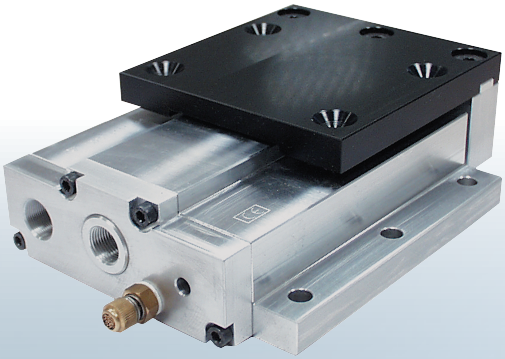
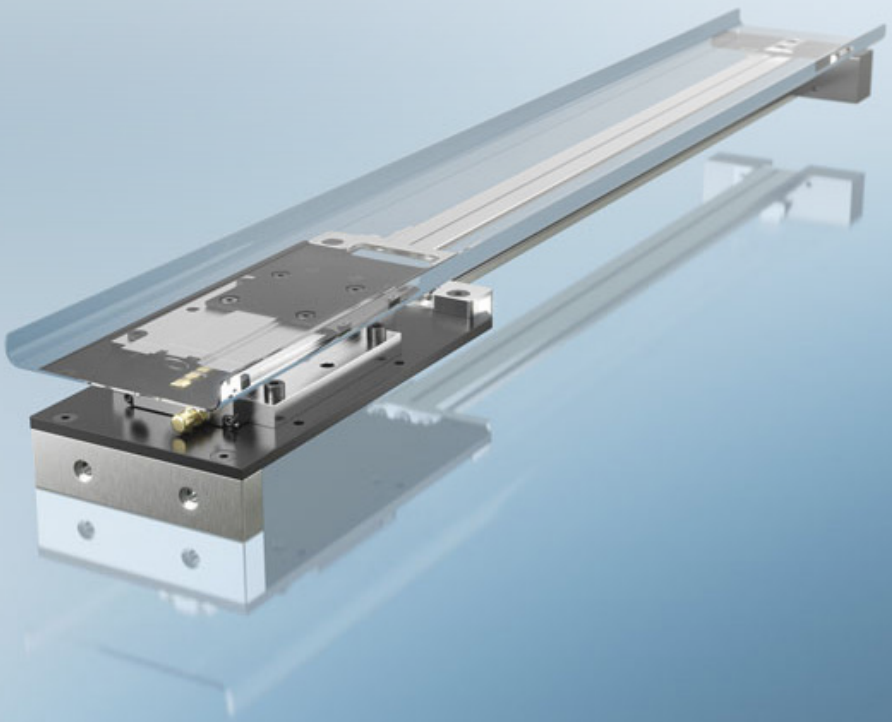
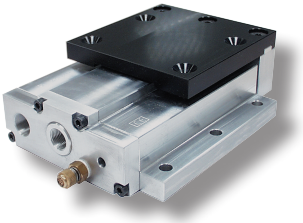




Pneumatic part conveyors

Code	Maximum load N	Maximum parts load Kg
TPTN-18	180	15
TPTN-25	250	22
TPTN-35	350	30
TPTN-65	650	53



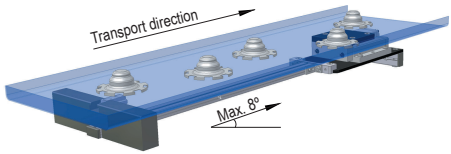
Application and use
This pneumatic part conveyor is a linear conveyor, which transports stampings of all kinds and shapes even out of extremely narrowed waste disposers.

The simple handling of the conveyors allows for rapid and trouble-free operation both in the series as in the large-quantity production. The conveyor is robust and needs little maintenance.

Operation
Linear conveyors work according to the principle of the relation between velocity and frictional resistance. Thereby different front or back acceleration values are used to transport a part on a groove made of steel sheet. It even allow us to transport parts with a negative inclination (max. 8°).

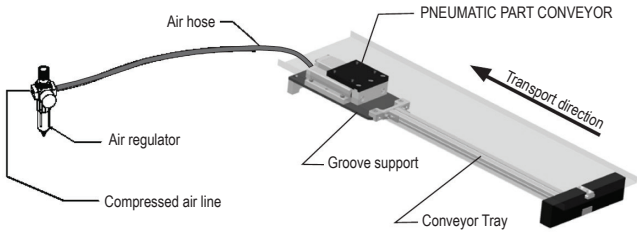
By adjusting stroke frequency, the transport velocity can optimally be accommodated to the conditions on the spot.

