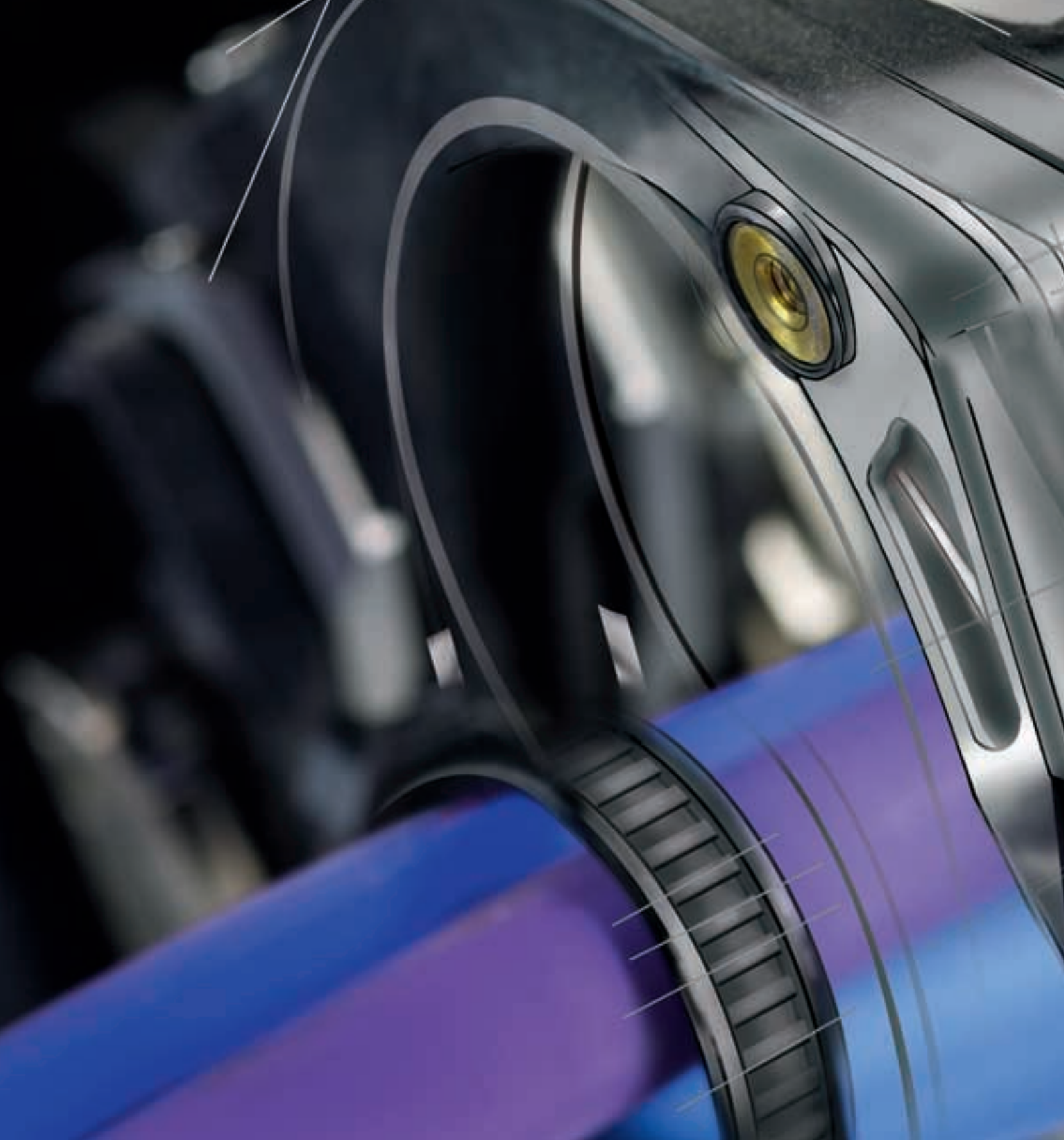


Application Tooling





	Page
6.1 Automatic Cable Tying System	
AutoTool System 3080	400
Autotool 2000	404
Autotool 2000 Innovations	406
6.2 Manual Application Tooling	
Overview Application Tools for Cable Ties	408
Flowchart for Optimum Tool Selection	409
Manual Processing Tool for Cable Ties – MK10-SB	410
Manual Tensioning Tools for Cable Ties – MK20/MK21	410
Manual Processing Tool for Cable Ties – MK3SP	411
Manual Processing Tool for Cable Ties – MK7	411
Manual Processing Tool for Cable Ties – MK7HT	411

