

## Low chemistry thermal plate production

### PRODUCT BROCHURE

Low chemistry thermal plate production -  
setting new standards in commercial printing

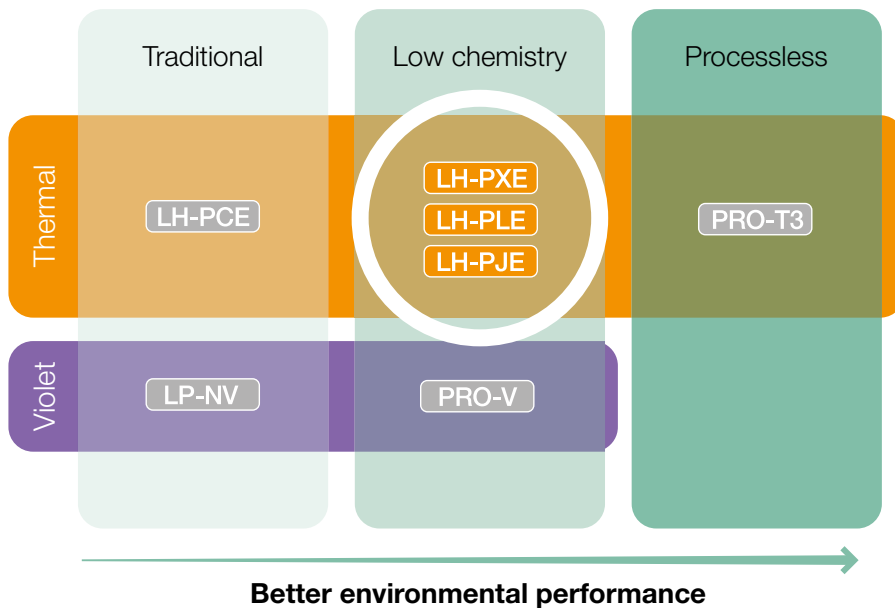


# Market leading low chemistry plate production for thermal applications

**The combination of the very latest plate and chemistry technologies, together with Fujifilm designed 'ZAC' software embedded within the company's leading processors, results in market-leading performance. With benefits including lower chemistry consumption, lower processor maintenance, lower waste production, a cleaner working environment and better stability, our low chemistry systems provide benchmark solutions for improving environmental and business performance.**

Low chemistry thermal			
Plates	Chemistry	Processors	Waste Reduction Unit
Superia LH-PXE	DT-XWE/DT-XRE	FLH-Z Range FLC-TZ Range	XR-1200F
Superia LH-PLE	DT-2WE / DT-2RE		
Superia LH-PJE	(FCT-E12 / FCT-E13)		

Fujifilm's low chemistry plate production solutions for thermal CTP applications comprise a range of four high definition thermal plates, each tailored to specific commercial printing application, two processor ranges incorporating Fujifilm's unique award-winning 'ZAC' technology, and a waste reduction unit.



*The Fujifilm plate range for commercial print applications. The three Superia low chemistry thermal plates featured in this brochure are circled.*

