

Radio-wave Tool Setter RWT35.50

BETRIEBSANLEITUNG

DE

OPERATING INSTRUCTIONS

EN

ISTRUZIONI OPERATIVE

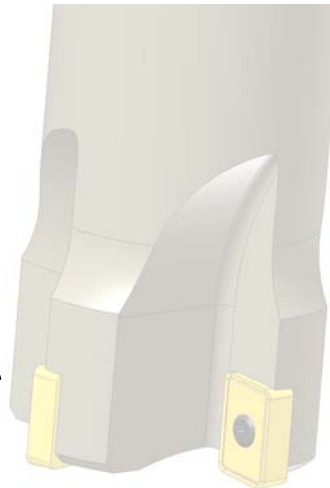
IT

MANUEL D'INSTRUCTION

FR

INSTRUCCIONES DE OPERACIÓN

ES



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Präzision am Werkstück

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m&h Inprocess Messtechnik GmbH • Am Langholz 11 • D-88289 Waldburg
Fon +49(0)7529 / 9733-0 • Fax +49 (0)7529 / 9733-7 • vertrieb@mh-inprocess.com

BA-RWT3550-1111-WEST

Technische Änderungen vorbehalten

Radio-wave Tool Setter RWT35.50

BETRIEBSANLEITUNG

(Original)

DE

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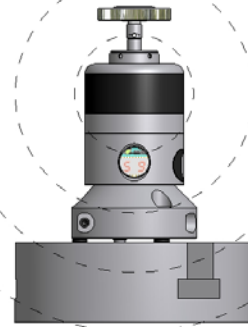
Radio-wave Tool Setter RWT35.50

Systemkomponenten

Radio-wave Receiver
RWR95.40



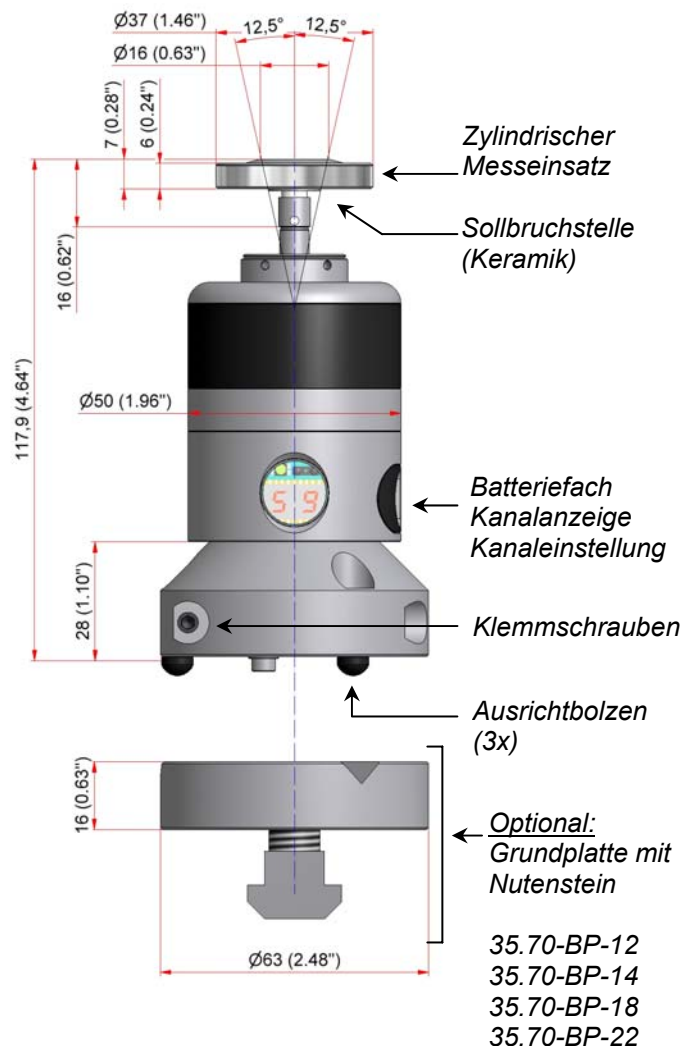
Radio-wave Tool Setter
RWT35.50



Technische Daten

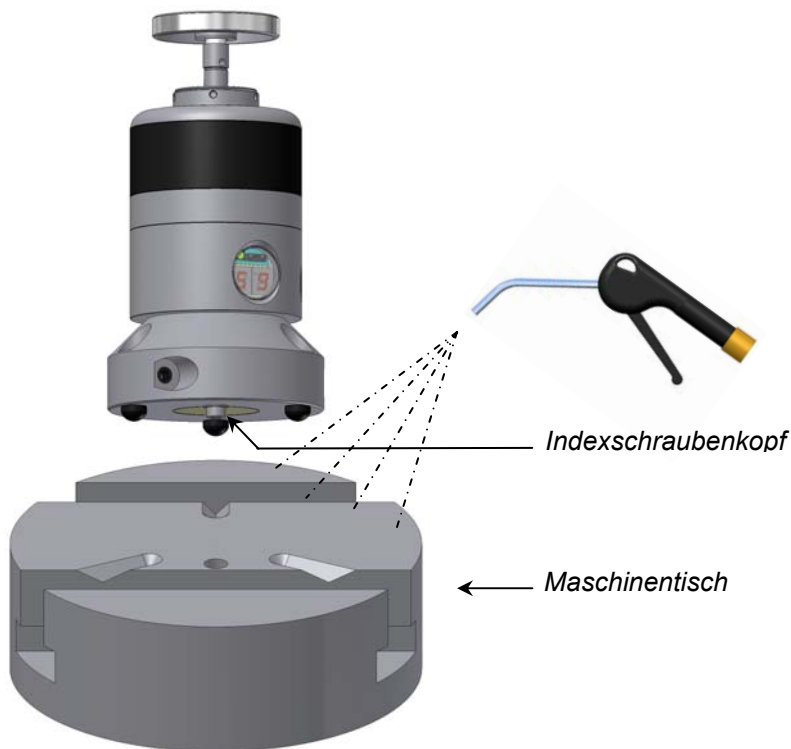
<u>Antastrichtungen:</u>	$\pm X; \pm Y; -Z$
<u>Max. Taststiftauslenkung:</u>	$XY \pm 12,5^\circ; Z -6mm$
<u>Antastkraft einstellbar:</u>	$Z = 2,5 - 12,5N$ $XY = 0,3 - 1,4N$
<u>Einstellung bei Auslieferung:</u>	$Z = 8,5N / XY = 0,96N$
<u>Kleinstes Werkzeug:</u>	$\varnothing 0,5mm$
<u>Energieversorgung:</u>	2x Batterie 3,6V Typ ½ AA (1200mAh)
<u>Batterielebensdauer:</u>	100% = 325h 5% = 219d Standby = 230d
<u>Gewicht: ohne Grundplatte:</u>	ca. 940g
<u>Temperaturbereich:</u>	Betrieb: $10^\circ - 50^\circ C$ Lagern: $5^\circ - 70^\circ C$
<u>Material:</u>	Nichtrostender Stahl
<u>Antastwiederholgenauigkeit in einer Richtung:</u>	2Sigma $\leq 1\mu m$ bei 100mm/min
<u>Wechselgenauigkeit:</u>	$\pm 2,5\mu m$
<u>Garantierte Lebensdauer des Messwerks:</u>	10 Millionen Antastungen
<u>Sendefrequenzbereich:</u>	433,075 – 434,650 MHz
<u>Anzahl Kanäle:</u>	64
<u>Kanalabstände:</u>	25 KHz
<u>Abdichtung:</u>	IP68: EN60529

Abmessungen



Radio-wave Tool Setter RWT35.50

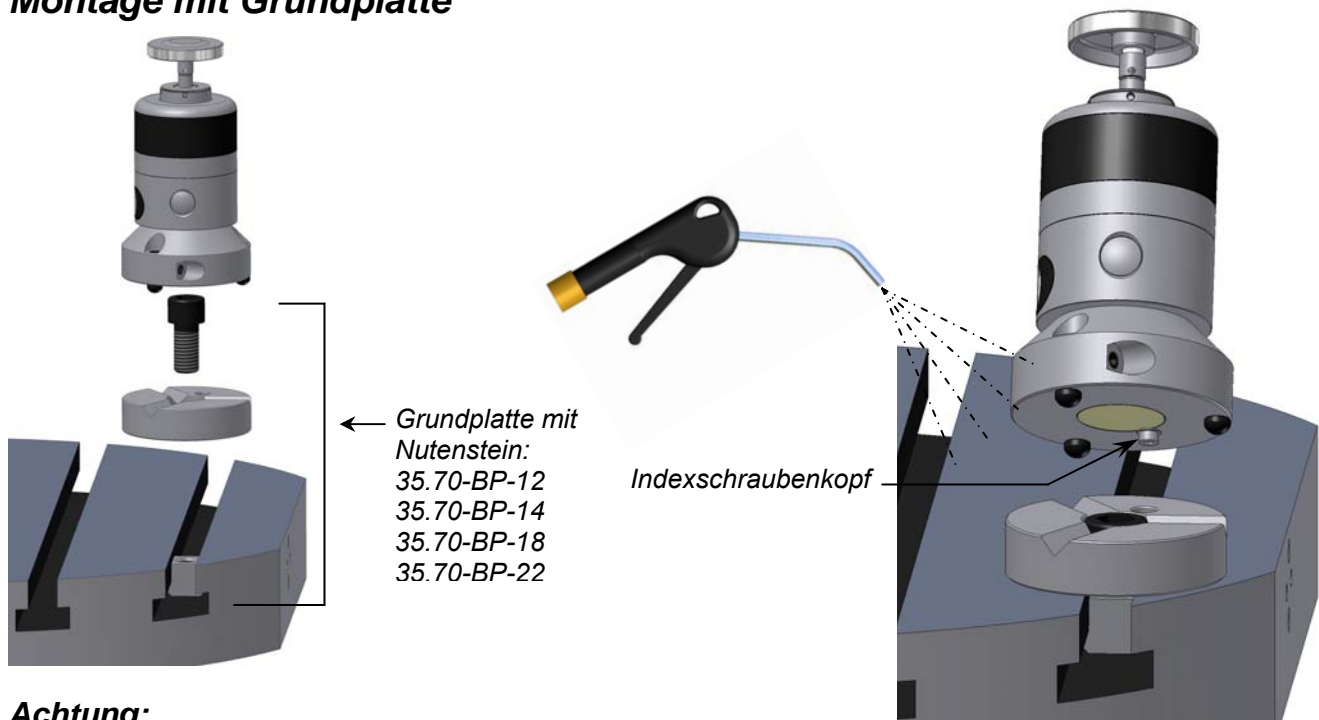
Montage direkt auf dem Maschinentisch



Achtung:

- Nuten müssen selbständig in den Maschinentisch gefräst werden!
- Ausrichtbolzen und V-Nuten sauber abblasen.
- Beim Aufsetzen des Tool Setters darauf achten, dass Indexschraubenkopf in vorgesehene Bohrung trifft!
- V-Nuten und Ausrichtbolzen müssen frei von Schmutz und Spänen sein!

Montage mit Grundplatte



Achtung:

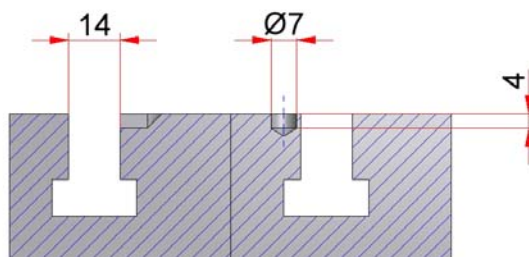
- Ausrichtbolzen und V-Nuten sauber abblasen.
- Beim Aufsetzen des Tool Setters darauf achten, dass Indexschraubenkopf in vorgesehene Bohrung trifft !
- V-Nuten und Ausrichtbolzen müssen frei von Schmutz und Spänen sein !

Radio-wave Tool Setter RWT35.50

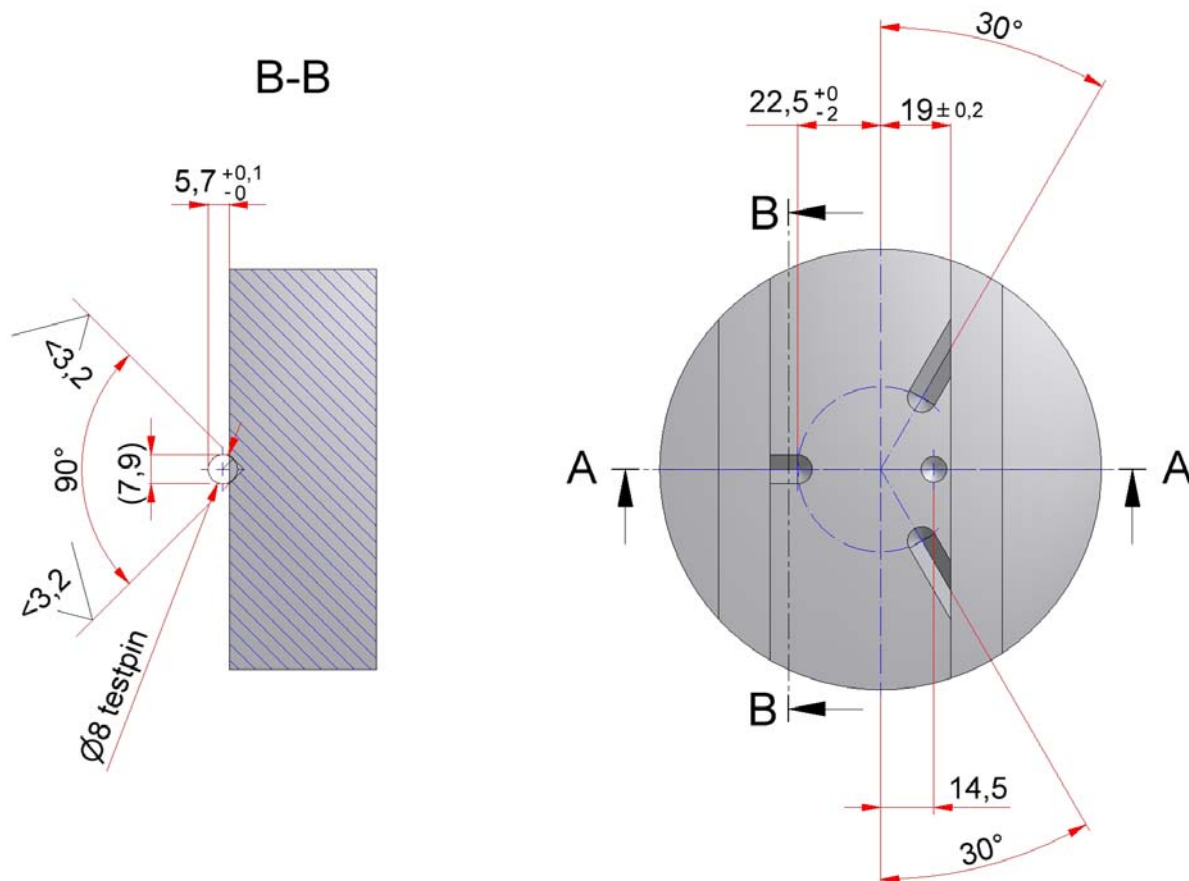
Fertigungszeichnung für V-Nuten

T-Nuten = 14mm

A-A

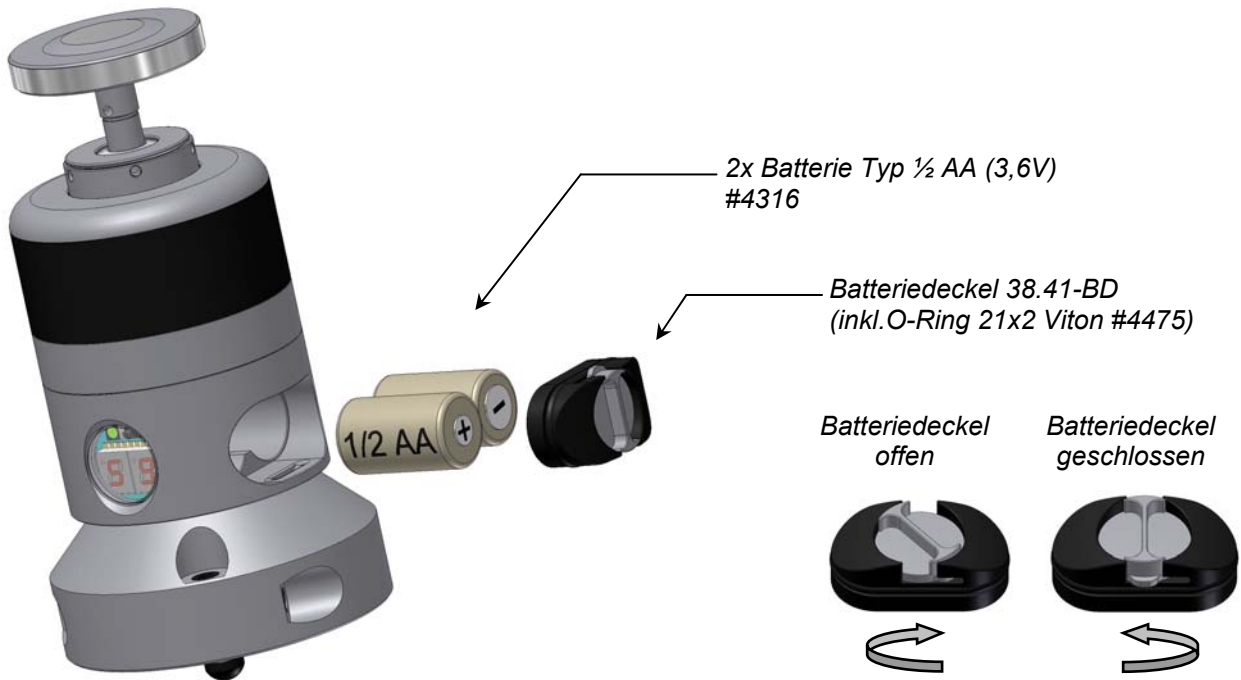


B-B



Radio-wave Tool Setter RWT35.50

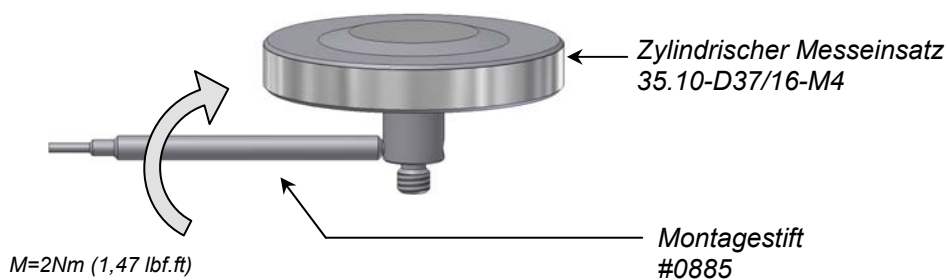
Batteriewechsel



Achtung!

- Tool Setter vor dem Öffnen sauber und trocken wischen!
NICHT mit Druckluft abblasen!
- Batteriedeckel mittels Drehbewegung öffnen!
- Leere Batterien entnehmen!
- Batterien **wechelseitig** einlegen!
- Beim Schließen des Batteriedeckels auf korrekte Einfuhr des dichtenden O-Rings achten!
- Leere Batterien sofort erneuern!

Messeinsatzwechsel



Achtung !

Nach dem Messeinsatzwechsel:

- Ausrichtung der Messfläche prüfen und bei Bedarf neu ausrichten!
- Tool Setter kalibrieren!

Radio-wave Tool Setter RWT35.50

Optische Zustandsanzeige



LED blinkt grün:

- Tool Setter überträgt Signale

LED blinkt grün / rot:

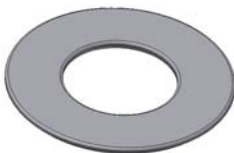
- Batteriewarnung

LED blinkt orange:

- Messeinsatz ausgelenkt

Wartung des Tool Setters

Service-Deckel #3240
mit O-Ring 16x1 Viton #3455



Metalldichtung
#2906



Kegelfeder
#2931



Unter der Metalldichtung kann sich
Schmutz ansammeln !

Reinigung :

- Service-Deckel mit Metalldichtung und Kegelfeder von Hand abziehen.
- Tool Setter und Teile unter fließendem Wasser säubern.
- Tool Setter wieder von Hand schließen.
- Messfläche ausrichten.
- Tool Setter kalibrieren !

Achtung !

- Zur Reinigung keine Druckluft oder starken Wasserstrahl verwenden !
- Keine spitzen Gegenstände verwenden !
(Beschädigung der Dichtmembran)



Radio-wave Tool Setter RWT35.50

Kanäle und Frequenzen

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	locked	18	433,300	36	433,875	54	434,375
01	433,925	19	433,325	37	433,900	55	434,400
02	434,075	20	433,350	38	433,950	56	434,425
03	433,075	21	433,400	39	433,975	57	434,450
04	locked	22	433,425	40	434,000	58	434,475
05	433,175	23	433,450	41	434,025	59	434,500
06	433,275	24	433,500	42	434,050	60	434,525
07	433,375	25	433,525	43	434,100	61	434,550
08	433,475	26	433,550	44	434,125	62	434,575
09	433,575	27	433,600	45	434,150	63	434,600
10	433,675	28	433,625	46	434,175	64	434,625
11	433,775	29	433,650	47	434,200	65	434,650
12	433,100	30	433,700	48	434,225		
13	433,125	31	433,725	49	434,250	66-99	locked
14	433,150	32	433,750	50	434,275		
15	433,200	33	433,800	51	434,300		
16	433,225	34	433,825	52	434,325		
17	433,250	35	433,850	53	434,350		

Kanaleinstellung



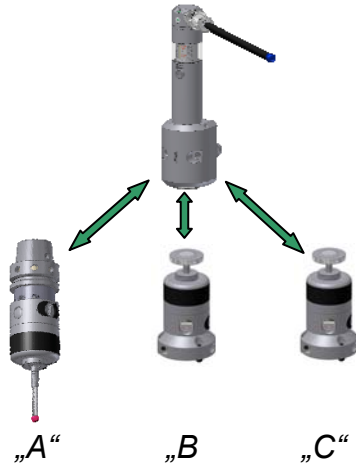
Ablauf:

- Der Tool Setter ist ausgeschaltet!
- Druckknopf drücken bis Kanal angezeigt wird.
- Den Druckknopf so oft drücken bis gewünschter Kanal angezeigt wird.
- Kanalanzeige erlischt nach 5 sec.
- Kanal ist nun eingestellt!

Radio-wave Tool Setter RWT35.50

Aktivierungs-Codierung und Ausschaltzeit einstellen

Mit 3 verfügbaren Aktivierungs-Codierungen, „A“ / „B“ / „C“, ist es möglich bis zu 3 Messsysteme mit einem Empfänger zu betreiben. Der Empfänger sendet den ausgewählten Aktivierungs-Code und erwartet auch nur Signale im selben Aktivierungs-Code.



Achtung - Sicherheitshinweis!

Es dürfen **niemals** 2 oder mehr Systeme mit derselben Aktivierungs-Codierung auf demselben Kanal eingestellt werden!