	Page
Manual Processing Tool for Cable Ties – MK9HT	412
Manual Processing Tool for Cable Ties – MK9	412
Manual Processing Tool For Cable Ties – MK6	412
Pneumatic Tensioning Tool for Cable Ties – MK3PNSP2	413
Pneumatic Tensioning Tool for Cable Ties – MK7P	414
Pneumatic Tensioning Tool for Cable Ties – MK9P	415
Manual Processing Tool for Cable Ties – KR6/8	416
Pneumatic Tensioning Tool for Cable Ties – KR8PNSE	416
Manual Processing Tool For Cable Ties – MK9SST	417
Manual Processing Tool for Cable Ties – MTT4	417
Manual Processing Tool for Cable Ties – MTT6	417
AMTS Automated Metal Tying System	418
How to use a cable tie tool (using an MK7 as an example)	419

Application Tooling

	Page
Tool testing – Determination of tensions	419
Test set-up with MAV HT50 device and cable tie tool MK3PNSP2	420
6.3 Specialist Tooling	
Weldy Hot Air, Tool H5002	421
Weldy Hot Air, Tool H5004	421
E4500 Gas powered Hot Air Gun Kit	422
NA Three-Pronged Pliers and Replacement Prongs	423
VA2.5/5 Three-Prong Expansion pliers	424
Three Pronged Expansion Applicator Tools	425
TY5 Wedge base socket tool	426

	Page
ASNP, MSNP snapper tools	426
Helafix HCT tool and Accessories	427

6.4 Cable Installation System

Cable Rod	428
Cable Rod – Sets	429
Cable Rod – Pairs	430
Cable Rod – Accessories	431
Cable Grips	433



AutoTool System 3080

The ATS3080 is an electrical bundling system from HellermannTyton. In about one second you get absolutely waste free bindings. The outside serrated strap and the closures are each supplied on "continuous reels". The ATS3080 is an outstanding innovation in bundling systems!

High quality standards in the production industry are requiring fully automatic, precise bundling. Only the automation of bindings allows efficient manufacturing of high quantities in a consistent workflow. A challenge which HellermannTyton solved successfully with the development of the ATS3080.

The ATS3080 can be used with an overhead suspender or a bench mount system. This makes the tool flexible for different applications, especially in the Automotive and the white or brown goods industry, or even for packaging. It is a high-capacity tool with a very short cycle time (about 1.3sec./50 mm jaws).



ATS3080 with overhead dispenser for mobile applications.

Material Data	
Power Supply	Electrical
Cycle Time	approx. 1.3 sec. (50mm jaw)
Weight (Kg)	2,2
Application	Stationary or mobile

Material Data	
Power Supply unit	Input: 230/115 VAC, 50/60 Hz Output: 48 VDC, max. 50 W
Bench mount kit	Tool and tie reel stand including foot pedal
Overhead Suspender	Overhead Suspender and tie reel stand including balancer



Closures, strap and fixing parts FT6 and EC36.



The ATS 3080 is also innovative for its strap and closures. The outside serrated strap prevents damage to wire insulation. The whole system is waste free and every shot has a flush cut off. The tool uses only the required strap length for your diameter. You do not lose any time cleaning or opening any waste boxes, resulting in a clean and safe production environment. The material is available in reels of 500m strap and reels of 5000 piece closures.

The ATS 3080 has a tension control system as an optional feature. Every shot is stored and documented on the PCB. You can read out the data via an interface to your PC, with this option you can guarantee a reliable binding and fixing process.



For the stationary installation – the bench mount kit.

