# **Pneumatic tools**



MADE IN <b>GERMANY</b>	Process mon- itoring availa- ble	Real <b>classics</b>	Automation integration
Fast mainte- nance. Comprehensive service.	Extensive range of special accesso- ries available from stock	Original HONSEL spare parts	Individual adaptations are possible.

**Decades of experience** and **continuous optimisation and further development** make the successful HONSEL tools from the BZ and VNG Series your reliable partner in industrial series production as well as in workshops and trade applications.



#### **ONLINE-CHECK-IN**

Take advantage of the possibility of checking in repairs and maintenance in advance on our Internet website.

# The innovative system packaging

Compatible with all L-Boxxes from other manufacturers.





A **sturdy design** and **complete equipment** with all the necessary conversion parts and special configurations such as axial versions or angular riveting heads leave nothing to be desired.



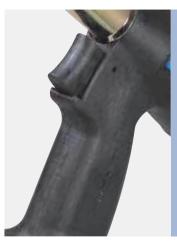
HONSEL BZ 221A In a special version for the production of a wide range of different cable drums.

# **FamilyFacts**



## **Comfortable**

The air current holds the blind rivet securely in the nose piece in any position before setting – one hand remains free to position the part.



# Durable

High-quality, durable plastic housing.

# **Flexible**

Multiple compressed air connections to ensure the right working position for right-handed and left-handed users at all times.



**Individual** Individual setting possibilities for the extractor.

Nose pieces stored directly in the base of the tool.

**Sturdy** 



# Safe and compact

Cover cap for reliable blind rivet setting without mandrel container in tight installation situations.





Large, sturdy stud collector for sheared blind rivet studs.



**Practical** Integrated hanger bracket for working with balancer.

# Optimised

Very flat standard nose pieces with reduced cone angle length improve the setting behaviour and make the work process faster.











sleeve with a special nose piece.

**Retrofits.** 

For use with standard rivets

Very small diameters Ideal for confined riveting positions

# **Extended front sleeves**

Extended front sleeves are ideally suited for reaching recessed riveting positions.

These are available from stock in lengths up to 210 mm and can be easily fitted to existing tools.

Blind rivets with extended mandrels are not necessary!

#### Extended front sleeves BZ 103A (and BZ 102A)

321103010130	Conversion kit for extended front sleeve (130 mm)
321103010170	Conversion kit for extended front sleeve (170 mm)
321103010210	Conversion kit for extended front sleeve (210 mm)

#### Extended front sleeves BZ 123A (and BZ 122A)

321123010130	Conversion kit for extended front sleeve (130 mm)
321123010170	Conversion kit for extended front sleeve (170 mm)
321123010210	Conversion kit for extended front sleeve (210 mm)

#### **Extended front sleeves VNG 703**

321703010170 Conversion kit for extended front sleeve (170 mm)

#### **Extended front sleeves VNG 903**

321903010170

Conversion kit for extended front sleeve (170 mm)







Extended front sleeve with large holding area

Comfort trigger AXIAL setting tool bracket can be used horizontally and vertically without modification

# **Axial setting**

Riveting tools with a pistol grip have an optimum ergonomic design for horizontal rivet setting.

Correspondingly modified versions are available for rivet setting in vertical direction, especially in industrial series production applications. The tools are converted at the factory.

Our Technical Field Service is available for consultation on site.



32010300000-2-1	BZ 103A AXIAL
320123000000-2-1	BZ 123A AXIAL
32070300000-2-1	VNG 703 AXIAL
32090300000-2-1	VNG 903 AXIAL











In sturdy high quality. Any position can be reached.

Freely adjustable.

# Angular riveting heads

Various **angular riveting heads** are available on request in order to be able to set blind rivets even at difficult-to-reach places.

#### Angular riveting head 5000/12

Stroke	5,000 N
Overall height	85.6 mm
Width	24.0 mm
Length	117.0 mm

#### Angular riveting head 9200/17

Stroke	9,200 N
Overall height	88.0 mm
Width	34.2 mm
Length	121.0 mm

 321102000600
 Angular rivet head 5000 12

 360008800000
 Angular rivet head 9200 17









Perfect handling of the part

Simple and convenient

Greater **safety** and **cleanliness** at the workplace

# Stud discharge

The special screw fitting with plug connector can be used as an alternative to the normal stud collector. The sheared studs can be discharged through the hose (available in various lengths) into a large collecting bin. Frequent emptying is no longer necessary- you can continue to work without interruption. The workplace is kept free of sheared rivet studs.