Jede Aktivierungs-Codierung ist mit der jeweiligen Ausschaltzeit Einstellung „FUNK OFF“ und „3 min“ verfügbar. Bei der Einstellung „FUNK OFF“ muss das Messsystem über den Empfänger mit einem M-Code deaktiviert werden!

Bei der Einstellung „3min“ muss das Messsystem ebenfalls per M-Code deaktiviert werden, wird aber bei einer fehlerhaften Deaktivierung sicherheitshalber nach 3 min intern deaktiviert!

Die „1“ vor dem Aktivierungs-Code zeigt an, dass die Ausschaltzeit **aktiviert** ist, die „0“ dass sie **deaktiviert** ist.

Anzeige im Display:



= 0.A. → Ausschaltzeit nicht aktiv („Funk OFF“) / Aktivierungs-Code „A“



= 1.C. → Ausschaltzeit aktiv („3 min“) / Aktivierungs-Code „C“



Display zeigt Aktivierungs-Code und Status der Ausschaltzeit

Werkseinstellung →

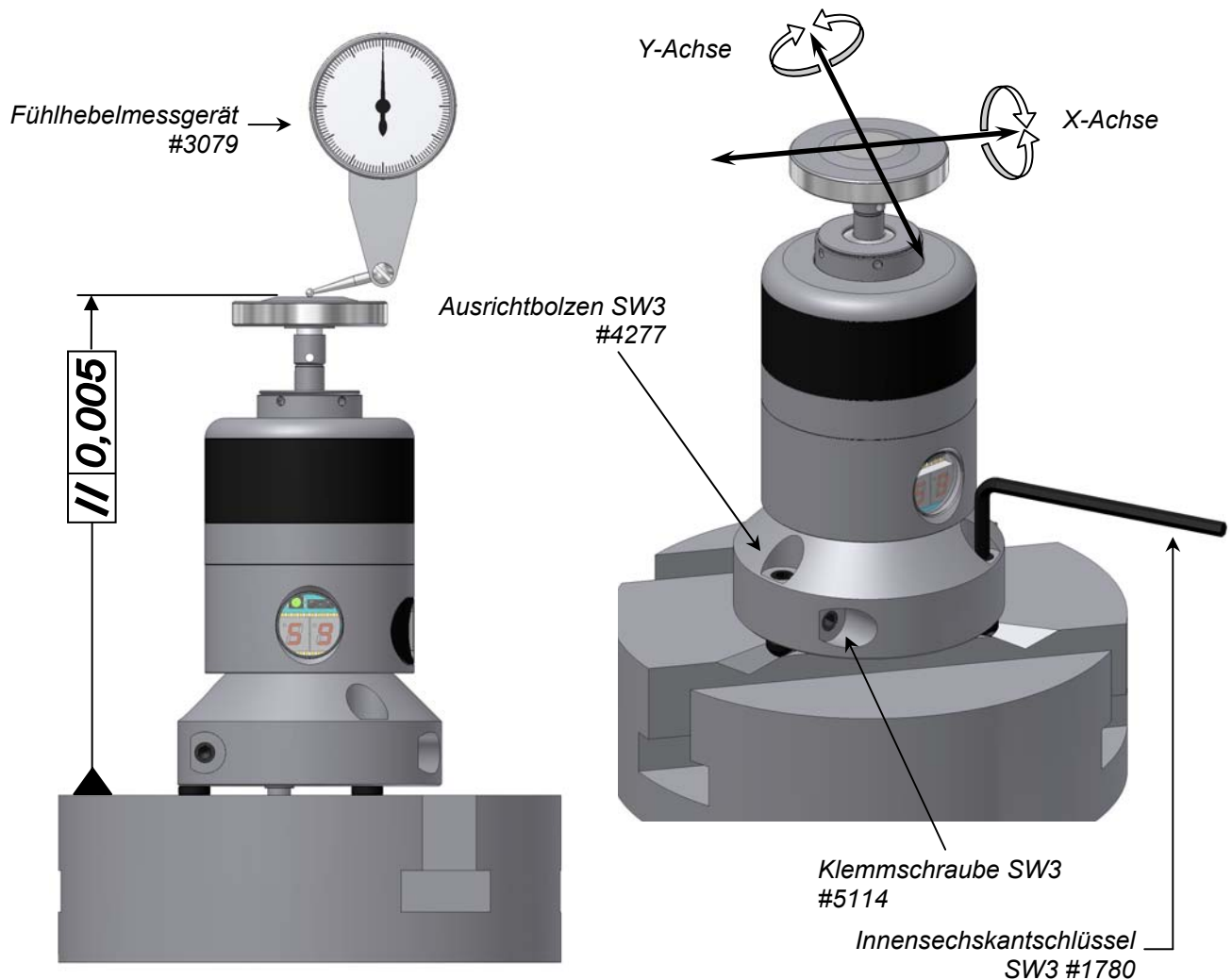
Einstellung	Aktivierungs-Code	Ausschaltzeit
0.A.	„A“	Funk OFF
0.B.	„B“	Funk OFF
0.C.	„C“	Funk OFF
1.A.	„A“	3 min
1.B.	„B“	3 min
1.C.	„C“	3 min

Ablauf:

- Der Tool Setter ist ausgeschaltet!
- Druckknopf drücken bis der eingestellte Kanal angezeigt wird.
- Den Messeinsatz so oft auslenken bis die gewünschte Aktivierungs-Codierung ausgewählt ist.
- Messeinsatz und Druckknopf nicht mehr betätigen!
- Displayanzeige erlischt nach 5 sec.
- Aktivierungs-Codierung ist nun eingestellt.

Radio-wave Tool Setter RWT35.50

Ausrichten des Messeinsatzes

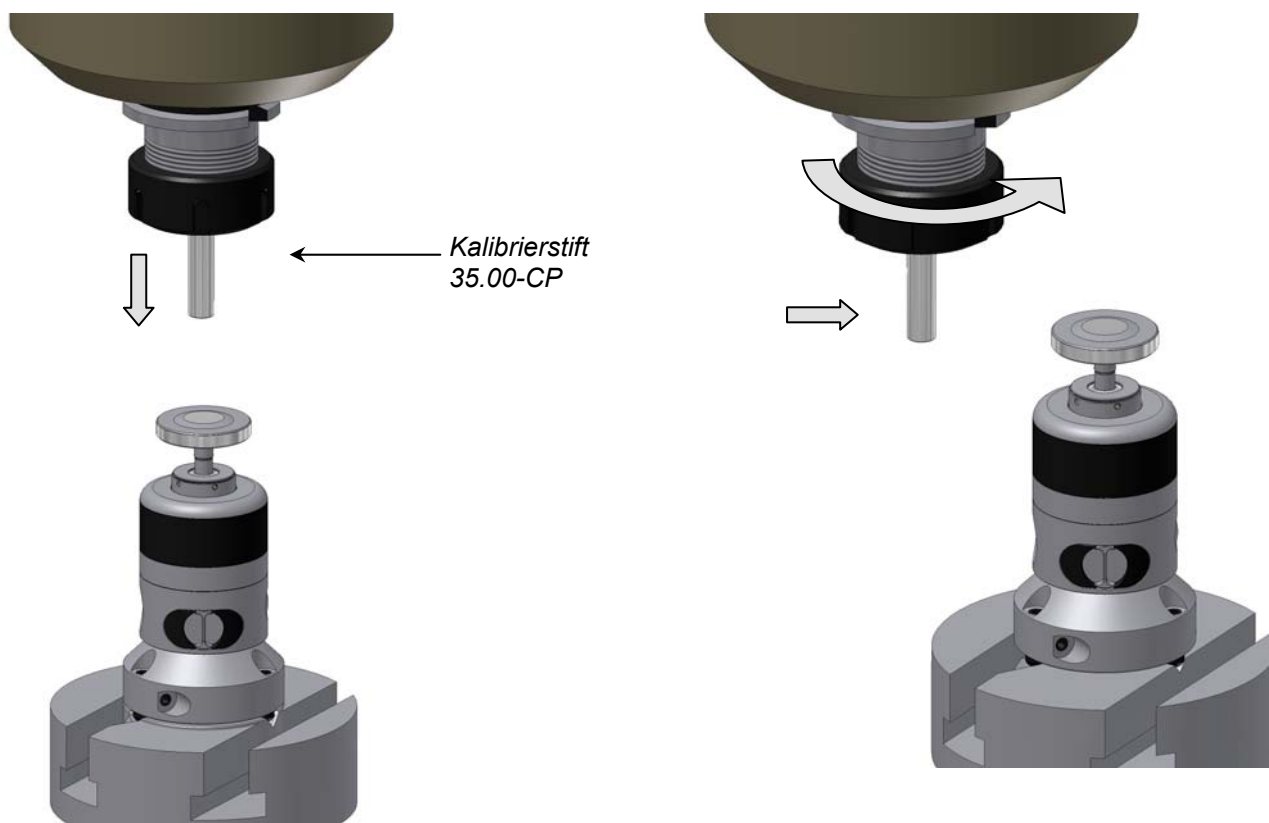


Ablauf:

- Klemmschrauben lösen und Ausrichtbolzen bis zum Anschlag nach oben eindrehen.
- Klemmschrauben so anziehen, dass Ausrichtbolzen mit mittlerer Kraft noch gedreht werden können.
- Ausrichtbolzen und V-Nuten sauber abblasen.
- Tool Setter in den V-Nuten aufsetzen.
- Messeinsatz in der X-Achse mittels Fühlhebelmessgerät abfahren und Parallelität ermitteln.
- Durch drehen der Ausrichtbolzen den Tool Setter um die Y-Achse auf $< 5\mu\text{m}$ ausrichten.
- Klemmschrauben (2x) der eingestellten Ausrichtbolzen fest anziehen.
- Tool Setter mit drittem Ausrichtbolzen um die X-Achse auf $< 5\mu\text{m}$ ausrichten.
- Klemmschraube des dritten Ausrichtbolzens fest anziehen.
- Tool Setter aus Maschine nehmen und Klemmschrauben (3 St.) mit hoher Handkraft (ca. 10Nm) festziehen.
- Ausrichtbolzen und V-Nuten sauber abblasen.
- Tool Setter erneut in den V-Nuten aufsetzen und die Ausrichtung überprüfen.
- Tool Setter kalibrieren !

Radio-wave Tool Setter RWT35.50

Tool Setter kalibrieren

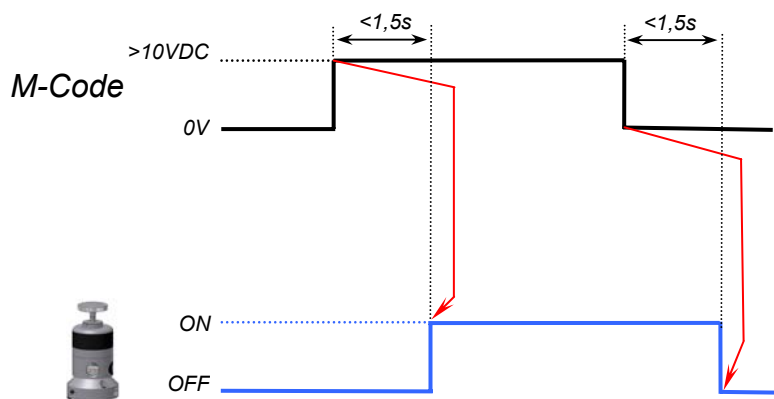


Achtung:

Tool Setter mit Kalibrierzyklus der Maschinensteuerung kalibrieren.

Tool Setter ON / OFF Prozedur

Der bidirekte Tool Setter wird über den Funk-Empfänger RWR95.40 aktiviert und deaktiviert. Nach dem Setzen des M-Codes ist der Tool Setter in $<1,5\text{ s}$ aktiviert und $<1,5\text{ s}$ nach dem Rücksetzen wieder deaktiviert.



Radio-wave Tool Setter RWT35.50

Sicherheitshinweise – Bitte beachten !

1. Um Beschädigungen des Funk-Werkzeugmesssystems oder des Werkzeuges zu vermeiden muss sichergestellt sein, dass sich kein anderes bidirektionales Funksystem auf dem selben Kanal mit der selben Aktivierungs-Codierung befindet!
2. Ein Vorschub- oder Spindel-Stop, ausgelöst durch ein Schaltsignal oder ein ERROR-Signal eines Werkzeugmesssystems, darf nur dann erfolgen, wenn ein Werkzeugmesssystem aktiviert und in Verwendung ist.
Diese Sicherheitsabfrage verhindert, dass die Spindel oder der Vorschub während einer normalen Fräsbearbeitung gestoppt wird, falls aus einem der nachfolgenden Gründe ein Signal von einem Funk-System ausgelöst werden sollte:
 - Eine weitere Maschine mit einem Funk-System wird in Betrieb genommen und dieses System sendet auf dem gleichen Kanal mit gleicher Aktivierungs-Codierung wie ein zuvor installiertes System.

Konformitätserklärung

Wir erklären in allgemeiner Verantwortung, dass das Produkt „**Radio-wave Tool Setter RWT35.50**“, auf das sich diese Erklärung bezieht, mit folgenden Normen übereinstimmt:

R&TTE-Directive 99/5/EG	
EN 300 220-1 V2.3.1 (2010-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods
EN 300 220-2 V2.3.2 (2010-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

EMC- Directive 2004/108/EG	
EN 301 489-1 V1.8.1 (2008-04)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
EN 301 489-3 V1.4.1 (2002-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz
EN 6000-4-2 (2009-12)	Electromagnetic compatibility (EMC) - Part 4-2: Testing and Measurement - Examination of the discharge immunity static electricity

FCC / RSS – Declaration

In Progress: Application done - Confirmation coming soon!

Radio-wave Tool Setter RWT35.50

Lieferumfang, Ersatzteile, Zubehör

Lieferumfang		
Bestellnummer	Bezeichnung	
35.50-RWT	Funk-Werkzeugmesssystem RWT35.50	
	4x Batterie Typ 1/2AA (3,6V)	#4316
	Aufbewahrungskoffer	#4301
	Toolbox	35.50-TB

Ersatzteile und Werkzeuge		
Bestellnummer	Bezeichnung	
35.10-D37/16-M4	Zylindrischer Messeinsatz	
#4316	Batterie Typ ½ AA (3,6V)	
38.41-BD	Batteriedeckel	
#4475	O-Ring 21x2 Viton für Batteriedeckel	
#4277	Ausrichtbolzen SW3	
#5114	Klemmschraube SW3	
#3240	Service-Deckel	
#3455	O-Ring 16x1 Viton für Service-Deckel	
#2906	Metalldichtung	
#2931	Kegelfeder	
35.00-CP	Kalibrierstift	
#1780	Innensechskantschlüssel SW3	
#0885	Montagestift	
#3079	Fühlhebelmessgerät	
35.50-TB	Toolbox	
	1x Innensechskantschlüssel SW3	#1780
	1x Montagestift	#0885
	2x Klemmschraube SW3	#5114
	1x Kalibrierstift	35.00-CP

Zubehör		
Bestellnummer	Bezeichnung	
35.70-BP-12	Grundplatte mit Nutenstein 12mm	
35.70-BP-14	Grundplatte mit Nutenstein 14mm	
35.70-BP-18	Grundplatte mit Nutenstein 18mm	
35.70-BP-22	Grundplatte mit Nutenstein 22mm	
#4301	Aufbewahrungskoffer	

Radio-wave Tool Setter RWT35.50

OPERATING INSTRUCTIONS

(Translation of the original operating instructions)

EN

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Fon +49(0)7529 / 9733-0 · Fax +49 (0)7529 / 9733-7 · vertrieb@mh-inprocess.com

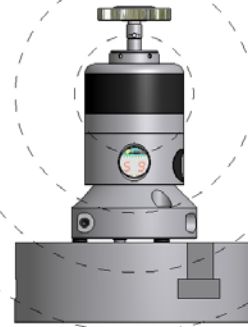
Radio-wave Tool Setter RWT35.50

System Components

**Radio-wave Receiver
RWR95.40**



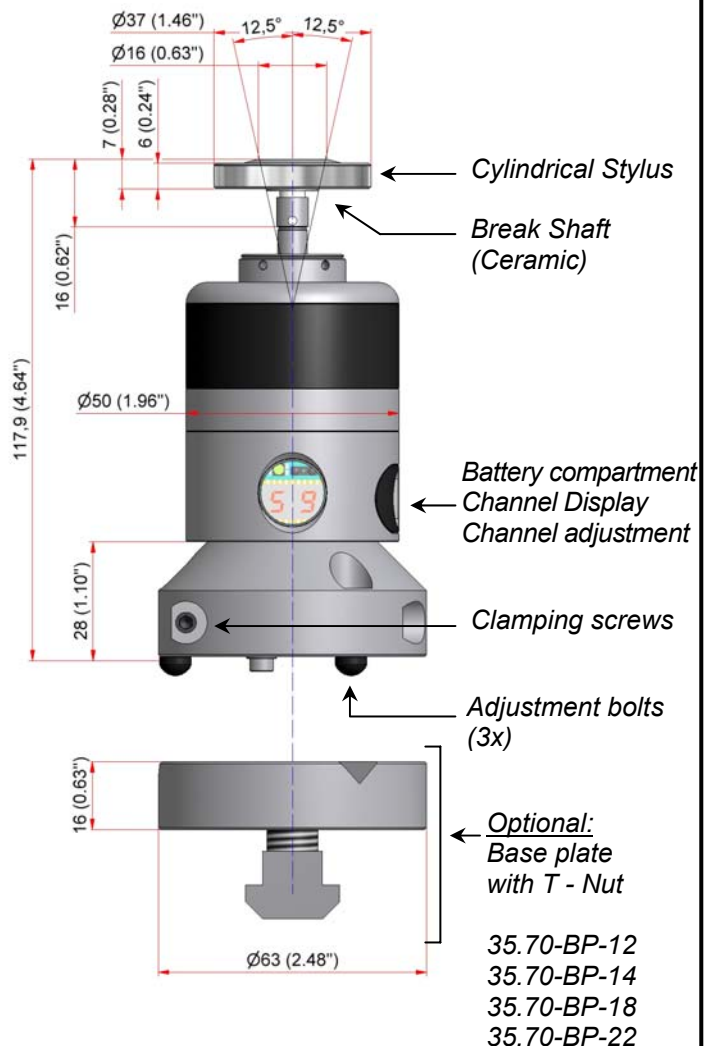
**Radio-wave Tool Setter
RWT35.50**



Technical Data

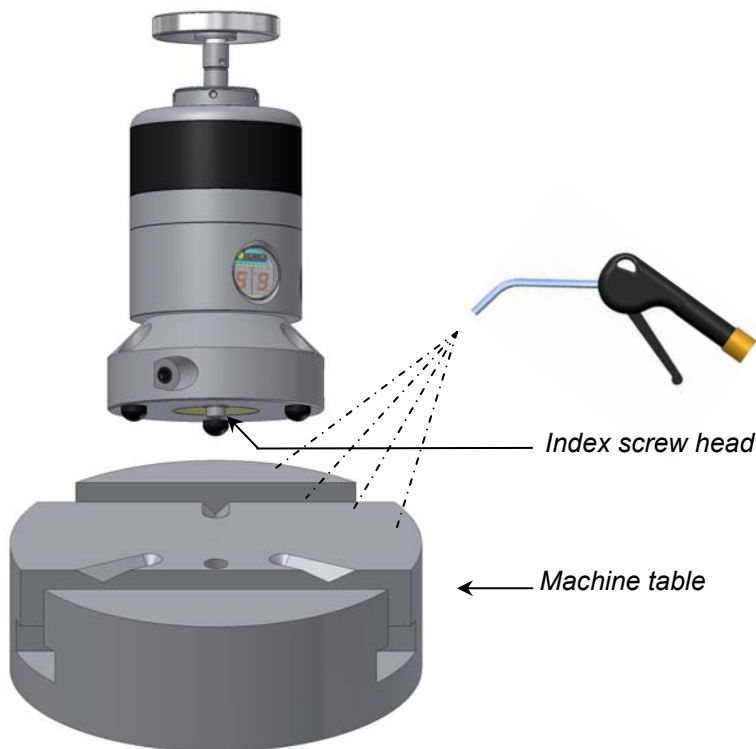
<u>Probing Directions:</u>	$\pm X; \pm Y; -Z$
<u>Max. Stylus Overtravel:</u>	$XY \pm 12.5^\circ; Z -6mm$
<u>Probing Force adjustable:</u>	$Z = 2,5 - 12.5N$ $XY = 0.3 - 1.4N$
<u>Factory Settings:</u>	$Z = 8.5N / XY = 0.96N$
<u>Smallest Tool:</u>	$\varnothing 0.5mm (0.02")$
<u>Battery:</u>	2x Battery 3,6V Type 1/2 AA (1200mAh)
<u>Battery Lifetime:</u>	100% = 325h 5% = 219d Standby = 230d
<u>Weight:</u>	
<u>without base plate:</u>	ca. 940g
<u>Temperature range:</u>	Operating: $10^\circ - 50^\circ C$ Storage: $5^\circ - 70^\circ C$
<u>Material:</u>	Stainless Steel
<u>Probe repeatability in one direction:</u>	$2\text{Sigma} \leq 1\mu m$ at 100mm/min
<u>Placement Accuracy:</u>	$\pm 2.5\mu m$
<u>Guaranteed Life-time of Measuring Unit:</u>	10 million deflections
<u>Frequency Range:</u>	433.075 – 434.650 MHz
<u>Number of Channels:</u>	64
<u>Channel Spacing:</u>	25 KHz
<u>Sealing:</u>	IP68: EN60529

Dimensions



Radio-wave Tool Setter RWT35.50

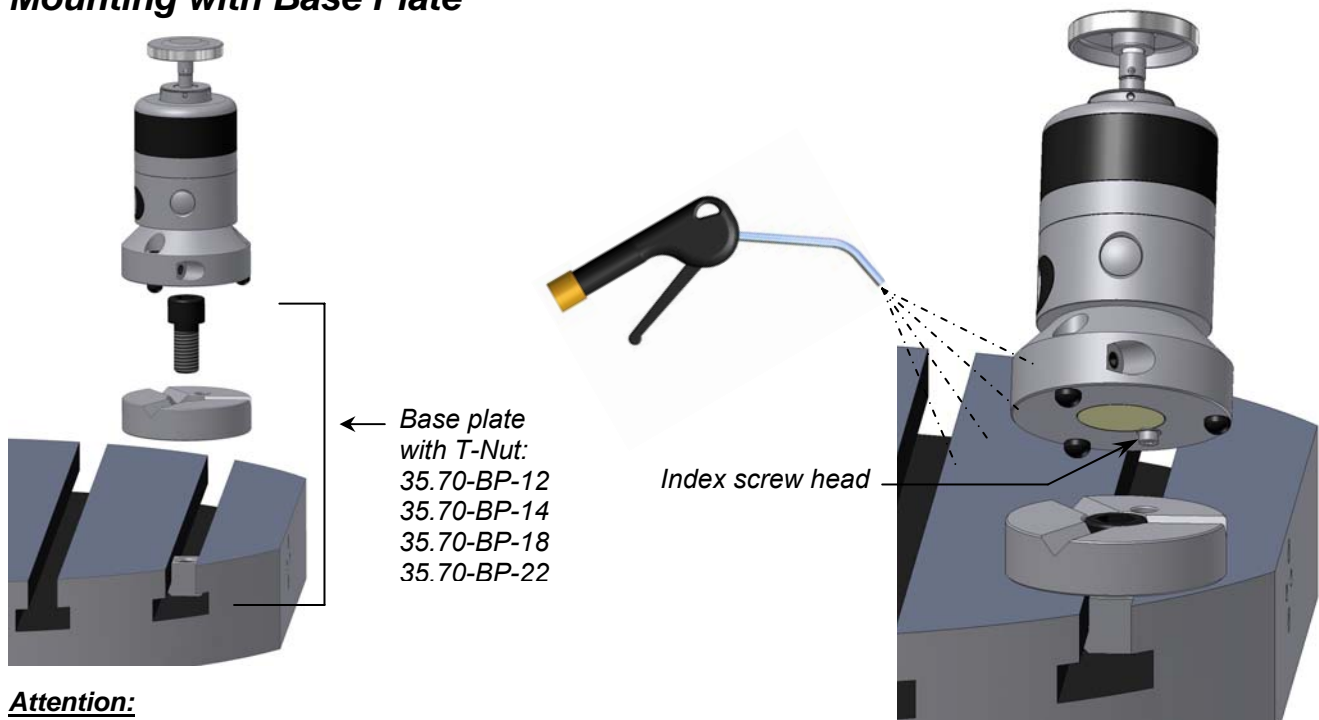
Mounting Directly on the Machine Table



Attention:

- Slots must be milled in the machine table!
- Blow adjustment bolts and V-slots clean.
- When positioning the tool setter, ensure that the index screw head is in the correct hole!
- V-Slots and adjustment bolts must be clean and free of chips!

