activities: younger staff members work alongside those with more experience, so they really learn the job and acquired experience is not lost. Staff training is targeted both from a technical viewpoint and from that of workers' safety so workers are independent and, above all, safe in whatever situation they have to operate.

Research is consistent with the requests of our customers. Our flexibility also consists in taking care of problems and finding inexpensive solutions, but without ever scrimping on quality, which is always of the highest quality.

The company involves the younger generations thanks to ongoing cooperation with local high schools and the university of Modena and Reggio Emilia.

**PM**  
S.p.A.

*High Precision Machining*  
*since 1976...*



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