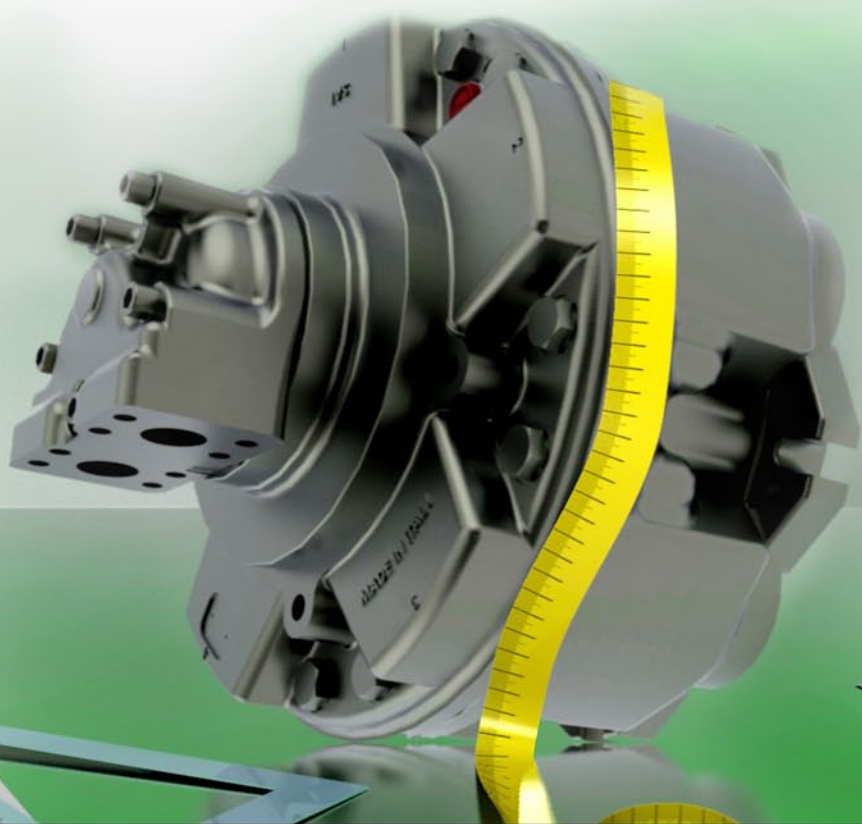


# THE **SAIL** JOURNAL

Year 10, Issue 1 2012



*Sai provides  
customised  
solutions for any  
specific application*

## **ADAPTABILITY MAKES BUSINESSES MORE COMPETITIVE**

POWER THROUGH EFFICIENCY

### APPLICATION FOCUS

SLURRY/GRAVEL PUMP DRIVE:  
EXTEND LIFETIME WITH THE NEW SAI GS6B HYDRAULIC MOTOR!

