



PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers performance requirements of 36638 series T3 interface CMC headers.

2.0 PART DESCRIPTION

2.1 PART NAME AND PART NUMBERS

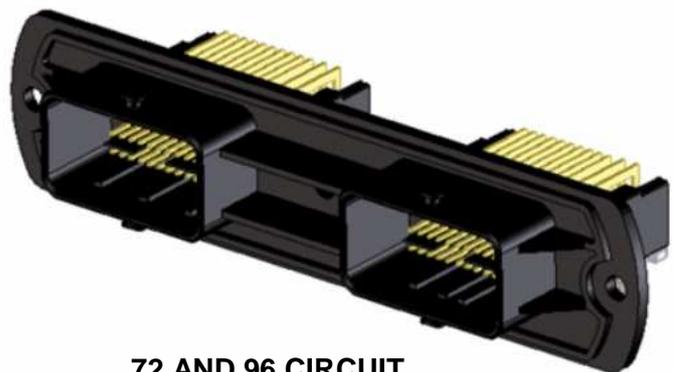
SL NO	PART NAME	PART NO
1	CMC HDR W/O SPLIT PEG T3/BK/36+T3/BR/36	366380001
2	CMC HDR WITH SPLIT PEG T3/BK/48	366380002
3	CMC HDR WITH SPLIT PEG T3/BR/48	366380003
4	CMC HDR W/O SPLIT PEG T3/BK/48	366380004
5	CMC HDR W/O SPLIT PEG T3/BR/48	366380005
6	CMC HDR WITH SPLIT PEG T3/BK/36	366380006
7	CMC HDR WITH SPLIT PEG T3/BR/36	366380007
8	CMC HDR W/O SPLIT PEG T3/BK/36	366380008
9	CMC HDR W/O SPLIT PEG T3/BR/36	366380009
10	CMC HDR WITH SPLIT PEG T3/BK/36+T3/BR/36	366380010
11	CMC HDR W/O SPLIT PEG T3/BK/48+T3/BR/48	366380011
12	CMC HDR WITH SPLIT PEG T3/BK/48+T3/BR/48	366380012

2.2 VISUAL, DIMENSIONS, MATERIAL, PLATING AND MARKINGS

Refer 36638 series drawings for information on dimensions, materials, plating and markings.



**36 AND 48 CIRCUIT
CMC HEADER**



**72 AND 96 CIRCUIT
CMC HEADER**

REVISION: A	ECR/ECN INFORMATION: EC No: I2008-0573 DATE: 2008/04/08	TITLE: CMC HEADERS T3 INTERFACE WITH AND WITHOUT SPLIT PEG	SHEET No. 1 of 9
DOCUMENT NUMBER: PS-36638-001	CREATED / REVISED BY: RAGHU	CHECKED BY: KPRASAD	APPROVED BY: KPRASAD



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3.0 RATINGS

3.1 VOLTAGE: 250V [AC RMS/ DC]

3.2 CURRENT: 0.64 TERMINAL – 8AMPS
1.50 TERMINAL – 12AMPS

3.3 TEMPERATURE: OPERATING TEMPERATURE: -40°C TO +100°C
NON OPERATING TEMPERATURE: -40°C TO +100°C

4.0 PERFORMANCE

4.1 ELECTRICAL PERFORMANCE

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT													
4.1.1	<u>INSULATION RESISTANCE</u>	Connectors shall be mated and apply 500V DC between adjacent terminal or housing.	100 Mega Ohms min. No abnormalities in performance and appearance after test													
4.1.2	<u>VOLTAGE DROP</u>	Connectors shall be mated and measure by the following circuits. Measurement point is 200mm from crimped portion <table border="1" data-bbox="635 1223 1141 1433"> <thead> <tr> <th>Term Size</th> <th>Measurement current</th> <th>Opening voltage</th> </tr> </thead> <tbody> <tr> <td rowspan="2">0.64</td> <td>100 µA</td> <td>50mV</td> </tr> <tr> <td>8A</td> <td>13V</td> </tr> <tr> <td rowspan="2">1.5</td> <td>100 µA</td> <td>50mV</td> </tr> <tr> <td>12A</td> <td>15V</td> </tr> </tbody> </table>	Term Size	Measurement current	Opening voltage	0.64	100 µA	50mV	8A	13V	1.5	100 µA	50mV	12A	15V	100µA 0.64: 30m Ohm max 1.5 : 10m Ohm max 8A 0.64: 10m Ohm max 12A 1.5: 5m Ohm max
Term Size	Measurement current	Opening voltage														
0.64	100 µA	50mV														
	8A	13V														
1.5	100 µA	50mV														
	12A	15V														
4.1.3	<u>LEAK CURRENT</u>	Connectors shall be mated and exposed to the conditions of 60±5°C, 90~95%RH for 1 hour and apply 13V DC between adjacent terminal	<table border="1" data-bbox="1157 1503 1487 1700"> <tbody> <tr> <td>Initial</td> <td>1µA max</td> </tr> <tr> <td>After test</td> <td>10µA max</td> </tr> </tbody> </table>	Initial	1µA max	After test	10µA max									
Initial	1µA max															
After test	10µA max															

