Radio-wave Touch Probe RWP38.41

BETRIEBSANLEITUNG DE

OPERATING INSTRUCTIONS EN

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Präzision am Werkstück

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Technische Änderungen vorbehalten

Radio-wave Touch Probe RWP38.41

BETRIEBSANLEITUNG
(Original)

DE

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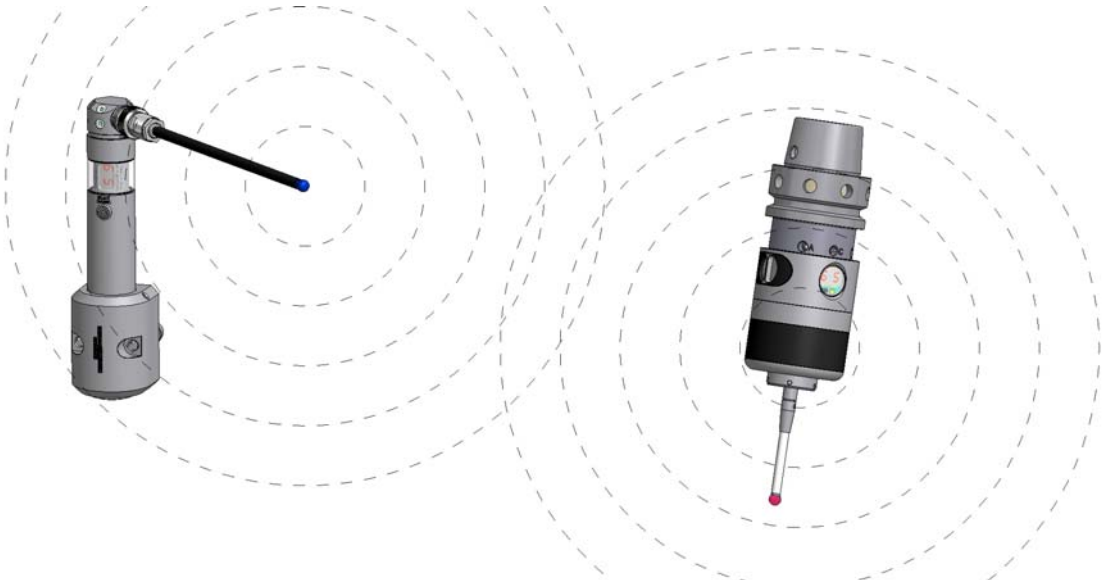
Systemkomponenten

Radio-wave Receiver
RWR95.40

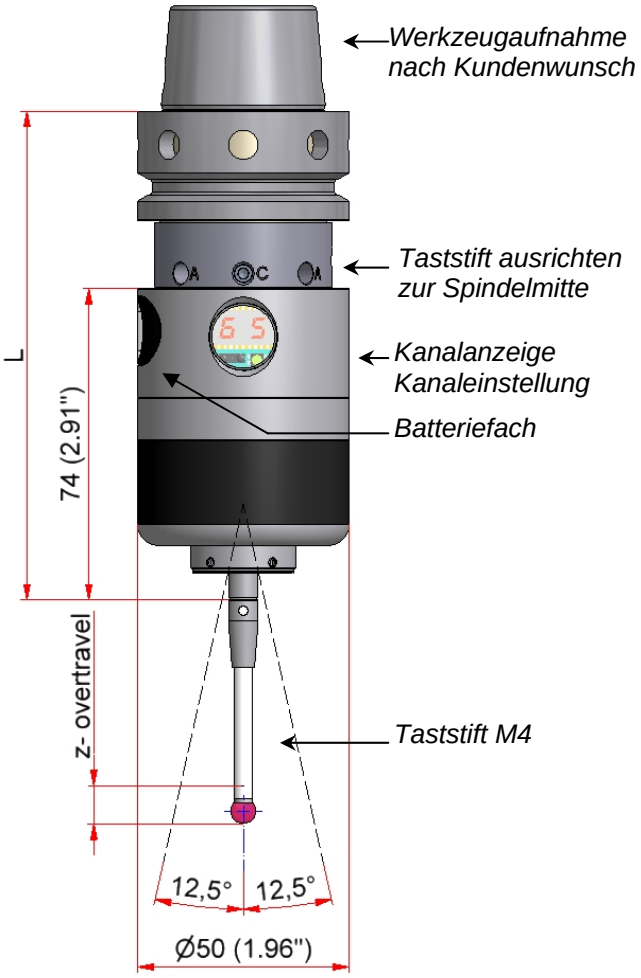
Radio-wave Touch Probe
RWP38.41



Technische Daten

Antastrichtungen:	± X; ± Y; -Z
Max. Taststiftauslenkung:	XY ±12,5°; Z –6mm
Antastkraft mit 50mm Taststift:	XY = 0,3-1,4N; Z = 2,5-12,5N einstellbar
Einstellung bei Auslieferung:	XY = 0,96N; Z = 8,5N
Empfohlene Antastgeschwindigkeit:	254mm/min – 2000mm/min
Energieversorgung:	2x Batterie 3,6V Typ ½ AA (1200mAh)
Batterielebensdauer:	100% = 325h 5% = 219d Standby = 230d
Material:	Nichtrostender Stahl
Gewicht ohne Kegel:	ca. 460g
Temperaturbereich:	Betrieb: 10° - 50°C Lagern: 5° - 70°C
Wiederholgenauigkeit:	max. 2Sigma ±1µm mit 50mm Taststift und 254mm/min Antastgeschw.
Garantierte Lebensdauer des Messwerks:	10 Millionen Antastungen
Sendefrequenzbereich:	433,075 – 434,650 MHz
Anzahl Kanäle:	64
Kanalabstände:	25 KHz
Abdichtung:	IP68: EN60529

Abmessungen



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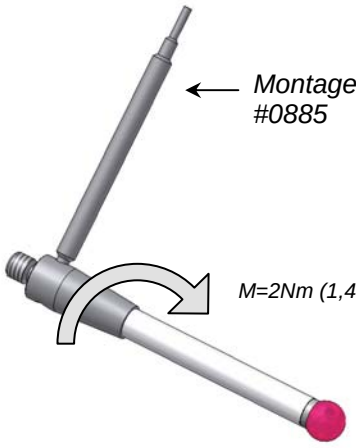
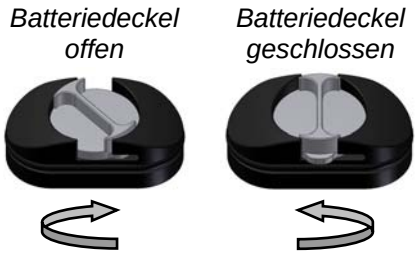
Taststiftwechsel

Achtung !
Nach dem Taststiftwechsel:
- *Taststift ausrichten zur Spindelmitte.*
- *Messtaster kalibrieren !*



Batteriewechsel



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

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Taststift ausrichten zur Spindelmitte

1 „C“ Schrauben anlegen

Innensechskantschlüssel SW2,5 #1346

- alle "A" Schrauben 2 Umdrehungen lösen
- alle "C" Schrauben lösen
- Inbusschlüssel längsseitig stecken
- beide "C" Schrauben handfest anlegen

2 Justierung bis <20µ

Innensechskantschlüssel SW2 #1097

- Messuhr vor dem Taststift anlegen wie abgebildet
- Taster drehen, bis die Messuhr die größte Rundlaufabweichung anzeigt
- mit "A" Schraube(n) den **halben** Messuhrausschlag nach hinten drehen
- verwendete "A" Schraube(n) eine Umdrehung lösen
- Vorgang wiederholen bis Rundlauf **< 20µ** eingestellt ist

3 „C“ Schrauben festziehen

- Innensechskantschlüssel querseitig stecken
- beide "C" Schrauben mit hoher Handkraft festziehen

4 Justierung bis <5µ

- Taster drehen, bis die Messuhr die größte Rundlaufabweichung anzeigt
- mit "A" Schraube(n) den **halben** Messuhrausschlag nach hinten drehen
- verwendete "A" Schraube(n) eine Umdrehung lösen
- Vorgang wiederholen bis Rundlauf **< 5µ** eingestellt ist

5 „C“ Schrauben nachziehen

- Innensechskantschlüssel querseitig stecken
- beide "C" Schrauben nochmals mit hoher Handkraft nachziehen

6 „A“ Schrauben gegen kontern

- die zwei in einer Achse liegenden "A" Schrauben gleichzeitig gegen kontern (0° - 180°)
- danach die anderen zwei "A" Schrauben gleichzeitig gegen kontern (90 - 270°)

Falls Rundlauf sich verstellt:

- die hohe Seite nach vorne drehen
- die "A" Schraube(n) auf der Rückseite vorsichtig und langsam lösen bis Rundlauf **< 5µ**
- nochmals die jeweiligen "A" Schrauben gleichzeitig gegen kontern

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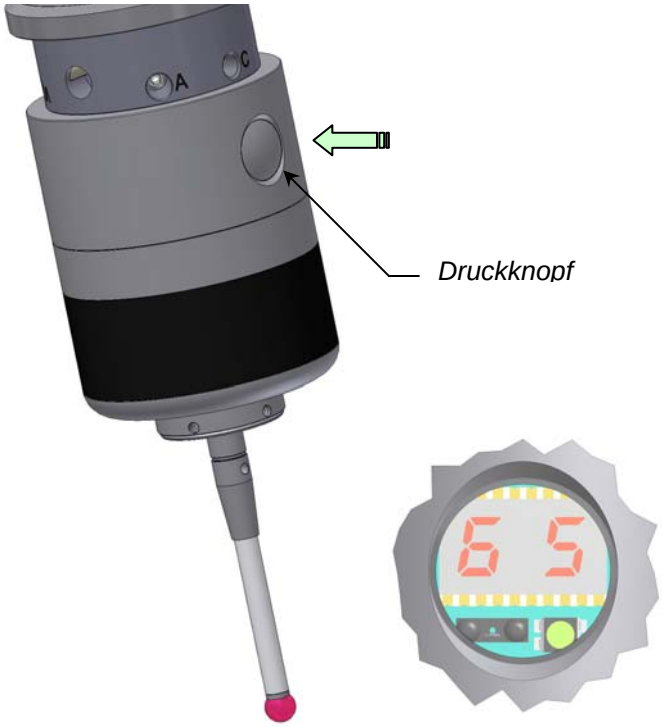
Kanäle und Frequenzen

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 Messtaster 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!*

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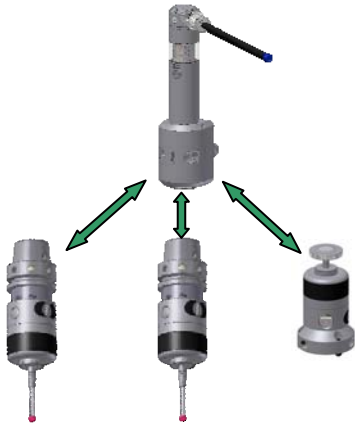
Aktivierungs-Codierung und Ausschaltzeit einstellen

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.



„A“ „B „C“

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. → Auschaltzeit nicht aktiv („Funk OFF“) / Aktivierungs-Code „A“

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

Werkseinstellung

Display zeigt Aktivierungs-Code und Status der Auschaltzeit

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

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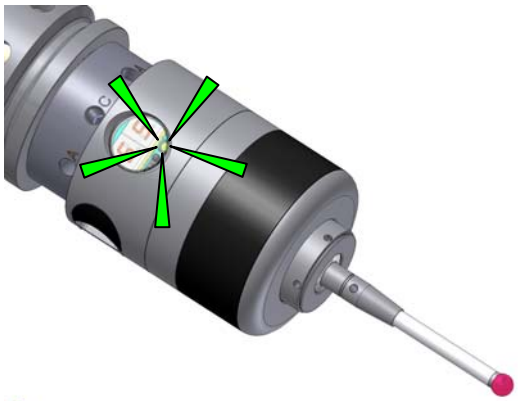
Optische Zustandsanzeige



LED blinkt grün:
- Taster überträgt Signale

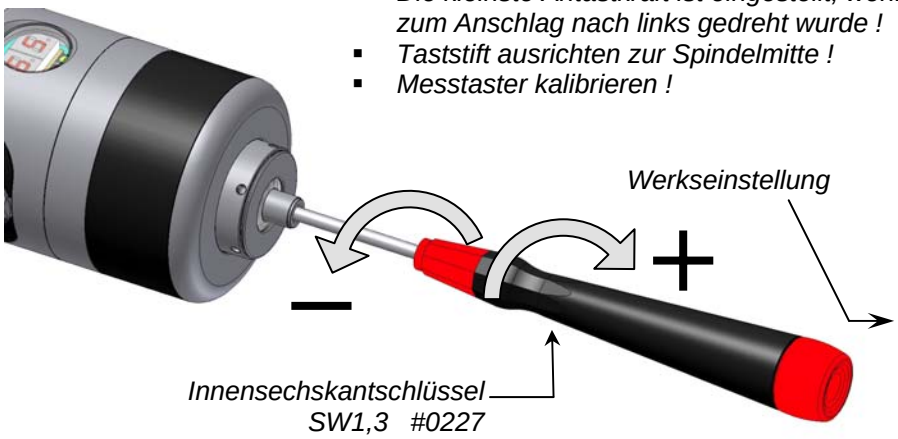
LED blinkt grün / rot:
- Batteriewarnung

LED blinkt orange:
- Taststift ausgelenkt

Krafteinstellung (patentiert)

Bei starken Maschinenvibrationen oder schweren Tasteinsätzen ist die Erhöhung der Antastkraft zu empfehlen.

Achtung !
- Zum Einstellen der Antastkraft Taststift abschrauben !
- Die kleinste Antastkraft ist eingestellt, wenn der Innensechskantschlüssel bis zum Anschlag nach links gedreht wurde !
- Taststift ausrichten zur Spindelmitte !
- Messtaster kalibrieren !



Umdrehungen von kleinster Kraft	Antastkraft mit 50mm Taststift in N	
	Z	X/Y
min.0	2,5	0,30
1	3,5	0,41
2	4,5	0,52
3	5,5	0,63
4	6,5	0,74
5	7,5	0,85
6	8,5	0,96
7	9,5	1,07
8	10,5	1,18
9	11,5	1,29
max.10	12,5	1,40

Wartung

Unter der Metalldichtung kann sich Schmutz ansammeln.

Reinigung :
- Service-Deckel mit Metalldichtung und Kegelfeder von Hand abziehen.
- Messtaster und Teile unter fließendem Wasser säubern.
- Messtaster wieder von Hand schließen.
- Taststift ausrichten zur Spindelmitte!
- Messtaster kalibrieren!

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

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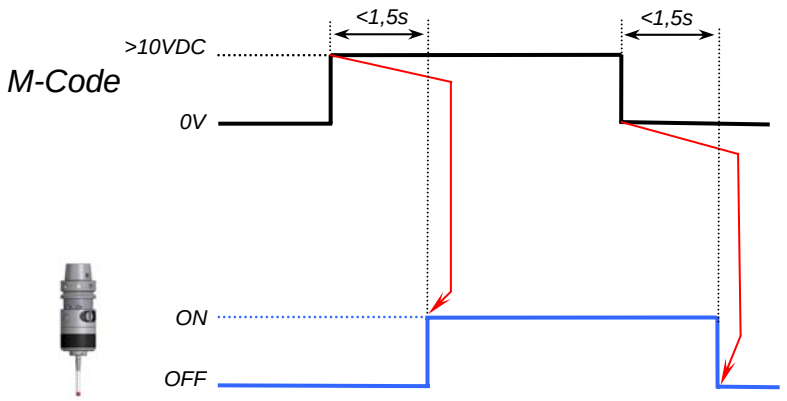
Messtaster ON / OFF Prozedur

Der bidirekte Messtaster wird über den Funk-Empfänger RWR95.40 aktiviert und deaktiviert.
Nach dem Setzen des M-Codes ist der Messtaster in <1,5 s aktiviert und <1,5s nach dem Rücksetzen wieder deaktiviert.



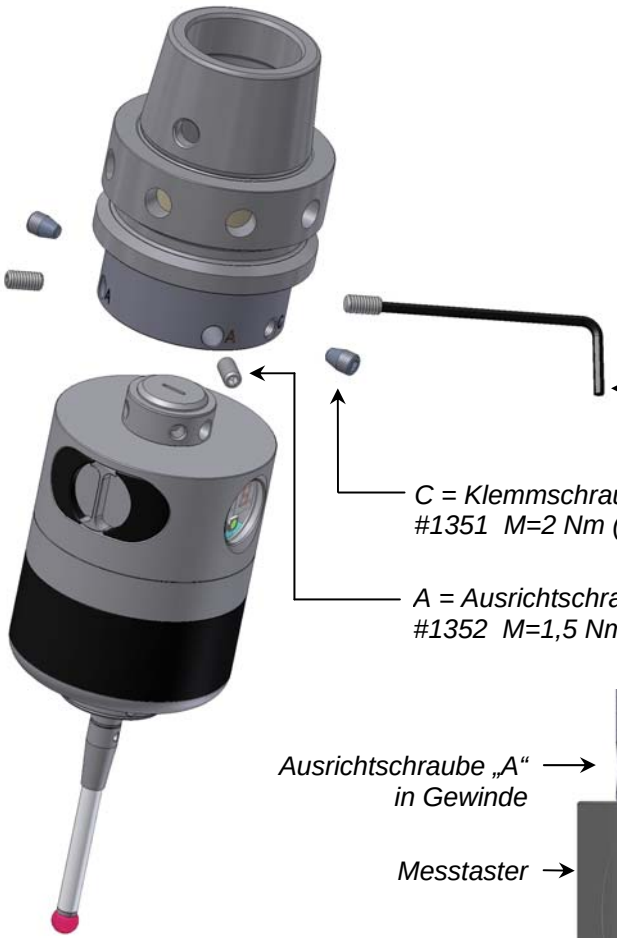
Montage der Werkzeugaufnahme

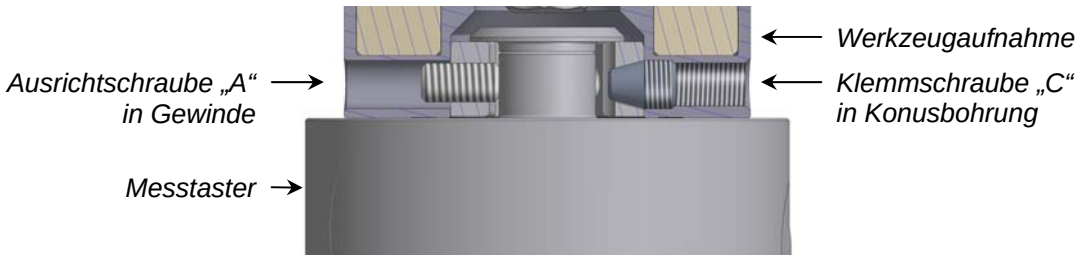
Demontage der Werkzeugaufnahme:

- *Alle Schrauben „A“ und „C“ entfernen.*
- *Werkzeugaufnahme abziehen.*

Montage der Werkzeugaufnahme:

- *Werkzeugaufnahme vorsichtig auf Taster schieben, dabei das Gewinde „C“ zur Konusbohrung ausrichten.*
- *Beide Klemmschrauben „C“ einschrauben und leicht anziehen.*
- *Alle Ausrichtschrauben „A“ einschrauben*
- *Taststift ausrichten zur Spindelmitte.(siehe Seite 3)*
- *Messtaster kalibrieren!*





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Messtaster mit Werkzeugaufnahme HSK

Nicht im Lieferumfang

Mögliche Kegel:	L:	Bestellnummer:
DIN69893-HSK-E25	93 (3.67”)	38.41-HSK25E
DIN69893-HSK-A32	110 (4.33”)	38.41-HSK32A
DIN69893-HSK-E32	110 (4.33”)	38.41-HSK32E
DIN69893-HSK-A40	110 (4.33”)	38.41-HSK40A
DIN69893-HSK-E40	110 (4.33”)	38.41-HSK40E
DIN69893-HSK-F40	110 (4.33”)	38.41-HSK40F
DIN69893-HSK-A50	110 (4.33”)	38.41-HSK50A
DIN69893-HSK-A50	142,5 (5.61”)	38.41-HSK50A-142,5
DIN69893-HSK-E50	116 (4.57”)	38.41-HSK50E
DIN69893-HSK-E50	142,5 (5.61”)	38.41-HSK50E-142,5
DIN69893-HSK-F50	116 (4.57”)	38.41-HSK50F
DIN69893-HSK-A63	110 (4.33”)	38.41-HSK63A
DIN69893-HSK-A63	142,5 (5.61”)	38.41-HSK63A-142,5
DIN69893-HSK-A63-70	144 (5.67”)	38.41-HSK63A-144
DIN69893-HSK-E63	132,5 (5.22”)	38.41-HSK63E
DIN69893-HSK-F63	147,5 (5.81”)	38.41-HSK63F
DIN69893-HSK-A80	147,5 (5.81”)	38.41-HSK80A
DIN69893-HSK-A100	116 (4.57”)	38.41-HSK100A
DIN69893-HSK-A100	147,5 (5.81”)	38.41-HSK100A-147,5
Kennametal KM63	147,5 (5.81”)	38.41-KM63
Kennametal KM80	147,5 (5.81”)	38.41-KM80

weitere Werkzeugaufnahmen auf Anfrage

Messtaster mit Werkzeugaufnahme SK

Nicht im Lieferumfang

Mögliche Kegel:	L:	Bestellnummer:
DIN69871-SK30	120,5 (4.74”)	38.41-SK30
DIN69871-SK30-Mube	120,5 (4.74”)	38.41-SK30-Mube
DIN69871-SK40	122,5 (4.82”)	38.41-SK40
DIN69871-SK40-70	144 (5.67”)	38.41-SK40-144
DIN69871-SK50	122,5 (4.82”)	38.41-SK50
DIN2080-SK50	118,5 (4.67”)	38.41-DIN2080-SK50
DIN69871-SK60	142,5 (5.61”)	38.41-SK60
BT30	101 (3.98”)	38.41-BT30
BT30	120,5 (4.74”)	38.41-BT30-120,5
BT30	151 (5.94”)	38.41-BT30-151
BT30	176 (6.93”)	38.41-BT30-176
BT30	201 (7.91”)	38.41-BT30-201
BT40	122,5 (4.82”)	38.41-BT40
BT40-70	144 (5.67”)	38.41-BT40-144
BT50	137,5 (5.41”)	38.41-BT50
CAT40	122,5 (4.82”)	38.41-AN40
CAT40-70	144 (5.67”)	38.41-AN40-144
CAT50	122,5 (4.82”)	38.41-AN50

weitere Werkzeugaufnahmen auf Anfrage

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Messtaster mit Werkzeugaufnahme Coromant Capto

Nicht im Lieferumfang

Mögliche Aufnahmen:	L:	Bestellnummer:
Coromant Capto C4	110 (4.33”)	38.41-C4
Coromant Capto C5	110 (4.33”)	38.41-C5
Coromant Capto C5	147,5 (5.81”)	38.41-C5-147,5
Coromant Capto C6	116 (4.57”)	38.41-C6
Coromant Capto C6	147,5 (5.81”)	38.41-C6-147,5
Coromant Capto C8	116 (4.57”)	38.41-C8
Coromant Capto C8	147,5 (5.81”)	38.41-C8-147,5

weitere Werkzeugaufnahmen auf Anfrage

Messtaster mit Werkzeugaufnahme THERMO-LOCK® (patentiert)

Nicht im Lieferumfang

Mögliche Aufnahmen:	L:	Bestellnummer
DIN69893 HSK-E32	110 (4.33”)	38.41-HSK32E-TI
DIN69893 HSK-E40	110 (4.33”)	38.41-HSK40E-TI
DIN69893 HSK-E50	116 (4.57”)	38.41-HSK50E-TI
DIN69893 HSK-A63	116 (4.57”)	38.41-HSK63A-TI

Die patentierte THERMO-LOCK® Technologie verhindert die Wärmeausdehnung des HSK und den Wärmeübergang von der Maschinenspindel zum Messtaster. Der Messtaster liefert somit gleichbleibend präzise Messergebnisse, auch bei großem Wärmeunterschied zwischen Maschinenspindel und HSK.

Messtaster mit sonstigen Werkzeugaufnahmen

Nicht im Lieferumfang

Mögliche Aufnahmen:	L:	Bestellnummer
D20-D8-L25-B	89 (3.50”)	38.41-D8-L25
D20-D32-L100-B	86 (3.39”)	38.41-D32-L100
NIKKEN-NC5-46	141,5 (5.57”)	38.41-NC5-46
NIKKEN-NC5-63	141,5 (5.57”)	38.41-NC5-63
D20-Erowa-ITS	115 (4.53”)	38.41-ITS

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Messwerk-Verlängerung

Achtung !