# CONTENTS

**3 ADAPTABILITY MAKES BUSINESSES MORE COMPETITIVE**

**4 SPECIAL PROJECTS? SAI PROVIDES CUSTOMISED SOLUTIONS FOR ANY SPECIFIC APPLICATION**

**5 SAI HYDRAULIC MOTORS SHANGHAI CO. LTD.  
OUR WORLDWIDE SUCCESS? C.G.R.**

**6 NEW PRODUCTS READY FOR THE MARKET**

**7 SLURRY/GRAVEL PUMP DRIVE:**  
Extend Lifetime with the new SAI GS6B Hydraulic motor!

**8 2012 EVENTS**



# WELCOME TO THE SAI JOURNAL!

*Dear Readers,*

*We are pleased to present this new issue of the SAI Journal.*

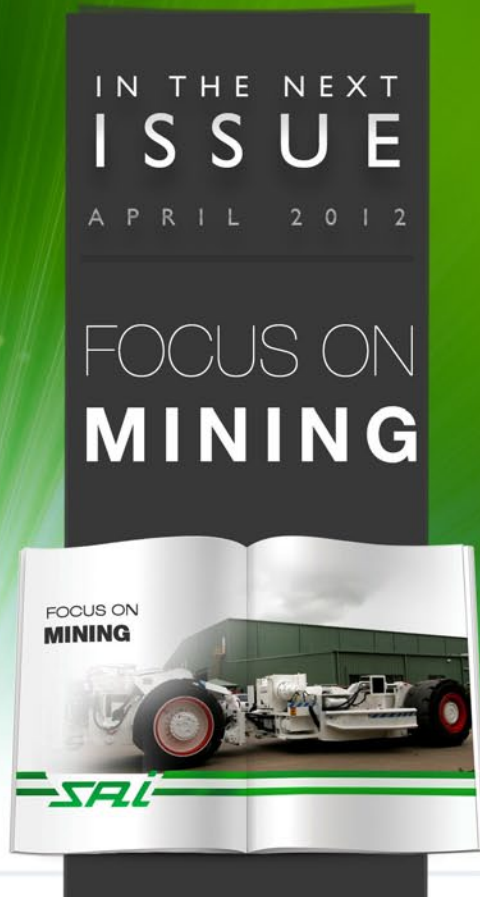
*The past twelve months were quite successful for the SAI Group despite the times were not the best ones. The turnover hit an all-time high, the new products presented to the market have received quite a warm welcome from the customers, the various companies of our group have managed to perform more efficiently and with a higher degree of integration. Despite that, this continuing economic instability and the volatility of the markets aggravated by events in Europe suggest that the uncertainty will stay with us for some more time. However, companies in the east and the west should be prepared to work amid complicated conditions as they continue to renovate their business model with the goal of long-term growth. SAI is ready to do so. We think that this is possible due to the extreme resilience and adaptability that our company and our products have shown in the last few years.*

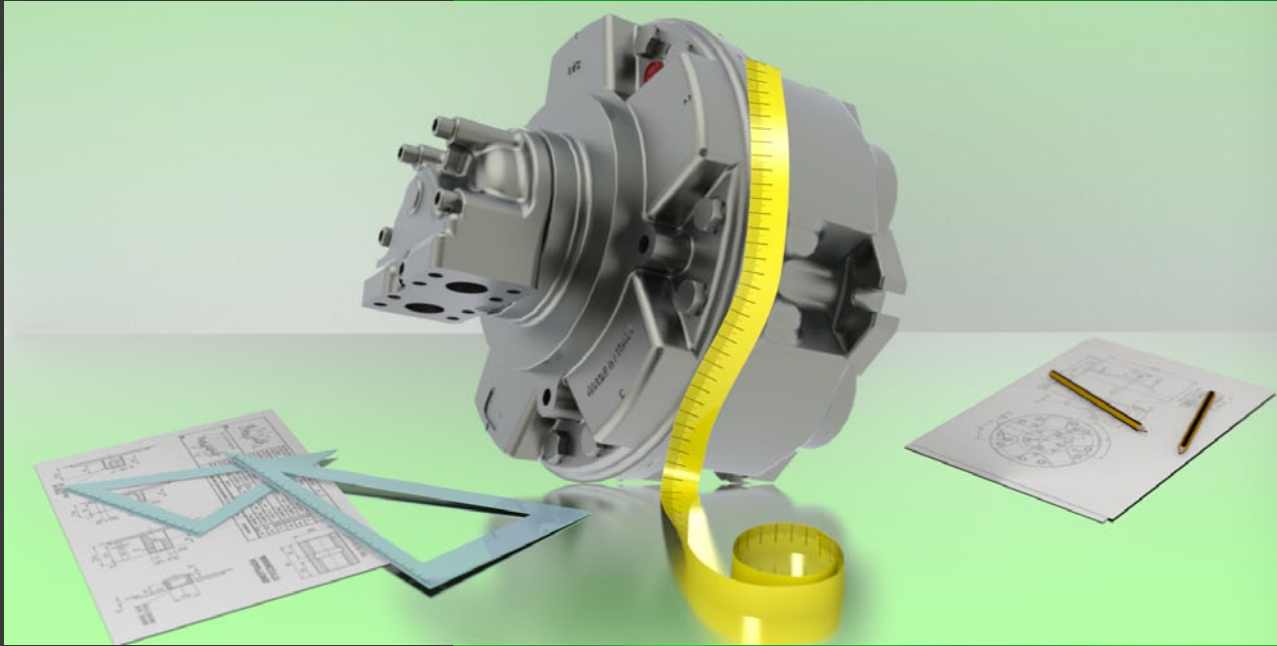
*That's why in this issue of the SAI Journal we cover the topic of the Adaptability. Adaptation of the business in order to finding new or better opportunities in unstable conditions, or in order to managing organizational growth are essential in this uncertain business environment. The adaptation of the products through new product development and the revision or customisation of the current ones in order to fulfil the evolving market needs are indispensable in a market where the technologies change faster every day.*

