

Product description

The Jacobs Drill Handpiece is a reduction transmission instrument with a quick release 3-jaw chuck system to be used in an orthopaedic environment. The instrument is applied in a low speed range for short or medium periods of application in connection with an appropriate motor system.

Technical data

Jacobs Drill Handpiece, Ref. 1955

Speed range:	80 – 2100 rpm
Transmission ratio:	19 : 1
Max. torque at drill:	60 Ncm
Coupling, motor:	INTRA EN3964
Approved length of drills:	180 mm
Range of drill Ø:	0,3 – 7,4 mm
Shank clamping depth until stop:	20 mm
Weight:	530 g
Length/max. thickness of Instrument:	175 mm / 35 mm

Faults and causes of error

Faults	Cause	Solution
Motor runs but drill handpiece does not move	Instrument is not connected to the motor optimally	Press instrument firmly onto the motor until it engages
Drill does not rotate uniformly	Drill not clamped optimally	Center drill properly in three jaw chuck and tighten firmly
Instrument is noisy	Poorly lubricated	Apply NouClean



Ambient conditions

	Transport and storage:	Operation:
Relative humidity:	Max. 90 %	Max. 80 %
Temperature:	0°C – 60°C	10°C – 30°C
Atmospheric pressure:	700 hPa – 1060 hPa	800 hPa – 1060 hPa

Warranty coverage

Having purchased the Jacobs Drill Handpiece entitles you to a 1-year guarantee. Returning the guarantee card for registration within 4 weeks of the date of purchase extends the guarantee for an additional 6 months.

Parts that are subject to wear are not covered by the guarantee. Improper use and repair, and non-adherence to our instructions voids your guarantee and releases us from any other claims.

Explanation of symbols

	Important information		Specification of serial number		CE mark with Notified Body
	Warning		Specification of order number		Autoclavable at 135°C
	Observe the instructions for use		Manufacturer		Can be thermally disinfected

Service Centers

Switzerland

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Please contact your country's dealer or representative if you require service, repair and spare parts.

Disposal notice: when disposing of the device, device parts and accessories, the stipulated statutory regulations must be followed.

Safety instructions

Your safety, that of your team and, of course your patients' safety is our prime concern. It is therefore vital to observe the following instructions.

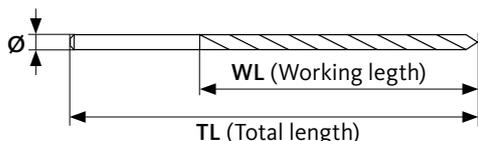
Fundamentals

- | | | | |
|--|---|---|---|
|  | Improper use and repair of the Jacobs Drill Handpiece and non-adherence to our instructions voids your guarantee and releases us from any other claims. |  | Before use, initial operation and any application the user has to ensure that the Jacobs Drill Handpiece and its accessories are in proper order. This means clean, sterile and functional. |
|  | The operator is responsible for use of any third-party products. Functionality and patient safety cannot be guaranteed with third-party accessories. |  | Use NouClean spray to maintain the Jacobs Drill Handpiece. Using other care products can result in malfunction and resultant loss of the guarantee. |
|  | Repairs may only be made by authorized Nouvag service technicians. |  | The Jacobs Drill Handpiece may only be used by qualified staff and only for surgical procedures. |
|  | Clean and lubricate the Jacobs Drill Handpiece prior to autoclaving it. Autoclaving a Jacobs Drill Handpiece soiled with blood or deposits can induce damage. |  | Read the operating instructions carefully before using the Jacobs Drill Handpiece. Read the preparation instructions carefully, too. |

During use

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|--|--|---|--|
|  | We do not deliver the instrument in a sterile state. The Craniotome requires cleaning, disinfecting and sterilizing prior to first use and immediately after each use. |  | Before using on a patient, ensure that you run the product on a trial basis and pay particular attention to loosening, vibration, noises and temperature (production of heat). |
|  | If you detect even only slightly abnormal conditions during operation, stop using the unit at once and contact your dealer. |  | Only use drills which fit the Jacobs Drill Handpiece. Unsuitable drills can result in malfunction or accidents. |
|  | Never manipulate the clamping mechanism during operation. |  | The Jacobs Drill Handpiece may only be used by qualified staff and only for surgical procedures. |
|  | Do not use bent, damaged or deformed drills. Otherwise malfunction or accidents can be the result. |  | Do not subject the product to strong vibration (in particular, by dropping it). |
|  | Ensure that the shaft of the instrument to be used is clean. A soiled shaft can result in poor centring or a lessening of capillary force. |  | The micromotor has to fully stop before you place the handpiece on the motor or use the drill. |
|  | In order to use the Jacobs Drill Handpiece safely, check the drill and replace it with a new one if necessary. |  | Do not run the Instrument without having inserted a drill. |

