

# i.COOL NEWSPAPER

## EFFICIENT WASTE HEAT MANAGEMENT:

Cooling Solutions for Heat Removal from Newspaper Printing Presses.

[www.cofely.de](http://www.cofely.de)



BUILDING SERVICES

ENERGY SERVICES

FACILITY SERVICES

REFRIGERATION

OPTIMAL USE OF ENERGIES.

**COFELY**  
GDF SUEZ

# i.COOL NEWSPAPER

## SPECIALIZED SYSTEMS FOR EFFICIENT HEAT REMOVAL FROM NEWSPAPER PRINTING PRESSES.

*"The quality of our objectives determines the quality of our future."* Josef Schmidt

More than three decades of experience in the printing industry combined with trend-setting expertise in systems and building technology have made it possible for Cofely to develop specialized systems for efficient heat removal from printing presses. These systems create the perfect working climate for people, materials and production processes in printing works. For many years we have been particularly committed to reducing energy consumption and environmental impact.

In line with these economic and environmental concerns, Cofely's i.Cool® systems provide constant temperatures during the printing process. They also help to guarantee the productivity of the entire process. Cofely assumes total responsibility for eliminating the heat from your printing process, starting with the design of the system, through to ensuring long-term operation and the lowest possible life cycle costs.

### SUPERIOR SERVICE FOR MAN AND MACHINE

"Upgrade your press" is the slogan that epitomises the efficiency of the i.Cool® systems and services: Cofely will look after your equipment all over the world for its whole service life.

- You will receive detailed feasibility and ROI reports right from the design phase.
- Our technical service ensures totally efficient operation thanks to regular preventive maintenance and telemonitoring.
- Cofely Service is at your service 24/7 so that your equipment is always operating in a safe, economical and environmentally-friendly way.



*Cofely gets involved with the creation of the perfect working environment for people, material and production processes in printing works.*

### **i.COOL® NEWSPAPER – Solutions with System**

#### **i.COOL® AQUACENTER**

Water for energy-saving cooling of printing presses. Ensure efficiency, reliability and top quality in your operations.

#### **i.COOL® AQUACENTER S**

Hot climates are a particular challenge. Make sure you always have optimal printing conditions and increase your production through high levels of reliability.

#### **i.COOL® COMPACTCENTER**

Integrate a system into your existing refrigeration supply that ensures printing quality at the same high level while reducing wear and tear on your machine parts.

#### **i.COOL® AIRCENTER**

Air for eliminating printing press waste heat. Use the natural thermal current, work economically and efficiently.

#### **i.COOL® VARIOAIRCENTER**

Adjustable ventilation system for all production areas in your printing works. Optimal air changes, reduced dust and energy-saving heat recovery are standard. And we'll tailor the system to suit your particular requirements.

# i.COOL AQUACENTER



## **OPTIMAL HEAT REMOVAL**

The i.Cool® AquaCenter has become a classic in the area of producing cold water for cooling inking units, drive motors, automatic control cabinets, gear oil coolers, dampening water cooling equipment as well as for all other hot spots in a newspaper printing press. Its reliability ensures the optimal economical and ecological removal of waste heat resulting from the printing process.

## **EFFICIENT AND UNIQUE**

By developing the highly-efficient Twin Chill Concept (TCC) we were able to increase the efficiency of the i.Cool® Aqua Center to a maximum. The use of a closed cooling tower enables energy savings up to 80 % compared to conventional systems with air-cooled refrigeration machines. As a result, the operating costs are noticeably reduced.

## **HIGHEST PRECISION**

All the components of the i.Cool® AquaCenter are assembled and tested for you before delivery by our highly-qualified technicians and engineers under production conditions. This quality management ensures that the system is tuned precisely to your particular printing press. All actions which have to be carried out by the customer are described in great detail and documented with detailed plans.

