

EUROCARBO SpA

A worldwide leader sintered
material company
(Electrical Carbon, brush holder,
Mechanical carbon, silicon carbide,
etc..)

company profile





Segment of Eurocarbo Business

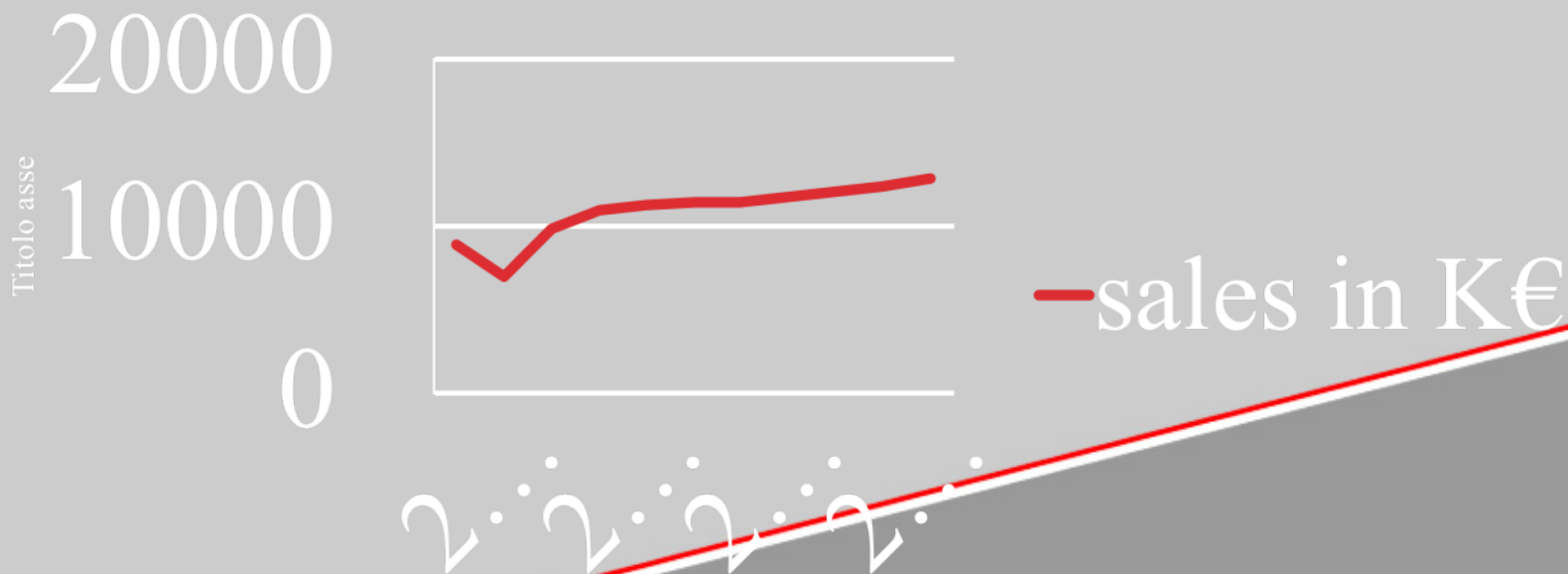
Mechanical
carbon

Electrical
carbon&spare

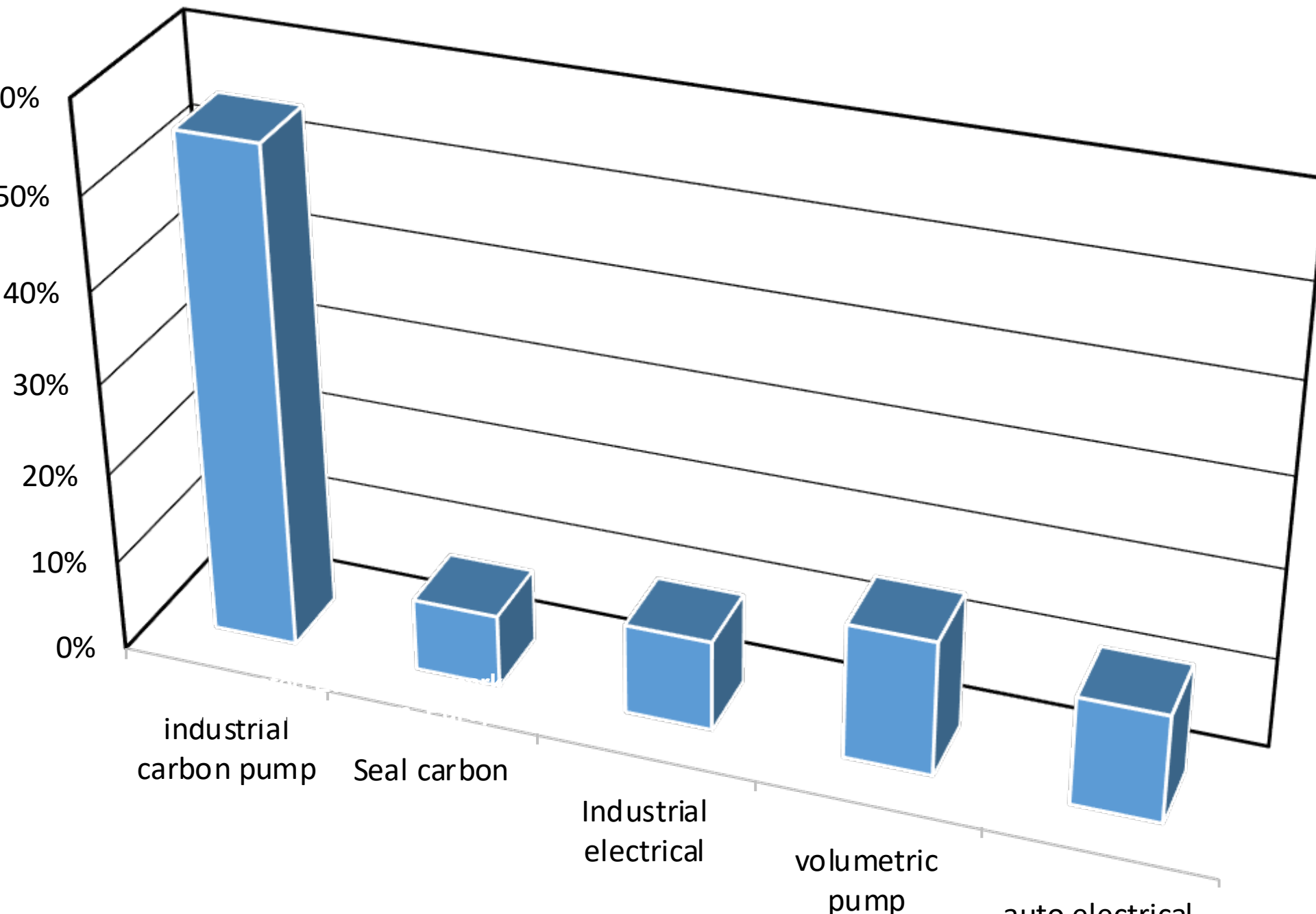
Silicon
carbide

Trend sales last years

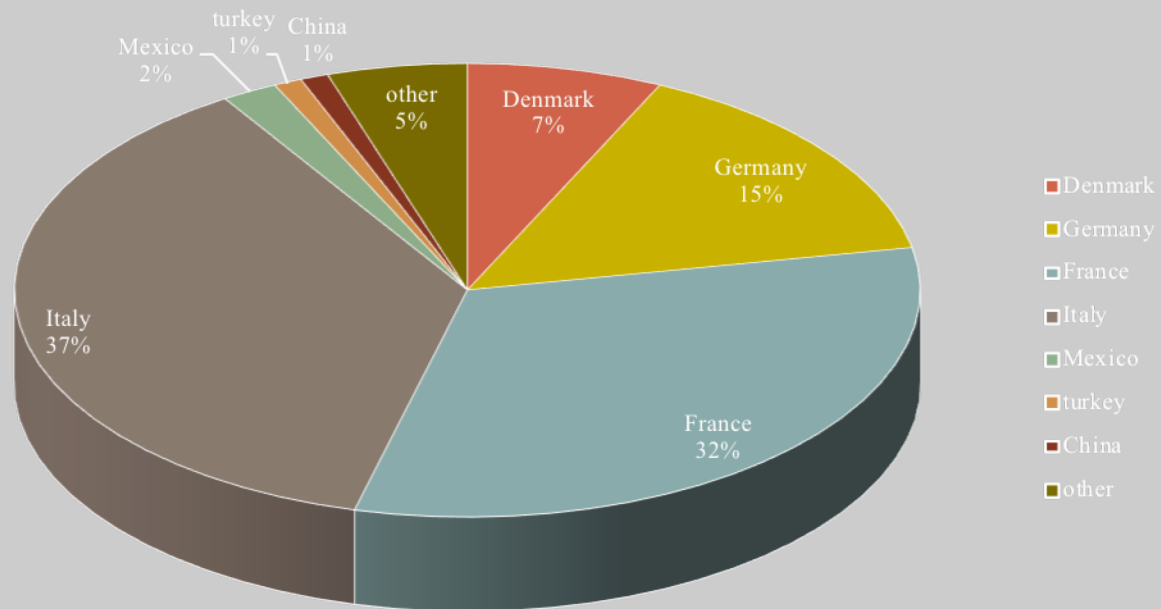
sales in K€



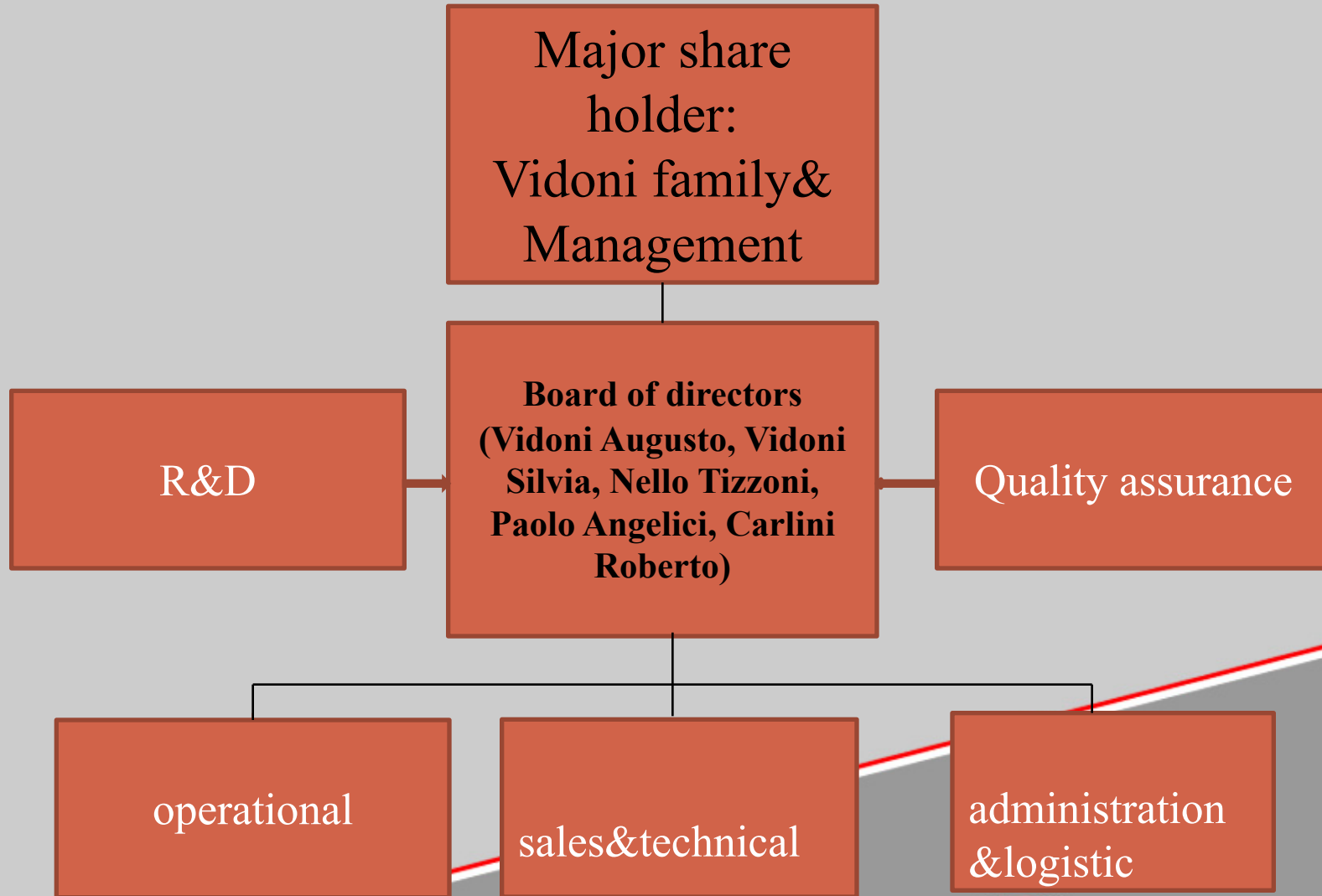
Sales 2018 per product (total 12,500K€)



Sales distribution 2018



Organisation





Founded in 1973

Area: 30.000 m²
15.000 m² covered
plus new building

Employes: 115 units
85 direct
30 indirect

**High skilled people with
More than 15 years as average
experiences**

 **EUROCARBO®**



UNI EN ISO 9001-2008



Prodotto Conforme



Prodotto Conforme
D.M. 174/2004



UNI EN ISO 14001-2004



CERTIFICATO

Nr 50 100 7285 - Rev. 01

Si attesta che / This is to certify that
IL SISTEMA DI GESTIONE AMBIENTALE DI
THE ENVIRONMENTAL MANAGEMENT SYSTEM OF

EUROCARBO S.p.A.
SEDE LEGALE E OPERATIVA:
VIA SANTA SCOLASTICA 35
I-64013 CORROPOLI (TE)

È CONFORME AI REQUISITI DELLA NORMA
HAS BEEN FOUND TO COMPLY WITH THE REQUIREMENTS OF

UNI EN ISO 14001:2004

Questo certificato è valido per il seguente campo di applicazione
This certificate is valid for the following product or service range

Progettazione e realizzazione di spazzole per macchine elettriche e carboni per applicazioni meccaniche e chimiche tramite macinazione, mescolazione, pressatura, cottura e rifinitura (EA 15)

Design and manufacture of brushes for electrical machines and of carbon components for mechanical and chemical application by grinding, mixing, pressing, baking and finishing (EA 15)

Certificazione rilasciata in conformità al Regolamento Tecnico SINCERT RT-09



Per l'Organismo di Certificazione