- *Messtaster vor dem Ausschrauben des Messwerks sauber und trocken wischen !*
- *Beim Einschrauben auf richtigen Sitz des O-Rings achten !*
- *Taststift ausrichten zur Spindelmitte !*
- *Messtaster kalibrieren !*

Bestellnummer	Länge
21.00-VE50	50
21.00-VE100	100
21.00-VE200	200

Verlängerung max. 400

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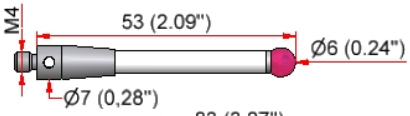
M4-Taststifte, Schaft-∅7

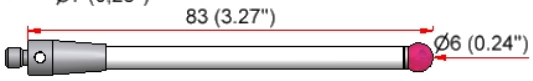
Alle Taststifte mit Keramikschaft

Bestellnummer:

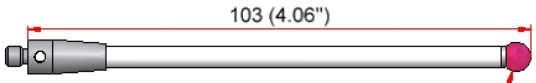
91.00-T53/6-KE-M4
(Rubinkugel)



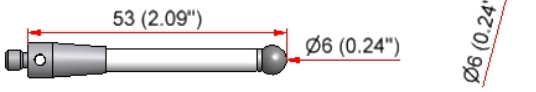
91.00-T83/6-KE-M4
(Rubinkugel)



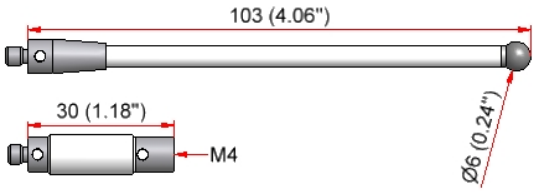
91.00-T103/6-KE-M4
(Rubinkugel)



91.00-T53/6-KE-M4-Si
(Siliziumnitridkugel)

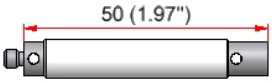


91.00-T103/6-KE-M4-Si
(Siliziumnitridkugel)

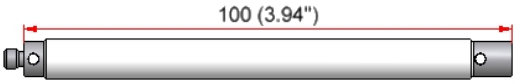


91.00-TV30-KE-M4
(Taststiftverlängerung)

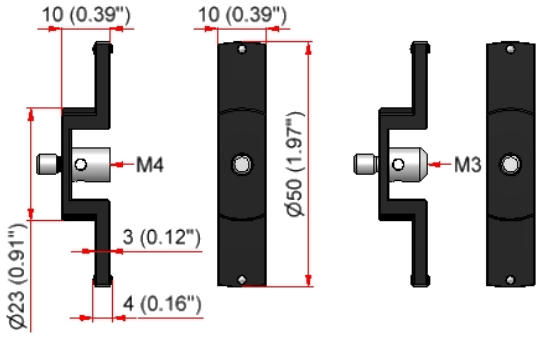
91.00-TV50-KE-M4
(Taststiftverlängerung)



91.00-TV100-KE-M4
(Taststiftverlängerung)



91.00-TS-ST-M4
91.00-TS-ST-M4/M3
(Scheibenförmiger Tasteinsatz)

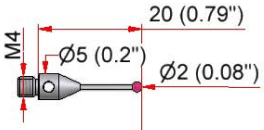


M4-Taststifte, Schaft-∅5

Alle Taststifte mit Rubinkugel

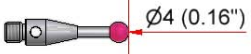
Bestellnummer:

91.00-T20/2-HM-M4
(Hartmetallschaft)

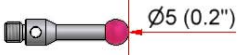


91.00-T20/3-HM-M4
(Hartmetallschaft)

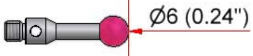
91.00-T20/4-HM-M4
(Hartmetallschaft)



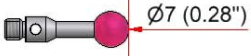
91.00-T20/5-ST-M4
(Nirostahlschaft)



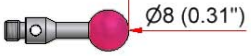
91.00-T20/6-ST-M4
(Nirostahlschaft)



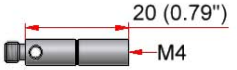
91.00-T20/7-ST-M4
(Nirostahlschaft)



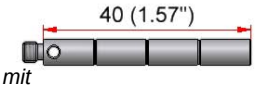
91.00-T20/8-ST-M4
(Nirostahlschaft)



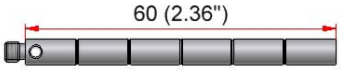
91.00-TV20-ST-M4
(Taststiftverlängerung mit Nirostahlschaft)



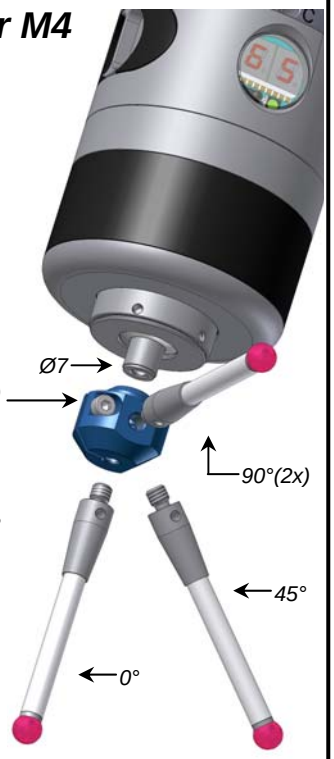
91.00-TV40-ST-M4
(Taststiftverlängerung mit Nirostahlschaft)



91.00-TV60-ST-M4
(Taststiftverlängerung mit Nirostahlschaft)



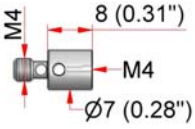
Klemmadapter M4



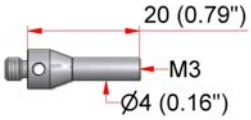
41.00-KM-M4
Auf Schaft Ø7 geklemmt mit Zylinderschraube SW2 radial ausrichtbar

Zubehör

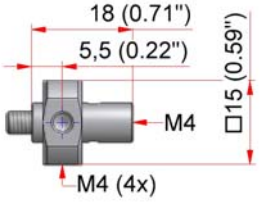
91.00-S-M4/M4
(Taststiftadapter mit Sollbruchstelle)



91.00-TA-M4/M3
(Taststiftadapter)



91.00-TK-ST-M4
(5-Wege Tastkreuz)



Weitere Taststifte auf Anfrage.

Radio-wave Touch Probe RWP38.41

Sicherheitshinweise – Bitte beachten !

1. *Das manuelle oder automatische Positionieren eines Messtasters sollte dahingehend geschützt sein, dass ein unvorhergesehenes Auslenken des Taststiftes außerhalb des Antastvorganges zu einem sofortigen Vorschub-Stop führt !*

2. *Ein Vorschub- oder Spindel-Stop, ausgelöst durch ein Schaltsignal oder Betriebsbereit-Signal eines Messtasters, darf nur dann erfolgen, wenn ein Messtaster in der Spindel ist.*
   Diese Sicherheitsabfrage verhindert, dass die Spindel oder der Vorschub während einer normalen Fräsbearbeitung gestoppt wird, falls aus einem der nachfolgenden Gründe ein Signal vom Messtaster ausgelöst werden sollte:

   - *Kunde wechselt Batterien und prüft anschließend die Funktionen des Messtasters,*
   - *Eine weitere Maschine mit einem Funk-Messtaster wird in Betrieb genommen und dieser Messtaster sendet auf dem gleichen Kanal wie ein zuvor installierter Taster.*

Konformitätserklärung

*Wir erklären in allgemeiner Verantwortung, dass das Produkt „**Radio-Wave Touch Probe RWP38.41**“, 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

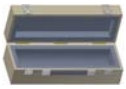
In Progress: Application done - Confirmation coming soon!

Radio-wave Touch Probe RWP38.41

Lieferumfang, Ersatzteile, Zubehör

Lieferumfang		
Bestellnummer	*Bezeichnung*	
38.41-RWP	***Funk-Messtaster RWP38.41*** *4xBatterie Typ 1/2AA(3,6V) #4316* *Toolbox 38.41-TB* *Holzbox oder 25.00-HB* *Aufbewahrungskoffer #3611*	
Ersatzteile und Werkzeuge		
Bestellnummer	*Bezeichnung*	
#4316	*Batterie Typ ½ AA (3,6V)*	
38.41-BD	*Batteriedeckel*	
#4475	*O-Ring 21x2 Viton* *für Batteriedeckel*	
#1351	*Klemmschraube SW2,5*	
#1352	*Ausrichtschraube DIN913 M4x8 (SW2)*	
#3240	*Service-Deckel*	
#3455	*O-Ring 16x1 Viton* *für Service-Deckel*	
#2906	*Metalldichtung*	
#2931	*Kegelfeder*	
#2074	*O-Ring 24x2 Viton*	
#0227	*Innensechskantschlüssel SW1,3*	
#1346	*Innensechskantschlüssel SW2,5*	
#1097	*Innensechskantschlüssel SW2*	
#2951	*Hakenschlüssel*	
#0885	*Montagestift*	
#3079	*Fühlhebelmessgerät*	
38.41-TB	***Toolbox*** *1xInnensechskantschlüssel SW2,5 #1346* *2xInnensechskantschlüssel SW2 #1097* *1xInnensechskantschlüssel SW1,3 #0227* *2xAusrichtschraube DIN913 M4x8 (SW2) #1352* *1xMontagestift #0885* *2xHakenschlüssel #2951*	

Lieferumfang, Ersatzteile, Zubehör

Zubehör		
Bestellnummer	*Bezeichnung*	
21.00-VE50	*Verlängerung L=50mm*	
21.00-VE100	*Verlängerung L=100mm*	
21.00-VE200	*Verlängerung L=200mm*	
25.00-HB	*Holzbox*	
#3611	*Aufbewahrungskoffer*	

Radio-wave Touch Probe RWP38.41

OPERATING INSTRUCTIONS

(Translation of the original operating instructions)

EN

	Page
System Components, Technical Data, Dimensions	1
Stylus Change, Battery Replacement	2
Aligning Stylus to Spindle Centre	3
Channels and Frequencies, Setting the Channel	4
Activation Code and Time-out Adjustment	5
Optical Status Display, Adjusting Trigger Force, Maintenance	6
Probe ON/OFF Procedure, Mounting the Shank	7
HSK Shanks, SK Shanks	8
Coromant Capto Shanks, THERMO-LOCK® Shanks, Other Shanks	9
Measuring Unit Extension	10
Styli, Accessories	11
Safety Advice, Declaration of Conformity, FCC/RSS-Declaration	12
Delivery Contents, Spare Parts, Accessories	13

Precision at the workpiece

www.mh-inprocess.com

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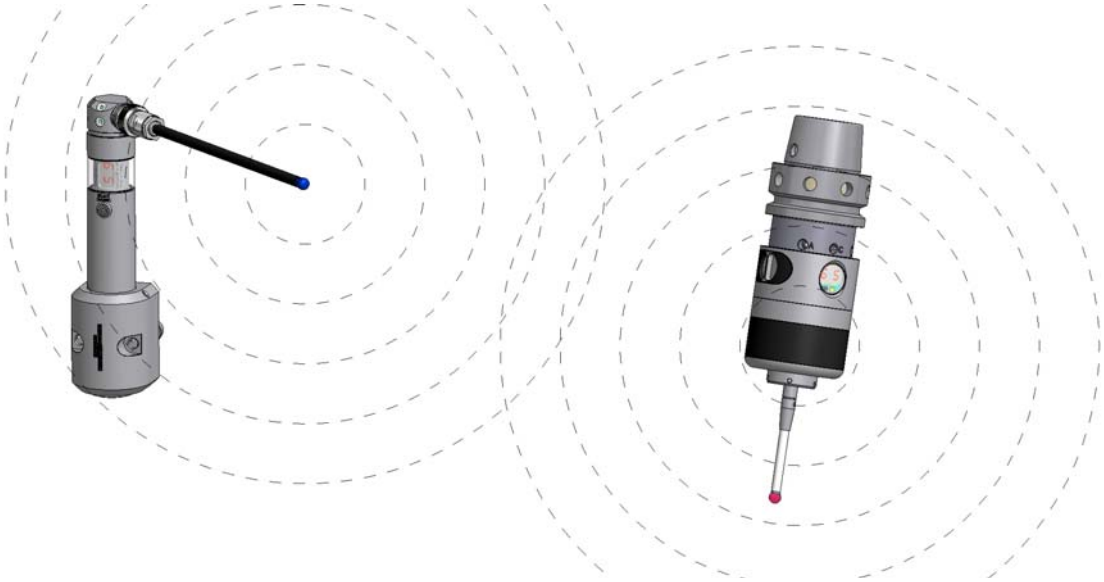
Radio-wave Touch Probe RWP38.41

System Components

Radio-wave Receiver
RWR95.40

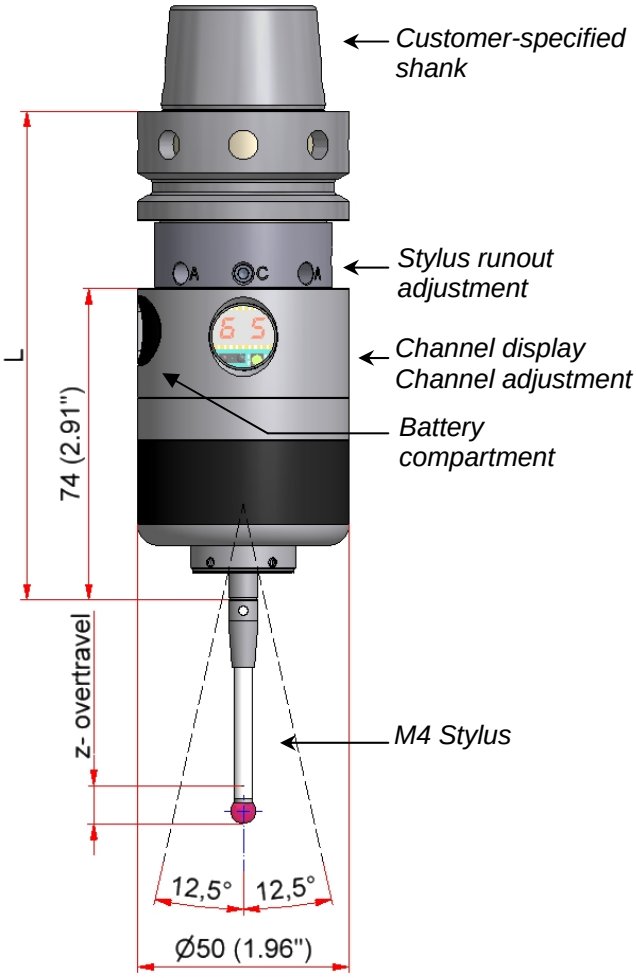
Radio-wave Touch Probe
RWP38.41



Technical Data

Sensing Directions:	± X; ± Y; -Z
Max.Stylus Overtravel:	XY ±12.5°; Z –6mm (0.24”)
Trigger Force with 50mm Stylus:	XY = 0.3-1.4N; Z = 2.5-12.5N adjustable
Factory Settings:	XY = 0.96N; Z = 8.5N
Recommended Probing Speed:	254mm/min – 2000mm/min
Power Supply:	2x Battery 3,6V Type ½ AA (1200mAh)
Battery lifetime:	100% = 325h 5% = 219d Standby = 230d
Material:	Stainless steel
Weight without Shank:	approx. 460g
Temperature Range:	Operating: 10° - 50°C Storage: 5° - 70°C
Unidirectional Repeatability:	max. 2sigma ±1µm with 50mm stylus at 254mm/min
Guaranteed Life-time of Measuring Unit:	10 million deflections
Frequency Range:	433.075 – 434.650 MHz
Number of Channels:	64
Channel Spacing:	25 KHz
Sealing:	IP68: EN60529

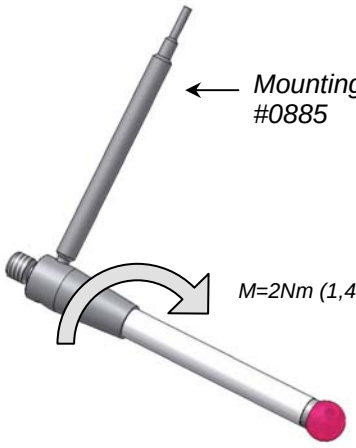
Dimensions



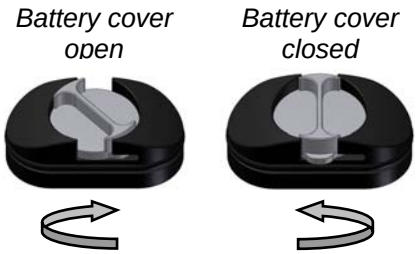
Radio-wave Touch Probe RWP38.41

Stylus Change

Attention !
After changing the stylus:
- *Adjust stylus to spindle centre!*
- *Calibrate probe !*



Battery Replacement



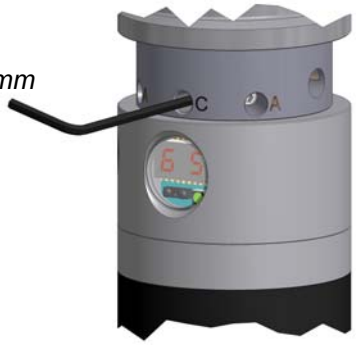
Attention !
- *Before opening probe, clean and dry well.*
  Do NOT blow off with compressed air!
- *Open battery cover by a circular motion.*
- *Remove empty batteries.*
- *Make sure positive and negative ends of battery are inserted correctly.*
- *When closing the battery cover, ensure the O-ring for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

Radio-wave Touch Probe RWP38.41

Aligning Stylus to Spindle Centre

1 Set „C“ Screws

Hexagon key AF2.5mm
#1346



- *Loosen all "A" screws 2 turns*
- *Loosen the "C" screws*
- *Using the long end of the Hex key tighten both "C" screws lightly*

2 Adjustment to <20µ

Hexagon key AF2mm
#1097

- *Set dial gauge in front of the stylus like on the picture*
- *Turn the probe until the maximum deviation is shown on the indicator*
- *Turn the "A" screws **half** of the indicator reading*
- *Loosen the "A" screws that were used 1 turn*
- *Repeat procedure until runout is **< 20µ***

3 Tighten „C“ Screws

- *Tighten both “C” screws using the short end of the Hex Key*

4 Adjustment to <5µ

- *Turn the probe until the maximum deviation is shown on the indicator*
- *Turn the "A" screws **half** of the indicator reading*
- *Loosen the "A" screws that were used 1 turn*
- *Repeat procedure until runout is **< 5µ***

5 Retighten „C“ Screws

- *Using the short end of the Hex Key*
- *Securely retighten both "C" screws*

6 Set „A“ Screws against each other

- *Set opposing „A“ screws (0° - 180°) against each other*
- *Repeat with the other two opposing „A“ screws (90 - 270°)*

If the runout goes out of adjustment:

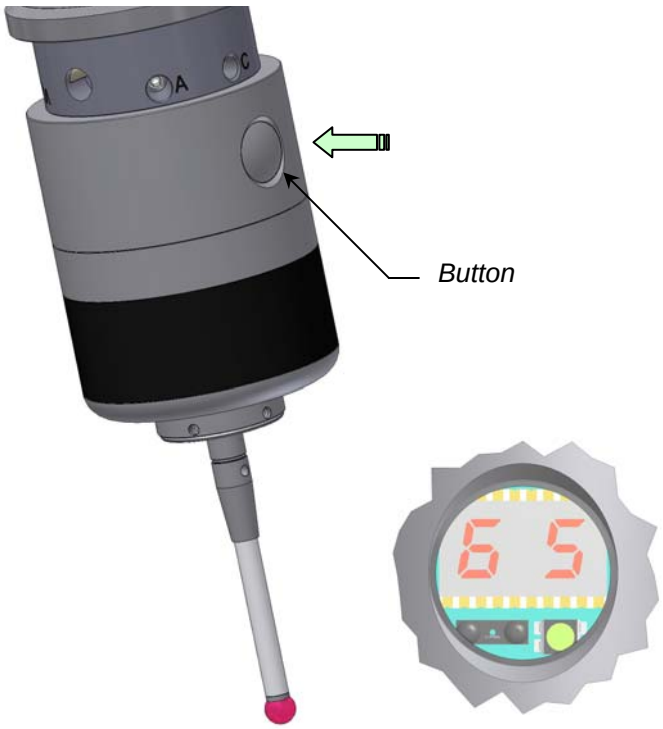
- *Turn the probe until the maximum deviation is shown on the indicator*
- *Carefully loosen the „A“ screws on the opposite side until the runout is **< 5µ***
- *Set the opposing „A” screws against the newly adjusted one*

Radio-wave Touch Probe RWP38.41

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



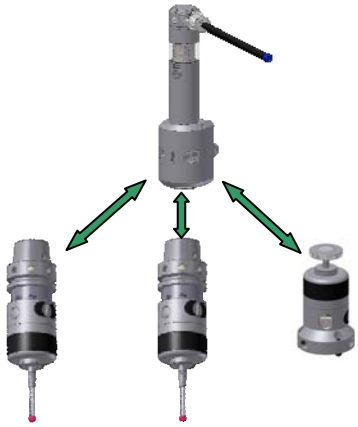
Procedure:

- *Ensure the probe 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 Touch Probe RWP38.41

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.



„A“ „B „C“

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”

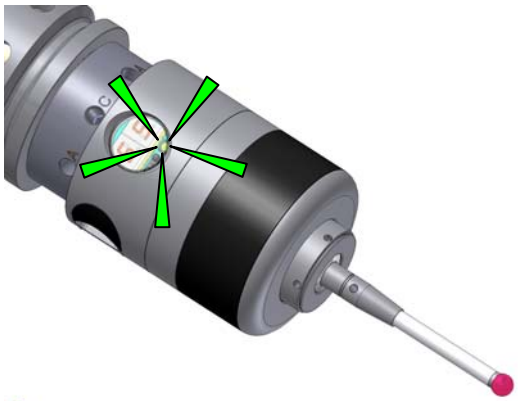
Adjustment	Activation Code	Time-Out
0.A.	„A“	Radio-wave OFF
0.B.	„B“	Radio-wave OFF
0.C.	„C“	Radio-wave OFF
1.A.	„A“	3 min
1.B.	„B“	3 min
1.C.	„C“	3 min

Procedure:

- *Ensure the probe 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 Touch Probe RWP38.41

Optical Status Display



LED blinking green:
- *Probe is transmitting signals*

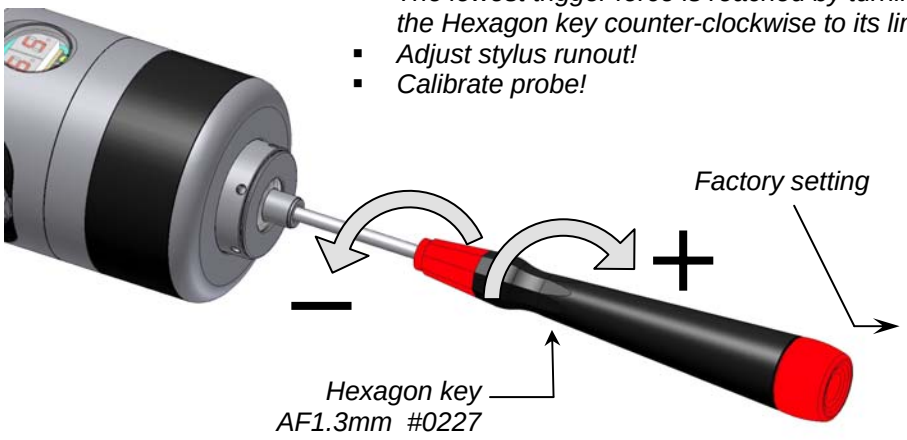
LED blinking green / red:
- *Low battery warning*

LED blinking orange:
- *Stylus deflected*

Adjusting Trigger Force *(patented)*

In case of strong machine vibrations or heavy styli it is recommended to increase probe trigger force.

Attention !
- *To adjust trigger force, remove stylus first!*
- *The lowest trigger force is reached by turning the Hexagon key counter-clockwise to its limit*
- *Adjust stylus runout!*
- *Calibrate probe!*



Turns from lowest force	Trigger force with 50mm stylus in N	
	Z	X/Y
min.0	2.5	0.30
1	3.5	0.41
2	4.5	0.52
3	5.5	0.63
4	6.5	0.74
5	7.5	0.85
6	8.5	0.96
7	9.5	1.07
8	10.5	1.18
9	11.5	1.29
max.10	12.5	1.40

Maintenance

Dirt may accumulate under the metal eyelid

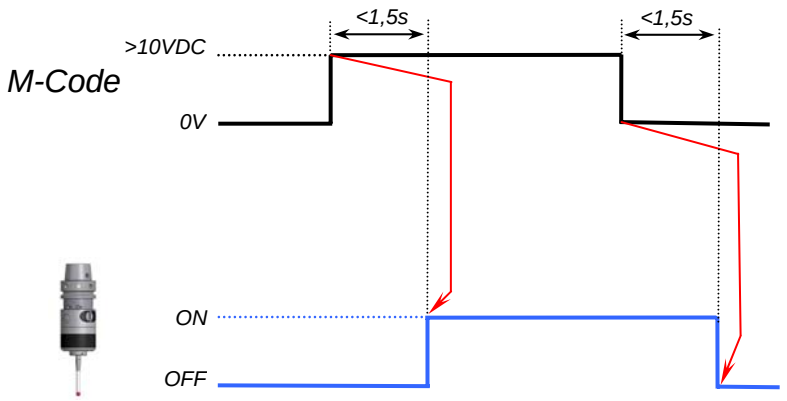
To clean :
- *Remove service cover with eyelid and conical spring by hand.*
- *Clean probe and parts under running water.*
- *Close the probe by hand.*
- *Align the stylus to spindle centre!*
- *Calibrate probe!*

Attention !
- *Do NOT use compressed air or high pressure water to clean!*
- *Do NOT use any sharp tools! (these could damage the inner seal)*

Radio-wave Touch Probe RWP38.41

Probe ON / OFF Procedure

The bi-directional probe will be activated and deactivated by the Radio-wave Receiver RWR95.40.
After setting the M-Code the probe is activated in <1,5 s and deactivated in <1,5 s after resetting.



