

# LOGISTICS AND HANDLING FOR PRESS TOOLS



**GÜTHLE**

## DILOS SHUTTLE

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# DILOS SHUTTLE

## EFFICIENT DIE CHANGING ON LARGE PRESSES

The frequent changing of press tools – from once a week up to several times a day during shift operation – often means incalculably high machine downtime. This problem can be expected to increase as the market demands more and more flexibility, even from presses. The normal tool changing times to date can now be significantly reduced, however, by the creation of a suitable tool changing periphery.

*Die out, die in –  
and production  
can start again*

The die changing transporter, DILOS SHUTTLE, is suitable for die weights from 4 to 40 t. The rail-mounted DILOS SHUTTLE travels back and forth between the die preparation and die transfer positions. Since with this changing technology, the preparatory measures are not carried out directly in front of the press, production can continue unhindered up to the moment of the actual change. A further benefit is the gentle handling of the value dies.



*Die changing on  
a press line.  
Two DILOS SHUTTLES  
operate together –  
the dies (18 t)  
are simply pushed  
through.*



# ONE-MAN DIE CHANGING

## Die guide

When using die baseplates of the same size, these are guided by lateral guide rails (1) when the die is pushed onto the shuttle table or press table.

For additional or exclusive use of dies with baseplates of different sizes, the DILOS SHUTTLE is equipped with an additional guide keyway (2) for die T-blocks.

The press table is expediently equipped with SWT-rollbloc roller strips (3) for gentle pushing of the dies.

The use of **standardized subplates** combined with the SWT-SlipGrip guiding and clamping elements (see rear cover) offers a technological alternative.

*The sturdy girder construction and generously dimensioned supporting rollers are designed for the long service lives typical of presses.*



*The electric power supply to the drive motors is laid under the floor (standard version)*

## Minimum set-up times

Only 10 to 25% of the conventional die changing times are now required for the complete change.

First the 'old' die is pulled onto the DILOS SHUTTLE and deposited on a die changing platform for further handling. On a tan-

dem DILOS SHUTTLE, the die initially remains on the second loading area.

The 'new' die is then transported and transferred to the press. The die is exactly positioned, precisely clamped and set up ready for production.

*DILOS SHUTTLE as a special model (over size) with DILOS standardized subplates in the version for the DILOS SlipGrip clamping rail.*



## Die changing as a standard process

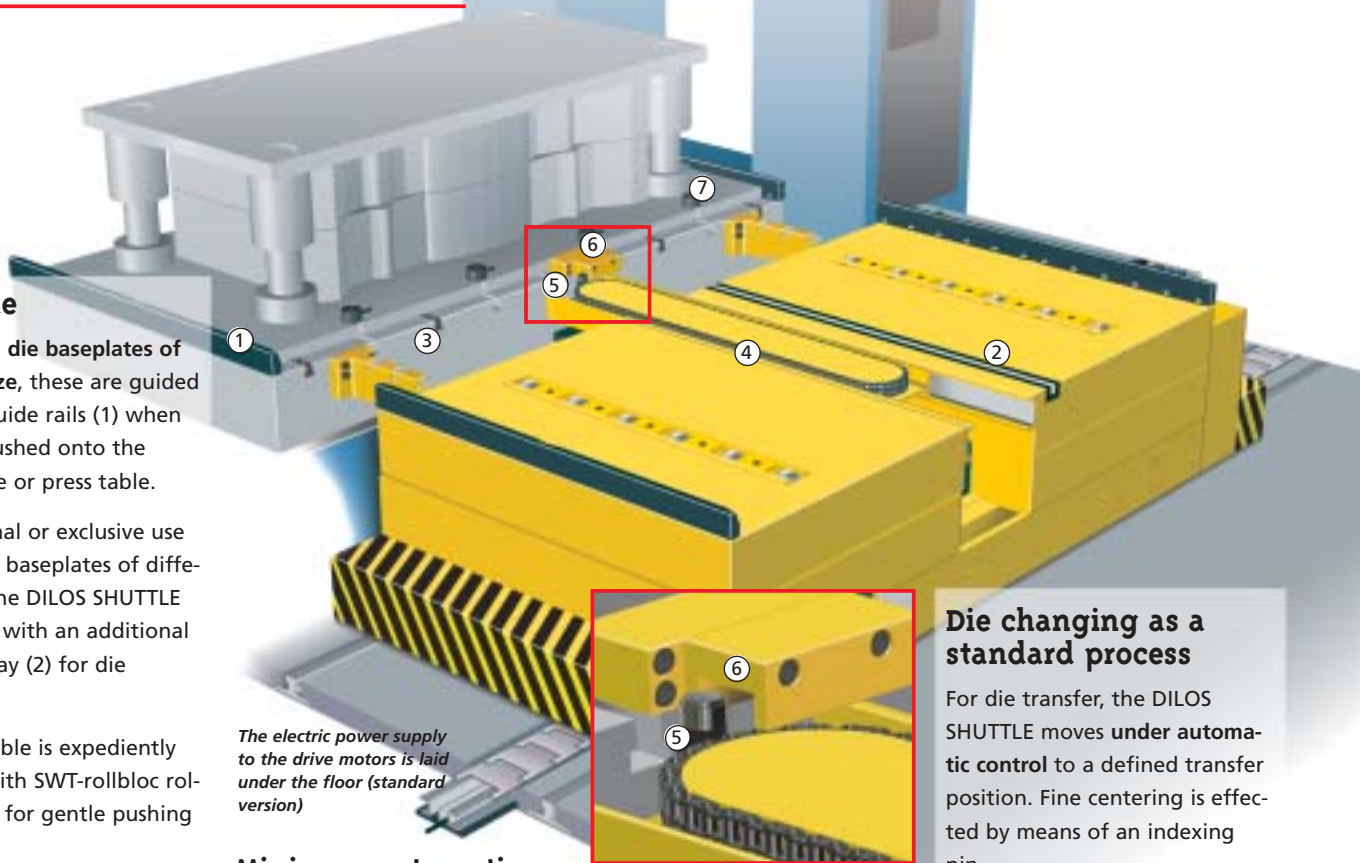
For die transfer, the DILOS SHUTTLE moves **under automatic control** to a defined transfer position. Fine centering is effected by means of an indexing pin.

