OnyxOMNIA

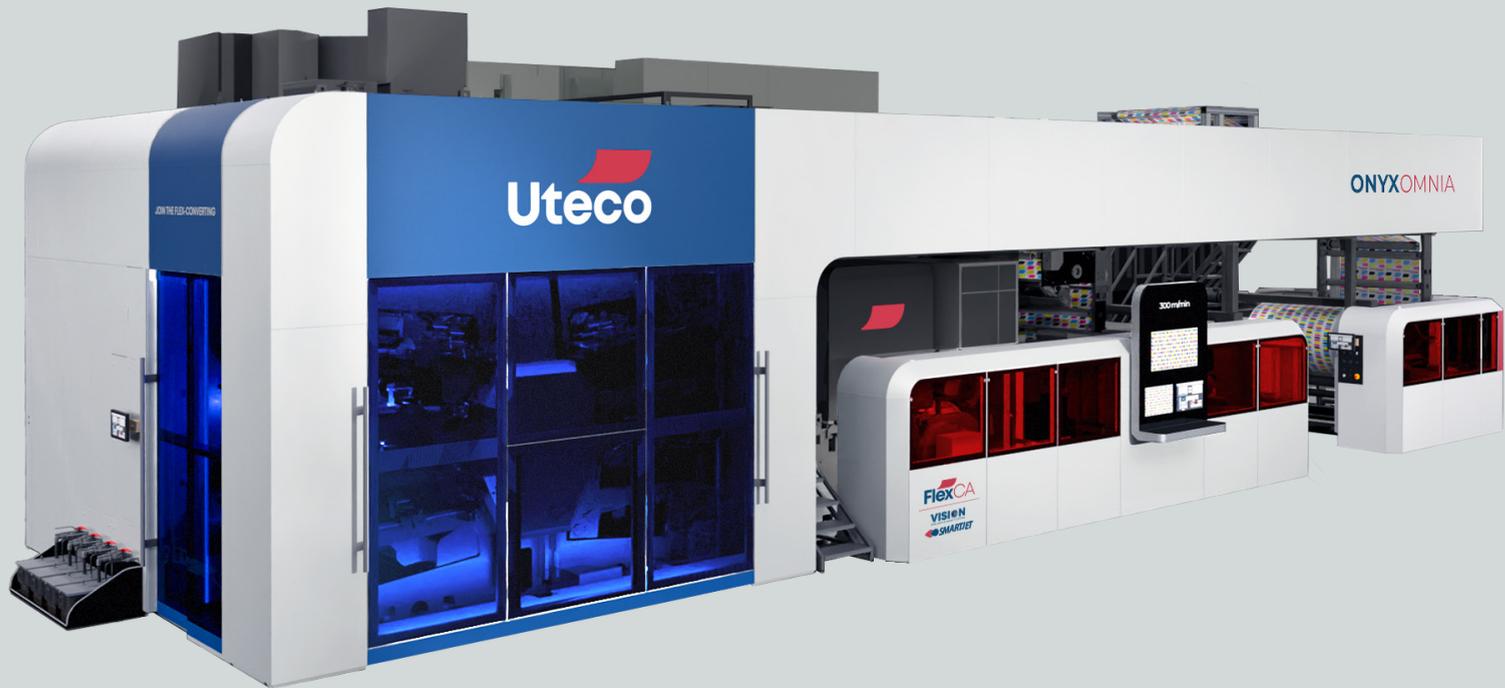## THE UNIQUE FLEXO-DIGITAL PRINTING PRESS

Uteco
JOIN THE FLEX-CONVERTING

OnyxOMNIA - The unique FlexoDigital Printing Press in the market

Best fit for a mix of Short & Medium Runs.

OnyxOMNIA - Key Technical Features

Combine the **best attributes** of **Flexo** and **Digital Printing Technologies**.

Printing Colors
Up to 10 Colors + Finishing

Max. Printing Speed
Up to 400 mpm

Max. Printing Width
Up to 1320 mm

Ink Type
- **Water**
- **Solvent**
- **Water+Solvent**

ONYXOMNIA COMBINES THE BEST ATTRIBUTES OF FLEXO AND DIGITAL TECHNOLOGIES

BEST FIT FOR **MIX OF SHORT & MEDIUM RUNS**

OnyxOMNIA

OnyxOMNIA combines the **best attributes** of **Flexo** and **Digital Techs**.

