

# 20



**Table micromotors NAKANISHI Emax EVOLution**



**Speed 1'000...40'000 RPM.**

MSA	Voltage	Size	Kg
20.362	230 V / 50-60 Hz	130 x 254 x 97 mm	2.300

Table micromotor set NAKANISHI Emax EVOLution improved with the last technologies.

- Digital display on the centre roller
- Variator with speed memory possibility
- Maximum torque 4.3 cN-m
- Start switch can be made on the control unit or directly on the micromotor
- Clockwise and anticlockwise rotation
- A second motor can be connected at the control unit with a A/B selector (cannot be used simultaneously).

*Delivered with :*

- 1 control unit MSA20.364
- 1 motor MSA20.362-M1
- 1 handpiece MSA20.360-P2
- 1 chuck Ø 2.35 mm MSA20.360-C235
- 1 chuck Ø 3.00 mm MSA20.360-C300
- 1 stand MSA20.360-S
- 1 set of flat and pun wrench keys for locking/unlocking chucks
- 1 power supply cord.



**Speed 1'000...25'000 RPM.**

MSA	Voltage	Size	Kg
20.365	230 V / 50-60 Hz	130 x 254 x 97 mm	2.300

Table torque micromotor set NAKANISHI Emax EVOLution improved with the last technologies.

- Digital display on the centre roller
- Variator with speed memory possibility
- Maximum torque 4.8 cN-m
- Start switch can be made on the control unit or directly on the micromotor
- Clockwise and anticlockwise rotation
- A second motor can be connected at the control unit with a A/B selector (cannot be used simultaneously).

*Delivered with :*

- 1 control unit
- 1 motor ENK-250T
- 1 handpiece MSA20.360-P2
- 1 chuck Ø 2.35 mm MSA20.360-C235
- 1 chuck Ø 3.00 mm MSA20.360-C300
- 1 stand MSA20.360-S
- 1 set of flat and pun wrench keys for locking/unlocking chucks
- 1 power supply cord.



MSA	Kg
20.362-F	0.543

ON/OFF foot and speed control pedal for micromotor MSA20.362 and MSA20.365.



**Speed 1'000~40'000 RPM.**

MSA	Power	Size	Kg
20.362-M1	73 W	Ø 24.50 x 97 mm	0.090

Motor for MSA20.362. Maximum Torque 4.3 cN-m. Excellent combination of high speed, lightweight, small diameter and high torque. This lightweight and compact general-use type is perfect for precision work. *Delivered with a 1.5 m power supply cord.*



**Maximum speed 40'000 RPM.**

MSA	Size	Kg
20.360-P1	Ø 14 x 60 mm	0.062

Handpiece with a side lever for fast chuck tightening for micromotor MSA20.362. *Delivered with tightening keys and 2 chucks : 1x MSA20.360-C235 (Ø 2.35 mm) and 1x MSA20.360-C300 (Ø 3.00 mm).*



**Maximum speed 40'000 RPM.**

MSA	Size	Kg
20.360-P2	Ø 13 x 64 mm	0.092

Handpiece with a side lever for fast chuck tightening for micromotor MSA20.362. *Delivered with tightening keys and 2 chucks : 1x MSA20.360-C235 (Ø 2.35 mm) and 1x MSA20.360-C300 (Ø 3.00 mm).*



**Optional adaptable chucks for MSA20.360-P1 and MSA20.360-P2 (other diameters available upon request) :**

MSA	Item	Kg
20.360-C100	Optional adaptable chuck, length 33.90 mm, Ø 1.00 mm	0.005
20.360-C150	Optional adaptable chuck, length 33.90 mm, Ø 1.50 mm	0.005
20.360-C160	Optional adaptable chuck, length 33.90 mm, Ø 1.60 mm	0.005
20.360-C200	Optional adaptable chuck, length 33.90 mm, Ø 2.00 mm	0.005
20.360-C235	Optional adaptable chuck, length 33.90 mm, Ø 2.00 mm	0.005
20.360-C300	Optional adaptable chuck, length 33.90 mm, Ø 3.00 mm	0.005



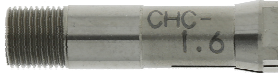
**Maximum speed 16'000 RPM.**

MSA	Size	Kg
20.367	Ø 14 x 93 mm	0.095

Riveting-setting hammer for micromotor MSA20.362.



