# CONCRETE CURING SYSTEM

# ProCure

365 Days – One climate





# Concrete Curing System

# ProCure

# The most advanced curing system

365 days - one climate





- Resistant concrete surfaces
   More consistent and brighter colours
  - Lower primary and
  - secondary efflorescence
- Higher density concrete surfaces
- Less cement
- Faster early strength

# OVERVIEW STANDARD SYSTEM

How it works



# CLIMATE CONTROL by ProCure

Reduce your curing time with heat and humidity supply

- Zone wise control of temperature & humidity
- Long lasting aluminum ductwork
- Energy saving 2-Step-humidification
- Water treatment pump station, inclusive reverse osmosis plant
- Intuitive process control system



### WARM AIR GENERATOR (standard solution)

- High quality warm air generator
- Inside housing, heat exchanger und burning chamber made of stainless steel
- Powder coated radial fan
- Operated by gas or oil



### WATER PUMP & TREATMENT STATION (standard solution)

- Trouble-free humidification
- Low maintenance
- High quality water treatment station
- High pressure water pump with ceramic head for a long life
- Water-treatment-station monitored by process control
- Tested and ready for use



# WATER INJECTION

- Decentral two stage water injection.
  Step 1 without supply of additional heat
- Extreme fine fogging
- Extreme fine fogging by water pressure of 70 bars
- Tight welded aluminum ducts



# **ROTHO-CONTROL**

Operate your system via control PC

- Easiest operation of complex processes
- Worldwide online data access and ROTHO support
- Zone control for BIG chambers
- Limitation of user rights
- Historical data recording
- climate curve for each day adaptable



# **High humidity**

**Risks?** 

#### What does that mean for the system?

- Condensation?
- Mold?
- Corrosion?



# INSULATION / SEALING

Do it in a proper way !

- Lower energy losses
- Avoid thermal bridges
- No water leaks on the joints



# **OPTIONS**

## **Stainless steel doors**

#### **Benefits:**

- Lower energy losses
- Corrosion resistant and long lasting

## Heated door frames

### Benefits:

 No condensate on the frames / floor around the doors



**OPTIONS** 

**Air Curtain** 

- Lower energy losses
- Lower air exchange



# **SYSTEM OVERVIEW**

Options for different energy carriers and chamber versions

- Warm water

- Electrical power



# WARM WATER HEAT EXCHANGER

- Cost effective system
- Good temperature control
- Connected to warm water grid (supplied by customer)



# ELECTRIC AIR HEATER

#### **Benefits:**

- Very fast heat supply
- Very good temperature control
- Easy to mount

### Disadvantages:

- High energy costs
- Separate switchboard needed



# **STEAM HUMIDIFIERE**

#### **Benefits:**

- Compact system
- Direct steam production
- No water treatment required

#### **Disadvantages:**

- High energy costs
- Needs to be sheltered from curing atmosphere



# **DATA SHEET** PROCURE

- Design the curing system according to customer needs
- Easy to use data sheet
- Collect necessary data

| Customer / Project:   | ΓΟΙΙΟ  |
|-----------------------|--|
| Name:                 | KUITU  |
| Street:<br>Town/city: | Robert Thomas<br>Metall- und Elektrowerke GmbH & O   |
| Phone:                | Postfach 1820 • 57279 Neunkirchen<br>Hellerstraße 6 • 57290 Neunkirchen<br>Deutschland • Germany                 |
| E-Mail:               | Telefon: +49 (0) 2735/788-0<br>Telefax: +49 (0) 2735/788-559<br>E-Mail: sales@rotho.de<br>Internet: www.withe.de |





ProCure-Basic data:

| Type of Curing rack:   | in existing hall / Indoor 🗆 | Outdoor 🗆        |
|------------------------|-----------------------------|------------------|
| Type of curing system: | BIG chamber 🗆               | Single chamber 🗖 |
|                        |                             | Double chamber 🗆 |

#### Technical data:

| Minimum temperature in the production hall              | °C     |
|---|--------|
| Minimum temperature of the aggregates                   | °C     |
| Desired hardening temperature                           | °C     |
| Desired relative humidity in the curing chamber         | %rH    |
| Specification of the cement content in the concrete mix | Mass-% |
| Water / cement value                                    |        |

#### Cement content: (indication of the percentage of cement classes in the cement mixture)

| 32,5 R; 42,5 N         | % |
|------------------------|---|
| 42,5 R; 52,5 N; 52,5 R | % |
| Fly ash                | % |

#### Performance data:

| Board size (L x W x H)         | mm       |
|--------------------------------|----------|
| Board weigth                   | kg       |
| Max. Concrete weight per board | kg       |
| Ø Number of pallets            | pieces/h |
| Max. concrete mass flow        | t/h      |

#### **Produktinformationen**

|            | L [mm] | W [mm] | H [mm] | Weight [kg] | Number per board |
|------------|--------|--------|--------|-------------|------------------|
| Block 1    |        |        |        |             |                  |
| Block 2    |        |        |        |             |                  |
| Pavers 1   |        |        |        |             |                  |
| Pavers 2   |        |        |        |             |                  |
|            |        |        |        |             |                  |
| Signiture: |        |        | Plac   | e:          | Date:            |



# THE ASSEMBLY

Option 1: supervisor assembly Option 2: ROTHO complete assembly







# THE ASSEMBLY

What we need to start at site:









- Foundation +0 / -10 mm
- Steel hall in place
- Isolation in place
- Tools according to our tool list
- Helpers ready to start (number / qualification)
- Electrical power
- Water supply @ commissioning
- Gas / Oil supply @ commissioning
- Internet @ commissioning
- Workplace safety
- Pictures of the construction side before assembly start



### Thank you very much for interest !