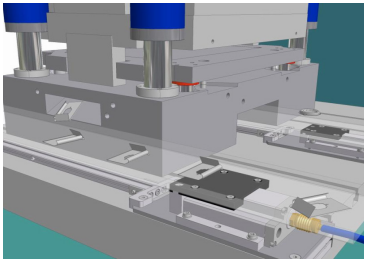
The transport groove can be arranged individually and a high wear of the conveyor band is avoided. Stampings which are fouled by oil can optionally be carried away on a corrugated transportation steel sheet.

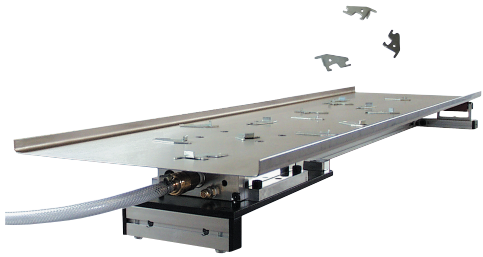


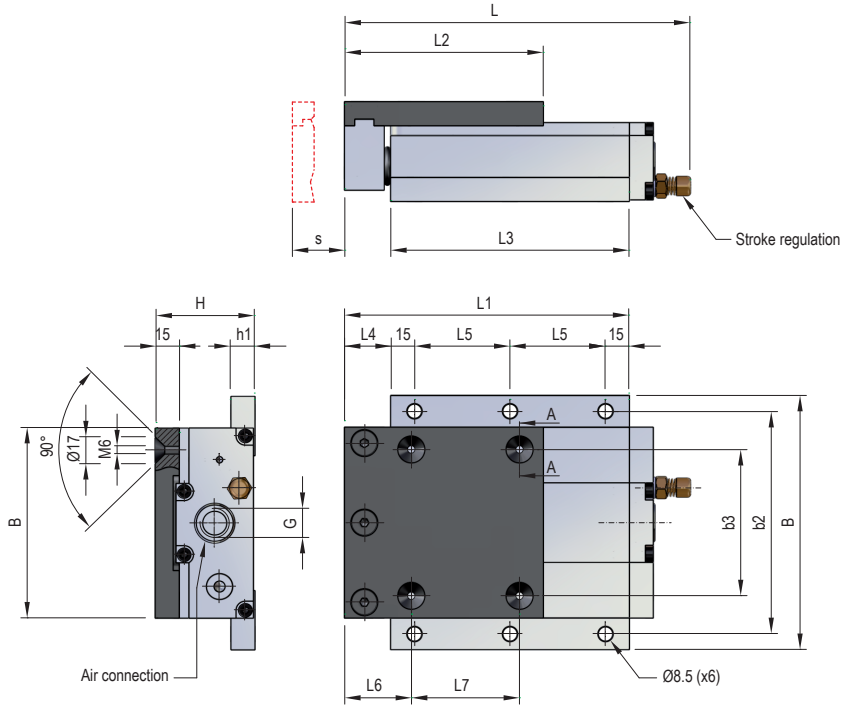
The conveyors work with oiled air pressure which is supplied by means of the maintenance unit and the oiler. The stroke frequency adjustment rate lies, depending on the type of the conveyor, between 10–180 strokes/minute.

The vibrations of the transport groove have to be secured by groove supports. Transport velocity can be increased by a slight incline of the transport groove.