For the Certification Body
TUV Italia S.r.l.
Andrea Vivi
Amministratore Delegato - CEO

Data di emissione / Issue date
2010-10-31

Data di scadenza / Expiry date

2013-10-30

Rinnovo del certificato emesso per la prima volta in data 2007-11-26

"La validità del presente certificato è subordinata a sorveglianza periodica a 12 mesi e al riesame completo del sistema di gestione aziendale con periodicità triennale"
"The validity of the present certificate depends on the annual surveillance every 12 months and on the complete review of company's management system after three-years"

TUV Italia • Gruppo TÜV SÜD • Via Carducci 125, Pal. 23 • 20099 Sesto San Giovanni (MI) • Italia • www.tuv.it TÜV®

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ CERTIFICADO ◆ CERTIFICAT ◆ CERTIFICATE ◆ ZERTIFIKAT

CERTIFICATO

Nr 50 100 3441 - Rev. 02

Si attesta che / This is to certify that
IL SISTEMA QUALITÀ DI
THE QUALITY SYSTEM OF

EUROCARBO S.p.A.
SEDE LEGALE E OPERATIVA:
VIA SANTA SCOLASTICA 35
I-64013 CORROPOLI (TE)

È CONFORME AI REQUISITI DELLA NORMA
HAS BEEN FOUND TO COMPLY WITH THE REQUIREMENTS OF

UNI EN ISO 9001:2008

Riferirsi al manuale della qualità per eventuali dettagli delle esclusioni
ai requisiti della norma ISO 9001:2008
Refer to quality manual for possible details of exclusions of requirements
of the norm ISO 9001:2008

Questo certificato è valido per il seguente campo di applicazione
This certificate is valid for the following product or service range

Progettazione e fabbricazione di spazzole per macchine elettriche e di carboni per applicazioni meccaniche e chimiche (EA 15)

Design and manufacture of brushes for electrical machines and of carbon components for mechanical and chemical applications (EA 15)



Per l'Organismo di Certificazione
For the Certification Body
TUV Italia S.r.l.