Mounting the Shank

Removing the shank:

- *Remove all „A“ and „C“ screws.*
- *Remove shank.*

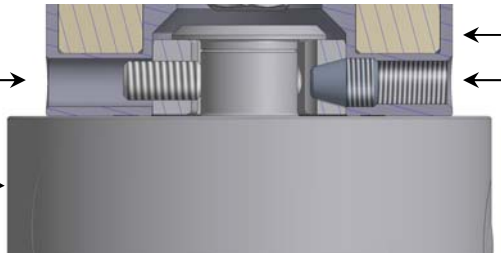
Assembling the shank:

- *Carefully slide the shank onto the probe body. Align the „C“ threads with the conical bores.*
- *Insert both clamping screws „C“ and tighten lightly.*
- *Insert adjustment screws „A“.*
- *Align the stylus to spindle center.(see page 3)*
- *Calibrate the probe!*

Hexagon Key
AF2mm #1097 / AF2.5mm #1346

C = Clamping Screw AF2.5mm (2x)
#1351 M=2 Nm (1.47 lbf.ft)

A = Adjustment Screw AF2mm (4x)
#1352 M=1.5 Nm (1.1 lbf.ft)



Adjustment screw „A“ in thread

Probe

Shank

Clamping screw „C“ in conical bore

Radio-wave Touch Probe RWP38.41

Probe with Shank HSK

Not included

Available Shanks:	L:	Order Number:
DIN69893-HSK-E25	93 (3.67”)	38.41-HSK25E
DIN69893-HSK-A32	110 (4.33”)	38.41-HSK32A
DIN69893-HSK-E32	110 (4.33”)	38.41-HSK32E
DIN69893-HSK-A40	110 (4.33”)	38.41-HSK40A
DIN69893-HSK-E40	110 (4.33”)	38.41-HSK40E
DIN69893-HSK-F40	110 (4.33”)	38.41-HSK40F
DIN69893-HSK-A50	110 (4.33”)	38.41-HSK50A
DIN69893-HSK-A50	142,5 (5.61”)	38.41-HSK50A-142,5
DIN69893-HSK-E50	116 (4.57”)	38.41-HSK50E
DIN69893-HSK-E50	142,5 (5.61”)	38.41-HSK50E-142,5
DIN69893-HSK-F50	116 (4.57”)	38.41-HSK50F
DIN69893-HSK-A63	110 (4.33”)	38.41-HSK63A
DIN69893-HSK-A63	142,5 (5.61”)	38.41-HSK63A-142,5
DIN69893-HSK-A63-70	144 (5.67”)	38.41-HSK63A-144
DIN69893-HSK-E63	132,5 (5.22”)	38.41-HSK63E
DIN69893-HSK-F63	147,5 (5.81”)	38.41-HSK63F
DIN69893-HSK-A80	147,5 (5.81”)	38.41-HSK80A
DIN69893-HSK-A100	116 (4.57”)	38.41-HSK100A
DIN69893-HSK-A100	147,5 (5.81”)	38.41-HSK100A-147,5
Kennametal KM63	147,5 (5.81”)	38.41-KM63
Kennametal KM80	147,5 (5.81”)	38.41-KM80

Other shanks upon request

Probe with Shank SK

Not included

Available Shanks:	L:	Order Number:
DIN69871-SK30	120,5 (4.74”)	38.41-SK30
DIN69871-SK30-Mube	120,5 (4.74”)	38.41-SK30-Mube
DIN69871-SK40	122,5 (4.82”)	38.41-SK40
DIN69871-SK40-70	144 (5.67”)	38.41-SK40-144
DIN69871-SK50	122,5 (4.82”)	38.41-SK50
DIN2080-SK50	118,5 (4.67”)	38.41-DIN2080-SK50
DIN69871-SK60	142,5 (5.61”)	38.41-SK60
BT30	101 (3.98”)	38.41-BT30
BT30	120,5 (4.74”)	38.41-BT30-120,5
BT30	151 (5.94”)	38.41-BT30-151
BT30	176 (6.93”)	38.41-BT30-176
BT30	201 (7.91”)	38.41-BT30-201
BT40	122,5 (4.82”)	38.41-BT40
BT40-70	144 (5.67”)	38.41-BT40-144
BT50	137,5 (5.41”)	38.41-BT50
CAT40	122,5 (4.82”)	38.41-AN40
CAT40-70	144 (5.67”)	38.41-AN40-144
CAT50	122,5 (4.82”)	38.41-AN50

Other shanks upon request

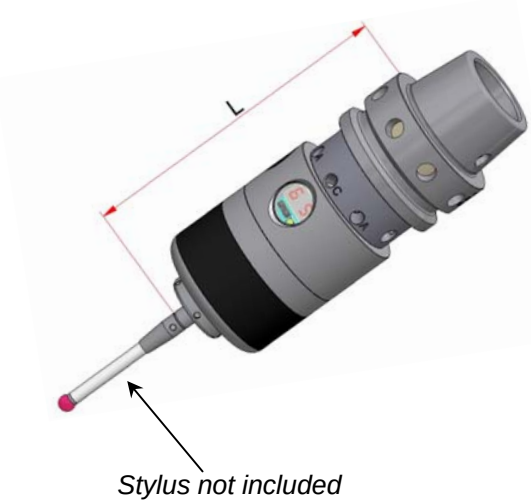
Radio-wave Touch Probe RWP38.41

Probe with Shank Coromant Capto

Available Shanks:	L:	Order Number:
Coromant Capto C4	110 (4.33”)	38.41-C4
Coromant Capto C5	110 (4.33”)	38.41-C5
Coromant Capto C5	147,5 (5.81”)	38.41-C5-147,5
Coromant Capto C6	116 (4.57”)	38.41-C6
Coromant Capto C6	147,5 (5.81”)	38.41-C6-147,5
Coromant Capto C8	116 (4.57”)	38.41-C8
Coromant Capto C8	147,5 (5.81”)	38.41-C8-147,5

Other shanks upon request

Probe with Shank THERMO-LOCK® (patented)



Available Shanks:	L:	Order Number:
DIN69893 HSK-E32	110 (4.33”)	38.41-HSK32E-TI
DIN69893 HSK-E40	110 (4.33”)	38.41-HSK40E-TI
DIN69893 HSK-E50	116 (4.57”)	38.41-HSK50E-TI
DIN69893 HSK-A63	116 (4.57”)	38.41-HSK63A-TI

Patented THERMO-LOCK® Technology prevents thermal expansion of the HSK and heat transfer from the spindle to the probe. This ensures that the probe delivers stable, precise results even by large temperature differences between the spindle and the HSK.

Probe with Other Shanks

Available Shanks:	L:	Order Number:
D20-D8-L25-B	89 (3.50”)	38.41-D8-L25
D20-D32-L100-B	86 (3.39”)	38.41-D32-L100
NIKKEN-NC5-46	141,5 (5.57”)	38.41-NC5-46
NIKKEN-NC5-63	141,5 (5.57”)	38.41-NC5-63
D20-Erowa-ITS	115 (4.53”)	38.41-ITS

Radio-wave Touch Probe RWP38.41

Measuring Unit Extension

Procedure:

- *Clean and dry the probe body well before removing the probe !*
- *When screwing in the probe, ensure the O-Rings are properly seated !*
- *Align probe to the spindle centre!*
- *Calibrate probe*

Order Number	Length
21.00-VE50	50 (1.96“)
21.00-VE100	100 (3.93“)
21.00-VE200	200 (7.87“)

Extension max. 400 (15.75”)

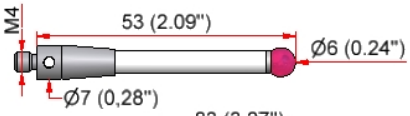
Radio-wave Touch Probe RWP38.41

M4-Styli, Shaft-∅7

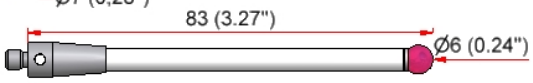
All styli with ceramic shaft

Order Number:

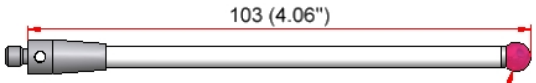
91.00-T53/6-KE-M4
(Ruby ball)



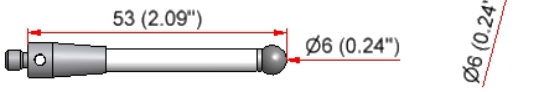
91.00-T83/6-KE-M4
(Ruby ball)



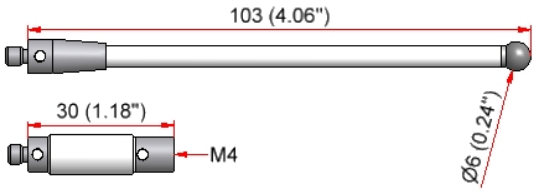
91.00-T103/6-KE-M4
(Ruby ball)



91.00-T53/6-KE-M4-Si
(Silicon nitride ball)

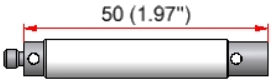


91.00-T103/6-KE-M4-Si
(Silicon nitride ball)

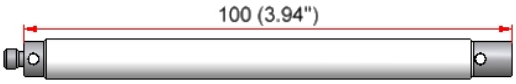


91.00-TV30-KE-M4
(Stylus extension)

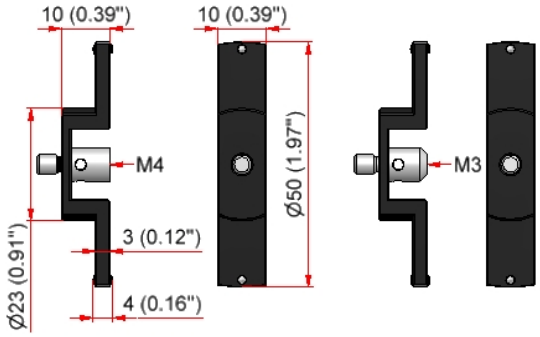
91.00-TV50-KE-M4
(Stylus extension)



91.00-TV100-KE-M4
(Stylus extension)



91.00-TS-ST-M4
91.00-TS-ST-M4/M3
(Disc stylus)

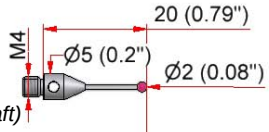


M4-Styli, Shaft-∅5

All styli with ruby ball

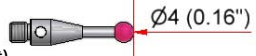
Order Number:

91.00-T20/2-HM-M4
(Tungsten carbide shaft)

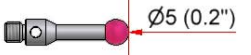


91.00-T20/3-HM-M4
(Tungsten carbide shaft)

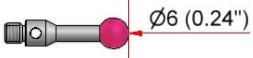
91.00-T20/4-HM-M4
(Tungsten carbide shaft)



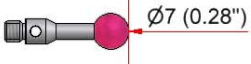
91.00-T20/5-ST-M4
(Stainless steel shaft)



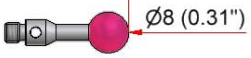
91.00-T20/6-ST-M4
(Stainless steel shaft)



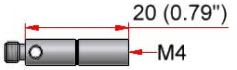
91.00-T20/7-ST-M4
(Stainless steel shaft)



91.00-T20/8-ST-M4
(Stainless steel shaft)

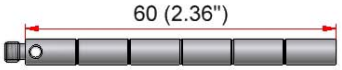


91.00-TV20-ST-M4
(Stylus Extension with stainless steel shaft)

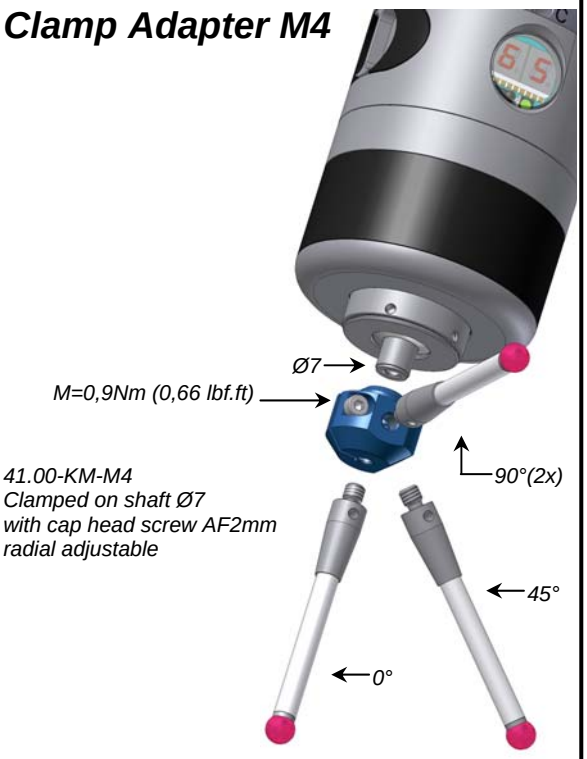


91.00-TV40-ST-M4
(Stylus Extension with stainless steel shaft)

91.00-TV60-ST-M4
(Stylus Extension with stainless steel shaft)



Clamp Adapter M4

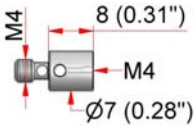


41.00-KM-M4
Clamped on shaft Ø7
with cap head screw AF2mm
radial adjustable

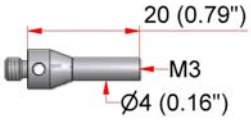
Other styli available upon request.

Accessories

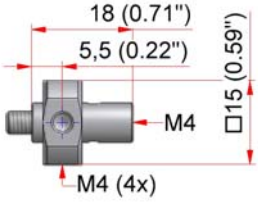
91.00-S-M4/M4
(Break shaft adapter)



91.00-TA-M4/M3
(Stylus adapter)



91.00-TK-ST-M4
(5-way stylus centre)



Radio-wave Touch Probe RWP38.41

Safety Advice !

1. *Manual or automatic positioning of the probe should be protected, so that the machine axis stops feeding if the probe is triggered during its move to the position where actual measuring should begin.*

2. *Feedhold or spindle-stop resulting from a trigger or ready signal from a probe should only happen if the probe is actually in the spindle.*
   This security logic will protect the machine against a possible spindle or feeding stop under normal milling operation if a signal from a probe reaches the control under one of the conditions below:

   - *Customer is changing the batteries and checks the function of the probe by manually switching the probe on.*
   - *A new machine is installed with radio-wave transmission with the same frequency as a probe already fitted to an existing machine.*

Declaration of Conformity

*We declare under our sole responsibility that the product „ **Radio-Wave Touch Probe RWP38.41**“ 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 Touch Probe RWP38.41

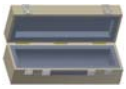
Delivery Contents, Spare Parts, Accessories

Delivery Contents		
Order Number	*Description*	
38.41-RWP	***Radio-wave Touch Probe RWP38.41*** *4xBattery Type 1/2AA(3,6V)* *#4316* *Toolbox* *38.41-TB* *Storage box* *25.00-HB or #3611*	

Spare Parts and Tools		
Order Number	*Description*	
#4316	*Battery Type ½ AA (3,6V)*	
38.41-BD	*Battery cover*	
#4475	*O-Ring 21x12 Viton for Battery cover*	
#1351	*Clamping screw AF2.5mm*	
#1352	*Adjustment screw DIN913 M4x8 (AF2mm)*	
#3240	*Service cover*	
#3455	*O-Ring 16x1 Viton for service cover*	
#2906	*Metal eyelid*	
#2931	*Conical spring*	
#2074	*O-Ring 24x2 Viton*	
#0227	*Hexagon key AF1.3mm*	
#1346	*Hexagon key AF2.5mm*	
#1097	*Hexagon key AF2.0mm*	
#2951	*C-Spanner*	
#0885	*Mounting pin*	
#3079	*Dial gauge*	
38.41-TB	***Toolbox*** *1xHexagon key AF2.5mm* *#1346* *2xHexagon key AF2mm* *#1097* *1xHexagon key AF1.3mm* *#0227* *2xAdjustment screw DIN913 M4x8 (AF2mm)* *#1352* *1xMounting pin* *#0885* *2xC-Spanner* *#2951*	

Radio-wave Touch Probe RWP38.41

Delivery Contents, Spare Parts, Accessories

Accessories		
Order Number	*Description*	
21.00-VE50	*Extension L=50mm (1.96“)*	
21.00-VE100	*Extension L=100mm (3.93“)*	
21.00-VE200	*Extension L=200mm (7.87“)*	
25.00-HB	*Storage Box*	
#3611	*Storage box*	

Radio-wave Touch Probe RWP38.41

ISTRUZIONI OPERATIVE

(Traduzione delle Istruzioni Operative originali)

IT

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Precisione sul pezzo

www.mh-inprocess.com

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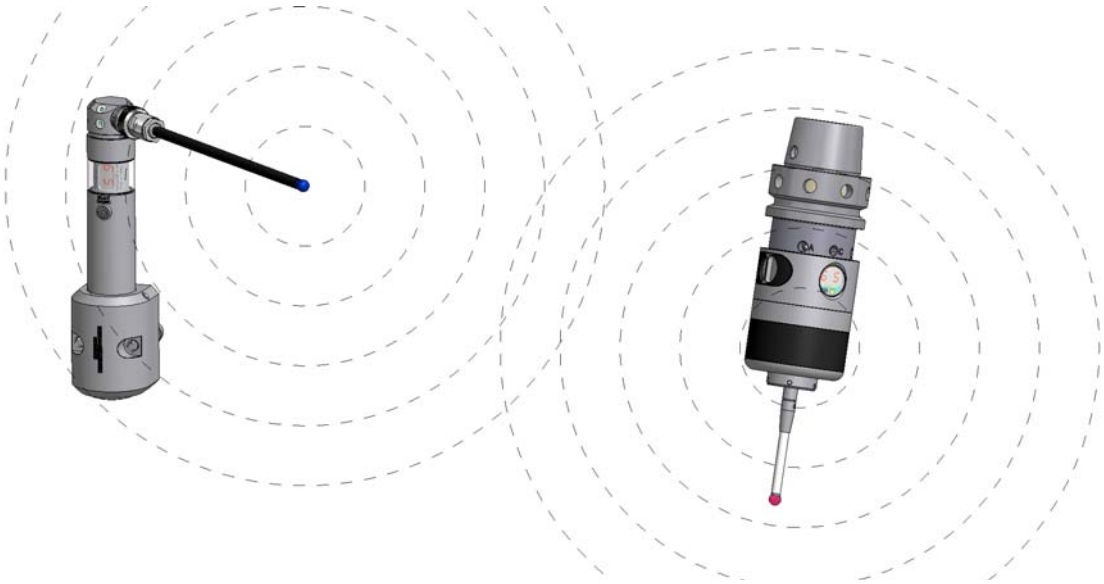
Soggetto a modifiche tecniche senza preavviso

Radio-wave Touch Probe RWP38.41

Componenti del sistema

Radio-wave Receiver
RWR95.40

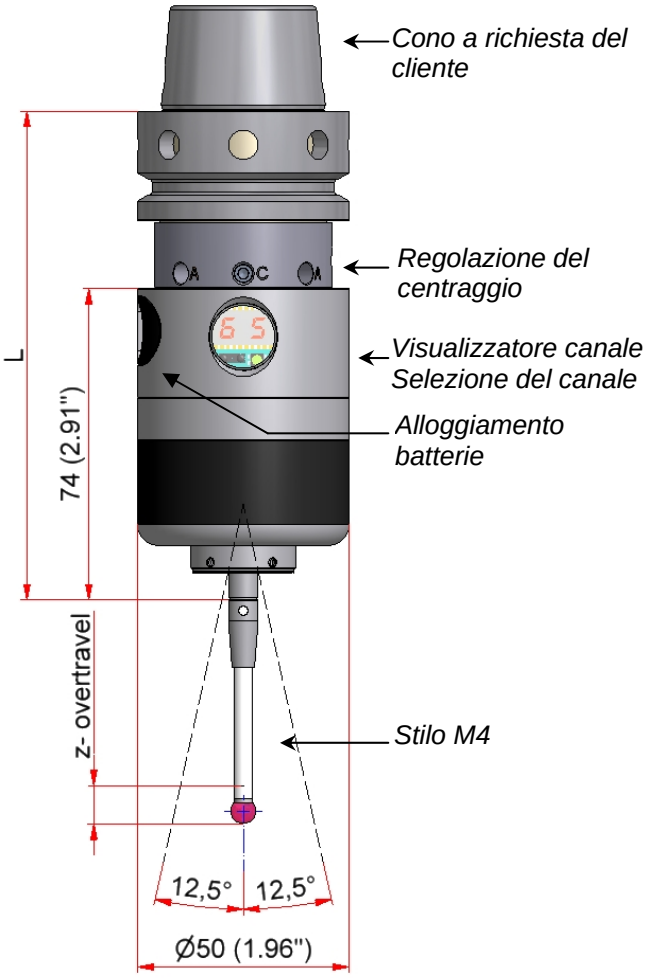
Radio-wave Touch Probe
RWP38.41



Dati tecnici

Direzioni di tastatore:	± X; ± Y; -Z
Massima corsa dello stilo:	XY ±12.5°; Z –6mm (0.24”)
Forza di deflessione con stilo da 50mm:	XY = 0.3-1.4N; Z = 2.5-12.5N regolabile
Valori di fabbrica:	XY = 0.96N; Z = 8.5N
Velocità di contatto raccomandata:	254mm/min – 2000mm/min
Alimentazione:	2x Batteria da 3,6V Tipo ½ AA (1200mAh)
Durata della batteria:	100% = 325h 5% = 219d Standby = 230d
Materiale:	Acciaio inossidabile
Peso senza cono:	ca. 460g
Intervallo di temperatura:	Operativa: 10° - 50°C A riposo: 5° - 70°C
Ripetibilità unidirezionale:	max. 2sigma ±1µm con stilo 50mm e 254mm/min
Tempo di vita garantito dell'unità di misura:	10 milioni di deflessioni
Intervallo frequenze di trasmissione:	433.075 – 434.650 MHz
Numero di canali:	64
Spazio tra i canali:	25 KHz
Tenuta:	IP68: EN60529

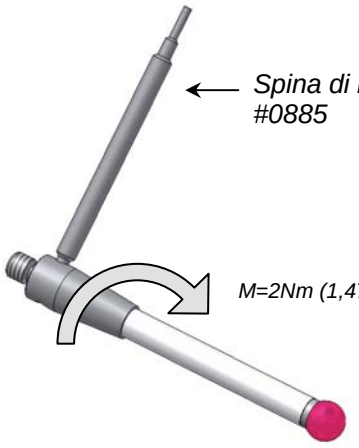
Dimensioni



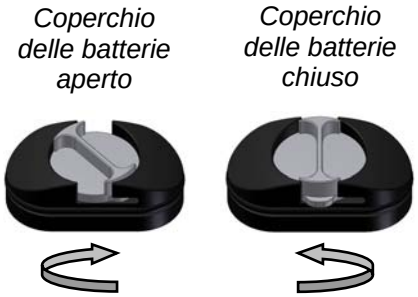
Radio-wave Touch Probe RWP38.41

Sostituzione dello stilo

Attenzione !
Dopo la sostituzione dello stilo:
- *Regolare il centraggio dello stilo*
- *Calibrate il tastatore*



Sostituzione delle batterie



Attenzione!
- *Pulire il corpo del tastatore 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 nel tastatore.*

Radio-wave Touch Probe RWP38.41

Regolazione de centraggio dello stilo

1 Regolazione grani „C“

Chiave a brugola
AF2,5mm
#1346

- Allentare i grani "A" di 2 giri
- Allentare i grani "C"
- Facendo leva sul lato corto della chiave a brugola serrare leggermente i grani "C"

2 Regolazione fino a <20µ

Chiave a brugola AF2mm
#1097

- Appoggiare il comparatore allo stilo (v. Fig.)
- Ruotare il tastatore fino ad avere il valore massimo sul comparatore
- Ruotare i grani "A”fino a dimezzare la lettura sul comparatore
- Rilasciare il grano "A"opposto quando si fa più di un giro
- Ripetere la procedura fino a che l’eccentricità non è **< 20µ**

3 Bloccare i grani „C“

- Bloccare entrambi i grani “C” facendo leva sul lato lungo della chiave a brugola

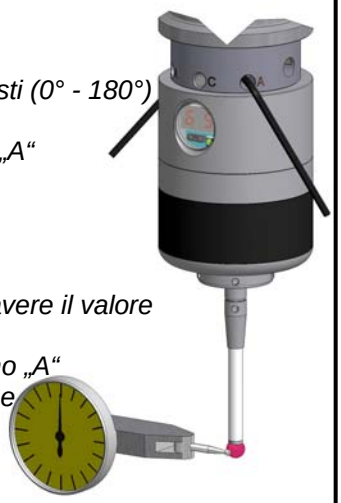
4 Regolazione fino a <5µ

- Ruotare il tastatore fino ad avere il valore massimo sul comparatore
- Ruotare i grani "A”fino a dimezzare la lettura sul comparatore
- Rilasciare il grano "A"opposto quando si fa più di un giro
- Ripetere la procedura fino a che l’eccentricità non è **< 5µ**

5 Ribloccare i grani „C“

- Fare leva sul lato lungo della chiave
- Serrare con forza entrambi i grani "C"

6 Posizionare i grani „A“ uno contro l’altro



- Posizionare i grani „A“ opposti (0° - 180°) uno contro l’altro
- Ripetere con gli altri 2 grani „A“ opposti (90 - 270°)

Se l’eccentricità aumenta:

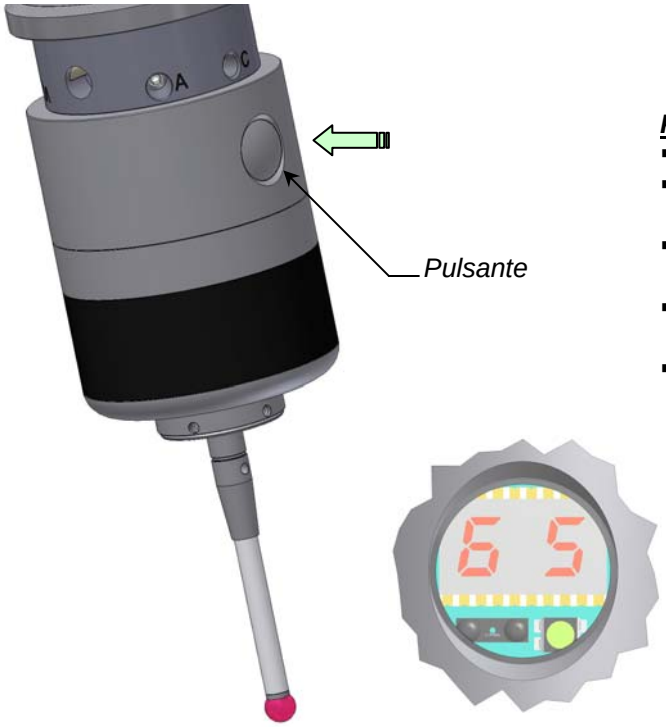
- Ruotare il tastatore fino ad avere il valore massimo sul comparatore
- Lentamente rilasciare il grano „A“ dalla parte opposta fino a che l’eccentricità non è **< 5µ**
- Appoggiare il grano „A” opposto su quello appena allentato

Radio-wave Touch Probe RWP38.41

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
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		

Selezione del canale



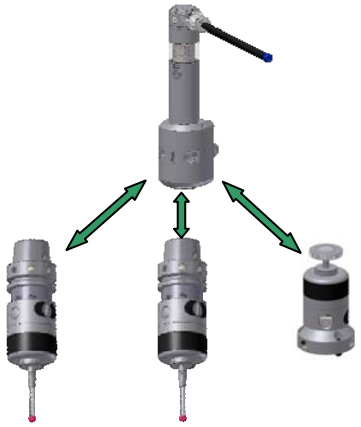
Procedura:

- *Assicurarsi che il tastatore 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 Touch Probe RWP38.41

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



„A“ „B „C“

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"

Impostazione di fabbrica

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

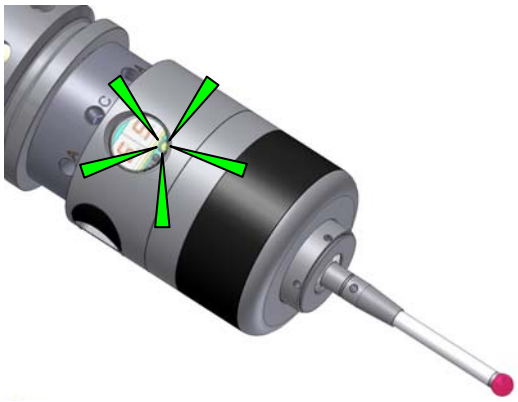
Impostazione	Codice di attivazione	Time-Out
0.A.	„A“	Radio-wave OFF
0.B.	„B“	Radio-wave OFF
0.C.	„C“	Radio-wave OFF
1.A.	„A“	3 min
1.B.	„B“	3 min
1.C.	„C“	3 min

Procedura:

- *Assicurarsi che il tastatore 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 Touch Probe RWP38.41

Segnale ottico dello stato



LED lampeggia verde
- *Il tastatore trasmette segnali*

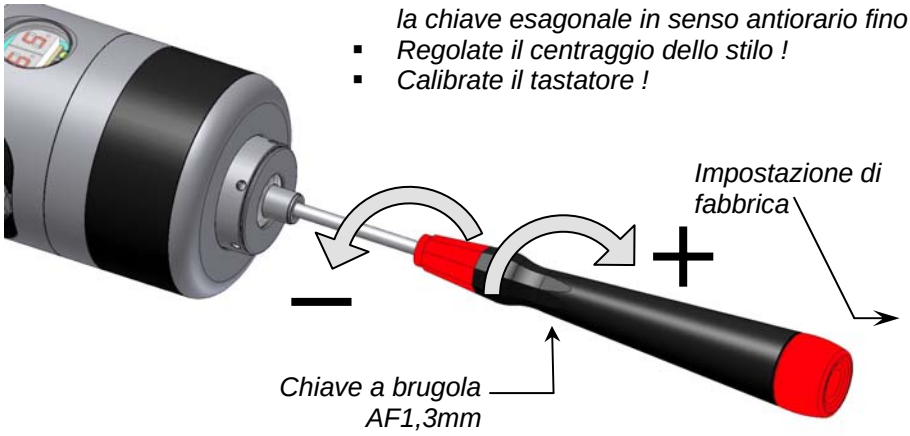
LED lampeggia verde / rosso
- *Segnale di batteria scarica*

LED lampeggia arancio
- *Stilo deflesso*

Regolazione della forza di contatto *(brevettato)*

In caso di elevate vibrazioni o di stili pesanti si raccomanda di aumentare la forza di contatto

Attenzione!
- *Per regolare la forza, rimuovere lo stilo !*
- *La minima forza di contatto si ottiene ruotando la chiave esagonale in senso antiorario fino alla fine.*
- *Regolate il centraggio dello stilo !*
- *Calibrate il tastatore !*



Giri dalla forza minima	Forza di contatto con stilo da 50mm in N	
	Z	X/Y
min.0	2.5	0.30
1	3.5	0.41
2	4.5	0.52
3	5.5	0.63
4	6.5	0.74
5	7.5	0.85
6	8.5	0.96
7	9.5	1.07
8	10.5	1.18
9	11.5	1.29
max.10	12.5	1.40

Manutenzione

Nella cavità sottostante la membrana metallica si può accumulare sporcizia.