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4.2 MECHANICAL PERFORMANCE

4.2.1 MATING FORCE

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
4.2.1.1	<u>CONNECTOR MATING FORCE IN THE RIGHT DIRECTION WITH ACTION ON THE LEVER [LEVER OPERATION FORCE]</u>	The speed of tensile machine head is between 25 & 50 mm/min. Testing temperature: 23 ⁰ C +/- 5 ⁰ C. Humidity Rate: 60% +/- 15% [Insertion wave pattern is necessary]	Maximum Insertion force < 80N
4.2.1.2	<u>CONNECTOR INSERTION FORCE IN THE WRONG POLARIZATION (POSITION AT 180 DEGREES)</u>	The speed of tensile machine head is between 25 & 50 mm/min. Testing temperature: 23 ⁰ C +/- 5 ⁰ C. Humidity Rate: 60% +/- 15%	Minimum Insertion force > 150N
ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
4.2.1.3	<u>CONNECTOR INSERTION FORCE IN THE WRONG CODING COUNTERPART</u>	The speed of tensile machine head is between 25 & 50 mm/min. Testing temperature: 23 ⁰ C +/- 5 ⁰ C. Humidity Rate: 60% +/- 15%	Minimum Insertion force > 150N

4.2.2 UNMATING FORCE

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
4.2.2.1	<u>CONNECTOR UNMATING FORCE WITH INOPERATIVE LOCKING DEVICE.</u>	The speed of tensile machine head is between 25 & 50 mm/min. Testing temperature: 23 ⁰ C +/- 5 ⁰ C. Humidity Rate: 60% +/- 15%	Maximum Unmating force < 80N
4.2.2.2	<u>CONNECTOR UNMATING FORCE WITH OPERATIVE LOCKING DEVICE.</u>	The speed of tensile machine head is between 25 & 50 mm/min. Testing temperature: 23 ⁰ C +/- 5 ⁰ C. Humidity Rate: 60% +/- 15%	A. During and at the end of test, there must not be unlocking of connector or mechanical damages. B. Minimum unmating force >100N (Note : The disconnection speed should be constant)
		A. The test machine travels until achieving the value of 100N(During 10 seconds)	
		B. The test machine travels until the connector is disconnected	

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4.2.3 PIN/TAB RETENTION FORCES

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
4.2.3.1	<u>PIN/TAB RETENTION FORCES</u>	The speed of tensile machine head is between 25 & 50 mm/min. Testing temperature: 23 ⁰ C +/- 5 ⁰ C. Humidity Rate: 60% +/- 15%	For Pin 0.63 Min. retention force should be >35N. For Tab 1.5 Minimum retention force should be >60N

4.2.4 HEADER PIP MECHANICAL RESISTANCE

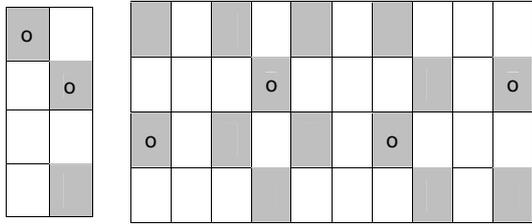
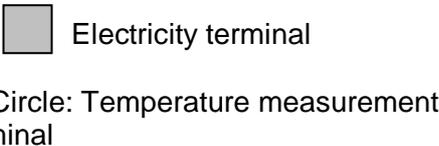
4.2.4.1	<u>HEADER PIP MECHANICAL RESISTANCE</u>	The speed of tensile machine head is 50 mm/min. Testing temperature: 23 ⁰ C +/- 5 ⁰ C. Humidity Rate: 60% +/- 15% Header should be fixed on to the table. Lever must be changed for each test. See Appendix-4	500N minimum force average without individual value below 450N.
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4.3 ENVIRONMENTAL PERFORMANCE