OnyxOMNIA is the best printing press, ever!

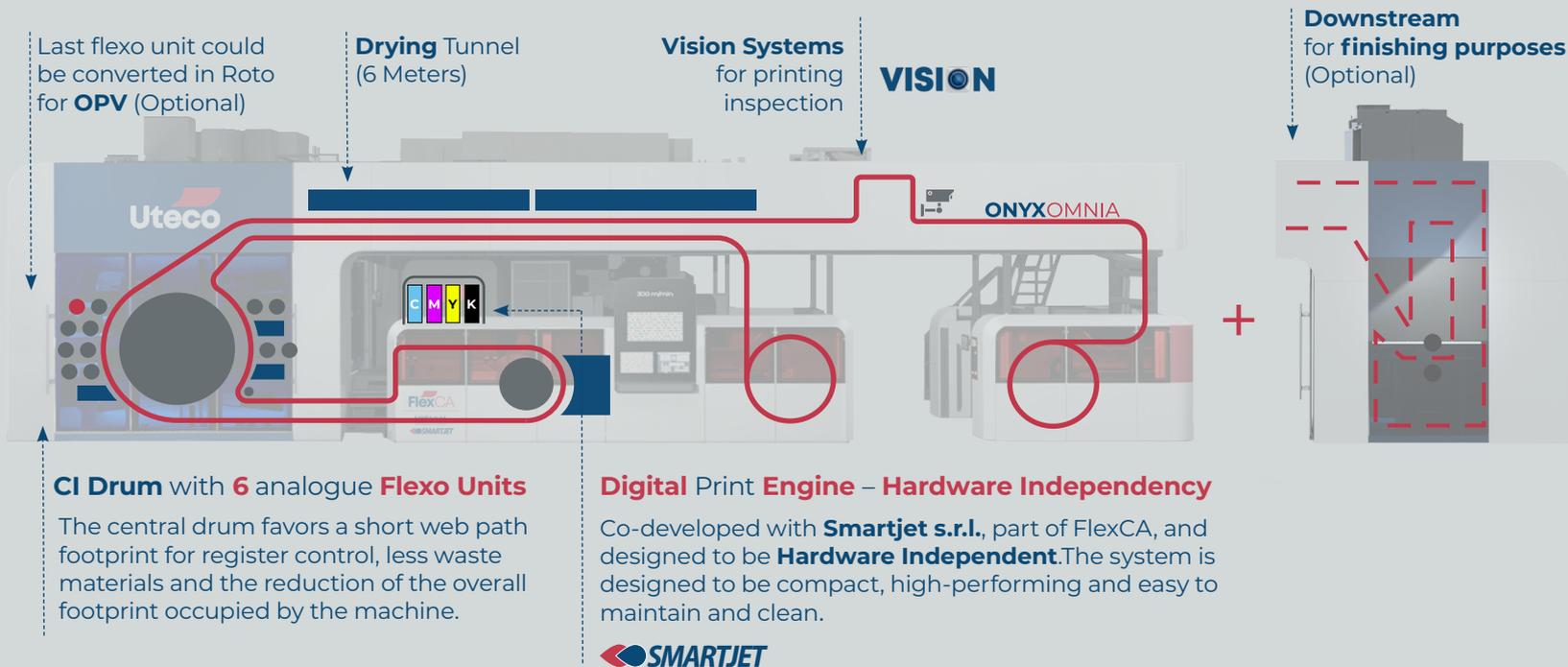| VS FLEXO	VS DIGITAL
• **Faster Changeover** • **Lower Operating Costs** (e.g. printing plates) • **Higher Productivity** due to **Faster Changeover** • **Faster Time** to **Market**	• **Lower Digital Inks** Consumption & Costs • **More Robust** & Reliable Process • **Faster** Printing Speed • **Digital Print-heads** enhanced lifetime • **Extended Color Gamut** • **Possibility to print special inks** (e.g metalized)

OnyxOMNIA - Layout Overview

FlexCA

Machine configuration overview.