Maximum speed 35'000 RPM.



MSA	Size	Kg
20.360-P4	Ø 20.20 x 57.30 mm	0.045

Contra-angle handpiece for micromotor MSA20.362.  
 Delivered with tightening keys and 1 chuck Ø 3.00 mm.  
 A set of standard accessories is also included (3 rubber micro-disks and 3 abrasive disks in different diameters).

**Optional adaptable chucks (other diameters available upon request) :**

MSA	Item	Kg
20.360-160	Optional adaptable chuck, length 17.20 mm, Ø 1.60 mm	0.080
20.360-235	Optional adaptable chuck, length 17.20 mm, Ø 2.35 mm	0.080



Maximum speed 25'000 RPM.

MSA	Size	Kg
20.360-P5	Ø 20 x 105 mm	0.235

Handpiece for micromotor MSA20.362. Reciprocating motion, stroke range 0.8 mm.

Delivered with 1 tightening key, 1 spring holder, 1 ceramic fiber grindstone holder, 1 electroplated diamond file 1.2 x 4 x 50 mm (# 100) and 1 ceramic fiber grindstone 1 x 6 x 50 mm (# 1200).



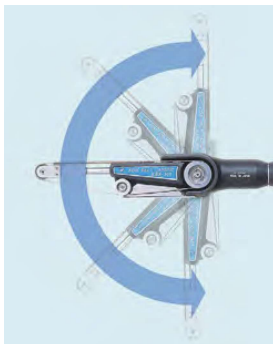
Belt runs approx. 0~705 metres/minute

MSA	Size	Kg
20.368	200 x 35 x 49 mm	0.576

Belt sander for micromotors.  
 - Very high belt speed, ideal for applications from deburring to finishing  
 - Belt runs approx. 0~825 m/minute, circumference 300 mm  
 - Lightweight, compact, minimal vibration and a small diameter grip design keep the hand free from fatigue for long, continuous operation  
 - The angle of the belt section is fully adjustable  
 - Exchanging the belt is simply done by lever release.

**Belts included in the delivery :**

MSA	Item
20.368-4/120	Belt 4 mm, grain 120
20.368-4/240	Belt 4 mm, grain 240
20.368-4/400	Belt 4 mm, grain 400
20.368-6/120	Belt 6 mm, grain 120
20.368-6/240	Belt 6 mm, grain 240
20.368-6/400	Belt 6 mm, grain 400
20.368-8/120	Belt 8 mm, grain 120
20.368-8/240	Belt 8 mm, grain 240
20.368-8/400	Belt 8 mm, grain 400



**Table micromotors NAKANISHI Espert 500.**



**Speed 1'000...50'000 RPM.**

MSA	Voltage	Power	Size	Kg
20.361	230 V / 50-60 Hz	200 W	172 x 230 x 94 mm	2.600

The table torque micromotor set NAKANISHI Espert 500 is perfectly adapted for jobs requiring an extra effort.

- Speed regulation on potentiometer or with pedal MSA20.360-F
- Start button on box or directly on the micromotor
- Right/left rotation, tempomat
- A second micromotor can be plugged in with A/B selector (A and B cannot be used simultaneously).

Delivered with :

- 1 control unit MSA20.363
- 1 motor MSA20.361-M1
- 1 handpiece MSA20.361-P1
- 1 chuck Ø 2.35 mm MSA20.360-C235
- 1 chuck Ø 3.00 mm MSA20.360-C300
- 1 stand MSA20.360-S.



MSA	Kg
20.360-F	0.600

Vario pedal for MSA20.361.



MSA	Power	Size	Kg
20.361-M1	200 W	Ø 28.30 x 121.40 mm	0.160

Torque motor for MSA20.361. Maximum torque 8.7 cN-m.

Delivered with 1.5 m spiral cord.

**Maximum speed : 50'000 RPM.**



MSA	Power	Size	Kg
20.361-M2	140 W	Ø 24.50 x 107.80 mm	0.115

Compact motor for MSA20.361. Maximum torque 6.0 cN-m.

Delivered with 1.5 m spiral cord.

**Maximum speed : 50'000 RPM.**



MSA	Size	Kg
20.361-P1	Ø 22.40 x 59.40 mm	0.094

Handpiece with rotating quick-clamping system to be fitted on micromotor MSA20.361.

