

HEBERLEIN® POLYJET-TG TOP AIR.

AIR INTERLACING.

AIR INTERLACING OF TECHNICAL YARNS IN THE SPIN-DRAW PROCESS.

The PolyJet-TG Top Air is used for advanced air interlacing of technical filament yarns such as Polyester, Nylon and polypropylene which can be used as example, in the manufacture of ropes, geo-textiles, hoses, sewing threads, netting and slings.

Air interlacing

Individual filaments are intermingled using a stream of compressed air. The resulting interlacing knots provide the required yarn compaction. This in turn leads to higher processing speeds, to an improved package build and reduced occurrence of broken filaments and yarn breaks in the downstream processes.



Features and Benefits

- ▶ Provides an additional indirect air stream from above, as well as normal vertical airstream from below
- ▶ Indirect air stream forwards and centres the yarn and works as a twist amplifier
- ▶ Can produce a large number of strong interlacing knots with a large denier range
- ▶ Improved package build and unwinding at very high speeds
- ▶ Easy to thread via suction gun and user friendly
- ▶ Ceramic guarantees long life
- ▶ Can be fitted to all existing spinning machines

Heberlein® PolyJet-TG Top Air

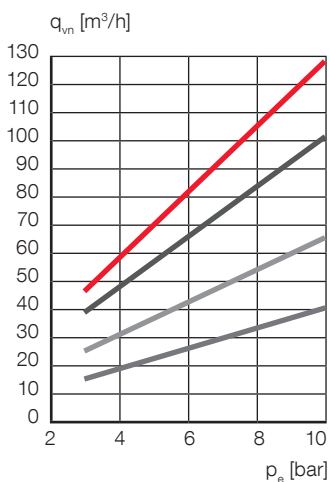
Technical data

Type	TG36- HN251AL/CO33	TG36- HN321AL/CO41	TG45- HN403AL/CO52	TG45- HN453AL/CO63	TG45- HN452AL/CO62
Working air pressure p_e [bar]	3.0 - 8.0	3.0 - 8.0	3.0 - 8.0	3.0 - 8.0	3.0 - 8.0
Yarn-count in the jet ¹ [dtex]	PES: 500 - 1 000 PA: 500 - 1 000 PP: 400 - 900	PES: 600 - 1 800 PA: 600 - 1 800 PP: 550 - 1 500	PES: 1 000 - 3 500 PA: 1 000 - 3 000 PP: 900 - 2 500	PES: 2 000 - 5 000 PA: 2 000 - 4 500 PP: 1 800 - 4 000	PES: 2 500 - 6 000 PA: 2 500 - 5 500 PP: 2 200 - 5 000
Winding speed ¹ [m/min]	~ 5 000	~ 5 000	~ 5 000	~ 5 000	~ 5 000
Formula for air consumption per yarn channel q_{vn} [m ³ /h]	$q_{vn} = 3.617 (p_e + 1)$	$q_{vn} = 5.925 (p_e + 1)$	$q_{vn} = 9.285 (p_e + 1)$	$q_{vn} = 11.646 (p_e + 1)$	$q_{vn} = 11.792 (p_e + 1)$
Yarn tension after the jet ² [cN/dtex]	0.06 - 0.15	0.06 - 0.15	0.06 - 0.15	0.06 - 0.15	0.06 - 0.15
Number of yarn ends	1, 2	1, 2	1, 2	1, 2	1, 2
Gauge [mm]	30, 15	30, 15	30, 15	30, 15	30, 15

¹ Approximate values: dependent on the properties of the feeder yarn used, on the machine set up and yarn guiding.

² Yarn tension 1 g = 0.981 cN, den = 0.9 x dtex

Air consumption



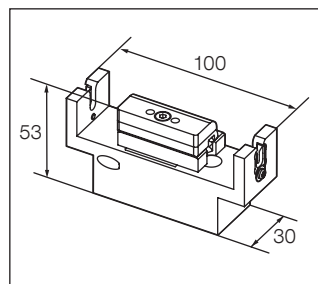
- HN452A, HN453A
- HN403A
- HN321A
- HN251A

p_e = gauge pressure [bar]
 q_{vn} = air consumption [m³/h]*
 psi = 14.7 x bar
 CFM = 0.588 x m³/h

* In the normal conditions as per DIN 1343:

standard temperature = 0 °C, standard pressure = 1.01325 bar, relative humidity = 0 %
 (1 standard cubic metre = 1.293 kg)

Dimensions and weight



Weight 260 g, dimensions in mm

Compressed air requirements

- Max. residual oil: 0.1 mg/m³ (class 2*)
- Max. residual particles: (class 2*)
 - Particle size 1 µm
 - Particle density 1 mg/m³
- Max. residual water: (class 5*)
 - Residual water 7.732 g/m³
 - Dew point + 7 °C

* According to DIN ISO 8573-1