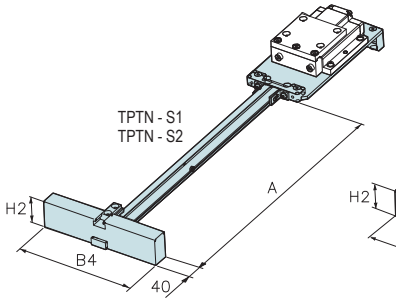


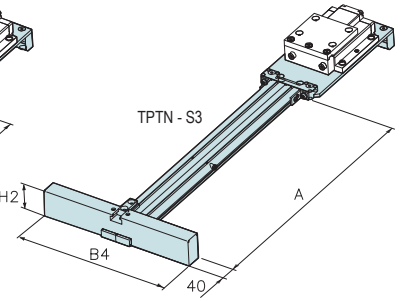


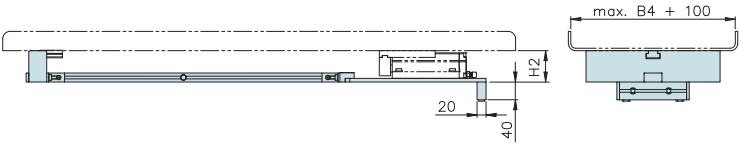
Code	L mm	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	L6 mm	L7 mm	B mm	B1 mm	b2 mm	b3 mm	H mm	h1 mm	G mm	s mm	Kg
TPTN - 18	211	188	100	150	23	60	30	60	125	85	105	60	40	10	R 3/8"	27	2,1
TPTN - 25															R 3/8"		2,1
TPTN - 35	218	194	125	150	29	60	42	68	160	120	140	92	62	15	R 3/8"	30	4,3
TPTN - 65															R 1/2"		4,5

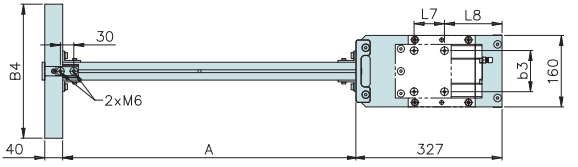
Code	Maximum load with support N	Maximum incline of the transport groove	Maximum weight of support Kg
TPTN - 18	180	8º	3
TPTN - 25	250	8º	3
TPTN - 35	350	8º	5
TPTN - 65	650	8º	7

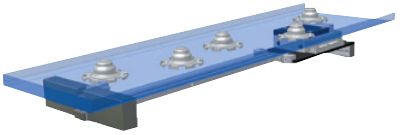
Code	Working pressure Bar	Min internal diam. hose mm	Air consumption l/min	Rate of feed m/min	Noise level dB(A)
TPTN - 18	3,9 - 4,5	6	1 - 2	0,8 - 4	< 70
TPTN - 25	3,9 - 4,6	6	1,5 - 2,5	0,8 - 4	< 70
TPTN - 35	4,2 - 4,7	8	2 - 5	0,8 - 3	< 70
TPTN - 65	4,2 - 4,7	8	3 - 7	0,8 - 3	< 70

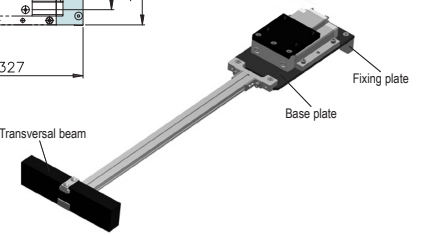






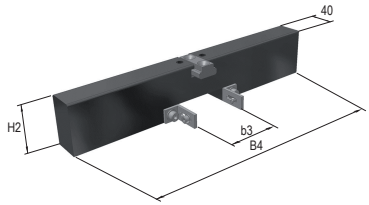






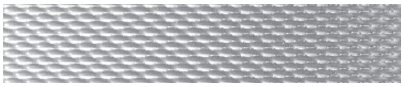
Code	A mm	B4 mm	H2 mm	L7 mm	L8 mm	b3 mm	Pneumatic part conveyor model
TPTN-S1	700	160	48	60	148	60	TPTN-18 / TPTN-25
		200					
		300					
	1000	160	48	60	148	60	TPTN-18 / TPTN-25
		200					
		300					
TPTN-S2	700	160	70	68	134	92	TPTN-35 / TPTN-65
		300					
		500					
	1000	160	70	68	134	92	TPTN-35 / TPTN-65
		300					
		500					
TPTN-S3	700	300	70	68	134	92	TPTN-35 / TPTN-65
		400					
		500					
	1000	300	70	68	134	92	TPTN-35 / TPTN-65
		400					
		500					

Support



Code	B4 mm	H2 mm	b3 mm
TPTN-S1-S	160 200 300	48	40
TPTN-S2-S	160 300 500	70	40
TPTN-S3-S	300 400 500	70	80

Transport groove

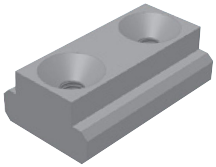


For transport grooves we recommend, particularly for badly oiled/ greased parts, the using of structured sheet steel of the SM-5WL (1.4301) type.

The transport groove has to be made by the customer.

