

THE
VACUUM
DIE CASTING
SOLUTIONS



FONDAREX®

OUR MANUFACTURING
PROCESS INVOLVES
95 LOCAL SUPPLIERS
WHICH ALLOWS
FONDAREX TO HAND
BUILD EACH UNIT
SPECIFICALLY TO YOUR
BUSINESS
REQUIREMENTS

SWISS MADE

YOUR
PARTNER
FOR
VACUUM

70 YEARS EXPERIENCE
IN VACUUM DIE CASTING

WORLDWIDE
TECHNICAL SUPPORT

MODERN AND APPROVED
VACUUM TECHNOLOGY

COMPATIBILITY WITH
ANY DCM

PRODUCTS DEVELOPPED
TO ACHIEVE
A SHORT PAY-BACK

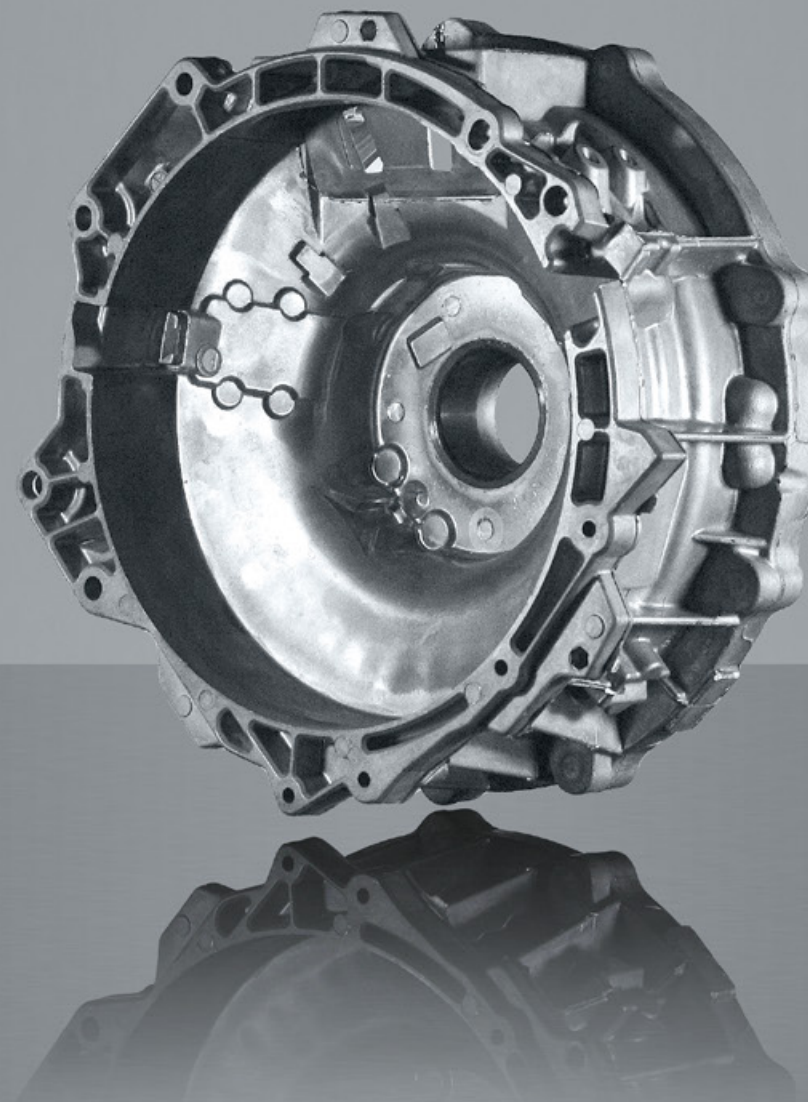
PART OPTIMIZATION

REDUCES
POROSITY

INCREASES
DENSITY

IMPROVES
SURFACE QUALITY

ENABLES HEAT
TREATMENT