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
4.3.1	SEALING TEST UNDER AIR PRESSURE	Mated connectors are placed in the water tank as per Appendix-1 Air pressure of 300 mBars is applied. Water temperature 23± 5°C. Test duration: 30 seconds.	Visual Check- No air bubble allowed in the interfacial seal area.	
4.3.2	TEMPERATURE RISE	Connectors shall be mated and measure the temperature rise of contact, when the maximum AC rated current is flowed. Temperature: Normal Temperature Current: 0.64 8A 1.50 12A Current circuit  	0.64 Initial	25°C Max
			0.64 After test	30°C Max
			1.5 Initial test	35°C Max
			1.5 After test	40°C Max
4.3.3	THERMAL SHOCK TEST	The connectors wired under series conditions (without current) are subjected to 100 cycles defined in Appendix 2 .	No damages and must meet 4.2.2.2 & 4.3.1	
4.3.4	HEAT AND HUMIDITY CYCLING TEST	The female connectors are wired under series conditions (without current) are subjected to 10 cycles defined in Appendix 3 .	No damages and must meet 4.2.2.2 & 4.3.1	
4.3.5	VIBRATION RESISTANCE	Connectors shall be mated and subjected to the following Vibration conditions Sweep time: 6.8G, 50~200Hz in 8 minutes Duration: Up and down 4 hrs Back and forth 2 hrs Left and Right 2 hrs	Discontinuity	10µ sec max
			Voltage drop	Must meet 4.1.2
			Temperature rise	Must meet 4.3.1
4.3.6	SOLDERABILITY	Test to be conducted as per SMES-152	Solder Coverage: 95% Min. (Per SMES-152)	

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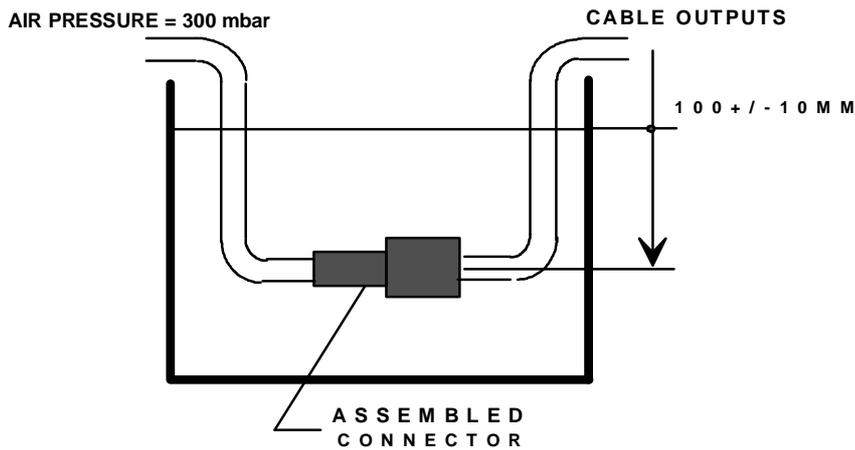
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4.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.
Refer Packing Spec: **PK-36638-001**