Data di emissione / Issue date
2010-01-07

Andrea Vivi
Amministratore Delegato - CEO

Data di scadenza / Expiry date
2012-09-24

Rinnovo del certificato emesso per la prima volta in data 2003-11-03

"La validità del presente certificato è subordinata a sorveglianza periodica a 12 mesi e al riesame completo del sistema di gestione aziendale con periodicità triennale"

"The validity of the present certificate depends on the annual surveillance every 12 months and on the complete review of company's management system after three-years"

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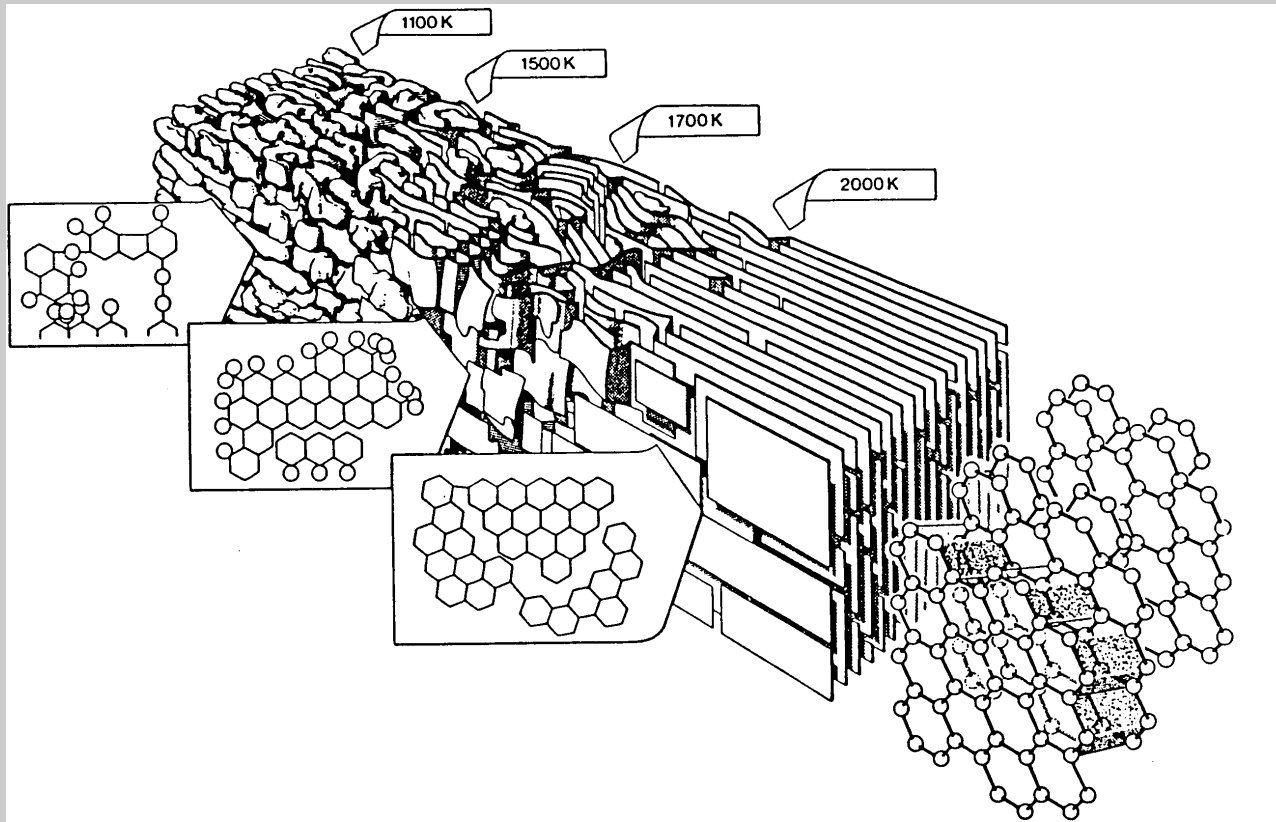
New all carbon HPC835 approvals by:

<p>NSF: alcuni materiali approvati per il loro utilizzo in campo alimentare (HT 204) / some approved material for the use on food and beverage application (HT 204)</p>			<p>Certificazione societaria TUV per il sistema qualità ISO 9001 e per il sistema di gestione ambientale ISO 14001 / quality system TUV certificate for ISO 9001 and environmental management system ISO 14001</p>
<p>WRAS: alcuni materiali approvati per acque potabili e sanitarie (HT 204, HPC 835) / some approved material for drinkable & sanitary water (HT 204, HPC 835)</p>			<p>Certificazione ACS: alcuni materiali approvati dalle autorità francesi per usi sanitari e alimentari (HT 204, HPC 835) / ACS certification: some approved material certified by the french institute for food and beverage application and sanitary water (HT 204, HPC 835)</p>
<p> Certificazione istituto di igiene tedesco: HY certificazione DVGW-KTW: alcuni materiali approvati per uso sanitario (HT 204, HPC 835) some approved material for sanitary application approved by German hygiene institute (HT 204, HPC 835)</p>			

Recently approved on NSF 61 FOR OUR NEW ALL CARBON HPC835

Meaning of our sintered products

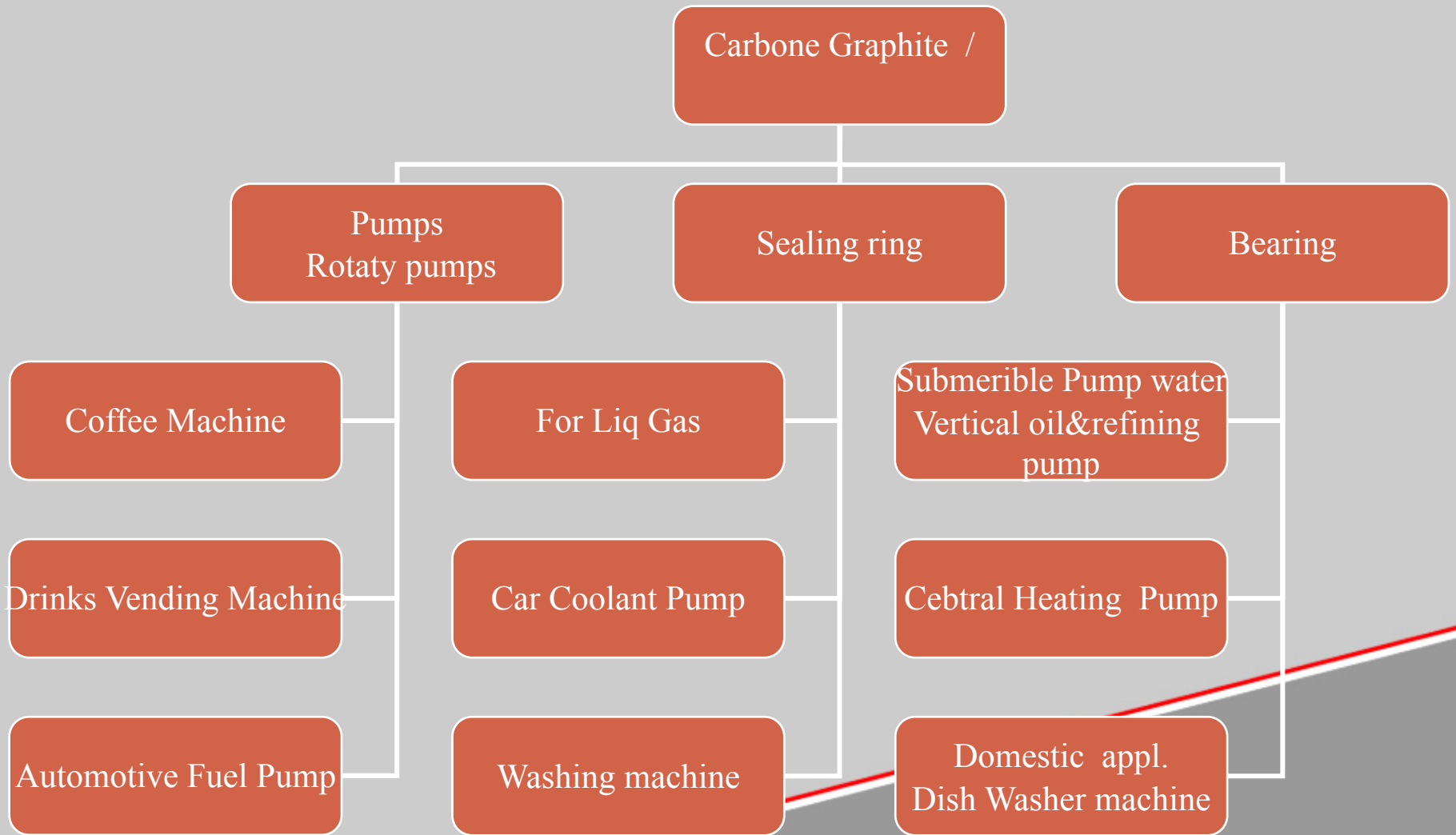
We make hard carbon bake process 950-1150°C