Technical Table

Article-No.	Type	Bundle Ø min.	Bundle Ø max.
102-30000	ATS3080 jaw 30 mm	0.0	30.0
102-50000	ATS3080 jaw 50 mm	0.0	50.0
102-80000	ATS3080 jaw 80 mm	0.0	80.0
102-55000	ATS3080 jaw 50 mm for fixing parts	0.0	50.0

All dimensions in mm. Subject to technical changes.

For your assembly line situation we offer individual solutions.

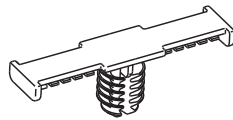


Three jaws optimise the cycle time for the different bundling diameters.



HellermannTyton developed a very innovative solution for harnesses of the Automotive industry. With the ATS3080 it is now possible to fasten fixings, also known as foot parts, with an automatic binding. This simplifies the final assembly of harnesses, because the pre-assembled harness can be fixed directly at the metal edge or in a hole! It's the first time that you can produce a complex harness completely automatically.

Another advantage of the ATS3080 is the three different jaw diameters: 30 mm, 50 mm and 80 mm are available. If your application needs ties from very small up to 80 mm, you use the 80's. If your max. is 45 mm you choose the 50's and save time. You don't have to adjust anything. The sophisticated electronics recognise it and change the parameters for the cycle.



Fixing Clip ATS BCFT6LG



Fixing Clip ATS EC35



The footpart is placed, ...



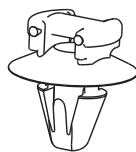
Fir Tree ATS FT6



... the strap is tied automatically through the head of the footpart, ...



Autotool System 3080.



Arrow Head ATS SFT6,5



... and the harness is completely bundled including the footpart.

Technical Table

Article-No.	Type
102-00000	ATS3080 Complete
102-00010	Power Pack ATS3080
102-00040	Bench Mount Kit
102-00050	Overhead Dispenser

All dimensions in mm. Subject to technical changes.

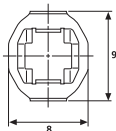
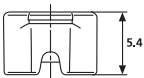
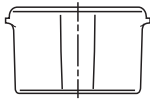
Other fixings available on request.



Technical Table

Article-No.	Type	Panel Thickness min.	Panel Thickness max.	Fixing Hole Ø (FH)	Material	Colour	Pack Cont.
102-67060	ATS FT6	0.6	3.0	6.3-7.0	PA66HIRHS	Black (BK)	500 pcs.
102-67061	ATS FT6 LG	0.6	6.0	6.3-7.0	PA66HIRHS	Black (BK)	1000 pcs.
102-67065	ATS BC FT6 LG	0.6	5.1	6.3-7.0	PA66HIRHS	Black (BK)	1000 pcs.
102-67080	ATS FT8G SD	0.8	5.0	7.9-8.5	PA66HIRHS	Black (BK)	1000 pcs.
102-68350	ATS EC35	1.5	4.0	–	PA66HIRHS	Black (BK)	5000 pcs.
102-68360	ATS EC36	1.5	4.0	–	PA66HIRHS	Black (BK)	5000 pcs.
102-68370	ATS EC37	1.5	4.0	–	PA66HIRHS	Black (BK)	5000 pcs.
102-68380	ATS EC38	1.5	4.0	–	PA66HIRHS	Black (BK)	5000 pcs.
102-69060	ATS SFT 6.5	2.5	3.5	6.3-6.7	PA66HIRHS	Black (BK)	1000 pcs.

All dimensions in mm. Subject to technical changes.



Closure ATS3080

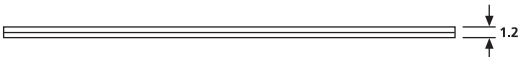
Material Data

Material	Polyamide 6.6 heat and UV stabilised (PA66HSUV)
Operating Temperature	-40 °C to +105 °C Continuous, (+145 °C for 500 h)
Flammability	UL94 V2



Material Data

Material	Polyamide 6.6 high impact modified, heat and UV stabilised (PA66HIRHSUV)
Operating Temperature	-40 °C to +95 °C Continuous, (+105 °C for 5000 h)
Flammability	UL94 HB



Strap ATS3080

Technical Table

Article-No.	Type	Min. Tensile Strength (N)	Material	Colour	Pack Cont.
102-66109	Strap Natural ATS3080	220	PA66HIRHSUV	Natural (NA)	500 m
102-66110	Strap Black ATS3080	220	PA66HIRHSUV	Black (BK)	500 m
102-66209	Closures Natural ATS3080	220	PA66HSUV	Natural (NA)	5000 pcs.
102-66210	Closures Black ATS3080	220	PA66HSUV	Black (BK)	5000 pcs.