# **Foot release**

Actuation of the riveting tool by foot release leaves both hands free for positioning the part to be riveted.

Ideal in combination with installation in an existing fixture / worktop. It is also possible to trigger several tools simultaneously with one foot release.

#### We will be happy to provide you with further details.

321101000016	Front sleeve for table mounting
321103500014	Lock nut for table mounting
321102000018	Mandrel discharge complet
320103000000	BZ 103 A prepared for foot controlled trigger
320123000000	BZ 123 A prepared for foot controlled trigger
320703000000	VNG 703 prepared for foot controlled trigger
321103001504	Foot controlled trigger complete

Not retrofittable!







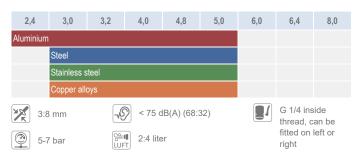


# Reliable, sturdy, proven ten thousand times over.

The **HONSEL BZ 103A** has been one of the most popular standard tools for reliable blind riveting up to 5 mm rivet diameter for years. We will be happy to advise you on custom solutions tailored to your specific application.

Weight <b>1,800 g</b>	<b>11,700 N</b> Setting force	<b>18 mm</b> Stroke	uo to <b>5.0 mm</b> Diameter
Including all conversion parts	Individually and precisely adjustable stud extraction	Very fast setting process	Low air consumption. Reduced noise.

# $\dashv \stackrel{\scriptstyle \checkmark}{\scriptstyle \frown}$ Working range

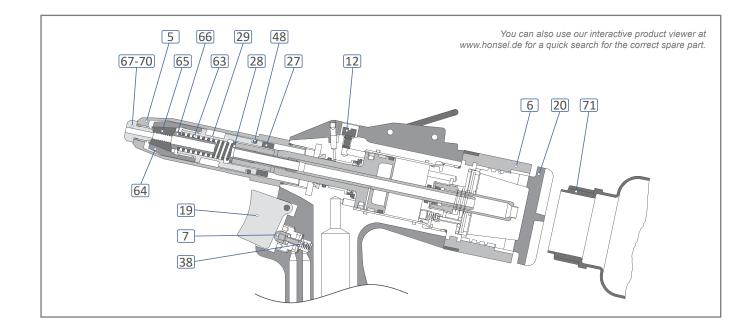




# Scope of supply

- 1x BZ 103A pneumatic-hydraulic riveter in L-Boxx®
- 4x nose piece •
- 1 set of clamping jaws
- 1 bottle of hydraulic oil with refill unit2x stud collector

32010300000-90-1 Setting tool for blind rivets BZ 103 A



## Spare / wear parts and accessories

5	321101000016	Front sleeve
6	321102000006	Mandrel capture comple
7	321102000007	Release valve
12	321101000027	Oil drain plug including o-ring
19	321102000016	Trigger
20	321102000017	Closing cap mandrel capture
27	321102000023	Lock nut M12x1
28	321121000121	Vacuum nozzle
29	321102000025	Spacer

#### Standard nose pieces

67	321070000240	Standard nose piece 2.4 mm
68	321085000123	Standard nose piece 3.0/3.2 mm
69	321085000124	Standard nose piece 4.0 mm
70	321085000125	Standard nose piece 4.8/5.0 mm

# **Special nose pieces**

#### For recessed riveting points

Extended no	Extended nose pieces 7 mm			
321103932070	Extended nose piece 3.0			

F

21103932070	Extended nose piece 3.0/3.2 mm
21103940075	Extended nose piece 4.0 mm

21103950070	Extended nose piece 4.8/5.0 mm



Extended no	ose pieces 20 mm
321103932200	Extended nose piece 3.0/3.2 mm

321103940200 Extended nose piece 4.0 mm

021100010200		000 1.0 11111
201102050200	Extended peec ai	0.00 1 0/E 0 man

321103950200 Extended nose piece 4.8/5.0 mm

Suitable for OPT<sup>O®</sup> multigrip blind rivet with extended mandrel.