Mounting with Base Plate



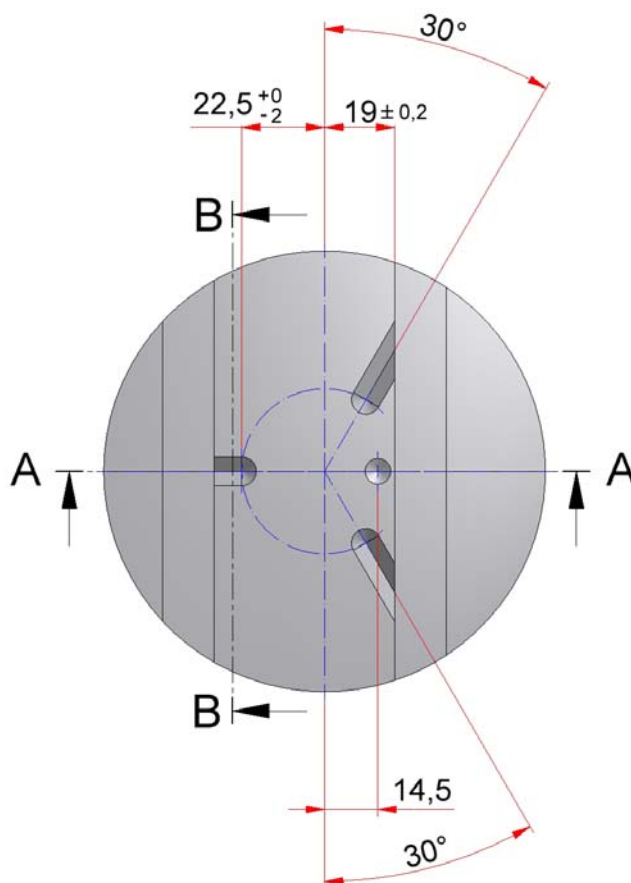
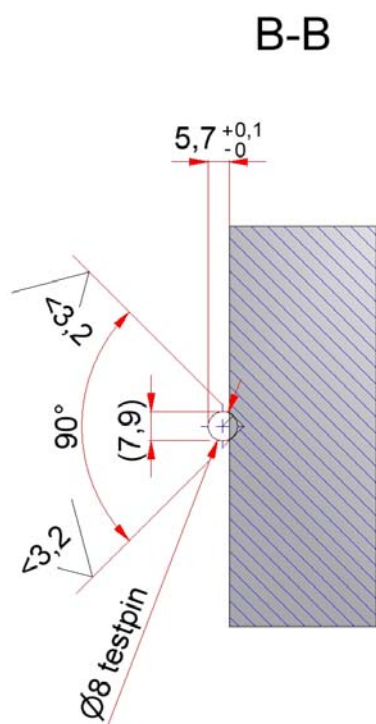
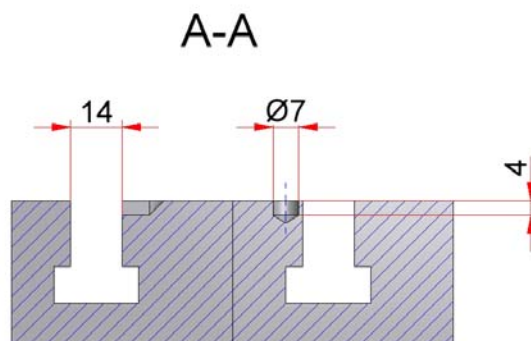
Attention:

- Clean adjustment bolts and V-slots.
- When positioning the tool setter, ensure that the index screw head is in the correct hole!
- V-Slots and adjustment bolts must be clean and free of chips!

Radio-wave Tool Setter RWT35.50

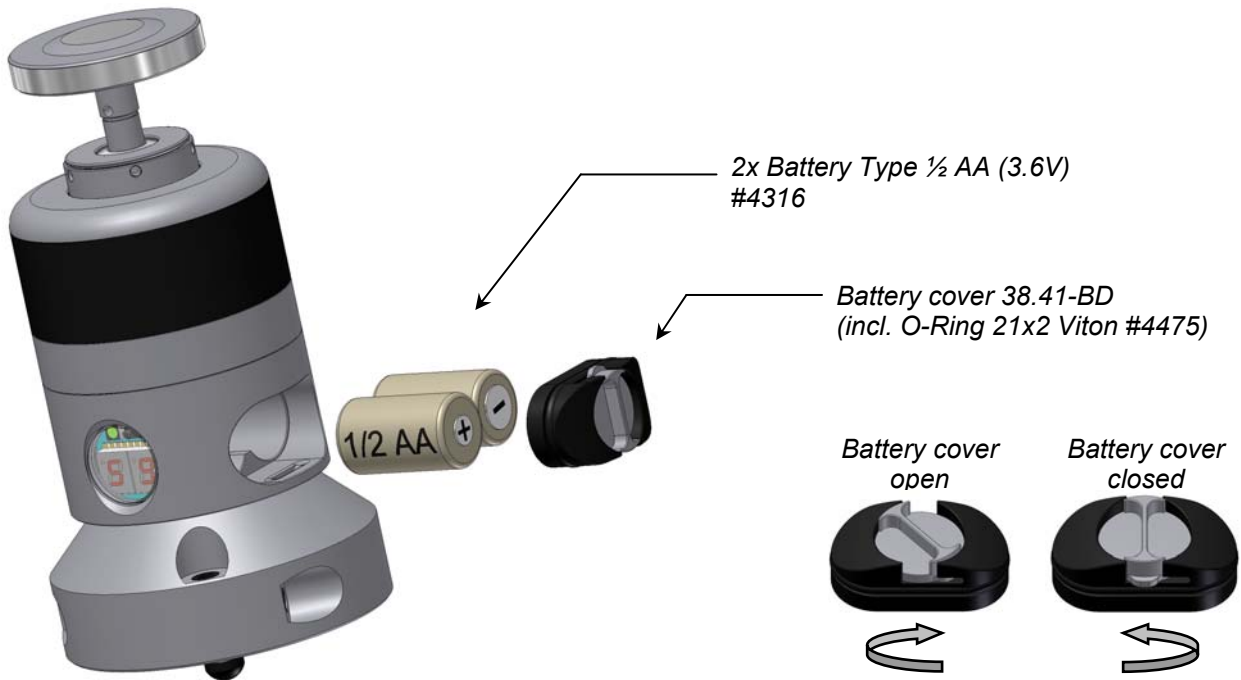
Drawing for V-Slots

T-Nuts = 14mm



Radio-wave Tool Setter RWT35.50

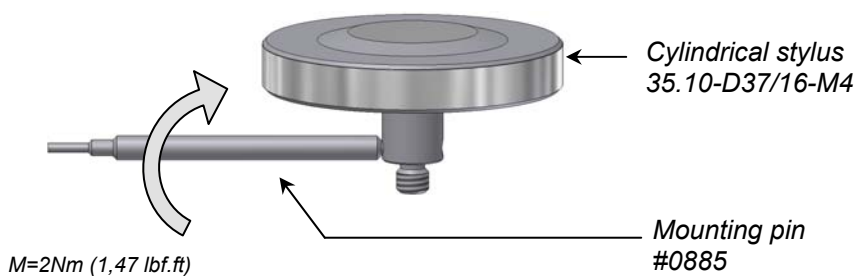
Battery Replacement



Attention !

- Before opening Tool Setter, clean and dry well!
Do NOT blow off with compressed air!
- Open battery cover by a circular motion!
- Remove empty batteries!
- Make sure **positive and negative** ends of battery are inserted correctly!
- When closing the battery cover, ensure the O-ring for sealing will be properly inserted !
- Replace empty batteries immediately

Stylus Change



Attention !

After changing the stylus:

- Check the alignment of the measuring surface and realign when needed!
- Calibrate the Tool Setter

Radio-wave Tool Setter RWT35.50

Optical Status Display



LED blinking green:

- Tool Setter transmitting signal

LED blinking green / red:

- Low Battery

LED blinking orange:

- Stylus deflected

Maintenance



Dirt can build up under the metal eyelid!

To Clean:

- Remove the service cover, metal eyelid, and conical spring by hand.
- Clean the Tool Setter and parts with flowing water.
- Reassemble and close by hand.
- Align the measuring surface.
- Calibrate Tool Setter!

Attention!

- Do not use compressed air or pressure washer to clean!
- Do not use sharp objects as these can damage the seals!

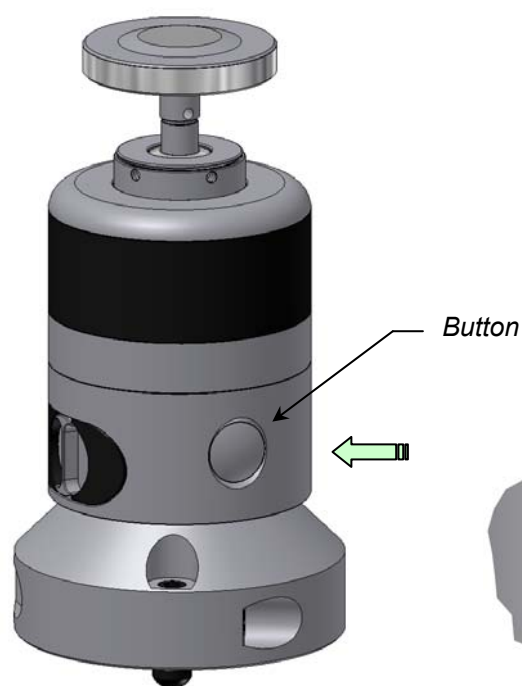


Radio-wave Tool Setter RWT35.50

Channels and Frequencies

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	locked	18	433,300	36	433,875	54	434,375
01	433,925	19	433,325	37	433,900	55	434,400
02	434,075	20	433,350	38	433,950	56	434,425
03	433,075	21	433,400	39	433,975	57	434,450
04	locked	22	433,425	40	434,000	58	434,475
05	433,175	23	433,450	41	434,025	59	434,500
06	433,275	24	433,500	42	434,050	60	434,525
07	433,375	25	433,525	43	434,100	61	434,550
08	433,475	26	433,550	44	434,125	62	434,575
09	433,575	27	433,600	45	434,150	63	434,600
10	433,675	28	433,625	46	434,175	64	434,625
11	433,775	29	433,650	47	434,200	65	434,650
12	433,100	30	433,700	48	434,225		
13	433,125	31	433,725	49	434,250	66-99	locked
14	433,150	32	433,750	50	434,275		
15	433,200	33	433,800	51	434,300		
16	433,225	34	433,825	52	434,325		
17	433,250	35	433,850	53	434,350		

Setting the Channel



Procedure:

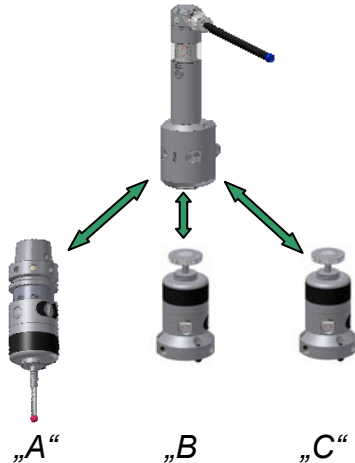
- Ensure the Tool Setter is off
- Press the button until the channel is displayed
- Press the button again until the desired channel is displayed
- Channel display shuts off after 5 sec.
- Channel is now adjusted!



Radio-wave Tool Setter RWT35.50

Activation Code and Time-Out Adjustment

With 3 available activation codes, „A“ / „B“ / „C“, it is possible to operate up to 3 systems with one receiver. The receiver sends the selected activation code and expect only signals from the selected activation code.



Attention – Safety advice!

Under no circumstances 2 or more systems may be set up on the same channel using the same activation coding!

Every activation code is available with the respective time-out adjustment „Radio-wave OFF“ and „3min“.

When using the setting „Radio-wave OFF“, the measuring system must be deactivated by the receiver with an M-Code!

When using the setting „3min“, the measuring system must also be deactivated with an M-Code, but in case of a failure during deactivation the probe will be automatically deactivated after 3min!

The „1“ in front of the activation code shows that the time-out is **activated**, the „0“ that it is **deactivated**!

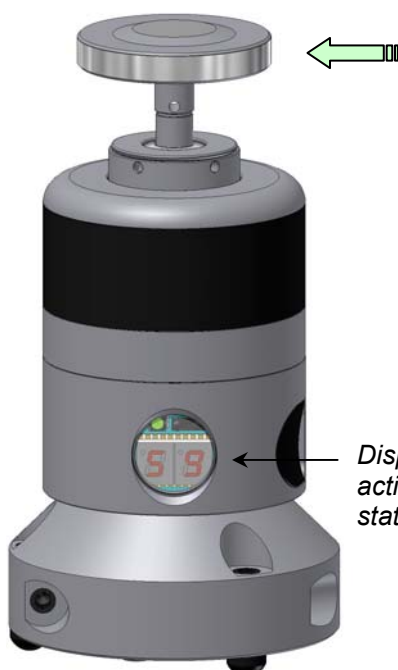
In the display:



= 0.A. → Time-out is deactivated („Radio-wave OFF“) / Activation code „A“



= 1.C. → Time-out is activated („3 min“) / Activation code „C“



Factory Setting →

Adjustment	Activation Code	Time-Out
0.A.	„A“	Radio-wave OFF
0.B.	„B“	Radio-wave OFF
0.C.	„C“	Radio-wave OFF
1.A.	„A“	3 min
1.B.	„B“	3 min
1.C.	„C“	3 min

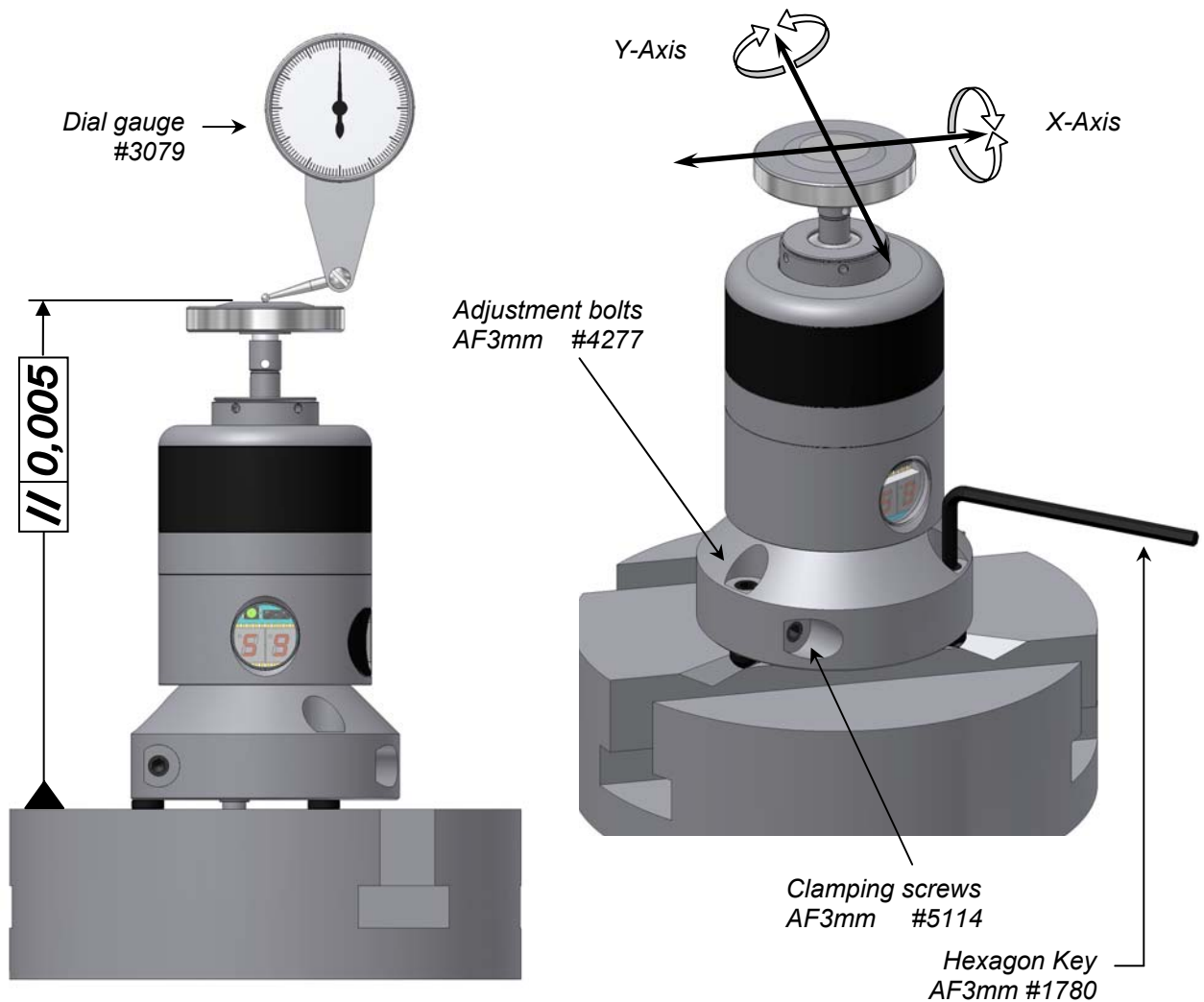
Display shows the activation code and status of time-out

Procedure:

- Ensure the Tool Setter is off.
- Press the button until the channel is displayed.
- Deflect the stylus until the desired activation code is displayed.
- Do not operate the button and stylus again.
- Display shuts off after 5 sec.
- Activation code is now adjusted!

Radio-wave Tool Setter RWT35.50

Aligning the Stylus

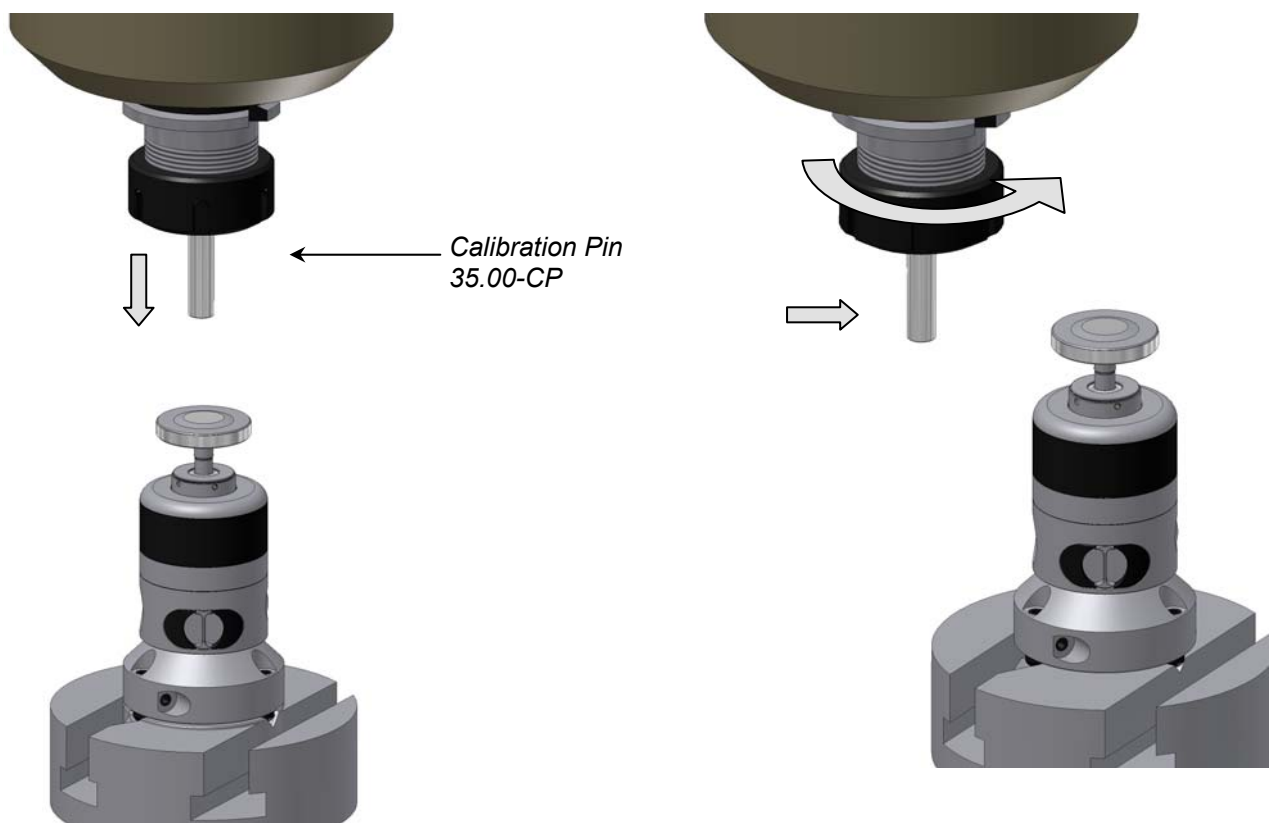


Steps:

- Loosen the clamping screws and turn the adjustment bolts until they reach their limit in the upper position.
- Tighten the clamping screws so until the adjustment bolts can just be turned with moderate-force.
- Blow the adjustment bolts and the V-Slots clean.
- Place the Tool Setter in the V-Slots.
- Check the parallelism of the stylus in the X Axis using an dial gauge.
- Adjust the Tool Setter in the Y Axis to $< 5\mu\text{m}$ by turning the adjustment bolts.
- Tighten (2x) the adjustment bolts.
- Using the third adjustment bolt, adjust the tool setter around the X-Axis to $< 5\mu\text{m}$
- Tighten the third adjustment bolt
- Take the Tool Setter out of the machine and securely tighten all 3 clamping screws by hand (ca. 10Nm).
- Blow off the adjustment bolts and the V-Slots.
- Put the tool setter back in the V-Slots and verify the alignment.
- Calibrate the Tool Setter!

