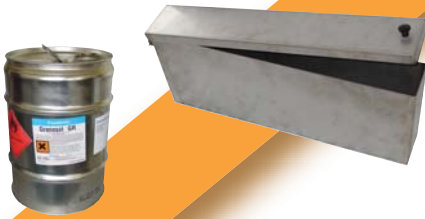


# CHROM STEEL PLATE ETCHING

2. Developing



3. Drying



1. Exposure



4. Etching



Teca-Print  
coated Chrom Steel Plates



5. De-layering



Chrom Steel Plates  
ready for printing

 **Teca-Print**



# USE AND FEATURES OF CHROM STEEL PLATES

In pad printing, chrom steel plates are used for large production runs.

Because of the special qualities, chrom steel plates will be preferred for numerous applications. For the best results - whether in terms of etching or print quality - it is critical that all products used in the etching process are carefully chosen and matched together. We are pleased that Teca-Print can now offer such a complete range of products and materials for the entire chrom steel plate etching process.

Teca-Print chrom steel plates are available in all commonly demanded plate sizes, whether un-punched or with punched holes for Sealed Ink Well printing systems.

Please note that on delivery and during the etching process, chrom steel plates are very light-sensitive.

## CHROM STEEL PLATE ETCHING

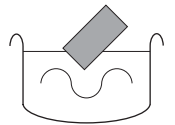
### 1. EXPOSURE

Teca-Print chrom steel plates are optimally exposed with exposure units modified with a crystal glass plate instead of the customary clear foil. This crystal glass plate disperses the U.V-Rays over the surface of the plates.

Peel off protective foil from the chrom steel plate. The mat positive film, with the print image side down, is placed on the plate and covered with a crystal glass plate. The chrom steel plate is then exposed with UV-light in the BG 25/30 or BG 35/50 exposure units.

### 2. DEVELOPING

Immediately after UV-light exposure, the chrom steel plates are developed for 2 minutes in a chrome steel tank filled with Granosol GR under gentle stirring movements.



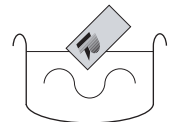
There are various sizes of chrome steel tanks and immersion tools available for this purpose (see table).

The plates are then rinsed with water from top to bottom and dried with compressed air. We recommend a drying time of 5 to 10 minutes at 50 to 60°C in our drying cabinets TS 25/30 or TS 35/50.

**Retouching:** Areas on the plate surface that have not been properly hardened during UV-light exposure can be protected from being etched off by covering them with red retouching varnish. For fine retouching, the etchproof masking pen can be used.

### 3. ETCHING

Chrom steel plates are etched in a salt solution of 3 parts of water and 1 part etching salt. The etching salt must be completely dissolved before the etching process can be begun. For optimum etching results, the salt solution temperature should be 32°C.



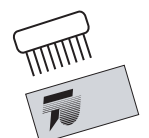
The etching time should be between 1<sup>1/2</sup> and 1<sup>3/4</sup> minutes to achieve an etching depth of ~ 25 µm.

After the etching is complete, the plate must be rinsed with water.

The etching salt solution can be used for about 3 to 5 weeks, after that time its etching power begins to gradually diminish. An aging process also takes place while the solution is not in use. Unused etching salt should be stored in the original container in a cool, dry place and at a safe distance to any organic products.

### 4. DE-LAYERING

Now the red retouching varnish that protected areas of the plate surface from the etching salt solution and the photolayer are removed. For this purpose, cleaner RE (or thinner VD) are applied, left on for a while to react with the residues on the plate surface, and are then removed mechanically using a brush. However, this will only work when the drying temperature (see step 2: Developing) did not exceed 60°C at any point.



Finally, the plate is rinsed with water and dried with compressed air.



## GENERAL INSTRUCTIONS

### STORAGE

Chrom steel plates should be stored upright and not touching each other.



Unexposed plates should be stored in a cool, dry place and storage time should not exceed 6 months.

### ORDERING INFORMATION

Chrom steel plates for open inking system can be ordered with partnumbers beginning with A98 and closed inking systems with A99. Be sure to always state the designations A98 or A99 in purchase orders and specify the plate size, e.g. A98 250 100 (plate for open ink well systems, size 250 x 100 mm) or A99 100 220 (plate for sealed ink cup systems, size 100 x 220 mm).

Chrom steel plates can be ordered individually.

### TECHNICAL DATA AND SAFETY DATA SHEETS

**FOR FURTHER INFORMATION PLEASE CONSULT OUR TECHNICAL DATA SHEET ON CHROM STEEL PLATE ETCHING. IT CONTAINS DETAILED INSTRUCTIONS AND GUIDELINES FOR THE ETCHING PROCESS.**

Safety data sheets are available for all chemicals. It is essential that all **safety regulations** and **danger warnings** related to the respective chemicals are strictly observed.