Sliding T nut

TPTN-T



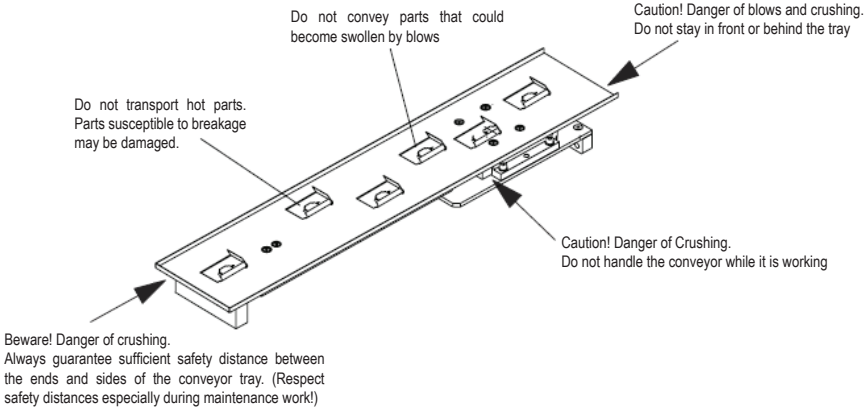
Safety

In principle, conveyor capacity depends on the surface of the parts that are to be conveyed, on the tray surface and on the adjusted stroke frequency. Conveyor transport capacity with the conveyor tray is indicated in catalogue specifications.

In order to prevent tool breakage and other defects due to a pneumatic conveyor stop during the automatic manufacturing process, a control device has to be foreseen that transmits a signal that initiates a tool emergency stop in case of unit malfunction or stoppage.

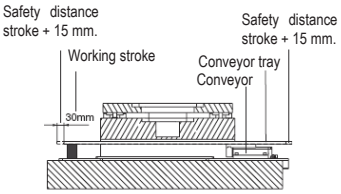
In order to obtain a long service life without breakdowns, the unit has to be properly handled and all the assembly instructions described in this manual are to be observed. Pay attention to the following safety indications, as an inadequate use may cause injury to people and damage to the equipment among other things.

Conveyors are to be fixed on to the tool in such a way they are protected by safety devices such as protection grids.



Safety distances as shown in the figure imply the corresponding safety installations that exclude the possibility of blows or crushing.
Henceforward safety distances in accordance with DIN EN 349 should be respected.

Stroke distance should be taken into account when carrying out conveyor assembly. It is for this reason that the tray should not be placed too near possible obstacles. Stroke distance may increase due to the weight of the tray - be especially careful with this.

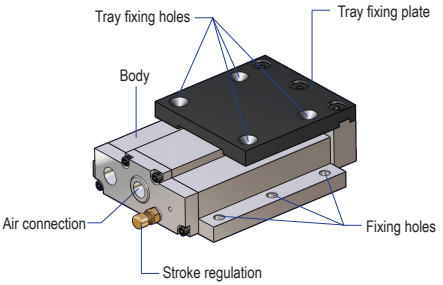


Installation

The pneumatic part conveyor is composed of a moving plate, on which the conveyor tray is fixed. The conveyor is connected to the air mains (maximum 4.7 bar) through a R3/8" or R1/2" connection that can be regulated by a pressure regulator with a lubricator . The interior diameter of the connection hose is to be kept at 10 mm, otherwise the unit will malfunction because of insufficient air flow.

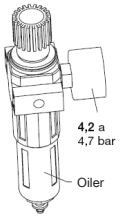
There can only be one conveyor per pressure regulator.
Upon initial functioning add some drops of oil to the air connection. Fix the conveyor with at least 4xM8 screws to the substructure (tool base plate). The screws are to be equipped with a safety washer.

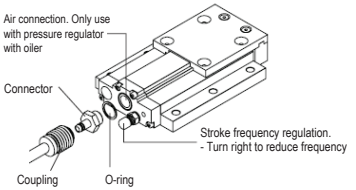
The construction of the substructure is to be dimensioned in such a way that the support surface is flat and without misalignments.
Fix the conveyor tray with four countersunk screws on the tray support plate. Make sure the length of the screws, depending on the thickness of the tray plate plus that of the base plate, have adequate dimensions so that the screw ends do not stick out over the tray.
The longer the conveyor tray plate is, the more wear and tear the equipment will have to undergo.
By holding the edges, plates with thicknesses below 1mm can have a higher rigidity.



