



Integrated solutions and systems for flexographic printing





BFT is born out of the need for innovation on inking systems in the world of flexographic printing. Since most inking systems are manual and free of washing automations, operators must adjust the speed of the pumps and remove the ink bucket manually and insert a bucket of water in the washing phase.

For this, BFT has created the BFT Flexo inking and washing system and the BFT Carbon doctor blade unit. An integrated solution for your flexographic machines.

Two products to use separately, but. when integrated, achieve unparalleled levels of process optimisation. A flexible system. Just like the products you make.



Simone Bonaria - COO

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## The carbon doctor blade unit, easy to wash and install

A BFT complete inking system (inking and washing system + doctor blade unit) solution is also required by the OEMs. Always looking for innovation for its products, BFT Carbon is born, a cutting-edge product made of carbon fibre, with sensors inside that communicate with the BFT Flexo system to optimise the process at best.



It automates the inking and washing processes, recovering ink and halving consumption

Thanks to the excellent results obtained by the printing customers, the BFT Flexo systems are requested as an original equipment even by OEMs, that find technology and reliability in BFT Flexo systems but also a considerable saving compared to the internal management of the washing system.



The only thing you need to do by hand is touching the screen

Most inking systems include manual processes, including the pump adjustment and washing. Operations that require prolonged machine downtime and a continuous assistance by the staff.

The BFT FLEEXO systems are completely automatic: to start any cycle, just press a button on the touch screen.



It remembers everything you do

Process standardisation

The operator can easily set the speed of the pumps from the screen to optimise the inking phase and the washing phase. Setting is saved and linked to the order to be resumed over time.

## Don't waste "liquids"

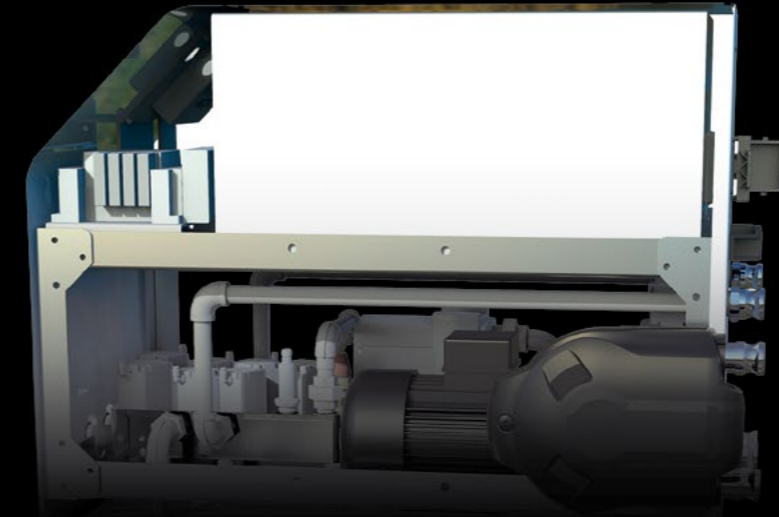
### Ink recovery

Thanks to the possibility of reversing the delivery pump, the system can recover all the residual ink that is washed and is wasted when using other systems.



## Quick and thorough washing

The washing cycles are fast and precise at every colour change and ensure the complete cleaning of the anilox cells.



## For you, the glass will always be half full

### Halved water consumption

The washing algorithm differentiates the water used during the pre-wash, wash and rinse phases, thus halving the volume used for each complete wash.

## The surprise of not having surprises

### An eye on the statistics

All the components of the system carry out a self-diagnosis showing the life of each component to the operator and signalling any necessary maintenance in advance, avoiding any costly downtime.