## Lower chemistry consumption

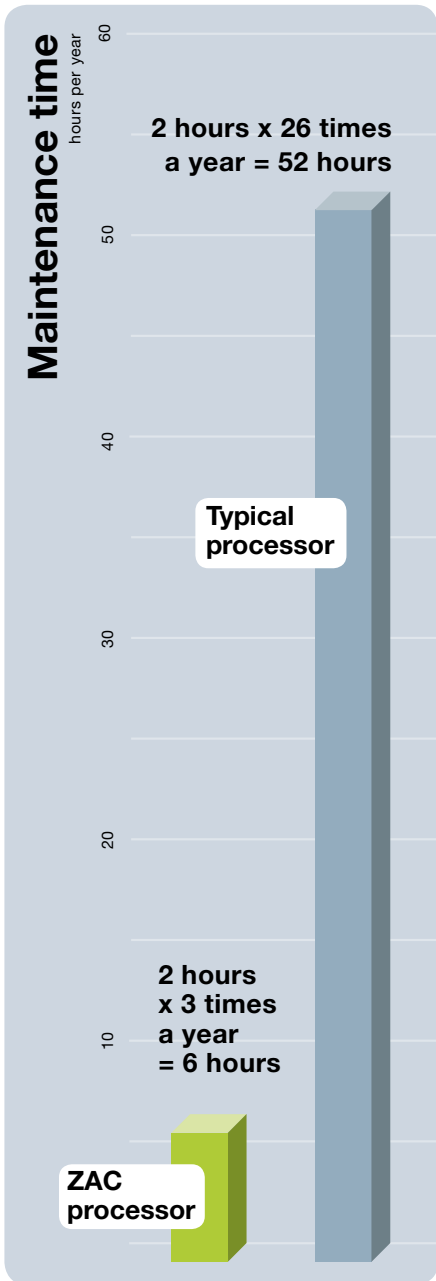
The FLH-Z and FLC-TZ 'ZAC' processors incorporate unique Fujifilm developed software to intelligently control the amount of replenisher used in the plate development process. This improvement means that a full bath of developer can now develop up to 15,000m<sup>2</sup> of plates resulting in substantial savings in developer consumption. For a printer using around 10,000 B1 plates over a 1-3 month period, chemistry consumption can be reduced to around 294 litres - a reduction of over 80% (depending on existing system used).

## Lower maintenance

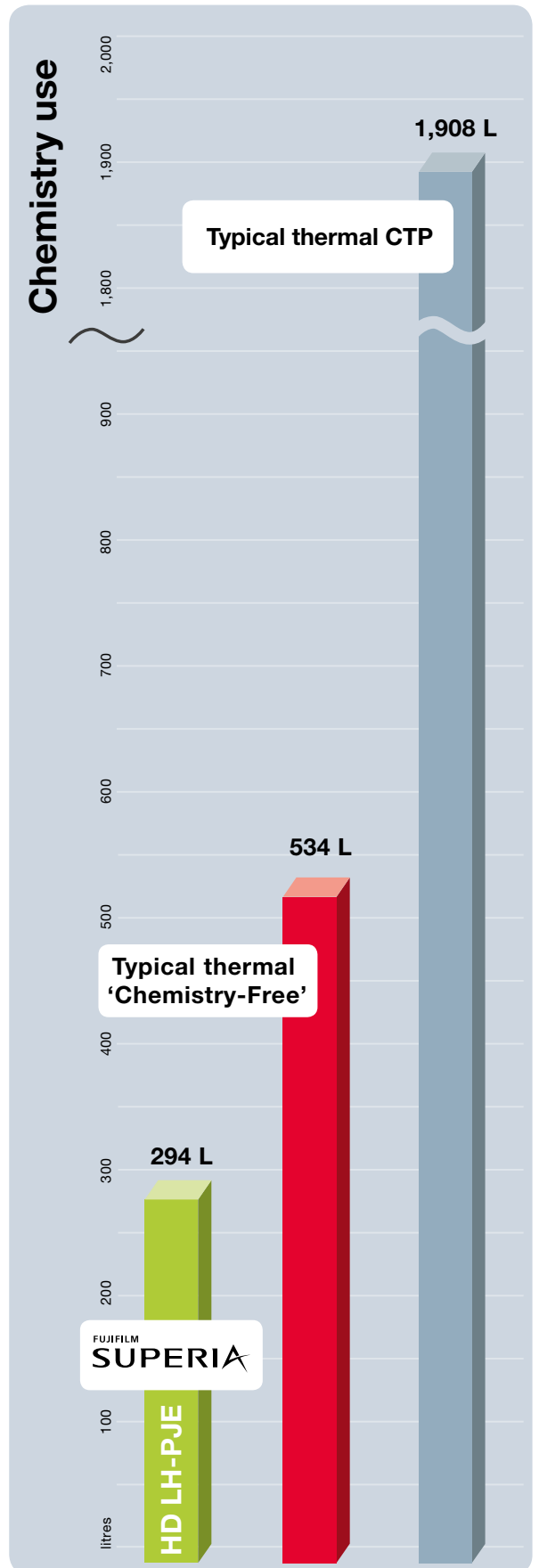
Maintaining perfect developer activity allows the developer bath life to be greatly extended beyond the norm for developing systems. It is typical to achieve bath life figures that are four or more times greater than normal plate processing systems. These improvements mean that a full bath of developer will now develop up to 15,000m<sup>2</sup> of plates resulting in substantial reductions in cleaning down time. It is not uncommon to save over 40 hours of cleaning time for a large 32,000m<sup>2</sup> consumer of plates over a year's plate production.