Delivered with tightening key and 2 chucks : 1x MSA20.360-C235 (Ø 2.35 mm) and 1x MSA20.360-C300 (Ø 3.00 mm).



MSA	Size	Kg
20.361-P2	Ø 22.40 x 58.90 mm	0.070

Handpiece with rapid tightening ring to be fitted on micromotor MSA20.361. Delivered with tightening key and 2 chucks : 1x MSA20.360-C235 (Ø 2.35 mm) and 1x MSA20.360-C300 (Ø 3.00 mm).



**Optional adaptable chucks for MSA20.361-P1 and MSA20.361-P2 (other diameters available upon request) :**

MSA	Item	Kg
20.360-C100	Optional adaptable chuck, length 33.90 mm, Ø 1.00 mm	0.005
20.360-C150	Optional adaptable chuck, length 33.90 mm, Ø 1.50 mm	0.005
20.360-C160	Optional adaptable chuck, length 33.90 mm, Ø 1.60 mm	0.005
20.360-C200	Optional adaptable chuck, length 33.90 mm, Ø 2.00 mm	0.005
20.360-C235	Optional adaptable chuck, length 33.90 mm, Ø 2.00 mm	0.005
20.360-C300	Optional adaptable chuck, length 33.90 mm, Ø 3.00 mm	0.005
20.360-C300	Optional adaptable chuck, length 33.90 mm, Ø 3.00 mm	0.005



**Maximum speed 25'000 RPM.**

MSA	Size	Kg
20.361-P3	Ø 15 x 84.50 mm	0.130

Thin pen shape handpiece with rapid tightening ring for small polishing operations, for micromotor MSA20.361. Delivered with an adapter for ceramic fibre files.



**Maximum speed 30'000 RPM.**

MSA	Size	Kg
20.361-P5	Ø 22.40 x 64.30 mm	0.054

Contra-angle handpiece for micromotor MSA20.361. Delivered with tightening keys and a set of standard accessories (3 rubber micro-disks and 3 abrasive disks in different diameters).

**Table micromotor ARGOFILE.**

MSA	Voltage	Size
20.381	110/220 V	110 x 148 x 96 mm

Table micromotor set MAXIMA PHP 40.  
 The compact control unit MSA20.381-02 is a continuously variable speed controller (0...40'000 rpm).  
 Handpiece with "One-Touch" quick system.



**Speed 0...40'000 RPM.**

*Delivered with :*

- 1 control unit MSA20.381-02
- 1 handpiece MSA20.381-01
- 1 Vario pedal MSA20.381-03
- 1 handpiece stand MSA20.381-04
- 1 pair of carbon brushes MSA20.381-05
- 1 chuck Ø 2.35 mm MSA20.381-235.

**Spare parts :**

MSA	Item
20.381-01	(1) Handpiece Ø 26 x 145 mm, maximum speed 40'000 RPM
20.381-02	(2) Control unit 110 x 148 x 86 mm, 110/220 V
20.381-03	(3) Vario pedal
20.381-04	(4) Handpiece stand
20.381-05	(5) Pair of carbon brushes

**Accessories :**

MSA	Item
20.381-235	(6) Chuck for handpiece, Ø 2.35 mm
20.381-300	Chuck for handpiece, Ø 3.00 mm



MSA	Size	Kg
20.381-SB	115 x 65 x 57 mm	0.235

Distributor SPLITTER BOX for micromotor MSA20.381, for connecting 2 motors (not operating simultaneously).



**Working cabinets.**



MSA	Size	Kg
<b>23.812</b>	320 x 300 x 250 mm	3.000

Working cabinet for micromotors.  
 A removable drawer makes it easy to collect the residues of the precious alloys used.  
 The fitting with hose allows the connection of the portable vacuum cleaners MSA23.810 and MSA23.811.  
 Excellent working visibility, sealed Plexiglas cabinet.



MSA	Size	Kg
<b>23.813</b>	600 x 400 x 400 mm	15.000

Safety cabinet for finishing work with micromotors.  
 This device is equipped with several side entrances on the left and right, a neon light, a fast-air connector and a power supply for the portable vacuum cleaners MSA23.810 and MSA23.811.

- Bright and wide working area
- Easy-to-clean heavy-duty grid collector
- Solid and reliable construction.

See Chapter 23 for other suction systems.