Last flexo unit could be converted in Roto for **OPV** (Optional)

Drying Tunnel (6 Meters)

Vision Systems for printing inspection

VISION

Downstream for **finishing purposes** (Optional)

Uteco

ONYXOMNIA

300 m/min

FlexCA

SMARTJET

+

CI Drum with **6** analogue **Flexo Units**

The central drum favors a short web path footprint for register control, less waste materials and the reduction of the overall footprint occupied by the machine.

Digital Print **Engine** – **Hardware Independency**

Co-developed with **Smartjet s.r.l.**, part of FlexCA, and designed to be **Hardware Independent**.The system is designed to be compact, high-performing and easy to maintain and clean.

SMARTJET

OnyxOMNIA - Focus on Digital Print Engine

Our **Digital Engine** has unique characteristics.

**4 modules
CMYK**

Max Resolution
1200x1200 dpi
with **1320 mm**
printing width

Max printing
speed
150 mpm

**Hardware
Independent:**
interchangeable digital
printing engine

FlexCA | **SMARTJET**

The system is designed in collaboration with
SmartJet s.r.l company, part of FlexCA.
The Print Engine prints 4 colors CMYK with a
maximum resolution of **1200x1200 Dpi** and a
maximum printing speed of **150 mpm**.

Our digital printheads can guarantee:
- High resolution
- High fire frequency
- Compatibly with all Ink Types (UV, EB, Water-Based,
  Solvent-Based)
- Digital engine is modular and scalable in width
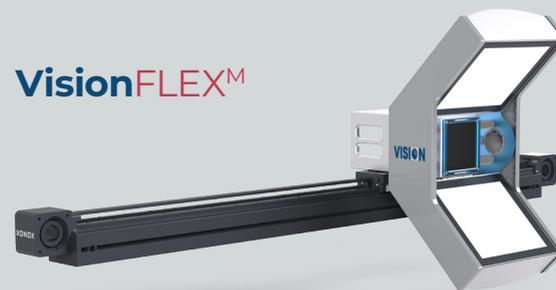- Automatic missing Nozzles Control

OnyxOMNIA - VisionFLEX quality control system

Our **Vision System Solutions equipping Onyx**OMNIA.

FlexCA | **VISION** EXCELLENCE IN QUALITY CONTROL

VisionFLEX

- **Matrix and 100% Linear Vision Systems**
- **Fast Startup** of the Printing Job
- **Higher Sustainability** of the Printing Process due to low energy consumption
- **Ready-2-Report** System
- **Easy Troubleshooting**

VisionFLEX^M

VisionFLEX^L

VisionFLEX^L

OnyxOMNIA - Processes Overview

Everything you ever needed for **Printing**. **All in One**.

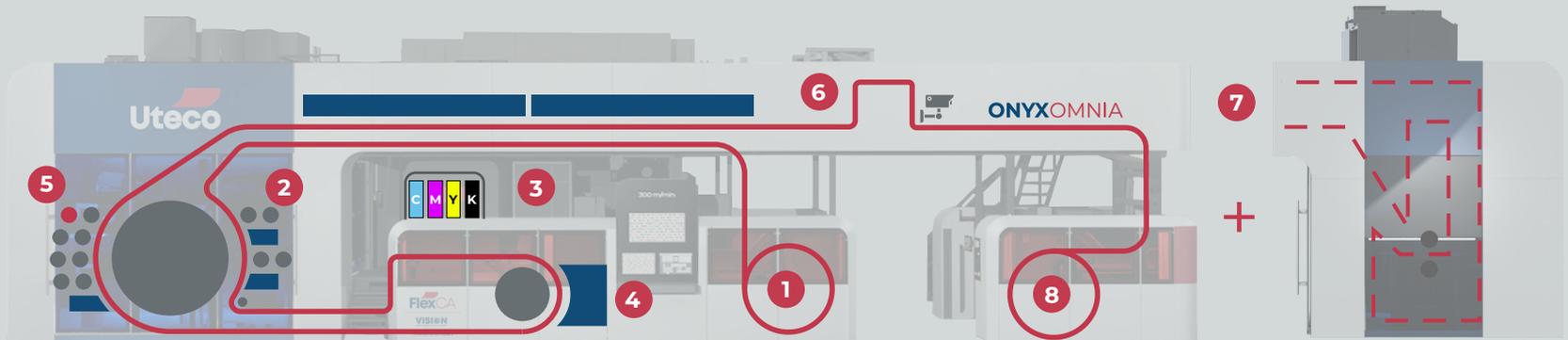**3 Processes in One with the Greatest Robustness & Reliability:**

