STOPA

sheet metal storage system STOPA TOWER Flex
The music of sheet metal production machines plays all over the world.
A storage system from southern Germany guaranties availabilty.
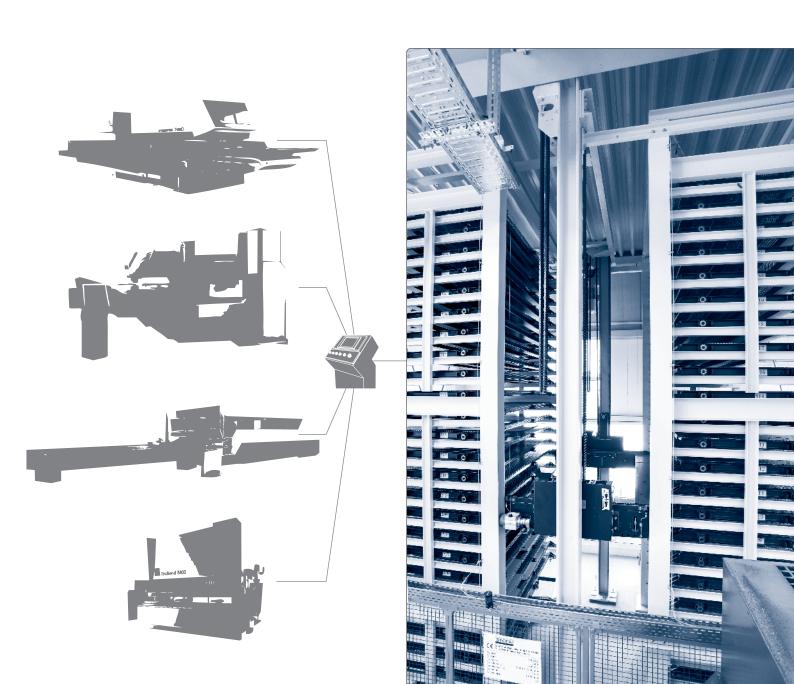
"In the front, you define the tempo.

And in the background,

the production machines play the song."

In a prozess oriented production line, the focus is on just-in-time delivery of sheet metal in different sizes and thicknesses. Meaning an intelligent storage and retrieval system, that regulates the demand of flat materials fully automatic. And that does not interfere with the overhead material management.

The full automatic storage and retrieval sytem STOPA TOWER Flex plays in sync with different TRUMPF sheet metal production machines. Not only does it supply an interface for every situation, due to the great variaty of options it will also grow with its tasks – and with yours.

That's why the system got the name STOPA TOWER Flex: It changes with your changing needs of your production – today as well as tomorrow.
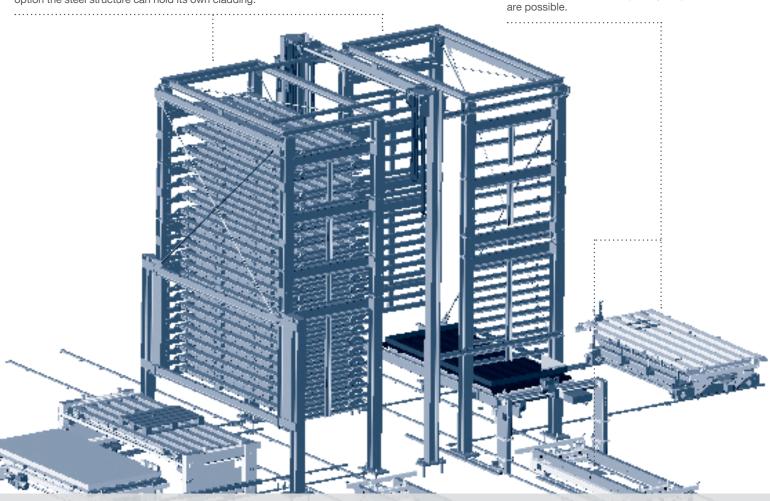
Flexibility of the steel structure:
According to customer needs, a single tower can be expanded later to a dual tower system. Even two interconnected dual towers standing next to each other are possible. To utilize the maximum available ceiling height, the shelf spacing can be adjusted. Also, as an option the steel structure can hold its own cladding.

Great variaty of stations:
According to customer needs, transport carts and scissors lifts (also in combination) can enter and exit the steel structure at all openings. Up to 11 stations are possible.
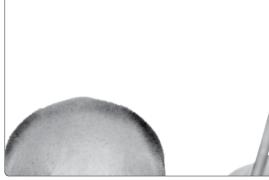
Specification	Pallet format MF	Pallet format GF	Pallet format XF	Special formats SF
Size W x L [inches	mm]	48 x 96	1250 x 2500	60 x 120	1525 x 3050	80 x 160	2032 x 4064	on request
Net load per shelf [lbs	kg]	6600/11000	3000/5000	6600/11000	3000/5000	6600/11000	3000/5000	6600/11000	3000/5000
Max system height [ft	m]	82	25	82	25	82	25	82	25
Max hoist speed [ft/min	m/min]	100	30			
Max number of shelves	< 140	< 140	< 140	< 140
Building integrated design	optional	optional	optional	optional
Fully integrated production machines	yes	yes	yes	yes

1500 systems worldwide."

The STOPA TOWER Flex is ideal for flexible storage and retrieval of flat material, even in confined spaces. With its compact design of the steel structure and the systems pallets designed for push and pull technique, an economical system with perfect balance between storage capacity and floor space is created. Initially the system can be installed as dual tower, or as single tower with the option for a later expansion. By using different load- and unload stations, several production machines can be connected to one STOPA TOWER Flex.