Use supports in the front and back areas to project the conveyor tray from vibrations or leaning. Only extremely short trays (length of the device + 150 mm), which are very light, do not require supports.
The groove support assembly must avoid interfering with the conveyor guide. The conveyor groove must not become bulged.

Connect the air mains to the necessary connection elements.
Adjust the pressure regulator to an adequate pressure and fill it with oil.
Use only appropriate oil for the compressed air.
We recommend approximately 1 drop of oil per minute for 60 strokes.

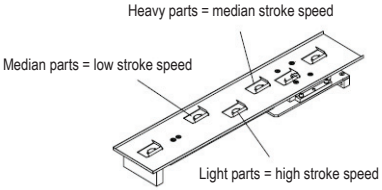


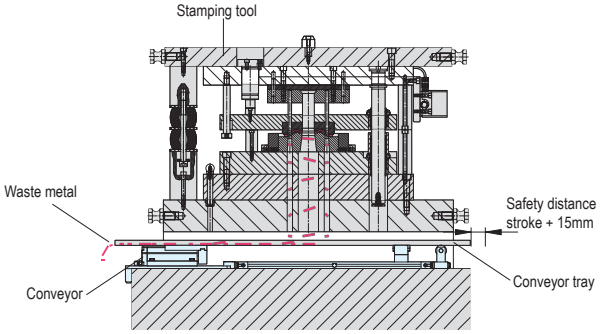


Conveyor speed will depend on stroke frequency. The conveyor can be regulated from 10 strokes/min. up to 180 strokes/min. approximately. Depending on the form of the pieces to be conveyed, optimal transport speed may be determined by trying out different stroke frequencies.

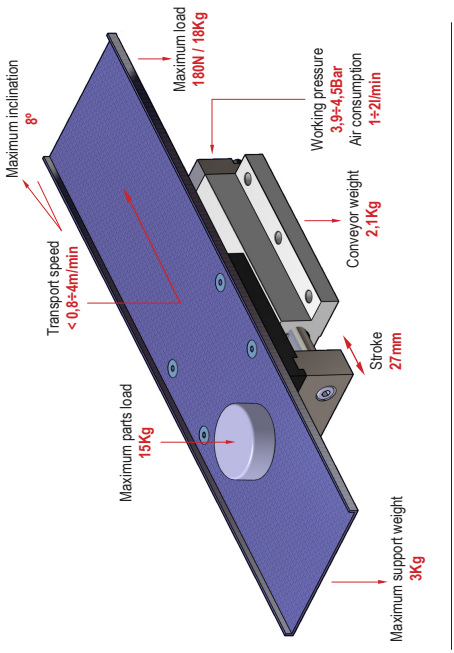
High stroke frequency does not necessarily produce a higher transport speed. An excessively high stroke frequency may even lead to the cancellation of transport, with the pieces simply vibrating on the tray.

Stroke frequency regulation is carried out by means of the adjustment screw placed at the front of the conveyor.