AND WELDING



PROCESS OPTIMIZATION

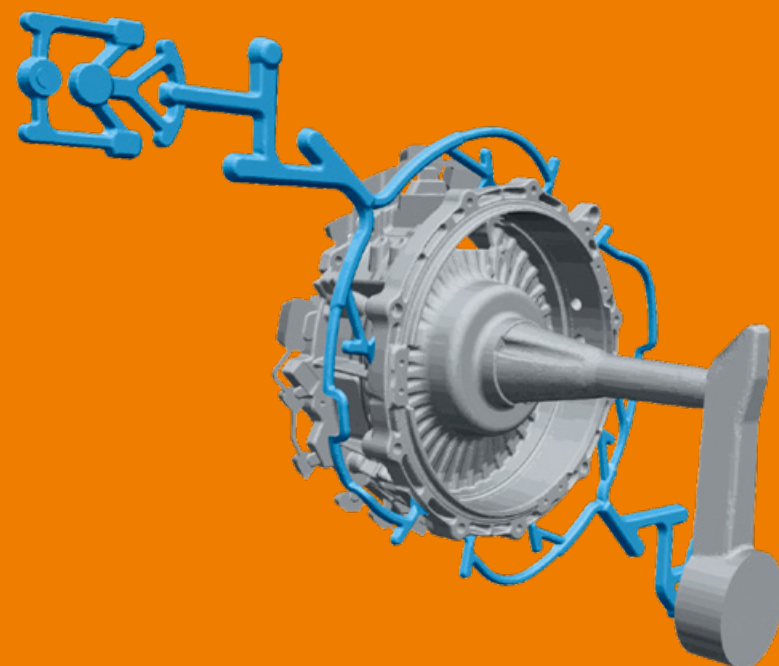
ALLOWS
SMOOTH FILLING
OF COMPLEX
PARTS

REDUCES
INJECTION
PRESSURE

INCREASES
MOLD LIFE TIME

APPLICATION **STUDIES**

VACUUM



CHANNEL DESIGN

Vacuum application studies are the roots of a good vacuum integration into your process

With over 5'000 achieved projects, Fondarex is the leading specialist in vacuum channel design

SIMULATION

Constantly striving to discover new possibilities

For a better understanding of the complex dynamic flows inside the cavity; ask Fondarex!