*The changes can come and happen quite fast, and this applies very well not just to the business, but also to many other situation in nature. Therefore, adaptability is one of the most pressing problems for man and companies all over the world. It's understandable: competition is getting tougher, the use of resources can't be cut endlessly, and the competence required is becoming more and more elevated. The only chance to succeed in these difficult conditions is to think carefully about performance and become very flexible to follow the quick turn-arounds the environment introduces.*

*So be ready to adapt and we will be pleased to help you in doing so. We wish you a pleasant reading!*

**Vittorio Pecorari**





# ADAPTABILITY makes businesses more competitive

...Having the ability to adapt quickly to changes in the economic environment is essential. The faster the change in our world, the more critical this becomes. There are many examples of companies, legendary in their time, which have disappeared due to their inability to change...

In recent years, the answer to the key question of the theory of evolution of the human species has often been discussed. Why has modern man survived whilst the Neanderthal did not? The most likely answer is that Neanderthals were not capable of adapting to the changing environment in which they were living. Therefore, it can be deduced that adaptability was key to the survival of man. Even for our contemporary situation it can be said that there is probably no more important attribute than adaptability. In our world, that sometimes seems incomprehensible, every organization is potentially on the brink of extinction and will soon be forced over the cliff unless it changes as fast as change itself. It is evident to everyone how some organizations have the ability to change as they can adapt to environmental changes quickly and easily while others do not seem to be capable of adapting, no matter what they do or hard they try. Having the ability to adapt quickly to changes in the economic environment is essential. The faster the change in our world, the more critical this becomes. There are many examples of companies, legendary in their time, which have disappeared due to their inability to change. Large companies offer well-known examples, but the challenge is there for all of us, regardless of size or position. All companies must adapt to new technology, the Internet, telecommunications, competition, changing demographics,

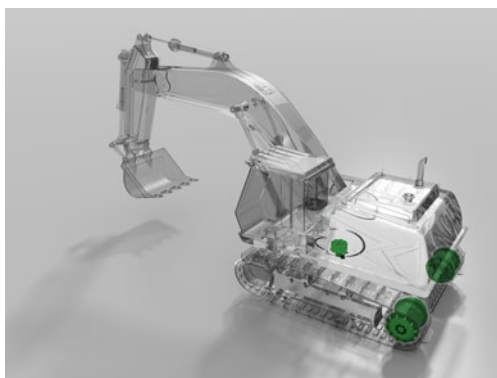
changing environmental conditions and regulations, etc.. Companies that can adapt quickly will have a much better chance of survival whilst those that do not are destined to disappear off of the face of the earth. Similarly, keen competitiveness of today's market requires every company to develop new products and services for its customers on a continuous basis. Product flexibility, understood as being the degree of reactivity (or adaptability) to any future change in design, has recently gained the attention of those companies that develop products for rapidly evolving technologies and who are constantly under pressure to regularly update their products. The flexibility of any product design plays a significant role in the ability of the manufacturer to respond more quickly to customer feedback, enabling faster updates in those products, allowing them to reach higher levels of performance in a shorter time frame. It is preferable that product development is targeted to a set of basic parameters, common to a very large potential customer base. In this way, several products may benefit technologically from one market lead adaptation. The development of a specific product or service may make the

