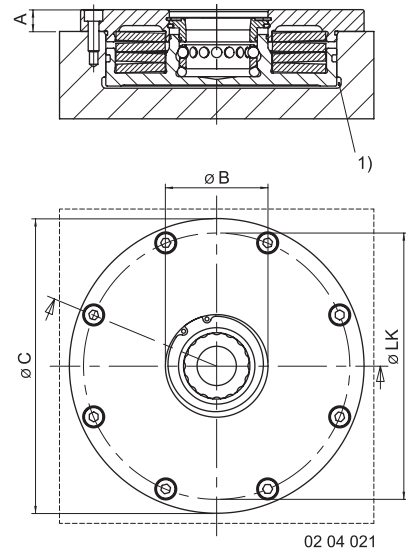




SPEEDY assembly 1000, 2000, 3000 round



Example: Angle with
8 SPEEDY 1000 round and
4 SPEEDY 1000 square



1) Hydraulic supply

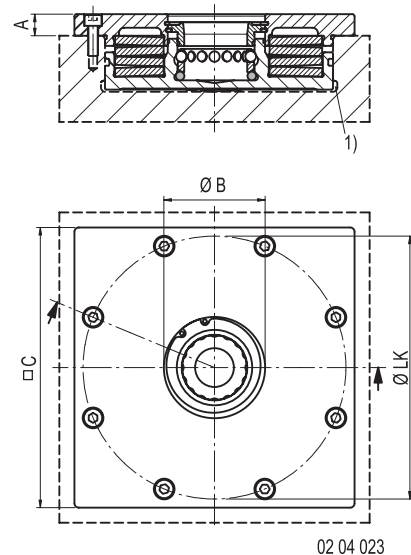
9

Order no.	Description	A	ØB	ØC	ØLK	Insertion force [N]	Release hydr. pressure [bar]
804 331	SPEEDY 1000	10	32	105	92	6.722	40
804 348	SPEEDY 1000	10	32	105	92	10.000	80
804 452	SPEEDY 2000	10	47	135	122	20.000	40
804 339	SPEEDY 3000	19	65	176	160	30.000	30

SPEEDY assembly 1000, 2000, 3000 square



Example: Angle with
9 SPEEDY 1000 square



1) Hydraulic supply

Order no.	Description	A	ØB	□C	ØLK	Insertion force [N]	Release hydr. pressure [bar]
804 330	SPEEDY 1000	10	32	100	92	6.722	40
804 347	SPEEDY 1000	10	32	100	92	10.000	80
804 453	SPEEDY 2000	10	47	130	122	20.000	40
804 338	SPEEDY 3000	19	65	170	160	30.000	30

Also suited for pallets with only one retractable nipple.



9

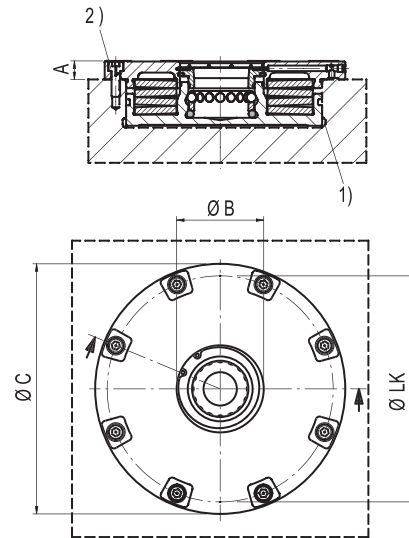
Pallet station with mounting towers, SPEEDY 1000 tubular set up and SPEEDY 1000 assembly



Mounting tower with SPEEDY 1000 round on the top side SPEEDY 1000 squared for central mounting



SPEEDY *Tornado* 1000, 2000, 3000 round assembly module with raised supports and blow out ducts