## Cleaner working environment

The chemistry used for processing plates in a 'ZAC' system is a non-silicate based recipe. This makes a much longer bath life possible without the increase in developer sludge and filter blockages. In addition, both



*This graphic highlights the amount of chemistry used by different plate solutions. The calculations assume 10,000 B1 plates are produced over a 1-3 month period.*



*This graphic highlights the amount of time spent cleaning a processor over the course of a year, assuming 32,000 B1 plates are produced in this period, and a typical 2 hour cleaning regime.*

Superia LH-PJE and LH-PLP plates incorporate an Enhanced Development Layer (EDL) enhancing the solubility of the non-image areas during development, further aiding bath life, giving wider developing latitude and resulting in much cleaner working. Finally, as the chemistry contains no alcohol or solvents, this further enhances the working environment.

**More stable system**

Because of the way 'ZAC' processors intelligently control replenisher delivery, they are more stable making it much easier to achieve high quality, irrespective of changes to environmental conditions. This is particularly important for demanding FM screening applications.



HD LH-PJE

## An extended range of low chemistry plates for every application

**There are three plates in the Superia low chemistry thermal plate range, all bringing the quality and consistency of Fujifilm High Definition, low chemistry CTP to users of thermal platesetters. They allow higher quality print to be achieved more easily, particularly when printing demanding FM, hybrid or fine-line conventional screens, and all exhibit Fujifilm's renowned low chemistry benefits.**



### Superia LH-PXE

Superia LH-PXE is a positive-working, thermal CTP plate for long-run commercial sheet-fed and web applications. The latest addition to Fujifilm's 'low-chemistry' range, Superia LH-PXE offers an extra long run length of up to 500,000 impressions unbaked, and an extended run length of up to 1,000,000 when baked. The enhanced plate handling properties of Superia LH-PXE have been achieved by using a new double layer emulsion, resulting in much better durability and reducing the need for plate remakes. This highly sensitive emulsion requires minimal laser power and results in faster plate production (platesetter dependent).

### Superia LH-PJE/PLE

Both Superia LH-PJE and LH-PLE are high definition, positive-working thermal CTP plates for medium-run commercial print applications. They both incorporate an Enhanced Development Layer (EDL) which enhances the solubility of the non-image areas during development, further aiding bath life, giving wider developing latitude and resulting in much cleaner working. Both plates can also be used with UV inks, either unbaked or baked, and Superia LH-PJE in particular can be used for ultra high quality 10µm FM screening applications.

Specification	Superia LH-PXE	Superia LH-PLE	Superia LH-PJE
<b>Print application</b>	Ultra long-run commercial sheet-fed and web applications	Long-run commercial, sheet-fed and web offset	Medium-run commercial, sheet-fed and web offset
<b>Laser type</b>	Thermal LD 830 nm (800-850 nm)	Thermal LD 830 nm (800 – 850 nm)	Thermal LD 830 nm (800 – 850 nm)
<b>Sensitivity</b>	100-120 mJ/cm <sup>2</sup>	100-120 mJ/cm <sup>2</sup>	100-120 mJ/cm <sup>2</sup>
<b>Resolution</b>	200 lpi (1 – 99%)	200 lpi (1 – 99%)	300 lpi (1 – 99%)
<b>FM screen capability</b>	20µm FM **	20µm FM	10µm FM
<b>Plate gauges</b>	0.15, 0.2, 0.3, 0.4 mm	0.3 and 0.4 mm	0.15, 0.2, 0.3, 0.4 mm
<b>Safe light</b>	White: 1 hour; UV-cut: 2 hours; yellow: 12 hrs	White: 1 hour; UV-cut: 2 hours; yellow: 12 hrs	White: 1 hour; UV-cut: 2 hours; yellow: 12 hrs
<b>Shelf life</b>	2 years	2 years	2 years
<b>Contrast</b>	Excellent	Excellent	Excellent
<b>Developer/replenisher</b>	DT-XWE / DT-XRE	DT-2WE / DT-2RE (FCT-E12 / FCT-E13)	DT-2WE / DT-2RE (FCT-E12 / FCT-E13)
<b>Bath life ('ZAC' processors)</b>	Up to 3 months or 8,000 m <sup>2</sup>	Up to 4 months or 15,000 m <sup>2</sup>	Up to 4 months or 15,000 m <sup>2</sup>
<b>Gum</b>	FN-6CWE	FN-6CWE	FN-6CWE
<b>Run length (unbaked)*</b>	Up to 500,000	Up to 300,000	Up to 200,000
<b>Run length (baked)*</b>	Up to 1,000,000	Up to 400,000	Up to 300,000
<b>Run length (UV ink, unbaked)*</b>	Up to 100,000	Up to 150,000	Up to 100,000
<b>Run length (UV ink, baked)*</b>	Up to 400,000	Up to 200,000	Up to 150,000

