

Printing-ink cartridge system

The packaging innovation for sheet-fed offset inks



Packaging innovations

The aim behind the persistent efforts of the **huber**group companies is to manufacture high-quality and user-friendly printing inks for the wide variety of requirements in the printing industry and to optimise product-related service.

In addition to the many and important product developments and product innovations that have originated from our group in the past, we have also laid down milestones with respect to the packaging of printing inks:

- In 1965 we developed the conical, deep-drawn, vacuum-sealed can for packaging 1 kg and 2.5 kg of offset ink. These ink cans have been the international packaging standard for sheet-fed offset inks for many years.
- 1988 saw the introduction of the material- and space-saving multiple packaging of vacuum-sealed cans.

Deliveries of inks in user-friendly and different types of reusable container system are nowadays a matter of course.

All of these improvements have played an important role in establishing more efficient handling of jobs in printing houses.

That said, we have not rested on our laurels, content with the excellent developments we have already achieved, but have continued to search for ways to optimise the method of packaging pasty inks and to achieve more economical and even more efficient handling of printing inks.

The companies that make up the **huber**group have been working very closely with various manufacturers and have developed a new, modified printing-ink cartridge system. The necessary peripheral pieces of equipment from the various system suppliers are matched to the cartridge system and offer a diversity of potential applications depending on the specific requirements.

The printing-ink cartridge

The printing-ink cartridge consists of 3 parts made of the same material:

- 2-kg ink cartridge (body)
- dispensing piston
- screw cap.

The cartridge is supplied filled and ready to use. All the user has to do before loading it into the dispensing unit is remove the screw cap.



Technical data and information

| | |
|--------------------------|---|
| Material | transparent polypropylene (PP) |
| Height | 360 mm, including screw cap |
| Diameter | inside 96 mm / outside 99 mm |
| Weight (empty) | approx. 175 g |
| Capacity | 2-kg sheet-fed offset ink |
| Sealing method | reusable screw cap |
| Ink outlet | spherical head with bayonet lock |
| Dispensing piston | slightly conical dispensing piston with 2 wiper rings for residue-free ink dispensing |
| Total emptying | ink residue approx. 10 g (0.5% of contents) |
| Partial emptying | possible, but must be resealed airtight with the screw cap after use in order to prevent a skin forming in the ink outlet when stored for a long period |



Dispensing piston

The 2-kg printing-ink cartridge is a modern, up-to-date, efficient, environmentally compatible and economic method of packaging inks.

Packaging

Unit and delivery pack

6 x 2-kg cartridges
= 12 kg sheet-fed offset ink

Different ink series and/or HKS® inks can be combined in one unit pack.



Recycling packaging

1991 saw the installation of the GEBR system as the industry-wide solution to material recycling of printing-ink and printing-auxiliary packaging.

GEBR accepts, under fixed terms and conditions, packages that have been properly emptied of all residue and have been collected separated according to metal, plastic, package contents re-quiring special labelling and, where appropriate, package contents containing pollutants. The charges for this service are currently set as follows:

| | |
|-------------------------------|-------------|
| Metal packaging | EUR 150,-/t |
| Plastic packaging | EUR 425,-/t |
| Flat-rate collection charge | EUR 48,- |
| Minimum value of a collection | EUR 75,- |

Collection in “Big Bags”

Since many printing houses do not have suitable collection facilities, GEBR offers a collection system that consists of a stand and Big Bags with a capacity of 1 m³ each.

The rent per stand and 3 Big Bags is EUR 15,-/month.

Small-quantity collection

Small printshops can collect their empty packaging, separated according to type, in 240-l plastic sacks. The containers are simply thrown into the sack separately (they must not be bound together in any way).

Each sack is picked up for a flat-rate charge of EUR19,80, with a minimum pick-up quantity of 4 sacks. These sacks can be purchased at cost price of EUR 2,- each. This is no collection flat rate or other charges with this collection variant.

GEBR is the third party charged in accordance with § 11 of the German Packaging Ordinance with the task of taking back printing-ink and printing-auxiliary containers. Those suppliers who participate in this system can be identified by the fact that their containers carry the GEBR symbol.

Further information is available from the following address:



**GEBR Entsorgungs- und Beratungsgesellschaft
für die deutsche Recyclingwirtschaft mbH & Co. KG**

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The printing-ink cartridge system for ink efficiency in the sheet-fed offset printing house

Environmental protection requirements, economic constraints, increasing quality requirements, the pressures of time – these are the conflicting conditions under which printing houses operate today. System partners and suppliers have taken it upon themselves to offer their customers field-oriented solutions in order to provide them with new room to manoeuvre in this environment.