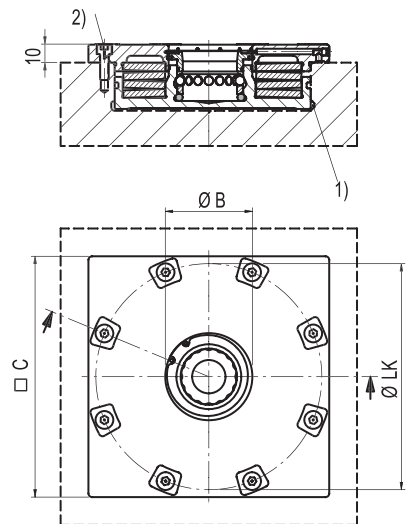
02 04 027

- 1) Hydraulic supply
- 2) Bolt with blow out

9

Order no.	Description	A	ØB	ØC	ØD	Insertion force [N]	Release hydr. pressure [bar]
804 620	SPEEDY <i>Tornado</i> 1000	10	32	105	92	6.722	40
804 622	SPEEDY <i>Tornado</i> 1000	10	32	105	92	10.000	80
806 020	SPEEDY <i>Tornado</i> 2000	10	47	135	122	20.000	40
807 020	SPEEDY <i>Tornado</i> 3000	19	65	176	160	30.000	30

SPEEDY *Tornado* 1000, 2000, 3000 square assembly module with raised supports and blow out ducts



02 04 029

- 1) Hydraulic supply
- 2) Bolt with blow out

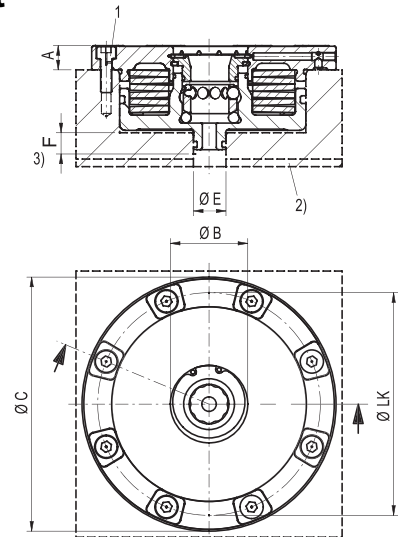
Order no.	Description	A	ØB	ØC	ØD	Insertion force [N]	Release hydr. pressure [bar]
804 621	SPEEDY <i>Tornado</i> 1000	10	32	100	92	6.722	40
804 623	SPEEDY <i>Tornado</i> 1000	10	32	100	92	10.000	80
806 021	SPEEDY <i>Tornado</i> 2000	10	47	130	122	20.000	40
807 021	SPEEDY <i>Tornado</i> 2000	19	65	170	160	30.000	30



SPEEDY *Tornado* 1000, 2000, 3000 round assembly module with raised supports, blow out ducts and drainage of coolant



- 1) Bolt with blow out
- 2) When laying the fast closing clamps flat on the machine table, the drainage of coolant must be assured by drilling groves or holes.
- 3) min. fitting length F



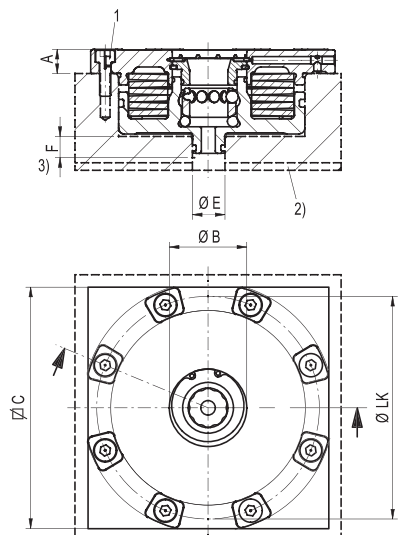
02 04 033

Order no.	Description	A	ØB	ØC	ØLK	ØE	F	Insertion force [N]	Release hydr. pressure [bar]
804 630	SPEEDY <i>Tornado</i> 1000	10	32	105	92	14	9	6.722	40
804 632	SPEEDY <i>Tornado</i> 1000	10	32	105	92	14	9	10.000	80
806 022	SPEEDY <i>Tornado</i> 2000	10	47	135	122	26	9	20.000	40
807 030	SPEEDY <i>Tornado</i> 3000	19	65	176	160	30	17	30.000	30