PUMP PIPE LIFE

RECOVERED INK

WATER USE

ENERGY USE

# Technical Features

## Touch Screen

for easy and immediate settings, it allows standardising the pump settings and many other parameters

## Sensors

air pressure, PH, viscosity, temperature

## BFT FLEXO Manifold

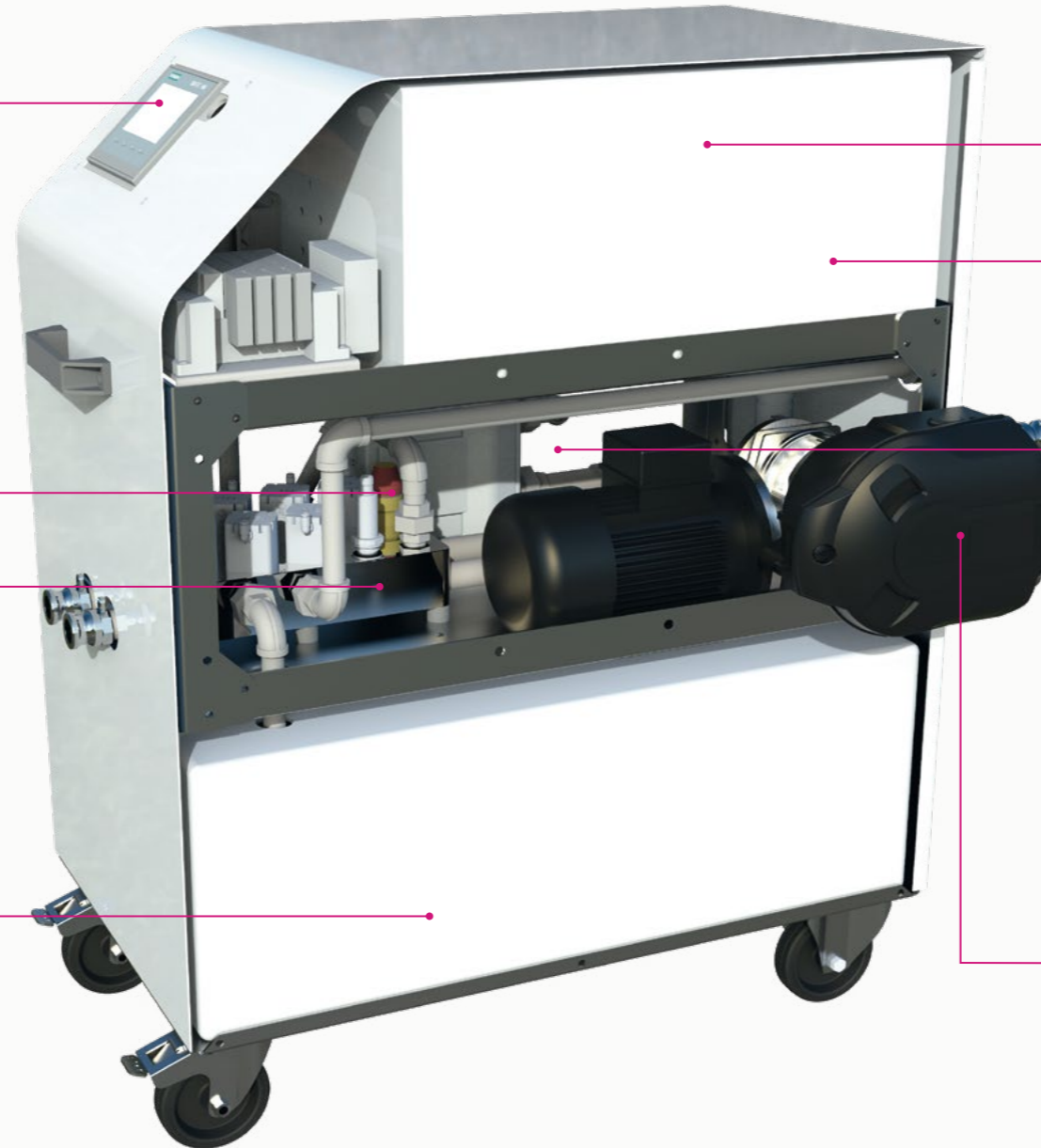
a single stainless-steel component is the heart of the system

## Internal tank to save 50% of water

with the same washing quality without the use of the tank

## Components

all the system components supplied by our partners are available all over the world for immediate assistance