Marsh-Griffiths model of carbonisation/graphitisation process.

Where we are (carbon explanation)

Application of hard carbon





Mechanical carbon some pictures:

- bearings
- seal rings
- thrust bearings
- pads
- sleeves

Applications:

- chemical pumps
- mechanical seals
- circulator
- submersible pumps
- volumetric pumps
- Beverage application pumps
- other

Mechanical carbon:

- special bearings

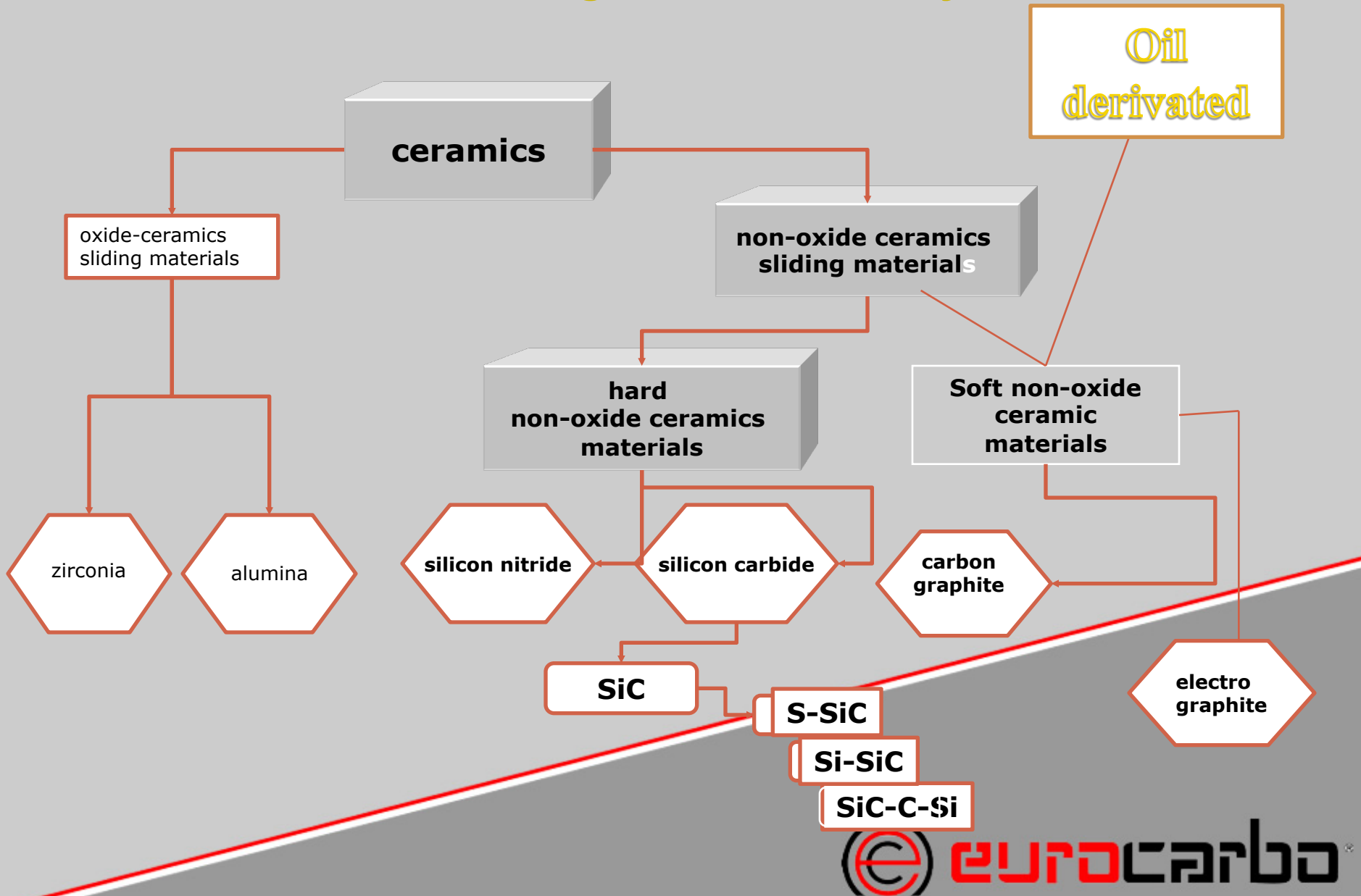
Applications:

- process pumps for oil & chemical plants



Silicon carbide

Seal & Bearing Materials family





Sintered Silicon carbide
Podwer from realible
Supplier SSiC:

**We make Ssic with our graphite
for:**

- . seal rings
- . small bearings
- . small shafts

Applications:

- chemical pumps
- mechanical seals
- Thrust bearing
-

Electrical segment



Electrical carbon:

- auto brushes
- fhp brushes
- industrial brushes
(partner E-Carbon Group for small user, eg grade industrial application)
- traction brush
- earthing brush
- Microbrushes

Applications:

- industrial motors
- automation motors
- traction motors
- automotive
- microbrushes for tooling and medical electrical motor
- Wind energy