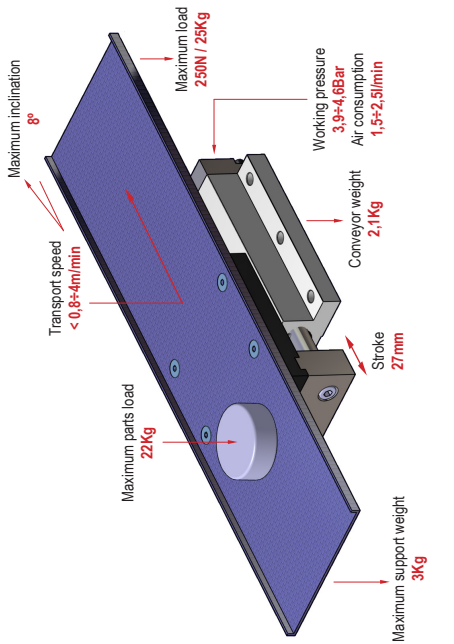




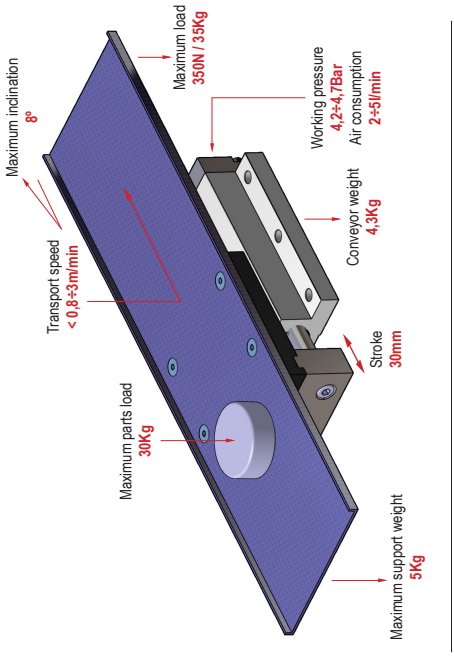
TPTN-18



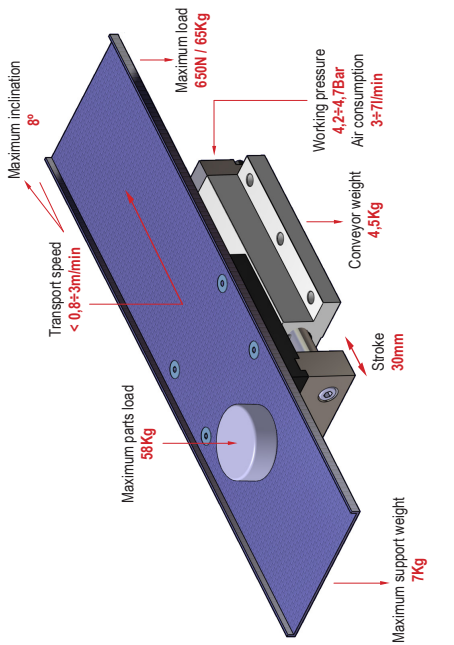
TPTN-25



TPTN-35



TPTN-65



Incorrect funtioning

The conveyor plate does not move:

☑ Check air supply and check that the pressure is correct

☑ Check the inside diameter of the air hose

☑ Check the oiler of the pressure regulator (if necessary apply a drop of oil on the air connection)

☑ Check that the conveyor tray moves freely or if it is blocked or lopsided.

Stroke frequency cannot be regulated correctly:

☑ If the conveyor has not been used for some time, we recommend an empty running period of about 10 minutes.

The conveyor stops alter some time in use:

☑ Lubrication is not sufficient (check the oiler). Before starting the conveyor apply a little oil in the air connection.

Maintenance

Operate the conveyor only with the pressure regulator and oiler!

Optimum oiling is to be guaranteed by the pressure regulator.
Adjust necessary lubrication according to the stroke frequency used.

Amount guidance:

1 DROP OF OIL PER MINUTE
for 60 strokes per minute.

☑ Use emulsified and very fluid oil to guarantee optimum oiling.

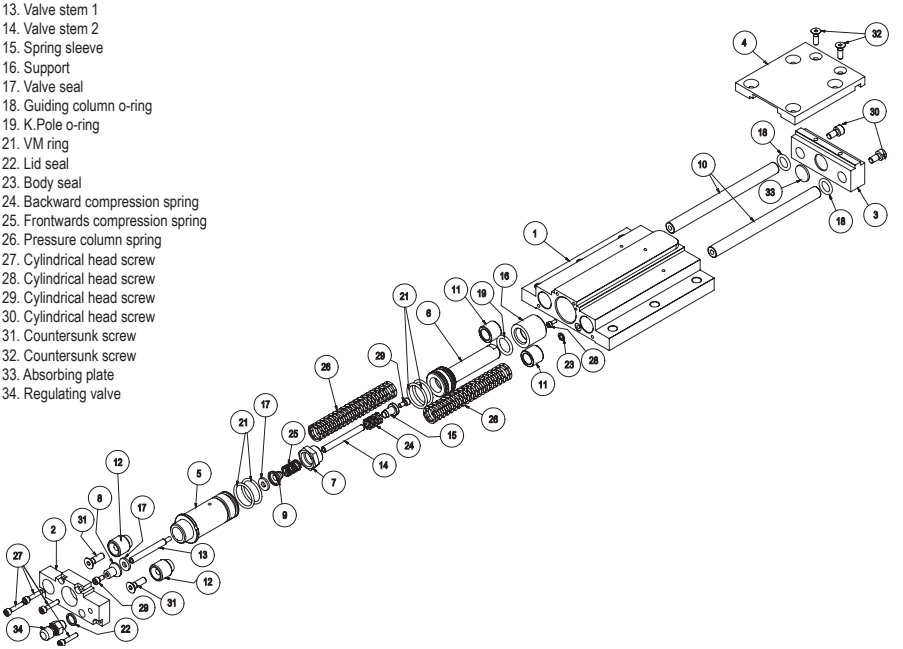
☑ Clean the pressure regulator water separator every day.

