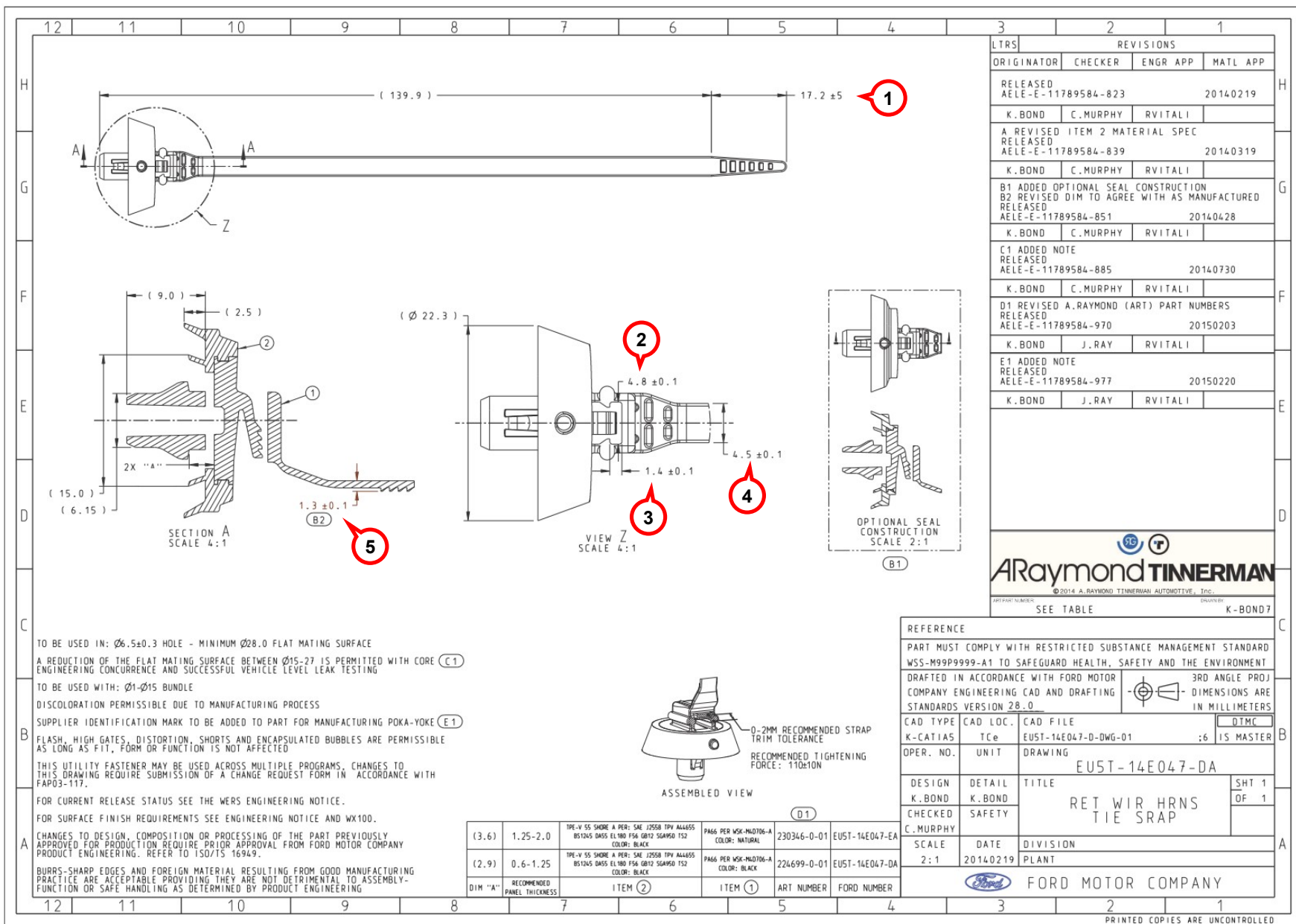


Part Submission Warrant

Part Name: <u>RET WIR HRNS TIE STRAP</u>		Cust. Part Number: <u>EU5T-14E047-DA</u>	
Shown on Drawing No. <u>EU5T-14E047-DA</u>		Org. Part Number: <u>224699001</u>	
Engineering Change Level: <u>AELE-E-11789584-977</u>		Dated: <u>20.02.2015</u>	
Additional Engineering Changes: _____		Dated: _____	
Safety and/or Government Regulation: ☐ Yes ☒ No		Purchase Order No. _____ Weight (kg): <u>0,002</u>	
Checking Aid No: _____		Checking Aid Engineering Change Level _____ Dated: _____	
ORGANIZATION MANUFACTURING INFORMATION		CUSTOMER SUBMITTAL INFORMATION	
A.Raymond Jablonec s.r.o. <u>49-504-2616</u>		Nursan Elektrik Donanım San. ve Tic. A.Ş.	
Organization Name & Supplier/Vendor Code		Customer Name/Division	
<u>Čs.Armády 27/4609</u>		Nadiye BARUTÇU	
Street Address		Buyer/Buyer Code	
<u>Jablonec nad Nisou 466 05 Czech republic</u>		_____	
City	Region	Postal Code	Country
<u>Jablonec nad Nisou</u>	<u>466 05</u>	<u>Czech republic</u>	<u>Application</u>
MATERIALS REPORTING			
Has customer-required Substances of Concern information been reported? ☒ Yes ☐ No ☐ n/a			
Submitted by IMDS or other customer format: <u>IMDS ID - 678540979</u>			
Are polymeric parts identified with appropriate ISO marking codes? ☐ Yes ☐ No ☒ n/a			
REASON FOR SUBMISSION (Check at least one)			
☒ Initial Submission			
☐ Engineering Change(s)			
☐ Tooling: Transfer, Replacement, Refurbishment, or additional			
☐ Correction of Discrepancy			
☐ Tooling Inactive > Than 1 year			
☐ Change to optional Construction or Material			
☐ Supplier or Material Source Change			
☐ Change in part Processing			
☐ Parts Produced at Additional Location			
☐ Other -please specify below			
<u>Cavities no : 65A - 80A,65B - 80B</u>			