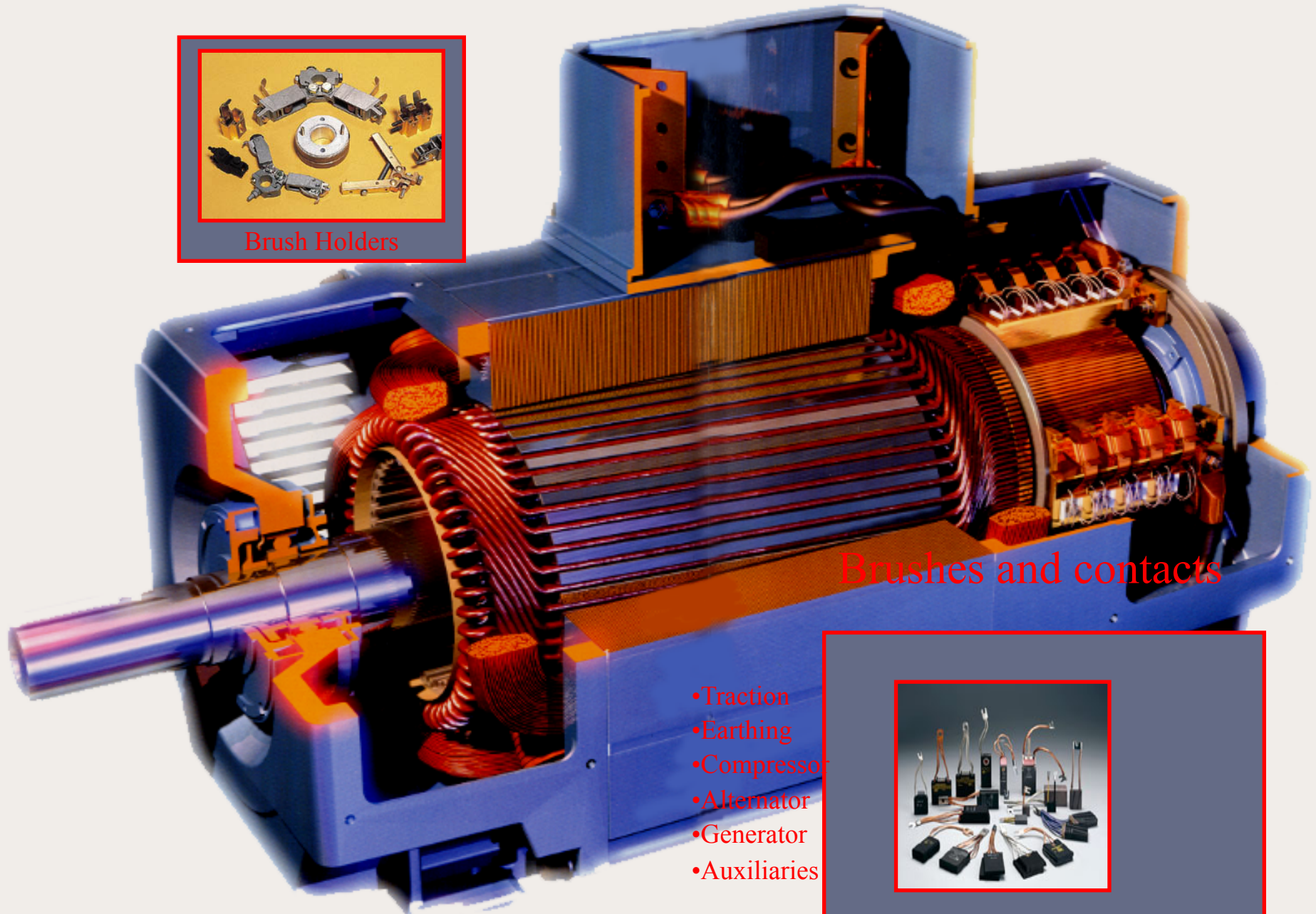
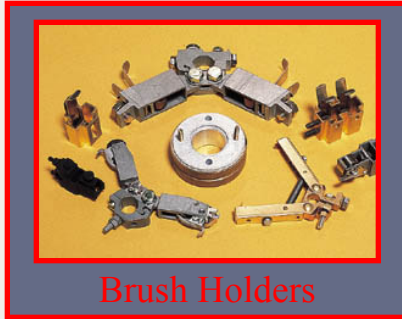
Auto business application carbon and brush holders



Applications:

- starters and generator for automotive

Industrial application on DC motor



- Traction
- Earthing
- Compressor
- Alternator
- Generator
- Auxiliaries



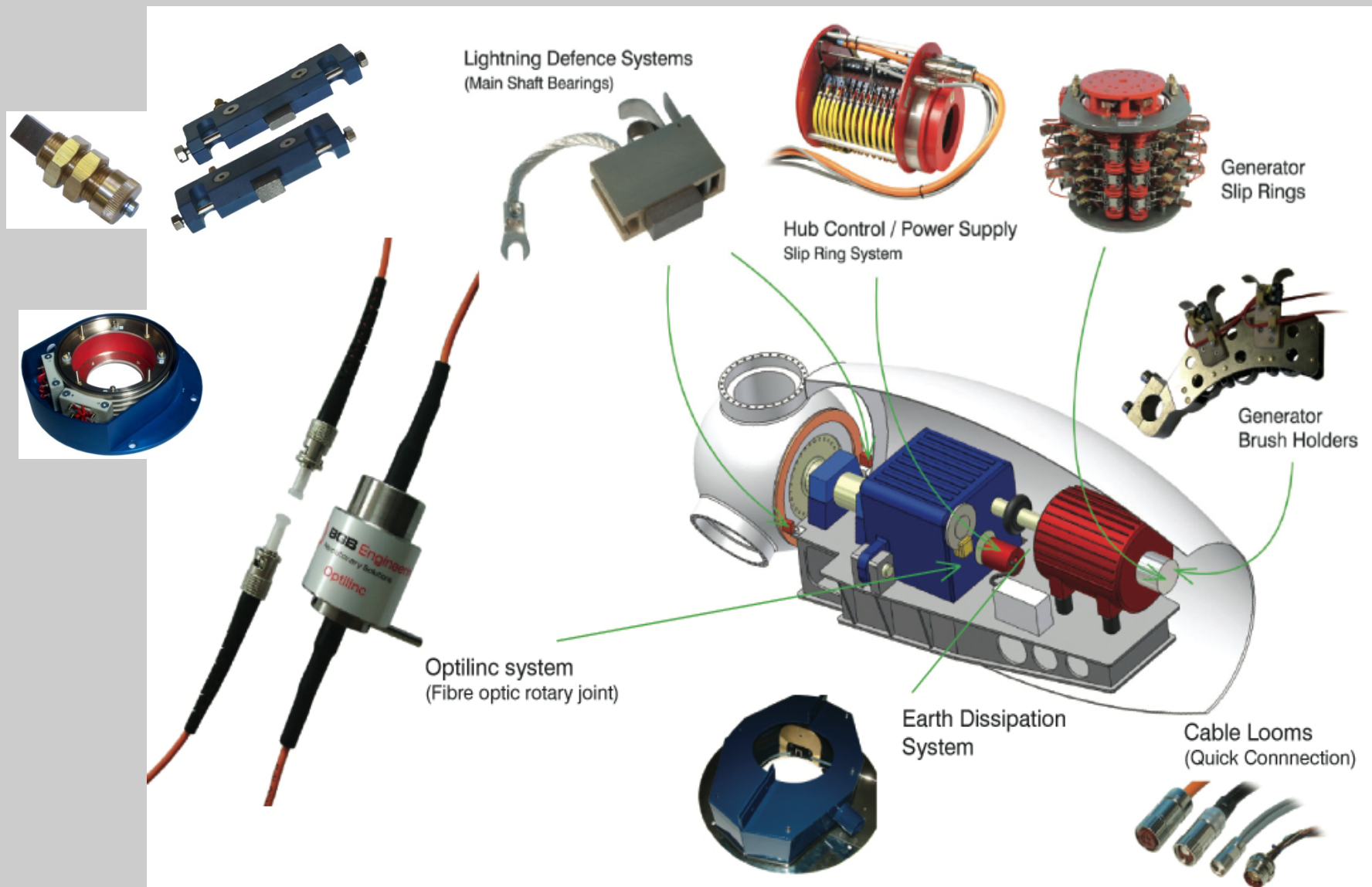
BGB & Vestas Partnership

Wind Energy

(New development)



BGB Wind Turbine Product Range



(market in starting)

MAJOR MECHANICAL APPLICATIONS

Principali applicazioni carbone meccanico

Rotary pumps

- rotary pumps for:
 - beverage vending machine
 - post-mix drink dispenser
 - espresso coffee machine
 - cooling system
 - reverse osmosis
 - ultra filtration