Radio-wave Tool Setter RWT35.50

Tool Setter Calibration

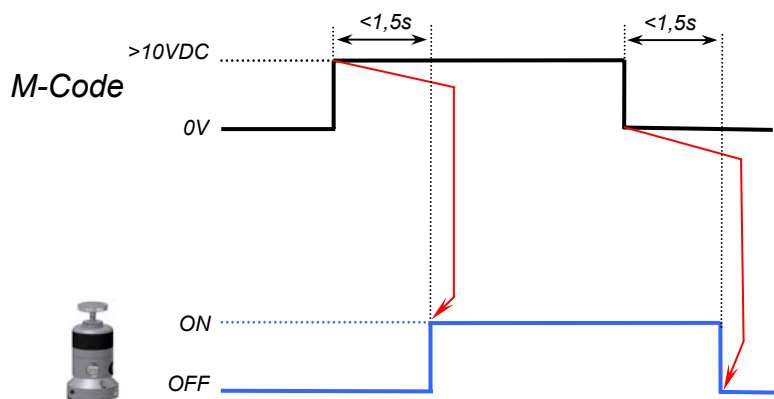


Attention:

Calibrate the Tool Setter using the machine control's calibration cycle.

Tool Setter ON / OFF Procedure

The bi-directional Tool Setter will be activated and deactivated by the Radio-wave Receiver RWR95.40. After setting the M-Code the Tool Setter is activated in <math><1,5\text{ s}</math> and deactivated in <math><1,5\text{ s}</math> after resetting.



Radio-wave Tool Setter RWT35.50

Safety Advice !

1. To avoid any damage to the radio-wave tool setter system or the tool, it has to be made sure that no other bidirectional radio system is running on the same channel using the same activation coding!
2. A feed or spindle stop triggered by a switching signal or an ERROR signal of a tool measuring system may only occur if a tool measuring system is activated and currently in use.
This security query prevents the spindle or the feed from being stopped during normal machining if a signal is triggered by a radio system for one of the following reasons:
 - Another machine equipped with a radio system is put into operation, and this system transmits on the same channel using the same activation coding as a previously installed system.

Declaration of Conformity

We declare under our sole responsibility that the product „Radio-wave Tool Setter RWT35.50“ to which this declaration relates is in conformity with following standards:

R&TTE-Directive 99/5/EG	
EN 300 220-1 V2.3.1 (2010-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods
EN 300 220-2 V2.3.2 (2010-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

















EMC- Directive 2004/108/EG	
EN 301 489-1 V1.8.1 (2008-04)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
EN 301 489-3 V1.4.1 (2002-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz
EN 6000-4-2 (2009-12)	Electromagnetic compatibility (EMC) - Part 4-2: Testing and Measurement - Examination of the discharge immunity static electricity

FCC / RSS - Declaration

In Progress: Application done - Confirmation coming soon!

Radio-wave Tool Setter RWT35.50

Delivery Contents, Spare Parts, Accessories

Delivery Contents		
Order Number	Description	
35.50-RWT	Radio-wave Tool Setter RWT35.50 4x Battery Type 1/2AA (3,6V) Storage Box Toolbox	#4316 #4301 35.50-TB
Spare Parts and Tools		
Order Number	Description	
35.10-D37/16-M4	Cylindrical stylus	
#4316	Battery Type 1/2 AA (3,6V)	
38.41-BD	Battery cover	
#4475	O-Ring 21x2 Viton for battery cover	
#4277	Adjustment bolt AF3mm	
#5114	Clamping screw AF3mm	
#3240	Service cover	
#3455	O-Ring 16x1 Viton for service cover	
#2906	Metal eyelid	
#2931	Conical spring	
35.00-CP	Calibration pin	
#1780	Hexagon key AF3mm	
#0885	Mounting pin	
#3079	Dial gauge	
35.50-TB	Toolbox 1x Hexagon key AF3mm 1x Mounting pin 2x Clamping screw AF3mm 1x Calibration pin	#1780 #0885 #5114 35.00-CP
Accessories		
Order Number	Description	
35.70-BP-12 35.70-BP-14 35.70-BP-18 35.70-BP-22	Base plate with T - Nut 12mm Base plate with T - Nut 14mm Base plate with T - Nut 18mm Base plate with T - Nut 22mm	
#4301	Storage box	

Radio-wave Tool Setter RWT35.50

ISTRUZIONI OPERATIVE

(Traduzione delle Istruzioni Operative originali)



	<u>Pagina</u>
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Montaggio diretto sulla tavola della macchina, Montaggio con piastra di base	2
Disegno delle cave a "V"	3
Sostituzione batterie, Sostituzione stilo	4
Segnale ottico dello stato, Manutenzione	5
Canali e frequenze, Selezione del canale	6
Codice di attivazione e tempo di spegnimento	7
Allineamento dello stilo	8
Calibrazione del presetting utensili, Sequenza di accensione/spegnimento	9
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m&h Inprocess Messtechnik GmbH • Am Langholz 11 • D-88289 Waldburg
Fon +49(0)7529 / 9733-0 • Fax +49 (0)7529 / 9733-7 • vertrieb@mh-inprocess.com

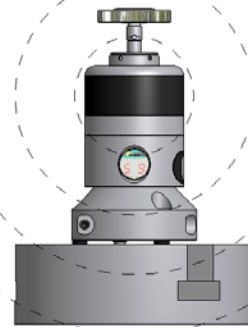
Radio-wave Tool Setter RWT35.50

Componenti del sistema

Radio-wave Receiver
RWR95.40



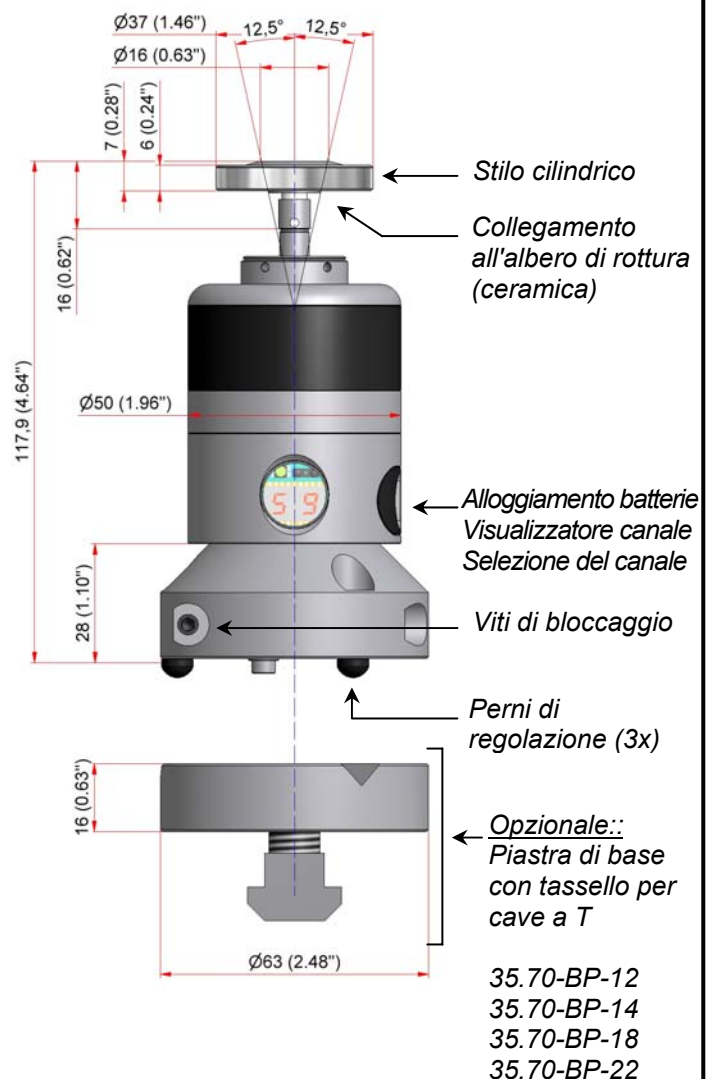
Radio-wave Tool Setter
RWT35.50



Dati tecnici

<u>Direzioni di tastatore:</u>	$\pm X; \pm Y; -Z$
<u>Massima corsa dello stilo:</u>	$XY \pm 12.5^\circ; Z -6mm$
<u>Forza di deflessione regolabile:</u>	$Z = 2,5 - 12,5N$ $XY = 0,3 - 1,4N$
<u>Valori di fabbrica:</u>	$Z = 8.5N / XY = 0.96N$
<u>Minimo diam. utensile:</u>	$\varnothing 0.5mm$
<u>Alimentazione:</u>	2x Batteria da 3,6V Tipo ½ AA (1200mAh)
<u>Durata della batteria:</u>	100% = 325h 5% = 219d Standby = 230d
<u>Peso senza piastra di base:</u>	ca. 940g
<u>Intervallo di temperatura:</u>	Operativa: $10^\circ - 50^\circ C$ A riposo: $5^\circ - 70^\circ C$
<u>Materiale:</u>	Acciaio inossidabile
<u>Ripetibilità unidirezionale:</u>	2Sigma $\leq 1\mu m$ con 100mm/min
<u>Precisione di posizionamento:</u>	$\pm 2.5\mu m$
<u>Tempo di vita garantito dell'unità di misura:</u>	10 milioni di deflessioni
<u>Intervallo frequenze di trasmissione:</u>	433.075 – 434.650 MHz
<u>Numero di canali:</u>	64
<u>Spazio tra i canali:</u>	25 KHz
<u>Tenuta:</u>	IP68: EN60529

Dimensioni



Radio-wave Tool Setter RWT35.50

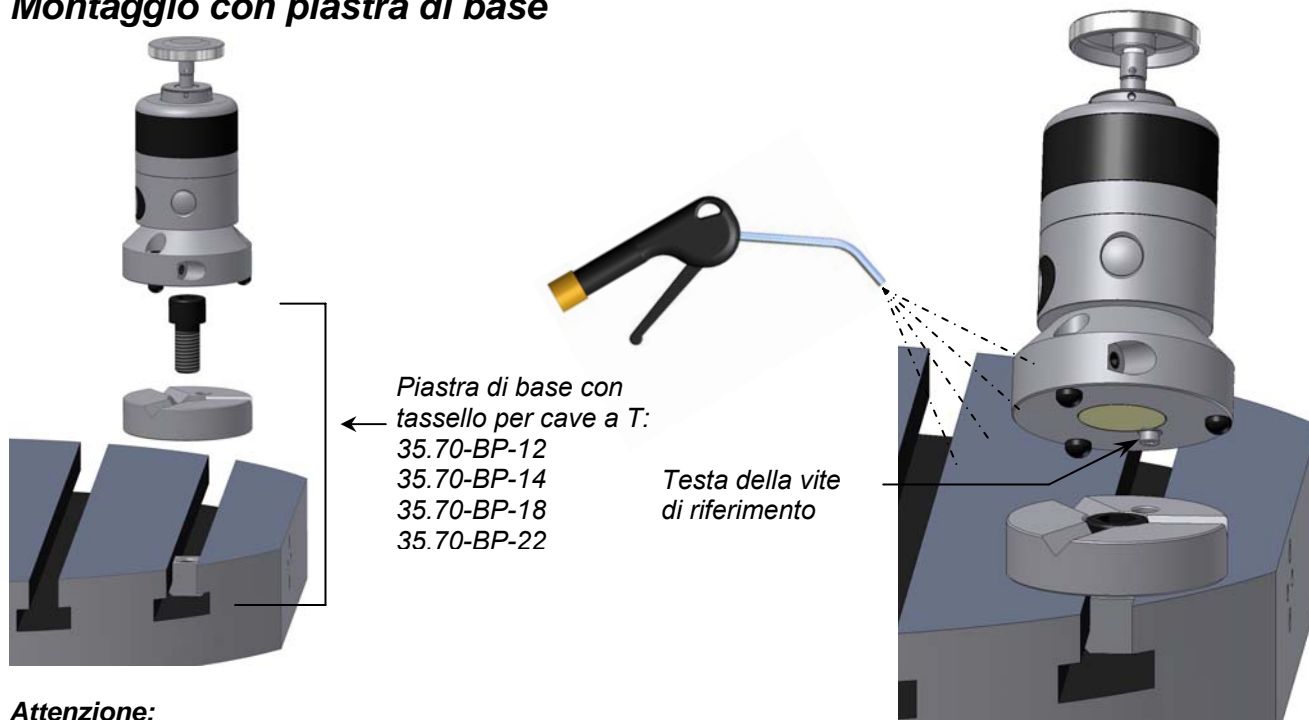
Montaggio diretto sulla tavola della macchina



Attenzione:

- Le sedi devono essere fresate sulla tavola della macchina!
- Pulire le sedi per la regolazione e le cave a V.
- Quando posizionate il presetting assicuratevi che la testa della vite di riferimento sia nella giusta sede!
- Le cave a V e le sedi per la regolazione devono essere pulite e libere da trucioli!

Montaggio con piastra di base



Attenzione:

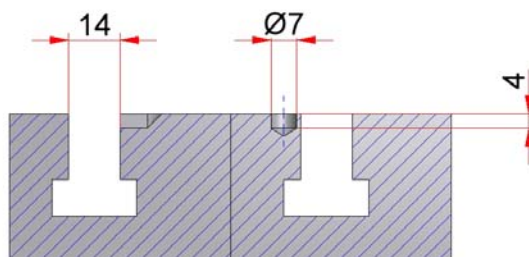
- Pulire la sedi di centraggio e le cave a V!
- Quando posizionate il presetting assicuratevi che la testa della vite di riferimento sia nella giusta sede!
- Le cave a V e le sedi per la regolazione devono essere pulite e libere da trucioli!

Radio-wave Tool Setter RWT35.50

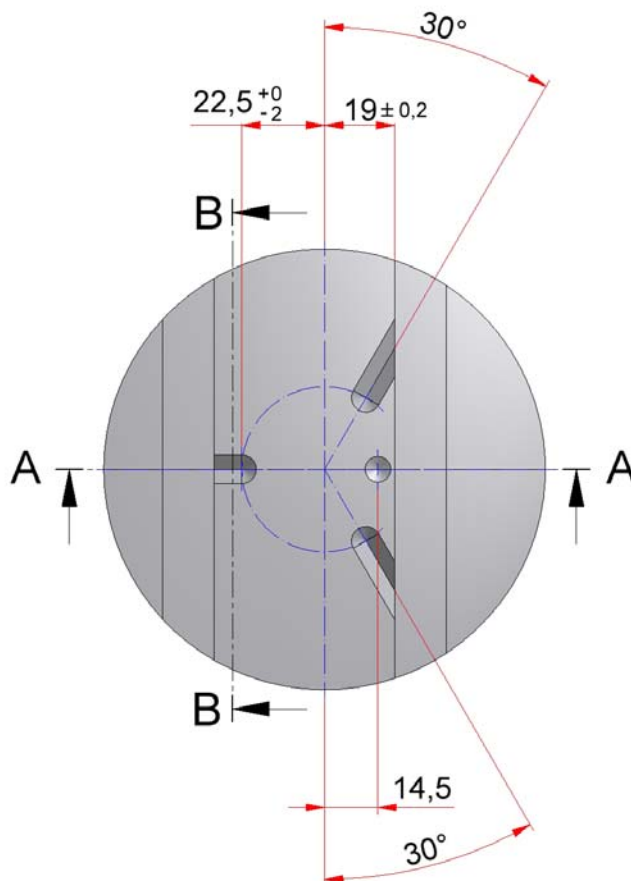
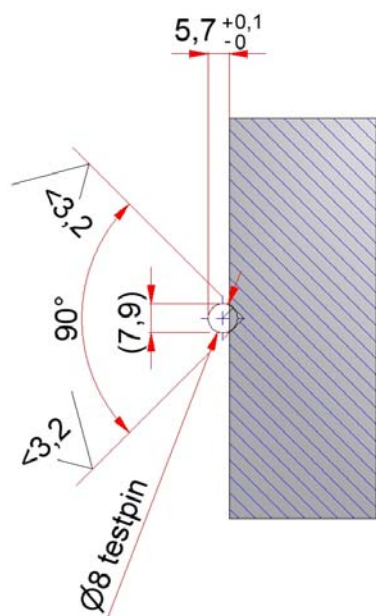
Disegno delle cave a "V"

T-Nuts = 14mm

A-A

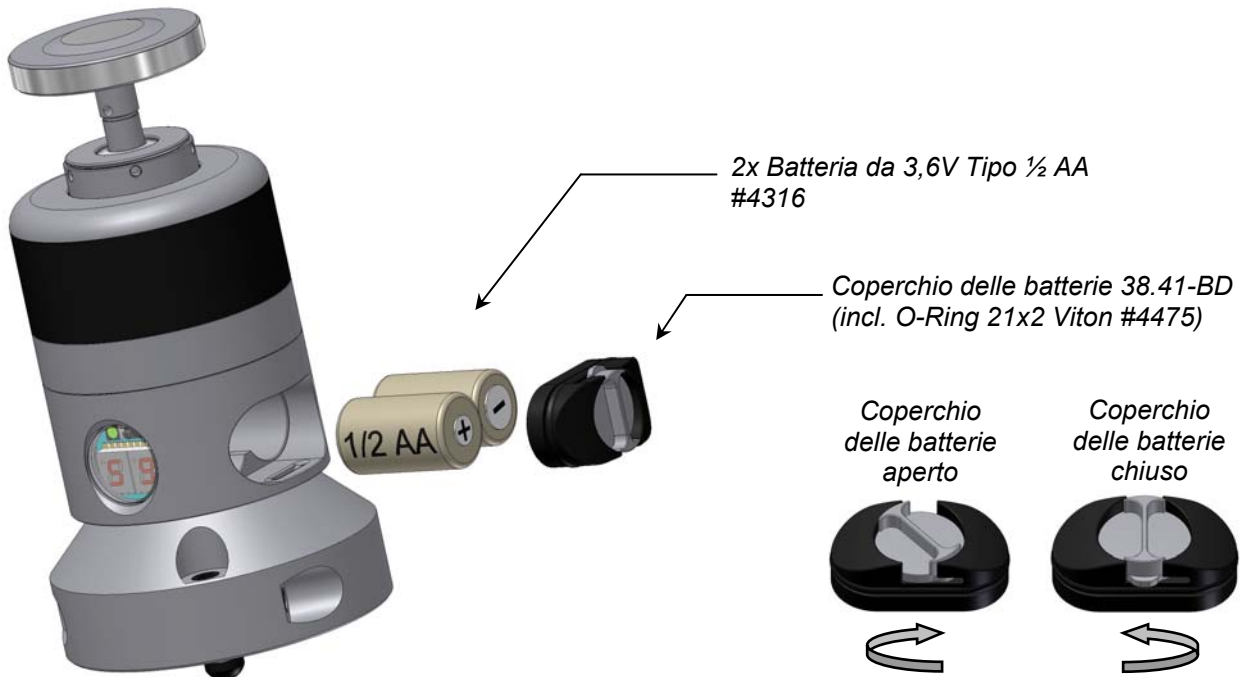


B-B



Radio-wave Tool Setter RWT35.50

Sostituzione batterie

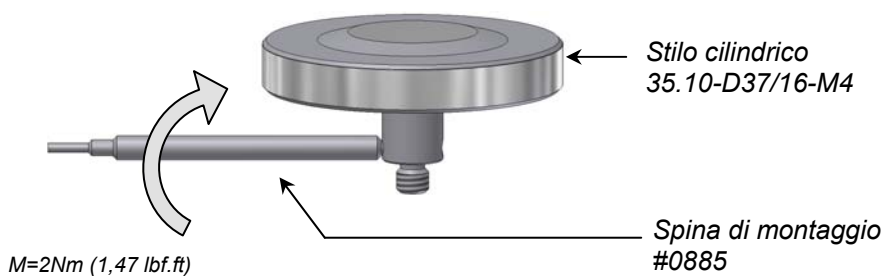


Attenzione!

- Pulire il corpo della presetting utensili prima delle seguenti operazioni !
NON usare aria compressa !
- - Aprire il coperchio batterie con movimento rotatorio.
- Togliere le batterie scariche.
- Assicurarsi che le batterie siano inserite con la polarità corretta.
- Chiudendo il coperchio, assicurarsi che la guarnizione di tenuta sia posizionata correttamente.
- Non lasciare batterie esaurite nella presetting utensili.



Sostituzione stilo



Attenzione !

Dopo la sostituzione dello stilo:

- Verificare l'allineamento della superficie dello stilo e registrare se necessario
- Calibrate il tool setter

Radio-wave Tool Setter RWT35.50

Segnale ottico dello stato



LED lampeggia verde:

- Presetting utensili trasmette segnali

LED lampeggia verde / rosso:

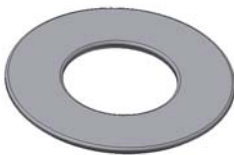
- Segnale di batteria scarica

LED lampeggia arancio:

- Stilo deflesso

Manutenzione

Coperchio di servizio #3240
con O-Ring 16x1 Viton #3455



Membrana metallica
#2906



Molla conica
#2931



Nella cavità sottostante la membrana
metallica si può accumulare sporcizia.

Pulizia:

- Togliere manualmente il coperchio di servizio la membrana metallica e la molla conica.
- Pulire il tastatore ed i pezzi sotto l'acqua corrente
- Richiudere manualmente il presetting utensili
- Alligner la surface de mesure
- Calibrare il presetting utensili!

Attenzione!

- Non usare aria compressa o getti d'acqua ad alta pressione !
- Non usare utensili affilati !
(c'è il rischio di danneggiare il diaframma)

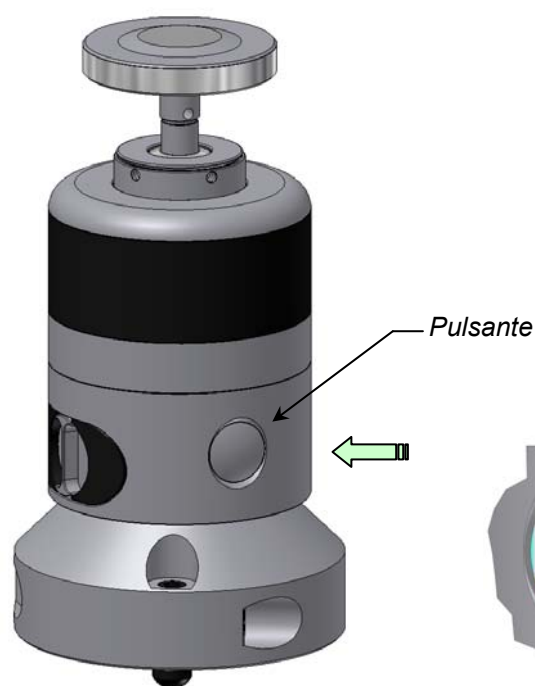


Radio-wave Tool Setter RWT35.50

Canali e frequenze

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	locked	18	433,300	36	433,875	54	434,375
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07	433,375	25	433,525	43	434,100	61	434,550
08	433,475	26	433,550	44	434,125	62	434,575
09	433,575	27	433,600	45	434,150	63	434,600
10	433,675	28	433,625	46	434,175	64	434,625
11	433,775	29	433,650	47	434,200	65	434,650
12	433,100	30	433,700	48	434,225		
13	433,125	31	433,725	49	434,250	66-99	locked
14	433,150	32	433,750	50	434,275		
15	433,200	33	433,800	51	434,300		
16	433,225	34	433,825	52	434,325		
17	433,250	35	433,850	53	434,350		

Selezione del canale



Procedura:

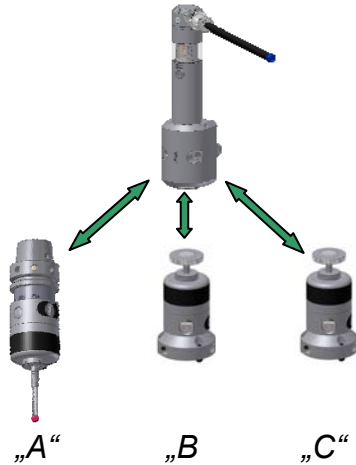
- Assicurarsi che il presetting utensili sia spento
- Premere il pulsante fino a che viene visualizzato il canale
- Premere di nuovo il pulsante fino a raggiungere il canale desiderato
- Attendere lo spegnimento del visualizzatore dopo 5 sec.
- Il canale è adesso selezionato



Radio-wave Tool Setter RWT35.50

Codice di accensione e regolazione del tempo di spegnimento

Grazie a 3 codici di attivazione, "A" / "B" / "C", è possibile utilizzare fino a 3 dispositivi con un solo ricevitore. Il ricevitore invia soltanto il codice di attivazione selezionato e, analogamente, aspetta segnali soltanto dallo stesso codice di attivazione



Attenzione - Avvertenza di sicurezza!