THE
STORY
OF
VACUUM

WATCH
THE MOVIE

www.fondarex.com



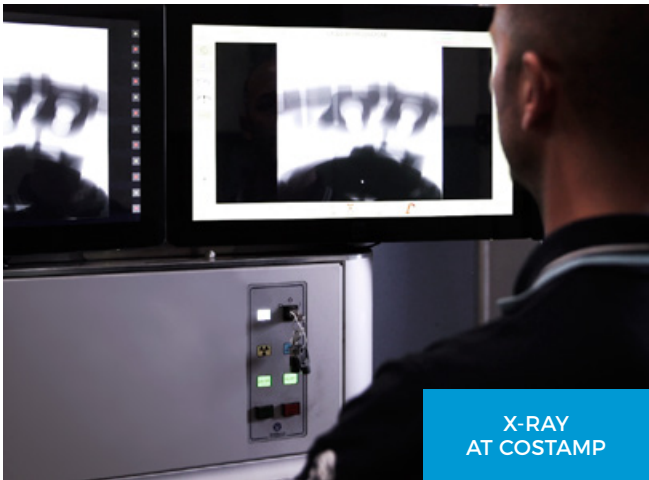
PRODUCTION
AT FONDAREX



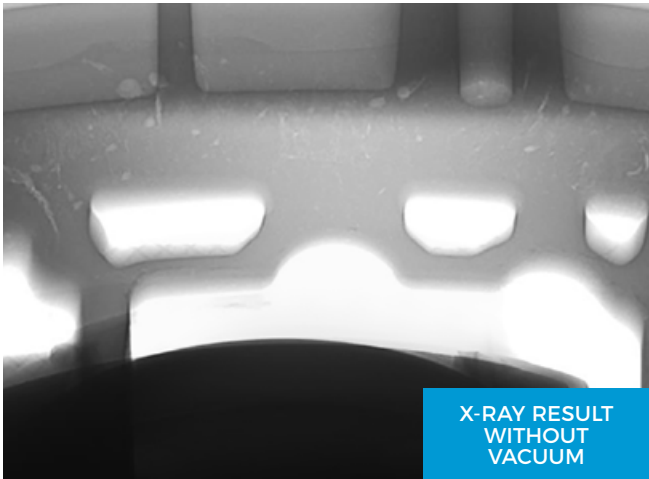
TEST
AT FONDAREX



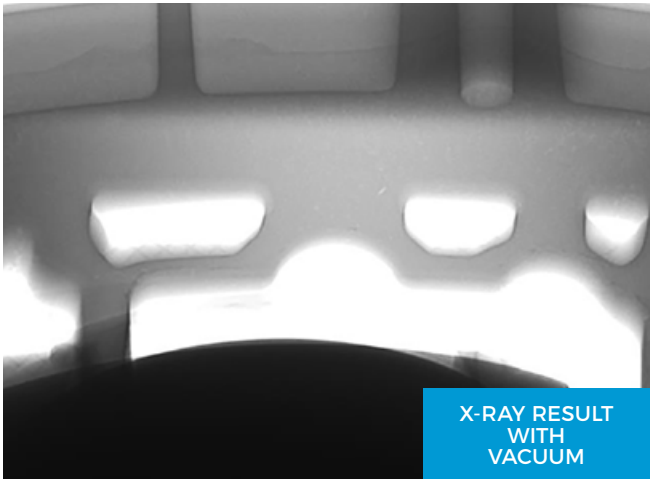
DIE CASTING
AT COSTAMP



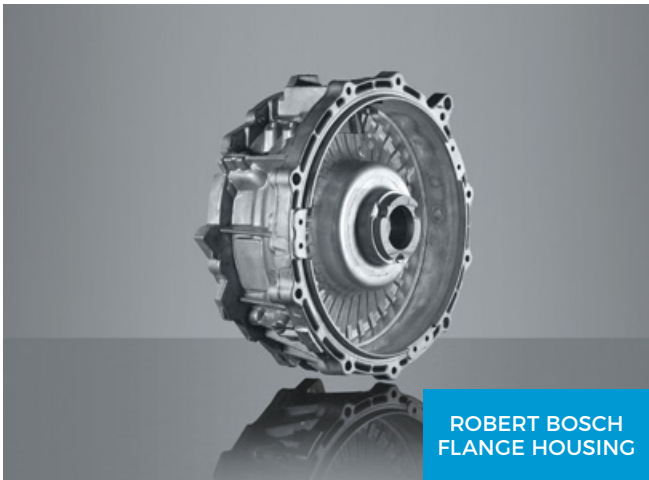
X-RAY
AT COSTAMP



X-RAY RESULT
WITHOUT
VACUUM



X-RAY RESULT
WITH
VACUUM

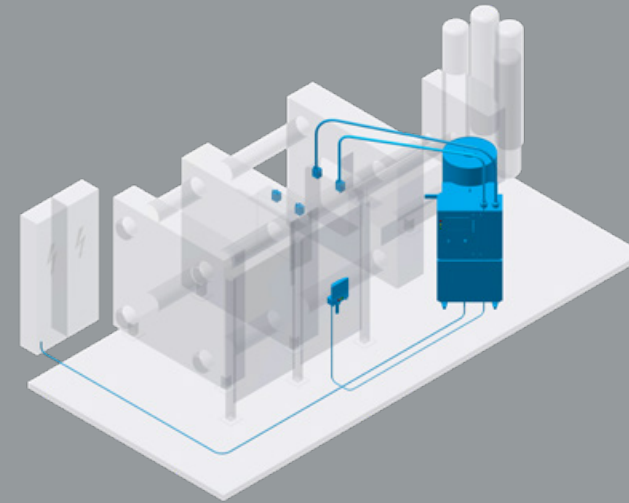


ROBERT BOSCH
FLANGE HOUSING



PORSCHE
PANAMERA
E-HYBRID

FOR EACH
SITUATION
A
SOLUTION

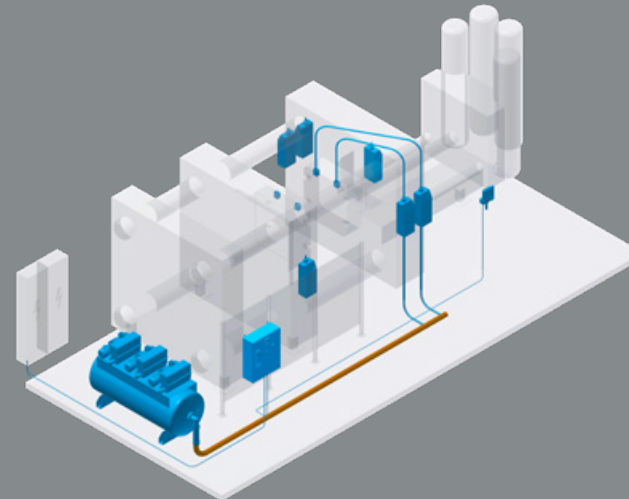


**FONDAREX
MODULAR**
MOBILE

Interchangeable from one DCM to another

Compact vacuum system

Ideal for DCM up to 3'000 t

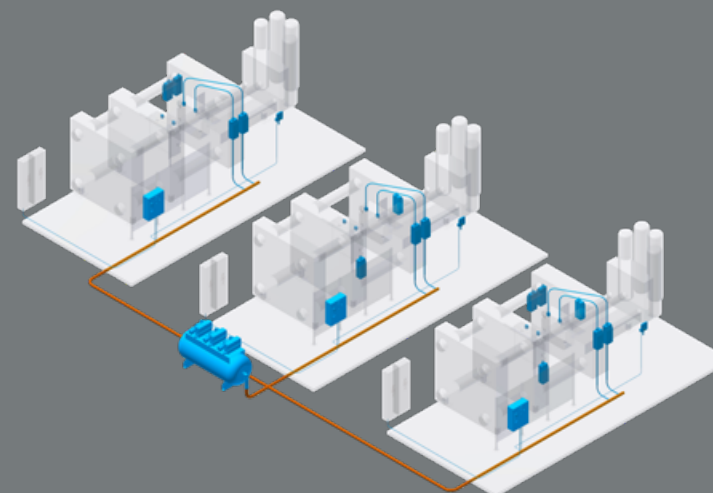


**FONDAREX
MODULAR**
CELL

Optimized cell integration

All elements can be placed easily around the DCM for the most efficient configuration

Recommended for high-end projects on DCM's up to 6'000 t



**FONDAREX
MODULAR**
CENTRAL

Centralized tank and pump stand for all DCMs

FONDAREX MODULAR MOBILE

The Fondarex Modular provides intelligent and precise vacuum process control

Configurable to your needs and upgradable at any time.
It can be integrated to any DCM

Intuitive innovation, the new user interface is the perfect combination of simplicity and ingenuity

Quick maintenance, stay focus on your process



FONDAREX
MODULAR
MOBILE 500



FONDAREX
MODULAR
MOBILE 750



FONDAREX
MODULAR
MOBILE 1000



- INDUSTRY 4.0
- REAL TIME
VACUUM CONTROL
- AIR FLOW MEASURE
- AIR QUALITY CONTROL
- REMOTE
CONTROL PANEL

FONDAREX MODULAR CELL / CENTRAL

Allows you to independently place up to 6 vacuum channels

Configurable to your needs and upgradable at any time.
It can be integrated to any DCM

Intuitive innovation, the new user interface is the perfect
combination of simplicity and ingenuity