1. FlexoDigital

2. Flexo

3. Digital Hybrid

OnyxOMNIA - FlexoDigital Printing Process

1. FlexoDigital Printing Process.

Max Process Speed 300 mpm

Configuration: **1 - FlexoDigital**

Unwinder → Flexo CI → Digital Print → Roto/Flexo Stack Unit → Rewinder

1 Substrate Unwinding and Corona treatment

2 **CI drum**: 2 Flexo Units for **Primer/White/Spot Color**

3 **Digital Print Engine**: CMYK colors

4 Digital Colors drying with **NIR Drying Lamps**

5 **4 flexo units** on CI Drum for spot colors **where last unit can be converted to 1 roto unit** for OPV application (Optional)

6 **Vision System** for print **quality inspection**

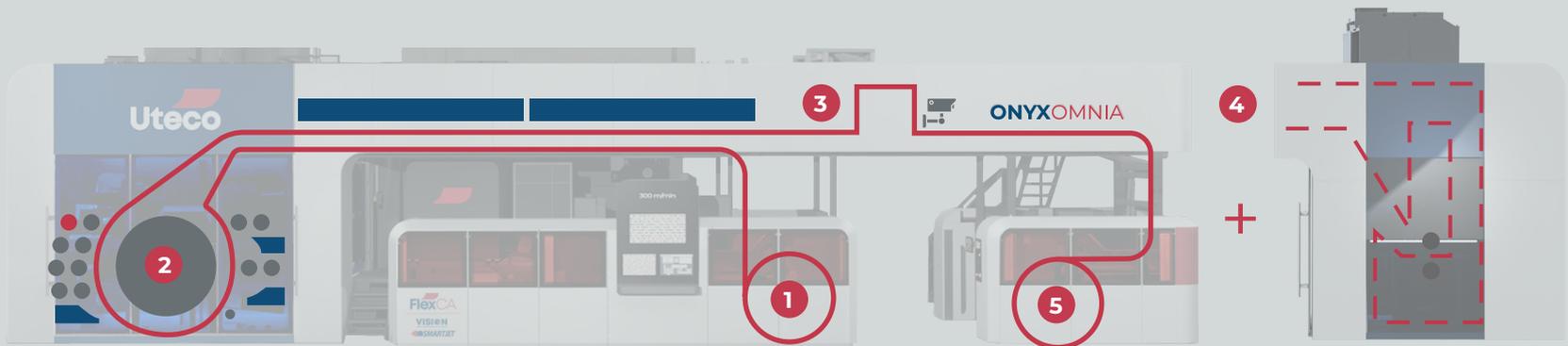**7** **Downstream Unit** (Optional)