☑ Do not use the pneumatic part conveyor subjecting it to high temperatures, as this can alter lubrication and damage the closing seals.

The conveyor has been adjusted by the manufacturer, for this reason it should not be opened.

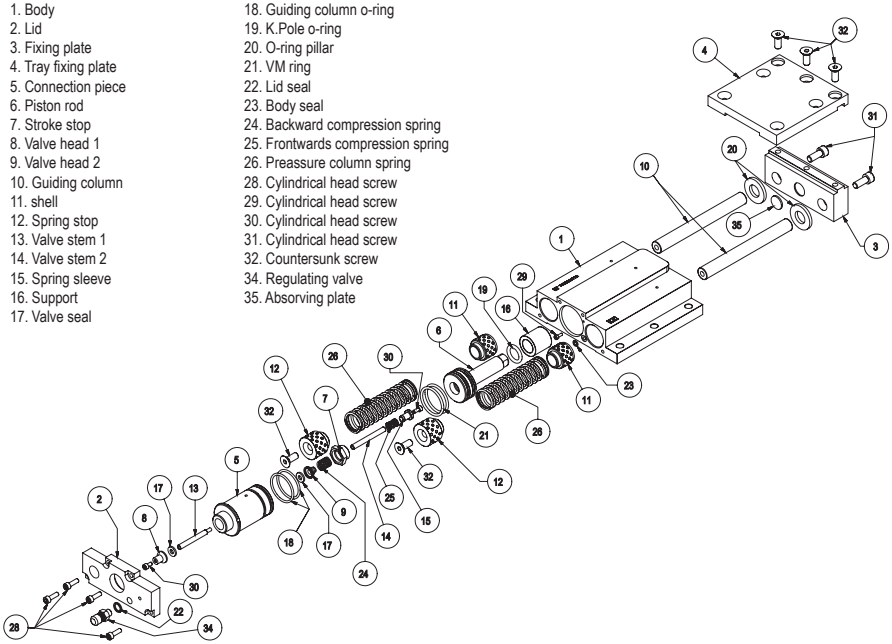
Spare parts TPTN-18 / TPTN-25

1. Body
2. Lid
3. Fixing plate
4. Tray fixing plate
5. Connection piece
6. Piston rod
7. Stroke stop
8. Valve head 1
9. Valve head 2
10. Guiding column
11. shell
12. Spring stop
13. Valve stem 1
14. Valve stem 2
15. Spring sleeve
16. Support
17. Valve seal
18. Guiding column o-ring
19. K.Pole o-ring
21. VM ring
22. Lid seal
23. Body seal
24. Backward compression spring
25. Frontwards compression spring
26. Pressure column spring
27. Cylindrical head screw
28. Cylindrical head screw
29. Cylindrical head screw
30. Cylindrical head screw
31. Countersunk screw
32. Countersunk screw
33. Absorbing plate
34. Regulating valve