REQUESTED SUBMISSION LEVEL (Check one)			
☐ Level 1 - Warrant only (and for Designated appearance items, an Appearance Approval Report) submitted to customer.			
☐ Level 2 - Warrant with product samples and limited supporting data submitted to customer			
☒ Level 3 - Warrant with product samples and complete supporting data submitted to customer.			
☐ Level 4 - Warrant and other requirements as defined by customer.			
☐ Level 5 - Warrant with product samples and complete supporting data reviewed at organization's manufacturing location			
SUBMISSION RESULTS			
The Result for ☒ dimensional measurements ☒ material and functional tests ☐ appearance criteria ☒ statistical process package			
These results meet all design record requirements: ☒ Yes ☐ No (If "No" - Explanation Required)			
Mold/Cavity/Production Process <u>400009343 / 32</u>			
DECLARATION			
I affirm that the samples represented by this warrant are representative of our parts which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of <u>20000 / 8 hours.</u>			
I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.			
EXPLANATION/COMMENTS: <u>A. Raymond considers the FMEA proprietary and our policy is not distribute it but make it available for review in our plant.</u>			
Is each Customer Tool properly tagged and numbered? ☐ Yes ☐ No ☒ n/a			
Organization Authorized Signature <u></u>		Date <u>01.03.2023</u>	
Print Name <u>Ondrejкова, Martina</u>		Phone No. <u>+420 483 358 109</u> FAX No. _____	
Title <u>Quality engineer</u>		E-mail: <u>Martina.Ondrejкова@araymond.com</u>	
FOR CUSTOMER USE ONLY (IF APPLICABLE)			
PPAP Warrant Disposition: ☐ Approved ☐ Rejected ☐ Other _____			
Customer Signature: _____		Date: _____	
Print Name: _____		Customer Tracking Number (optional): _____	