8 Substrate rewinding

OnyxOMNIA - Flexo Printing Process

2. Flexo Printing Process.

Configuration: **2 - Flexo**

Unwinder → Flexo CI → Digital Print → Roto/Flexo Stack Unit → Rewinder

1. Substrate Unwinding and Corona treatment

2. **CI drum**: 6 Flexo Units for **White**/**Spot colors** where last Unit can be converted to roto unit for OPV application (Optional)
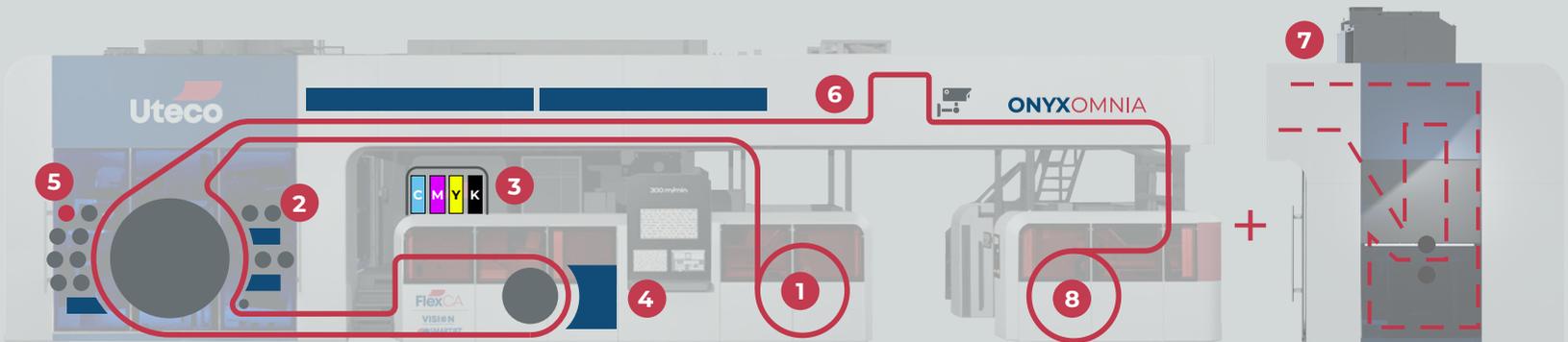
3. **Vision System** for print **quality inspection**

4. **Downstream Unit** (Optional)

5. Substrate rewinding

OnyxOMNIA - Digital Printing Process

3. Digital Printing Process.

**Max Process Speed
150 mpm**

Configuration: **3 - Digital**

| Unwinder | → | Flexo CI | → | Digital Print | → | Roto/Flexo Stack Unit | → | Rewinder |

1	Substrate Unwinding and Corona treatment
2	**CI drum**: 2 Flexo Units for **Primer**/**White**
3	**Digital Print Engine**: CMYK colors
4	Digital Colors drying with **NIR Drying lamps**
5	**1 roto unit** on CI Drum for **OPV or White** application (Optional)
6	**Vision System** for print **quality inspection**
7	**Downstream Unit** (Optional)
8	Substrate rewinding

OnyxOMNIA - Value Proposition

ONYXOMNIA

1. The Most **Versatile**
2. The Lowest **Operating Costs**
3. The Most **Productive**
4. The Best **Printing Quality**
5. The Most **Sustainable** **ESG** UTECO FOR SUSTAINABILITY
6. The Most **Compact**
7. The Most **Ergonomic**

Expand **Printing Finishing possibilities** with our **DSU**.

OnyxOMNIA can be equipped with 1 or more **Down-Stream Units (DSU) for Functional or Embellishment Purposes**

Optional DSU

Expand **Printing Finishing possibilities** with our **DSU**.

Our Down-Stream Units (DSU) for Functional or Embellishment Purposes

ONYXOMNIA

DSU^R

DSU Types

DSU^R
Roto

DSU^F
Flexo

DSU^X
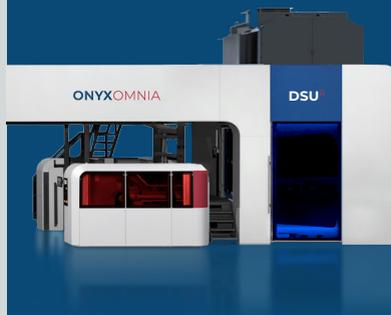*Hybrid Roto-Flexo*

DSU^K
*Stack
(2 Printing Units)*

Expand **Printing Finishing possibilities** with our **DSU**.

Our **Down Stream Unit** (DSU) is a fundamental part of the printing process to handle finishing applications after printing.

We offer a complete range of Solutions in line with Market demand for a **wide range of finishing applications** such as Varnish, coating and printing (es. Cold Seal, heat seal, functional coating, matte varnish, soft touch, lamination, Solvent or WB).

DSU Technology

- **Flexo**
- **Roto**
- **Hybrid/Flexo/Roto**
- **Stack**

ONYXOMNIA   DSU

Applications

- **Functional**
- **Embellishment** (es. Soft Touch, Matt, Varnish)
- **Adhesive**
- **Printing**
- **Cold-Seal/Heat Seal**

1. The Most Versatile – Inks

OnyxOMNIA widens the **types of printing Inks** that can be used.