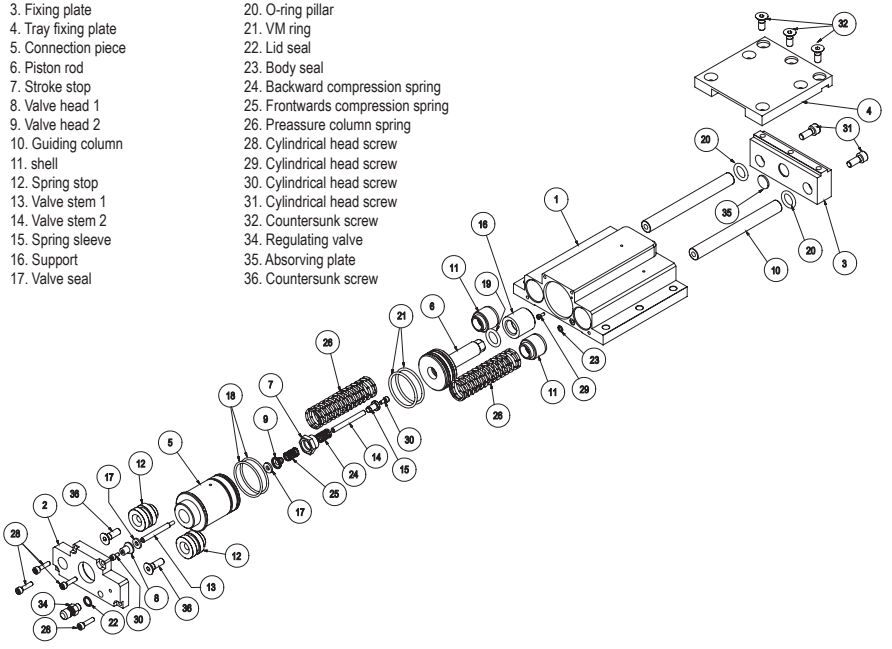
Spare parts TPTN-35

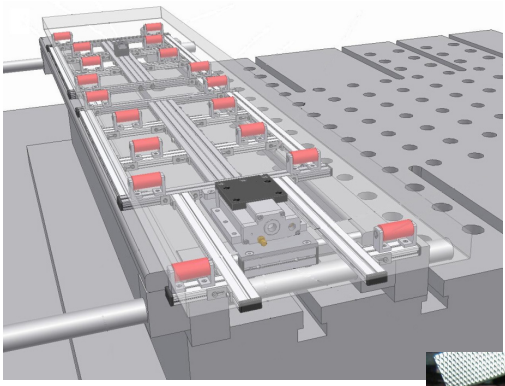
1. Body
2. Lid
3. Fixing plate
4. Tray fixing plate
5. Connection piece
6. Piston rod
7. Stroke stop
8. Valve head 1
9. Valve head 2
10. Guiding column
11. shell
12. Spring stop
13. Valve stem 1
14. Valve stem 2
15. Spring sleeve
16. Support
17. Valve seal
18. Guiding column o-ring
19. K.Pole o-ring
20. O-ring pillar
21. VM ring
22. Lid seal
23. Body seal
24. Backward compression spring
25. Frontwards compression spring
26. Preassure column spring
28. Cylindrical head screw
29. Cylindrical head screw
30. Cylindrical head screw
31. Cylindrical head screw
32. Countersunk screw
34. Regulating valve
35. Absorving plate

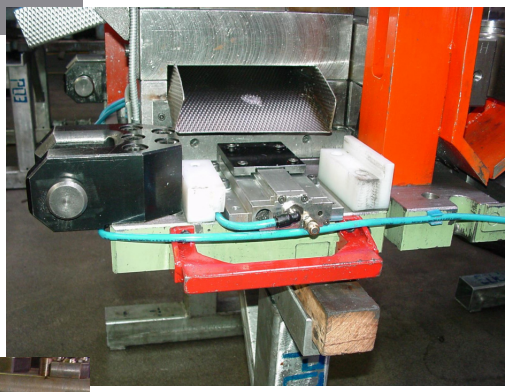


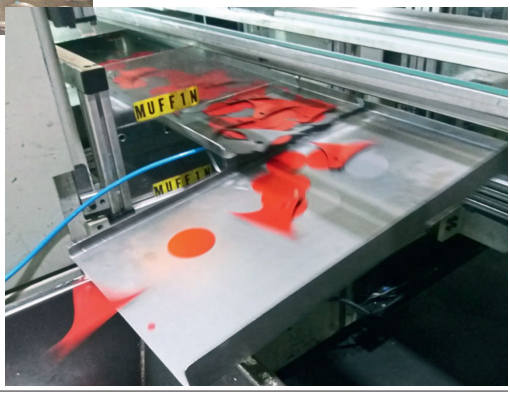
Spare parts TPTN-65

1. Body
2. Lid
3. Fixing plate
4. Tray fixing plate
5. Connection piece
6. Piston rod
7. Stroke stop
8. Valve head 1
9. Valve head 2
10. Guiding column
11. shell
12. Spring stop
13. Valve stem 1
14. Valve stem 2
15. Spring sleeve
16. Support
17. Valve seal
18. Guiding column o-ring
19. K.Pole o-ring
20. O-ring pillar
21. VM ring
22. Lid seal
23. Body seal
24. Backward compression spring
25. Frontwards compression spring
26. Preassure column spring
28. Cylindrical head screw
29. Cylindrical head screw
30. Cylindrical head screw
31. Cylindrical head screw
32. Countersunk screw
34. Regulating valve
35. Absorving plate
36. Countersunk screw





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