321102000036	Pressure spring trigger
321101000042	O-ring 15.0x2.0
311045000013	Pressure spring clamping mechanism
311045000010	Clamping sleeve
321070000241	Clamping jaws (1 set = 3 pcs)
311055000020	Guide sleeve
321082000010	Drilled mandrel collector
321221000065	Extended mandrel collector
321101000091	Wind deflector to divert the mandrel suction air flow BZ tools
	321101000042 311045000013 311045000010 321070000241 311055000020 321082000010 321221000065

A	Special nose pieces for specific customer applications
	can be produced at short notice.
$\mathbf{O}$	Extended front sleeves and further accessories on
	pages 74 - 77.
O	Pneumatic accessories on page 89.

#### For 5.0 mm large dome head blind rivets

321085000	321085000
	321085000

 085000511
 Facade nose piece head 11.0 mm

 085000514
 Facade nose piece head 14.0 mm

 085000516
 Facade nose piece head 16.0 mm

#### For 4.8 mm FERO® BOLT high-strength blind rivets

321101008401 Nose piece FERO-BOLT® 4.8 mm

#### For 5.2 mm folding blind rivets



321103716052 Nose piece for folding blind rivets 5.2 mm

#### For burr-free setting of closed blind rivets



321085009124 CERTO®-Nose piece 4.0 mm 321085009125 CERTO®-Nose piece 4.8/5.0 mm BZ 103 A









## Very powerful. Very large stroke.

The really powerful tool from HONSEL for blind rivets up to 8.0 mm diameter! With a very long stroke of 25 mm it is also eminently suitable for the setting of high-strength FERO<sup>®</sup> BOLT blind rivets.

The BZ 123A is to be found in industrial series production, for example, of truck semi-trailers, and in individual vehicle and trailer construction – wherever large numbers of safety-relevant blind rivets have to be set quickly and reliably.

Weight <b>2,340 g</b>	<b>18,700 N</b> Setting force	<b>25 mm</b> Stroke	up to <b>8.0 mm</b> Diameter
Suitable for FERO <sup>®</sup> BOLT	Individually and precisely adjustable stud extractionstud extraction	Very large stroke	Low air consumption. Reduced noise.

# - Working range

2,4	3,0	3,2	4,0	4,8	5,0	6,0	6,4	8,0
			Aluminium					
			Steel					
			Stainless s	teel				
			Copper allo	oys				
4,8	mm	~	🔊 < 75 d	B(A) (68,3	32)		G 1/4 ins thread, c	
5-7	' bar	LUF		er			fitted on right	left or

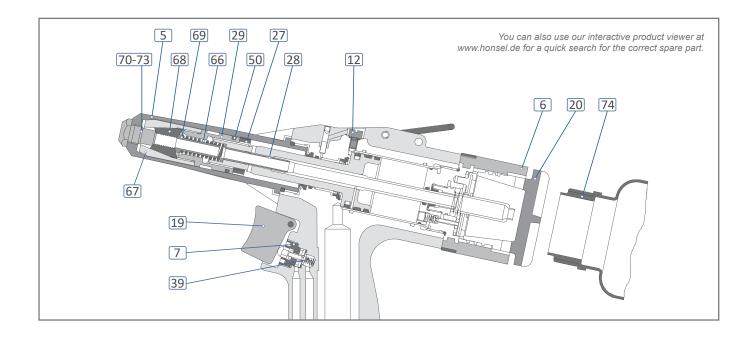


ø 110 mm

# Scope of supply

- 1x BZ 123A pneumatic-hydraulic riveter in L-Boxx®
- 4x nose piece
   1 bottle of hydraulic oil with refill unit
- 1 set of clamping jaws
- 2x stud collector

320123000000-90-1 Setting tool for blind rivets BZ 123A



## Spare / wear parts and accessories

5	321121000016	Front sleeve incl. o-ring
6	321102000006	Mandrel capture comple
7	321102000007	Release valve
12	321101000027	Oil drain plug including o-ring
19	321102000016	Trigger
20	321102000017	Closing cap mandrel capture
27	321122000023	Lock nut M14 x 1.5
28	321221000014	Vacuum nozzle
29	321122000025	Spacer

#### **Standard nose pieces**

70	321120000124	Standard nose piece 4.0 mm
71	321120000125	Standard nose piece 4.8/5.0 mm
72	321120000126	Standard nose piece 6.0 mm
73	321120000127	Standard nose piece 6.4/8.0 mm

# **Special nose pieces**

#### For recessed riveting points

Extended nose pieces 7 mm



	321123940070	Extended nose piece 4.0 mm
	321123950070	Extended nose piece 4.8/5.0 mm
	321123960070	Extended nose piece 6.0 mm
	321123964070	Extended nose piece 6.4 mm

#### Extended nose pieces 20 mm

321123940200	Extended nose piece 4.0 mm
321123950200	Extended nose piece 4.8/5.0 mm
321123960200	Extended nose piece 6.0 mm
321123964200	Extended nose piece 6.4 mm

Suitable for OPTO® multigrip blind rivet with extended mandrel.