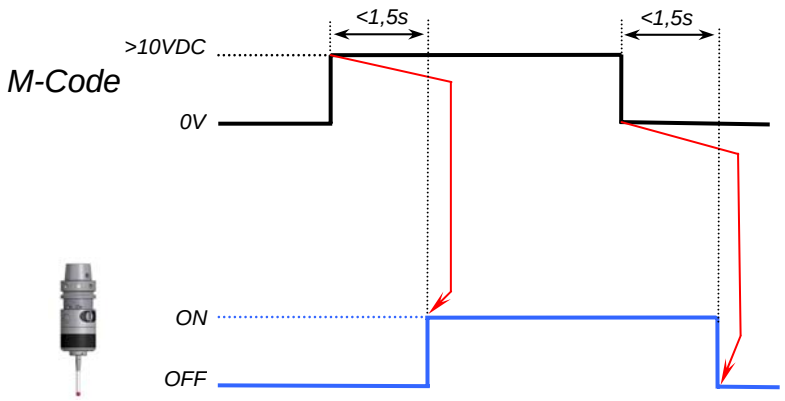
Pulizia :
- *Togliere manualmente il coperchio di servizio la membrana metallica e la molla conica.*
- *Pulire il tastatore ed i pezzi sotto l'acqua corrente*
- *Richiudere manualmente il tastatore*
- *Regolate il centraggio dello stilo !*
- *Calibrare il tastatore*

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 Touch Probe RWP38.41

Sequenza di accensione/spegnimento

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



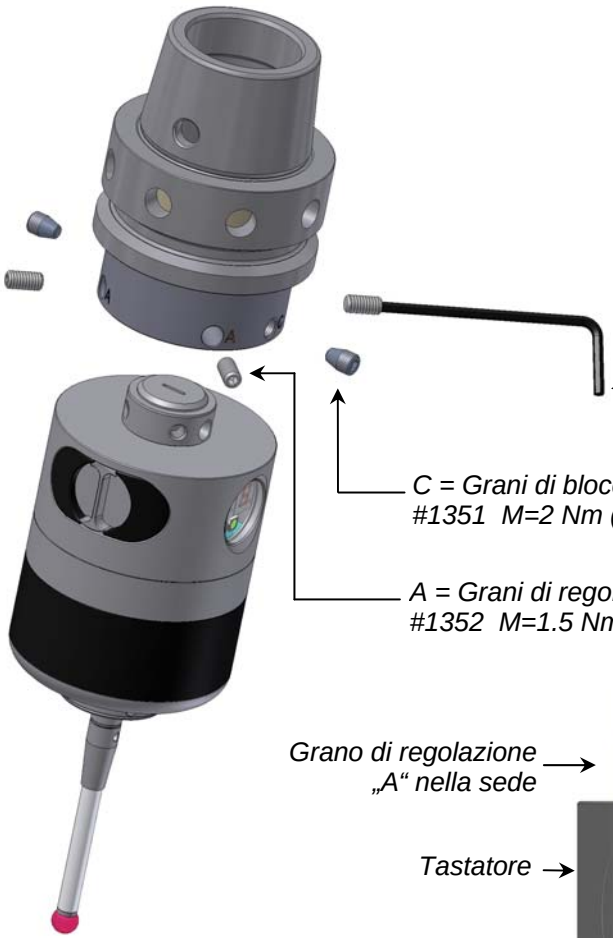
Montaggio cono di attacco utensile

Smontaggio del cono:

- *Rimuovere tutte le viti „A“ e „C“.*
- *Rimuovere il cono.*

Montare il cono:

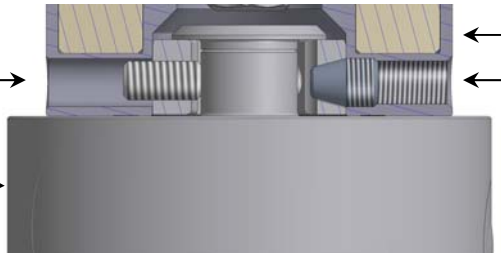
- *Inserire con cura il tastatore dentro il cono. Allineare le sedi dei grani „C” con I fori conici.*
- *Inserire entrambi i grani di bloccaggio „C” e serrarli leggermente.*
- *Inserire i grani di regolazione „A“.*
- *Centrare lo stilo con l’asse mandrino.(vd.pagina 3)*
- *Calibrare il tastatore*



Chiave a brugola AF2mm #1097 / AF2,5mm #1346

C = Grani di bloccaggio AF2,5mm (2x) #1351 M=2 Nm (1.47 lbf.ft)

A = Grani di regolazione DIN913 M4x8 (AF2mm) (4x) #1352 M=1.5 Nm (1.1 lbf.ft)



Cono

Grano di regolazione „A“ nella sede

Grano di regolazione „C“ Nella sede conica

Tastatore

Radio-wave Touch Probe RWP38.41

Tastatore con cono HSK

Non incluso

Coni disponibili:	L:	Codice di acquisto:
DIN69893-HSK-E25	93 (3.67”)	38.41-HSK25E
DIN69893-HSK-A32	110 (4.33”)	38.41-HSK32A
DIN69893-HSK-E32	110 (4.33”)	38.41-HSK32E
DIN69893-HSK-A40	110 (4.33”)	38.41-HSK40A
DIN69893-HSK-E40	110 (4.33”)	38.41-HSK40E
DIN69893-HSK-F40	110 (4.33”)	38.41-HSK40F
DIN69893-HSK-A50	110 (4.33”)	38.41-HSK50A
DIN69893-HSK-A50	142,5 (5.61”)	38.41-HSK50A-142,5
DIN69893-HSK-E50	116 (4.57”)	38.41-HSK50E
DIN69893-HSK-E50	142,5 (5.61”)	38.41-HSK50E-142,5
DIN69893-HSK-F50	116 (4.57”)	38.41-HSK50F
DIN69893-HSK-A63	110 (4.33”)	38.41-HSK63A
DIN69893-HSK-A63	142,5 (5.61”)	38.41-HSK63A-142,5
DIN69893-HSK-A63-70	144 (5.67”)	38.41-HSK63A-144
DIN69893-HSK-E63	132,5 (5.22”)	38.41-HSK63E
DIN69893-HSK-F63	147,5 (5.81”)	38.41-HSK63F
DIN69893-HSK-A80	147,5 (5.81”)	38.41-HSK80A
DIN69893-HSK-A100	116 (4.57”)	38.41-HSK100A
DIN69893-HSK-A100	147,5 (5.81”)	38.41-HSK100A-147,5
Kennametal KM63	147,5 (5.81”)	38.41-KM63
Kennametal KM80	147,5 (5.81”)	38.41-KM80
Altri coni a richiesta		

Tastatore con cono SK

Non incluso

Coni disponibili:	L:	Codice di acquisto:
DIN69871-SK30	120,5 (4.74”)	38.41-SK30
DIN69871-SK30-Mube	120,5 (4.74”)	38.41-SK30-Mube
DIN69871-SK40	122,5 (4.82”)	38.41-SK40
DIN69871-SK40-70	144 (5.67”)	38.41-SK40-144
DIN69871-SK50	122,5 (4.82”)	38.41-SK50
DIN2080-SK50	118,5 (4.67”)	38.41-DIN2080-SK50
DIN69871-SK60	142,5 (5.61”)	38.41-SK60
BT30	101 (3.98”)	38.41-BT30
BT30	120,5 (4.74”)	38.41-BT30-120,5
BT30	151 (5.94”)	38.41-BT30-151
BT30	176 (6.93”)	38.41-BT30-176
BT30	201 (7.91”)	38.41-BT30-201
BT40	122,5 (4.82”)	38.41-BT40
BT40-70	144 (5.67”)	38.41-BT40-144
BT50	137,5 (5.41”)	38.41-BT50
CAT40	122,5 (4.82”)	38.41-AN40
CAT40-70	144 (5.67”)	38.41-AN40-144
CAT50	122,5 (4.82”)	38.41-AN50
Altri coni a richiesta		

Radio-wave Touch Probe RWP38.41

Tastatore con cono Coromant Capto

Coni disponibili:	L:	Codice di acquisto:
Coromant Capto C4	110 (4.33”)	38.41-C4
Coromant Capto C5	110 (4.33”)	38.41-C5
Coromant Capto C5	147,5 (5.81”)	38.41-C5-147,5
Coromant Capto C6	116 (4.57”)	38.41-C6
Coromant Capto C6	147,5 (5.81”)	38.41-C6-147,5
Coromant Capto C8	116 (4.57”)	38.41-C8
Coromant Capto C8	147,5 (5.81”)	38.41-C8-147,5
Altri coni a richiesta		

Tastatore con cono THERMO-LOCK® (brevettato)

Coni disponibili:	L:	Codice di acquisto:
DIN69893 HSK-E32	110 (4.33”)	38.41-HSK32E-TI
DIN69893 HSK-E40	110 (4.33”)	38.41-HSK40E-TI
DIN69893 HSK-E50	116 (4.57”)	38.41-HSK50E-TI
DIN69893 HSK-A63	116 (4.57”)	38.41-HSK63A-TI

La brevettata tecnologia THERMO-LOCK® impedisce l’allungamento termico del cono HSK e il passaggio di calore dal mandrino al tastatore. Questo garantisce di ottenere dal tastatore risultati costanti, accurati anche in caso di grande differenza di temperatura tra il mandrino e l’HSK.

Tastatore con altri coni

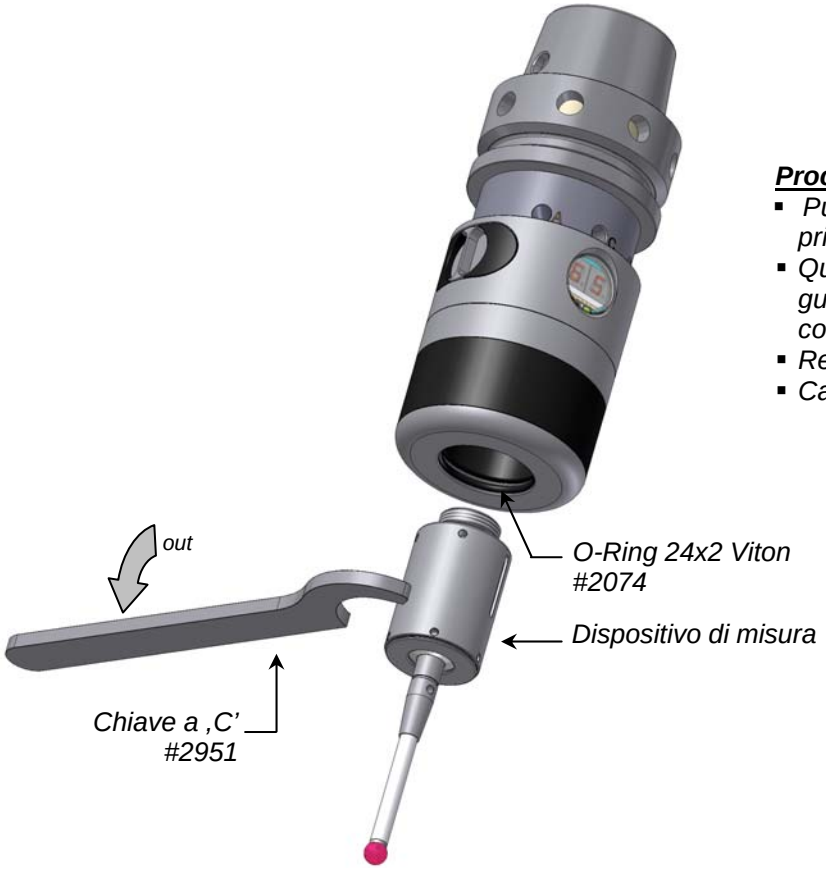
Coni disponibili:	L:	Codice di acquisto:
D20-D8-L25-B	89 (3.50”)	38.41-D8-L25
D20-D32-L100-B	86 (3.39”)	38.41-D32-L100
NIKKEN-NC5-46	141,5 (5.57”)	38.41-NC5-46
NIKKEN-NC5-63	141,5 (5.57”)	38.41-NC5-63
D20-Erowa-ITS	115 (4.53”)	38.41-ITS

Radio-wave Touch Probe RWP38.41

Prolunga del dispositivo di misura

Procedura:

- *Pulire ed asciugare bene il corpo del tastatore prima di togliere il dispositivo di misura*
- *Quando viene riposizionato, verificare la guarnizione ad anello sia in posizione corretta !*
- *Regolate il centraggio !*
- *Calibrate il tastatore !*



Codice di acquisto	Lunghezza
21.00-VE50	50
21.00-VE100	100
21.00-VE200	200

Prolunga max. 400

Radio-wave Touch Probe RWP38.41

M4-Stili, Albero-∅7

Tutti gli stili con gambo in ceramica

Codice di acquisto:

91.00-T53/6-KE-M4
(Sfera in rubino)

91.00-T83/6-KE-M4
(Sfera in rubino)

91.00-T103/6-KE-M4
(Sfera in rubino)

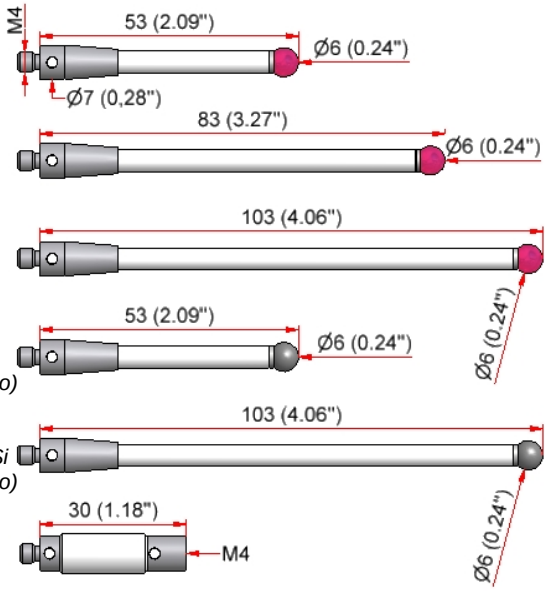
91.00-T53/6-KE-M4-Si
(Sfera in nitruro di silicio)

91.00-T103/6-KE-M4-Si
(Sfera in nitruro di silicio)

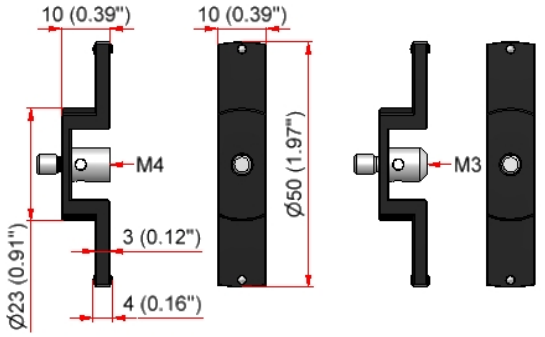
91.00-TV30-KE-M4
(Prolunga per stilo)

91.00-TV50-KE-M4
(Prolunga per stilo)

91.00-TV100-KE-M4
(Prolunga per stilo)



91.00-TS-ST-M4
91.00-TS-ST-M4/M3
(Stilo a disco)



M4-Stili, Albero-∅5

Tutti gli stili hanno sfera in rubino

Codice di acquisto:

91.00-T20/2-HM-M4
(Gambo in metallo duro)

91.00-T20/3-HM-M4
(Gambo in metallo duro)

91.00-T20/4-HM-M4
(Gambo in metallo duro)

91.00-T20/5-ST-M4
(Gambo in acciaio)

91.00-T20/6-ST-M4
(Gambo in acciaio)

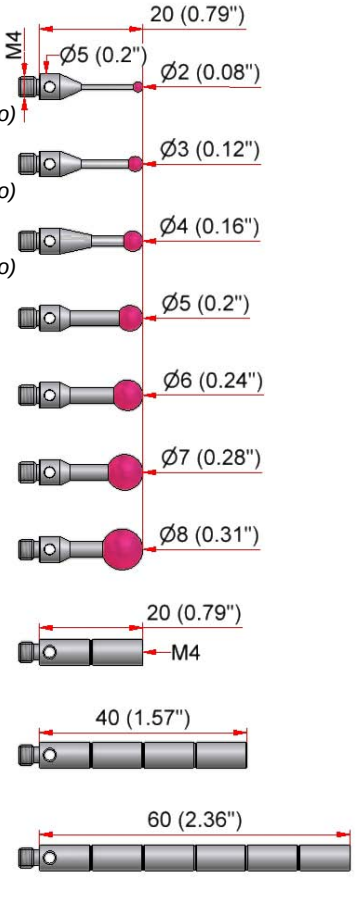
91.00-T20/7-ST-M4
(Gambo in acciaio)

91.00-T20/8-ST-M4
(Gambo in acciaio)

91.00-TV20-ST-M4
(Prolunga per stilo,
Gambo in acciaio)

91.00-TV40-ST-M4
(Prolunga per stilo,
Gambo in acciaio)

91.00-TV60-ST-M4
(Prolunga per stilo,
Gambo in acciaio)

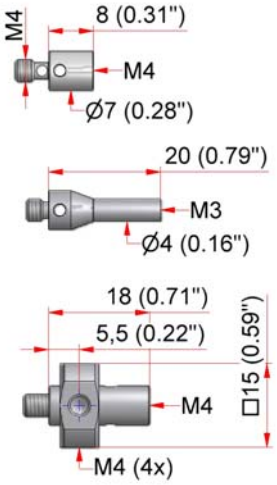


Accessori M4

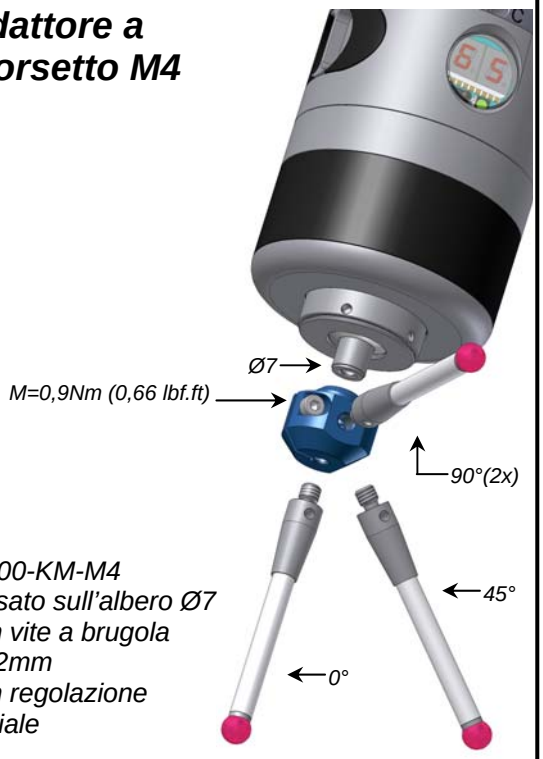
91.00-S-M4/M4
(Adattatore con
albero di rottura)

91.00-TA-M4/M3
(Stilo adattatore)

91.00-TK-ST-M4
(Centro stilo a 5 vie)



Adattore a morsetto M4



41.00-KM-M4
Fissato sull'albero Ø7
con vite a brugola
AF2mm
con regolazione
radiale

Altri stili disponibili a richiesta.

Radio-wave Touch Probe RWP38.41

Raccomandazioni di sicurezza – Per favore fate attenzione !

1. *Il posizionamento manuale o automatico del tastatore dovrebbe essere protetto, in questo modo la macchina si arresta se il tastatore viene deflesso durante il movimento verso la posizione dove dovrebbe avvenire la misura.*

2. *L'arresto degli assi o del mandrino conseguenti ad un segnale di stilo deflesso o di errore dovrebbero avvenire soltanto se il tastatore è sul mandrino.*
   Questa logica di sicurezza protegge la macchina da un arresto degli assi o del mandrino in normali condizioni di fresatura se un segnale del tastatore raggiunge il CNC in una delle seguenti condizioni:

   - *Il cliente sta cambiando le batterie e verifica il funzionamento del tastatore accendendolo a mano.*
   - *E' stata installata una nuova macchina con un sistema di trasmissione radio con la stessa frequenza del tastatore già esistente.*

Dichiarazione di conformità

Dichiariamo sotto la nostra piena responsabilità che il prodotto ***„ Radio-Wave Touch Probe RWP38.41"*** *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!