Appendix C - Production Part Approval, Dimensional Results

DAIMLERCHRYSLER



Production Part Approval Dimensional Test Results

ARaymond

A. RAYMOND JABLONEC s.r.o.

ORGANIZATION: A.Raymond Jablonec s.r.o.						PART NUMBER: EU5T-14E047-DA		
SUPPLIER/VENDOR CODE: 49-504-2616						PART NAME: RET WIR HRNS TIE STRAP		
ARAYMOND PART NO.: 224699001						DESIGN RECORD CHANGE LEVEL:		
INSPECTION FACILITY: TW - Torque Wrench OS - 3D Optical Scanner						ENGINEERING CHANGE DOCUMENTS:		
3D - 3D Measuring Machine GP - Gauge Plug OP - Optical Projector						AELE-E-11789584-977 20.02.2015		
C - Calliper M - Micrometer TM - Tensile Machine								
DI - Dial Indicator PP - Profile Projector HA - Halogen moisture analyzer								
ITEM	DIMENSION / SPECIFICATION	SPECIFICATION / LIMITS	INS. FACIL.	TEST DATE	QTY. TESTED	ORGANIZATION MEASUREMENT RESULT (DATA) (cavity no. 1, cavity no. 2, cavity no. 3 ...)	OK	NOT OK
01 /	length	17,20 ±0,50	OP	01.03.2023	32	17,00; 17,05; 17,03; 17,08; 17,06; 17,05; 17,02; 16,99; 16,98; 17,38; 17,00; 17,06; 17,17; 17,18; 17,21; 17,26; 17,16; 17,26; 17,29; 17,22; 17,29; 17,26; 17,11; 17,22; 17,00; 17,09; 17,22; 17,29; 17,18; 17,28; 17,36; 17,29	☒	☐
02 /	length	4,80 ±0,10	C	01.03.2023	32	4,82; 4,78; 4,78; 4,80; 4,77; 4,78; 4,76; 4,80; 4,77; 4,83; 4,79; 4,78; 4,77; 4,80; 4,78; 4,76; 4,80; 4,77; 4,78; 4,75; 4,78; 4,77; 4,75; 4,78; 4,77; 4,78; 4,78; 4,79; 4,80; 4,81; 4,78; 4,76	☒	☐
03 /	length	1,40 ±0,10	OP	01.03.2023	32	1,40; 1,42; 1,40; 1,39; 1,39; 1,40; 1,40; 1,40; 1,41; 1,42; 1,41; 1,41; 1,42; 1,41; 1,39; 1,41; 1,40; 1,40; 1,41; 1,40; 1,40; 1,41; 1,42; 1,39; 1,41; 1,42; 1,39; 1,41; 1,41; 1,42; 1,39; 1,40; 1,41; 1,41; 1,42	☒	☐
04 /	length	4,50 ±0,10	C	01.03.2023	32	4,55; 4,56; 4,55; 4,58; 4,56; 4,56; 4,57; 4,57; 4,57; 4,56; 4,56; 4,55; 4,56; 4,57; 4,57; 4,56; 4,56; 4,55; 4,56; 4,57; 4,55; 4,57; 4,57; 4,56; 4,55; 4,55; 4,57; 4,57; 4,56; 4,57; 4,55; 4,58	☒	☐
05 /	length	1,30 ±0,10	C	01.03.2023	32	1,35; 1,32; 1,33; 1,34; 1,34; 1,35; 1,34; 1,34; 1,33; 1,35; 1,34; 1,35; 1,34; 1,33; 1,31; 1,33; 1,34; 1,33; 1,32; 1,35; 1,35; 1,33; 1,35; 1,33; 1,35; 1,35; 1,36; 1,34; 1,35; 1,35; 1,36	☒	☐

Blanket statements of conformance are unacceptable for any test results.

March
2006

CFG-1003

SIGNATURE

TITLE

DATE

Ondrej kova, Mart

1.3.2023

Appendix D+E - Production Part Approval, Material and Performance Test Results



DAIMLERCHRYSLER



Production Part Approval Material
and Performance Test Results

A. RAYMOND JABLONEC s.r.o.

ORGANIZATION: A.Raymond Jablonec s.r.o.						PART NUMBER: EU5T-14E047-DA		
SUPPLIER/VENDOR CODE: 49-504-2616						PART NAME: RET WIR HRNS TIE STRAP		
ARAYMOND PART NO.: 224699001						DESIGN RECORD CHANGE LEVEL:		
INSPECTION FACILITY:						ENGINEERING CHANGE DOCUMENTS:		
TW - Torque Wrench OS - 3D Optical Scanner 3D - 3D Measuring Machine GP - Gauge Plug OP - Optical Projector C - Calliper M - Micrometer TM - Tensile Machine DI - Dial Indicator PP - Profile Projector HA - Halogen moisture analyzer						AELE-E-11789584-977		
ITEM	DIMENSION / SPECIFICATION	SPECIFICATION / LIMITS	INS. FACIL.	TEST DATE	QTY. TESTED	ORGANIZATION MEASUREMENT RESULT (DATA)	OK	NOT OK
07 /	application	to be used in: dia. 6,5±0,3 hole - minimum dia. 28 flat mating surface, thickness 0,6 - 1,25		01.03.2023	32	OK	☒	☐
08 /	application	to be used with dia. 1 - 15 bundle		01.03.2023	32	OK	☒	☐
09 /	appearance	discoloration permissible due to manufacturing process		01.03.2023	32	OK	☒	☐
10 /	appearance	flash, high gates, distortion, shorts and encapsulated bubbles are permissible as long as fit...		01.03.2023	32	OK	☒	☐
11 /	appearance	burrs, shar edges and foreign material resulting from good manufacturing practice are acceptable...		01.03.2023	32	OK	☒	☐
12 /	material	TPE-V 55 Shore A per: SAE J2558 TPV A44655 BS1245 DA55 EL 180 F56 GB12 SGA950 T52		01.03.2023	32	RTP 6091-55A	☒	☐
13 /	colour	black		01.03.2023	32	OK	☒	☐
14 /	material	PA 66 per WSK-M4D706-A		01.03.2023	32	Zytel MT 409 AHS	☒	☐