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performance more rigid thus impeding possible future development. New products should be introduced continuously. This requires the company team to be adaptable and requires an in depth familiarity with any past development of these new products and services. SAI has always paid close attention to adaptability and flexibility. The ability to react to changing conditions within the power transmission market has always been a cornerstone of our corporate culture. The use of new technology, attention to internal and external communication, coupled with an interest towards exploring new geographical areas have guaranteed that SAI is in position to face the changes required in meeting the current global economic outlook. In product development, SAI has always paid extreme attention to the various demands of different markets whilst taking account of the increasing need for technological evolution. If we consider power density, there are no other products comparable to SAI crankshaft design radial piston hydraulic motors, that have increased their quality and performance to anything like the same extent as have SAI. All of the above has made the situation extremely favourable for SAI in facing the strong challenges of the years to come. The attention of the entire team is aimed to maintain and further develop this culture of flexibility and innovation that we think is the basis for a lasting leadership role in the field of crankshaft design radial piston hydraulic motors.



## SPECIAL PROJECTS? SAI PROVIDES CUSTOMISED SOLUTIONS FOR ANY SPECIFIC APPLICATION!



The current economic crisis has everyone wondering - how can we overcome such terrible period of our history? Politicians and economists have their own solutions, but what can we really do?

One answer is - Be Efficient, Be Dynamic!

This is the strategy that SAI has been promoting since 1964. Despite negative feeling, pessimistic forecasts and a general halt in economic growth, the only way to take control of our future is to be agile, flexible and to keep on developing innovative ideas.

Our keywords are EFFICIENCY and DYNAMISM. The continuous evolution of our range enables us to now offer products which are capable of being modified with only a few minor adjustments to make them suitable for applications in many different fields and machineries. The global market is made up of extremely demanding customers who know that they can count on a huge range of products and services from the SAI organisation. SAI offers a specialized engineering support to Customers with respect to product selection and application by working closely with the engineers and buyers whilst at the same time maintaining, and even increasing the high quality standards which go to ensure the complete fulfilment of client specific needs.

SAI is the leading specialist of crankshaft design radial piston hydraulic motors and, due to the extreme versatility of the basic design, in almost 50 years of history, SAI engineers have been able to re-adapt its standard products to hundreds, if not thousands of different applications. Starting from the initial machine design, then analysing expected against actual performance, SAI is able to provide their customers with tailor-made proposals.

Thanks to this wealth of developmental experience, SAI is the only manufacturer able to supply a continuous variation of displacement for radial piston motors.

Dynamism is our strength and it is the reason for us launching new successful products every year. Our wealth of acquired knowledge is always available to be tapped into by our ever growing Customer base meaning that our power is their power.

Believe in your idea, defend your projects and develop them with our engineering staff.

Your customised solution awaits you - Your Future is Now!

#### CONTACT PERSON

Marco Costagiu Technical Supervisor | [technical.supervisor@saispa.it](mailto:technical.supervisor@saispa.it)

...SAI HAS ALWAYS PAID MUCH ATTENTION TO  
ADAPTABILITY AND FLEXIBILITY.  
THE ABILITY TO REACT TO THE CHANGING  
CONDITIONS OF THE POWER TRANSMISSION  
MARKET HAS ALWAYS BEEN A CORNERSTONE  
OF OUR  
CORPORATE CULTURE...

