

The evolution of the world of work and current technology

The working environment and safety

Driven by the progress, the world of work is changing and, ultimately, improving. In recent years working environments, and the way we work, have changed. Today, there is a greater focus on health and safety, as a consequence no doubt of the growing awareness of those responsible and also due to the regulations in force and inspections carried out by the relevant authorities. Generally, social conflict is eased where there is prevention, and focus on safety and innovation. When breaches are found to have caused harm to people or even death, we are shocked and incredulous. Despite everything, we all want to look forward as we believe that the future must be better than the past.

The Entrepreneur and the Company's social function

Entrepreneurs are people who are generally very well-educated and have a certain professionalism, but this professionalism is not gained solely from their studies. Professionalism is a way of being, like a sense of duty, a respect of the rules and consideration of others. Those who lead a company must take inspiration from these immutable principles and apply them carefully in their professions. A serious entrepreneur is not a financier who removes capital from a company to use it elsewhere. The real entrepreneur knows that the company has a social duty towards those who work for it and society in general. The entrepreneur is satisfied only when he or she has created a safe and relaxed working environment, where everyone is committed to their jobs. The enhancement of human resources is of fundamental importance to foster good relations and cooperation.

Research and Innovation

Only companies that renew themselves continue to remain in the market. Innovation has become a system of selection as important as it is necessary. Renewal means moving forward, improving, producing machines that are even more perfect and up-to-date with current technology. This can only be achieved through continuous scientific research. Through research, costs can be cut making the products manufactured more easily accessible to all. It is always through research that environmentally sustainable production can be achieved. Guiding a group of persons in their research today is a great challenge and appropriate tools must be available: coworkers must share the same objectives and commitments, and scientific research must be appropriately funded. Financially sound companies self-finance their research.

Environmental sustainability and energy saving

Saving raw materials, solid and liquid, is not a fashionable trend by an imperative requirement which no-one can distance themselves from. We all have a duty to do our best to save, for future generations, those resources which nature offers us so freely and which have given us the prosperity we now enjoy. For centuries, man was able to live using a level resources which were in balance with what nature could sustain.

But, for the last thirty years, our demand for resources has exceeded what is available. In other words, using our natural capital at a faster pace than is sustainable is like spending more than our

CATTANI S.p.A.

Via Natta, 6/A – 43122 Parma – Italy – Tel. +39 0521 607604
SALE DEPT. FAX: +39 0521 607628 – PURCHASING DEPT. FAX: +39 0521 607855
ACCOUNTING DEPT. FAX: +39 0521 399966
<http://www.cattani.it> Email: info@cattani.it PEC: cattani@peclife.it
Codice Fiscale e Partita I.V.A. 01720020344 – E.E.C. VAT IT 01720020344 –
Capitale Sociale € 1.549.800,00 I.V. - R.E.A. 173616
Registro Imprese Parma n. 01720020344

**AZIENDA CON SISTEMA DI GESTIONE
PER LA QUALITÀ CERTIFICATO DA DNV
= UNI EN ISO 9001:2008 =**

income. Here are a few examples. The electrical installers' magazine "Elettro" no.4 (April 2008), on page 28, informs its readers that by electronically updating simple electric installations we could achieve energy savings of 40%. The same magazine on page 32, in the article entitled "MOTORS FOR SAVING" tells its readers that Italian industry uses around 50% of its total energy consumption; of this 75% (around 15000 GWh) is used to power electric motors.

Various studies linked to the European Commission's SAVE project have highlighted that installing high-efficiency motors and inverters can lead to saving around 29% of the electricity used.

All this is possible by replacing current low output motors with new standard EFF3 - EFF 2 – EFF 1 classified high-efficiency motors.