APPENDIX 1

SEALING PRESSURE TEST



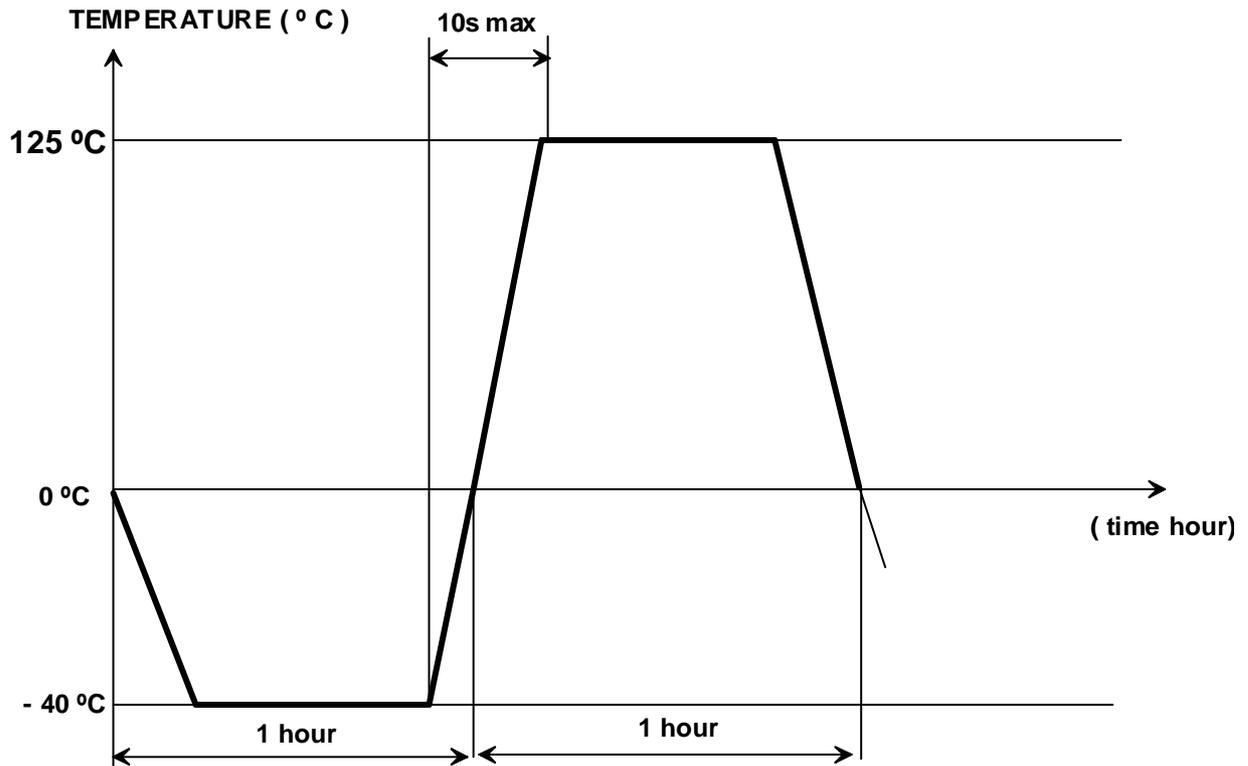
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APPENDIX 2

THERMAL SHOCK CYCLE



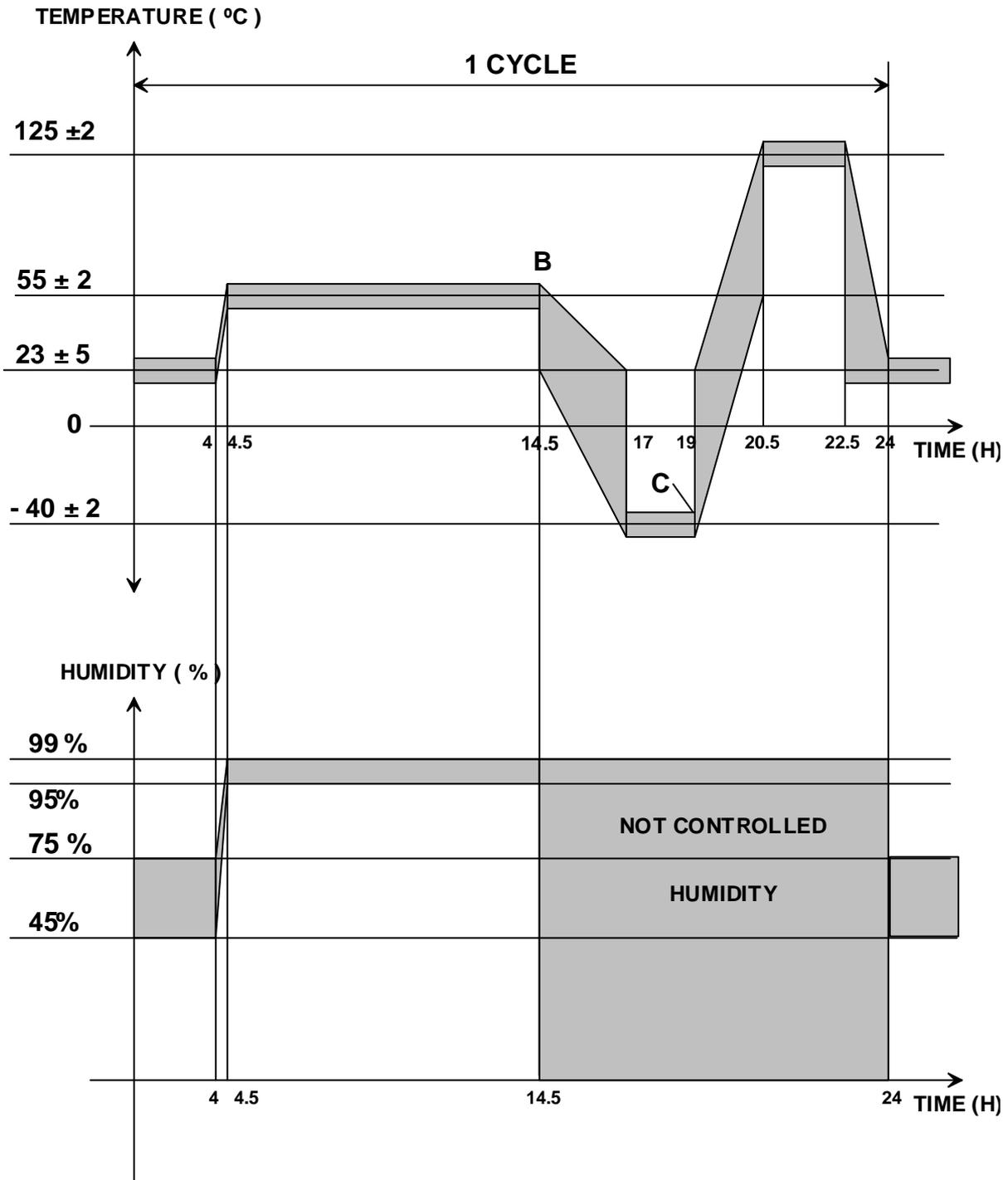
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APPENDIX 3