\* Run lengths are always dependent on laser power and press conditions

\*\* Contact Fujifilm for required processor specification

## World-class, sustainable plate production

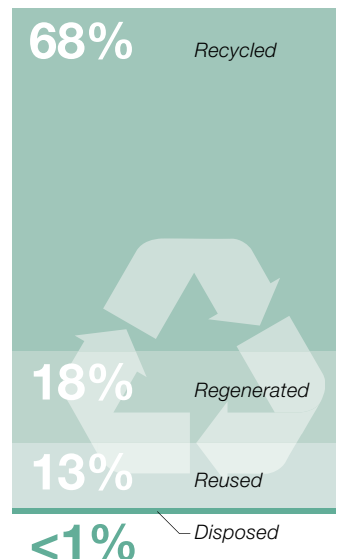


Fujifilm prides itself on its investment in sustainability, and the Tilburg manufacturing site is a prime example. The site itself achieved ISO 14001 certification in 1997, and has been implementing sustainability improvements every year. The ultimate aim of the site is to be 100% CO<sub>2</sub> neutral in everything it does.

In October 2011, the installation of five wind turbines was completed. The five turbines, developed in partnership with ENECO and having a combined capacity of 10MW, are set to supply approximately 20% of the total energy used by the 63 hectare Tilburg site as a whole. This represents a 12,000 tonne reduction in CO<sub>2</sub> emissions per year. Recently the

site has converted to 100% wind power for its entire production energy requirements further reducing its environmental impact.

Other investments include a co-generative thermal oxidiser which uses gases and waste solvents produced as a by-product of the plate manufacturing process for fuel and will help to reduce CO<sub>2</sub> emissions by a further 5,500 tonnes per year. With these and other sustainability measures in place, Fujifilm Tilburg estimates that it currently reuses 13% of the waste it produces, recycles 68%, regenerates 18% and so is left with less than 1% of the total site waste to dispose of.

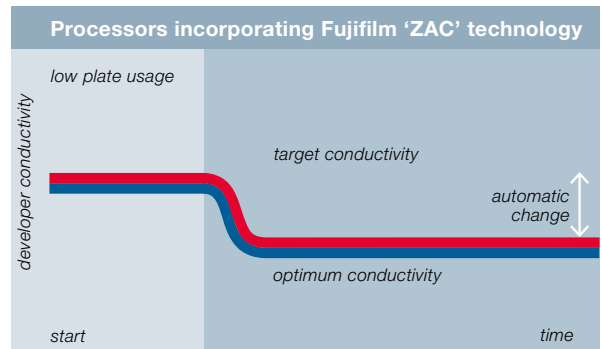
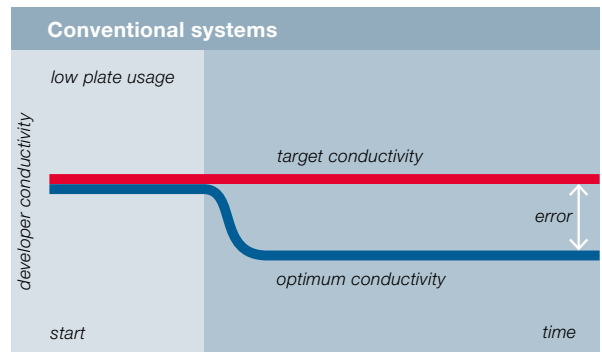


Over 99% of waste produced at Tilburg is recycled, regenerated or reused.