## **INNOVATION ADVANTAGES**

For more than 30 years we have been partners to the printing industry and have installed more than 900 systems all over the world. This makes it easier for us to develop new innovations for our systems and to integrate them in the best way possible. We have known for a long time how we let our systems “just” work in your operation – and you benefit from our motivation to keep getting better. Upon request we can also supply our solutions on a turnkey basis. The i.Cool® AquaCenter can be combined with the i.Cool® AirCenter.

*Water for energy-saving cooling of printing presses.  
Ensure efficiency, reliability and top quality in your operations.*



### **i.COOL® AQUACENTER – Characteristics**

#### **TWIN CHILL CONCEPT (TCC)**

- Lowers operating costs by up to 80 %
- Redundancy - two independent cooling circuits for increased operational dependability
- Hermetic dual-circuit refrigeration engine
- Increased operational reliability
- Reduced refrigerating agent content
- Connection pipelines between the separate components conduct water only

#### **COLD WATER STORAGE TANK**

- Longer lifetime of all components as refrigeration engine needs to be switched on less often
- Refrigerating machine operates at a consistent and optimum level

#### **MAXIMUM EFFICIENCY**

- Extremely low operating costs
- Compact dimensions
- Clean cooling tower with reduced water consumption due to conductance-controlled blowdown (optional)
- Long life cycle

#### **AXI.COS® HIGH-TECH CONTROL**

- Precise regulation and control
- Telemonitoring
- Remote service
- Control panel connection (optional)

#### **OPTIMUM OPERATIONAL DEPENDABILITY**

- International service organisations

# i.COOL AQUACENTER S

## **PERFECT PRINTING – EVEN IN EXTREME HEAT**

It doesn't matter where you want to print, if in southern Europe, Africa, Asia, Australia, Latin America or any other place of the world – the i.Cool® AquaCenter S uses water to eliminate heat from printing presses even in regions with particularly hot climate. Each individual part has been developed to meet the special requirements of printing presses so that you can print in an economical and high quality way, even under extreme conditions.

## **COMPLEX CHALLENGES – SOLVED IN A LASTING WAY**

All Cofely systems have been keeping our customers happy for many years – all over the world. The i.Cool® AquaCenter S solves the complex challenges posed by newspaper printing in an exemplary and lasting manner. This is based on Cofely's many years experience in manufacturing, improving, installing and maintaining these systems. Now you can benefit directly from this experience.

## **ALWAYS PRECISE**

Perfect chill water management in the i.Cool® AquaCenter S guarantees at all times strict adherence to the chill water temperatures, water levels and water pressures required by the production process. This allows the reproducibility of the printed product and lowers production costs considerably. The system operates in a closed circuit, completely free of any corrosion and contamination.

## **HIGHLY SPECIALIZED HEAT ELIMINATION**

Our clients are also our best consultants: their requests for easy maintenance and optimal operation reliability have been implemented in the i.Cool® AquaCenter S. As a part of the printing press peripherals, the colour of the system will be matched to the colour of your printing press.

The i.Cool® AquaCenter S can be combined with the i.Cool® AirCenter.



**i.COOL® AQUACENTER S** – always convincing

**HERMETIC HIGH-EFFICIENCY REFRIGERATING MACHINE**

- Developed for cooling of printing presses
- At least two independent refrigeration cycles for a high level of operating reliability
- Reduced refrigerating agent content
- Connection pipelines between the separate components conduct water only

**COOL WATER STORAGE TANK**

- Longer lifetime of all components as refrigeration engine needs to be switched on less often
- Refrigerating machine operates at a consistent and optimum level

**AXI.COS® HIGH-TECH CONTROL**

- Precise regulation and control
- Telemonitoring
- Remote service
- Control panel connection (optional)

**OPTIMAL OPERATIONAL DEPENDABILITY**

- International service organisations

*Hot climates are a particular challenge. Make sure you always have optimal printing conditions and increase your production through high levels of reliability.*



# i.COOL COMPACTCENTER



*Integrate a system into your existing refrigeration supply that ensures printing quality at the same high level while reducing wear and tear on your machine parts.*

## **PRECISE PARAMETER CONTROL**

The i.Cool® CompactCenter supports your printing press with its existing separate refrigeration supply. Its tried-and-tested technology ensures precise and reliable adherence to the parameters called for by the machine manufacturer – and consequently ensures quality and efficiency in your operations.