In nessun caso 2 o più sistemi che utilizzino lo stesso codice di attivazione possono operare sullo stesso canale!

Ogni codice di attivazione, è disponibile con regolazione time-out "Radio-wave OFF" oppure "3 min".

Con l'impostazione "Radio-wave OFF", il sistema di misurazione deve essere disattivato dal ricevitore con un codice M!

Con l'impostazione "3 min", il sistema di misurazione può essere disattivato ancora con un codice M, ma in caso di mancata disattivazione il tastatore viene spento precauzionalmente dopo 3min!

La prima cifra a "1" nel codice di attivazione significa che il time-out è attivato, se è "0" significa disattivato.

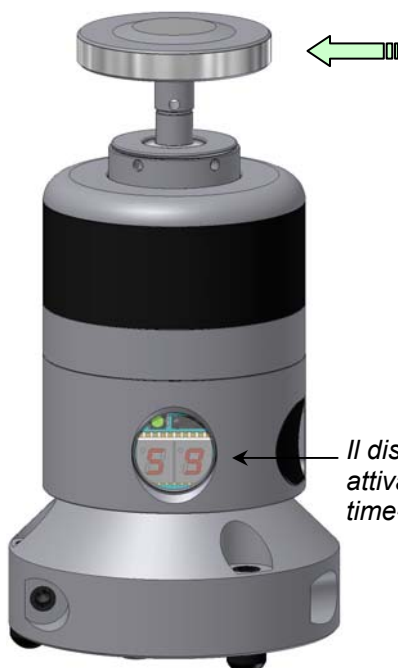
Sul display:



= 0.A. → Time-out disattivato ("Radio-wave OFF") / codice di attivazione "A"



= 1.C. → Time-out attivato ("3 min") / codice di attivazione "C"



Il display indica il codice di attivazione e lo stato del time-out

Impostazione di fabbrica →

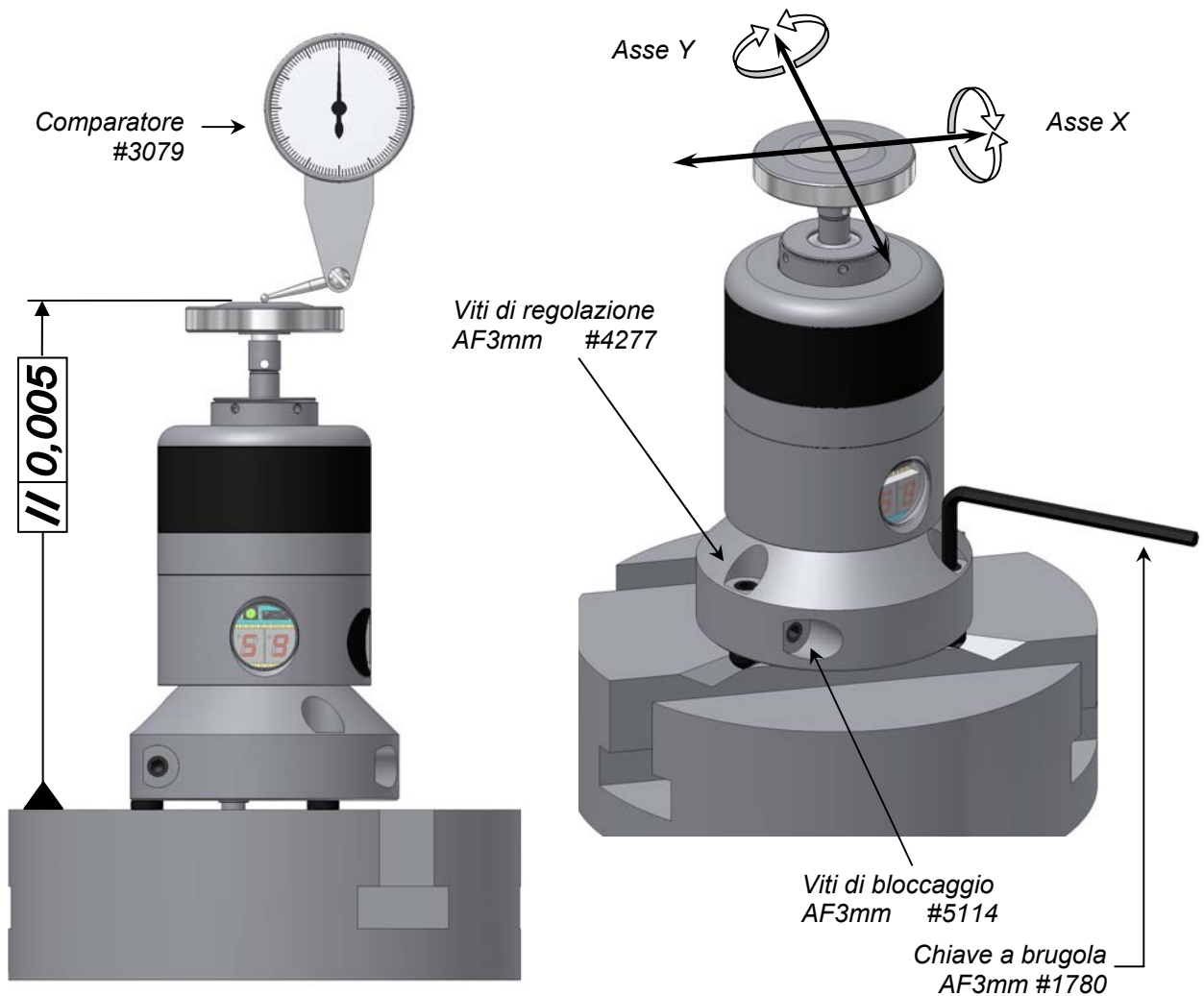
Impostazione	Codice di attivazione	Time-Out
0.A.	„A“	Radio-wave OFF
0.B.	„B“	Radio-wave OFF
0.C.	„C“	Radio-wave OFF
1.A.	„A“	3 min
1.B.	„B“	3 min
1.C.	„C“	3 min

Procedure:

- Assicurarsi che il presetting utensili sia spento.
- Premere il pulsante fino a che viene visualizzato il canale
- Deflettere lo stilo fino a raggiungere il codice di attivazione
- Non agire sul pulsante e sullo stilo contemporaneamente
- Attendere lo spegnimento del visualizzatore dopo 5 sec.
- Il codice di attivazione è adesso selezionato

Radio-wave Tool Setter RWT35.50

Allineamento dello stilo

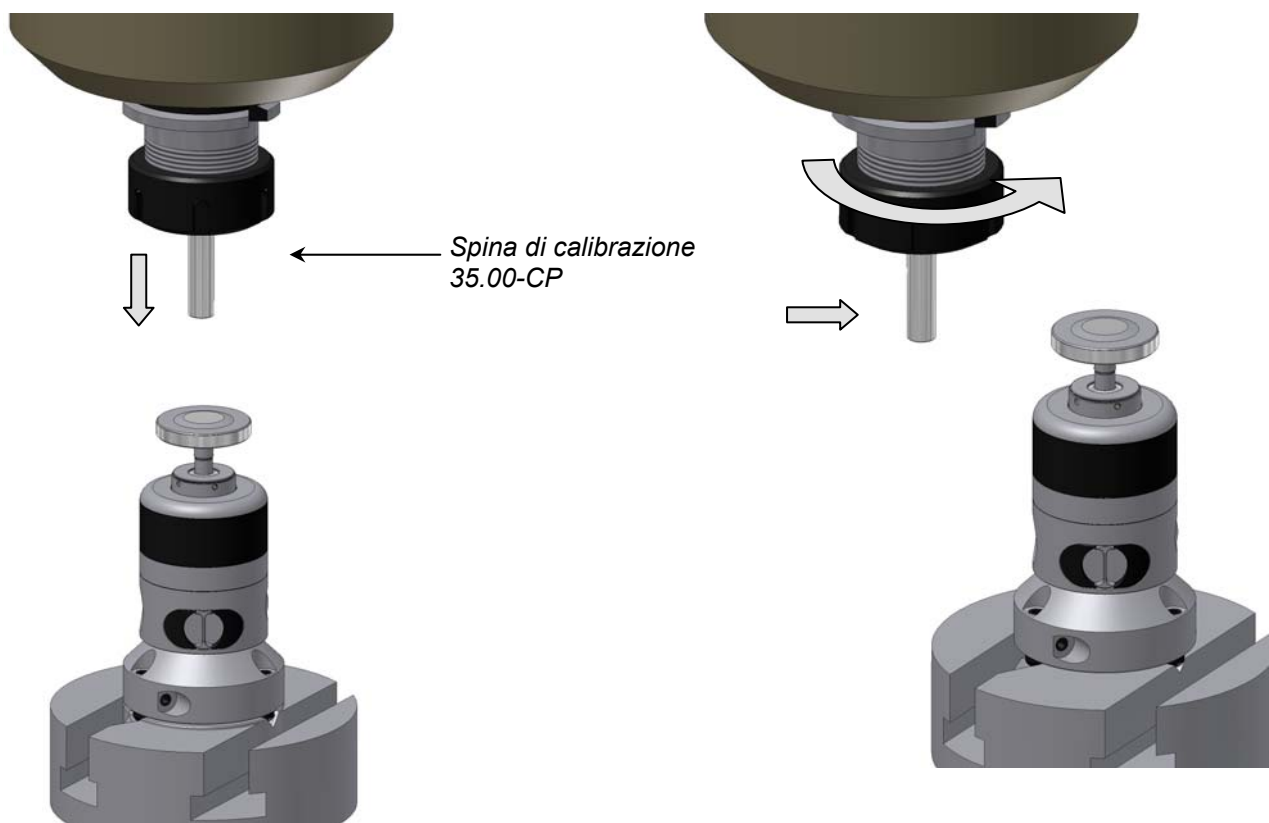


Azioni:

- Rilasciare le viti di bloccaggio e ruotare le viti di regolazione fino alla loro posizione più arretrata.
- Serrare leggermente le viti di bloccaggio in modo che le viti di regolazione possano essere ruotate con una forza moderata.
- Pulire le sedi di regolazione e le cave a V.
- Posizionare il presetting nelle cave a V.
- Verificare il parallelismo dello stilo con il piano orizzontale usando un comparatore.
- Regolare il presetting lungo l'asse Y fino a $< 5\mu\text{m}$ ruotando le viti di regolazione.
- Bloccare le due viti di regolazione(2x).
- Usando la terza vite di regolazione, allineate il presetting lungo l'asse X fino a $< 5\mu\text{m}$
- Bloccate la terza vite di regolazione
- Togliere il presetting dalla macchina e bloccate decisamente tutte le 3 viti di bloccaggio a mano (ca. 10Nm).
- Pulire le sedi di regolazione e le cave a V.
- Riposizionare il presetting nella cave a V e verificate l'allineamento.
- Calibrate il presetting!

Radio-wave Tool Setter RWT35.50

Calibrazione del presetting utensili

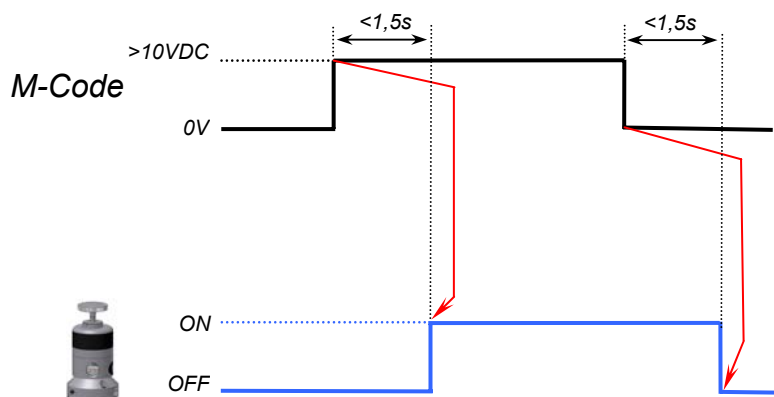


Attenzione:

Calibrate il presetting utilizzando i cicli di calibrazione della macchina.

Sequenza di accensione/spegnimento

Il presetting utensili bi-direzionale viene attivato e disattivato dal ricevitore ad onde radio RWR95.40. Dopo aver programmato il codice M il presetting utensili viene attivato in meno di 1,5 s e disattivato in meno di 1,5 s dopo il rilascio.



Radio-wave Tool Setter RWT35.50

Raccomandazioni di sicurezza – Per favore fate attenzione !

1. Per evitare danni al tool setter radio o all'utensile, è necessario fare attenzione che non ci siano altri dispositivi radio bidirezionali in funzione sullo stesso canale e che utilizzino lo stesso codice di attivazione.
2. L'avanzamento assi o la rotazione mandrino possono essere interrotti da un comando o da un segnale di errore di un dispositivo di misura utensile soltanto se il sistema è attivo ed in uso. Questa sicurezza evita che gli assi o il mandrino vengano fermati durante le normali operazioni di fresatura se un comando viene inviato da un sistema radio per una delle seguenti ragioni:
 - Viene messa in funzione un'altra macchina con un sistema radio e questo sistema trasmette sullo stesso canale con lo stesso codice di attivazione del sistema precedentemente installato

Dichiarazione di conformità

Dichiariamo sotto la nostra piena responsabilità che il prodotto „Radio-wave Tool Setter RWT35.50“ al quale si riferisce la presente dichiarazione, è conforme ai seguenti standards:

R&TTE-Directive 99/5/EG	
EN 300 220-1 V2.3.1 (2010-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods
EN 300 220-2 V2.3.2 (2010-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

EMC- Directive 2004/108/EG	
EN 301 489-1 V1.8.1 (2008-04)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
EN 301 489-3 V1.4.1 (2002-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz
EN 6000-4-2 (2009-12)	Electromagnetic compatibility (EMC) - Part 4-2: Testing and Measurement - Examination of the discharge immunity static electricity

FCC / RSS – Declaration

In Progress: Application done - Confirmation coming soon!















Radio-wave Tool Setter RWT35.50

Elenco parti consegnate, Parti di ricambio, Accessori



Elenco parti consegnate

Codice di acquisto	Descrizione	
35.50-RWT	Presetting ad onde radio RWT35.50 4x Batterie Tipo ½ AA (3,6V) Contenitore Kit utensili	#4316 #4301 35.50-TB

Parti di ricambio, Tools

Codice de acquisto	Descrizione	
35.10-D37/16-M4	Stilo cilindrico	
#4316	Batterie Tipo ½ AA (3,6V)	
38.41-BD	Coperchio di batterie	
#4475	O-Ring 21x2 Viton per coperchio di batterie	
#4277	Viti di regolazione AF3mm	
#5114	Viti di bloccaggio AF3mm	
#3240	Coperchio di servizio	
#3455	O-Ring 16x1 Viton per coperchio di servizio	
#2906	Membrana metallica	
#2931	Molla conica	
35.00-CP	Spina di calibrazione	
#1780	Chiave a brugola AF3mm	
#0885	Spina di montaggio	
#3079	Comparatore	
35.50-TB	Kit utensili 1x Chiave a brugola AF3mm 1x Spina di montaggio 2x Viti di bloccaggio AF3mm 1x Calibration pin	#1780 #0885 #5114 35.00-CP

Accessori

Codice de acquisto	Descrizione	
35.70-BP-12 35.70-BP-14 35.70-BP-18 35.70-BP-22	Base di appoggio per cave a T da 12mm Base di appoggio per cave a T da 14mm Base di appoggio per cave a T da 18mm Base di appoggio per cave a T da 22mm	
#4301	Contenitore	

Radio-wave Tool Setter RWT35.50

MANUEL D'INSTRUCTION

(Traduction du manuel d'instruction original)

FR

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m&h Inprocess Messtechnik GmbH • Am Langholz 11 • D-88289 Waldburg
Fon +49(0)7529 / 9733-0 • Fax +49 (0)7529 / 9733-7 • vertrieb@mh-inprocess.com

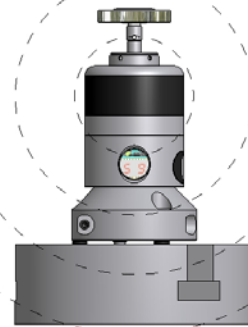
Radio-wave Tool Setter RWT35.50

Composants du système

Radio-wave Receiver
RWR95.40



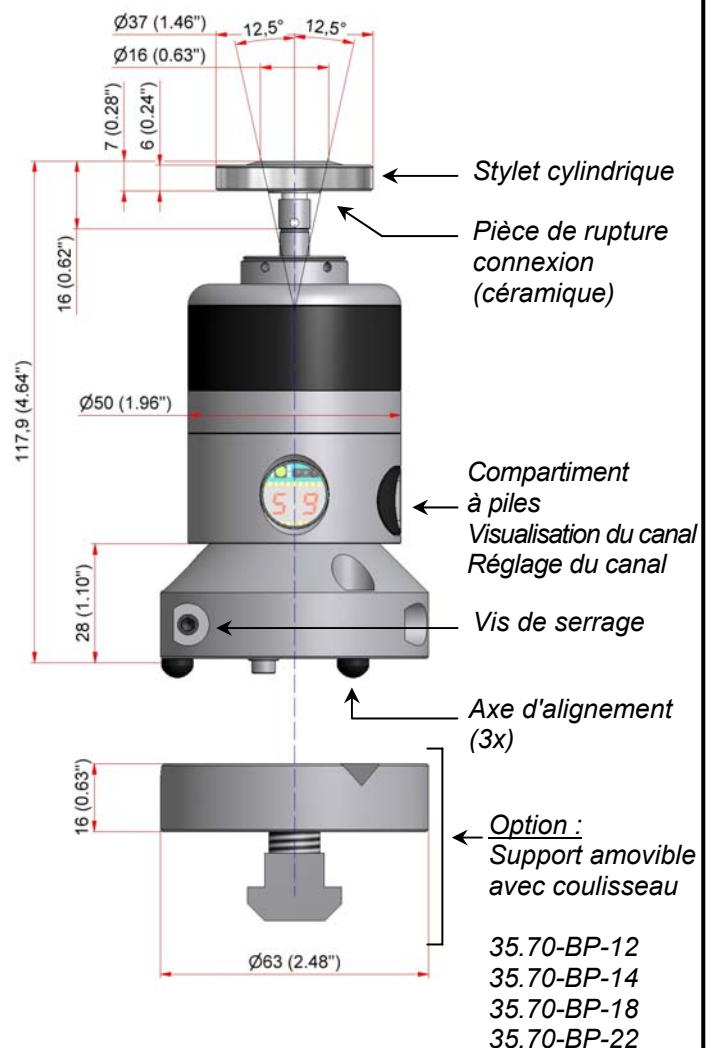
Radio-wave Tool Setter
RWT35.50



Données techniques

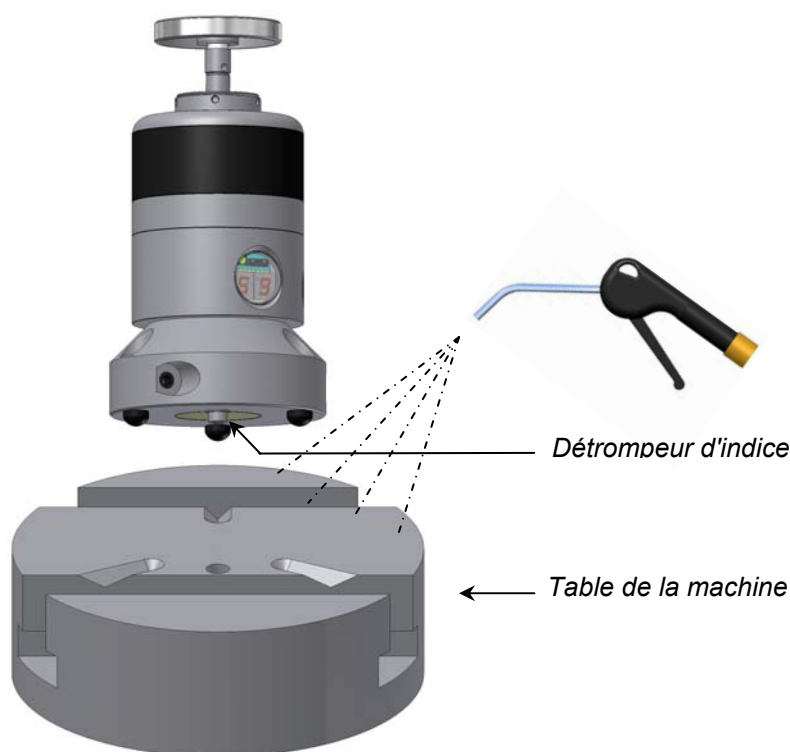
<u>Axes de palpée::</u>	$\pm X; \pm Y; -Z$
<u>Surcourses max. du stylet:</u>	$XY \pm 12.5^\circ; Z -6mm$
<u>Force de déclenchement ajustable:</u>	$Z = 2,5 - 12,5N$ $XY = 0,3 - 1,4N$
<u>Réglage d'usine:</u>	$Z = 8.5N / XY = 0.96N$
<u>Ø outil minimum:</u>	$\text{Ø}0.5mm (0.02")$
<u>Batterie::</u>	2x Piles de 3,6V Type ½ AA (1200mAh)
<u>Durée de vie:</u>	100% = 325heures 5% = 219jours Standby = 230jours
<u>Poids : sans support amovible:</u>	env. 940g
<u>Plage de température:</u>	Utilisation: $10^\circ - 50^\circ C$ Stockage: $5^\circ - 70^\circ C$
<u>Matière:</u>	Acier inoxydable
<u>Répétabilité unidirectionnelle:</u>	$2\text{Sigma} \leq 1\mu m$ à 100mm/min
<u>Répétabilité du positionnement:</u>	$\pm 2.5\mu m$
<u>Durée de vie garantie du système de mesure:</u>	10 millions d'inflexions
<u>Plage de fréquences:</u>	433.075 – 434.650 MHz
<u>Nombre de canaux:</u>	64
<u>Intervalle entre 2 canaux:</u>	25 KHz
<u>Étanchéité:</u>	IP68: EN60529