The pusher (4) with electric motor of the DILOS SHUTTLE is equipped with a two-speed drive (fast adjustment, slow positioning). A chain-guided drive pin (5) engages positively in the die plate coupling (6).

An **automatic stop** gives the operator time for a **visual check**. After the clear signal, the die is pushed quickly but gently into **clamping position** and held until it has been clamped.

Since this changing technique can be completely standardised, the whole process can be accurately timed.

Both conventional and hydraulically actuated clamping systems (SWT swivel-mounted clamping unit, SWT hollow piston cylinder (7) or SWT clamping rails) can be employed for die clamping.



# UNIVERSAL, FLEXIBLE BASIC CONSTRUCTION



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### The rationalisation factor for new projects



The attainment of the **shortest possible downtime** is a major calculation factor for investment in new machines. If the conventional die changing procedure is retained, no significant improvements can be achieved in overcoming familiar bottleneck situations.

Extremely short changing times are made possible by the use of DILOS SHUTTLE, supplemented by corresponding clamping devices. The combination of DILOS SHUTTLE **standardized sub-plates and hydraulic SWT clamping techniques** frequently proves to be the most flexible and future-oriented technology.

*DILOS SHUTTLE  
with turntable  
(special version)*

### Special versions

The DILOS SHUTTLE is manufactured in a variety of basic versions as well as in special versions, including even higher weight tools.

Adaptation of the design to the space and functional situation in question generally presents no problems.

### Ideal for retrofitting

In existing production lines, attention was seldom paid to the need for an **optimum press periphery**.

If large presses or press lines are to be retrofitted, the space available generally dictates what is possible.

DILOS SHUTTLE allows various logistics systems to be created. Special versions enable even the most unusual problems to be overcome.



*Complete configuration of a press line with tandem DILOS SHUTTLE (5 t)*

# LOADING AND UNLOADING IN SHUTTLE



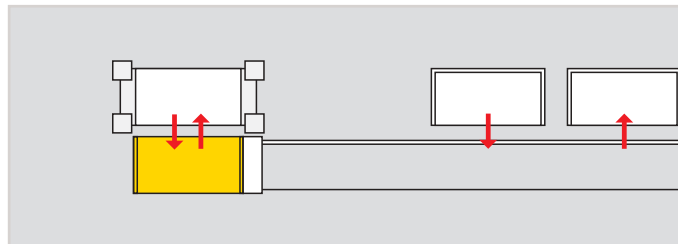
**GÜTHLE**

## Design versatility for practical applications

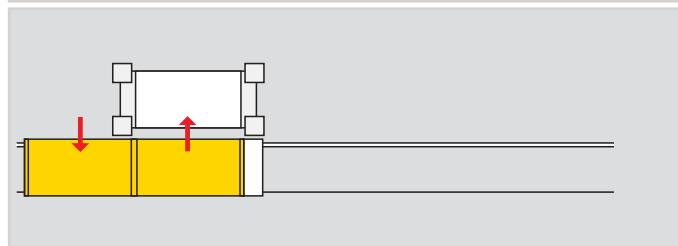
DILOS SHUTTLE is suitable as a flexibly configurable solution to the problems associated with die changing automation through to the complete configuration of a press line or press shop.