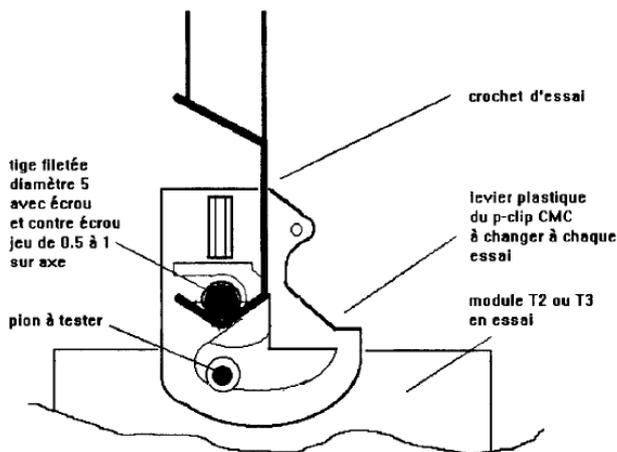
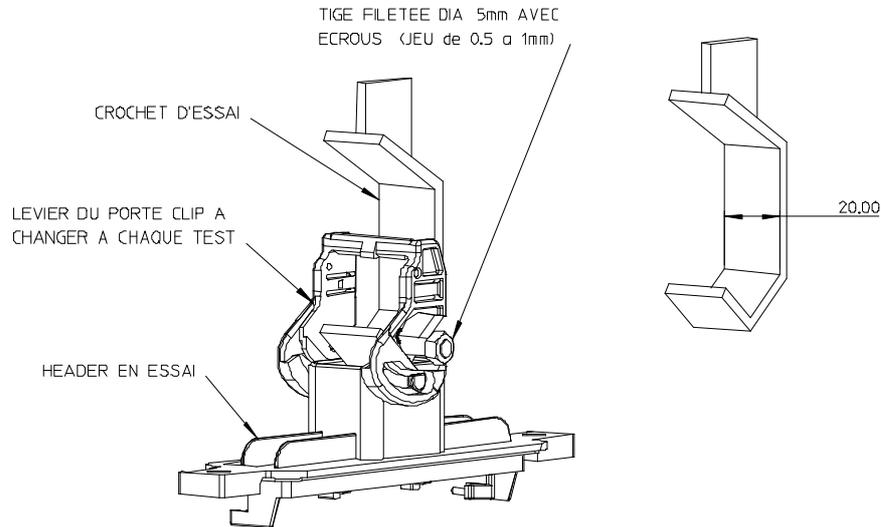
TEMPERATURE AND HUMIDITY CYCLING



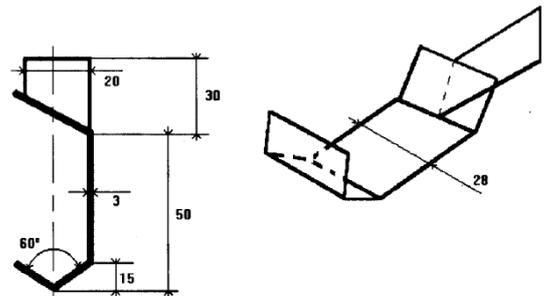
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APPENDIX 4

HEADER PIPS MECHANICAL RESISTANCE



Cotes en millimètre
Tolérance: +/- 0.5mm



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