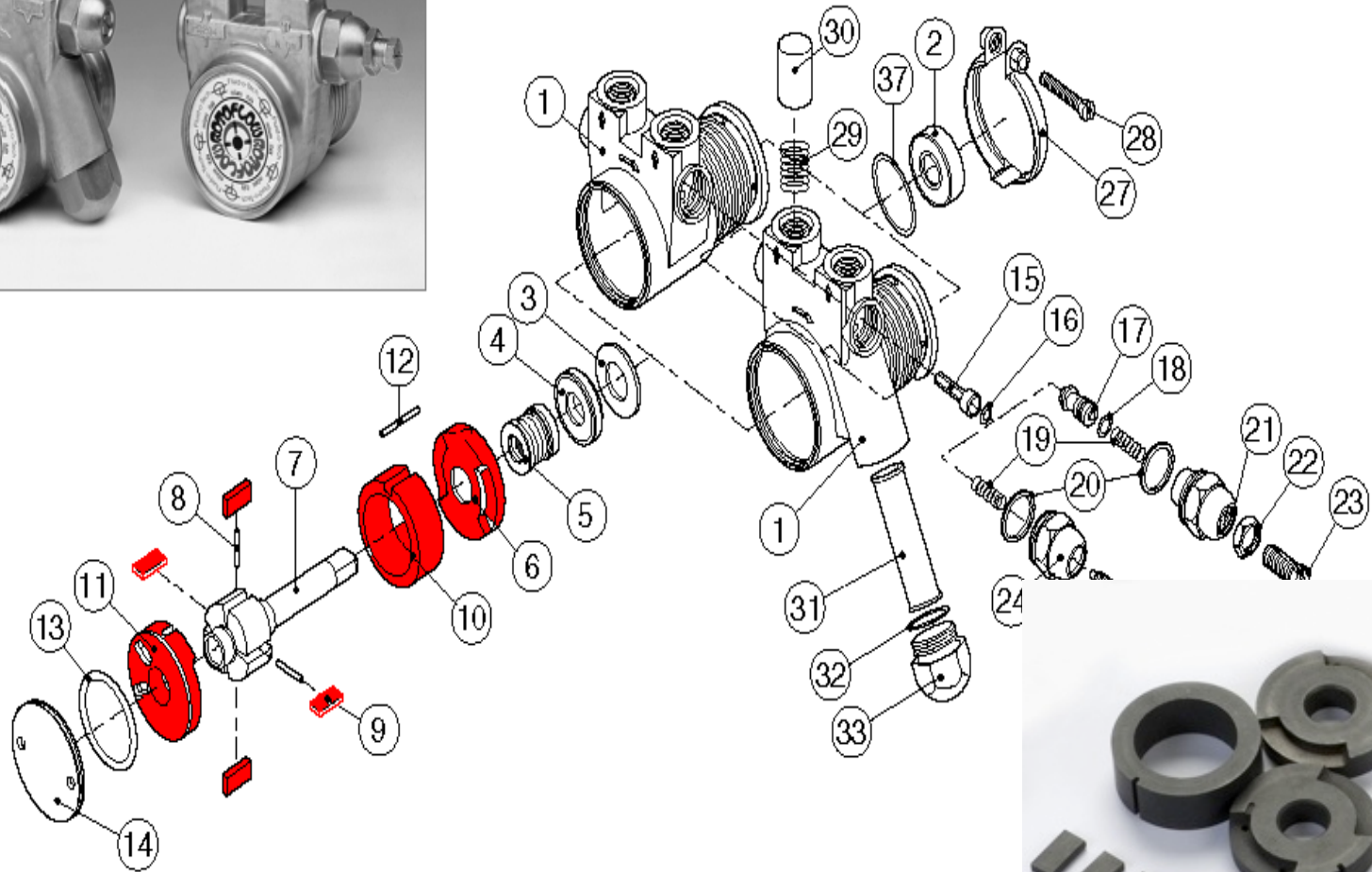
Strong increase high quality

We supply the complete carbon set-pumps:

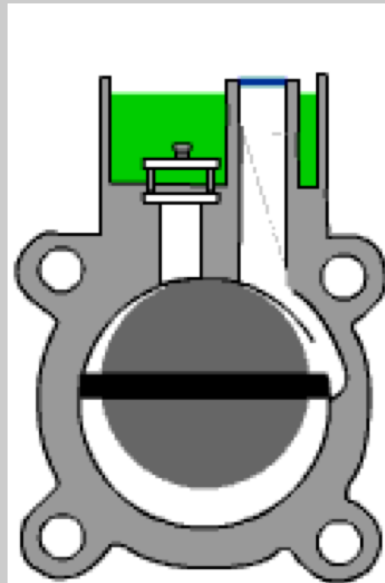
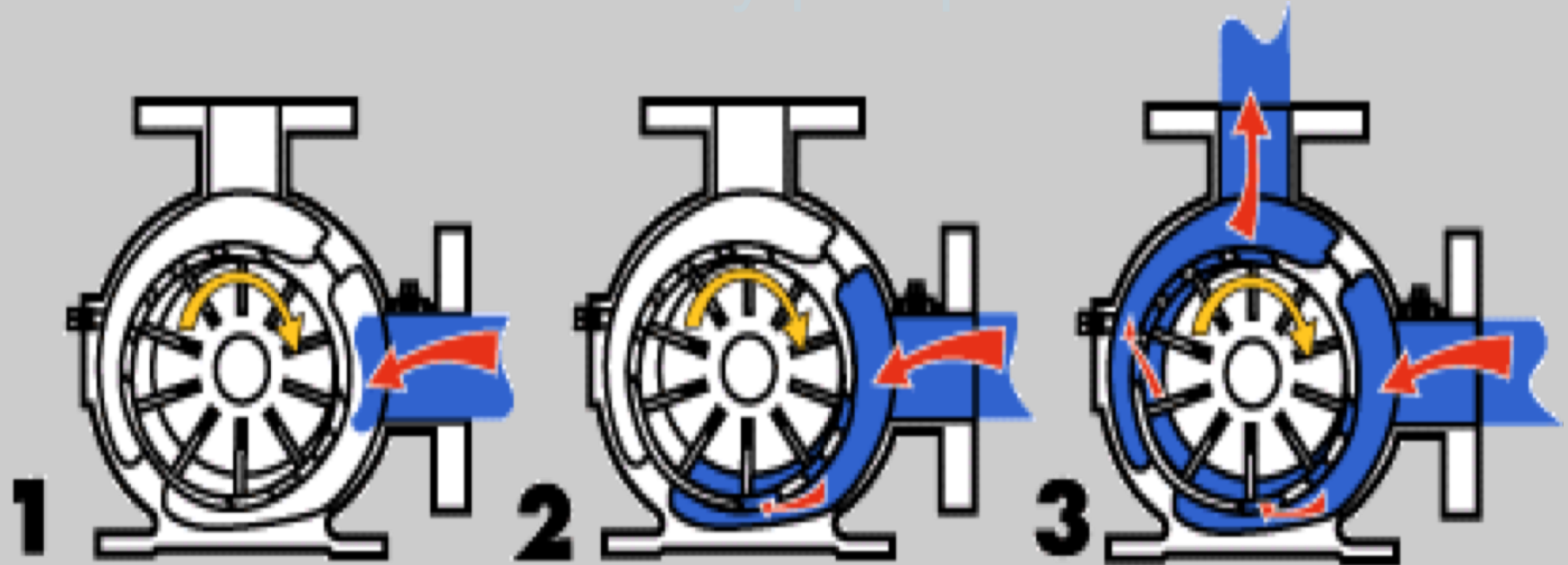
vanes, liner rings, rear rings

- grade: HT204 resin impregnated carbon
- NSF 51 approved
- New R&D all carbon, low resin content