A tandem DILOS SHUTTLE ensures minimum changing times and requires no die changing platforms, as no load shifting is necessary for unloading and loading.

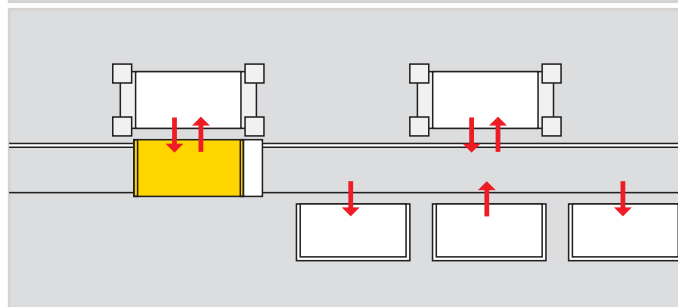
On presses arranged in line and operating in combination, quick die-changing can be carried out simultaneously and in the shortest possible time using the "push-through technique". Of course there are far more possibilities than those illustrated here, extending right up to the integration of a system storage technique and the transport of the dies for maintenance.



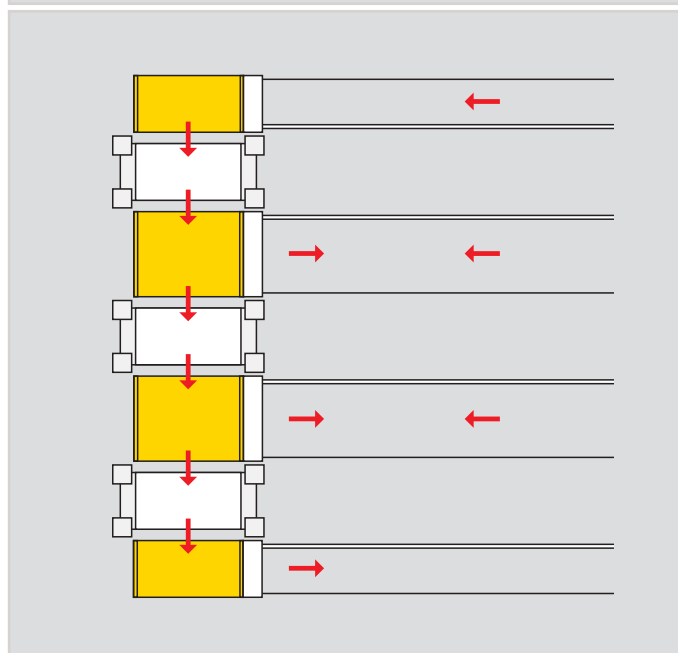
*Standard DILOS SHUTTLE changing transporter with two changing platforms for preparation and further handling.*



*DILOS SHUTTLE in standard tandem version.*



*DILOS SHUTTLE for supplying several presses, with 'push-through device' for both sides.*



*Configuration of a press line for simultaneous die changing with "push-through technique"*



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## Installation

The necessary preparations for laying industrial rails and cable trenches have to be carried out on site (standard version). All further measures by arrangement.

## Commissioning

Commissioning of a DILOS SHUTTLE involves the definition and programming of the automatic functions on site and a brief introduction to the operation of the various functions. No specialist knowledge on the part of the operator is required.

## After-sales service

All the necessary service measures can be carried out by the manufacturer.

## Comprehensive consultation

The DILOS SHUTTLE is a key product in the efficient rationalisation of tool changing on large presses.

DILOS stands for **DIE LOGISTICS SYSTEM**. Thanks to its individual design possibilities, this future-oriented press die logistics system permits efficient and methodical handling of press

tools. The rationalisation system is supplemented by facilities for die maintenance and die storage.