39	321102000036	Pressure spring trigger
50	321120000014	O-ring 16.0x2.0
66	311045000013	Pressure spring clamping mechanism
67	321120000012	Clamping sleeve
68	321120000011	Clamping jaws (1 set = 3 pcs)
69	321120000010	Guide sleeve
74	321082000010	Drilled mandrel collector
o. Abb.	321221000065	Extended mandrel collector

A	Special nose pieces for specific customer applications
	can be produced at short notice.
$\mathbf{O}$	Extended front sleeves and further accessories on
	pages 74 - 77.
U	Pneumatic accessories on page 89.

#### For 5.0 mm large dome head blind rivets

	32
	32
1	3

 321120000511
 Facade nose piece head 11.0 mm

 321120000514
 Facade nose piece head 14.0 mm

 321120000516
 Facade nose piece head 16.0 mm

#### For 4.8 mm FERO® BOLT high-strength blind rivets



 361121008401
 Nose piece FERO-BOLT® 4.8 mm

 361121008601
 Nose piece FERO-BOLT® 6.4 mm

#### For 5.2/6.3 mm folding blind rivets



321123716052 Nose piece for folding blind rivets 5.2 mm

321123716063 Nose piece for folding blind rivets 6.3 mm





# The specialist for blind rivets up to 8.0 mm.

Special high-strength FERO<sup>®</sup> BULB blind rivets (and similar types) are set easily and reliably by the combination of short stroke and very high setting force.

Weight <b>2,340 g</b>	<b>24,000 N</b> Setting force	<b>18 mm</b> Stroke	up to <b>8.0 mm</b> Diameter
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## - Working range



#### Scope of supply

- 1x BZ 133A pneumatic-hydraulic riveter in L-Boxx®
- 4x nose piece
- 1 bottle of hydraulic oil with refill unit
- 1 set of clamping jaws 2x stud collector

320133000000-1-1 Setting tool for blind rivets BZ 133A

Further family facts on pneumatic tools can be found on page 73.

## **Nose pieces**

321120000124	Standard nose piece 4.0 mm
321120000125	Standard nose piece 4.8/5.0 mm
321120000126	Standard nose piece 6.0 mm
321120000127	Standard nose piece 6.4/8.0 mm

# 300 mm

ø 110 mm

# Spare and wear parts

321121000016	Front sleeve incl. o-ring
321102000007	Release valve
361122000022	Clamping sleeve
361122000020	Clamping jaws (1 set = 3 pcs)
321120000010	Guide sleeve
321221000014	Vacuum nozzle
321102000016	Trigger
311045000013	Pressure spring clamping mechanism
321101000027	Oil drain plug including o-ring
321102000017	Closing cap mandrel capture
321082000010	Drilled mandrel collector
321221000065	Extended mandrel collector



# Reliable with low wear.

On the HONSEL BZ 143A, the clamping jaws are specially adapted to the trapezoidal grooves of the rivet mandrel.

Together with the modified clamping mechanism, this ensures safe and **positive-fit setting** of high-strength blind rivets of type FERO<sup>®</sup> BULB (or comparable types) with a stud diameter of 3.8 to 6.15 / 6.5 mm is guaranteed!

Weight <b>2,500 g</b>	<b>24,000 N</b> Setting force	<b>18 mm</b> Stroke	<b>8.0 mm</b> Diameter
Suitable for FERO <sup>®</sup> BULB	Optimised for grooved man- drels	Positive-fit setting	Minimum wear on the clamp- ing jaws

# 🕂 Working range

2,4	3,0	3,2	4,0	4,8	5,0	6,0	6,4	8,0
							Aluminium	
							Steel	
							Stainless s	teel
6,5 mm		- <b>\</b> S	🔊 < 75 d	B(A)			G 1/4 ins thread, c	
5-7	′ bar		3,5 Lit	er			fitted on I right	eft or