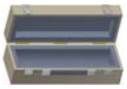
Radio-wave Touch Probe RWP38.41

Elenco parti consegnate, Parti di ricambio, Accessori

Elenco parti consegnate		
Codice di acquisto	*Descrizione*	
38.41-RWP	***Tastatore ad onde radio RWP38.41*** *4x Batterie Tipo ½ AA (3,6V) #4316* *Kit utensili 38.41-TB* *Scatola in legno oppure 25.00-HB* *Contenitore #3611*	
Parti della tastatore		
Codice de acquisto	*Descrizione*	
#4316	*Batterie Tipo ½ AA (3,6V)*	
38.41-BD	*Coperchio di batterie*	
#4475	*O-Ring 21x2 Viton* *per coperchio di batterie*	
#1351	*Viti di bloccaggio AF2,5mm*	
#1352	*Viti di regolazione DIN913 M4x8 (AF2mm)*	
#3240	*Coperchio di servizio*	
#3455	*O-Ring 16x1 Viton* *Per coperchio di servizio*	
#2906	*Membrana metallica*	
#2931	*Molla conica*	
#2074	*O-Ring 24x2 Viton*	
#0227	*Chiave a brugola AF1,3mm*	
#1346	*Chiave a brugola AF2,5mm*	
#1097	*Chiave a brugola AF2mm*	
#2951	*Chiave a ‚C'*	
#0885	*Spina di montaggio*	
#3079	*Comparatore*	
38.41-TB	***Kit utensili*** *1x Chiave a brugola AF2,5mm #1346* *2x Chiave a brugola AF2mm #1097* *1x Chiave a brugola AF1,3mm #0227* *2x Viti di regolazione DIN913 M4x8 (AF2mm) #1352* *1x Spina di montaggio #0885* *2x Chiave a ‚C' #2951*	

Radio-wave Touch Probe RWP38.41

Elenco parti consegnate, Parti di ricambio, Accessori

Accessori		
Codice de acquisto	*Descrizione*	
21.00-VE50	*Prolunga, Lunghezza L=50mm*	
21.00-VE100	*Prolunga, Lunghezza L=100mm*	
21.00-VE200	*Prolunga, Lunghezza L=200mm*	
25.00-HB	*Scatola in legno*	
#3611	*Contenitore*	

Radio-wave Touch Probe RWP38.41

MANUEL D´INSTRUCTION

(Traduction du manuel d'instruction original)

FR

	Page
Composants du système, Données techniques, Dimensions	1
Changement du stylet, Remplacement des piles	2
Réglage du faux-rond du stylet	3
Canaux et fréquences, Choix du canal de fréquence	4
Code d'activation et réglage de la temporisation	5
Signal optique sur l'état du palpeur Ajustage de la force de palpage, Maintenance	6
Palpeur ON / OFF Procédure, Montage de l'attachement	7
Attachements HSK, Attachements SK – ISO	8
Attachements Coromant Capto, Attachements THERMO-LOCK®, Autres Attachements	9
Extension du système de mesure	10
Stylets, Accessoires	11
Recommandations de sécurité, Déclaration de conformité, Déclaration FCC / RSS	12
Contenu du package, Pièces détachées, Accessoires	13

Précision sur pièce

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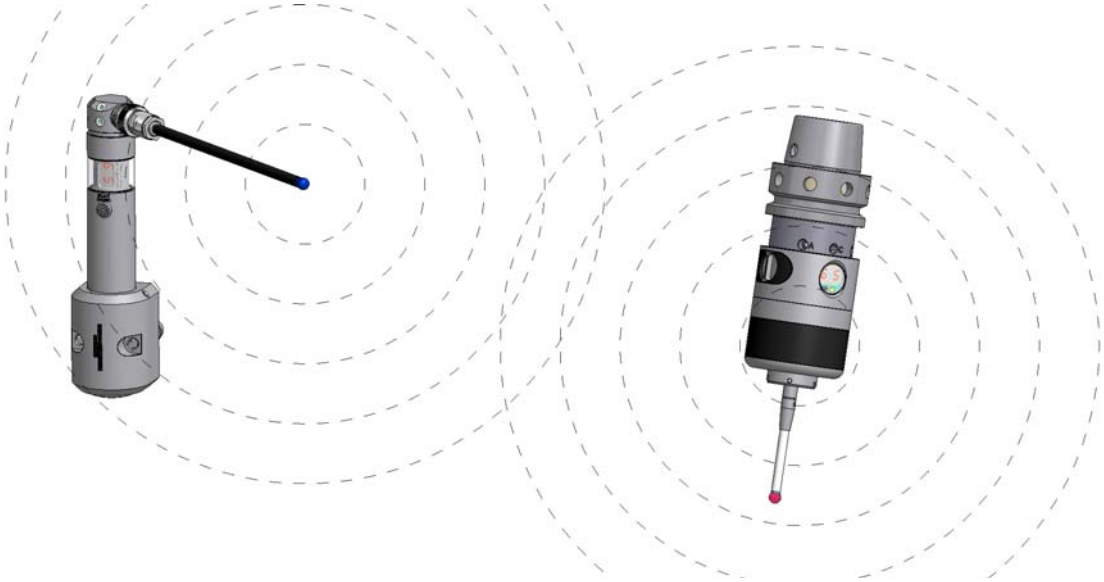
Radio-wave Touch Probe RWP38.41

Composants du système

Radio-wave Receiver
RWR95.40

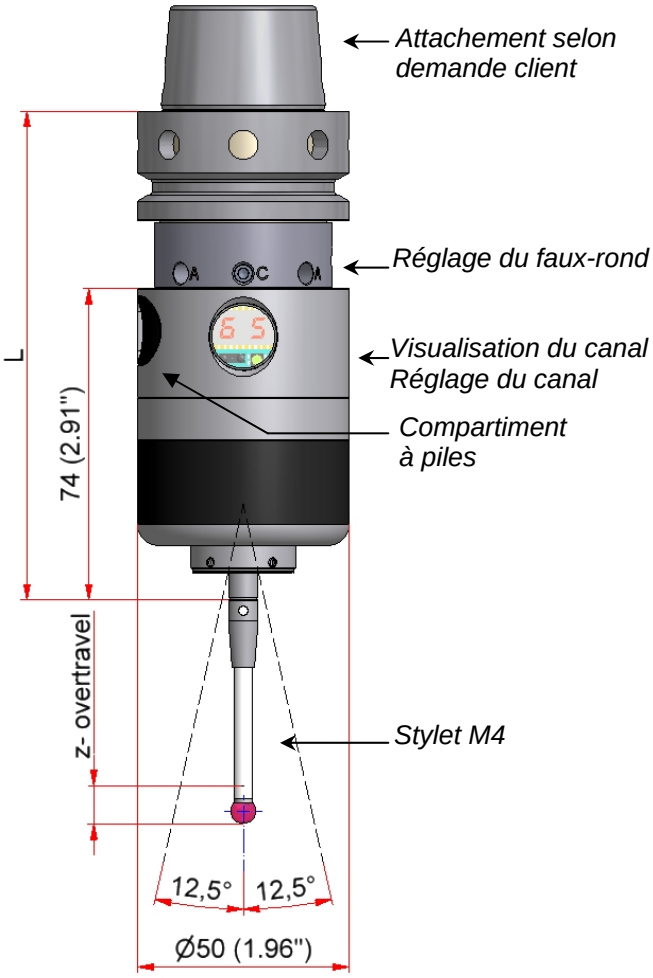
Radio-wave Touch Probe
RWP38.41



Données techniques

Axes de palpage:	± X; ± Y; -Z
Surcourses max. du stylet:	XY ±12.5°; Z –6mm (0.24")
Force de déclenchement avec stylet de 50mm:	XY = 0.3-1.4N; Z = 2.5-12.5N ajustable
Réglage d'usine:	XY = 0.96N; Z = 8.5N
Vitesse de palpage recommandée:	254mm/min – 2000mm/min
Batterie:	2x Piles de 3,6V Type ½ AA (1200mAh)
Durée de vie:	100% = 325heures 5% = 219jours Standby = 230jours
Matière:	Acier inoxydable
Poids sans attachement:	env. 460g
Plage de température:	Utilisation: 10° - 50°C Stockage: 5° - 70°C
Répétabilité unidirectionnelle:	max. 2sigma ±1µm avec stylet de 50mm et vitesse 254mm/min
Durée de vie garantie du système de mesure:	10 millions d'inflexions
Plage de fréquences:	433.075 – 434.650 MHz
Nombre de canaux:	64
Intervalle entre 2 canaux:	25 KHz
Etanchéité:	IP68: EN60529

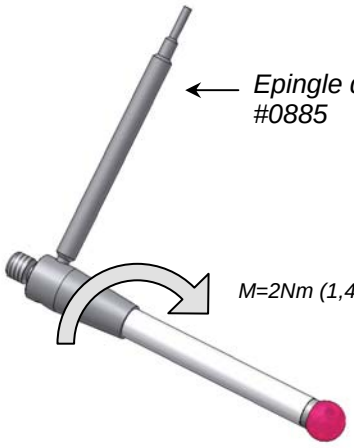
Dimensions



Radio-wave Touch Probe RWP38.41

Changement du stylet

Attention !
Après tout changement de stylet:
- *Régler le faux-rond*
- *Calibrer le palpeur*



Remplacement des piles

Capot a batterie 38.41-BD
(incl. Joint torique 21x2 Viton #4475)

2x Pile de 3,6V
Type ½ AA
#4316

Capot à batterie ouvert

Capot à batterie fermé

- ***Attention !***
- *Le palpeur 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.*

Radio-wave Touch Probe RWP38.41

Réglage du faux-rond du stylet

1 Positionnement des vis „C“

Clé hexagonale AF2,5mm #1346

- *Desserrer toutes les vis "A" sur 2 tours*
- *Desserrer les vis "C"*
- *Resserrer légèrement les vis "C" en utilisant la clé hexagonale (côté long)*

2 Ajustage à <20µ

Clé hexagonale AF2mm #1097

- *Poser le comparateur sur le stylet (voir dessin)*
- *Tourner le palpeur jusqu'à la déviation maximale indiquée sur le cadran*
- *Tourner les vis "A" jusqu'à la moitié de la déviation maximale*
- *Desserrer les vis "A" utilisées sur 1 tour*
- *Répéter la procédure jusqu'à un faux-rond **< 20µ***

3 Serrage des vis „C“

- *Serrer les deux vis “C” en utilisant le côté court de la clé hexagonale*

4 Ajustage à <5µ

- *Tourner le palpeur jusqu'à la déviation maximale indiquée sur le cadran*
- *Tourner les vis "A" jusqu'à la moitié de la déviation maximale*
- *Desserrer les vis "A" utilisées sur 1 tour*
- *Répéter la procédure jusqu'à un faux-rond **< 5µ***

5 Resserrage des vis „C“

- *Utiliser le côté court de la clé hexagonale*
- *Resserrer plus fortement les 2 vis "C"*

6 Positionnement des vis „A“ opposées, 2 par 2

- *Positionner les 2 vis „A“ opposées (0° - 180°) l'une contre l'autre*
- *Répéter l'opération avec les 2 autres vis „A“ opposées (90 - 270°)*

<u>Si le faux-rond se dérègle:</u>

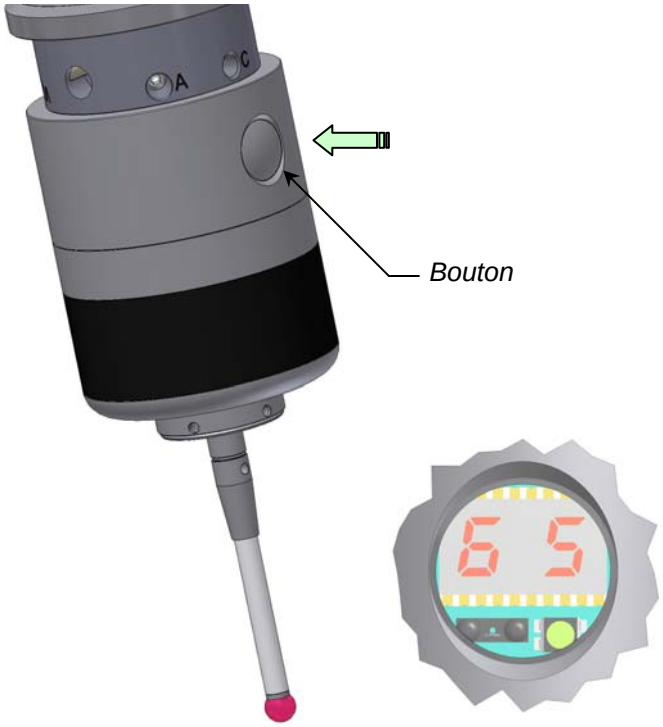
- *Tourner le palpeur jusqu'à la déviation maximale indiquée sur le cadran*
- *Desserrer doucement et précautionnement la (les) vis „A“ du côté opposé jusqu'à obtenir un faux-rond **< 5µ***
- *Positionner la (les) vis „A” opposée correspondante au contact de(s) la précédente*

Radio-wave Touch Probe RWP38.41

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



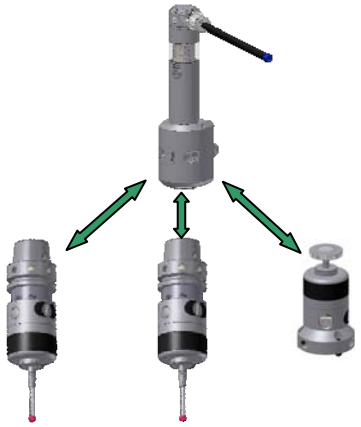
Procédure:

- *Vérifier que le palpeur 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 Touch Probe RWP38.41

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.



„A“ „B „C“

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”

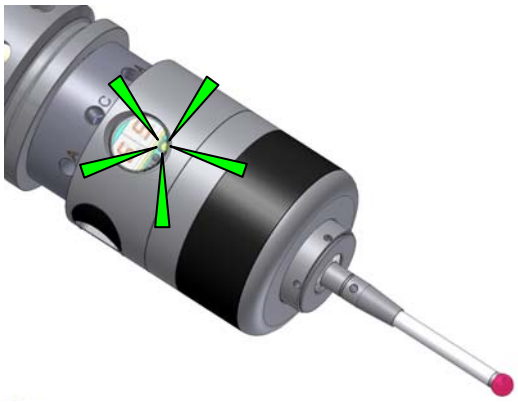
Réglage	Code d'Activation	Temporisation
0.A.	„A“	Radio OFF
0.B.	„B“	Radio OFF
0.C.	„C“	Radio OFF
1.A.	„A“	3 min
1.B.	„B“	3 min
1.C.	„C“	3 min

Procédure:

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

Radio-wave Touch Probe RWP38.41

Signal optique sur l'état du palpeur



LED clignotante verte:
- *Palpeur en fonctionnement*

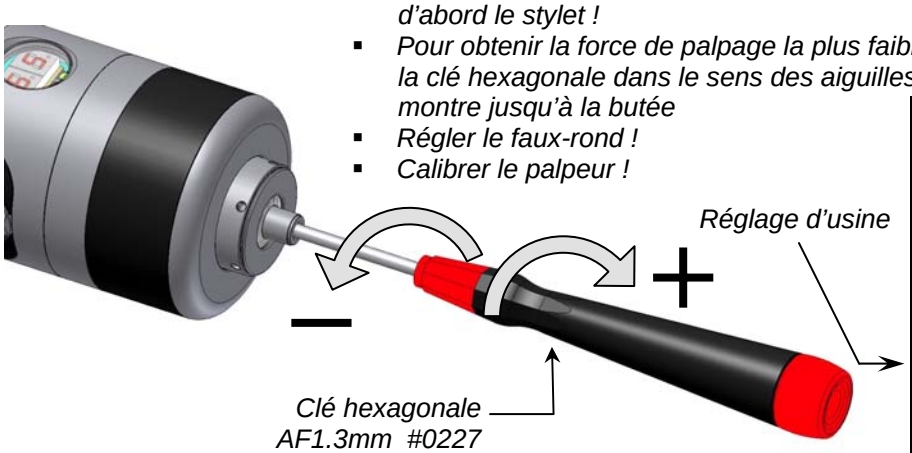
LED clignotante verte / rouge:
- *Batterie faible*

LED clignotante orange:
- *Inflexion du stylet*

Ajustage de la force de palpage *(breveté)*

En cas de vibrations importantes ou de stylet imposant et lourd, il est recommandé d'augmenter la force de palpage.

Attention !
- *Pour ajuster la force de palpage, démonter d'abord le stylet !*
- *Pour obtenir la force de palpage la plus faible, tourner la clé hexagonale dans le sens des aiguilles d'une montre jusqu'à la butée*
- *Régler le faux-rond !*
- *Calibrer le palpeur !*



Nombre de tours depuis la force la plus faible	Force de palpage en N avec stylet de 50mm	
	Z	**X/Y**
min.0	2.5	0.30
1	3.5	0.41
2	4.5	0.52
3	5.5	0.63
4	6.5	0.74
5	7.5	0.85
6	8.5	0.96
7	9.5	1.07
8	10.5	1.18
9	11.5	1.29
max.10	12.5	1.40

Maintenance

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

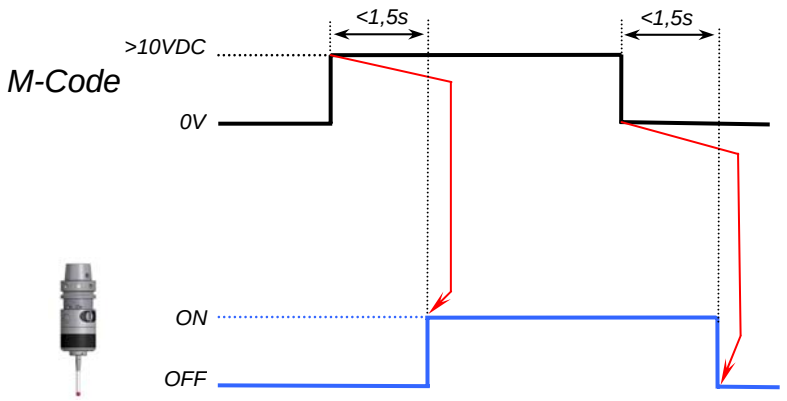
Nettoyage :
- *Détacher manuellement le couvercle de service avec la paupière métallique et le ressort conique.*
- *Nettoyer le palpeur et les pièces sous l'eau courante.*
- *Fermer manuellement le palpeur.*
- *Régler le faux-rond !*
- *Calibrer le palpeur.*

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 Touch Probe RWP38.41

Palpeur ON / OFF Procédure

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



Montage de l'attachement

Démontage du porte-outil :

- *Enlever toutes les vis „A“ et „C“.*
- *Retirer le porte-outil.*

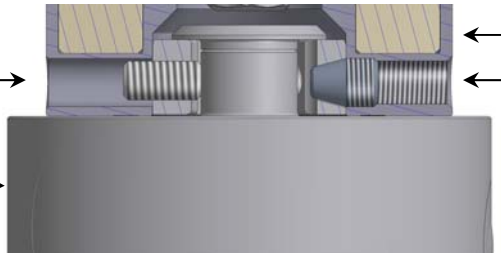
Montage du porte-outil :

- *Positionner prudemment l'attachement sur le palpeur en alignant le filetage „C“ sur le trou conique.*
- *Visser les deux vis de serrage „C“ et les serrer légèrement*
- *Visser toutes les vis d'ajustement „A“.*
- *Régler le faux-rond (voir page 3).*
- *Calibrer le palpeur de mesure.*

Clé hexagonale
AF2mm #1097 / AF2,5mm #1346

C = Vis de serrage AF2,5mm (2X)
#1351 M=2 Nm (1.47 lbf.ft)

A = Vis d'ajustement DIN913 M4x8 (AF2mm) (4x)
#1352 M=1,5 Nm (1.1 lbf.ft)



Attachement

Vis d'ajustement „A“ dans le filetage

Vis de serrage „C“ dans le trou conique

Palpeur de mesure

Radio-wave Touch Probe RWP38.41

Palpeur avec attachement HSK

Not included

Cônes utilisables :	L:	Référence :
DIN69893-HSK-E25	93 (3.67”)	38.41-HSK25E
DIN69893-HSK-A32	110 (4.33”)	38.41-HSK32A
DIN69893-HSK-E32	110 (4.33”)	38.41-HSK32E
DIN69893-HSK-A40	110 (4.33”)	38.41-HSK40A
DIN69893-HSK-E40	110 (4.33”)	38.41-HSK40E
DIN69893-HSK-F40	110 (4.33”)	38.41-HSK40F
DIN69893-HSK-A50	110 (4.33”)	38.41-HSK50A
DIN69893-HSK-A50	142,5 (5.61”)	38.41-HSK50A-142,5
DIN69893-HSK-E50	116 (4.57”)	38.41-HSK50E
DIN69893-HSK-E50	142,5 (5.61”)	38.41-HSK50E-142,5
DIN69893-HSK-F50	116 (4.57”)	38.41-HSK50F
DIN69893-HSK-A63	110 (4.33”)	38.41-HSK63A
DIN69893-HSK-A63	142,5 (5.61”)	38.41-HSK63A-142,5
DIN69893-HSK-A63-70	144 (5.67”)	38.41-HSK63A-144
DIN69893-HSK-E63	132,5 (5.22”)	38.41-HSK63E
DIN69893-HSK-F63	147,5 (5.81”)	38.41-HSK63F
DIN69893-HSK-A80	147,5 (5.81”)	38.41-HSK80A
DIN69893-HSK-A100	116 (4.57”)	38.41-HSK100A
DIN69893-HSK-A100	147,5 (5.81”)	38.41-HSK100A-147,5
Kennametal KM63	147,5 (5.81”)	38.41-KM63
Kennametal KM80	147,5 (5.81”)	38.41-KM80

Autres attachements sur demande

Palpeur avec attachement SK

Non inclus

Cônes utilisables :	L:	Référence :
DIN69871-SK30	120,5 (4.74”)	38.41-SK30
DIN69871-SK30-Mube	120,5 (4.74”)	38.41-SK30-Mube
DIN69871-SK40	122,5 (4.82”)	38.41-SK40
DIN69871-SK40-70	144 (5.67”)	38.41-SK40-144
DIN69871-SK50	122,5 (4.82”)	38.41-SK50
DIN2080-SK50	118,5 (4.67”)	38.41-DIN2080-SK50
DIN69871-SK60	142,5 (5.61”)	38.41-SK60
BT30	101 (3.98”)	38.41-BT30
BT30	120,5 (4.74”)	38.41-BT30-120,5
BT30	151 (5.94”)	38.41-BT30-151
BT30	176 (6.93”)	38.41-BT30-176
BT30	201 (7.91”)	38.41-BT30-201
BT40	122,5 (4.82”)	38.41-BT40
BT40-70	144 (5.67”)	38.41-BT40-144
BT50	137,5 (5.41”)	38.41-BT50
CAT40	122,5 (4.82”)	38.41-AN40
CAT40-70	144 (5.67”)	38.41-AN40-144
CAT50	122,5 (4.82”)	38.41-AN50

Autres attachements sur demande

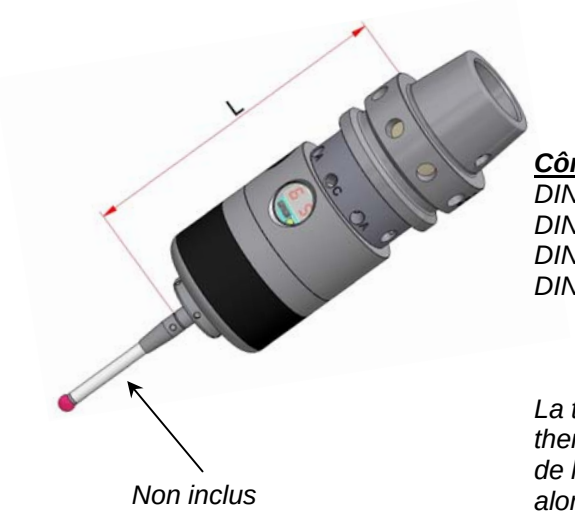
Radio-wave Touch Probe RWP38.41

Palpeur avec attachement Coromant Capto

Cônes utilisables :	L:	Référence :
Coromant Capto C4	110 (4.33”)	38.41-C4
Coromant Capto C5	110 (4.33”)	38.41-C5
Coromant Capto C5	147,5 (5.81”)	38.41-C5-147,5
Coromant Capto C6	116 (4.57”)	38.41-C6
Coromant Capto C6	147,5 (5.81”)	38.41-C6-147,5
Coromant Capto C8	116 (4.57”)	38.41-C8
Coromant Capto C8	147,5 (5.81”)	38.41-C8-147,5

Autres attachements sur demande

Palpeur avec attachement THERMO-LOCK® (breveté)



Cônes utilisables :	L:	Référence :
DIN69893 HSK-E32	110 (4.33”)	38.41-HSK32E-TI
DIN69893 HSK-E40	110 (4.33”)	38.41-HSK40E-TI
DIN69893 HSK-E50	116 (4.57”)	38.41-HSK50E-TI
DIN69893 HSK-A63	116 (4.57”)	38.41-HSK63A-TI

La technologie THERMO-LOCK® breveté prévient la dilatation thermique du porte-outil HSK et le transfert de chaleur de la broche de la machine au palpeur de mesure. Le palpeur de mesure livre alors des résultats de mesure précis et constants, même en cas de grande différence de température entre la broche de la machine et le porte-outil HSK.

Palpeur avec autres attachements

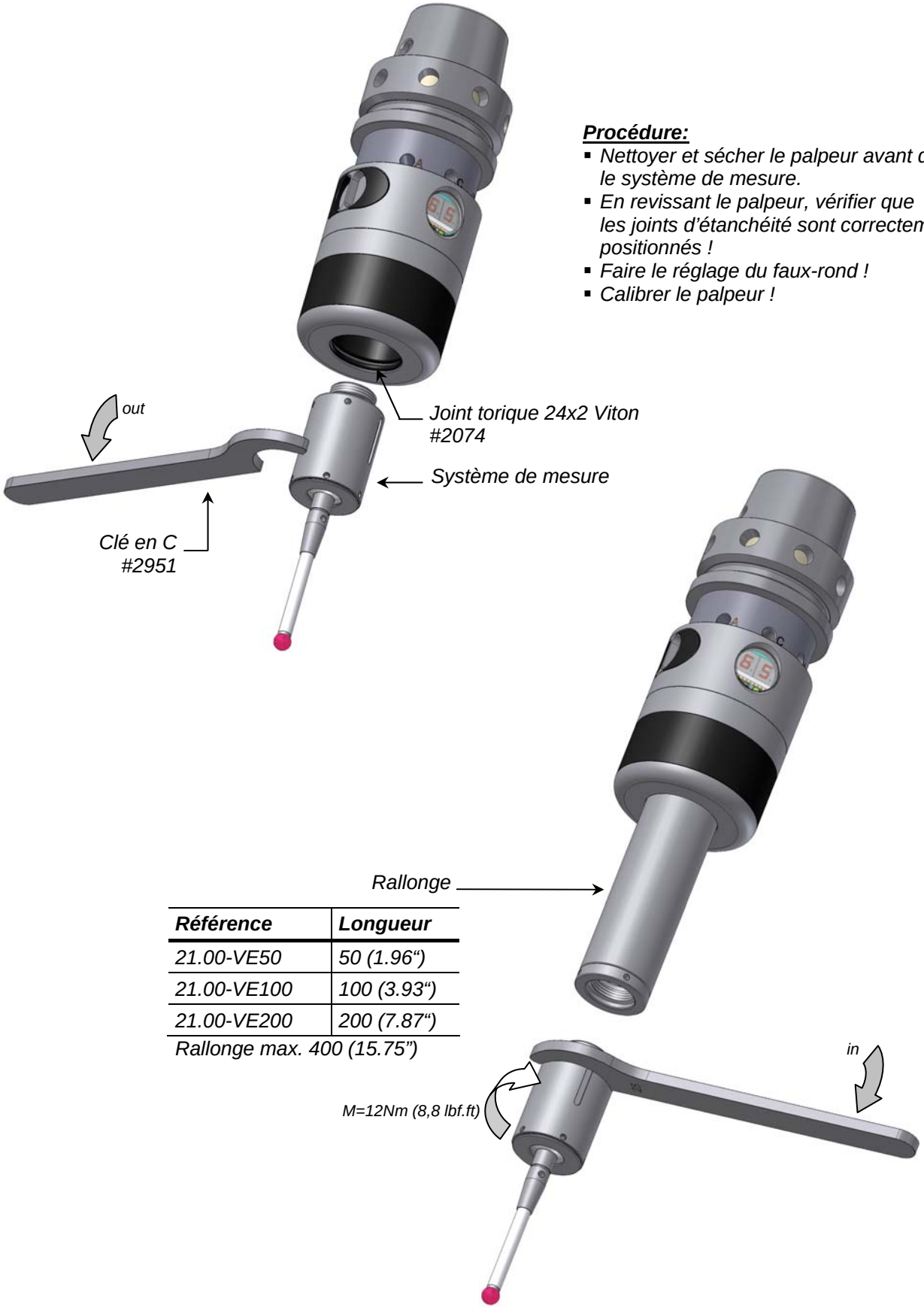
Cônes utilisables :	L:	Référence :
D20-D8-L25-B	89 (3.50”)	38.41-D8-L25
D20-D32-L100-B	86 (3.39”)	38.41-D32-L100
NIKKEN-NC5-46	141,5 (5.57”)	38.41-NC5-46
NIKKEN-NC5-63	141,5 (5.57”)	38.41-NC5-63
D20-Erowa-ITS	115 (4.53”)	38.41-ITS