SPEEDY *Tornado* 1000, 2000, 3000 square assembly module with raised supports, blow out ducts and drainage of coolant



- 1) Bolt with blow out
- 2) When laying the fast closing clamps flat on the machine table, the drainage of coolant must be assured by drilling groves or holes.
- 3) min. fitting length F

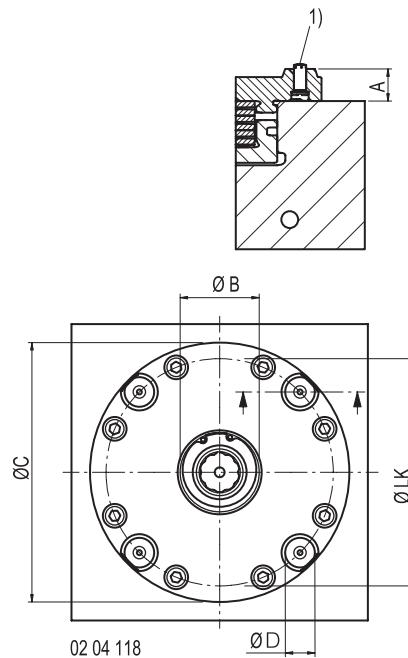


02 04 034

Order no.	Description	A	ØB	ØC	ØLK	ØE	F	Insertion force [N]	Release hydr. pressure [bar]
804 631	SPEEDY <i>Tornado</i> 1000	10	32	100	92	14	9	6.722	40
804 633	SPEEDY <i>Tornado</i> 1000	10	32	100	92	14	9	10.000	80
806 023	SPEEDY <i>Tornado</i> 2000	10	47	130	122	26	9	20.000	40
807 031	SPEEDY <i>Tornado</i> 3000	19	65	170	160	30	17	30.000	30



SPEEDY *Twister* 1000, 2000 round assembly module with raised supports and blow out ducts

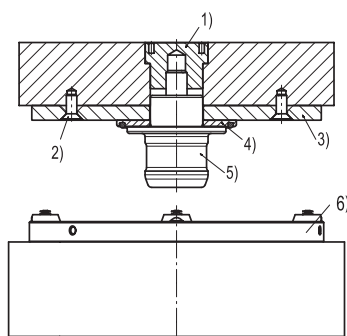


1) Blow out nozzle

9

Order no.	Description	A	ØB	ØC	ØD	Insertion force [N]	ØLK
804 500	SPEEDY <i>Twister</i> 1000	13	32	105	10	6.722	92
804 540	SPEEDY <i>Twister</i> 2000	13	47	140	12	20.000	122

Sample application: SPEEDY *Twister* 1000, 2000



02 04 119

- 1) Nipple attachment
- 2) Screw DIN 7991
- 3) Hardened bearing face
- 4) Distance washer
- 5) Retractable nipple
- 6) SPEEDY *Twister*

SPEEDY *Twister* 1000, 2000 for permanent automatic operations.

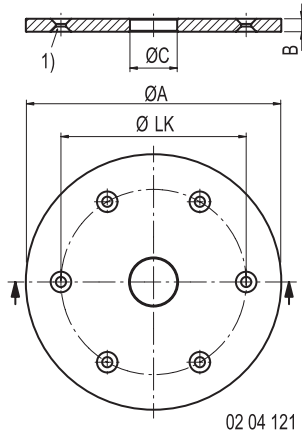
Retractable nipple with distance washer and hardened bearing face.