## **THE RIGHT DECISION**

The perfect complement to your existing refrigeration supply: It doesn't matter if you have your own refrigerating machine or work with well water, whether you utilize absorption refrigeration or have a central refrigeration supply available: the i.Cool® CompactCenter enables you in any case to keep the requirements of your printing press constant.

## **ADVANTAGES FOR YOU AND YOUR CLIENTS**

With the i.Cool® CompactCenter you ensure a constant printing quality – and achieve at the same time reduced wear and tear on the moving parts of your printing press because of the closed machine circuit. This extends the service life and means long-lasting cost reductions.

## **MAXIMUM INDIVIDUAL BENEFIT**

For many years Cofely has been working all over the world to produce and develop systems which provide the greatest on-site benefits for printing works and which give you the best possible usefulness thanks to flexible and adaptable products. An excellent example of this is the i.Cool® CompactCenter.

The i.Cool® CompactCenter can be combined with the i.Cool® AirCenter.



### **i.COOL® COMPACTCENTER – Your Benefits**

#### **EFFICIENCY THROUGH OPTIMIZATION**

- Optimal parameter control because the cooling capacity is adapted to the machine
- Precisely maintained temperatures
- Less spoilage

#### **SUSTAINABILITY**

- Optimal product quality and reproducibility, even for large runs
- Reduced wear and tear on moving parts because of constant temperature conditions and a closed, dirt-free refrigeration circuit

#### **INTEGRATED INTO THE IN-HOUSE NETWORK – BUT STILL INDEPENDENT**

- Hydraulic separation from the local cold water network using plate heat exchangers
- Independent of pressure fluctuations and potentially dirty water

#### **AXI.COS® HIGH-TECH CONTROL**

- Precise regulation and control
- Telemonitoring
- Remote service
- Control panel connection (optional)

# i.COOL AIRCENTER

## REGULATED CONSTANTS

The appearance of newspapers is becoming increasingly varied in terms of size, volume and colour set-up. At the same time, it is especially important to keep the preset production parameters constant over a long time period. The i.Cool® AirCenter uses air as the medium to carry off the printing press waste heat in a way that is both energy and space-saving. In this way it makes a clear contribution to the overall economical and environmental optimization of the printing process.

## SMOOTH OPERATION

The i.Cool® AirCenter offers a good balance between technical necessity, functionality and convenience. For you, this means no change in the ink-water balance, no fluctuations in printing quality and machine electronics that continue to work even in extreme conditions. The i.Cool® AirCenter ensures trouble-free operation.

## FLEXIBLE INTEGRATION

When developing the i.Cool® AirCenter Cofely put special emphasis on the flexibility of the modules. Even when the spatial conditions are difficult and the machine configurations are complex, the components can be optimally fitted into your operation.

## AXI.COS® CONTROL FOR EXTRA RELIABILITY

The i.Cool® AirCenter supports the thermal current produced by the printing press as a specific body and therefore requires up to 50 % less electricity than conventional ventilation systems. Using the AXI.COS® Control with modem, the room temperatures are directly monitored and regulated. The micro-processor control system of the i.Cool® AirCenter ensures well-balanced proportion of the air mass currents of incoming and waste air. This kind of technology saves energy costs and protects the environment. Using the modem, errors may be spotted and their correction initiated or wrong settings may be corrected. Upon request we also provide turnkey system concepts, all under one roof.

The i.Cool® AirCenter can be combined with the i.Cool® AquaCenter, the i.Cool® AquaCenter S or the i.Cool® CompactCenter.