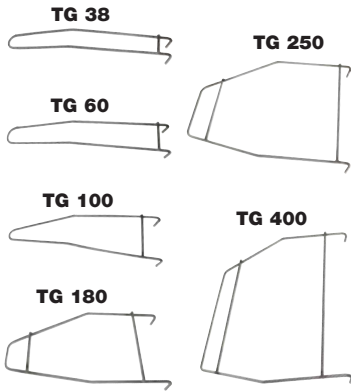
## LIST OF TECA-PRINT PRODUCTS FOR CHROM STEEL PLATE ETCHING

Article No	Description	Type	Size / Contents / Remarks	Maximum plate size
90 00 63	Exposure unit	BG 25/30	520 x 200 x 460 mm	350 x 220 mm
90 00 65	Exposure unit	BG 35/50	760 x 180 x 550 mm	250 x 600 mm
90 00 54	Drying cabinet	TS 25/30	520 x 200 x 460 mm	350 x 220 mm
90 00 06	Drying cabinet	TS 35/50	760 x 180 x 550 mm	250 x 600 mm
89 02 11	Developer	Granosol GR	1 Liter can	
55344 0003	Developer	Granosol GR	20 Liter steel barrel	
89 74 01	Retouching varnish red		0,5 Liter plastic bottle	
89 75 01	Etchproof masking pen		1 pen	
89 02 03	Etching unit	AG 35/22		350 x 220 mm
89 02 04	Etching unit	AG 60/25		600 x 250 mm
89 02 09	Etching salt		1 kg can	
89 02 10	Etching salt		5 kg bucket	
89 04 01	Chrome steel tank	B160	180 x 100 x 250 mm	160 x 200 mm
89 04 02	Chrome steel tank	B500	630 x 100 x 250 mm	600 x 200 mm
89 07 01	Immersion tool	TG 38	38 mm	
89 07 02	Immersion tool	TG 60	60 mm	
89 07 03	Immersion tool	TG 100	100 mm	
89 07 04	Immersion tool	TG 180	180 mm	
89 07 05	Immersion tool	TG 250	250 mm	
89 07 06	Immersion tool	TG 400	400 mm	
F91 00031 4	Cleaner	RE	1 Liter can	
F91 00031 5	Cleaner	RE	5 Liter canister	
F91 00031 8	Cleaner	RE	30 Liter canister	
F91 00001 4	Thinner	VD	1 Liter can	
F91 00001 5	Thinner	VD	5 Liter canister	

All devices listed above have a **main voltage** of **230V/50Hz**. If **115V/60Hz** is required, the exposure units BG 25/30 (No. 90 01 63) or BG 35/50 (No. 90 01 65) and the drying cabinets TS 25/30 (No. 90 01 54) or TS 35/50 (No. 90 01 06) may be used. For all other devices, use a **transformer** for 115V.



## IMMERSION TOOL TG



## EXPOSURE UNIT BG DRYING CABINET TS

BG 25/30  
TS 25/30



BG 35/50  
TS 35/50



## ETCHING UNIT AG

AG 35/22



AG 60/25



Retouching varnish  
(red)



## CHROME STEEL TANKS

B 160



B 500



Etchproof  
masking pen



## DEVELOPER GR

1L



20L



## ETCHING SALT

1KG



5KG



## THINNER VD

1L



5L



## CLEANER RE

1L



5L



30L



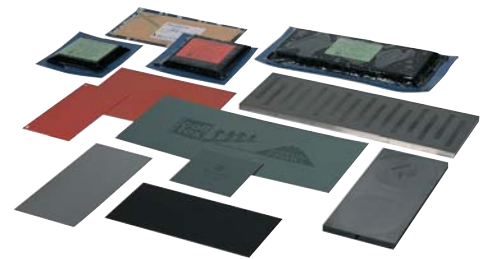
## OTHER PLATE TYPES

The Teca-Print plate range includes - in addition to the chrom steel plates - **thin steel, steel and plastic plates** in all commonly demanded sizes.

Four types of plastic plates are available:

- quality standard water-rinsable
- quality standard alcohol-rinsable
- quality long-life water-rinsable
- quality long-life alcohol-rinsable

Further information on plastic, steel and chrom steel plates is available on request or can be downloaded from our webpage [www.teca-print.com](http://www.teca-print.com)



**Visit our website for further information on Teca-Print plates and other pad printing products**



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