# Fujifilm processors incorporating 'ZAC' technology

Fujifilm is able to offer two processor ranges incorporating the company's unique 'ZAC' software, the award-winning FLH-Z range and the FLC-TZ range. Both ranges of processors offer significantly reduced chemistry consumption through intelligent monitoring and replenishment. Unlike conventional plate processors, which just attempt to keep developer solution conductivity at a constant level, Fujifilm 'ZAC' processors incorporate unique technology that precisely controls the replenishment rate according to usage and oxidation levels, drawing upon software algorithms compiled from exhaustive Fujifilm lab testing. This avoids wasteful over replenishment while providing consistent processing of each plate for optimum quality and on-press performance.

*Fujifilm 'ZAC' processors incorporate an intelligent replenishment system that tracks the optimum bath conductivity as usage varies, delivering the correct amount of replenisher for extended, consistent and repeatable processing.*



## Benefits of Fujifilm 'ZAC' processors

- ▶ Deliver major reductions in chemistry usage
- ▶ Maintain optimal processing conditions
- ▶ Robust chain-drive mechanism for long-term reliability
- ▶ Easy to use, service and maintain
- ▶ Support online or offline use
- ▶ Support all commercial plate sizes

## FLH-Z Processor Series

The FLH-Z processor range significantly reduces chemistry consumption through intelligent monitoring and replenishment. In the InterTech™ Technology Awards (organised by the Printing Industries of America) Fujifilm's 'ZAC' technology won an award for its control over plate processing resulting in more consistent plates, less money spent on chemicals, and reduced chemical waste.



Key specifications	FLH-Z 85	FLH-Z 125	FLH-Z 150	FLH-Z 165
<b>Plate types</b>	Superia LH-PJE, LH-PLE & LH-PXE thermal plates, and LH-PCE (without 'ZAC' benefits)			
<b>Maximum plate width</b>	850 mm	1250 mm	1500 mm	1650 mm
<b>Minimum plate length</b>	240 mm	310 mm	310 mm	310 mm
<b>Plate gauge</b>	0.15 – 0.4 mm			
<b>Processing time</b>	LH-PJE and LH-PLE: 16 seconds, LH-PXE: 14 seconds			
<b>Develop tank capacity</b>	27 litres	76.5 litres	92.5 litres	100 litres
<b>Dimensions (W x D x H)*</b>	1525 x 1070 x 1085 mm	1950 x 1410 x 1148 mm	2250 x 1410 x 1148 mm	2400 x 1410 x 1148 mm

\*Not including delivery/input table



## FLC-TZ Processor Series

The FLC-TZ Series is an alternative range of heavy duty plate processors that incorporate Fujifilm's unique 'ZAC' technology. Comprising four models, the range features a robust design with excellent maintenance access and usability. Each model is equipped with a heavy duty chain drive mechanism for trouble free processing.



### Benefits of Fujifilm's FLC-TZ processors

- ▶ Deliver major reductions in chemistry usage
- ▶ Maintain optimal processing conditions
- ▶ Robust chain-drive mechanism for long-term reliability
- ▶ Easy to use, service and maintain

Key specifications	FLC-T85Z	FLC-T125Z	FLC-T165Z
<b>Plate types</b>	Superia LH-PJE, LH-PLE & LH-PXE thermal plates, and LH-PCE (without 'ZAC' benefits)		
<b>Maximum plate width</b>	850 mm	1260 mm	1650 mm
<b>Minimum plate length</b>	300 mm	300 mm	300 mm
<b>Plate gauge</b>	0.15 – 0.4 mm		
<b>Processing time</b>	LH-PJE and LH-PLE: 16 seconds, LH-PXE: 14 seconds		
<b>Develop tank capacity</b>	65 litres	85 litres	105 litres
<b>Dimensions (W x D x H)</b>	1446 x 1580 x 1155 mm	1860 x 1580 x 1155 mm	2260 x 1580 x 1155 mm

## 'ZAC' System Unit

Fujifilm also offers a 'ZAC' System Unit that can be used to upgrade any G&J processor compatible with Superia LH-PJE and LH-PLE plates to give printers all the benefits of 'ZAC' intelligent processing.