Comparison with motors of earlier design with standard plate and EFF1 – EFF2 – EFF3 high-efficiency motors

MOTOR	POWER	High-efficiency Motors	Output	Amps	MOTOR	POWER	Standard Motors	Output	Amps	Output Difference
TECNO-T2	kW 0,75	M400	77,40%	2,3	TECNO-T2	kW 0,75	M530	63,00%	2,4	14,40%
UNI JET 75 2V	kW.0,75	M400	77,40%	2	UNIJET 75 2V	kW 0,75	M530	70,00%	2	7,40%
FLUX JET	kW.1,1	M400	79,60%	2,7	FLUX JET	kW 1,1	M530	73,00%	3	6,60%
FLUX JET	kW.1,5	M400	81,30%	3,7	FLUX JET	kW 1,5	M530	78,00%	4	3,30%
MEDIO JET	kW.2,2	M400	83,20%	4,7	MEDIO JET	kW 2,2	M530	81,00%	5,2	2,20%
MEDIO JET	kW.3	M400	86,50%	6,4	MEDIO JET	kW 3	M530	83,20%	6,8	3,30%
MEDIO J350	kW.3	M400	86,50%	6,4	MEDIO J350	kW 3	M530	83,20%	6,8	3,30%
MEDIO J 2V	kW.5,5	M400	87,70%	12,4	MEDIO J 2V	kW 5,5	M530	81,00%	13	6,70%
UNI JET 501	kW.7,5	M400	91,10%	14	UNI JET 501	kW 7,5	M530	81,80%	17,3	9,30%
UNI JET1500	kW.15	M400	90,70%	28	UNI J1500	kW 15	M530	85,50%	33,2	5,20%
UNI JET1500	kW.18	M400	91,60%	33	UNI J1500	kW 18	M530	86,00%	33,2	5,60%
UNI J2200	kW.18,5	M400	91,60%	33	UNI J2200	kW 18,5	M530	88,00%	33,2	3,60%

The kW installed is the same for each category of motor; with the high-efficiency plate have a higher output percentage because there are less dissipated Watts.

CATTANI S.p.A.

Via Natta, 6/A – 43122 Parma – Italy – Tel. +39 0521 607604
 SALE DEPT. FAX: +39 0521 607628 – PURCHASING DEPT. FAX: +39 0521 607855
 ACCOUNTING DEPT. FAX : +39 0521 399966
<http://www.cattani.it> Email: info@cattani.it PEC: cattani@peclife.it
 Codice Fiscale e Partita I.V.A. 01720020344 – E.E.C. VAT IT 01720020344 –
 Capitale Sociale € 1.549.800,00 I.V. - R.E.A. 173616
 Registro Imprese Parma n. 01720020344

AZIENDA CON SISTEMA DI GESTIONE
 PER LA QUALITÀ CERTIFICATO DA DNV
 = UNI EN ISO 9001:2008 =

The use of modern technology has allowed us to design a new concept of aspirator: an aspirator equipped with an inverter and a small computer with the appropriate software.



The inverter, also called a VSD (Variable Speed Driver) is an electrical and electronic device which optimized the operation of electric motors; the software is an artificial intelligence that constantly monitors the aspirator's functions. **The VSD and its software reduce the stress on motors and maintain a constant programmed operating head adapting the air capacity to demand in real time.**

Self-protection

Aspirators with VSD are the only ones which react to difficult situations such as high temperatures or power supply problems. The Turbo-Smart and Micro-Smart do not stop and will not be damaged. They display the temperature on the small screen and the software reacts by lowering the operating head suction for the period of time necessary to restore the operating temperature and, when normal temperature is restored, the aspirator returns to working at the programmed operating head suction.

Risk of flooding

In the event of a sudden wave of liquid, Turbo-Smart and Micro-Smart do not flood but enter into self-protection mode.

Prevention

During operation, **any dangerous events are highlighted on the display.**

Wireless connection

Turbo-Smart can be connected wirelessly to the practice's computer.