Dimensions



Radio-wave Tool Setter RWT35.50

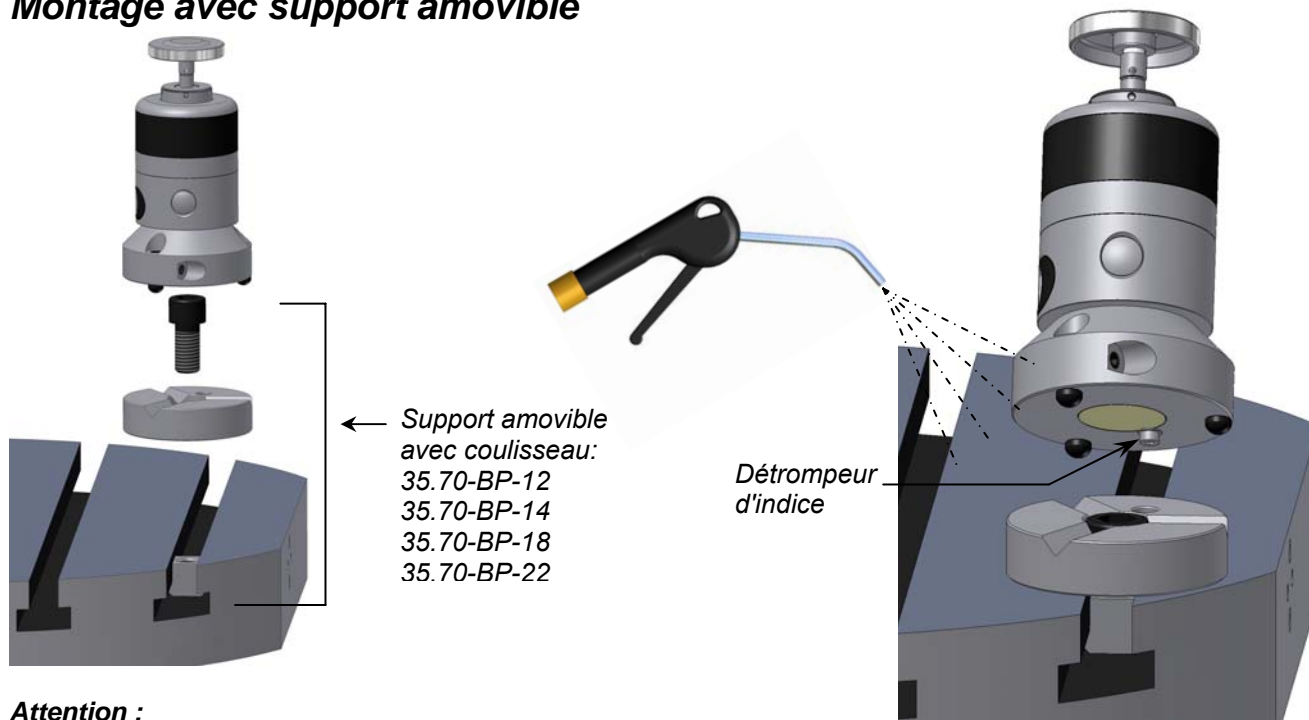
Montage direct sur la table de la machine



Attention :

- Les rainures doivent être fraisées dans la table de la machine-outil !
- Nettoyer l'axe d'alignement et les rainures en V à l'air comprimé.
- Lors de la pose du palpeur-outil, veiller à ce que le détrompeur trouve le trou correspondant !
- Les rainures en V et les axes d'alignement doivent être exempts de salissures et copeaux !

Montage avec support amovible

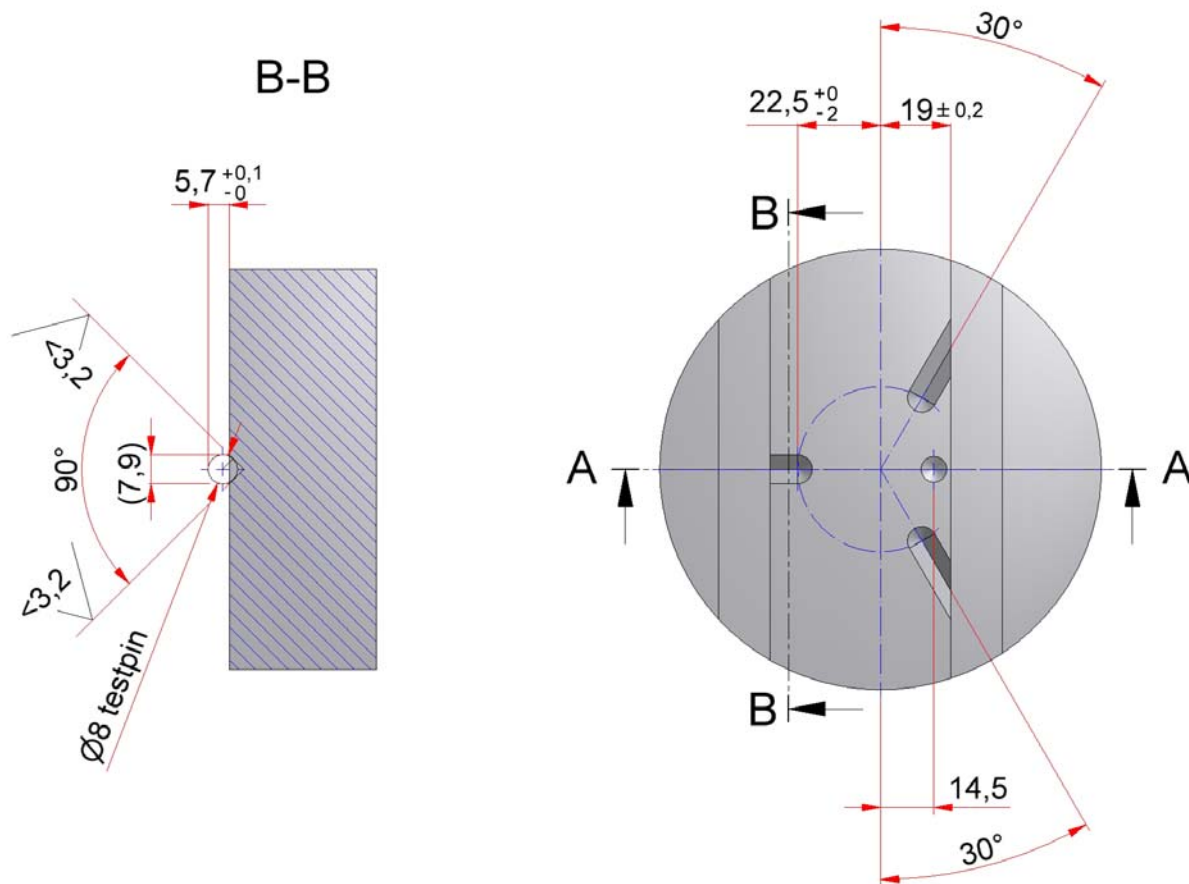
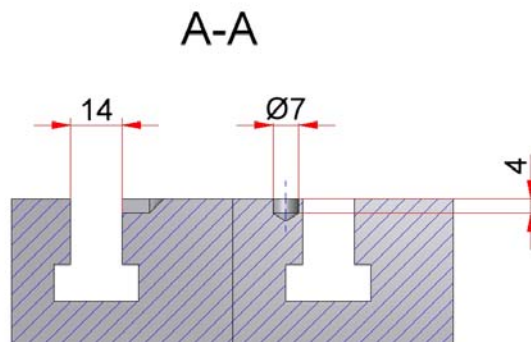


Attention :

- Nettoyer l'axe d'alignement et les rainures en V à l'air comprimé.
- Lors de la pose du palpeur-outil, veiller à ce que le détrompeur trouve le trou correspondant !
- Les rainures en V et les axes d'alignement doivent être exempts de salissures et copeaux !

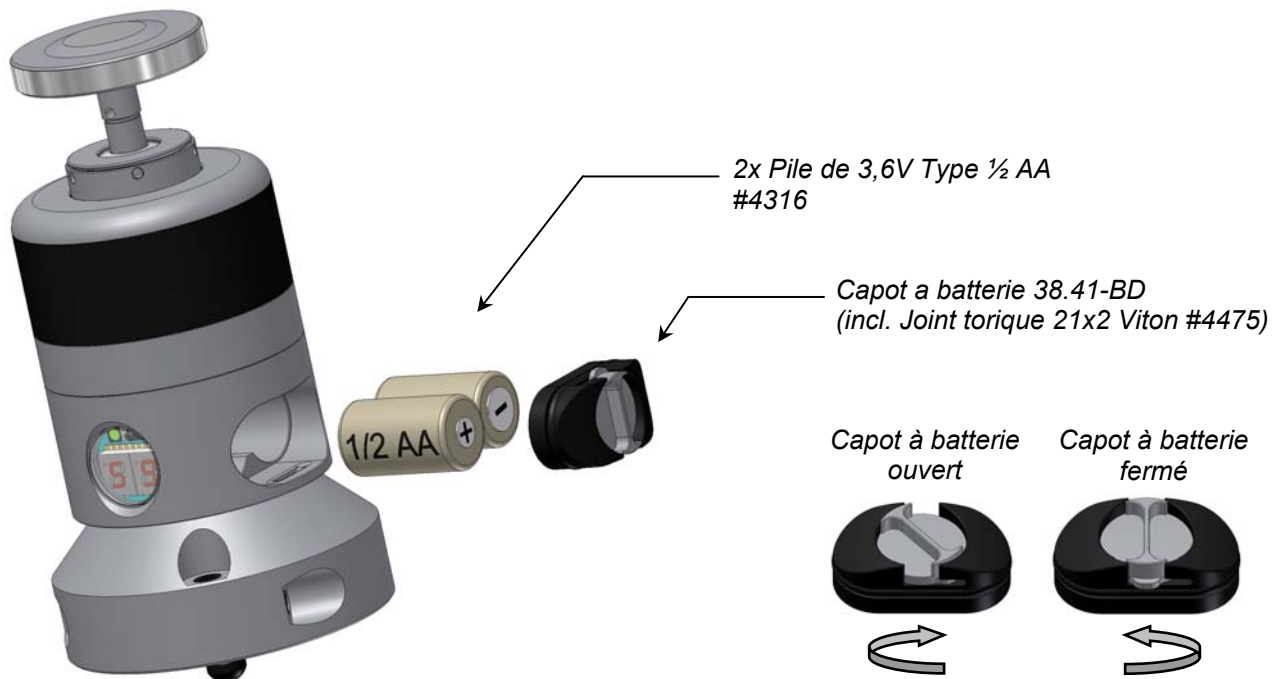
Radio-wave Tool Setter RWT35.50

Dessin du support avec rainures en V
Rainures en T = 14mm



Radio-wave Tool Setter RWT35.50

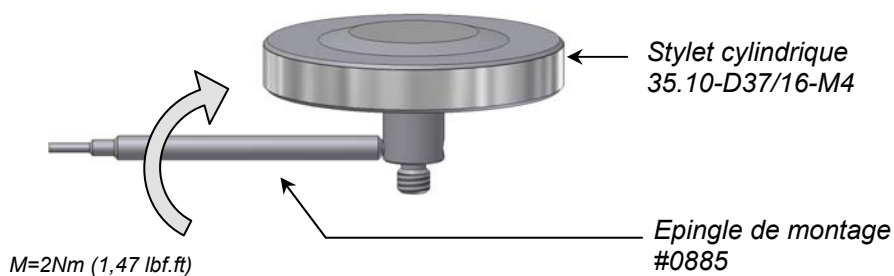
Changement des piles



Attention

- Le palpeur-outil doit être propre et sec avant l'ouverture!
Ne PAS nettoyer par soufflage d'air!
- Ouvrir le capot à batterie par un mouvement circulaire!
- Remplacer les piles!
- Assurez-vous que la polarité des piles est respectée!
- En fermant le capot à batterie, vérifiez que le joint torique d'étanchéité soit bien positionné !
- Changer immédiatement les piles vides !

Changement du stylet



Attention !

- Après tout changement de stylet:
- Vérifier l'alignement de la surface de mesure et réaligner si nécessaire!
 - Calibrer le palpeur-outil

Radio-wave Tool Setter RWT35.50

Signal optique sur l'état du palpeur-outil



LED clignotante verte:

- Palpeur-outil en fonctionnement

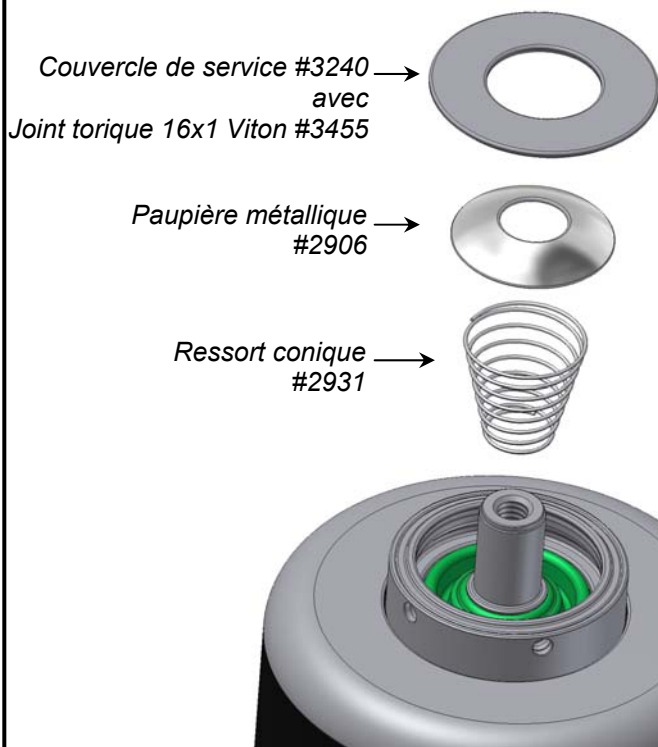
LED clignotante verte / rouge:

- Batterie faible

LED clignotante orange:

- Inflexion du stylet

Maintenance



La saleté peut s'accumuler dans la cavité en dessous de la paupière métallique de protection.

Nettoyage:

- Détacher manuellement le couvercle de service avec la paupière métallique et le ressort conique.
- Nettoyer le palpeur et les pièces sous l'eau courante.
- Fermer manuellement le palpeur-outil.
- Aligner la surface de mesure
- Calibrer le palpeur-outil!

Attention !

- Ne pas utiliser de l'air comprimé ou un jet d'eau à haute pression !
- Ne pas utiliser d'outils pointus ! (risque d'endommager le diaphragme)

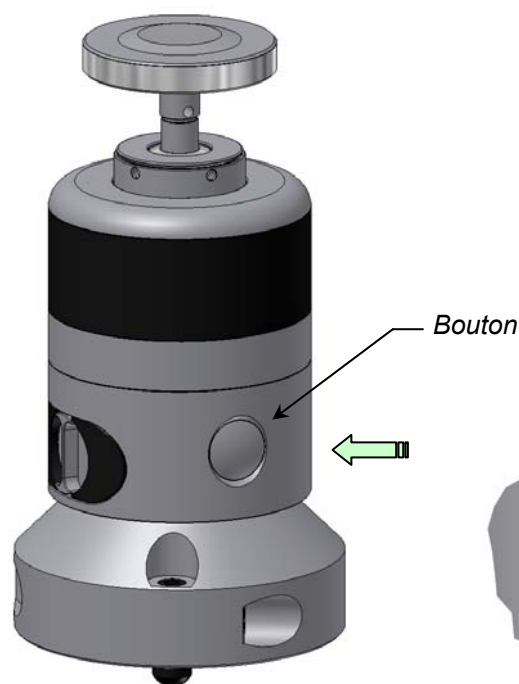


Radio-wave Tool Setter RWT35.50

Canaux et fréquences

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	locked	18	433,300	36	433,875	54	434,375
01	433,925	19	433,325	37	433,900	55	434,400
02	434,075	20	433,350	38	433,950	56	434,425
03	433,075	21	433,400	39	433,975	57	434,450
04	locked	22	433,425	40	434,000	58	434,475
05	433,175	23	433,450	41	434,025	59	434,500
06	433,275	24	433,500	42	434,050	60	434,525
07	433,375	25	433,525	43	434,100	61	434,550
08	433,475	26	433,550	44	434,125	62	434,575
09	433,575	27	433,600	45	434,150	63	434,600
10	433,675	28	433,625	46	434,175	64	434,625
11	433,775	29	433,650	47	434,200	65	434,650
12	433,100	30	433,700	48	434,225		
13	433,125	31	433,725	49	434,250	66-99	locked
14	433,150	32	433,750	50	434,275		
15	433,200	33	433,800	51	434,300		
16	433,225	34	433,825	52	434,325		
17	433,250	35	433,850	53	434,350		

Choix du canal de fréquence



Procédure:

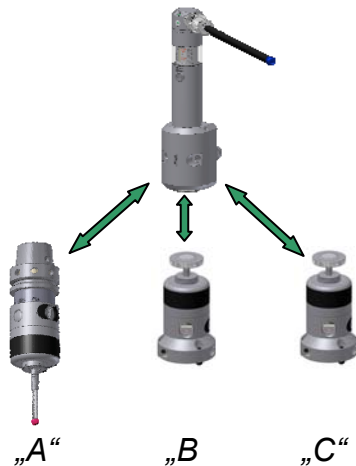
- Vérifier que le palpeur-outil est éteint
- Maintenir le bouton appuyé jusqu'à ce que le canal apparaisse
- Presser plusieurs fois le bouton jusqu'à l'affichage du canal désiré
- L'affichage du canal s'éteint après 5 sec.
- Le canal est maintenant réglé!



Radio-wave Tool Setter RWT35.50

Code d'activation et réglage de la temporisation

Avec 3 codes d'activation disponibles „A“ / „B“ / „C“, il est possible de gérer jusqu'à 3 systèmes de mesure avec un seul récepteur. Le récepteur envoie le code d'activation sélectionné et n'attend de signal que de ce code.



Attention - Conseil de sécurité

En aucun cas 2 systèmes ou plus ne peuvent être réglés sur le même canal utilisant le même code d'activation!

Chaque code d'activation est disponible avec une temporisation pouvant être réglée respectivement en "Radio OFF" ou "3min".

Avec la tempo "Radio OFF", le système de mesure doit être désactivé par le récepteur avec un code M!

Avec la tempo "3min", le système de mesure doit aussi être désactivé avec un code M, mais en cas d'absence de désactivation, le palpeur sera automatiquement éteint après 3min!

Le "1" devant le code d'activation montre que la temporisation est activée; le "0" qu'elle est désactivée!

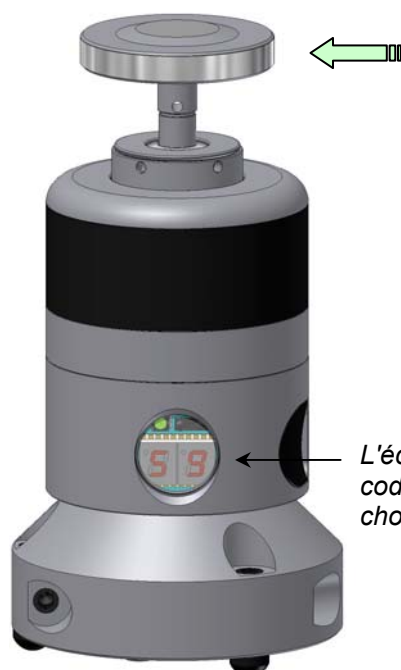
Sur l'écran digital



= 0.A. → La temporisation est désactivée („Radio OFF“) / Code d'activation „A“



= 1.C. → La temporisation est activée („3 min“) / Code d'activation „C“



Réglage d'usine →

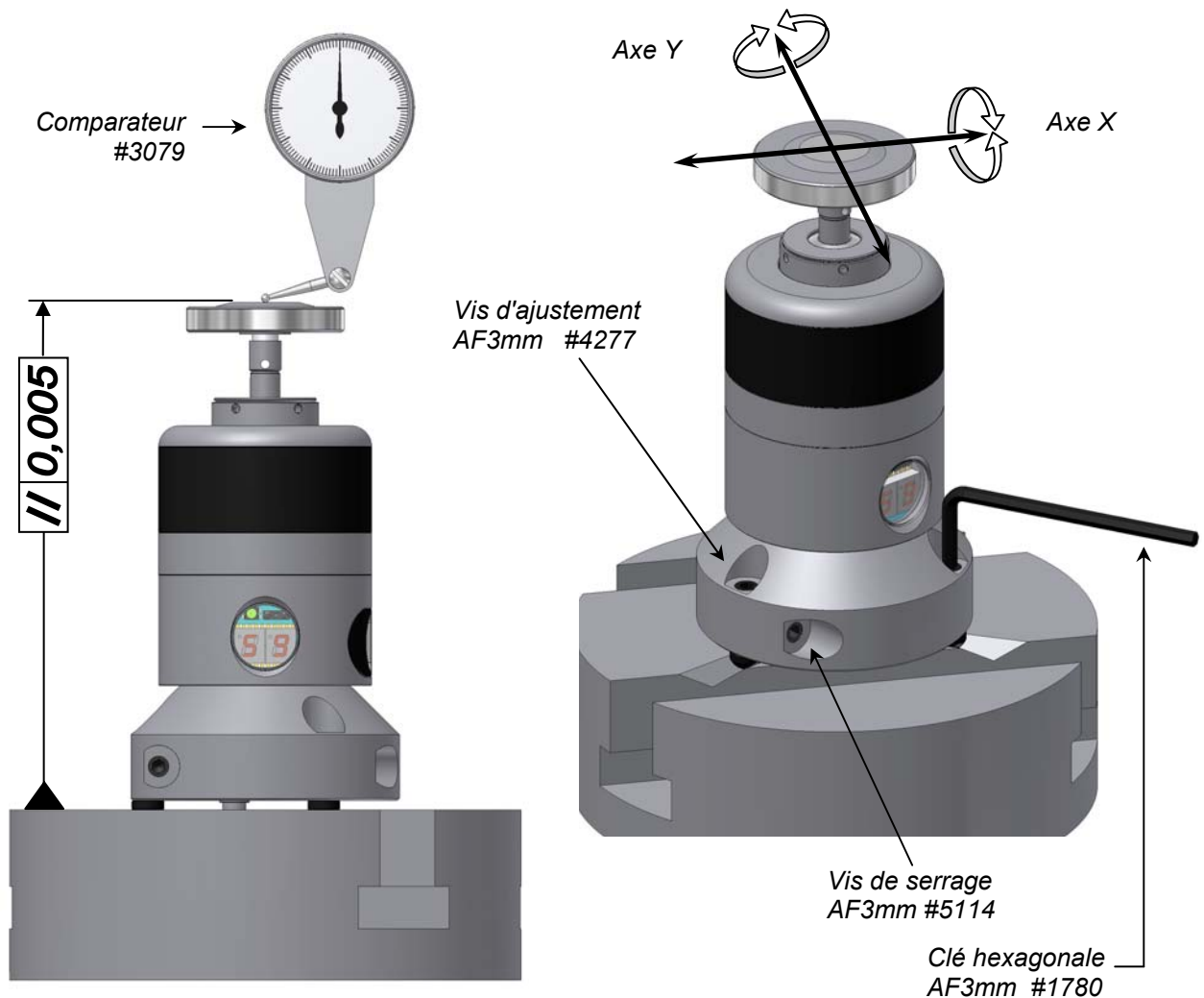
Réglage	Code d'Activation	Temporisation
0.A.	„A“	Radio OFF
0.B.	„B“	Radio OFF
0.C.	„C“	Radio OFF
1.A.	„A“	3 min
1.B.	„B“	3 min
1.C.	„C“	3 min

Procédure:

- Vérifier que le palpeur-outil est éteint
- Maintenir le bouton appuyé jusqu'à ce que le canal apparaisse
- Inflecter le stylet jusqu'à l'affichage du code d'activation souhaité
- Ne plus toucher le bouton et le stylet
- L'affichage du canal s'éteint après 5 sec.
- Le canal est maintenant réglé!