## Scope of supply

- 1x BZ 143A pneumatic-hydraulic riveter in L-Boxx®
- 2x nose piece
- 1 bottle of hydraulic oil with refill unit 2x stud collector
- 1 set of clamping jaws

320143000000-1-1 Setting tool for blind rivets BZ 143A

# Further family facts on pneumatic tools can be found on page 73.

## Spare and wear parts

321528045080	Clamping jaws (1 set = 3 pcs)
321143000010	Guide sleeve
321143000012	Clamping sleeve
321143000013	Pressure spring
321143000016	Front sleeve
321143000025	Spacer
321082000010	Drilled mandrel collector
321221000065	Extended mandrel collector
321101000027	Oil drain plug including O-ring

# Nose pieces

	321528200066	Retention nose piece 6.4 mm		
	321528200067	Retention nose piece 7.8 mm		











Typically HONSEL. Simple and practical: **Stepless setting** of the setting force individually for each fastener.



Special accessories: **Angular adapter** to maintain the necessary perpendicularity to the part.



# The force-controlled tool for fast handling of large numbers in series production.

The setting and control of the required setting force guarantees that the blind rivet nut is always optimally and gently set. The VNG 703 also features a user-friendly design and easy handling.

Switching from forward to return travel is extremely quick. Slight pressure on the mandrel automatically threads on the blind rivet nut and unthreads it again fully automatically after setting.

Weight <b>2,500 g</b>	20,000 N Setting force	<b>9 mm</b> Stroke	<sup>up to</sup>
Stepless setting of the setting force	Fast process- ing of <b>large</b> quantities	Simple han- dling	Automatic threading on and off

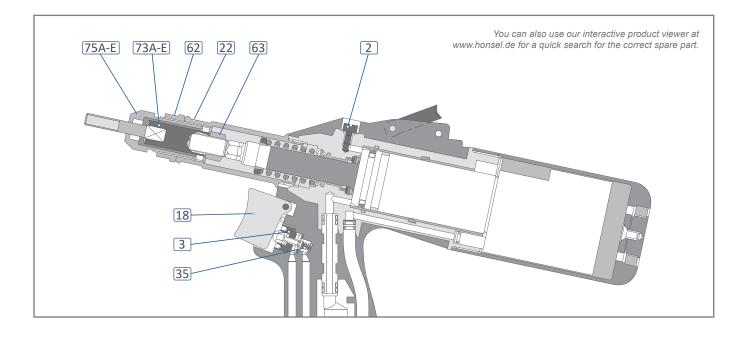
#### 🛱 Working range



#### Scope of supply

- 1x VNG 703 pneumatic-hydraulic riveter in L-Boxx®
- 5x conversion kits for blind rivet nuts
- 1 bottle of hydraulic oil with refill unit

320703000000-90-1 Setting tool for blind rivet nuts VNG 703



# Spare and wear parts

2	321101000027	Oil drain plug M4 including o-ring
3	321102000007	Release valve
18	321102000016	Trigger
22	321703000024	Front sleeve
35	321102000036	Pressure spring trigger
62	321801000074	Lock nut M18x1
63	361802191075	Lock nut M9x0.75

## Mandrels/sleeves

73A	321800008030	Mandrel M3
73B	321800008040	Mandrel M4
73C	321800008050	Mandrel M5
73D	321800008060	Mandrel M6
73E	321800008080	Mandrel M8
	321800009040	Threaded sleeve M4 RIFBOLT
	321800009050	Threaded sleeve M5 RIFBOLT
	321800009060	Threaded sleeve M6 RIFBOLT

# Nose pieces

75A	311800000203	Nose piece M3
75B	311800000204	Nose piece M4
75C	311800000205	Nose piece M5
75D	311800000206	Nose piece M6
75E	311800000208	Nose piece M8

# **Nose pieces HEADLESS**



321800004206 Nose piece M6 HEADLESS321800004208 Nose piece M8 HEADLESS

Special accessories, nose pieces and mandrels, for example in extended form or for inside riveting locations available on request.

Pneumatic accessories on page 89.