## PLC SIEMENS

arranged to interface the printing machine with an integrated teleservice system

## Algorithm for the internal washing of the system

to clean each component and avoid blocking and malfunctioning

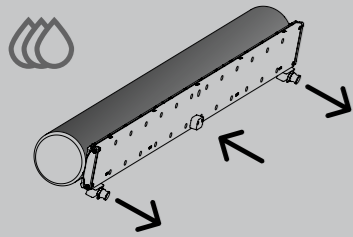
## PP and STAINLESS pipes

polypropylene welded tubes to guarantee the absence of internal leaks and the maximum compatibility with solvents

## Peristaltic pump

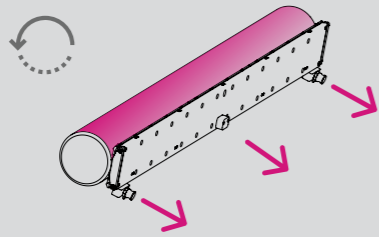
reduces pulse to improve print quality, does not contaminate the product, allows scheduled maintenance and consumption is lower than air pumps

## Description of the system



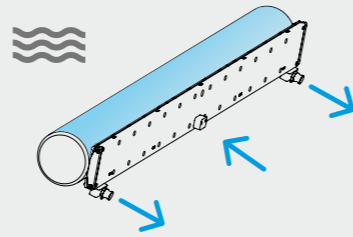
### PULSE-FREE INKING

Inking is managed by a peristaltic pump that reduces the pulsations to a minimum and a return pump to increase the ink circulation speed and avoid gelling in the doctor blade unit



### INK RECOVERY

The system recovers ink from both pipes, allowing the maximum ink saving



### PREWASHING AND WASHING WITH 50% WATER SAVING

Using an internal tank to store the water resulting from the last washing cycle, the system uses the same water twice in order to use half the water volume. The cycle ends with the cleaning of the circuit using clean water or solvent to avoid contamination in the subsequent printing operation

## Other functions

### INTERNAL CLEANING ALGORITHM

At the end of the task, the operator starts a cycle to wash all the system's valves and pumps, and washes the two bucket connection pipes internally, this way the BFT machine is completely clean and ready for the next job by postponing maintenance operations.

### DIAGNOSTICS AND STATISTICS

The sensor implemented systems can self-diagnose problems and create statistics related to the work that is carried out and that can be used when the same order is repeated or to define the process standardisation by fixing all those variables neglected in a printing process until now.

### CHECKING THE INK TEMPERATURE

Temperature is viscosity's most important variable. Keeping the ink temperature constant allows avoiding constant viscosity corrections by the operator and standardise an undervalued parameter at the same time.

## Range

BFT systems can be equipped with pump combinations requested by the customer:

- 1P - Single membrane pump
- 2P - Double peristaltic
- PM - Peristaltic + membrane pump
- 2M - Double Membrane pumps

## Sectors

Flexography  
Rotogravure  
Offset

## Fluids

Water based inks  
Solvent based inks (ATEX)  
Varnishes  
UV ink

## Configurations

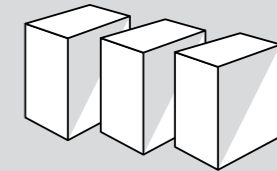
### GT1

Stand-alone system with integrated PLC for single applications, coatings and carts



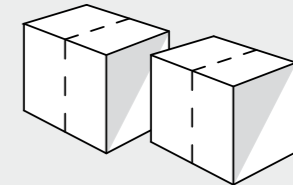
### GTX - L

Master and slave system up to 10 units for in-line printing machines



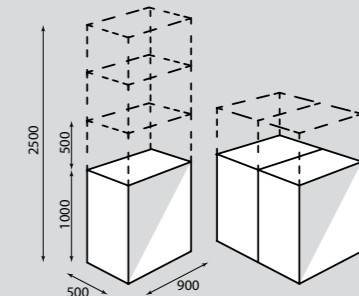
### GTX - 2CI

CI Master and slave System in two-colour groups compactness and ease for the maintenance of machines with a central drum