Rotary pumps



Rotary pumps



Mechanical seals

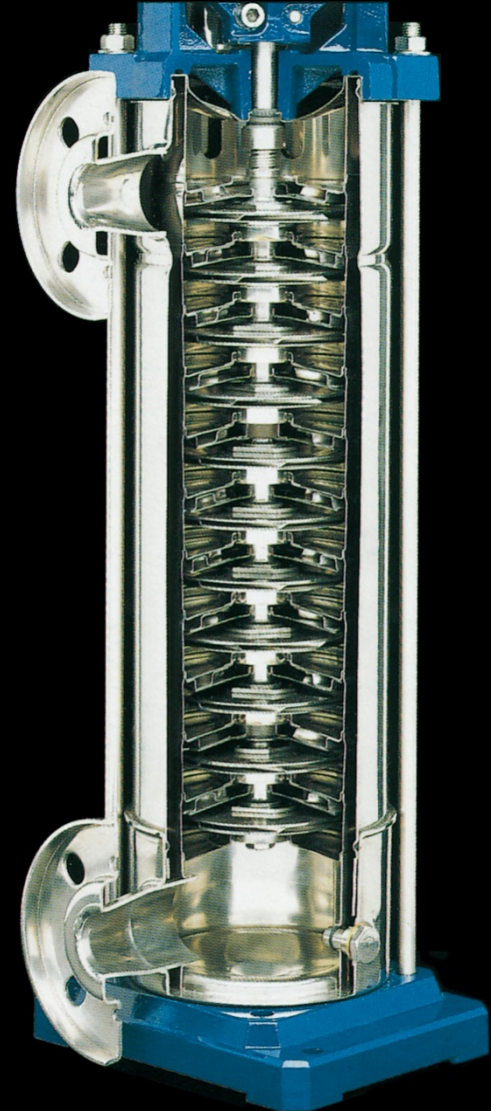
- Main customer and our major share holder Roten-Aves Srl Italy:

mechanical seals for fluid handling

we supply rotary & stationary seal rings: carbon and silicon carbide materials

grade: mainly resin impregnated but other solutions are available related to working conditions, metal or green.

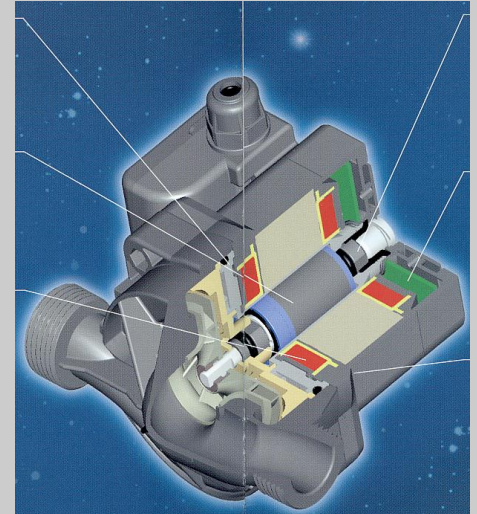
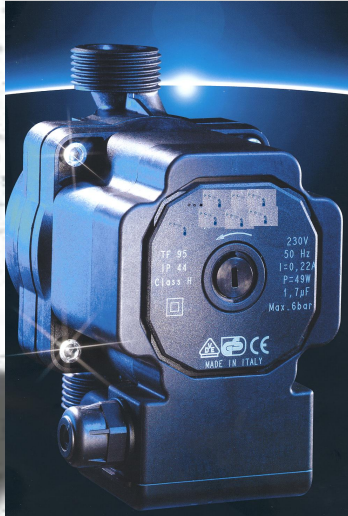




Eurocarbo spa

Worldwide leader in carbon bearing

Bearings our core



Bearings our core

- bearings for circulating heating pumps (million pcs per year) strong relationship with Wilo starting from beginning when Eurocarbo was founded

- grade: metal antimony and resin impregnated

• Now



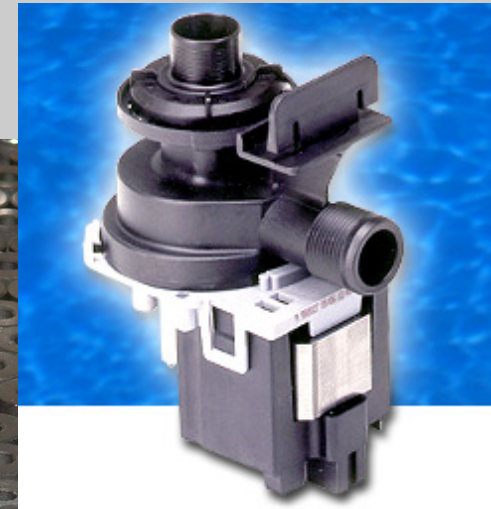
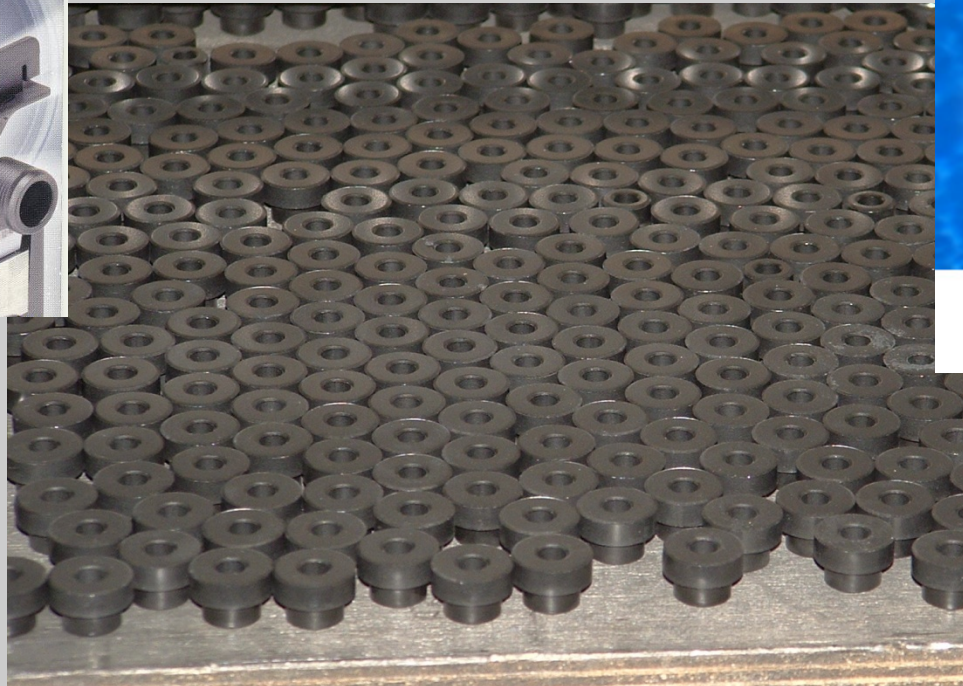
ALLCARBON



- New development: eurocarbo trade registered metal free materials for green solution **HPC835 (high performance carbon very very low friction)**

Dish washer application

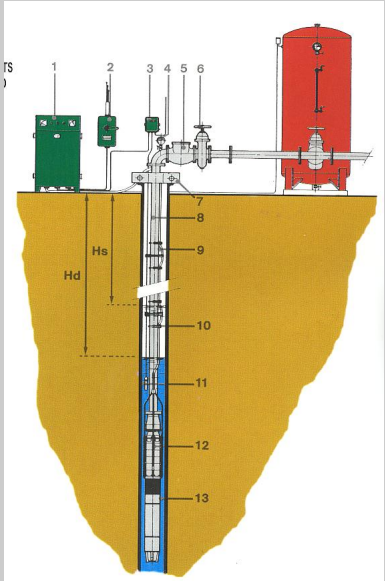
Syncronous pumps



Submersible pumps motor

- Submersible pumps:
application only on the electrical motors.
Thrust bearings used on mitchell support and bearings for shaft.
- Grade: metal or resin impregnated