Key Specifications	'ZAC' System Unit
<b>Processor</b>	Any G&J processor suitable for processing Superia LH-PJE, LH-PLE and LH-PXE plates
<b>Applicable chemistry</b>	DT-2WE, DT-2RE, DT-2RWE, DT-XWE, DT-XRE
<b>Chemical consumption</b>	8-10 ml/m <sup>2</sup> depending on plate consumption
<b>Bath life</b>	Up to 3 months or 8000 m <sup>2</sup>
<b>Weight</b>	19 kg
<b>Dimensions (W x D x H)</b>	180 x 400 x 635 mm

## XR-1200F Waste Reduction Unit

The XR-1200F unit is designed to reduce pre-press developer waste\*<sup>1</sup> and water use for printers using Fujifilm plate production systems requiring chemistry. The XR-1200F system works by separating plate chemistry into 'concentrated waste', reducing it by 70 to 90%\*<sup>2</sup>, and 'distilled water' that can then be reused in the plate production process. This results in a significant reduction in waste and water usage. The XR-1200F has been developed from technologies found in our 'ZAC' processors, and has the following benefits:

- ▶ Reduces waste volumes and therefore the cost of treatment
- ▶ Reduces water consumption as the distilled water can be reused in the processor
- ▶ Reduces CO<sub>2</sub> emissions generated by the transport and incineration of waste



Key specifications	XR-1200F
<b>Processing capacity</b>	1.2 L/h
<b>Dimensions (W x D x H)</b>	419 x 476 x 722 mm
<b>Weight (operational)</b>	70 kg
<b>Power requirement</b>	220-240 V 0.5 kW

\*<sup>1</sup> Only for use with Fujifilm Superia LH-PJE, LH-PLE and LH-PXE plates processed using Fujifilm developer

\*<sup>2</sup> Maximum value under standard conditions

### Pressroom products compatible\* with low chemistry thermal plates

In addition to developing market leading printing plates, we go one step further. The way plates perform on-press with the relevant pressroom products is critical to achieving optimum printing results. Because Fujifilm is one of the largest suppliers of pressroom solutions in the industry, we have been able to optimise the formulation of our pressroom products to match our plates. By using Fujifilm plates with our pressroom solutions, you can be guaranteed of the best performance and print quality.

Application	Plate	Founts	Description	Washes	Description
Heatset	LH-PXE	FountMax Red 20.90 AF	IPA-free fount; increased run length due to minimised piling; reduced paper waster due to extended washing intervals	WashMax 100.40 BIO	104 °C flashpoint; non VOC; maximum dryer security; improved cleaning power
				WashMax 60.10 MI	64 °C flashpoint; manual and automatic cleaning
Sheet-fed	LH-PLE	FountMax Blue 30.30 AF	IPA-free fount; especially suitable for metallic inks	WashMax 60.10 MI	64 °C flashpoint; manual and automatic cleaning
		FountMax Blue 30.25 AF	IPA-free fount; suitable for all water qualities, increased productivity due to minimised ink feedback	WashMax 60.65 MI	62 °C flashpoint; fast cleaning, reduced restart waste
Sheet-fed	LH-PJE	FountMax Blue 30.30 AF	IPA-free fount; especially suitable for metallic inks	WashMax 60.10 MI	64 °C flashpoint; manual and automatic cleaning
		FountMax Blue 30.25 AF	IPA-free fount; suitable for all water qualities, increased productivity due to minimised ink feedback	WashMax 60.65 MI	62 °C flashpoint; fast cleaning, reduced restart waste

\* Run lengths are always dependent on laser power and press conditions



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