Radio-wave Touch Probe RWP38.41

Extension du système de mesure

Procédure:

- *Nettoyer et sécher le palpeur avant d'enlever le système de mesure.*
- *En revissant le palpeur, vérifier que les joints d'étanchéité sont correctement positionnés !*
- *Faire le réglage du faux-rond !*
- *Calibrer le palpeur !*



Référence	Longueur
21.00-VE50	50 (1.96“)
21.00-VE100	100 (3.93“)
21.00-VE200	200 (7.87“)

Rallonge max. 400 (15.75”)

Radio-wave Touch Probe RWP38.41

M4-Stylets, Tige-∅7

Tous les stylets sont avec tige céramique

Référence:

91.00-T53/6-KE-M4
(Bille en rubis)

91.00-T83/6-KE-M4
(Bille en rubis)

91.00-T103/6-KE-M4
(Bille en rubis)

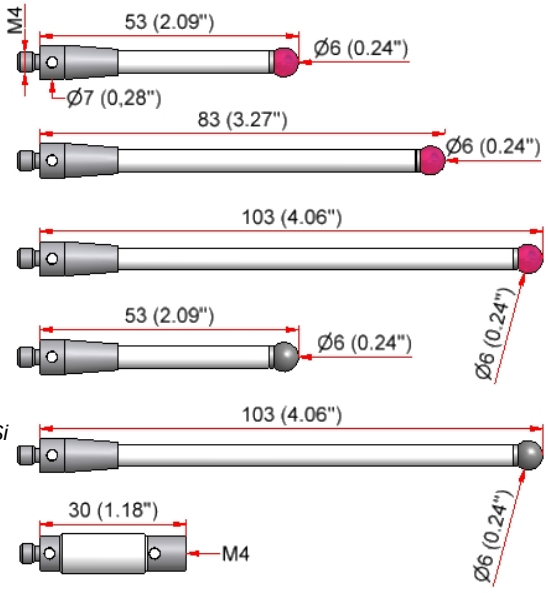
91.00-T53/6-KE-M4-Si
(Bille en nitrure de silicium)

91.00-T103/6-KE-M4-Si
(Bille en nitrure de silicium)

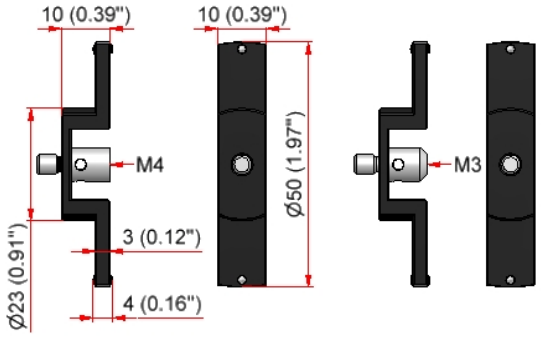
91.00-TV30-KE-M4
(Stylet extension)

91.00-TV50-KE-M4
(Stylet extension)

91.00-TV100-KE-M4
(Stylet extension)



91.00-TS-ST-M4
91.00-TS-ST-M4/M3
(Stylet à disque)



M4-Stylet, Tige-∅5

Tous les stylets sont avec bille rubis

Référence:

91.00-T20/2-HM-M4
(Tige en carbure)

91.00-T20/3-HM-M4
(Tige en carbure)

91.00-T20/4-HM-M4
(Tige en carbure)

91.00-T20/5-ST-M4
(Tige en acier)

91.00-T20/6-ST-M4
(Tige en acier)

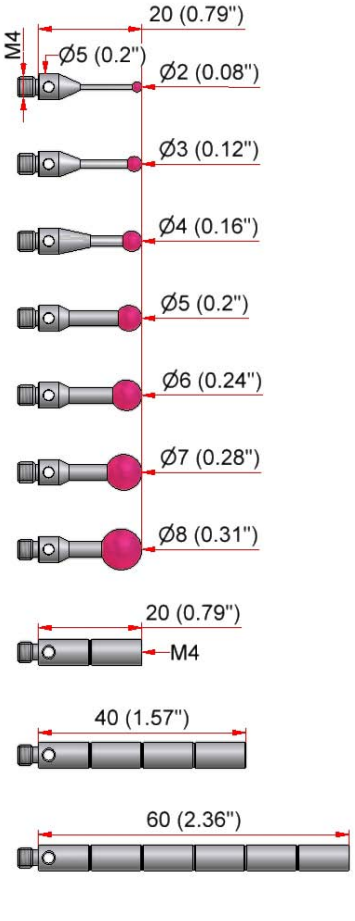
91.00-T20/7-ST-M4
(Tige en acier)

91.00-T20/8-ST-M4
(Tige en acier)

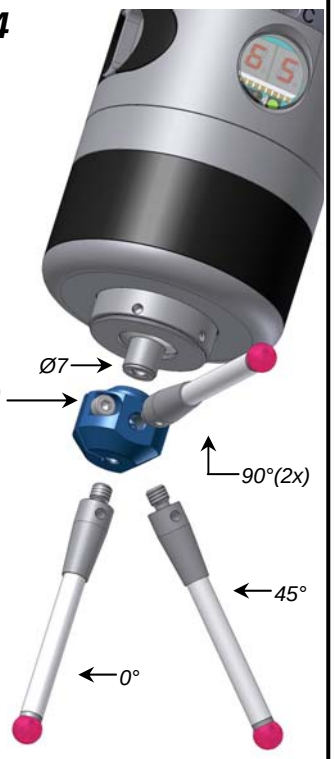
91.00-TV20-ST-M4
(Stylet extension, tige en acier)

91.00-TV40-ST-M4
(Stylet extension, tige en acier)

91.00-TV60-ST-M4
(Stylet extension, tige en acier)



Adaptateur M4 à serrage



41.00-KM-M4
Serré sur tige Ø7mm avec vis hexagonale AF2mm ajustable radialement

Autres stylets disponibles sur demande.

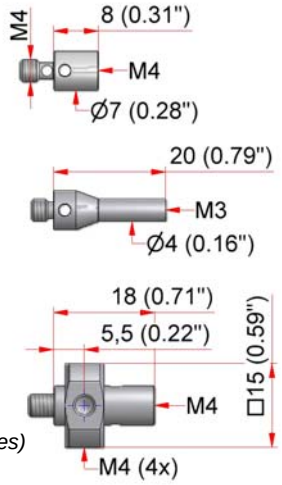
Accessoires

Référence:

91.00-S-M4/M4
(Adaptateur pour système de rupture)

91.00-TA-M4/M3
(Adaptateur)

91.00-TK-ST-M4
(Croix de palpage 5 voies)



Radio-wave Touch Probe RWP38.41

Recommandations de sécurité – Attention !

1. *Un positionnement manuel ou automatique du palpeur doit être protégé, de telle sorte que les axes de la machine s'arrêtent dès que le stylet a effectué une inflexion pendant le déplacement du palpeur vers la position de départ, d'où le cycle de mesure doit débuter.*

2. *L'arrêt des avances ou de la broche résultant d'un palpage ou d'un signal d'état du palpeur, ne doit être possible que si le palpeur est réellement dans la broche.*
   Cette logique sécuritaire protège la machine des arrêts machines (avances et broche) pendant l'usinage, même si un signal du palpeur atteint la commande numérique via le récepteur, pour l'une des raisons si dessous :

   - *Le client a changé les batteries et vérifie le fonctionnement du palpeur en l'activant manuellement.*
   - *Une nouvelle machine est installée avec une transmission radio utilisant la même fréquence que le palpeur déjà utilisé dans la machine existante.*

Déclaration de conformité

Nous déclarons sous notre seule responsabilité que le produit ***„ Radio-Wave Touch Probe RWP38.41“,***
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*
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*

Déclaration FCC / RSS

In Progress: Application done - Confirmation coming soon!

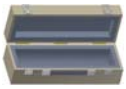
Radio-wave Touch Probe RWP38.41

Contenu du package, Pièces détachées, Accessoires

Contenu du package		
Référence	*Nomenclature*	
38.41-RWP	***Palpeur pièce radio RWP38.41*** *4x Pile Type ½ AA (3,6V)* *#4316* *Boîte à outils* *38.41-TB* *Boite de stockage* *25.00-HB ou #3611*	

Pièces du palpeur de mesure et outils		
Référence	*Nomenclature*	
#4316	*Pile Type ½ AA (3,6V)*	
38.41-BD	*Capot à batterie*	
#4475	*Joint torique 21x2 Viton pour capot à batterie*	
#1351	*Vis de serrage AF2,5mm*	
#1352	*Vis d'ajustement DIN913 M4x8 (AF2mm)*	
#3240	*Couvercle de service*	
#3455	*Joint torique 16x1 Viton pour couvercle de service*	
#2906	*Paupière métallique*	
#2931	*Ressort conique*	
#2074	*Joint torique 24x2 Viton*	
#0227	*Clé hexagonale AF1,3mm*	
#1346	*Clé hexagonale AF2,5m*	
#1097	*Clé hexagonale AF2mm*	
#2951	*Clé en C*	
#0885	*Epingle de montage*	
#3079	*Comparateur*	
38.41-TB	***Boîte à outils*** *1x Clé hexagonale AF2,5m* *#1346* *2x Clé hexagonale AF2mm* *#1097* *1x Clé hexagonale AF1,3mm* *#0227* *2x Vis d'ajustement DIN913 M4x8 (AF2mm)* *#1352* *1x Epingle de montage* *#0885* *2x Clé en C* *#2951*	

Contenu du package, Pièces détachées, Accessoires

Accessoires		
Référence	Nomenclature	
21.00-VE50	Rallonge, longueur = 50mm (1.96“)	
21.00-VE100	Rallonge, longueur = 100mm (3.93“)	
21.00-VE200	Rallonge, longueur = 200mm (7.87“)	
25.00-HB	Boite de stockage	
#3611	Boite de stockage	

Radio-wave Touch Probe RWP38.41

INSTRUCCIONES DE OPERACIÓN

ES

(Traducción de las Instrucciones de Operación originales)

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Piezas de precisión

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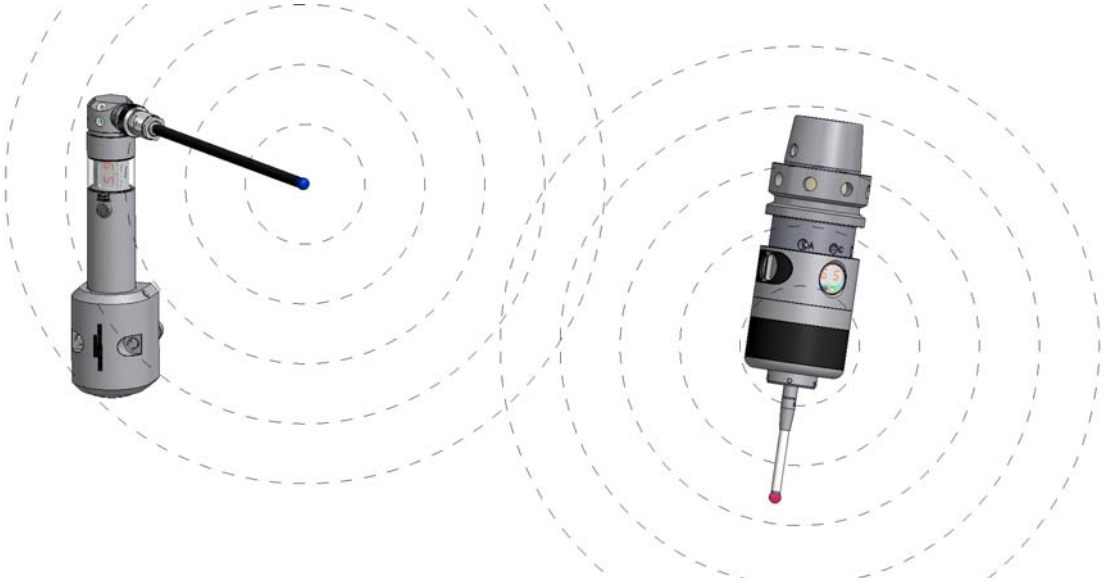
Sujecto a cambios técnicos sin previo aviso

Radio-wave Touch Probe RWP38.41

Componentes del sistema

Radio-wave Receiver
RWR95.40

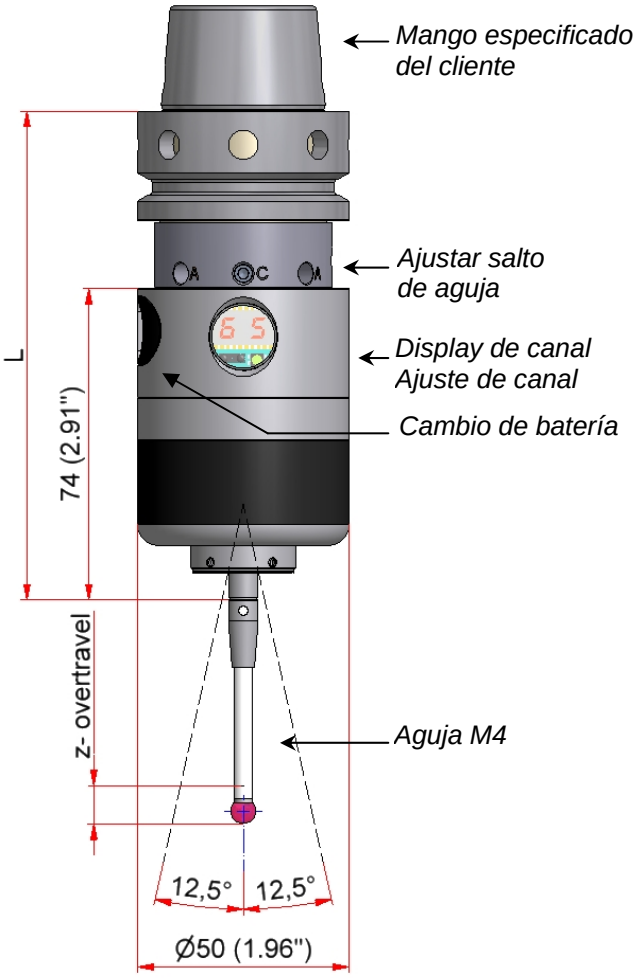
Radio-wave Touch Probe
RWP38.41



Datos técnicos

Direcciones de palpado:	*± X; ± Y; -Z*
Palpado máx. Recorrido:	*XY ±12.5°; Z –6mm (0.24")*
Fuerza activación con aguja 50mm:	*XY = 0.3-1.4N; Z = 2.5-12.5N ajustable*
Ajustes de fábrica:	*XY = 0.96N; Z = 8.5N*
Velocidad de palpado recomendada:	*254mm/min – 2000mm/min*
Alimentación:	*2x 3,6V Batteria Tipo ½ AA (1200mAh)*
Duración de batería:	*100% = 325h 5% = 219d Standby = 230d*
Material:	*Acero inoxidable*
Peso sin mango:	*aprox. 460g*
Rango de temperatura:	*Operación: 10° - 50°C Almacén: 5° - 70°C*
Repetibilidad unidirecctional:	*max. 2sigma ±1µm con aguja 50mm y velocidad 254mm/min*
Vida garantizada de unidad de medición:	*10 millones de deflexiones*
Gama de frecuencias :	*433.075 – 434.650 MHz*
Número de canales:	*64*
Espacio de canal:	*25 KHz*
Sellado:	*IP68: EN60529*

Dimensiones



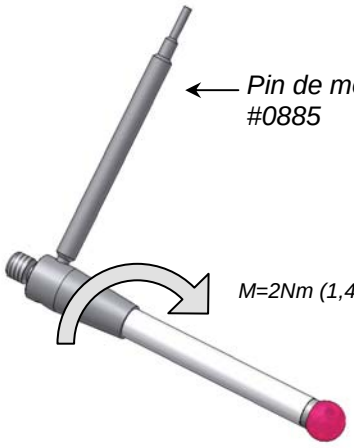
Radio-wave Touch Probe RWP38.41

Cambio de aguja

Atención

Tras cambiar la aguja:

- *Ajuste el salto de aguja !*
- *Calibre la sonda !*



Cambio de baterías

Atención

- *Limpie el cuerpo de la sonda 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.*

Radio-wave Touch Probe RWP38.41

Alinear la aguja de palpado con el centro del husillo

1 Ajuste tornillos „C“

Llave hexagonal AF2,5mm #1346

- Afloje todos los tornillos “A” 2 vueltas
- Afloje los tornillos "C"
- Usando el extremo de la llave hexagonal, apriete ambos tornillos "C"ligeramente

2 Ajuste a <20µ

Llave hexagonal AF2mm #1097

- Poner el calibre sobre la sonda (ver imagen) Gire la sonda hasta que la desviación máxima se muestre en el indicador
- Gire los tornillos "A" **la mitad** de lo que marque el indicador
- Afloje 1 vuelta los tornillos "A" que se usaron
- Repetir el procedimiento hasta que el ajuste sea **< 20µ**

3 Apriete los tornillos „C“

- Apriete ambos tornillo “C” usando el extremo corto de la llave hexagonal

4 Ajuste a <5µ

- Gire la sonda hasta que la desviación máxima se muestre en el indicador
- Gire los tornillos "A" **la mitad** de lo que marque el indicador
- Afloje 1 vuelta los tornillos "A" que se usaron
- Repetir el procedimiento hasta que el ajuste sea **< 5µ**

5 Reapretar los tornillos „C“

- Usando el extremo corto de la llave hexagonal
- Reapretar con seguridad ambos tornillos "C"

6 Ajuste los tornillos „A“ uno en contra del otro

- Ajuste los tornillos „A“ contrarios (0° - 180°)uno en contra del otro
- Repetir con los otros dos tornillos „A“ contrarios (90 - 270°)

Si la puesta a punto se sale del ajuste:

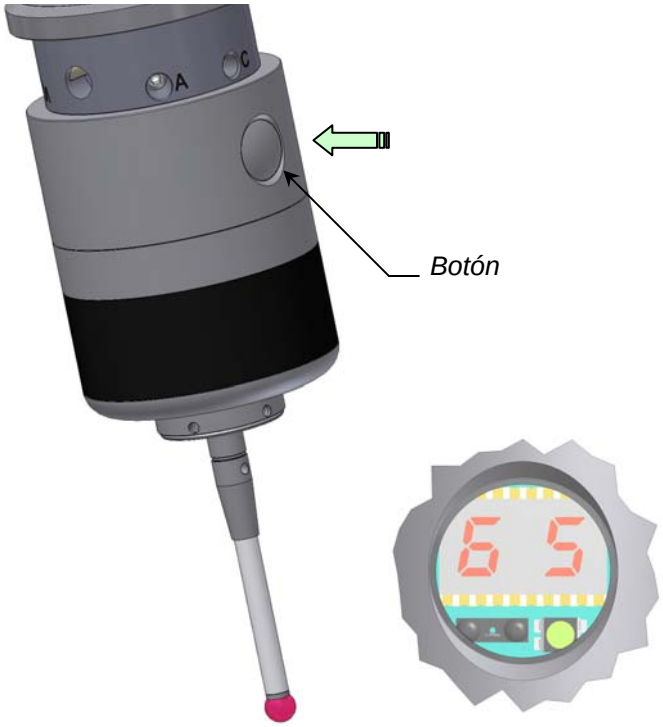
- Gire la sonda hasta que la desviación Máxima se muestre en el indicador
- Afloje cuidadosamente le tornillo „A“ en el lado opuesto hasta que el ajuste sea **< 5µ**
- Ajuste el tornillo contraio „A” contra el recientemente ajustado.

Radio-wave Touch Probe RWP38.41

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



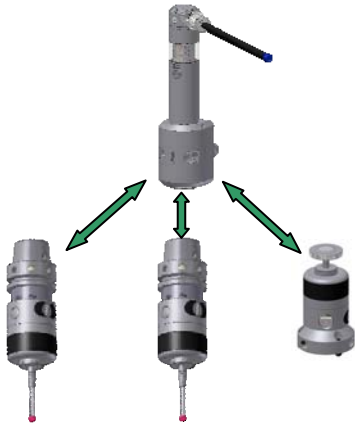
Procedimento:

- Asegúrese de que la sonda 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!

Radio-wave Touch Probe RWP38.41

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.



„A“ „B „C“

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

El display muestra el código de activación y el estado de tiempo-muerto

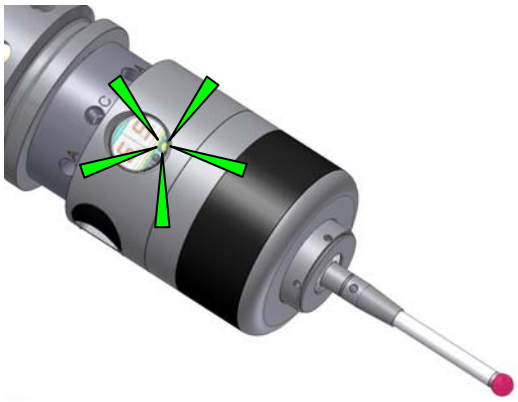
Ajuste	*Código de activación*	*Tiempo muerto*
0.A.	*„A“*	*Radio-frecuencia OFF*
0.B.	*„B“*	*Radio-frecuencia OFF*
0.C.	*„C“*	*Radio-frecuencia OFF*
1.A.	*„A“*	*3 min*
1.B.	*„B“*	*3 min*
1.C.	*„C“*	*3 min*

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 muestre el código de activación deseado.*
- *No toque de nuevo ni el botón ni la aguja de palpado.*
- *El display se apaga tras 5 segundos.*
- *El código de activación está ahora ajustado.*

Radio-wave Touch Probe RWP38.41

Señal óptica de estado



El LED parpadea en verde:
- *La sonda está transmitiendo señales*

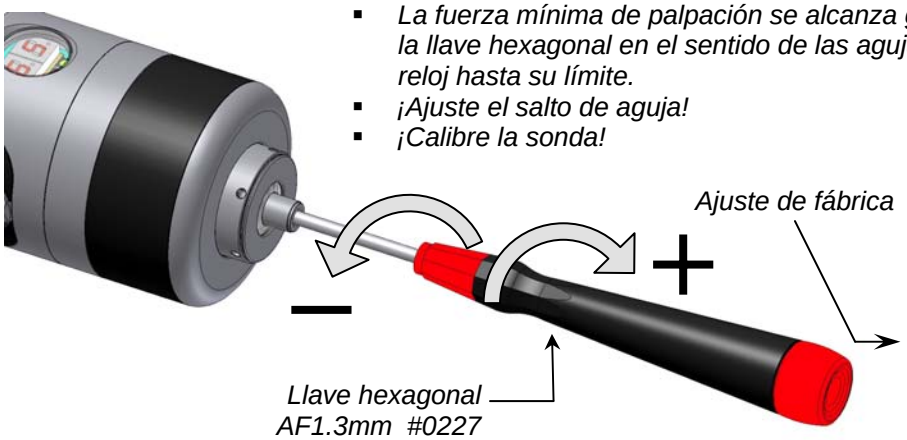
El LED parpadea en verde / rojo:
- *Batería baja*

El LED parpadea en naranja:
- *Aguja desviada*

Ajustar la fuerza de palpación (patente)

En caso de muchas vibraciones o aguja pesada, es recomendable aumentar la fuerza de palpación de la sonda.

¡Atención!
- *¡Para ajustar la fuerza de palpación, primero quite la aguja!*
- *La fuerza mínima de palpación se alcanza girando la llave hexagonal en el sentido de las agujas de reloj hasta su límite.*
- *¡Ajuste el salto de aguja!*
- *¡Calibre la sonda!*



Giros desde Fuerza mínima	Fuerza de palpación (en N) con aguja de palpado de 50 mm."	
	Z	X/Y
min.0	2.5	0.30
1	3.5	0.41
2	4.5	0.52
3	5.5	0.63
4	6.5	0.74
5	7.5	0.85
6	8.5	0.96
7	9.5	1.07
8	10.5	1.18
9	11.5	1.29
max.10	12.5	1.40

Mantenimiento

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

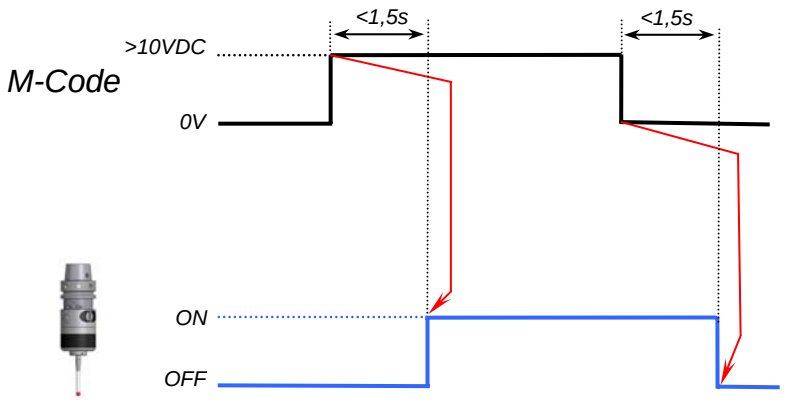
Limpieza:
- *Quite la cubierta de servicio con la tapa de metal y el muelle cónico con la mano.*
- *Limpie la sonda y las piezas en agua corriente.*
- *Cierre la sonda con la mano.*
- *¡Ajuste el salto de aguja!*
- *Calibre la sonda.*

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

Radio-wave Touch Probe RWP38.41

Procedimiento Sonda ON/OFF

La sonda bi-direccional se activará y desactivará mediante el receptor radio-frecuencia RWR95.40.
Después de lanzar la función-M la sonda se activa en <1,5 s y se desactiva en <1,5 s tras lanzar de nuevo la función-M.