Advantages:

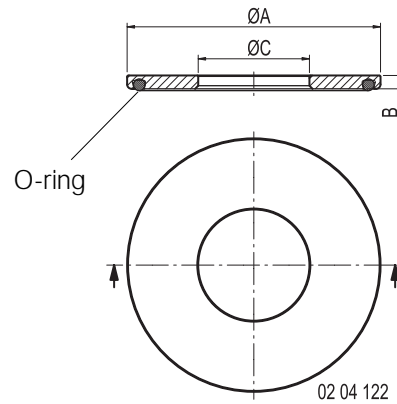
- reliable surface blow off
- no wear
- surface check via differential pressure, air barrier seals are possible



Hardened bearing face



Distance ring



1) Reduction for bolt DIN 7991

Order no.	suitable for	ØA	ØLK	B	ØC	1)
804 510	SPEEDY <i>Twister</i> 1000	105	70	5	25	M5
804 272	SPEEDY <i>Twister</i> 1000	105	70	5	16	M5
804 281	SPEEDY <i>Twister</i> 2000	138	100	7	25	M5

Order no.	suitable for	ØA	B	ØC
804 269	SPEEDY <i>Twister</i> 1000	42	3	25
804 271	SPEEDY <i>Twister</i> 1000	42	3	16
804 280	SPEEDY <i>Twister</i> 2000	57	3	25



Example: SPEEDY *Twister* 1000 special solution for a tight stitch length.



Raised support with blow out ducts

The SPEEDY *Twister* with raised blowers is used in the automation technology.

Practical advantages:

- Intelligent blow out and blow off technologies for the mounting points and the bolt hole
- Applications in automated palletizing systems.
- Support check with differential pressure, air-to-lock possible



Practical example: Layout 4/5 axis table with SPEEDY 1000 square.

9



Fast closing clamp plate with 4 pcs of flushed SPEEDY assembly round 1000.



Norm pallet with built-in fast closing clamps and flushed SPEEDY assembly 1000 round.



Fast closing clamp plate with SPEEDY assembly 3000 square for 4/5 axis machines.



Fast closing clamp plate for 5 axis table with sealing frame and SPEEDY assembly 1000 round.



Fast closing clamp plate with SPEEDY assembly 1000 round with mounting holes for machine table.



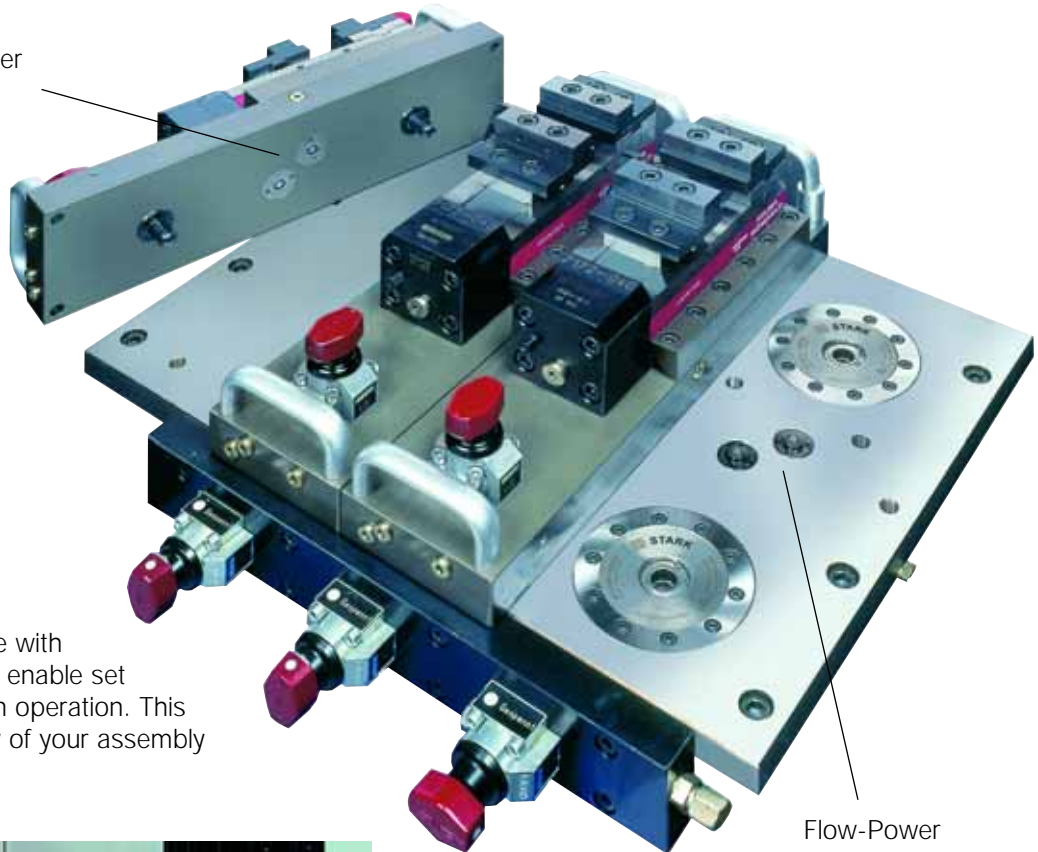
Fast closing clamp plate with SPEEDY assembly 2000, flushed.