The Flexo CI Drum can print with:
- **Water-based** Ink/Primer
- **Solvent-based** Ink/Primer
- **Water + Solvent-based** combined
- **UV** (only)
- **EB** (only)

Uteco Digital Inks are fully compliant for indirect food contact

2. The Lowest Operating Costs

OnyxOMNIA optimizes the **printing running costs**.

1	**Lower Printing Plates Costs**	Less usage of Flexo CI colors since process colors (CMYK) are printed on the Digital Unit
2	**Shorter Downtime / Higher OEE**	Faster Changeover since Digital changeover is instantaneous and less Flexo Colors to change / Job
3	**Lower Digital Inks Costs**	
4	**Lower Digital Printheads Maintenance/Cleaning Costs**	Lower stress and usage of digital printheads (and inks) since solid colors are print on the CI Flexo while digital is mainly used for variable data
5	**Longer Digital Printheads lifetime**	

3. The Most Productive - Our Printing Technology

Boost your productivity thanks to **the gratest Printing Technology**.

1 **Fastest Printing Speed in the Market**

for a FlexoDigital Press up to 300 mpm

2 **Up to 33% Faster Complete Changeover Vs Flexo**
(including color matching)

Thanks to combination of Digital and Flexo Technology

<3 minutes for Job Changeover
<20m material waste at each Job Changeover

4. The Best Printing Quality - The most reliable Printing Process

The **Quality of Flexo Tech** combined with the **Flexibility of Digital**.

The quality of Flexo Tech for Spot Colors

To print **solid** or **special colors** (like **Metalized** ones) with the **Best Flexo Quality**
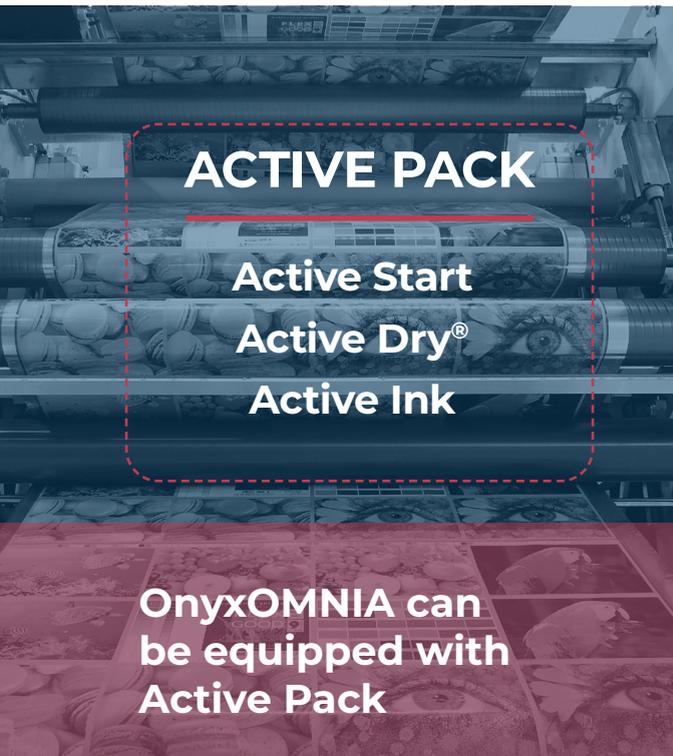
The Flexibility of Digital Tech for Variable Data

To print details and variable data/graphics

5. The Most Sustainable - ACTIVE PACK

Active Pack allows to equip our new **FlexoDigital Onyx**OMNIA with top-notch technologies for **Sustainability**.

ACTIVE PACK

Active Start

Active Dry®

Active Ink

OnyxOMNIA can be equipped with Active Pack

Active Pack allows to equip our **New Flexo CI Machines** with **top-notch technologies**.

Our **Active Pack techs** are unique in the flexographic industry, enabling the lowest **consumption of energy and consumable material**.

ACTIVE PACK

enables saving up to 300 k€ each year on energy and material consumption!

ESG
UTECO FOR SUSTAINABILITY

5. The Most Sustainable – ACTIVE START for CI FLEXO

The **Lowest Material Waste at each Startup**.

Active Start – CI Flexo
- **Automatic Adjustment** of **Printing Pressure** among the cylinder, cliché and substrate thanks to Recognition of the 3D Cliché's Characteristics (e.g. ink coverage)
- **Material Waste is Minimum**, thanks to very **Fast Setup**

< 20 METERS
of material waste at each startup in perfect register!