Montaje del mango

Retirar el mango:

- *Retirar todos los tornillos „A“ y „C“.*
- *Retire el mango.*

Montaje del mango:

- *Deslice cuidadosamente el mango sobre el cuerpo de la sonda. Alinee los hilos de rosca „C“ con el cónico.*
- *Inserte los tornillos de fijación „C“ y apriete ligeramente.*
- *Inserte los tornillos de ajuste „A“.*
- *Alinee el palpador con el centro del husillo.(ver pág.3)*
- *Calibre la sonda.*

Radio-wave Touch Probe RWP38.41

Sonda con mango HSK

No incluído

Mangos disponibles:	L:	Número Pedido:
DIN69893-HSK-E25	93 (3.67”)	38.41-HSK25E
DIN69893-HSK-A32	110 (4.33”)	38.41-HSK32A
DIN69893-HSK-E32	110 (4.33”)	38.41-HSK32E
DIN69893-HSK-A40	110 (4.33”)	38.41-HSK40A
DIN69893-HSK-E40	110 (4.33”)	38.41-HSK40E
DIN69893-HSK-F40	110 (4.33”)	38.41-HSK40F
DIN69893-HSK-A50	110 (4.33”)	38.41-HSK50A
DIN69893-HSK-A50	142,5 (5.61”)	38.41-HSK50A-142,5
DIN69893-HSK-E50	116 (4.57”)	38.41-HSK50E
DIN69893-HSK-E50	142,5 (5.61”)	38.41-HSK50E-142,5
DIN69893-HSK-F50	116 (4.57”)	38.41-HSK50F
DIN69893-HSK-A63	110 (4.33”)	38.41-HSK63A
DIN69893-HSK-A63	142,5 (5.61”)	38.41-HSK63A-142,5
DIN69893-HSK-A63-70	144 (5.67”)	38.41-HSK63A-144
DIN69893-HSK-E63	132,5 (5.22”)	38.41-HSK63E
DIN69893-HSK-F63	147,5 (5.81”)	38.41-HSK63F
DIN69893-HSK-A80	147,5 (5.81”)	38.41-HSK80A
DIN69893-HSK-A100	116 (4.57”)	38.41-HSK100A
DIN69893-HSK-A100	147,5 (5.81”)	38.41-HSK100A-147,5
Kennametal KM63	147,5 (5.81”)	38.41-KM63
Kennametal KM80	147,5 (5.81”)	38.41-KM80

Otros mangos bajo petición.

Sonda con mango SK

No incluído

Mangos disponibles:	L:	Número Pedido:
DIN69871-SK30	120,5 (4.74”)	38.41-SK30
DIN69871-SK30-Mube	120,5 (4.74”)	38.41-SK30-Mube
DIN69871-SK40	122,5 (4.82”)	38.41-SK40
DIN69871-SK40-70	144 (5.67”)	38.41-SK40-144
DIN69871-SK50	122,5 (4.82”)	38.41-SK50
DIN2080-SK50	118,5 (4.67”)	38.41-DIN2080-SK50
DIN69871-SK60	142,5 (5.61”)	38.41-SK60
BT30	101 (3.98”)	38.41-BT30
BT30	120,5 (4.74”)	38.41-BT30-120,5
BT30	151 (5.94”)	38.41-BT30-151
BT30	176 (6.93”)	38.41-BT30-176
BT30	201 (7.91”)	38.41-BT30-201
BT40	122,5 (4.82”)	38.41-BT40
BT40-70	144 (5.67”)	38.41-BT40-144
BT50	137,5 (5.41”)	38.41-BT50
CAT40	122,5 (4.82”)	38.41-AN40
CAT40-70	144 (5.67”)	38.41-AN40-144
CAT50	122,5 (4.82”)	38.41-AN50

Otros mangos bajo petición.

Radio-wave Touch Probe RWP38.41

Sonda con mango Coromant Capto

No incluído

Mangos disponibles:	L:	Número Pedido:
Coromant Capto C4	110 (4.33”)	38.41-C4
Coromant Capto C5	110 (4.33”)	38.41-C5
Coromant Capto C5	147,5 (5.81”)	38.41-C5-147,5
Coromant Capto C6	116 (4.57”)	38.41-C6
Coromant Capto C6	147,5 (5.81”)	38.41-C6-147,5
Coromant Capto C8	116 (4.57”)	38.41-C8
Coromant Capto C8	147,5 (5.81”)	38.41-C8-147,5

Otros mangos bajo petición

Sonda con mango THERMO-LOCK® (patentado)

No incluído

Mangos disponibles:	L:	Número Pedido:
DIN69893 HSK-E32	110 (4.33”)	38.41-HSK32E-TI
DIN69893 HSK-E40	110 (4.33”)	38.41-HSK40E-TI
DIN69893 HSK-E50	116 (4.57”)	38.41-HSK50E-TI
DIN69893 HSK-A63	116 (4.57”)	38.41-HSK63A-TI

La tecnología patentada THERMO-LOCK® previene la expansión térmica del HSK y la transferencia de calor del husillo de máquina a la sonda. Esto asegura que la sonda da resultados precisos, estables a pesar de que existan diferencias altas de temperatura entre el husillo y el HSK.

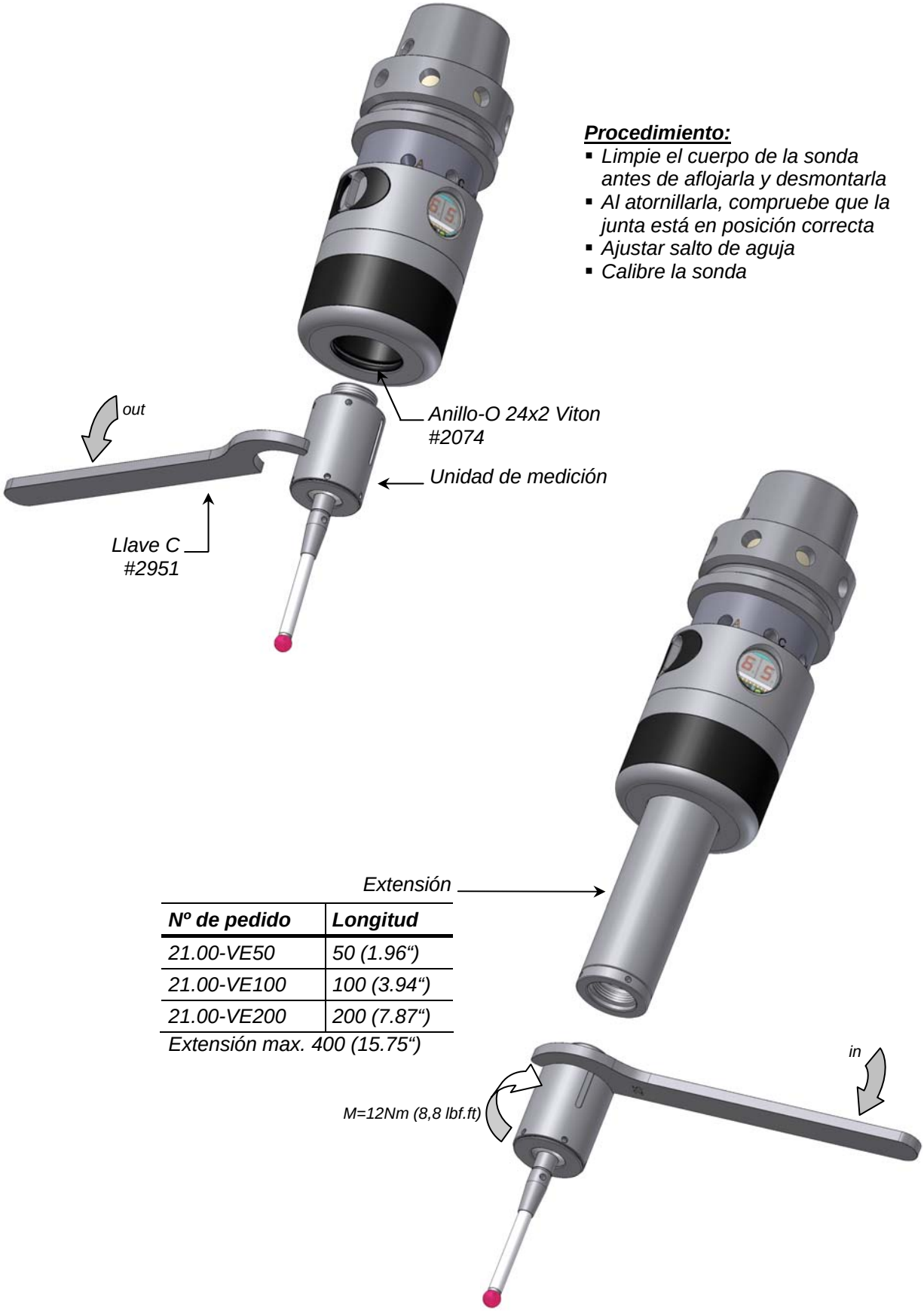
Sonda con otros mangos

No incluído

Mangos disponibles:	L:	Número Pedido:
D20-D8-L25-B	89 (3.50”)	38.41-D8-L25
D20-D32-L100-B	86 (3.39”)	38.41-D32-L100
NIKKEN-NC5-46	141,5 (5.57”)	38.41-NC5-46
NIKKEN-NC5-63	141,5 (5.57”)	38.41-NC5-63
D20-Erowa-ITS	115 (4.53”)	38.41-ITS

Radio-wave Touch Probe RWP38.41

Extensión de la unidad de medición



Procedimiento:

- *Limpie el cuerpo de la sonda antes de aflojarla y desmontarla*
- *Al atornillarla, compruebe que la junta está en posición correcta*
- *Ajustar salto de aguja*
- *Calibre la sonda*

Nº de pedido	Longitud
21.00-VE50	50 (1.96“)
21.00-VE100	100 (3.94“)
21.00-VE200	200 (7.87“)

Extensión max. 400 (15.75“)

Radio-wave Touch Probe RWP38.41

M4-Agujas de palpado, Vástago-∅7

Todas las agujas de palpado con vástago cerámico

Numero Pedido:

91.00-T53/6-KE-M4
(Bola rubi)

91.00-T83/6-KE-M4
(Bola rubi)

91.00-T103/6-KE-M4
(Bola rubi)

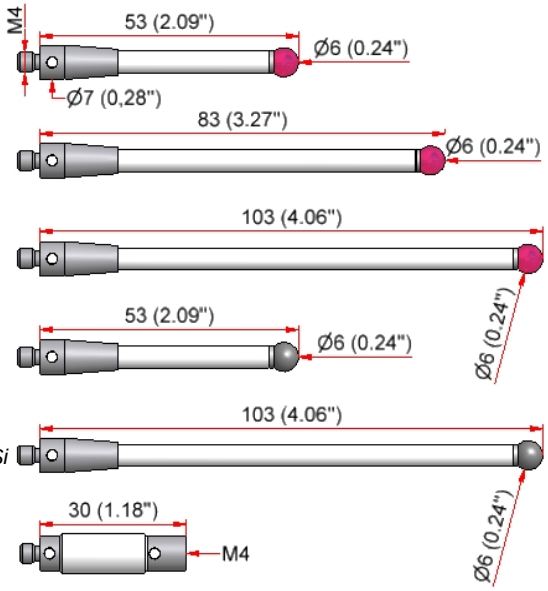
91.00-T53/6-KE-M4-Si
(Bola nitruro de silicio)

91.00-T103/6-KE-M4-Si
(Bola nitruro de silicio)

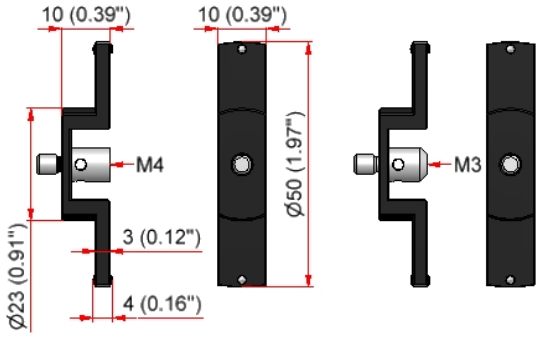
91.00-TV30-KE-M4
(Extensión de aguja)

91.00-TV50-KE-M4
(Extensión de aguja)

91.00-TV100-KE-M4
(Extensión de aguja)



91.00-TS-ST-M4
91.00-TS-ST-M4/M3
(Aguja disco)



M4-Agujas de palpado, Vástago -∅5

Todas las agujas de palpado con bola rubi

Numero Pedido:

91.00-T20/2-HM-M4
(Vastago metal duro tungsteno)

91.00-T20/3-HM-M4
(Vastago metal duro tungsteno)

91.00-T20/4-HM-M4
(Vastago metal duro tungsteno)

91.00-T20/5-ST-M4
(Vastago acero)

91.00-T20/6-ST-M4
(Vastago acero)

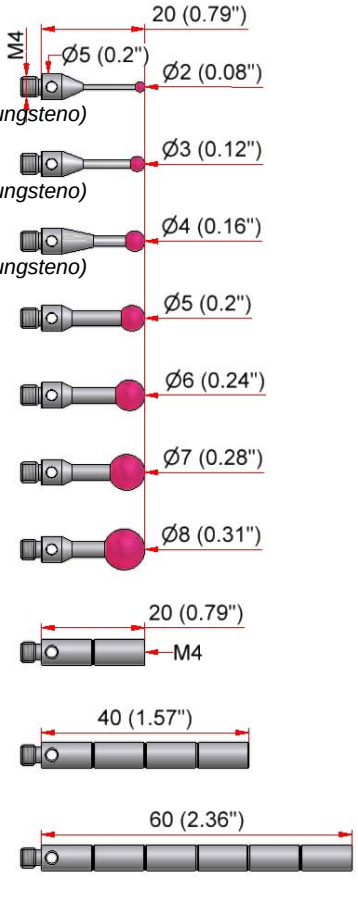
91.00-T20/7-ST-M4
(Vastago acero)

91.00-T20/8-ST-M4
(Vastago acero)

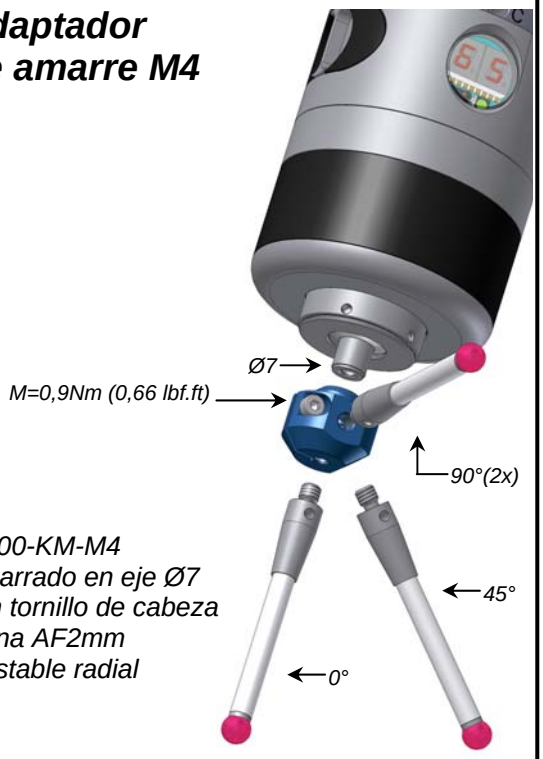
91.00-TV20-ST-M4
(Extensión de aguja, vastago de acero)

91.00-TV40-ST-M4
(Extensión de aguja, vastago de acero)

91.00-TV60-ST-M4
(Extensión de aguja, vastago de acero)



Adaptador de amarre M4



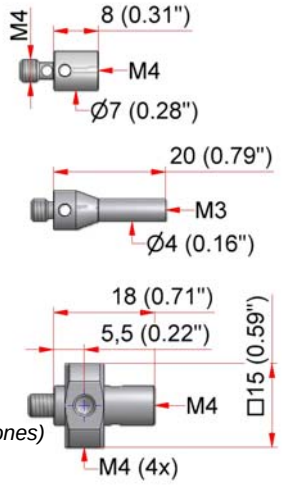
41.00-KM-M4
Amarrado en eje Ø7
con tornillo de cabeza
plana AF2mm
ajustable radial

Accesorios

91.00-S-M4/M4
(Adaptador fusible mecánico)

91.00-TA-M4/M3
(Adaptador)

91.00-TK-ST-M4
(Centro aguja 5 direcciones)



Otras agujas de palpado disponibles bajo pedido.

Radio-wave Touch Probe RWP38.41

Consejos de seguridad – por favor, tenga cuidado

1. *El posicionamiento manual o automático de la sonda debe estar protegido, de manera que el eje de la máquina detenga el avance si la sonda se activa durante su movimiento a la posición donde se debe iniciar la medición real.*

2. *La parada de avance o de husillo resultante de una palpación o señal de preparada de la sonda sólo debe ocurrir si la sonda está realmente en el husillo.*
   Esta lógica de seguridad protegerá la máquina de posibles paradas de husillo o de avance en operación de fresado normal si una señal de la sonda llega al control en caso que se dé unas de las condiciones siguientes:

   - *El cliente está cambiando las baterías y comprueba la función de la sonda conectando la sonda manualmente.*
   - *Se instala una máquina nueva con transmisión por ondas de radio con la misma frecuencia que una sonda ya instalada en una máquina existente.*

Declaración de conformidad

*Declaramos bajo nuestra sola responsabilidad que el producto **„ Radio-Wave Touch Probe RWP38.41“**, 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

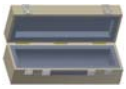
In Progress: Application done - Confirmation coming soon!

Radio-wave Touch Probe RWP38.41

Contenido de entrega, Recambios, Accesorios

Contenido de entrega		
Número Pedido	*Descripción*	
38.41-RWP	***Sonda por ondas de radio RWP38.41*** *4x Bateria Tipo ½ AA (3,6V)* *#4316* *Caja herramientas* *38.41-TB* *Caja de almacenaje* *25.00-HB o #3611*	
Piezas de la sonda, Herramientas		
Número Pedido	*Descripción*	
#4316	*Bateria Tipo ½ AA (3,6V)*	
38.41-BD	*Cubierta batteria*	
#4475	*Anillo-O21x2 Viton para cubierta bateria*	
#1351	*Tornillo de fijación AF2,5mm*	
#1352	*Tornillo de ajuste DIN913 M4x8 (AF2mm)*	
#3240	*Cubierta servicio*	
#3455	*Anillo-O 16x1 Viton para cubierta servicio*	
#2906	*Cubierta metálica*	
#2931	*Muelle cónico*	
#2074	*Anillo-O 24x2 Viton*	
#0227	*Llave hexagonal AF1,3mm*	
#1346	*Llave hexagonal AF2,5mm*	
#1097	*Llave hexagonal AF2mm*	
#2951	*Llave C*	
#0885	*Pin de montaje*	
#3079	*Reloj comparador*	
38.41-TB	***Caja herramientas*** *1x Llave hexagonal AF2,5mm* *#1346* *2x Llave hexagonal AF2mm* *#1097* *1x Llave hexagonal AF1,3mm* *#0227* *2x Tornillo de ajuste DIN913 M4x8 (AF2mm)* *#1352* *1x Pin de montaje* *#0885* *2x Llave C* *#2951*	

Contenido de entrega, Recambios, Accesorios

Accesorios		
Número Pedido	*Descripción*	
21.00-VE50	*Extensión, Longitud = 50mm (1.96“)*	
21.00-VE100	*Extensión, Longitud = 100mm (3.93“)*	
21.00-VE200	*Extensión, Longitud = 200mm (7.87“)*	
25.00-HB	*Caja de almacenaje*	
#3611	*Caja de almacenaje*	

Radio-wave Touch Probe RWP38.41

INSTRUÇÃO DE SERVIÇO

PT

(Tradução do manual de instruções original)

	Página
Componentes do sistema, dados técnicos, dimensões	1
Troca da haste do apalpador e troca das baterias	2
Alinhar ponta do apalpador no centro do fuso	3
Canais e frequências, ajuste de canal	4
Codificação de ativação e ajuste desligamento	5
Visualização do estado, ajuste da força, manutenção	6
Apalpador ON / OFF, montagem no cone	7
Cone - HSK; Cone - ISO	8
Cone - Coromant Capto, Cone - THERMO-LOCK®, Demais cones	9
Extensão do módulo de medição	10
Haste do apalpador, acessórios	11
Avisos de segurança, declaração de conformidade, FCC/RSS-Declaration	12
Volume de fornecimento, sobresselentes,acessórios	13

Precision at the workpiece

www.mh-inprocess.com

m&h Inprocess Messtechnik GmbH • Am Langholz 11 • D-88289 Waldburg
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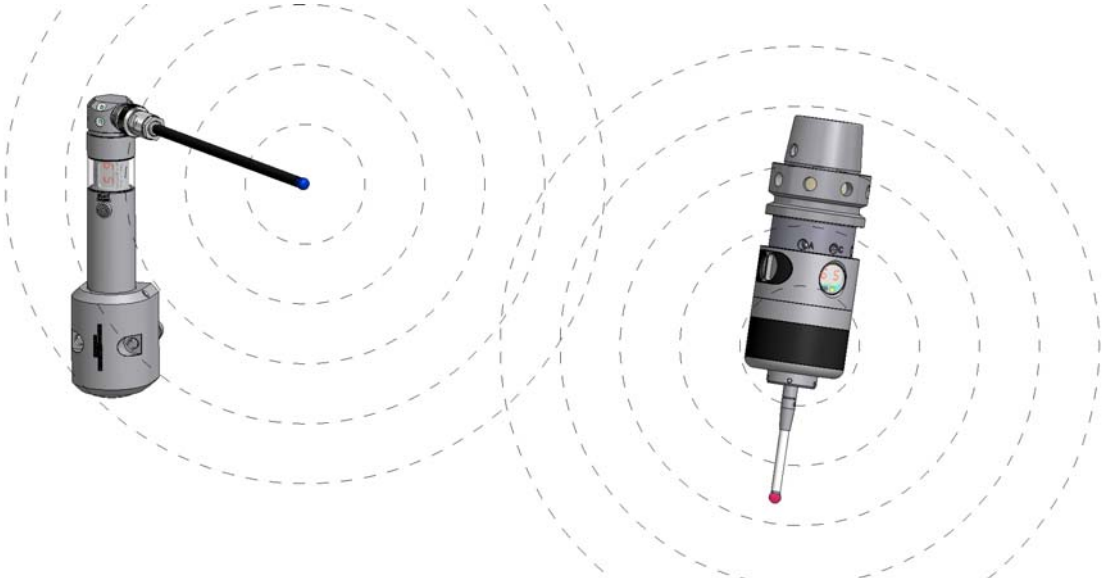
Radio-wave Touch Probe RWP38.41

Componentes do sistema

Radio-wave Receiver
RWR95.40

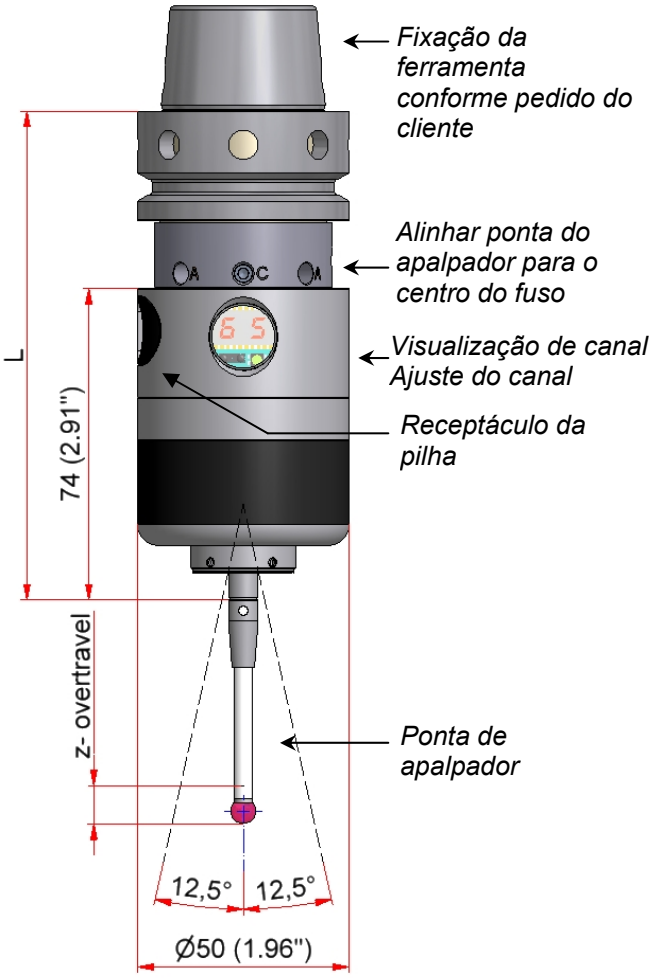
Radio-wave Touch Probe
RWP38.41



Dados técnicos

Sentidos de apalpação:	± X; ± Y; -Z
Desvio máx. de ponta de apalpador:	XY ±12,5°; Z –6mm
Força de apalpação com ponta de apalpador de 50mm:	XY = 0,3-1,4N; Z = 2,5-12,5N ajustável
Ajuste por ocasião do fornecimento:	XY = 0,96N; Z = 8,5N
Velocidade de apalpação recomendada:	254mm/min – 2000mm/min
Abastecimento de energia:	2x pilhas Tipo ½ AA (3,6V) (1200mAh)
Vida útil da pilha:	100% = 325h 5% = 219d Standby = 230d
Material:	Aço não oxidável
Peso sem esfera:	aprox. 460g
Margem de temperatura:	Serviço: 10° - 50°C Armazenagemn: 5 ° - 70°C
Precisão de repetição:	2 Sigma máx. ±1µm Com ponta de apalp. 50mm e veloc. de apalp. 254mm/min
Vida útil garantida do aparelho de medição:	10 milhões de apalpações
Margem de frequência de transmissão:	433,075 – 434,650 MHz
Número de canais:	64
Distância dos canais:	25 KHz
Vedação:	IP68: EN60529

Dimensões



Radio-wave Touch Probe RWP38.41

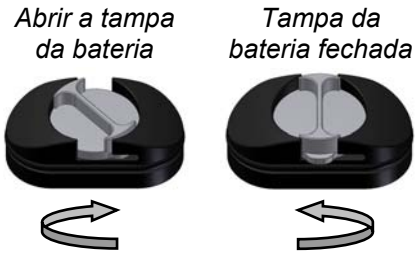
Troca da haste do apalpador

Atenção !

Após troca da haste do apalpador:

- *Alinhar haste do apalpador no centro do fuso.*
- *Calibrar apalpador !*

Troca das baterias



Atenção!