All dimensions in mm. Subject to technical changes.



Autotool 2000

Autotool 2000 is an electronically operated automatic cable tying system which has been design to speed up the binding process. Consistency and quality in the process of bundling, threading and cutting is achieved at the touch of a button.

Features and Benefits

The HellermannTyton Autotool 2000 is very easy to use. The tool has a binding speed of 0,8 seconds per cycle. The tool handles both bands of 50 or reels of 3500 cable ties. The ties can bundle up to a diameter of 20 mm. Once fitted, the tie will have a flush cut off. The adjustable binding force and the electronic fault diagnosis system ensures that optimum results are achieved.

Application

The reliability, ergonomics, simple handling and flexibility makes the HellermannTyton Autotool 2000 ideal for diverse applications where high quantities are required, e.g. in cable assemblies for automotive, electronics, TV and domestic appliances, packaging of bags and the bundling of parts together. The system suits both the high volume use of ties or where flexible production practices are necessary. Overall the Autotool 2000 gives full, flexible and cost effective utilization of labour and maximises efficiency.



Assembly equipment, band reel, Autotool 2000 in receptacle and power supply unit.

Technical Table	
Article-No.	Description
120-00000	Autotool 2000
120-00010	Power Pack
120-00040	Bench Mount Kit
120-00050	Overhead Suspender
120-00060	Control Box
120-00080	HH20

All dimensions in mm. Subject to technical changes.



Packaging application with the bench mount kit.



Autotool 2000

Application Method

With the bench mount kit or the overhead dispenser the Autotool 2000 can be used stationary or mobile, depending on the customer's application.

Another opportunity is the integration of AT2000 into a fully automated production line. To do this you would need the control box, which is the interface between AT2000 and your production line.



Overhead suspender, reel with ties and Autotool 2000.

Material Data	
Power Supply	Electrical, with Power Pack or Battery Pack
Cycle Time	0.8 s
Weight (Kg)	1.2
Application	Stationary, mobile or included in a fully automated production line
Tension Force	Continuously adjustable

Material Data	
Power Supply unit	Electrical: - 230/115 VAC Mains Output: - 25 VDC max. 30 W
Battery charger	Standard charger without memory effect
Battery Pack	Battery Capacity: 2500 bindings per charge (1 hour charge)
Bench mount kit	Bench mounting kit with foot pedal operation
Overhead Suspender	Overhead suspension unit with spring balance
Harness board accessory HH20	Bundle Ø max. 20 mm, stand-offs are used as spacer for an optimal bundling, Bundle height 45-25 mm



Autotool 2000 Innovations

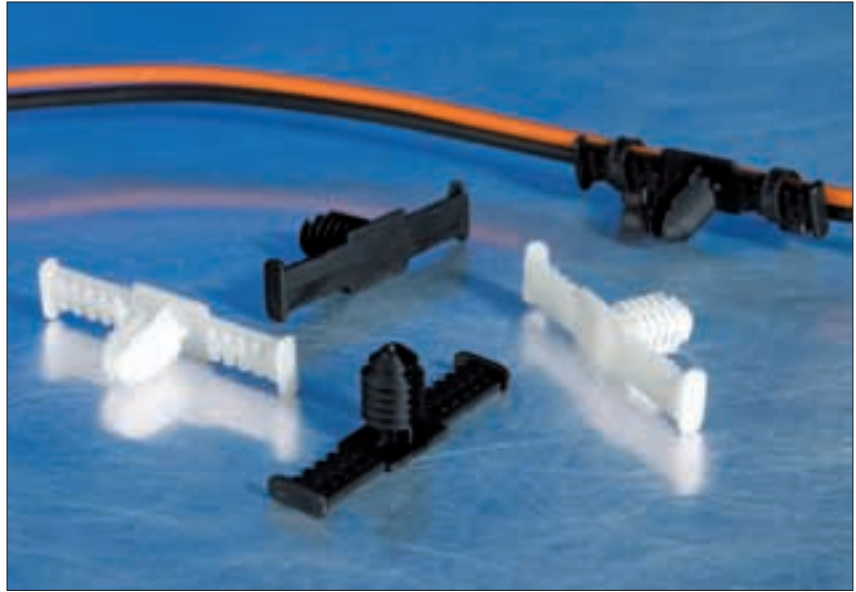
On Automotive harnesses many "tape clips" are used for harness mount points. These are mostly manually installed with tape. HellermannTyton have now created a new and much faster solution to install the now called "bundling clips". With a cable tie on each side of the clip you can fix it easily.