ESG
UTECO FOR SUSTAINABILITY

ACTIVE PACK

Active Start
Active Dry®
Active Ink

UP TO 80% LOWER MATERIAL WASTE (*)

(*) Vs comparable press on the market without Active Pack

5. The Most Sustainable – ACTIVE DRY® for CI FLEXO

The **Most Sustainable** Drying System.

ACTIVE PACK

Active Start

Active Dry®

Active Ink

SAVE UP TO 50%/ YEAR OF ENERGY CONSUMPTION (*)

Active Dry® - CI FLEXO

New **Patented Smart & Intelligence System** to optimize Energy Consumption on Drying.

Drying Power is **optimized** according to the printing characteristics and Ink coverage detected by Active Start System.

PATENT BY UTECO

ESG
UTECO FOR SUSTAINABILITY

(*) Vs comparable press on the market without Active Dry®

5. The Most Sustainable – ACTIVE INK

The **Most Sustainable** Inking System.

Smart Ink Pumping according to Printing Characteristics detected by Active Start System.

CI Flexo Inks' Pumps cycles are optimized, as well as the use of compressed air.

ESG
UTECO FOR SUSTAINABILITY

ACTIVE PACK

Active Start

Active Dry®

Active Ink

SAVE UP TO 60% / YEAR OF ENERGY CONSUMPTION (*)

(*) Vs comparable press on the market without Active Ink

5. The Most Sustainable – Active Pack Benefits

Valuable ESG Technology.

ESG
UTECO FOR SUSTAINABILITY

Valuable ESG Technology

Saving enabled by Active Pack

Avg. No. of Jobs Changeover/Day	10
Avg. Production Hours per Day (h)	24
Avg. Production Days/Year	240
Natural Gas Utility Cost (€/KwH)	0,09
Electricity Utility Cost (€/KwH)	0,2
Ink Type	Water based
Solvents Recovery (%)	-
Solvents Price (€/L)	-
Main Material Printed	Plastic Film
Avg. Profit Margin on Printed Reels (%)	20 %

YEARLY SAVING:

≈ € 210K
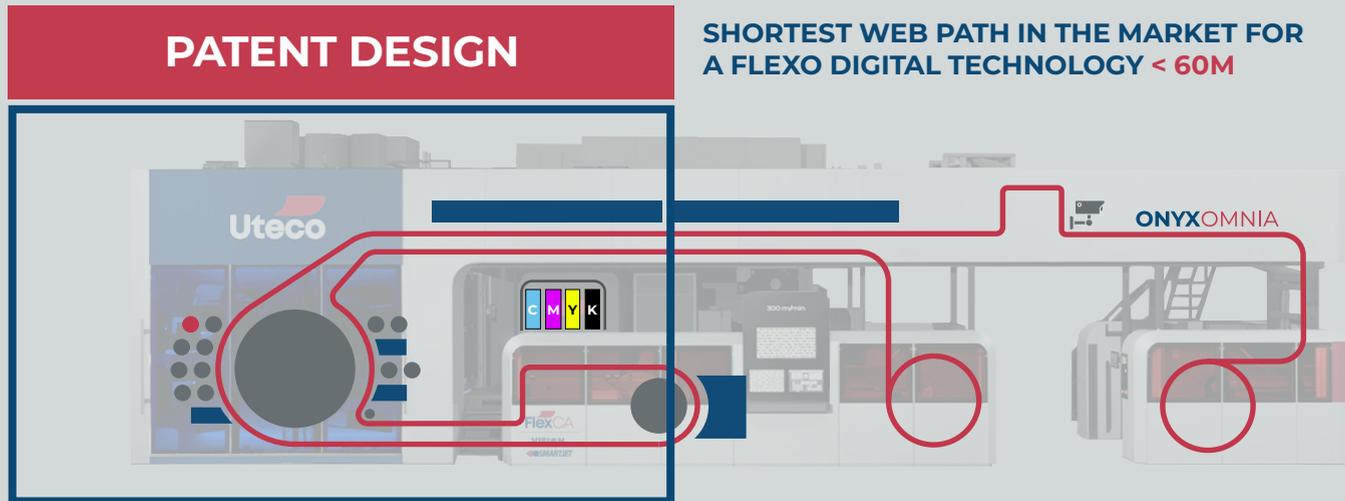
MACHINE LIFETIME SAVING (*):

≈ € 3.1M

Illustrative Simulation

(*) Considering 15 years avg machine lifetime

6. The Most Compact - Our Patent Design

Our Design of **Flexo CI** and **Digital Technologies** is **Patent** and **Unique in the market**.