*Air for eliminating printing press waste heat.  
Use the natural thermal current, work economically  
and efficiently.*



### **i.COOL® AIRCENTER – the clean solution**

#### **ECONOMICAL AND ENVIRONMENTALLY-FRIENDLY**

- Increased productivity for your printing press
- Up to 50 % savings on energy costs thanks to the use of natural thermal current
- Reduction of printing costs on every run
- Meets all legal requirements
- Energy recovery by using production heat to heat the surrounding air
- Selective Air Supply (SAS) of primary air columns as required

#### **CONSTANT, OPTIMUM OPERATING CONDITIONS**

- Optimum ventilation, even for complex machinery or difficult locations
- No thermal influence of areas outside the sound capsule through microprocessor-controlled pressure adjustment of the printing machinery
- Draught-free air intake
- Specially developed to meet the ventilation requirements of the printing process
- Uniform conditions around the printing machinery

#### **SPACE-SAVING AND FLEXIBLE**

- Compact, stand-alone modules
- Can be retrofitted
- Modules can be expanded or repositioned
- Space-saving integration of components into the machine technology

#### **EASY ASSEMBLY**

- Simple installation of components
- Short connection air ducts
- Can be installed by local technicians

#### **AXI.COS® HIGH-TECH CONTROL**

- Precise regulation and control
- Telemonitoring
- Remote service
- Control panel connection (optional)

# i.COOL VARIOAIRCENTER



## **CLEAN SOLUTIONS**

The i.Cool® VarioAirCenter offers a professional remedy for all the typical ventilation problems to be found in printing works. Whether around the printing press or in the post-press area, our solutions always guarantee the perfect production conditions for people, machinery and products.

The modular components can be combined to suit every need.

## **PERFECT CLIMATE**

Heat build-up and exposure to solvents and dust are things of the past. Cooling of supply air and circulating air adapted to your needs, optimised air changes and large filter surfaces ensure uniform operating conditions. This means you can increase your productivity, reduce costs and minimise fluctuations in product quality.

## **UNIVERSAL USE**

The modular construction means that the system can be used in all print production areas. Your i.Cool® VarioAirCenter can be adapted to suit any location or technical requirements and its system components, primary air columns and Temcoil devices mean that it is re-usable at any time.

## **COST REDUCTION AND PROTECTING THE ENVIRONMENT**

Care for the environment is one of our company's fundamental values. Alongside the responsibility we bear towards our generation and the generations to come, we are committed to developing products which meet our customers' needs. Using an i.Cool® VarioAirCenter will save you money because of its low energy consumption compared to conventional machines. Minimal loss of pressure due to short air ducts, the use of thermal updrafts to transport the air and waste heat from the machinery for heating in winter – all these are good for both your pocket and the environment. The i.Cool® VarioAirCenter can be combined with the i.Cool® AquaCenter, the i.Cool® AquaCenter S and the i.Cool® CompactCenter.

**i.COOL® VARIOAIRCENTER – for optimum results**

**ECONOMICAL AND ENVIRONMENTALLY-FRIENDLY**

- Increased productivity
- Up to 50 % savings on energy costs thanks to innovative solutions
- Reduction of printing costs on every run
- Meets all legal requirements
- Energy recovery by using production heat to heat the surrounding air
- Selective Air Supply (SAS) of primary air columns and Temcoil devices as required
- Healthy working climate for both man and machine

**SPACE-SAVING AND FLEXIBLE**

- Compact, stand-alone primary air columns and Temcoil devices
- Can be retrofitted
- Modules can be expanded or repositioned

**CONSTANT, OPTIMUM OPERATING CONDITIONS**

- Optimum ventilation, even for complex machinery or difficult locations
- Draught-free air intake
- Specially developed to meet the ventilation requirements of printing works
- Uniform conditions throughout all working and production areas
- Dust reduction and guarantee of perfect print quality

**EASY ASSEMBLY**

- Simple installation of components
- Short connection air ducts
- Can be installed by local technicians