☐ Minimal shelf spacing guaranties maximum storage capacity

☐ Safe and durable due to a chain hoist with dual strain roller chain

☐ Low maintenance push and pull conveyor

☐ Input and output stations for long side or short side available

☐ Load independant measuring system for exact height positioning

☐ Pallet position indicator on shelf retrieval unit for precise handling

☐ Interface to the controllers of your production machines

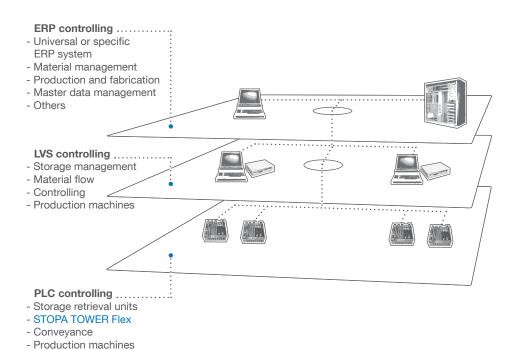☐ In time storage overview with connection to a strorage managing software

Picture of a dual tower version – initially also as single tower available.

Specification	Pallet format MF	Pallet format GF	Pallet format XF	Special formats SF
Size W x L [inches | mm]	48 x 96 | 1250 x 2500	60 x 120 | 1525 x 3050	80 x 160 | 2032 x 4064	on request
Stations	long side/short side self propelled	long side/short side self propelled	long side/short side self propelled	long side/short side self propelled
Pallet quick changer	optional	optional	optional	optional
Tandem changer	optional	optional	optional	optional
Automatic controller	standard	standard	standard	standard
Storage manager	optional	optional	optional	optional
ERP connection	optional	optional	optional	optional

ERP controlling ....
- Universal or specific
  ERP system
- Material management
- Production and fabrication
- Master data management
- Others

LVS controlling ....
- Storage management
- Material flow
- Controlling
- Production machines

PLC controlling ....
- Storage retrieval units
- STOPA TOWER Flex
- Conveyance
- Production machines
- Robots and deliveries

Since the STOPA TOWER Flex can interface to virtually all sheet metal production machines, and because of the integration into different ERP systems, the storage management system needs to be compatible, but also open to possible changes.

With the LVS Basic, a storage automation module, STOPA offers an innovative link between storage management and production machines to its customers and partners.

The LVS Extended is able to manage data of the production machines as well as the flat materials and parts lists. According to customer orders and production parts lists, the software module delivers raw material to the connected production machines for lights-out operation.

Controller compatible with LVS system:
The PLC is independant and can communicate with different LVS systems. Automatic operation is possible even without the LVS. That's why all diagnostic functios are kept on the PLC level.

Experience with reliable interface:
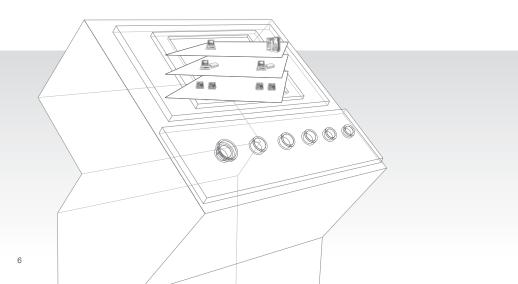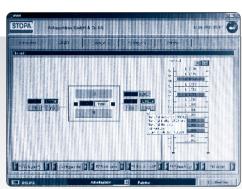LVS-Basic or -Extended (STOPA)
TC-Cell or CELL-Server (TRUMPF SYSTEMS)
DATA LEAP / COLUMBUS (ESAB CUTTING SYSTEMS)
Customer specific LVS, in case already exisiting
All controls are equiped with a modem and telediagnostic software. Stopa service can log in any time to troubleshoot and fix problems.

The 12" TFT Display continuously shows the system status, as well as a grafic visualization of the steel structure, storage retrieval unit and stations.

6

The options are on the right."

You can choose between several tower varieties and different heights, and optionally also among different add-ons in the first and following stages. Experienced specialists will guide you through the planning stages and can show possibilities for expansion early. Because in the automated production business the saying: "You never know what tomorrow will bring…" is true today more than ever.

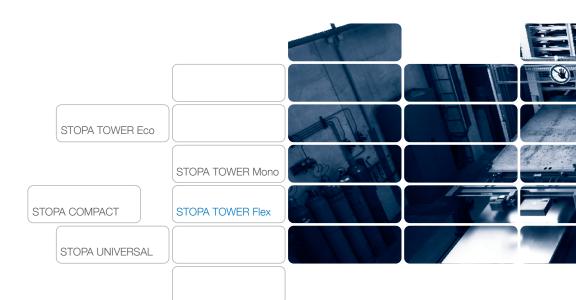| Storage and retrieval unit	Design	Option
		Loading capacity
	Stationary lift beam	Transport speed
Steel structure	Design	Option
	Single tower	Loading height
	Dual tower	With roof and wall cladding
Paletts	Format	Option
	Medium format	Bottom sheets
	Large format	Zero pins
	Maxi format	Laser machine pallets
	Special formats	Special design
Stations	Long side or short side	Option
	Scissors lift table with pins	Unpacking table
	Scissors lift table	Pedestals
	Transport cart	Turn table
	Lower cart	Speed
	Upper cart	Overhead door
	Tandem changer	Chip crane
	Quick changer	Sheet lifter for bundles
		Sensors for connected machines
PLC	Type	Option
	SIEMENS S7	Modem
		Interface to LVS
		Interface to production machines
Storage management		Option
		Interface to ERP
		Interface to connected machines

Connection of production machine with robotic loader

Delivery of raw material and return of finished goods with dual carts

Connection of production machines with linear portal robotic loader

STOPA TOWER Eco

STOPA TOWER Mono

STOPA COMPACT

STOPA TOWER Flex

STOPA UNIVERSAL