Eco-friendly Aspirators

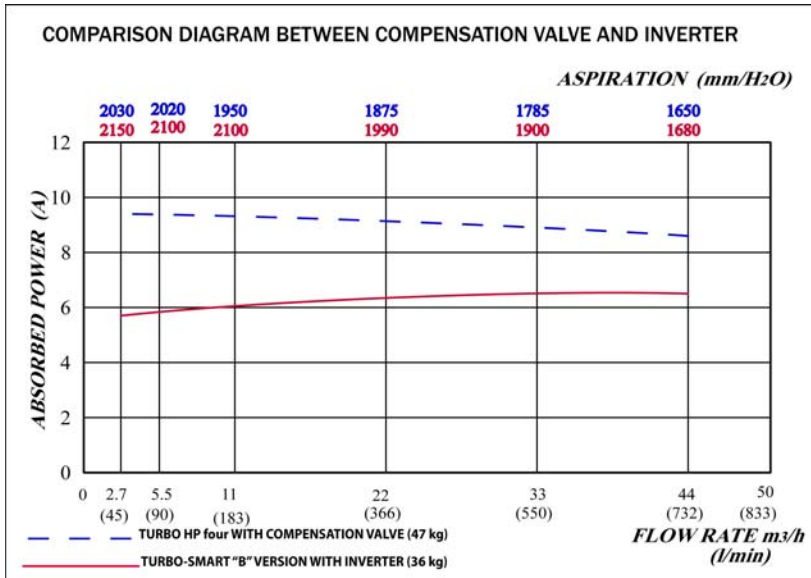
At the same performance levels, we found a saving in raw materials of 11 Kg and a power saving of 690 W/h compared to fixed speed aspirators.

CATTANI S.p.A.

Via Natta, 6/A – 43122 Parma – Italy – Tel. +39 0521 607604
 SALE DEPT. FAX: +39 0521 607628 – PURCHASING DEPT. FAX: +39 0521 607855
 ACCOUNTING DEPT. FAX: +39 0521 399966
<http://www.cattani.it> Email: info@cattani.it PEC: cattani@peclife.it
 Codice Fiscale e Partita I.V.A. 01720020344 – E.E.C. VAT IT 01720020344 –
 Capitale Sociale € 1.549.800,00 I.V. - R.E.A. 173616
 Registro Imprese Parma n. 01720020344

**AZIENDA CON SISTEMA DI GESTIONE
 PER LA QUALITÀ CERTIFICATO DA DNV
 = UNI EN ISO 9001:2008 =**

The working diagrams below illustrate the amount of savings in raw materials and energy used.

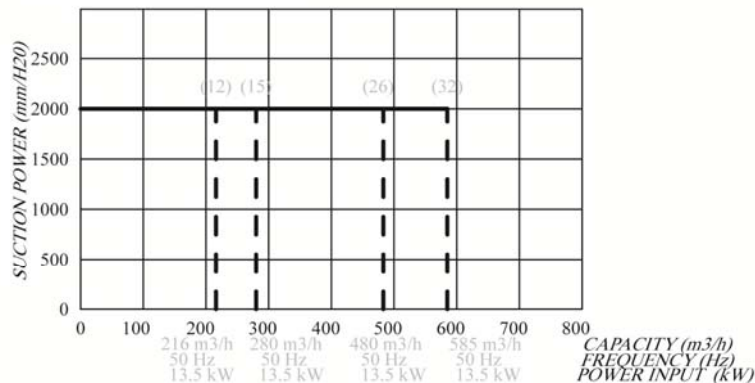


At the same performance levels, Turbo-Smart with inverter compared to a fixed speed aspirator achieves a saving in raw materials of 11 Kg on the motor and 690 W/h in energy. 35 Kg of raw materials are saved in the finished aspirator. The fixed speed aspirator (HP Quattro) weighs 58 Kg while the Turbo-Smart with inverter weighs 23 Kg. The fixed speed motor unit (HP Quattro) weighs 21 Kg while the Turbo-Smart motor unit weighs 10 kg.

Medium and large aspiration units for hospitals and University clinics

The working diagrams below demonstrate the energy savings achieved by using an inverter system compared to fixed speed motors.