### GTX - CUSTOM

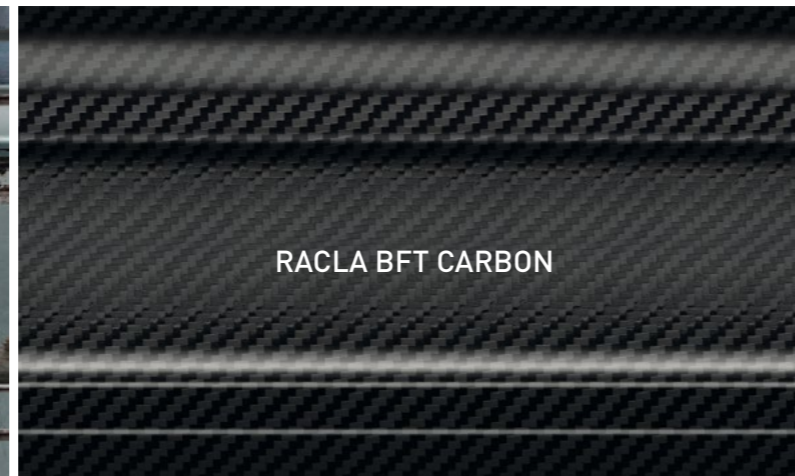
Master and slave system in multiple configurations depending on the client's space for every type of central drum machine





## Increasing efficiency is not a detail, but often a detail makes the difference

Most doctor blade units are made in aluminium. Water-based inks affect the surface, corroding it. BFT Carbon, developed in carbon, guarantees a surface as new even after ten years of use.



State of materials after 10 years of use

## Time is money

Easy to wash

Downtime can have very high costs. Thanks to the high surface tension of the epoxy resin, the ink does not cling to the surface and the water simply removes it during washing, requiring less quantity and time.





## Such an easy task

Easy handling

Carbon is an ultra-light material and facilitates the installation and movement of the doctor blade unit. Unlike aluminium systems that require two people for handling, BFT Carbon just needs one operator.

## “Made to measure” is our standard

The different profiles are specially designed for every type of application, from inking to coating. BFT creates made-to-measure profiles at the customer's request and converts doctor blade units in aluminium with state-of-the-art carbon fibre units.



**BFT CARBON: IS BUILT AND ASSEMBLED INTERNALLY,  
ENSURING SAVINGS UP TO 30%**

## The importance of customisation

Having a customised product means having a dedicated product that allows being applied to replace aluminium doctor blades installed on thousands of machines on the market, without need for any changes.

The replacement takes a few minutes, removing the old aluminium doctor blade body, and replacing it with the new performing carbon fibre body. Using the same piping system, the same brackets and the same spare parts.



## A revolution in 3 phases

### Design

Every single project has a dedicated design part that includes the reverse engineering part to acquire all the measurements of the machine on which it will be installed if the printing machine is already in use; the 3D design part to design the system and integrate it inside the machine, and the phase in which each system component is placed on the counter with a specific coding.

### Construction

Each part of the system is carefully constructed with the best quality standards to guarantee a high-quality system upon completion of the assembly process. Internal quality control ensures that every detail meets the necessary construction requirements. During the assembly, all the details are checked using the KanBan method to optimise the construction process, without any unexpected events.

### Installation

The installation phase, and the one that completes the customisation process, involves the installation on the machine, making it unnecessary to modify the machine, thus allowing an easy and quick installation without any long and costly downtime.

## Technical Features

Asymmetric and symmetrical profiles of different sizes are available depending on the diameter of the anilox.