The small ridges below the clip avoid under-taping on small harness diameters and also prevent sideways movement.

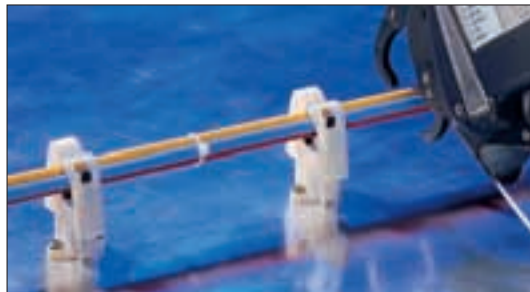
Because of new requirements from the cabling market to protect sensitive wiring or pipes etc., outside-serrated ties for AT2000 will be available in the future.

Changes on the tool can easily be made and kept to a minimum, to allow use of the outside-serrated ties instead of the standard inside serrated ties.

With outside-serrated ties you greatly reduce the possibility of damaging sensitive applications by the tie.



Bundling Clip ATS BC FT6LG.



Harness board accessory HH20.



Inside and outside serrated ties for AT2000.



Material Data

Material	Polyamide 4.6 (PA46)
Colour	Natural (NA)
Quantity	Bandolier with 3500 cable ties
Operating Temperature	-40 °C to +150 °C Continuous, (+195 °C for 500 h)
Flammability	UL94 V2, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low smoke generation



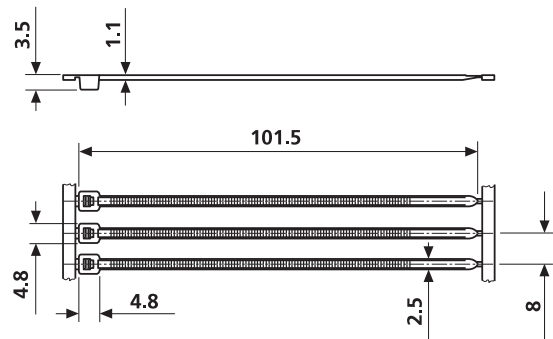
Material Data

Material	Polyamide 6.6 Heat Stabilised (PA66HS)
Colour	Natural (NA)
Quantity	Bandolier with 50 cable ties Bandolier with 3500 cable ties
Operating Temperature	-40 °C to +105 °C Continuous, (+145 °C for 500 h)
Flammability	UL94 V2



Material Data

Material	Polyamide 6.6 Heat and UV stabilised (PA66HSUV)
Colour	Black (BK)
Quantity	Bandolier with 50 cable ties Bandolier with 3500 cable ties
Operating Temperature	-40 °C to +105 °C Continuous, (+145 °C for 500 h)
Flammability	UL94 V2



Bandoleer T18RA.

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Colour	Material
120-04019	T18RA50	100	2.5	20.0	80	Natural (NA)	PA66HS
120-50009	T18RA3500	100	2.5	20.0	80	Natural (NA)	PA66HS
120-04010	T18RA50	100	2.5	20.0	80	Black (BK)	PA66HSUV
120-50010	T18RA3500	100	2.5	20.0	80	Black (BK)	PA66HSUV
120-46009	T18RA3500	100	2.5	20.0	80	Natural (NA)	PA46

All dimensions in mm. Subject to technical changes.