Flow-Power

Set up external of the machine

Hydraulic universal-device with zero point clamp system, enable set up while the machine is in operation. This increases the productivity of your assembly line.



9



Using the machine.



Rotation clamp device with 4 compact clamps. The compact built enables set up without collisions.



SPEEDY Sweeper 2000



STARK Zero Point clamping system with blow off and integrated mount control for automated production and manual applications.

Free of swarf for automated production lines

Swarf and refuse always place obstacles in the way of palletizing equipment. STARK's new *Sweeper* solves this problem. The blow off system, the central lock and bearing face blow off, maximize the level of production safety.

- Fully automatic mounting
- Safe automatic operations
- Protected against dirt build up with the blow out and blow off of bearing faces. Central lock blow off, readied for bearing face sad lock checks.

With integrated mount control

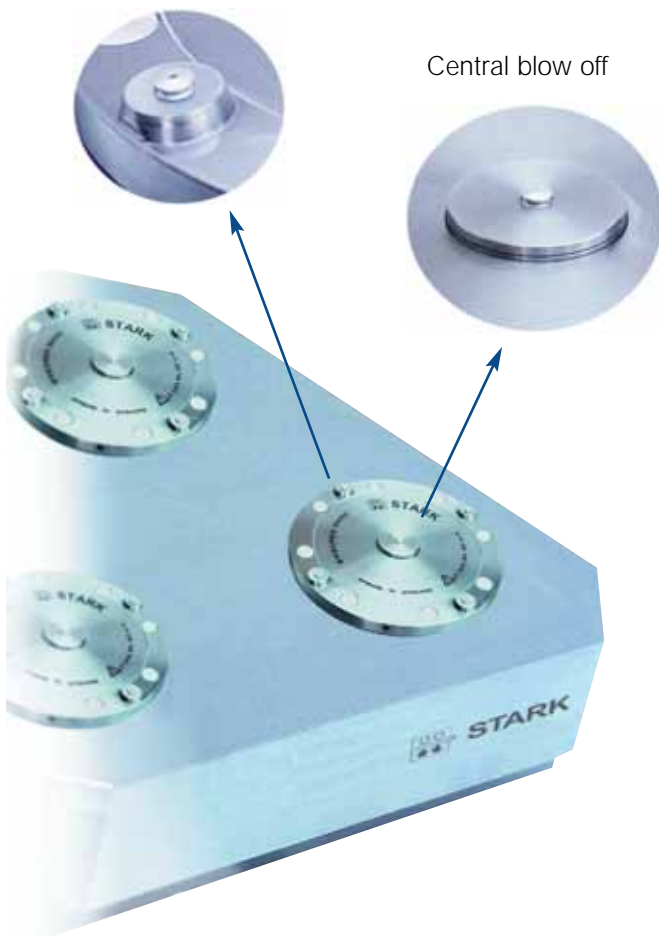
The newly designed SPEEDY *Sweeper* has an additional advantage. The air escaping through the nozzles can be gauged with a differential pressure switch. This enables an exact control of the mount pressure.

Another technical masterpiece feature of this system is its jam-free handling. The clamps are opened wide under pressure and lifted off from their fittings. This makes the equipment easy to mount or remove.