## SAI HYDRAULIC MOTORS SHANGHAI CO. LTD.

The Chinese subsidiary of SAI continues to grow considerably.



Thanks to its position of strength in the local market, it is now known as being a very reliable partner, able to support Customers in any phase of the selection or sales process. Moreover, the recent opening of a new production facility and office premises has enabled SAI Shanghai to increase its range of services, providing the market with highly qualified engineering support for the complete range of SAI products including maintenance, from the replacement of a single seal to complete refurbishment. A wide range of component parts are kept in stock to facilitate repairs and to help to guarantee quick delivery of complete drives hence minimising Customer machine downtime.

All of these aspects have helped to increase the quality and productivity of SAI Shanghai, enabling the Company to support and satisfy the continuing increased demands of the Chinese market.

All Customers and potential Customers are welcome to visit the new offices at 1st Floor, 2nd Building No.1281 Jinhu Rd. Pudong Shanghai P.R.C.



### SAI HYDRAULIC MOTORS SHANGHAI CO. LTD.

welcomes customers and potential customers in  
1st Floor, 2nd Building, No.1281, Jinhu Rd., Pudong  
201206, Shanghai, PRC

E-mail: saichina@saihydro.com  
Phone: +86 2150315248  
Fax: +86 2150315246

## OUR WORLDWIDE SUCCESS? C.G.R.

Another successful season of Worldwide Trade Exhibitions is coming to a close.

2011 has been a record year for SAI in that we have taken part in as many as 20 Fairs worldwide.

SAI considers International Fairs to be a strategic tool of C.G.R.



**C= COMMUNICATION:** SAI focuses much effort in conveying important information about the whole SAI group, its worldwide presence and the continuous support offered to its Customer network. We consider it to be one of the best ways of reinforcing existing commercial relationships and to find and develop new ones. For this reason, at our stands you will always be able to meet our Sales & Technical experts willing to help and guide you towards the best products to suit your needs.

**G= GREEN:** SAI has been promoting green technology that can be seen, understood and explained directly from the producer to the user. Even our LOGO is green in colour which matches the development of our technology towards the green economy. SAI is providing the market with highly efficient products that, thanks to their advanced engineering, provide reduced machine vibration and consequential reduced heat generation and exhaust emissions. All of our new products are aimed at guaranteeing a better future for us and our planet.

**R= RESEARCH:** development cannot exist without research. This binomial is true both for engineering and for sales, which is why the attendance at International Fairs is of strategic importance to us. It is through the knowledge and experience of local markets that we are able to understand these dynamics enabling us then to work on developing the technology necessary for meeting those demands. Adaptability is one of the principles of our era, and it is the starting point towards renewed and increasing success. Dialogue and the exchange of ideas towards learning is the basis of SAI's success at fairs.

Please don't miss out on the chance of sharing your success with us, come and visit SAI worldwide!



## CONTACT PERSON

Marco Costagiu Technical Supervisor | [technical.supervisor@saispa.it](mailto:technical.supervisor@saispa.it)

GS6B

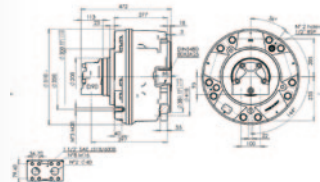
## GS6B



## CHARACTERISTICS

1. Max Displacement 3000 [cc/rev]
2. Max Peak Torque 14500 [Nm]
3. Max Cont. Torque 12000 [Nm]
4. Max Speed 600 [rpm]
5. Reduction Ratio 5.6:1
6. Approximative Mass 300 [kg]
7. Approximative oil capacity 25 [l]
8. Peak Power 300 kW

## DIMENSIONAL DRAWING


SAI Spa  
41122 Madonna della  
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www.saispa.com  
e-mail: [info@saispa.it](mailto:info@saispa.it)

Provisional leaflets subjected to change without  
notice. All data are real and calculated according to  
existing project.