Quick maintenance, stay focus on your process

Servicing DCM up to 6'000 t



FONDAREX
MODULAR
CELL / CENTRAL

Up to 6 vacuum channels

INDEPENDENT
VACUUM CHANNELS

INDUSTRY 4.0

REAL TIME
VACUUM CONTROL

AIR FLOW MEASURE

AIR QUALITY CONTROL



OPTIONS

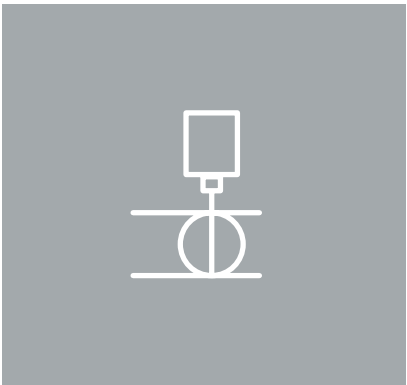
FOR

MODULAR



INDUSTRY 4.0

A new way to manage, communicate and treat the data through integrated vacuum process statistic and quality reports. This option includes the Web Dashboard to follow your production from your laptop.



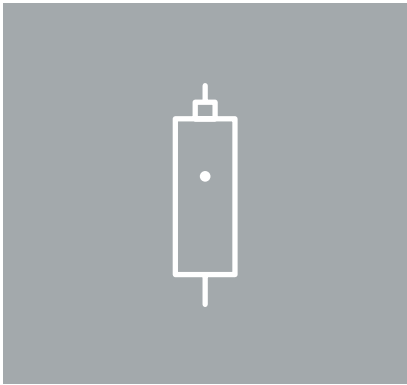
REAL TIME VACUUM CONTROL

The butterfly valve controls precisely the evacuated air flow. The high-speed control is done independently through each vacuum channel.



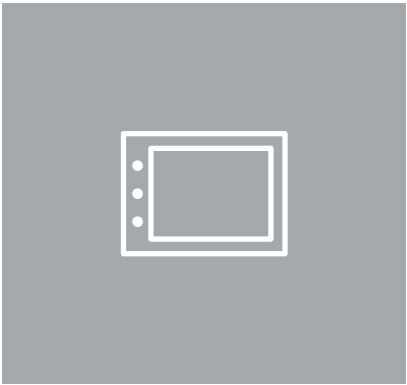
AIR FLOW MEASURE AND AIR QUALITY MONITORING

The module measures the evacuated air flow and air volume per vacuum channel. At the same time, the air quality is controlled by optical measurement.



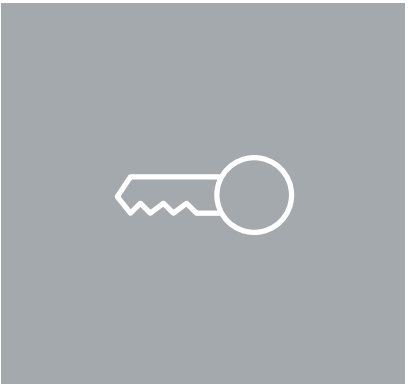
INDIVIDUAL VACUUM CHANNELS
(up to 6)

The individual vacuum channel box can be placed wherever needed around the DCM. It allows to work as close as possible to the mold.



REMOTE CONTROL PANEL

Always keep an eye on the vacuum process data by locating the remote control panel as close as possible to the operator.



ID KEY

The ID key enhances the parameters and data security with up to four different access levels, one dedicated key for each level.