PATENT DESIGN

SHORTEST WEB PATH IN THE MARKET FOR A FLEXO DIGITAL TECHNOLOGY < 60M

Uteco

CMYK

FlexCA

ONYX OMNIA

Our New Configuration of **CI Drum** + **Digital Printing Engine** is Patented
allowing the **Shortest Web Path** and the **Easiest Maintenance & Cleaning Operations**.

6. The Most Compact - The Shortest Web Path

2.5x Shorter than Comparable In-line Printing Solutions on the Market.

6 Flexo Units   **Digital CMYK**

Lenght

- 30 m ⟶ Minimized floor plant utilization

vs **existing comparable In-line** printing press solution

Web Path

- 75 m ⟶ **Lower** waste during startup

vs **existing comparable In-line** printing press solution

7. The Most Ergonomic – Easiest Access to Digital Engine Unit

The **Most Ergonomic Flexo and Digital Solution** in the market.

Digital Print Engine
- **Easy to access**, just **1,5 meter above the ground**
- **Easy to maintain** and clean

Dynamic Cockpit
- **The Most Ergonomic Cockpit** in the market thanks to the floating HMI, adapting to operators' height
- **Single Integrated Control Panel**, controlling both **Flexo** and **Digital Printing Techs** from a single spot

Technical Specifications

Parameter	Unit of Measurement	Value
Max Printing Width	[mm]	1320
Print Repeat Range	[mm]	350 ÷ 720
Max Printing speed (Flexo/FlexoDigital/Digital)	[mpm]	400/300/150
Color Units (Flexo + Digital)	-	10
Film Tension	[daN]	2 ÷ 40
Max Reel Diameter	[Kg]	1000

OnyxOMNIA

Digital CMYK & White

Best fit for mix of Short & Medium Runs

Equippable with Optional Down-Stream Units (DSU)

DSU^R   **DSU^X**

DSU^F   **DSU^K**

Max. Digital Resolution

1200 x 1200 dpi

ONYXOMNIA COMBINES THE **BEST** ATTRIBUTES OF **FLEXO** AND **DIGITAL** TECHNOLOGIES

Printing Colors

Up to 10 Colors + Finishing

Max. Printing Width

1320 mm

Max. Printing Speed

400 mpm

Digital Technology Hardware Independent: interchangeable digital printing engine

Solvent based Inks

Water based Inks

Our Company

Printing and Converting: All Round **High Tech Innovation**.

We provide innovative and flexible solutions from a wide range of **flexographic**, **rotogravure**, **digital printing**, **laminating and coating machines** and a corollary of comprehensive training and support services.

We develop **special and customized configurations** of high technological value, with an ongoing commitment to research and **innovation**, **organizational flexibility**, **engineering capabilities for final solutions**, optimization of production processes, and a fast and efficient worldwide service network.

Our Customer Service

Our Customer Service has **Everything You Need**.

Our expert **Customer Service teams** are **available 24/7** to respond quickly and effectively to requests for maintenance, repairs and operational renovations to machinery and systems, **both on-site and remotely (My Portal).**

Ready for your new machine? Don't forget about our customer service

Find out more!

On Field Assistance
We provide complete **life-cycle support services and printing processes** to ensure maximum performance throughout the entire lifespan of the machine.

Remote Assistance
Thanks to the newest technologies available on the market we guarantee **the best real-time support**.

Upgrades Service
We provide improvements of the efficiency and performances of your machine's processes, aligning them to the **latest technological market trends**.

Spare Parts
We have a series of spare parts checked and guaranteed by us.

Equipment
We offer equipment solutions to be added to your specific machine to **boost its performance and efficiency**.

JOIN THE FLEX-CONVERTING

Uteco