Sample application:

Mount with blow off nozzle

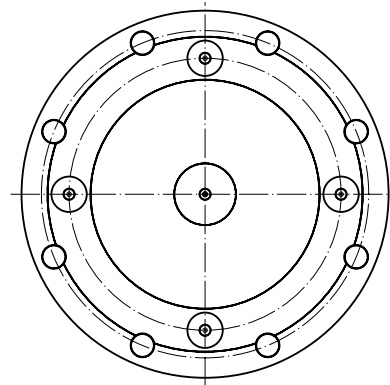
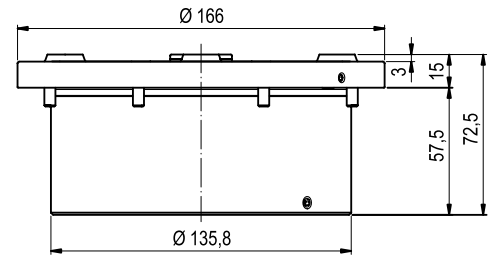
Central blow off





SPEEDY Sweeper 2000

Clamping module with central lock and raised face blow off



Order no.	Insertion force [N]	Release hydr. pressure [bar]	Min. pressure for blow out [bar]
809 100	20'000	50	6

- Flange connections
- Retractable nipples see page 54

9

Further system sizes upon request, also available with media ducts.



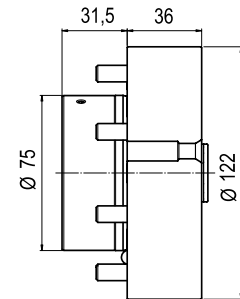
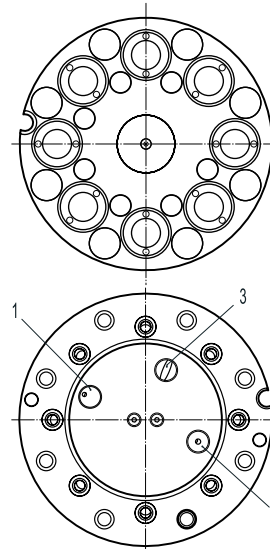
Sweeper 2000 in a practical application



SPEEDY Sweeper – multiple coupling

Coupling support plate

The hydraulic, double acting coupling support plate is equipped with a central lock and prevents dirt from entering. At the same time, swarf is blown off from the coupling support plate. The coupling support plate can be decoupled under pressure.



- 1) Clamping oil connection
- 2) Releasing oil connection
- 3) Air connection

9

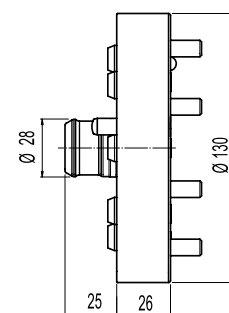
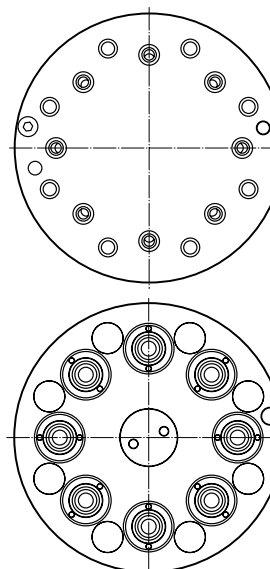
Order no.	Description	Insertion force at 300 bar [N]	max. operating pressure for clamping/releasing [bar]	min. pressure for blow off [bar]	max. pressure at 4x NW 5 [bar]
809 200	with 8 ducts NW 5	max. 20'000	300	6	300
809 204	with 4 ducts NW 5	max. 20'000	300	6	300

Coupling force $F [N] = 15,4 \times p [\text{bar}] \times n$

Depending on the coupling force and the application, the operating pressure should be reduced to the minimum necessary. Stark will give you the required advice.

n = Number of lines under pressure when coupled

Nipple support plate



Order no.	Description	max. operating pressure for clamping/releasing [bar]	max. pressure at 4x NW 5 [bar]
809 220	with 8 ducts NW 5	300	300
809 224	with 4 ducts NW 5	300	300

Sweeper couplings can be combined with the Sweeper fast closing clamp.