FONDAREX ONE / TWO MOBILE

1 or 2 vacuum channels

The Fondarex One is the best way to start your experience in vacuum die casting

No assistance required for the installation

Compatible with any vents and mechanical valves

Easy to use and maintain

Available also in Central solution



FONDAREX
ONE
MOBILE



FONDAREX
TWO
MOBILE

- VACUUM MEASURE
IN CAVITY
- FILTER
CONTAMINATION
CONTROL
- VENT PROFILE
CONTROL



	FONDAREX ONE / TWO MOBILE	FONDAREX ONE / TWO CENTRAL	FONDAREX MODULAR MOBILE	FONDAREX MODULAR CELL	FONDAREX MODULAR CENTRAL
TANK [l]	300 500	–	500 750 1000	1000 2000 3000 4000	–
PUMP [m³/h]	40	–	40 60 100	160 200 250 300	–
CHANNELS	1 2	1 2	2	Up to 6	Up to 6
VACUUM PROCESS CONTROL	Basic functions	Basic functions	Newly intuitive user interface with advanced vacuum process control	Newly intuitive user interface with advanced vacuum process control	Newly intuitive user interface with advanced vacuum process control
INDUSTRY 4.0 With web dashboard	×	×	Optional	Optional	Optional
VACUUM CONTROL IN CAVITY AND TANK	✓	✓	✓	✓	✓
REAL TIME VACUUM CONTROL	×	×	Optional	Optional	Optional
AIR FLOW / AIR VOLUME MEASURE AND AIR QUALITY CONTROL	×	×	Optional	Optional	Optional
AIR VOLUME CALCULATION	×	×	✓	✓	✓
LEAK TEST	×	×	✓	✓	✓
REMOTE CONTROL PANNEL	Optional	Optional	Optional	✓	✓
READY FOR PROFINET / PROFIBUS / OPC UA	×	×	✓	✓	✓
DATA MANAGEMENT	Internal log data	Internal log data	Data analysis & communication	Data analysis & communication	Data analysis & communication
HARDWARE UPGRADABLE	×	×	At any given time	At any given time	At any given time
FOOTPRINT L x D [m]	0,9 x 1	–	0,9 x 1,3 0,9 x 1,4 0,9 x 1,5	Depends on configuration	–
DCM [t]	Up to 800	Up to 1400	Up to 1400 Up to 2200 Up to 3000	Up to 3000 Up to 4000 Up to 6000	Up to 6000
TYPE OF DIE CAST PROJECTS	Standard parts	Standard parts	Complex parts, security parts and structural parts	Complex parts, security parts and structural parts	Complex parts, security parts and structural parts

FONDAREX KINETIC VALVE

The proper way to reach high vacuum, up to 300 mm²
evacuation performance

Easy maintenance, to reduce your production downtime
and focus on your profitability

Thermo-circuit integrated as standard

Compact design for better mold integration

Less weight for easy handling

Available in 2 sizes, 4 evacuation sections

	FONDAREX KINETIC VALVE 100 / 75		FONDAREX KINETIC VALVE 300 / 200	
DCM TONNAGE [t]	200 – 2000		1500 – 6000	
SHOT WEIGHT Al [kg]	1 – 20		15 – 60	
DIMENSIONS	Valve block	Profile block	Valve block	Profile block
WIDTH [mm]	100	100	125	125
DEPTH [mm]	75	50	95,5	57,5
HEIGHT [mm]	125	125	175	175
WEIGHT [kg]	6,9	4,3	14,4	8,5