**UNC/UNF Mandrels** 

	321800975006	Mandrel UNC 6-32
	321800975008	Mandrel UNC 8-32
	321800975010	Mandrel UNC 10-24
	321800975014	Mandrel UNC 1/4-20
	321800975516	Mandrel UNC 5/16-18
	321800975100	Mandrel UNF 10-32
	321800975140	Mandrel UNF 1/4-28
1	321800122517	Mandrel UNF 5/16-24

# Nose pieces UNC/UNF Mandrels

311800000204	Nose piece M4 for mandrel UNC 6-32
311800000205	Nose piece M5 for mMandrele UNC 8-32 and 10-24, UNF 10-32
311800000208	Nose piece M8 for mandrel UNC 1/4-20 and 5/16-18, UNF 1/4-28 and 5/16-24







Exact adjustment of the setting stroke via scale on the adjustment cap.



## The stroke-controlled solution for large tasks

The sophisticated design and individual setting options make the HONSEL VNG 903 your perfect tool for the easy and reliable setting of all common blind rivet nuts.

These are automatically threaded onto the mandrel with light pressure. Threading is likewise stopped automatically; the threading time can be set.

Also easily handled: self-clinching elements.



Weight <b>2,700 g</b>	29,000 N Setting force (at 7 bar)	<b>9 mm</b> Stroke	up to M12 (optional)
Sophisticated design	Individual	Comfortable	Automatic
	setting	Simple	threading on
	options	Practical	and off

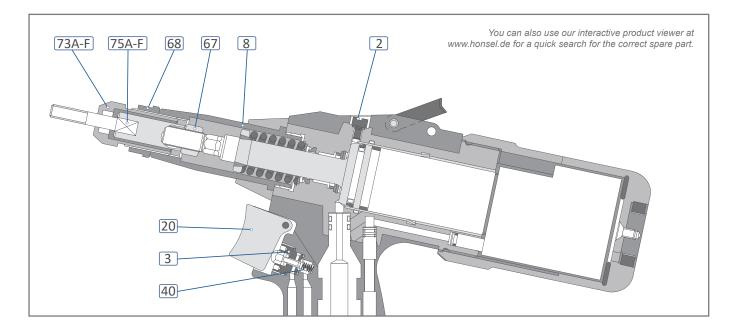
# Harring Working range



## Scope of supply

- 1x VNG 903 pneumatic-hydraulic riveter in L-Boxx®
- 5x conversion kits for blind rivet nuts
- 1 bottle of hydraulic oil with refill unit

320903000000-90-1 Setting tool for blind rivet nuts VNG 903



# Spare and wear parts

2	321101000027	Oil drain plug including O-ring
3	321102000007	Release valve
20	321102000016	Trigger
8	321903000016	Front sleeve
40	321102000036	Pressure spring trigger
67	361802191075	Lock nut M9x0.75
68	321801000074	Lock nut M18x1

## **Nose pieces**

73A	311800000204	Nose piece M4
73B	311800000205	Nose piece M5
73C	311800000206	Nose piece M6
73D	311800000208	Nose piece M8
73E	311800000210	Nose piece M10
73F	311800000212	Nose piece M12

# **Nose pieces HEADLESS**

	32180
A. S.	32180
	32180

321800004206	Nose piece M6 HEADLESS
321800004208	Nose piece M8 HEADLESS
321800004210	Nose piece M10 HEADLESS



The **stroke circlip** prevents an unwanted shifting of the adjusting cap.

321801000080 Stroke circlip

# Mandrels/sleeves

75A	321800008040	Mandrel M4
75B	321800008050	Mandrel M5
75C	321800008060	Mandrel M6
75D	321800008080	Mandrel M8
75E	321800008100	Mandrel M10
75F	321800008120	Mandrel M12
74A	321800009040	Threaded sleeve M4 RIFBOLT
74B	321800009050	Threaded sleeve M5 RIFBOLT
74C	321800009060	Threaded sleeve M6 RIFBOLT
74D	321800009080	Threaded sleeve M8 RIFBOLT

## **UNC/UNF Mandrels**

	321800975008	Mandrel UNC 8-32
	321800975010	Mandrel UNC 10-24
	321800975014	Mandrel UNC 1/4-20
	321800975038	Mandrel UNC 3/8-16
ф.	321800975516	Mandrel UNC 5/16-18
	321800975100	Mandrel UNF 10-32
	321800975140	Mandrel UNF 1/4-28
100	321800122380	Mandrel UNF 3/8-24
	321800122517	Mandrel UNF 5/16-24
	321800122716	Mandrel UNF 7/16-20