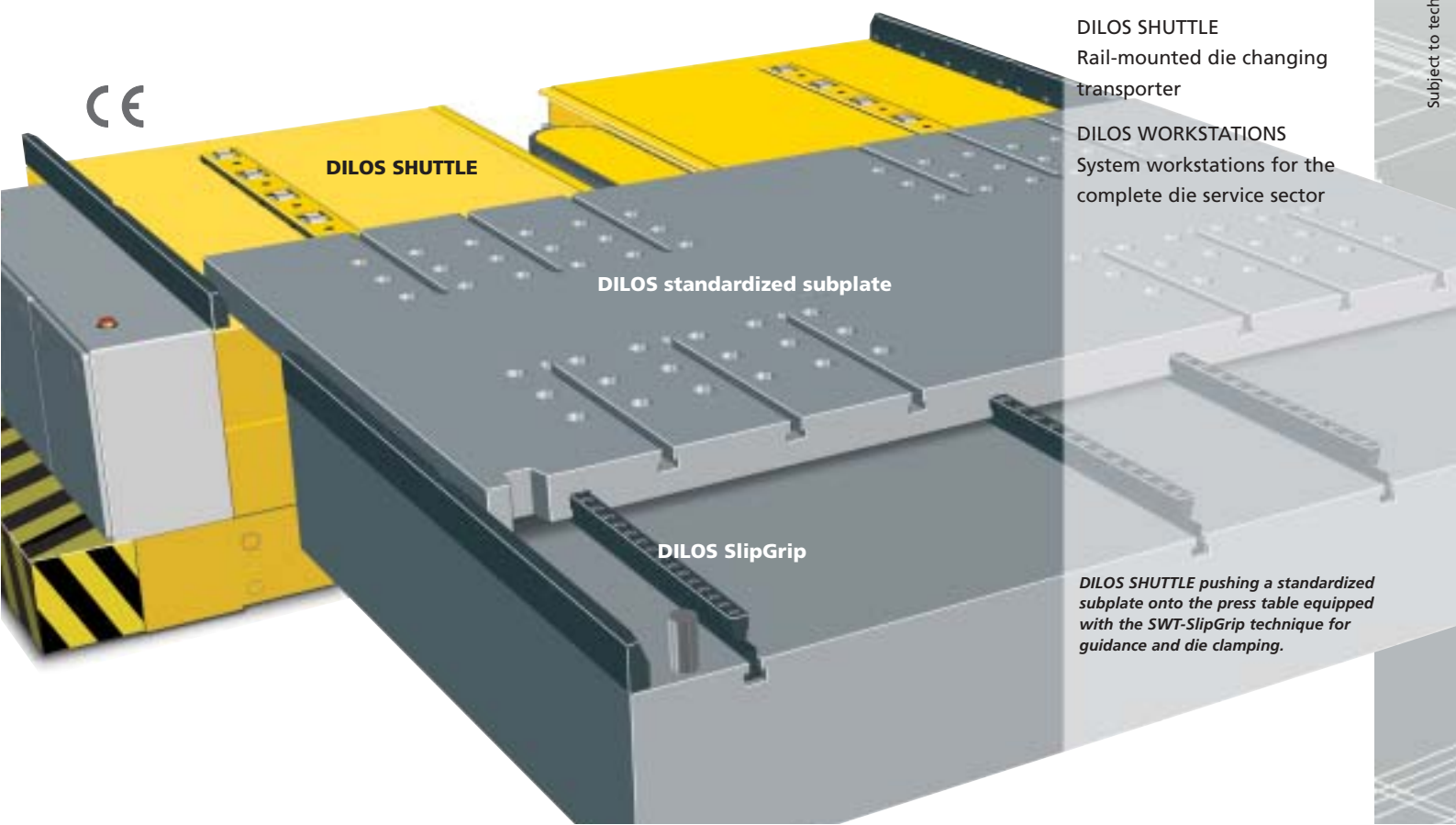
Benefit from the decades of experience of GÜTHLE to clarify your needs with a preliminary situation analysis in a consultation with no obligation.

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## Product overview

- SWT-rollbloc  
Ball type and roller type die lifters with mechanical or hydraulic lift
- SWT-consoles  
Die supports with and without supporting leg
- SWT-hydraulic clamps
- SWT-BUGGY 20  
Lightweight die changing cart
- DILOS standardized subplates
- DILOS clamping rails
- DILOS SlipGrip  
The innovative die supporting rail for positioning and clamping
- DILOS TRUCK 60  
Floor travelling die changing transporter
- DILOS SHUTTLE  
Rail-mounted die changing transporter
- DILOS WORKSTATIONS  
System workstations for the complete die service sector



*DILOS SHUTTLE pushing a standardized subplate onto the press table equipped with the SWT-SlipGrip technique for guidance and die clamping.*