**AXI.COS® HIGH-TECH CONTROL**

- Precise regulation and control
- Telemonitoring
- Remote service
- Control panel connection (optional)



*Air for removal of heat from printing press.  
Circulating air for reduction of dust and heat recovery*

# COFELY – EUROPE’S LEADING BRAND FOR ENERGY EFFICIENCY.

Virtually all areas of life require more efficient solutions when it is about dealing with energy - and this is a decisive factor of a company's competitiveness. Against this background, it makes sense to create service portfolios which are especially designed for this purpose. After the merger of Gaz de France and Suez to GDF Suez, one of the largest energy corporations in the world, Cofely, as European subsidiary, also merges the competencies of both companies in the area energy services and energy efficiency.

Cofely's mission is to be the one-stop shop which provides every customer with the exact kind of energy efficiency which they want and need.

Under the umbrella of the new European brand we now provide efficient technologies for machinery, buildings and refrigeration, along with energy production and distribution, commercial services and technical management. All these come together to create complete, tailored solutions which are good for both our customers and the environment.

The key is to have a breadth of expertise which covers all aspects of energy efficiency and which can justifiably be called unique. This is the foundation for Cofely's contribution towards optimising your business in three different areas:

- **Improving the efficiency of buildings and processes**

Design, construction, installation and maintenance of technology for systems and buildings – with special expertise in areas such as cooling technology, ventilation and equipment or building automation.

- **Solutions for local energy supply and production**

Design, installation and operation of the infrastructure, e.g. cooling and heating networks, combined heat and power plants, regenerative energy production and energy recovery.

- **Integrated services with guaranteed results**

Facility services, technical building management, energy supply contracting and energy procurement.

## **PROVEN COMPETENCE - TIGHTER NETWORKS – COFELY IN GERMANY.**

Cofely has set itself the task of not only utilizing companies' primary and secondary energy in the most economical and efficient way possible, but also of working with our partners in the most energy-saving way possible. A comprehensive portfolio is the best way to run even complex projects in a responsible way, so that we can free up our customer's internal resources for other projects.



#### **SYSTEMS TECHNOLOGY**

- Technology for ventilation, cooling, sanitation, measuring, controlling, regulating, building automation, electronics and news, fire protection, energy, heating, pipeline construction
- Clean room and process technology
- Tailored technical infrastructure solutions for particularly complex applications, e.g. industrial manufacturing, laboratories or clinics, hospitals, nuclear power plants

#### **FACILITY SERVICES**

- Servicing, maintenance, replacements, warranty / incident / environmental management, technical, infrastructure and commercial building management

#### **ENERGY SERVICES**

- On-site energy and media management: production and distribution of steam, compressed air, heat, cooling and electricity
- Full-service contracting: total operations management, maintenance of technical equipment and management
- Energy supply contracting: cost reductions through energy-efficient technology and choice of primary energy suppliers

- Energy-saving contracting: design, financing, construction and maintenance of building technology retrofitting for guaranteed energy savings

#### **COOLING TECHNOLOGY**

- Cooling technology for industrial applications, open cold water systems, process cooling and special applications
- Cooling technology products: liquid chillers, cooling towers, heat pumps
- Cooling technology services: servicing, industrial and equipment services, maintenance, refurbishment, cooling equipment rental, training and spare parts

#### **Cofely in numbers**

- Representation in 20 countries
- 35,000 employees
- 8 billion euro turnover
- No. 1 in Europe for energy and environmental efficiency



## CONTACT US:

[www.cofely.de](http://www.cofely.de)

### COFELY DEUTSCHLAND GMBH

#### DIVISION AXI.PRINT

Zinkmattenstrasse 40  
79108 Freiburg  
Germany  
Tel. +49 761 51003-0  
Fax +49 761 51003-10



#### Head Office

### COFELY DEUTSCHLAND GMBH

Duerener Strasse 403-405  
50858 Koeln  
Germany  
Tel. +49 221 46905-0  
Fax +49 221 46905-480

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GDF SVEZ