### Ultra-Smooth surface

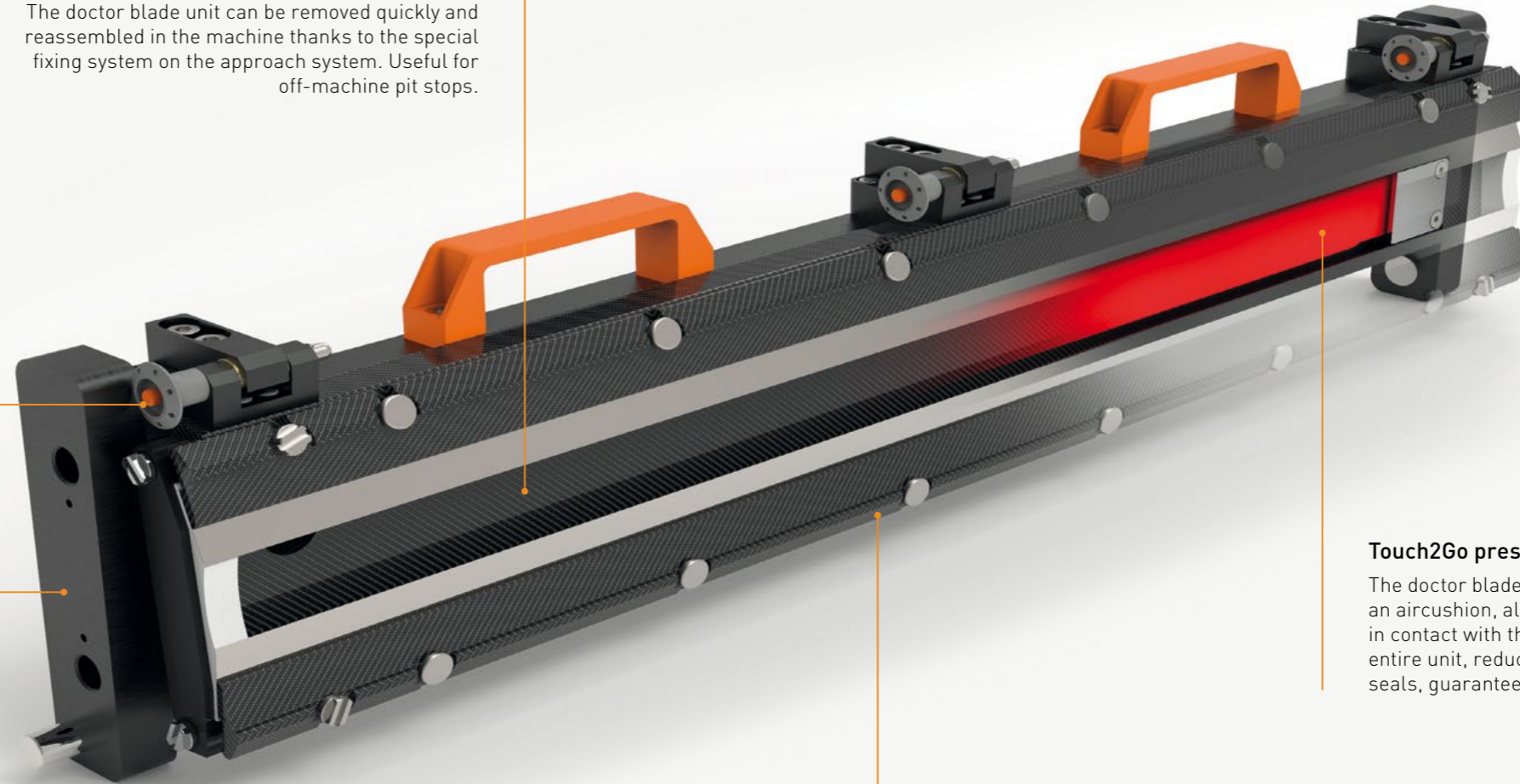
The doctor blade unit can be removed quickly and reassembled in the machine thanks to the special fixing system on the approach system. Useful for off-machine pit stops.

### Easy2Remove connection

The doctor blade unit can be removed quickly and reassembled in the machine thanks to the special fixing system on the approach system. Useful for off-machine pit stops.

### Compact and precise

The BFT Carbon approach systems are the most compact and robust available on the market and that can be lodged on label printing machines.



### Touch2Go pressure

The doctor blade unit approach system, equipped with an aircushion, allows positioning the doctor blade unit in contact with the anilox with a low pressure, along the entire unit, reducing the consumption of blades and lateral seals, guaranteeing an optimal doctoring operation.

### Clamp2Go blade closure

The quick release and spring hooking system of the blade stop slats, allows changing the blades quickly and precisely, avoiding undulations on the blade, thanks to the constant pressure along the entire unit.

## Our partners

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**SIEMENS**



**WATSON  
MARLOW**

Fluid Technology Group



ITALIANA LAME

**elesa**

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