Radio-wave Tool Setter RWT35.50

Alignement du stylet

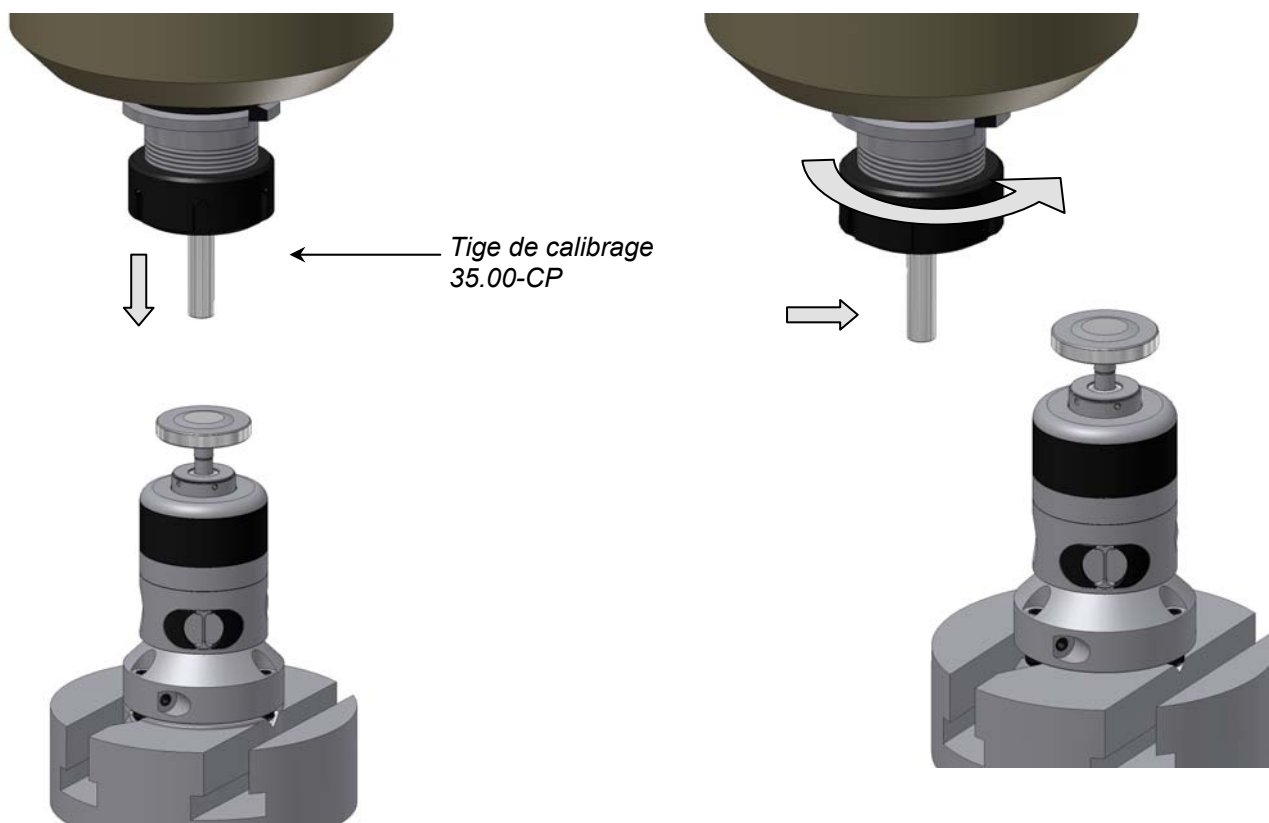


Procédure:

- Dévisser les vis de serrage et poser l'axe d'alignement vers le haut jusqu'à la butée.
- Serrer légèrement les vis de serrage de manière à ce que la vis d'ajustement puisse encore être déplacée avec une force modérée.
- Nettoyer les vis d'ajustement et les rainures en V à l'air comprimé.
- Poser le palpeur-outil dans les rainures en V.
- Déterminer le parallélisme en mesurant la surface du stylet dans l'axe X au moyen d'un comparateur.
- Tourner la vis d'ajustement pour aligner le palpeur-outil autour de l'axe Y à $< 5\mu\text{m}$ près.
- Resserrer les vis de serrage (2x) sur les vis d'ajustement correspondantes.
- Aligner le palpeur avec la troisième vis d'ajustement autour de l'axe X à $< 5\mu\text{m}$ près.
- Resserrer les vis de serrage sur la troisième vis d'ajustement.
- Retirer le palpeur-outil de la machine et serrer fermement (environ 10 Nm) les vis de serrage (3x)
- Nettoyer les vis d'ajustement et les rainures en V à l'air comprimé.
- Replacer le palpeur-outil dans les rainures en V et vérifier l'alignement.
- Calibrer le palpeur-outil !

Radio-wave Tool Setter RWT35.50

Calibrer le palpeur-outil

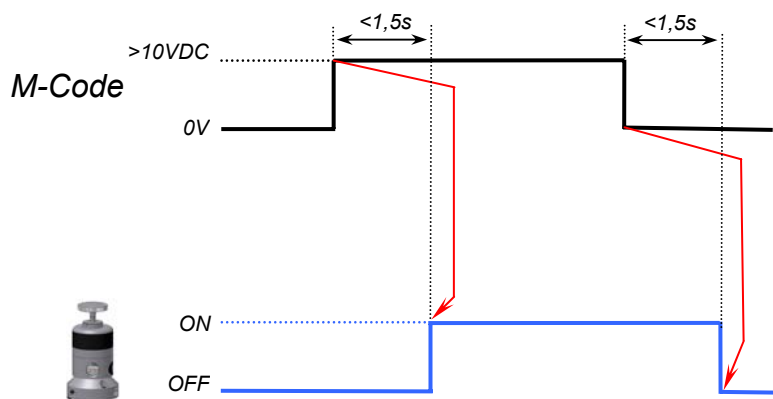


Attention:

Calibrer le palpeur-outil avec le cycle de calibrage de la commande numérique.

Palpeur-outil ON / OFF Procédure

Ce palpeur-outil bidirectionnel sera activé et désactivé par le récepteur radio RWR95.40. Le palpeur-outil est activé moins de 1,5 sec après le lancement du code M et désactivé moins de 1,5 sec après sa réinitialisation.



Radio-wave Tool Setter RWT35.50

Recommandations de sécurité – Attention !

1. Pour éviter tout dégât à l'outil ou au palpeur-outil radio, aucun autre système radio bidirectionnel ne doit fonctionner sur le même canal de fréquence en utilisant le même codage d'activation.
2. Un déplacement ou un arrêt broche déclenché par un signal de palpation ou un signal ERREUR/ERROR du palpeur outil ne peuvent être réalisés que si le système de mesure outil est actif et en cours d'utilisation.
Ce point de sécurité protège la broche et ses déplacements de tout arrêt intempestifs lors de l'usage normal si un signal est déclenché par un système de radio pour l'une des raisons suivantes :
 - Une autre machine équipée d'un système radio intervient dans le process et son système radio transmet sur le même canal de fréquence en utilisant le même code d'activation que le système précédemment installé.

Déclaration de conformité

Nous déclarons sous notre seule responsabilité que le produit „Radio-wave Tool Setter RWT35.50“, est conforme aux normes standards suivantes:

R&TTE-Directive 99/5/EG	
EN 300 220-1 V2.3.1 (2010-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods
EN 300 220-2 V2.3.2 (2010-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

















EMC- Directive 2004/108/EG	
EN 301 489-1 V1.8.1 (2008-04)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
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Déclaration FCC / RSS

In Progress: Application done - Confirmation coming soon!

Radio-wave Tool Setter RWT35.50

Contenu du package, Pièces détachées, Accessoires

Contenu du package		
Référence	Nomenclature	
35.50-RWT	Palpeur-outil radio RWT35.50 4x Pile Type ½ AA (3,6V) Boîte de stockage Boîte à outils	#4316 #4301 35.50-TB
Pièces détachées, Outils		
Référence	Nomenclature	
35.10-D37/16-M4	Cylindrical Stylus	
#4316	Pile Type ½ AA (3,6V)	
38.41-BD	Capot à batterie	
#4475	Joint torique 21x2 Viton pour capot à batterie	
#4277	Vis d'ajustement AF3mm	
#5114	Vis de serrage AF3mm	
#3240	Couvercle de service	
#3455	Joint torique 16x1 Viton pour couvercle de service	
#2906	Paupière métallique	
#2931	Ressort conique	
35.00-CP	Tige de calibrage	
#1780	Clé hexagonale AF3mm	
#0885	Epingle de montage	
#3079	Comparateur	
35.50-TB	Boîte à outils 1x Clé hexagonale AF3mm 1x Epingle de montage 2x Vis de serrage AF3mm 1x Tige de calibrage	#1780 #0885 #5114 35.00-CP
Accessoires		
Référence	Nomenclature	
35.70-BP-12 35.70-BP-14 35.70-BP-18 35.70-BP-22	Support amovible avec coulisseau 12mm Support amovible avec coulisseau 14mm Support amovible avec coulisseau 18mm Support amovible avec coulisseau 22mm	
#4301	Boîte de stockage	

Radio-wave Tool Setter RWT35.50

INSTRUCCIONES DE OPERACIÓN

(Traducción de las Instrucciones de Operación originales)

ES

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Plano diseño para ranuras “V”	3
Cambio de baterías, Cambio de aguja	4
Señal óptica de estado, Mantenimiento	5
Canales y frecuencias, Ajuste de canal	6
Código the activación y ajuste de tiempo muerto	7
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Calibración del medidor de herramienta, Procedimiento medidor de herramienta ON/OFF	9
Consejos de seguridad, Declaración de conformidad, Declaración FCC / RSS	10
Contenido de entrega, Recambios, Accesorios	11

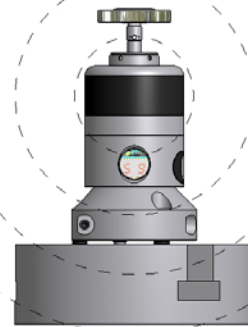
Radio-wave Tool Setter RWT35.50

Componentes del sistema

Radio-wave Receiver
RWR95.40



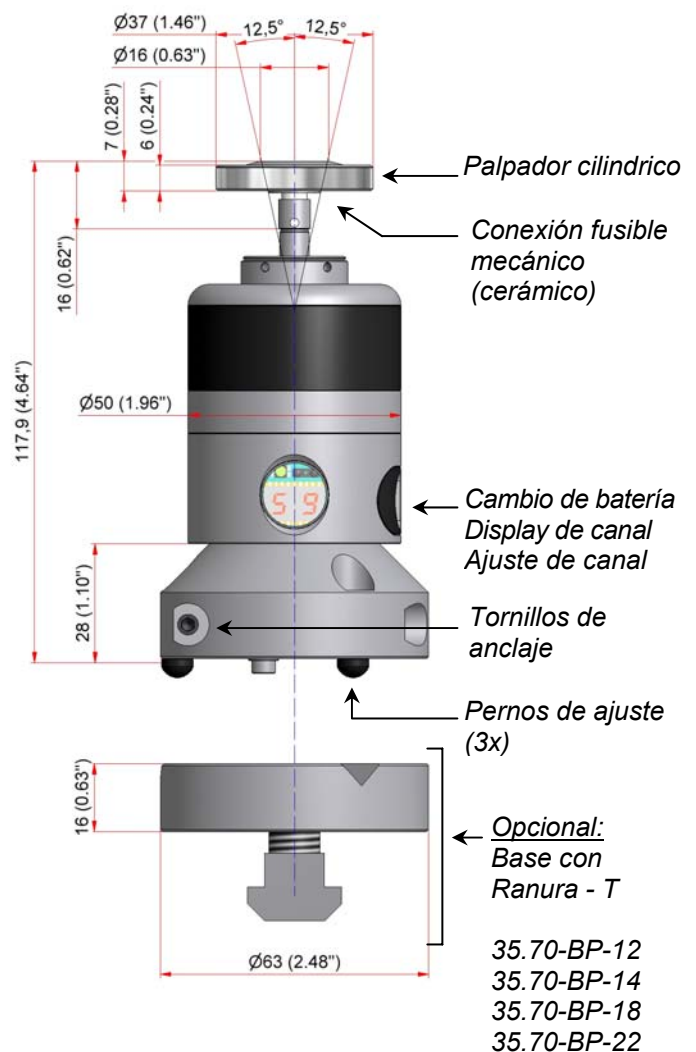
Radio-wave Tool Setter
RWT35.50



Datos técnicos

<u>Direcciones de palpado:</u>	$\pm X; \pm Y; -Z$
<u>Palpado máx. Recorrido:</u>	XY $\pm 12.5^\circ$; Z -6mm
<u>Fuerza de palpado:</u>	Z = 2,5 – 12,5N
<u>adjustable:</u>	XY = 0,3 – 1,4N
<u>Ajustes de fábrica:</u>	Z = 8.5N / XY = 0.96N
<u>Herramienta más pequeña:</u>	$\varnothing 0.5\text{mm}$ (0.02")
<u>Alimentación:</u>	2x 3,6V Batería Tipo ½ AA (1200mAh)
<u>Duración de batería:</u>	100% = 325h 5% = 219d Standby = 230d
<u>Peso sin la base:</u>	aprox. 940g
<u>Rango de temperatura:</u>	Trabajo: 10° - 50°C Almacén: 5° - 70°C
<u>Material:</u>	Acero inoxidable
<u>Repetibilidad de palpador en una dirección:</u>	2Sigma $\leq 1\mu\text{m}$ at 100mm/min
<u>Precisión de posicionamiento:</u>	$\pm 2.5\mu\text{m}$
<u>Vida garantizada de unidad de medición:</u>	10 millones de deflexiones
<u>Gama de frecuencias:</u>	433.075 – 434.650 MHz
<u>Número de canales:</u>	64
<u>Espacio de canal:</u>	25 KHz
<u>Sellado:</u>	IP68: EN60529

Dimensiones



35.70-BP-12
35.70-BP-14
35.70-BP-18
35.70-BP-22

Radio-wave Tool Setter RWT35.50

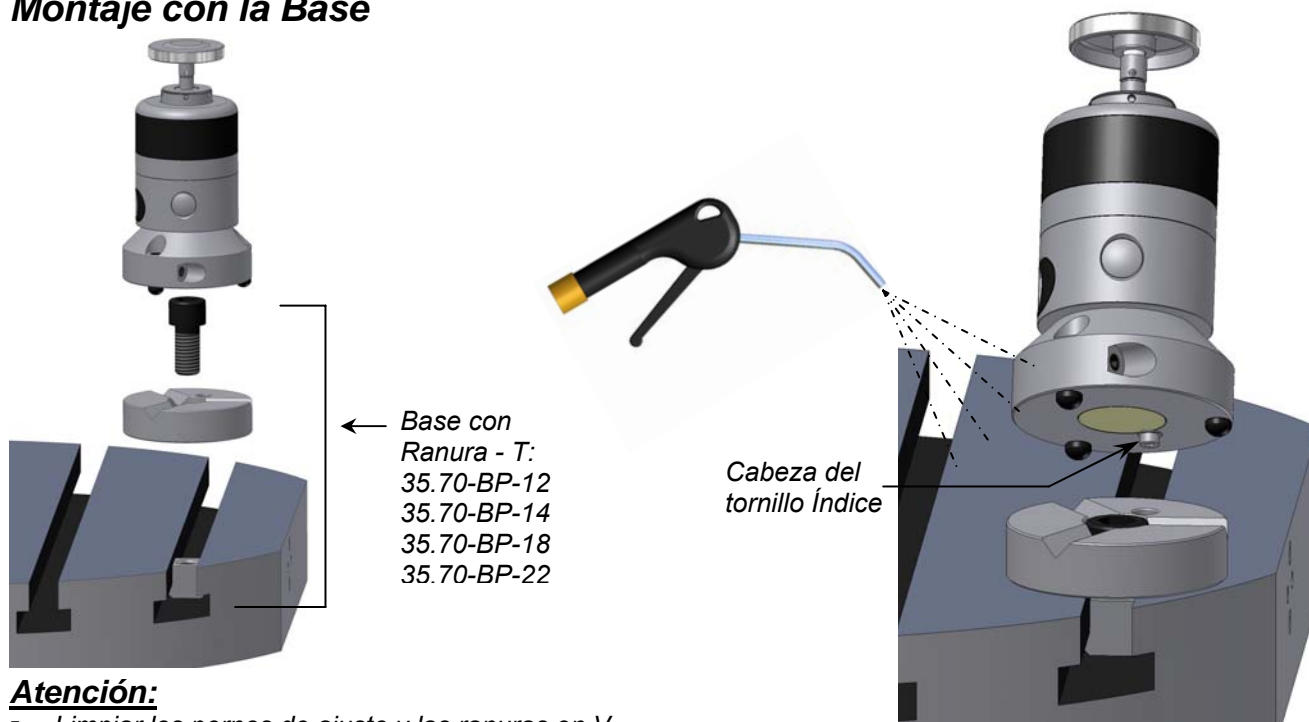
Montaje directo sobre la mesa de trabajo



Atención:

- Las ranuras se deben fresar en la mesa de la máquina!
- Limpiar los pernos de ajuste y las ranuras en V.
- Al posicionar el Medidor de Herramienta, asegúrese de que la cabeza del tornillo Índice está en el orificio correcto!
- Las ranuras en V y los pernos de ajuste deben estar limpios y libre de virutas!

Montaje con la Base



Atención:

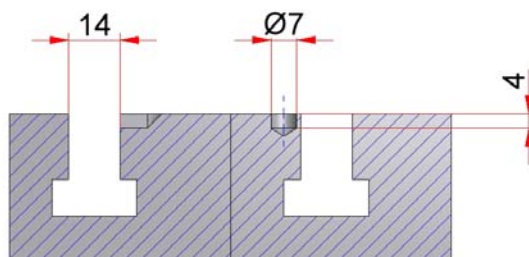
- Limpiar los pernos de ajuste y las ranuras en V.
- Al posicionar el Medidor de Herramienta, asegúrese de que la cabeza del tornillo Índice está en el orificio correcto!
- Las ranuras en V y los pernos de ajuste deben estar limpios y libre de virutas!

Radio-wave Tool Setter RWT35.50

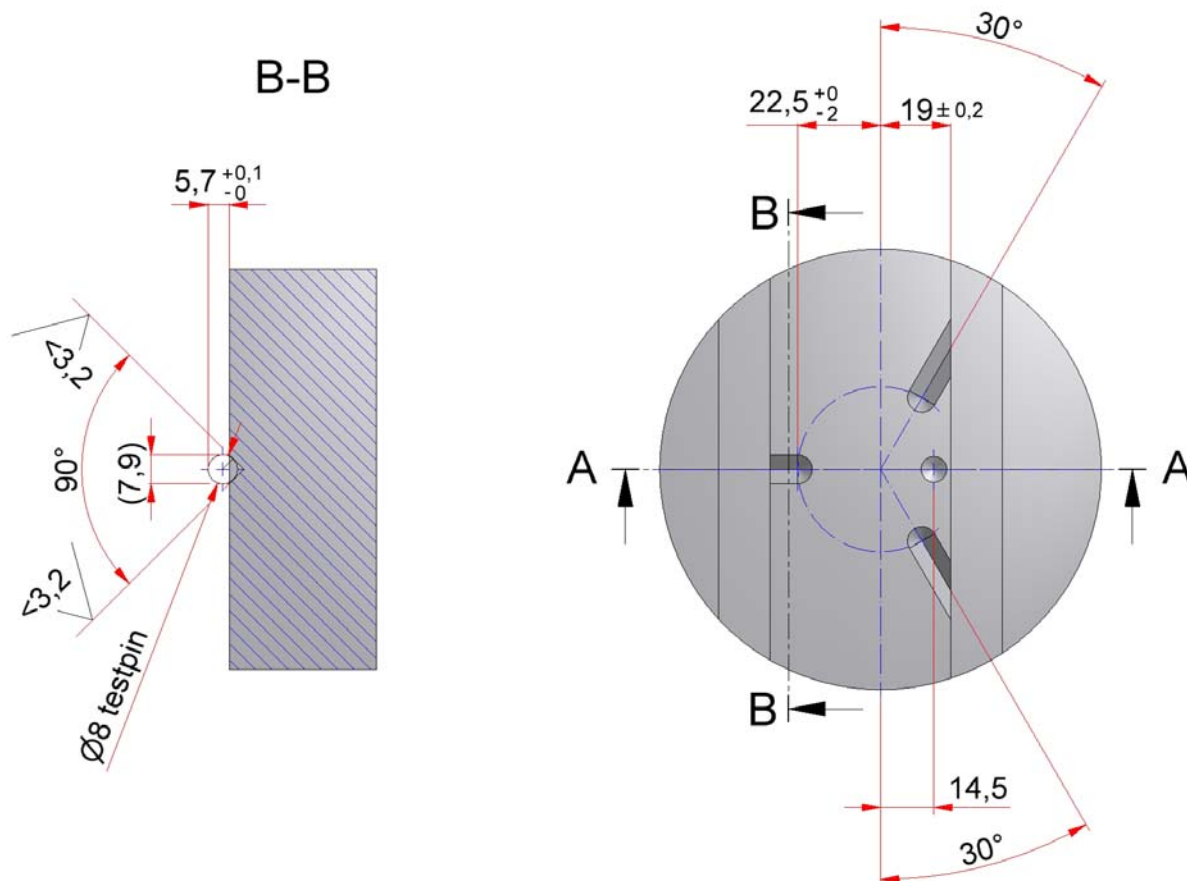
Plano diseño para ranuras "V"

T-Nuts = 14mm

A-A

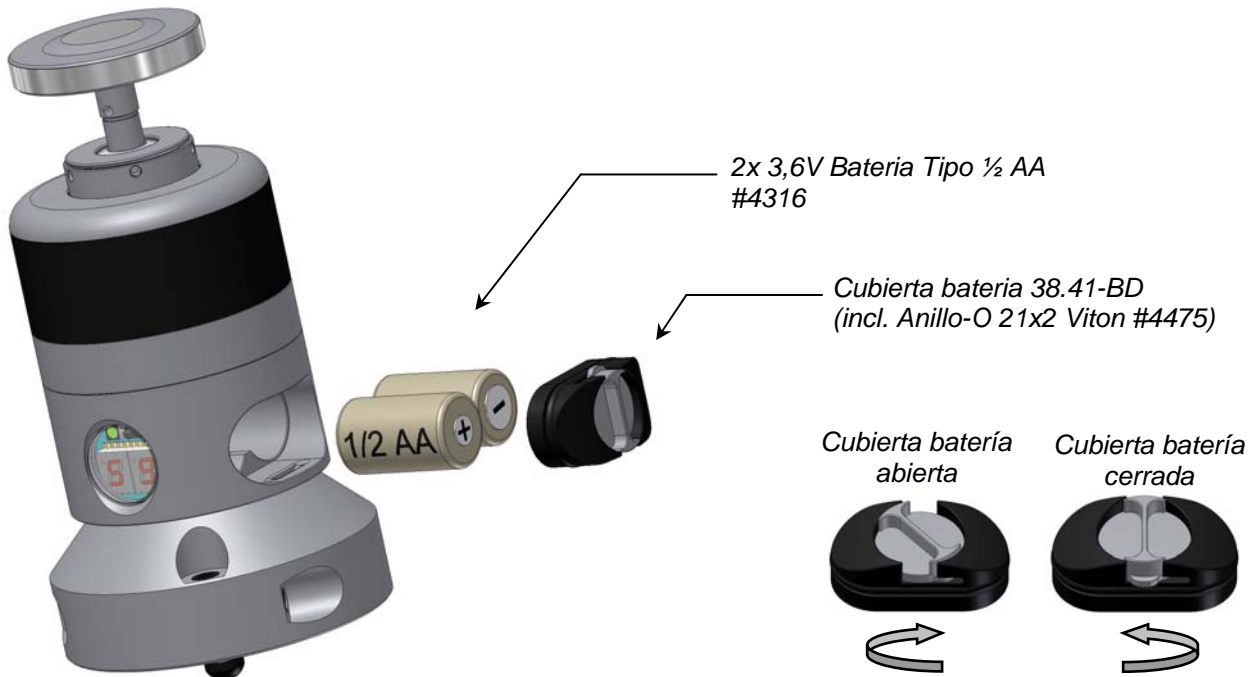


B-B



Radio-wave Tool Setter RWT35.50

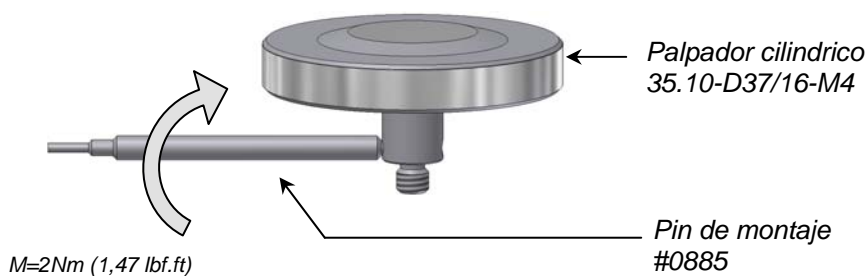
Cambio de baterías



Atención

- Limpie el cuerpo de la medidor de herramienta antes de abrirla
NO usar aire comprimido !
- Abra la cubierta de la batería mediante un movimiento circular!
- Retire las baterías viejas!
- Asegúrese de que los polos positivos y negativos se insertan correctamente!
- Al cerrar la cubierta de la batería, asegúrese de que el anillo-O de sellado esté bien insertado.!
- Retire inmediatamente las baterías vacías

Cambio de aguja



Atención!