- *Limpar o apalpador antes de abrir. Depois secar com um pano! NÃO usar ar comprimido!*
- *Abrir a tampa da bateria fazendo um movimento giratório!*
- *Retirar as baterias sem carga!*
- *Colocar as baterias alternando o pólo!*
- *Ao fechar a tampa da bateria, atente para que o anel O esteja colocado corretamente.*
- *Substituir pilhas usadas imediatamente!*

Radio-wave Touch Probe RWP38.41

Alinhar a haste do apalpador no centro do fuso

1 Colocar parafuso “C”

Chave Allen SW2,5
#1346

- Soltar todos os parafusos "A" 2 giros
- Soltar todos os parafusos "C"
- Colocar chave Inbus usando a parte longitudinal
- Apertar ambos os parafusos "C" firmemente

2 Ajuste até <20µ

Chave Allen SW2
#1097

- Colocar o relógio apalpador em frente à haste do apalpador como mostrado na figura
- Girar a tecla até que o relógio apalpador mostre a volta maior
- Girar para trás com parafuso(s) "A" fazendo **semi** giro desconcêntrico do relógio indicador para trás.
- Soltar parafuso(s) "A" usado(s) girando uma vez.
- Repetir o processo até que o giro concêntrico de **< 20µ** esteja ajustado.

3 Apertar parafusos “C”

- Encaixar chave Allen usando lado transversal
- Apertar ambos os parafusos "C" com força manual.

4 Ajuste até <5µ

- Girar a tecla, até que o sistema de medição mostre o maior desvio de concentricidade
- Girar com parafuso(s) "A" **semi** desconcentricidade do relógio indicador para trás.
- Soltar parafuso(s) "A" usados girando uma vez.
- Repetir o processo até que a concentricidade **< 5µ** esteja ajustada.

5 Apertar parafusos “C”

- Encaixar a chave Allen usado lado transversal
- Reapertar ambos os parafusos "C" novamente usando alta força manual.

6 Fixar parafusos “A“ com contraporca

- Fixar por contra-porca os dois parafusos "A" que se encontram em um eixo simultaneamente (0° - 180°)
- Depois fixar com contraporca (90 - 270°) os outros dois parafusos "A" simultaneamente

Se a concentricidade se desajustar:

- Girar o lado alto para a frente
- Soltar o(s) parafuso(s) "A" no lado traseiro cuidadosamente e soltar vagarosamente até atingir a concentricidade de < 5µ
- Fixar com contraporca novamente os parafusos "A" respectivos simultaneamente.

Radio-wave Touch Probe RWP38.41

Canais e frequências

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

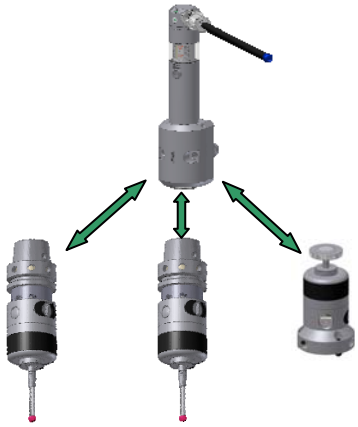
Sequência:

- O apalpador está desligado!
- Apertar botão de pressão até que o canal seja exibido.
- Pressionar o botão de pressão tantas vezes até que o canal desejado seja mostrado.
- Visualização do canal apaga após 5 seg.
- O canal está ajustado!

Radio-wave Touch Probe RWP38.41

Ajustar codificação de activação e hora de desligar

Com 3 codificações de activação disponíveis, "A" / "B" / "C", é possível trabalhar com até 3 sistemas de medição com um receptor. O receptor envia o código de activação seleccionado e aguarda também os sinais no mesmo código de activação.



„A" *„B* *„C"*

Atenção – Aviso de segurança!

***Jamais** devem ser ajustados 2 ou mais sistemas com a mesma codificação de activação no mesmo canal!*

Cada activação de codificação encontra-se disponível com o ajuste Hora de desligar respectiva "FUNK OFF" e "3 min". Utilizando-se o ajuste "FUNK OFF" o sistema de medição precisa ser desactivado através do receptor com o código M! Utilizando-se o ajuste "3min" o sistema de medição precisa analogicamente ser desactivado através do código M, será no entanto, por precaução, desactivado após 3 min. internamente caso a desactivação seja incorrecta!

*O "1" em frente ao código de activação indica que a hora de desligar está **activada** o "0" indica que está **desactivada**.*

Visualização no display:

= 0.A. → Hora de desligar não activada ("Funk OFF") / Código de activação "A"

= 1.C. → Hora de ligar activada ("3 min") / Código de activação "C"

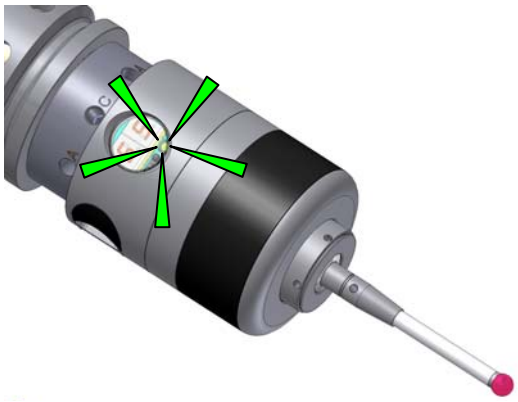
Ajuste	Código de activação	Hora de desligar
0.A.	"A"	Funk OFF
0.B.	"B"	Funk OFF
0.C.	"C"	Funk OFF
1.A.	"A"	3 min
1.B.	"B"	3 min
1.C.	"C"	3 min

Sequência:

- *O apalpador está desligado!*
- *Premir botão de pressão até que o canal ajustado seja exibido.*
- *Movimentar direcionando a ponta do apalpador até que a codifição de activação esteja seleccionada.*
- *Não accionar mais a ponta do apalpador e botão de pressão!*
- *Visualização do display apaga após 5 seg.*
- *A codificação de activação está agora ajustada.*

Radio-wave Touch Probe RWP38.41

Visualização óptica do estado



LED pisca verde:
- Tecla transmite sinais

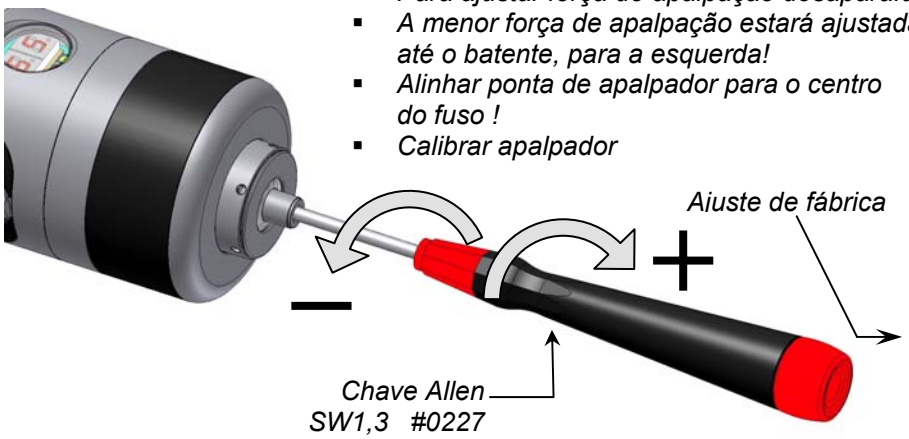
LED pisca verde / vermelho:
- Pilha fraca

LED pisca laranja:
- Ponta de apalpador

Ajuste de força (patenteado)

Caso as vibrações da máquina sejam muito fortes ou pontas substituíveis pesadas, é recomendável aumentar a força de apalpação.

Atenção !
- Para ajustar força de apalpação desaparafusar a ponta do apalpador !
- A menor força de apalpação estará ajustada se a chave Allen tiver sido girada até o batente, para a esquerda!
- Alinhar ponta de apalpador para o centro do fuso !
- Calibrar apalpador



Giros de força mais baixa	Força de apalpação com ponta de apalpador de 50mm em N	
	Z	X/Y
míín.0	2,5	0,30
1	3,5	0,41
2	4,5	0,52
3	5,5	0,63
4	6,5	0,74
5	7,5	0,85
6	8,5	0,96
7	9,5	1,07
8	10,5	1,18
9	11,5	1,29
máx.10	12,5	1,40

Manutenção

Sob a vedação metálica pode se acumular sujeira.

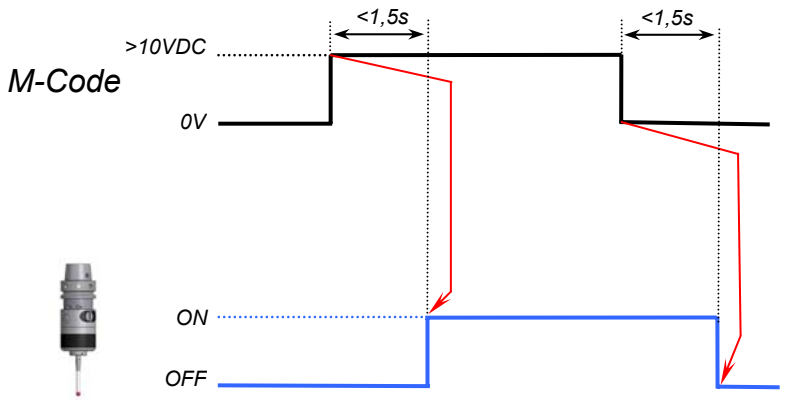
Limpeza :
- Retirar tampa de serviço com vedação metálica e mola cônica manualmente.
- Limpar apalpador e peças sob água corrente
- Fechar o apalpador manualmente.
- Alinhar a ponta do apalpador no centro do fuso!
- Calibrar o apalpador!

Atenção !
- Não utilize ar comprimido ou jato forte de água para fazer limpeza!
- Não utilizar nenhum objeto pontiagudo ! (danificação da membrana de vedação)

Radio-wave Touch Probe RWP38.41

Apalpador ON / OFF Procedimento

O apalpador é ativado e desativado através do receptor por rádio frequência RWR95.40. Após se ter estabelecido o código M, o apalpador estará ativado em <1,5 s e novamente desativado <1,5s após o ressetar.



Montagem no cone

Desmontagem do cone do apalpador:

- Retirar todos os parafusos „A“ e „C.
- Puxar a fixação da ferramenta.

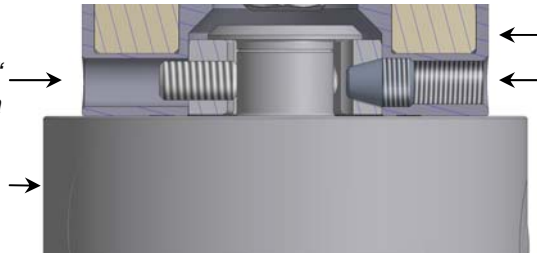
Montagem da fixação da ferramenta:

- Deslocar o cone cuidadosamente sobre guia. Ao fazê-lo alinhar a rosca “C” para o orifício cônico.
- Apertar ambos os parafusos de aperto “C” e apertar levemente.
- Aparafusar todos os parafusos de alinhamento “A”.
- Alinhar ponta de apalpador no centro do fuso. (veja página 3)
- Calibrar apalpador!

Chave Allen
SW2 #1097 / SW2,5 #1346

C = Parafuso de aperto SW2,5 (2x)
#1351 M=2 Nm (1.47 lbf.ft)

A = Parafuso de alinhamento SW2 (4x)
#1352 M=1,5 Nm (1.1 lbf.ft)



Cone da ferramenta

Parafuso de alinhamento “A“ em rosca

Parafuso de aperto “C” do apalpador no furo cônico

Radio-wave Touch Probe RWP38.41

Apalpador com fixação no Cone HSK

Não está incluido no fornecimento.

Esfera possível:	Compr.:	Número de encomenda:
DIN69893-HSK-E25	93 (3.67”)	38.41-HSK25E
DIN69893-HSK-A32	110 (4.33”)	38.41-HSK32A
DIN69893-HSK-E32	110 (4.33”)	38.41-HSK32E
DIN69893-HSK-A40	110 (4.33”)	38.41-HSK40A
DIN69893-HSK-E40	110 (4.33”)	38.41-HSK40E
DIN69893-HSK-F40	110 (4.33”)	38.41-HSK40F
DIN69893-HSK-A50	110 (4.33”)	38.41-HSK50A
DIN69893-HSK-A50	142,5 (5.61”)	38.41-HSK50A-142,5
DIN69893-HSK-E50	116 (4.57”)	38.41-HSK50E
DIN69893-HSK-E50	142,5 (5.61”)	38.41-HSK50E-142,5
DIN69893-HSK-F50	116 (4.57”)	38.41-HSK50F
DIN69893-HSK-A63	110 (4.33”)	38.41-HSK63A
DIN69893-HSK-A63	142,5 (5.61”)	38.41-HSK63A-142,5
DIN69893-HSK-A63-70	144 (5.67”)	38.41-HSK63A-144
DIN69893-HSK-E63	132,5 (5.22”)	38.41-HSK63E
DIN69893-HSK-F63	147,5 (5.81”)	38.41-HSK63F
DIN69893-HSK-A80	147,5 (5.81”)	38.41-HSK80A
DIN69893-HSK-A100	116 (4.57”)	38.41-HSK100A
DIN69893-HSK-A100	147,5 (5.81”)	38.41-HSK100A-147,5
Kennametal KM63	147,5 (5.81”)	38.41-KM63
Kennametal KM80	147,5 (5.81”)	38.41-KM80

Conforme consulta é possível fornecimento de outros cones.

Apalpador com fixação no Cone ISO

Não está incluido no fornecimento.

Esfera possível:	Compr.:	Número de encomenda
DIN69871-SK30	120,5 (4.74”)	38.41-SK30
DIN69871-SK30-Mube	120,5 (4.74”)	38.41-SK30-Mube
DIN69871-SK40	122,5 (4.82”)	38.41-SK40
DIN69871-SK40-70	144 (5.67”)	38.41-SK40-144
DIN69871-SK50	122,5 (4.82”)	38.41-SK50
DIN2080-SK50	118,5 (4.67”)	38.41-DIN2080-SK50
DIN69871-SK60	142,5 (5.61”)	38.41-SK60
BT30	101 (3.98”)	38.41-BT30
BT30	120,5 (4.74”)	38.41-BT30-120,5
BT30	151 (5.94”)	38.41-BT30-151
BT30	176 (6.93”)	38.41-BT30-176
BT30	201 (7.91”)	38.41-BT30-201
BT40	122,5 (4.82”)	38.41-BT40
BT40-70	144 (5.67”)	38.41-BT40-144
BT50	137,5 (5.41”)	38.41-BT50
CAT40	122,5 (4.82”)	38.41-AN40
CAT40-70	144 (5.67”)	38.41-AN40-144
CAT50	122,5 (4.82”)	38.41-AN50

Conforme consulta é possível o fornecimento de outros cones.

Radio-wave Touch Probe RWP38.41

Apalpador com fixação no Cone Coromant Capto

Não está incluido no fornecimento

Fixações possíveis:	Compr.:	Número de encomenda:
Coromant Capto C4	110 (4.33”)	38.41-C4
Coromant Capto C5	110 (4.33”)	38.41-C5
Coromant Capto C5	147,5 (5.81”)	38.41-C5-147,5
Coromant Capto C6	116 (4.57”)	38.41-C6
Coromant Capto C6	147,5 (5.81”)	38.41-C6-147,5
Coromant Capto C8	116 (4.57”)	38.41-C8
Coromant Capto C8	147,5 (5.81”)	38.41-C8-147,5

Conforme consulta é possível fornecimento de outros cones.

Apalpador com fixação no Cone THERMO-LOCK® (patenteado)

Não está incluido no fornecimento

Possíveis fixações:	Compr.:	Número de encomenda
DIN69893 HSK-E32	110 (4.33”)	38.41-HSK32E-TI
DIN69893 HSK-E40	110 (4.33”)	38.41-HSK40E-TI
DIN69893 HSK-E50	116 (4.57”)	38.41-HSK50E-TI
DIN69893 HSK-A63	116 (4.57”)	38.41-HSK63A-TI

A tecnologia THERMO-LOCK® patenteada impede a dilatação térmica do HSK e a transmissão de calor do fuso da máquina ao apalpador. Com isto o apalpador fornece resultados de medição constantes e precisos, mesmo que a diferença térmica seja alta entre o fuso da máquina e o HSK.

Apalpador com outros modelos de Cone

Não está incluido no fornecimento

Fixações possíveis	Compr.:	Número de encomenda
D20-D8-L25-B	89 (3.50”)	38.41-D8-L25
D20-D32-L100-B	86 (3.39”)	38.41-D32-L100
NIKKEN-NC5-46	141,5 (5.57”)	38.41-NC5-46
NIKKEN-NC5-63	141,5 (5.57”)	38.41-NC5-63
D20-Erowa-ITS	115 (4.53”)	38.41-ITS

Radio-wave Touch Probe RWP38.41

Extensão do módulo de medição

Atenção !

- *Antes de desaparafusar o aparelho de medição limpar o apalpador e secar com um pano !*
- *Ao aparafusar é importante observar se o anel O está colocado corretamente !*
- *Alinhar a ponta do apalpador no centro do fuso !*
- *Calibrar o apalpador!*

Número de encomenda	Compr.
21.00-VE50	50
21.00-VE100	100
21.00-VE200	200

Extensão máx. 400

Radio-wave Touch Probe RWP38.41

Haste de apalpador M4, haste-∅7

Todas as pontas de apalpador com haste de cerâmica

Número de encomenda:

91.00-T53/6-KE-M4
(esfera em rubi)

91.00-T83/6-KE-M4
(esfera em rubi)

91.00-T103/6-KE-M4
(esfera em rubi l)

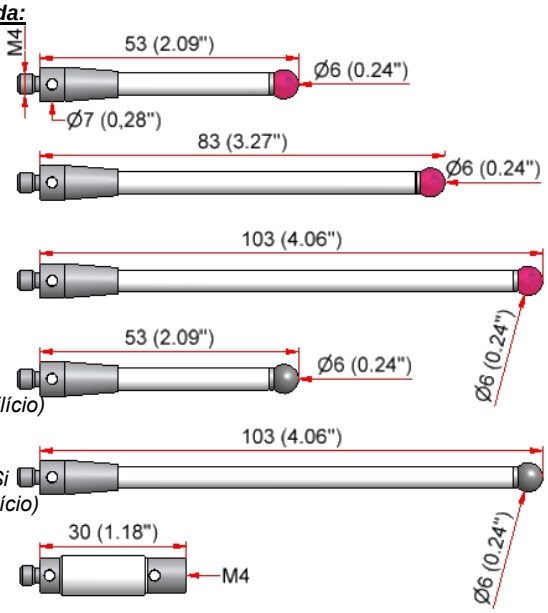
91.00-T53/6-KE-M4-Si
(esfera em nitrito de silício)

91.00-T103/6-KE-M4-Si
(esfera em nitrito de silício)

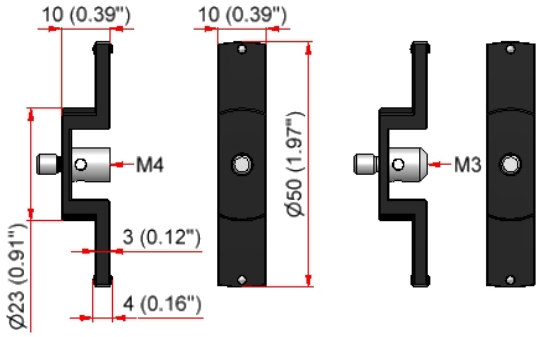
91.00-TV30-KE-M4
(extensão da ponta de apalpador)

91.00-TV50-KE-M4
(extensão da ponta de apalpador)

91.00-TV100-KE-M4
(extensão de ponta de apalpador)



91.00-TS-ST-M4
91.00-TS-ST-M4/M3
(jogo de apalpador em forma de arruela)



Haste de apalpador M4, haste ∅5

Todas as pontas de apalpação com esfera em rubi

Número de encomenda:

91.00-T20/2-HM-M4
(haste de metal duro)

91.00-T20/3-HM-M4
(haste de metal duro)

91.00-T20/4-HM-M4
(haste de metal duro)

91.00-T20/5-ST-M4
(haste em aço nitrito)

91.00-T20/6-ST-M4
(haste em aço nitrito)

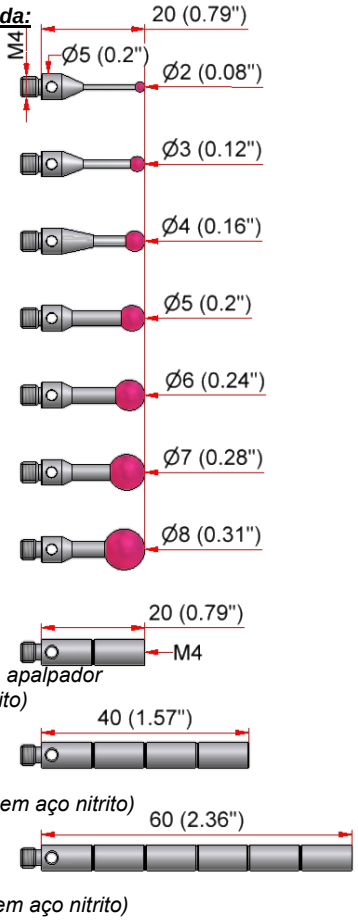
91.00-T20/7-ST-M4
(haste em aço nitrito)

91.00-T20/8-ST-M4
(haste em aço nitrito)

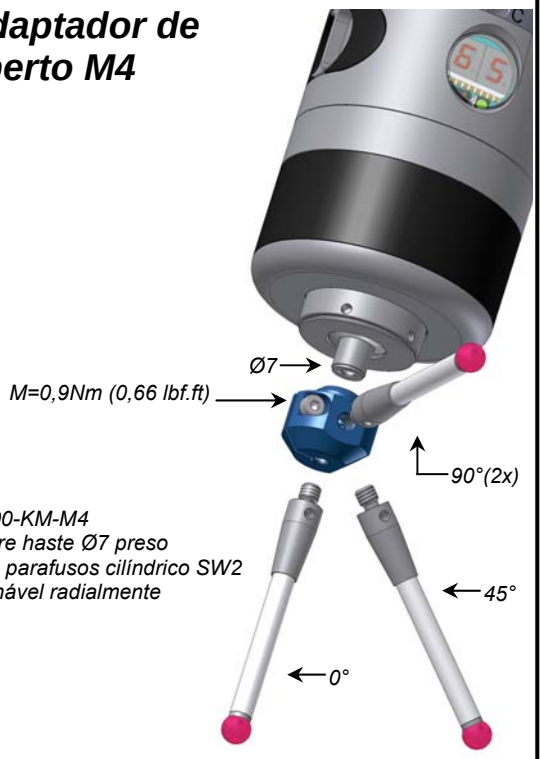
91.00-TV20-ST-M4
(extensão de ponta de apalpador com haste em aço nitrito)

91.00-TV40-ST-M4
(extensão de ponta de apalpador com haste em aço nitrito)

91.00-TV60-ST-M4
(extensão de ponta de apalpador com haste em aço nitrito)



Adaptador de aperto M4



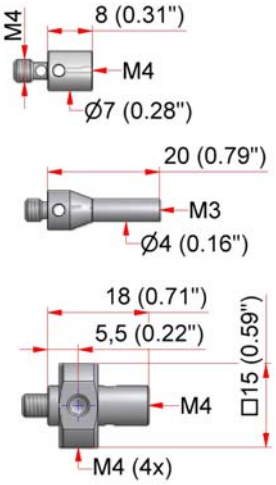
41.00-KM-M4
Sobre haste Ø7 preso com parafusos cilíndrico SW2 alinhável radialmente

Acessório

91.00-S-M4/M4
(fusível mecânico)

91.00-TA-M4/M3
(adaptador de haste)

91.00-TK-ST-M4
(centro estrela 5 vias)



Radio-wave Touch Probe RWP38.41

Avisos de segurança – Favor obedecer !

1. *O posicionamento manual ou automático do apalpador deve ser protegido de forma que um deslocamento imprevisto da haste fora do processo de apalpação acarrete um parada imediata do avanço !*

2. *Um avanço ou uma parada do fuso ativado pelo sinal de ligação ou sinal de Operação do apalpador só deve ocorrer se o mesmo estiver no fuso.*

   Esta segurança impede que o fuso ou o avanço ative o apalpador durante um trabalho de fresagem normal ou parado, caso um dos motivos abaixo citado provoque um acionamento de um sinal do apalpador:

   - *O usuário efetua a troca da bateria e verifica o funcionamento do apalpador,*
   - *Uma outra máquina com um apalpador por de rádio frequência seja colocada em serviço e este apalpador transmita usando o mesmo canal como um apalpador instalado anteriormente.*

Declaração de conformidade

*Com a presente declaramos assumindo responsabilidade geral que o produto "**Radio-Wave Touch Probe RWP38.41**", ao qual esta declaração se refere está de acordo com as seguintes normas:*

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!

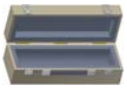
Radio-wave Touch Probe RWP38.41

Volume de fornecimento, sobresselentes, acessórios

Volume de fornecimento		
Número de encomenda	*Denominação*	
38.41-RWP	***Apalpador rádio frequência RWP38.41*** *4x Pilhas tipo 1/2AA (3,6V) #4316* *Caixa de ferramenta 38.41-TB* *Caixa de madeira ou 25.00-HB* *Mala para material #3611*	
Sobressalentes e ferramentas		
Número de encomenda	*Denominação*	
#4316	*Pilha tipo ½ AA (3,6V)*	
38.41-BD	*Tampa de bateria*	
#4475	*Anel O 21x2 Viton* *para tampa de bateria*	
#1351	*Parafuso de aperto SW2,5*	
#1352	*Parafuso de alinhamento DIN913 M4x8 (SW2)*	
#3240	*Tampa de serviço*	
#3455	*Anel O 16x1 Viton* *para tampa de serviço*	
#2906	*Vedação metálica*	
#2931	*Mola cônica*	
#2074	*Anel O 24x2 Viton*	
#0227	*Chave Allen SW1,3*	
#1346	*Chave Allen SW2,5*	
#1097	*Chave Allen SW2*	
#2951	*Chave fixa de grampo*	
#0885	*Pino de montagem*	
#3079	*Relógio Apalpador*	
38.41-TB	***Caixa de ferramentas*** *1x Chave Allen SW2,5 #1346* *2x Chaves Allen SW2 #1097* *1x Chave Allen SW1,3 #0227* *2x Parafusos de alinhamento* *DIN913 M4x8 (SW2) #1352* *1x Pino de montagem #0885* *2x Chaves fixa de grampo #2951*	

Radio-wave Touch Probe RWP38.41

Volume de fornecimento, sobresselentes, acessórios

Acessórios		
Número de encomenda	*Denominação*	
21.00-VE50	*Extensão L=50mm*	
21.00-VE100	*Extensão L=100mm*	
21.00-VE200	*Extensão L=200mm*	
25.00-HB	*Caixa de madeira*	
#3611	*Mala para material*	