THE BEST
SIZE-PERFORMANCE
RATIO



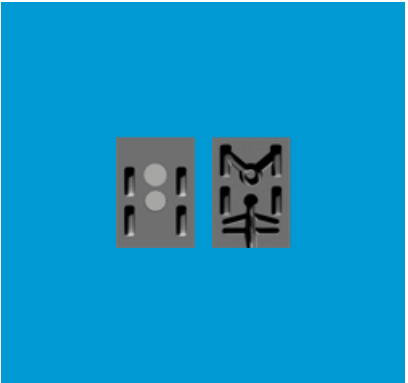
THE BEST
**SIZE-
PERFOR-
MANCE**
RATIO



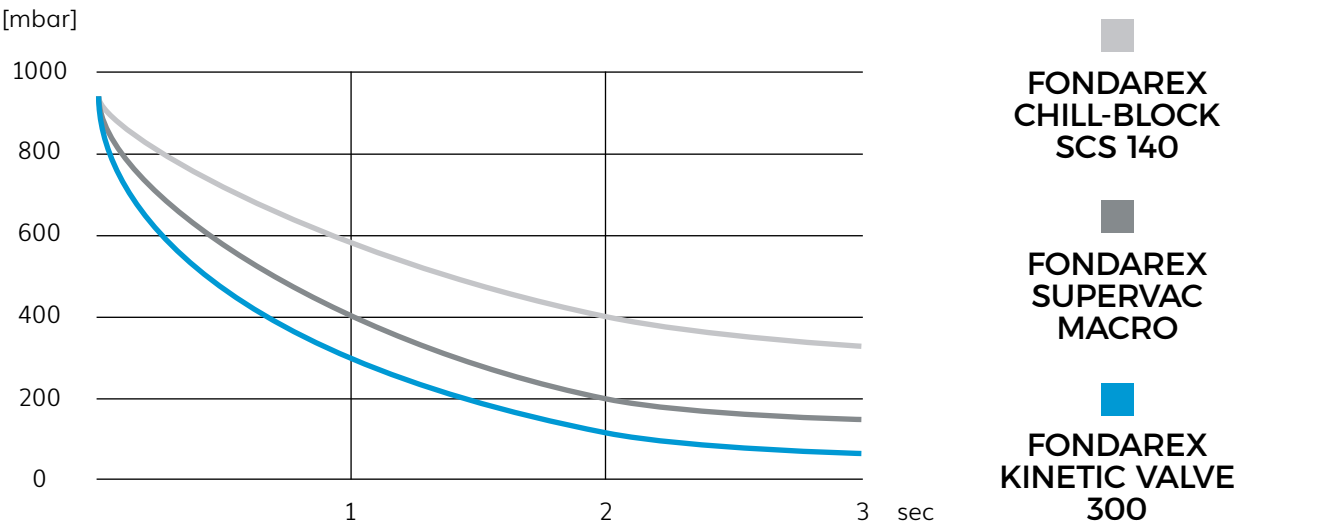
140
mm²
FONDAREX
CHILL-BLOCK
SCS 140



160
mm²
FONDAREX
SUPERVAC
MACRO



300
mm²
FONDAREX
KINETIC VALVE
300



FONDAREX CHILL-BLOCK

The aerodynamic profile of our Chill-Block SCS ensures fast and compact alloy solidification

No cooling system required

Simplicity as ultimate sophistication

	FONDAREX CHILL-BLOCK SCCZ 12		FONDAREX CHILL-BLOCK SCS 30		FONDAREX CHILL-BLOCK SCS 60		FONDAREX CHILL-BLOCK SCS 100		FONDAREX CHILL-BLOCK SCS 140	
DCM TONNAGE [t]	< 200 approx.		< 400 approx.		200 – 1200		800 – 2800		1600 – 4500	
SHOT WEIGHT Al [kg]	×		0,1 – 1,5		0,7 – 10		5 – 22		10 – 40	
SHOT WEIGHT Mg [kg]	0,05 – 0,8		0,07 – 1		0,5 – 6		3 – 12		6 – 26	
SHOT WEIGHT Zn [kg]	0,1 – 3		0,2 – 4		1 – 20		×		×	
DIMENSIONS	Fixed part	Mobile part	Fixed part	Mobile part	Fixed part	Mobile part	Fixed part	Mobile part	Fixed part	Mobile part
WIDTH [mm]	63	63	63	63	100	100	140	140	150	150
DEPTH [mm]	63,4	63,5	50	50	50	50	60	60	80	80
HEIGHT [mm]	100	99	150	149	250	249	300	299	360	359





WORLDWIDE TECHNICAL SUPPORT

Our experienced engineers provide support at
your production sites

We take care of:
the mold conception,
installation,
training on site,
and maintenance

Your continued satisfaction is our main goal

THÉO COUTURIER
Senior Technical Engineer

FONDAREX



FONDAREX WAS INITIALLY
ESTABLISHED AS A
DIE CASTING FOUNDRY
IN MONTREUX IN 1946

SIX YEARS LATER,
WE PRODUCED THE FIRST
VACUUM SYSTEM

OVER THE YEARS, OUR
DEVELOPMENTS HAS PUT
A MARK ON THE VACUUM
DIE CASTING INDUSTRY