Tras cambiar la aguja:

- Verifique el alineamiento de la superficie de medición y realinee cuando sea necesario!
- ¡Calibre el medidor de herramienta!

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Señal óptica de estado



El LED parpadea en verde:

- Medidor de herramienta está transmitiendo señales

El LED parpadea en verde / rojo:

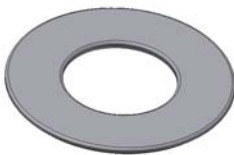
- Batería baja

El LED parpadea en naranja

- Aguja desviada

Mantenimiento

Cubierta de servicio #3240
con Anillo-O 16x1Viton #3455



Cubierta metálica
#2906



Muelle cónico
#2931



La suciedad se puede acumular en la cavidad de debajo de la junta de la tapa de metal.

Limpieza:

- Quite la cubierta de servicio con la tapa de metal y el muelle cónico con la mano.
- Limpie el medidor de herramienta y las piezas en agua corriente.
- Cierre el medidor de herramienta con la mano.
- Alinee la superficie de medición.
- Calibre el medidor de herramienta.

Atención

- No utilice aire comprimido ni chorro de agua de alta presión
- ¡No utilice herramientas afiladas!
(riesgo de dañar el diafragma)

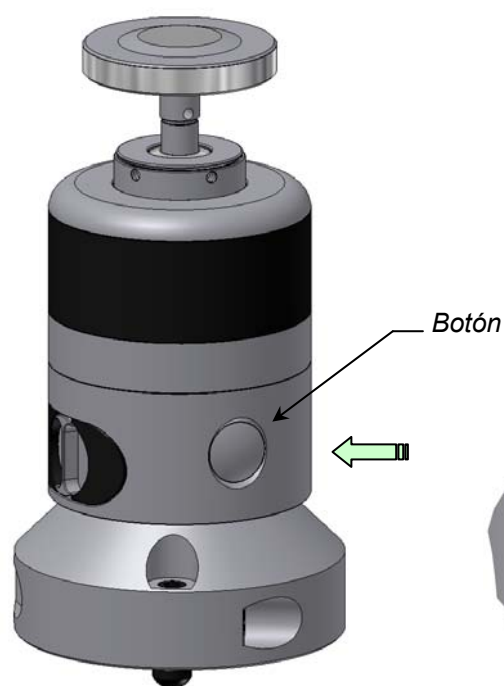


Radio-wave Tool Setter RWT35.50

Canales y frecuencias

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	locked	18	433,300	36	433,875	54	434,375
01	433,925	19	433,325	37	433,900	55	434,400
02	434,075	20	433,350	38	433,950	56	434,425
03	433,075	21	433,400	39	433,975	57	434,450
04	locked	22	433,425	40	434,000	58	434,475
05	433,175	23	433,450	41	434,025	59	434,500
06	433,275	24	433,500	42	434,050	60	434,525
07	433,375	25	433,525	43	434,100	61	434,550
08	433,475	26	433,550	44	434,125	62	434,575
09	433,575	27	433,600	45	434,150	63	434,600
10	433,675	28	433,625	46	434,175	64	434,625
11	433,775	29	433,650	47	434,200	65	434,650
12	433,100	30	433,700	48	434,225		
13	433,125	31	433,725	49	434,250	66-99	locked
14	433,150	32	433,750	50	434,275		
15	433,200	33	433,800	51	434,300		
16	433,225	34	433,825	52	434,325		
17	433,250	35	433,850	53	434,350		

Ajuste de canal



Procedimiento:

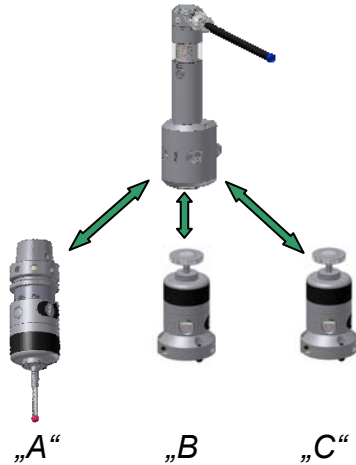
- Asegúrese de que la medidor de herramienta está apagada
- Presione el botón hasta que se muestre el canal
- Presione de nuevo el botón hasta que se muestre el canal deseado
- El display de canal se apaga tras 5 segundos
- Ahora el canal está ajustado!



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Código the activación y ajuste de tiempo muerto.

Con 3 códigos de activación disponibles, „A“ / „B“ / „C“, es posible trabajar hasta con 3 sistemas con un solo receptor. El receptor envía el código de activación seleccionado y espera también únicamente las señales del código de activación seleccionado.



Atención – Advertencia de seguridad!

Bajo ningún concepto se pueden configurar 2 ó más sistemas en el mismo canal utilizando los mismos códigos de activación!

Todos los códigos de activación están disponibles con su respectivo ajuste de tiempo muerto „Radio-wave OFF“ y „3min“. En el ajuste „Radio-wave OFF“, el sistema de medición debe ser desactivado por el receptor con una función-M! En el ajuste „3min“, el sistema de medición debe ser desactivado también con una función-M, pero en caso de fallo de la desactivación, la sonda se desactivará por precaución interna tras 3 min!

Un „1“ en frente del código de activación muestra que el tiempo muerto está activado, el „0“ muestra que está desactivado

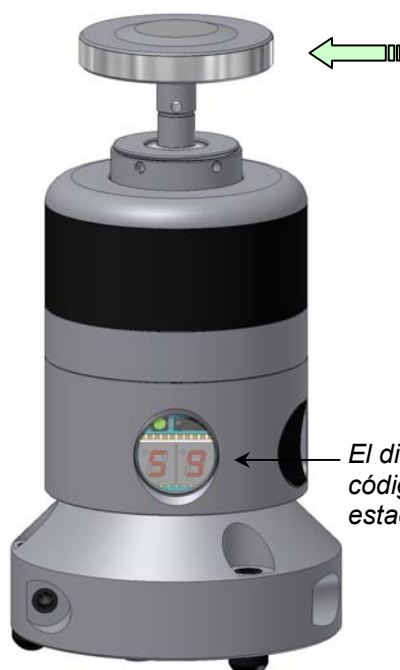
En el display:



= 0.A. → Tiempo muerto está desactivado („Radio-frecuencia OFF“) / código de activación „A“



= 1.C. → Tiempo muerto está activado („3 min“) / Código de activación „C“



Ajustes de fábrica →

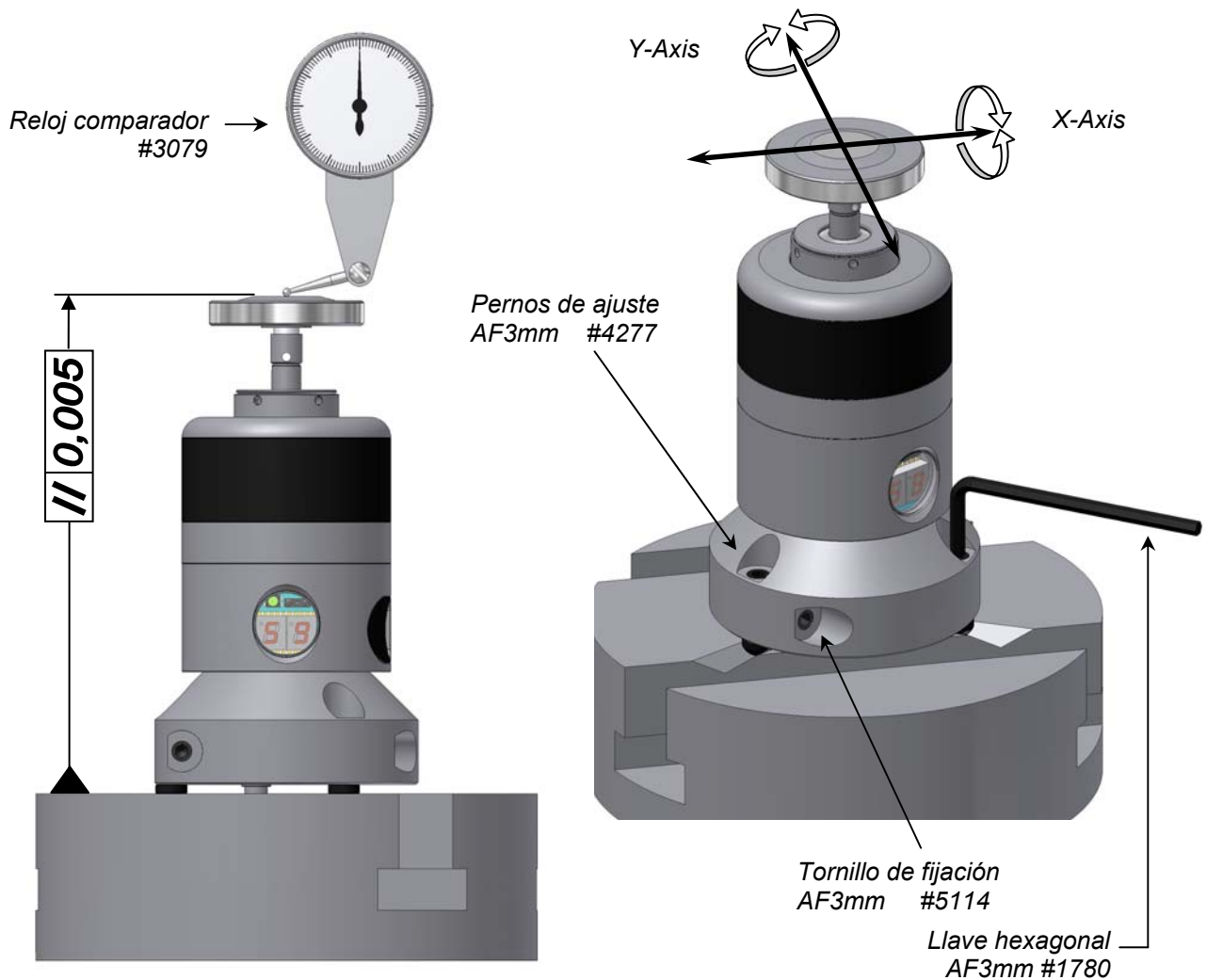
Ajuste	Código de activación	Tiempo muerto
0.A.	„A“	Radio-frecuencia OFF
0.B.	„B“	Radio-frecuencia OFF
0.C.	„C“	Radio-frecuencia OFF
1.A.	„A“	3 min
1.B.	„B“	3 min
1.C.	„C“	3 min

Procedimiento:

- Asegúrese de que la sonda está apagada
- Presione el botón hasta que se muestre el canal
- Flexione la aguja de palpado hasta que se visualice el código de activación deseado
- No presione de nuevo ni el botón ni la aguja de palpado.
- El display se apaga tras 5 segundos.
- El código de activación está ahora ajustado.

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Alineamiento del Palpador

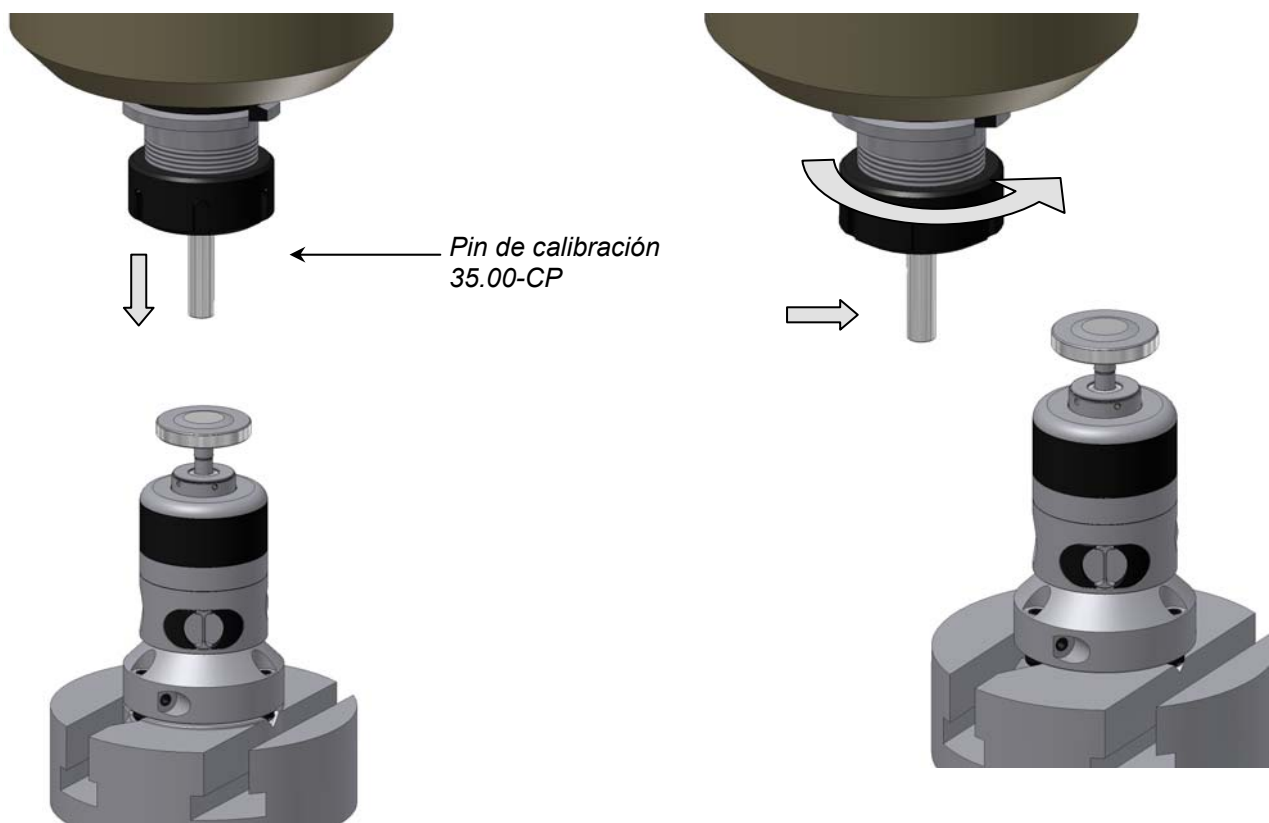


Pasos:

- Afloje los tornillos de fijación y gire los pernos de ajuste hasta llegar a su límite en la parte superior.
- Ajuste los tornillos de fijación hasta que los pernos de ajuste se puedan girar con fuerza moderada.
- Sople sobre los pernos de ajuste y limpie las ranuras en V.
- Posicione el medidor de herramienta en las ranuras en V.
- Compruebe el paralelismo del palpador en el eje X usando un calibre.
- Ajuste el medidor de herramienta en el eje Y hasta $< 5\mu\text{m}$ girando los pernos de ajuste.
- Apriete los pernos de ajuste (x2).
- Utilizando el 3er perno de ajuste, ajuste el medidor en torno al eje X hasta $< 5\mu\text{m}$
- Apriete el 3er perno de ajuste
- Saque el medidor de herramienta de la máquina y apriete a mano, de forma segura los 3 tornillos de fijación (ca. 10Nm).
- Descargue los pernos de ajuste y las ranuras en V.
- Ponga de nuevo el medidor de herramienta en las ranuras en V y compruebe el alineamiento.
- Calibre el medidor de herramienta!

Radio-wave Tool Setter RWT35.50

Calibración del medidor de herramienta



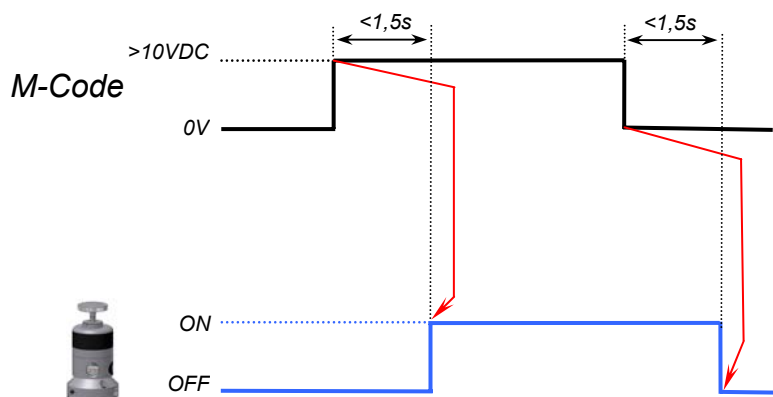
Atención:

Calibre el Medidor de Herramienta usando el ciclo de calibración del control de la máquina.

Procedimiento medidor de herramienta ON/OFF

El medidor de herramienta bi-direccional se activará y desactivará mediante el receptor radio-frecuencia RWR95.40.

Después de lanzar la función-M la medidor de herramienta se activa en $<1,5$ s y se desactiva en $<1,5$ s tras lanzar de nuevo la función-M.



Radio-wave Tool Setter RWT35.50

Consejos de seguridad – por favor, tenga cuidado

1. Para evitar cualquier daño al medidor de herramienta ó a la propia herramienta, se ha de estar seguro de que ningún otro sistema radio bidireccional se esté usando en el mismo canal utilizando el mismo código de activación.
2. Una entrada ó parada de husillo ocasionada por una señal de encendido ó una señal de error de un medidor de herramienta sólo podría ocurrir si se activa un medidor de herramienta que ya estaba actualmente en uso. Esta consulta de seguridad previene al husillo ó a la entrada de una parada durante un mecanizado normal si se emite una señal desde un sistema radio por alguna de las siguientes razones:
 - Otra máquina equipada con un sistema radio se pone operativa y este sistema transmite en el mismo canal utilizando el mismo código de activación que un sistema instalado previamente.

Declaración de conformidad

Declaramos bajo nuestra sola responsabilidad que el producto „Radio-wave Tool Setter RWT35.50“, al que se refiere esta declaración está en conformidad con los siguientes estándares:

R&TTE-Directive 99/5/EG	
EN 300 220-1 V2.3.1 (2010-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods
EN 300 220-2 V2.3.2 (2010-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
















EMC- Directive 2004/108/EG	
EN 301 489-1 V1.8.1 (2008-04)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
EN 301 489-3 V1.4.1 (2002-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz
EN 6000-4-2 (2009-12)	Electromagnetic compatibility (EMC) - Part 4-2: Testing and Measurement - Examination of the discharge immunity static electricity

Declaración FCC / RSS

In Progress: Application done - Confirmation coming soon!

Radio-wave Tool Setter RWT35.50

Contenido de entrega, Recambios, Accesorios

Contenido de entrega		
Número Pedido	Descripción	
35.50-RWT	Medidor de herramienta radio RWT35.50 4x Batería Tipo ½ AA (3,6V) Caja de almacenaje Caja herramientas	#4316 #4301 35.50-TB
Recambios, Herramientas		
Número Pedido	Descripción	
35.10-D37/16-M4	Palpador cilindrico	
#4316	Batería Tipo ½ AA (3,6V)	
38.41-BD	Cubierta batería	
#4475	Anillo-O 21x2 Viton para cubierta batería	
#4277	Pernos de ajuste AF3mm	
#5114	Tornillo de fijación AF30mm	
#3240	Cubierta de servicio	
#3455	Anillo-O 16x1 Viton para cubierta de servicio	
#2906	Cubierta metálica	
#2931	Muelle cónico	
35.00-CP	Pin de calibración	
#1780	Llave hexagonal AF3mm	
#0885	Pin de montaje	
#3079	Reloj comparador	
35.50-TB	Caja herramientas 1x Llave hexagonal AF3mm 1x Pin de montaje 2x Tornillo de fijación AF3mm 1x Pin de calibración	#1780 #0885 #5114 35.00-CP
Accesorios		
Número Pedido	Descripción	
35.70-BP-12 35.70-BP-14 35.70-BP-18 35.70-BP-22	Base con ranura - T 12mm Base con ranura - T 14mm Base con ranura - T 18mm Base con ranura - T 22mm	
#4301	Caja de almacenaje	