# **Nose pieces UNC/UNF Mandrels**

311800000205	Nose piece M5 for mandrel UNC 8-32 and 10-24, UNF 10-32
311800000208	Nose piece M8 for mandrel UNC 1/4-20 and 5/16-18, UNF 1/4-28 and 5/16-24
311800000210	Nose piece M10 for mandrel UNC 3/8-16
311800000212	Nose piece M12 for mandrel UNF 7/16-20







# **Spare parts**

321101000027	Oil drain plug including O-ring
321801000074	Lock nut M18x1
321801000080	Stroke circlip

# Nose pieces / mandrels

311800000205	Nose piece M5
311800000206	Nose piece M6
311800000208	Nose piece M8
311800000210	Nose piece M10
361800008513	Mandrel M5 extended by 5 mm
361800008613	Mandrel M6 extended by 6 mm
361800008813	Mandrel M8 extended by 10 mm
361800098101	Mandrel M10 extended by 5 mm



Folding blind rivet nuts are used wherever fragile components are connected and the forces that occur

must be distributed material-friendly over the large folded setting head. Due to the very large stroke of up to 15 mm and with extended threaded mandrels these can be set quickly and easily.

Weight <b>2,900 g</b>	<b>19,000 N</b> Setting force	<b>8-15 mm</b> Stroke	up to M10 (optional)
For folding blind nuts	Individual Setting options	Very long stroke	Automatic threading on and off



# 🗟 Working range

M3	M4	M5	M6	M8	M10	M12
		optional	Steel		optional	
5-7 ba	-92	< 75 dB(A) Screwing in Unscrewing	1800 rpm		G 1/4 insi can be fitt or right	



# Scope of supply

- 1x VNG 753 pneumatic-hydraulic riveter in L-Boxx®
- Conversion kits for M6 and M8 folding blind rivet nuts
- 1 bottle of hydraulic oil with refill unit

320753000000-1-1 Setting tool for blind rivet nuts VNG 753

#### Add to your order!

Have you considered the necessary pneumatic accessories? Save unnecessary work and order the appropriate accessories for the HONSEL pneumatic tools of the BZ and VNG series together with your tool order!



Pos.	Artikel-Nr.	Bezeichnung
1	321121000053-3-1	Angular pivoting fitting aluminium incl hose with 1/4" outside thread and hose coupling
2	321121000053-1-1	Pivoting threaded pipe angle. aluminium
3	321121000053-2-1	Pivoting threaded pipe angle. stainless steel
4	321121000021-1-1	Valve extension 1/8"
5	321121000057-1-1	Screw-in hose connector -set- G 1/4" 6 mm
6	321121000058-1-1	Screw-in hose connector -set- G 1/4" 9 mm
7	320848000009-1-1	Plug connection 7 mm G 3/8 for compressed-air sevice unit
8	320848000012-1-1	Plug connection 7 mm G 1/4 for pivoting threaded pipe angle
9	320848000010-1-1	Coupling G 1/4"
10	320848000004-1-1	Pressure controller 7 bar
11	320848000005-1-1	Compressed air spiral hose incl coupling and plug connection -length 4 m-
12	320848000006-1-1	Compressed air spiral hose incl coupling and plug connection -length 6 m-
13	320848000008-1-1	Compressed air spiral hose incl coupling and plug connection -length 8 m-
14	321101006467-1-1	Oil re-fill unit for all tools of BZ- and VNG-series
15	320848000001-1-1	Filter regulator G3/8 complete
16	320848000002-1-1	Maintenance unit. 2-part. complete
no fig.	320848000003-1-1	Replacement filter for filter regulator
no fig.	320848000011-1-1	1 litre of pneumatic motor oil
no fig.	321101000091-1-1	Wind deflector BZ tools

#### For smooth operation of our pneumatic tools, please be sure to observe the information in our operating manuals!

Important for maintaining a good performance and avoiding damage are the characteristics of the compressed air used.

- Condensation hinders the lubrication and causes corrosion inside the tool!
- · The motors have to be continuously lubricated.



For BZ tools water trap / pressure reducer G3/8 filter regulator with filter pressure regulator, manometer, plastic protective cage, mounting bracket, G3/8 plug connection and quick-coupler.



For VNG tools water trap / pressure reducer / oil nebuliser 2-piece G3/8 air conditioner, including plastic protective cage, mounting bracket, G3/8 plug connection, quick-coupler and 1 litre of pneumatic motor oil.