SUCTION CURVE OF A UNI-JET 1000 WITHOUT INVERTER
AT 2000 mm/H₂O DEPRESSION



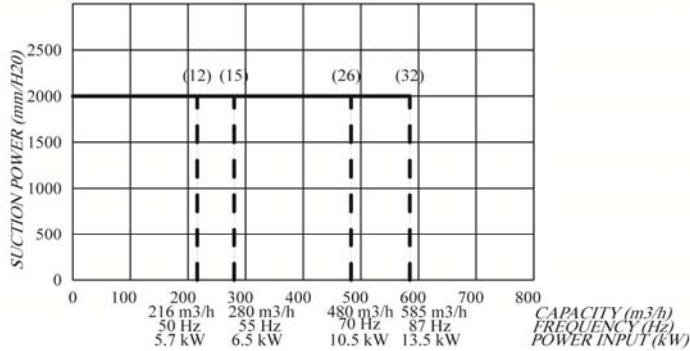
THE NUMBERS IN BRACKETS ARE WORKING PLACES THAT CAN BE SERVICED AT THE SAME TIME.
- FIGURE CALCULATED USING AIR CONSUMPTION OF 18 m³/h (300 N l/min) PER USE.
ASPIRATOR MODEL UNI-JET 1000 (155 Kg).

CATTANI S.p.A.

Via Natta, 6/A - 43122 Parma - Italy - Tel. +39 0521 607604
SALE DEPT. FAX: +39 0521 607628 - PURCHASING DEPT. FAX: +39 0521 607855
ACCOUNTING DEPT. FAX: +39 0521 399966
<http://www.cattani.it> Email: info@cattani.it PEC: cattani@peclife.it
Codice Fiscale e Partita I.V.A. 01720020344 - E.E.C. VAT IT 01720020344 -
Capitale Sociale € 1.549.800,00 I.V. - R.E.A. 173616
Registro Imprese Parma n. 01720020344

AZIENDA CON SISTEMA DI GESTIONE
PER LA QUALITÀ CERTIFICATO DA DNV
= UNI EN ISO 9001:2008 =

SUCTION CURVE OF A UNI-JET 501 WITH INVERTER
AT 2000 mm/H2O DEPRESSION



THE NUMBERS IN BRACKETS ARE WORKING PLACES THAT CAN BE SERVICED AT THE SAME TIME.
- FIGURE CALCULATED USING AIR CONSUMPTION OF 18 m³/h (300N l/min) PER USE -

ASPIRATOR MODEL UNI-JET 501 (88 Kg).

67 Kg of raw materials are saved.

Uni-Jet 1000 uses 13.5 kW of electricity when working on either 12 or 35 positions.

While the Uni-Jet 500 with inverter at the same capacity uses an average of 9.05 kW/h electricity with an average saving of 4.45 kW/h.

Self-protection

Equipment with inverters is also able to self-regulate automatically in the event of a criticality. For example, if a problem arises with the environment, the power supply, because of high temperature or an unexpected flow of liquid, the machine does not stop but adapts to the new situation and, once the emergency is over, returns to its normal function.

General Considerations

For clarity, we have used concrete examples with verifiable data. Renewal means keeping up with the times, with state-of-the-art technologies and standards, and to waste less and perform better. A company that renews itself will overcome the crisis but a company that stands still will slowly die. One person alone is unlikely to affect a company's growth, but a group of motivated people can make a difference.

In the same way, an individual company alone will not resolve the crisis in our country just as one country will not solve the European crisis, but a group of companies or a group of countries can solve the crisis in Europe and the world. In the meantime, if everyone feels obliged to do whatever they can, it will be a good start.

Cattani S.p.A.

November 2012

CATTANI S.p.A.

Via Natta, 6/A - 43122 Parma - Italy - Tel. +39 0521 607604
 SALE DEPT. FAX: +39 0521 607628 - PURCHASING DEPT. FAX: +39 0521 607855
 ACCOUNTING DEPT. FAX: +39 0521 399966
<http://www.cattani.it> Email: info@cattani.it PEC: cattani@peclife.it
 Codice Fiscale e Partita I.V.A. 01720020344 - E.E.C. VAT IT 01720020344 -
 Capitale Sociale € 1.549.800,00 I.V. - R.E.A. 173616
 Registro Imprese Parma n. 01720020344

AZIENDA CON SISTEMA DI GESTIONE
 PER LA QUALITÀ CERTIFICATO DA DNV
 = UNI EN ISO 9001:2008 =