Advantages for the sheet-fed offset printing house

- Automation in the sheet-fed offset process.
- Optimum emptying of the ink container.
- Temporary storage of opened printing-ink cartridges without loss of ink.
- Reduction in the amount of ink left over.
- Content of the cartridge is visible.
- Low investment costs.
- New inking-unit systems – prospects.

Comparison of packaging systems

| Left-over ink | 2.5-kg can | 2.0-kg cartridge |
|--|------------|------------------|
| Ink left over in container | 50 g = 2 % | 10 g = 0.5 % |
| Ink loss resulting from temporary storage | 2 – 5 % | 0 % |
| Average | 3 % | 0 % |
| Ink loss resulting from change of ink in inking unit, depending on print job | 2 – 3 % | 1 – 2 % |
| Average | 2.5 % | 1.5 % |
| Total amount of ink left over (approx.) | 7.5 % | 2.0 % |
| Savings potential (approx.) | – | 5.5 % |

Ink systems available

- Sheet-fed offset process inks** – the main ink series
Sheet-fed offset black inks – process inks and common special blacks
HKS® inks for sheet-fed offset – all colours in K and N qualities

Later expansion of systems available

- Sheet-fed offset special inks** PANTONE® inks
 House and proprietary article inks

The dispensing units for the printing-ink cartridge

The system suppliers offer two mechanical dispensing units and one manually operated dispensing gun for the task of filling the ink fountain.

All system suppliers are very willing to provide you with information materials and operating instructions for their dispensing units and will also install the units for you if you so wish.

“handy-fill” cartridge pump from technotrans AG

This is a manually operated device which uses compressed air to empty printing-ink cartridges.



Brief system description

The “handy-fill” cartridge pump operates pneumatically and can be connected to any existing compressed-air system with a pressure reducer. The design is very compact, the pump being only slightly larger than the ink cartridge.

The „handy-fill“ is supplied with separate mounts and can be integrated in any press. The light weight (1.5 kg without ink cartridge) of BVS’s cartridge pump also makes it very easy and versatile to use. You can swivel the “handy-fill” over the ink fountain or take it out of its mount so that you can fill the fountain evenly. Thanks to the spiral hose, its operating radius is very large. The cartridge is emptied at the push of a button, but is immediately depressurised again.

Up to eight cartridge pumps can be operated simultaneously on one compressed-air line through the use of adapters.

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Cartridge Dispenser System A from LIGHT CARTOUCHE



Brief system description

Dispenser System A designed for printing-ink cartridges is a pneumatic dispensing system that can be connected to the plant compressed-air supply or to a separate compressor. A double-acting cylinder, to which compressed air can be applied at a pressure of between 1 and 10 bar, drives the piston plate. The dispenser is controlled by a manually actuated valve with three settings: Dispense / Stop / Reset. A lockable pressure regulator with pressure gauge enables the operator to set the delivery rate him/herself.

The advantages of this system are its robust design, simple and reliable operation and the speed with which the ink cartridge can be changed. The dispenser does not become soiled during operation or when changing cartridge, even if the screw cap is off.

The dispensers are modular in design and can be adapted perfectly to almost any press. The metal components of the dispensers can be supplied in the same colour as your press.

Robert A. Wagner **LIGHT CARTOUCHE SYSTEME**

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Printing-ink cartridge gun from BEYER & OTTO

This is a hand-held printing-ink cartridge gun for quick, clean and simple filling of the ink fountain. No more opened cans of ink with a skin on top and no more wasting of special ink during small print runs.



Brief system description

This compact and ergonomic printing-ink cartridge gun is user-friendly and easy to handle. The ball-bearing-borne transport mechanism, with a transmission ratio of 20:1, ensures fatigue-free working with the gun over long periods. The pressure applied to the cartridge can be relieved by pressing the backstop with your thumb – this stops the ink from oozing out.

The printing-ink cartridge gun from BEYER & OTTO GMBH is available directly from the **huber-**group at a price of EUR 65,- excl. VAT, including operating instructions and packaging.

Article name and order number:

Printing-ink cartridge gun
Type GN 2000/KW

NOTE

If you would like more information about the printing-ink cartridge system, please don't hesitate to contact us. We are only too glad to help. If you have technical queries regarding the dispensing units, please contact the system suppliers directly.

Contact addresses for advice and further information can be found under www.hubergroup.de

This Technical information reflects the current state of our knowledge. It is designed to inform and advise. We assume no liability for correctness. Modifications may be made in the interest of technical improvement.