# GS6B

## MOTOR

Five piston fixed displacement high torque high speed hydraulic motor. Its high volumetric efficiency is able to convey 304kW as peak power. The GS6B is supplied complete with disc cage on the crankshaft specially reinforced central roller bearing, whose main benefits are the reduction of heat generation and the increase of heat dissipation even when the motor works at very high speeds. For more information please read the article on page 7.

Description: Fixed displacement, 5 piston motor

Motor code: GS6B

Mass: 300 kg

Power: 300 kW

Data sheet: 111060.1P

BDFK4

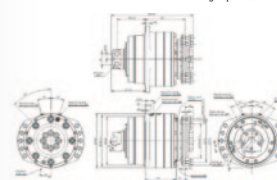
## BDFK4



## CHARACTERISTICS

1. Max Displacement 3500 [cc]
2. Max Peak Torque 15000[Nm]
3. Max Continuous Torque 800
4. Max Speed 700[rpm]
5. Reduction Ratio 5.6:1
6. Approximative Mass 210 [kg]
7. Approximative oil capacity 1
8. Peak Power 59 [kW]
9. BRAKE:  
Max. Pilot pressure 50bar  
Min. Pilot pressure 20bar  
Braking torque 14000Nm

## DIMENSIONAL DRAWING


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# BDFK4

## MOTOR

Advanced new generation five piston dual displacement compact wheel motor with integrated gearbox and brake, it extends the BDK series. It is able to reach a torque of 15000 Nm and a peak power of 59 kW. The BDFK4 can operate in the most extreme applications from the mobile to the industrial fields.

Description: Dual displacement, 5 piston wheel motor with integrated planetary gearbox and brake

Motor code: BDFK4

Mass: 210 kg

Power: 59 kW

Data sheet: 111144.1P

RG074

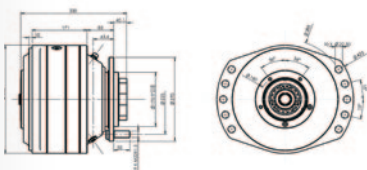
## RG074



## CHARACTERISTICS

1. PEAK TORQUE 19000 Nm
2. CONT. TORQUE 9500 Nm
3. PEAK SPEED 15 rpm
4. REDUCTION RATIO 22.4 : 1
5. OIL CAPACITY 3 L
6. APPROXIMATIVE MASS 150 kg

## DIMENSIONAL DRAWING


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Stella (VR)  
www.saispa.com

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notice. All data are real and calculated according to


# RG074

## GEARBOX

Very compact double stage planetary gearbox, with reduction ratio 22:1, especially suitable for low speeds and low powers. High output torque and high radial load resistance.

Description: Double stage planetary gearbox

Gearbox code: RG074

Mass: 150 kg

Power: 19000 kW

Data sheet: 1111143.1P



CONTACT PERSON

Matteo Michelin Sales Manager | [sales.manager@saispa.it](mailto:sales.manager@saispa.it)

## SLURRY/GRAVEL PUMP DRIVE

### *Extend Lifetime with the New SAI GS6B Hydraulic Motor!*

The GS6B motor is an evolution of the 5 piston fixed displacement high speed high torque GS6A. It is a new product developed specifically as a result of the long and fruitful co-operation between SAI and Custom FluidPower Pty (CFP) of Australia ([www.custom.com.au](http://www.custom.com.au)).