Accessories

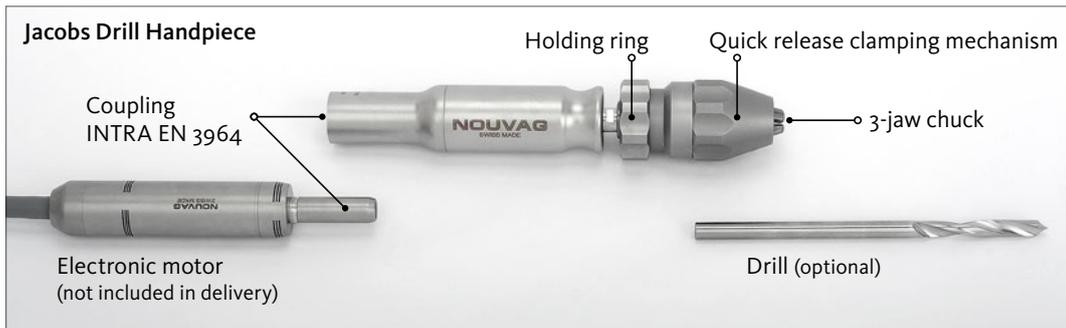


Ref.	Label	Ø	TL	WL
260201	Spiral drill	1.1	45.0	22.0
260202	Spiral drill	1.4	86.0	30.0
260203	Spiral drill	1.5	70.0	22.0
260204	Spiral drill	2.0	88.0	50.0

Ref.	Label	Ø	TL	WL
260205	Spiral drill	2.0	101.0	50.0
260206	Spiral drill	2.0	109.0	17.0
260207	Spiral drill	2.0	109.0	50.0
260208	Spiral drill	2.5	108.0	23.0
260209	Spiral drill	2.5	108.0	50.0
260210	Spiral drill	2.7	111.0	50.0
260211	Spiral drill	3.0	146.0	50.0
260212	Spiral drill	3.2	120.0	50.0
260213	Spiral drill	3.2	146.0	50.0

Ref.	Label	Ø	TL	WL
260214	Spiral drill	3.5	120.0	50.0
260215	Spiral drill	3.5	146.0	50.0
260216	Spiral drill	4.0	156.0	50.0
260218	Spiral drill	4.5	156.0	50.0
260219	Spiral drill	4.5	180.0	50.0
260220	Spiral drill	5.0	156.0	50.0
260221	Spiral drill	5.0	180.0	50.0
260222	Spiral drill	6.5	130.0	50.0
260404	Spiral drill	1.5	44.5	27.5

Operation



3-jaw chuck clamping mechanism for drills of 0.3 mm to 7.4 mm of diameter. The drill has to be clamped centered.

Fixing of drill



◀ Open 3-jaw chuck to fit the applied drill.



▶ Insert drill up to the stop.
 ▶ For proper centering of the drill hold the holding ring with your pointing finger, while twisting the quick release clamping mechanism with your thumb. With your right hand place the drill accurately into the 3-jaw chuck so that it's centered perfectly and tighten the clamping mechanism firmly.



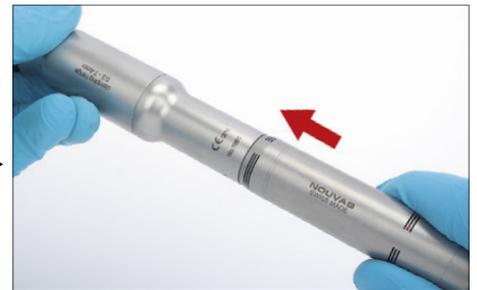
Jacobs Drill Handpiece with inserted drill. ▶



▶ Connect the electronic motor (not included in delivery) with the INTRA EN3964 coupling of the Jacobs Drill Handpiece.