Submersible pumps



Eurocarbo spa

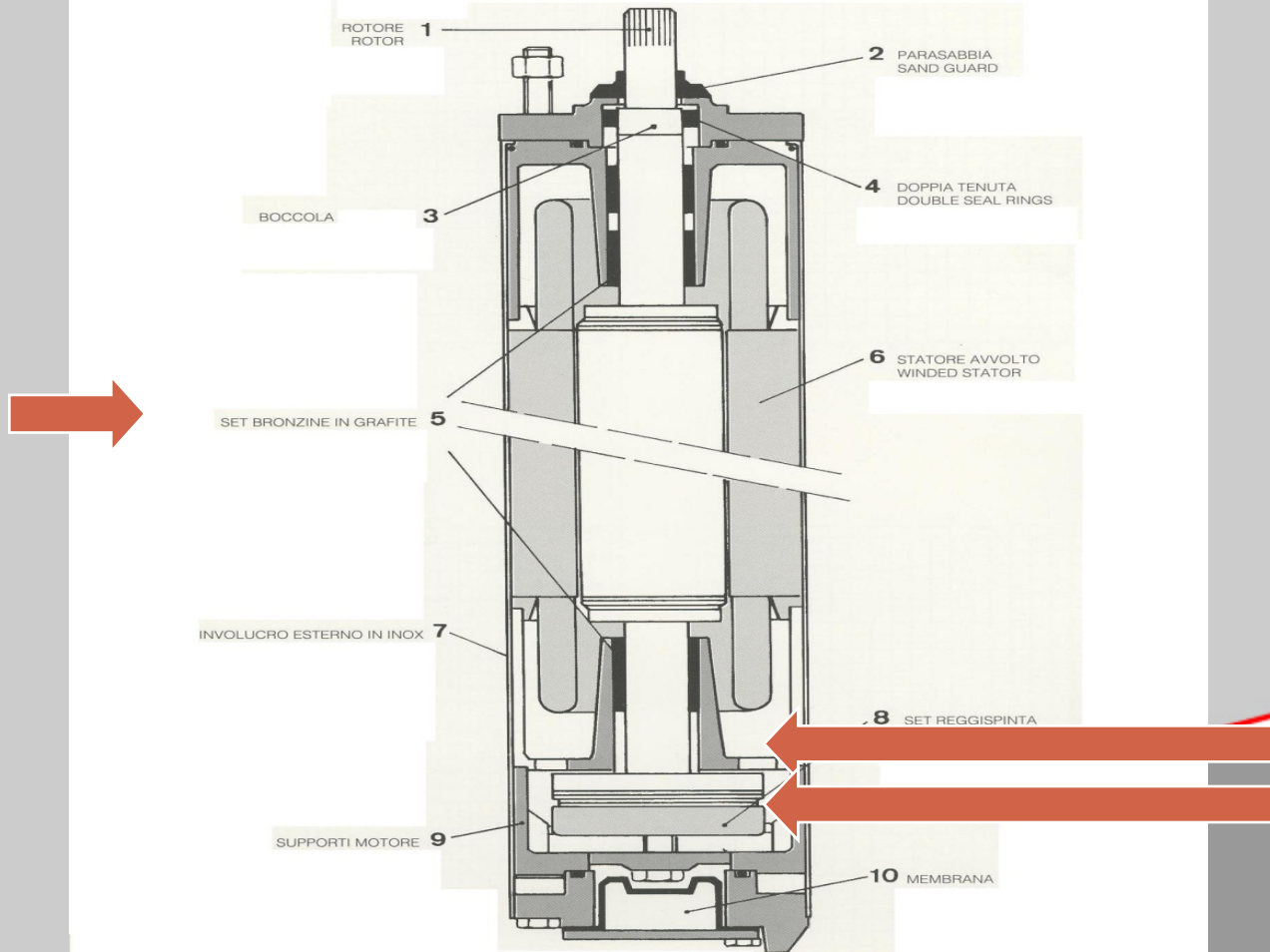
Worldwide leader in carbon path

Submersible pumps



Submersible motor pumps

6"



Main size where we are

4"-6"- 8" - 10" - 12" well water

Specifiche

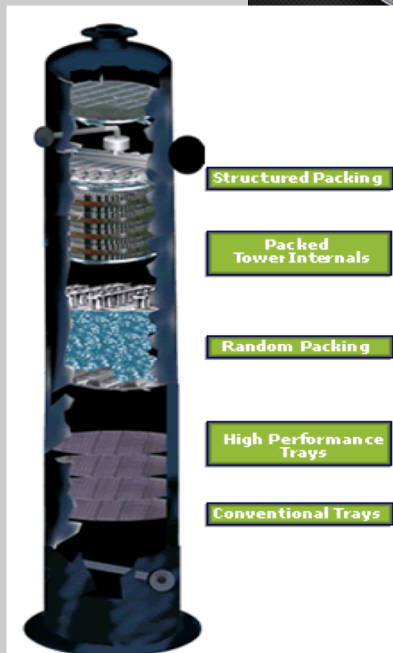
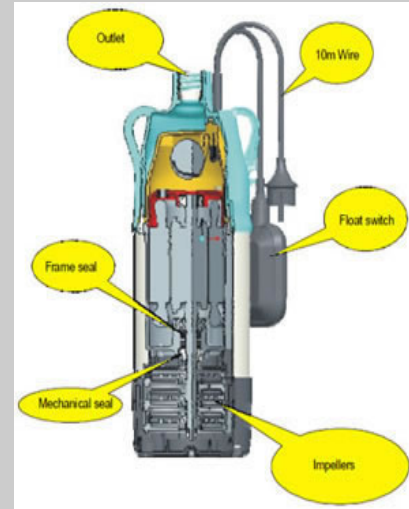
- Flow: 550,00 m³/h
- Power : till 460,0 m
- trifase 50 Hz
- Motor 4,00 kW up 300,00 kW
- temperature flow liquid: till 30,0 °C
- deep well: till 350,0 m

Application

- water distribution
- cleaning
- underground barrier protection
- chemical plants and refinery
- Irrigation
- Fire protection
- Osmosi
- Oil plants



Oil business & Refinery



- . Special bearing with high performance anti corrosion steel and impregnated graphite for vertical pump;
- . Raschig bearing for alkaline tower refinery

Eurocarbo is putting reasorce and capital on carbon and Sic because this our

“Core business”

To be done this year and committed:

Investment Eurocarbo
2012-2017 already in place

- . New Building (warehouse)
- . New kiln
- . New vessel Sb
- . H&S (rain water)
- . Layout Lean
- . New lenght grinder
- . New two grooves grinder
- . New automatic vessel resin
- . New washing bearing system
- . New cnc working station
- . Metrologic room
- . Total spend last three years

New ID grinder automatic high Volume (via Wilo)

New automatic equipment for Internal dimension control used on green department (done)

**Total on 2017 value 750K€
(Grinder ID, lapping, milling)
Planned on 2018.**

Additional ID grinder	350K€
Additional Ext grinder	350K€
Milling	250K€

Total 2700K€

Major Key Accounts

Wilo Group
Bosch group
Grundfos Group
Roten – Aves Group
Fluidotech (Italy and Asia)
Askol group
Standex Procoon
Xylem group
Weir Group
Sumoto group
Alarko
Vansan
Impo
KSB Turkey
Taco Usa
Nuert
And ... others

VIRTUAL PLANT TOUR

Manufacturing processes

PROCESSES

- Grinder and raw material preparation
- Mixing in temperature
- Milling powder
- Press
- Kilning
- Impregnation:
 - Phenolic resin
 - Babbit
 - Antimony
 - Antimony alloy

FINISHING

- CNC
- Grinding ID / OD
- Lapping
- Polishing / Superlapping
- graphitaziation EG
- Electrical assembly
- Grinding
- Tamping
- Terminal fixing
- etc

**SAFETY
MEETING
POINT**



INTELLIGENTE
SOLUZIONI
CANTIERI

1. MIXING; 2. MILLING; 3. PRESS AREA; 4. KILNING
LINES; 5. IMPREGNATION AREA; 6. CLEANING; 7
ASSEMBLY BRUSH; 8. MACHINING AREA; 9
INSPECTION AND SORTING; 10. SHIPPING; A.
HEADQUARTER; B. LABORATORY; C. STOCK
BUILDING

PLANIMETRIA
 **euromarbo** S.P.A.