CFP technically supervised a new dredging project for the Australian company Neumann Contractors ([www.neumanncontractors.com.au](http://www.neumanncontractors.com.au)) who specialize in Dredging, Steel Fabrication and Civil Contracts and is a branch of the Neumann Group (established in 1948). SAI & CFP engineers worked on Neumann Contractors' Dredging Division slurry/gravel pumps in order to deliver quality and efficiency by minimizing vibration under all conditions, to ensure trouble free operation, low cost

maintenance and extreme reliability. The GS6B 1300cc motor is fitted to the Nu Bounty dredge which operates as a slurry/gravel pump drive delivering 60000 LPM and reaching a peak speed of 450 rpm with 304 kW installed power. The GS6B has been tailor made for this application. The basic motor was selected due to known adaptability for heavy duty applications where vibration is a dominant feature. Whilst maintaining the standard GS6A external dimensions, the GS6B features a special reinforced central roller bearing resulting in a motor with a vastly extended lifetime. Nu Bounty dredge operates throughout the year for many hours per day and component lifetime, efficiency and reliability are all crucial points which go towards making the new generation of Neumann dredges leaders in their particular field. From this basic premise, and thanks

to the co-operation with CFP engineering, SAI has designed a technologically highly advanced motor ideally suited to this Customer's specific demands. The positive results obtained from the field give SAI every reason to be extremely proud of the versatility and reliability of its products enabling them to guarantee the highest standard of mechanical and volumetric efficiency under the most arduous working conditions.







2-5 February 2012 Verona ITALY



30 April - 4 May 2012 Ribeirao BRAZIL



29 May - 2 June 2012 Moscow RUSSIA



4-7 September 2012 Hamburg GERMANY



4-7 September 2012 Donetsk UKRAINE



10-14 September 2012 Johannesburg SOUTH AFRICA



3-6 October 2012 Piacenza ITALY

## SAI INTERVIEW



**Eng. Matteo Michelin**

The following interview is aimed at introducing our new Sales Manager, Eng. Matteo Michelin, to you.

**Q: Despite the current economic slowdown, 2011 has been another successful year for the SAI group, what is your forecast for 2012?**

*MM: You are correct! The SAI group achieved significant sales volumes in 2011. The current problems of the global financial markets create uncertainty and concern in the manufacturing field. SAI has fortunately always invested heavily in research and development, and today boasts a wide range of technologically advanced products, which results in us attracting customers that traditionally used our competitors products. Furthermore, energy efficiency is an issue of increasing importance to our Customers. The performance of SAI motors is among the highest, if not the highest in the hydraulic motor market. Therefore, SAI can offer its Customers ways of eliminating overheating, reducing fuel consumption and increasing the performing range of our customers' machines. To sum up, despite expecting a turbulent year, I think we have opportunities to grow in 2012, probably with a more evident trend in the second semester.*

**Q: What expectation do you have with the new developing Countries?**

*MM: SAI has been working for more than 40 years in foreign markets, sells in more than 80 countries in the world and has 9 branches outside Italy. We celebrated the 20th Anniversary of SAI INDIA LIMITED in December 2009, moreover our long presence in China and India allows us to capitalize on the trend of continuous growth in the Asian economy. At the same time we are increasing our market presence in terms of human resources and marketing in Southern Asia and Latin America.*

**Q: Which Market sectors do you think will be most dynamic?**

*MM: SAI is able to be present and effective in a variety of fields, from mobile to marine, to industrial. Our latest developments in terms of variable displacement, higher speeds and pressure are very important features of particular relevance to the drilling, mobile, mining and recycling fields. The advanced technology of SAI motors should allow further increase in our market shares especially in these areas.*

**Q: What development strategy do you envisage for the SAI worldwide sales network?**

*MM: SAI offers a highly technically advanced product, with the capability of customization in accordance with customer requirements. We are increasing our technical consultancy service and application engineer support throughout the distribution network and introducing new area managers of engineering education, all with the aim of an increasing awareness of the specific issues and needs of our Customers. We will also be organizing seminars based on technical and business issues to facilitate the know-how transfer between SAI and the distribution network, providing tools to better analyze applications and we will also have available our excellent R&D service for targeted testing applications.*



**SAI**

BREAKING  
**NEWS**



**SAI**  
BRASIL

<http://www.saihidraulica.com.br>

**NEW WEBSITE ONLINE**



**WORLDWIDE**



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