▶ Firmly press electronic motor to the Handpiece until it engages. Check fitting of the motor with a counter movement.



▶ Ready to use Jacobs Drill Handpiece.



Preparation instructions

Limitation on repeated preparation Frequent repeated preparation only has a minor impact on the Jacobs Drill Handpiece. The end of the product's service life is normally determined by wear and damage through use. Das Instrument is designed for 500 sterilization cycles.

INSTRUCTIONS

At the site of use Remove surface contaminants with a disposable cloth/paper towel.

Storage and transport No special requirements. Avoid long waiting periods until preparation due to risk of drying and corrosion.

Preparation for cleaning

1. Remove the Jacobs Drill Handpiece from the micromotor.
2. Remove the drill from the Jacobs Drill Handpiece and dispose of it properly.
3. Check the Jacobs Drill Handpiece for external changes, damage and wear.

Automatic cleaning and disinfection Equipment: cleaning/disinfection device with a special load carrier which facilitates the connection of handpieces to the cleaning/disinfection device and the rinsing of channels. Use neutral or alkaline cleaning agents at the recommended concentration.

1. Fit the Jacobs Drill Handpiece into the load carrier (channel rinsing has to be ensured).
2. Set a cleaning cycle that offers sufficient cleaning and rinsing. Perform the last rinse with deionized water.
3. Perform a 10-minute rinse cycle at 93°C to facilitate thermal disinfection.
4. When you remove the Jacobs Drill Handpiece, check for any dirt in gaps and grooves that is still visible. Repeat the cleaning cycle or clean manually as required.

Manual cleaning Equipment: neutral or alkaline cleaning agent, soft brush, running water:

1. Rinse surface contaminants from the Jacobs Drill Handpiece and brush away.
2. Use a brush to apply cleaning agent to all surfaces and gaps.
3. Rinse the Jacobs Drill Handpiece thoroughly under running water.

Manual disinfection Place the Jacobs Drill Handpiece into RKI*-tested disinfectant for manual disinfection. (Action time according to the disinfectant manufacturer's specifications).
* RKI disinfectant list (Robert Koch Institute)

Drying If a drying programme is not provided by the washer-disinfector, the Jacobs Drill Handpiece must be dried manually or in a drying cabinet.

Inspection, assembly and maintenance Perform a visual inspection for damage, corrosion and wear.

1. Place the spray adapter (Ref. 1958) on the NouClean spray.
2. Insert the spray adaptor into the Jacobs Drill Handpiece coupling flange and press in as far as it will go.
3. Apply a short, approx. 3-second burst of NouClean spray and wipe off excess liquid with a moistened cloth. If a sufficient lubricant delivery is not possible because of back pressure, pull the spray adapter out, hold the moistened cloth around the instrument and the adapter and spray into the couplings opening. Clean spilling with the cloth.



Ref: 1958



Packaging Individually: Pack Jacobs Drill Handpiece in individual packaging for sterile items. The bag must be large enough to ensure that the seal is not under tension.
Sets: Sort Jacobs Drill Handpieces onto trays intended for the purpose or place on all-purpose sterilization trays.

Sterilization Autoclave in the vacuum autoclave at 135°C for at least 5 minutes. When sterilizing several instruments in one sterilization cycle, do not exceed the sterilizer's maximum load. A drying cycle must be added in the case of autoclaves without a post-vacuum function.
Dry the Jacobs Drill Handpiece in the bag with the paper side facing upwards at room temperature for at least one hour.
* The temperature hold times are based on the country-specific guidelines and standards.

Storage No special requirements. If a sterilised Jacobs Drill Handpiece is not used immediately following sterilization, the packaging needs to be marked with the sterilization date. It is advisable to add a sterilization indicator.

The above-indicated instructions were validated by NOUVAG AG as being suitable for preparing a medical device to be reused.

The preparer is responsible for ensuring that the actually performed preparation involving the equipment, materials and personnel used in the preparation facility achieves the desired results. This normally requires validation and routine monitoring of the procedure. Likewise, each deviation from the provided instructions should be carefully analyzed for its effect and potential detrimental consequences.