Blanket statements of conformance are unacceptable for any test results.

March
2006

CFG-1003

SIGNATURE

TITLE

DATE

Ondrej kova, Ma

1.3.2023

INSPECTION CERTIFICATE

According to EN10204 3.1

From: **Specialty Products Czech Republic s.r.o.**
5 - Jinonice
Pekarská 14/628
155 00 PRAHA
CZECH REPUBLIC

To: **A.RAYMOND JABLONEC S.R.O.**
CS. ARMADY 27
466 05 JABLONEC NAD NISOU

Your order ref: **4501061022**
Your product ref: **505002571 (ZYTMT409AHS BK010 25 KG BAG)**

Product: **ZYTMT409AHS BK010 25 KG BAG**
Identification: **EMAWJCG201**

Country of Origin: **Belgium**
Shipping Point: **GENK CLEARED WHSE 8933 B9 23 Nov 2022**
DuPont Order /
Delivery Note: **2501469850 / 7900009530**

We confirm that this product is standard according to the DuPont Standard Product Criteria.

The following values result from measurements made on a representative sample for the above mentioned lot number according to the defined sampling plan.

Characteristic	Test Method	Unit	Value	Limits	
				Lower	Upper
Water Content at Packout, %	ISO 15512	%	0,06		0,18
Melt Viscosity, Pa.s	ISO 11443	Pa.s	88	40	120

Please consult our product literature or refer all inquiries to your DuPont representative at our local Sales Office.
This certificate has been produced electronically and therefore does not require a signature.

Quality Group



RTP Polska Sp. z o.o.
ul. Ryszarda Chomicza 13 G
55-080 Nowa Wieś Wrocławska
NIP: 8971844868,
REGON: 368227750

CERTYFIKAT ANALIZY/CERTIFICATE OF ANALYSIS

22000466

Nr.kl./Cust. No.	Nr. Zam./Order No.	Data wys./Ship date
100934	A13023-001	03-08-22
Numer przedmiotu klienta/Customer item No.		
TPE-609155ABK		

TO: STRECK TRANSPORTE GMBH
FRAU EMMI LAGER BIGLER AG
BROMBACHER STR.61

DE-79539 LOERRACH

Do obsługi przez dział jakości

Niniejszym zaświadczamy, że wymienione poniżej produkty są zgodne z wszystkimi wymaganiami akceptacji firmy RTP dotyczącymi formułowania i kontroli jakości partii.

This is to certify that the product listed below conforms to all batch acceptance requirements of RTP Company formulation and quality control.

Numer partii/ Lot number	Opis/Description	Nr. zam. kl./Customer order No.
62202338P	NYLABOND 6091-55A BLACK	625864

Property	Value (Metric)	Spec (Metric)
-----	-----	-----
Specific Gravity	0,94	Rng:0,93 - 0,97
Ash Content(%)	7,07	N/A
Moisture Content(%)	0,03	Max:0,10
Apparent Viscosity(Pas-Sec)	79	Max:100
Shore A Hardness	56	Rng:54 - 60
Elastomer Tensile Strength(MPa)	3,09	Min:1,98
Elastomer Tensile Elongation(%)	256,5	Min:180,0
Tear Strength(kN/m)	13,7	Min:12,6


Quality Engineer

X Série/Production		KONTROLNÍ PLÁN / CONTROL PLAN							Pozn. / Remark:		
ARaymond MORE THAN FASTENING		Díl / Part: 224699001		Index změny / Change Level: Db / 19.01.2016		Název / Name: TIE-STRAP & SEAL - RETAINER		Číslo zákazníka / CustPart: EU5T-14E047-DA		Zákazník / Customer: Nursan Elektrik Donanım San. ve Tic. A.Ş.	
		Znak / Characteristic				Metoda / Method					
Číslo	Proces / Diagram procesu	Číslo	Popis	KI	Specifikace	Způsob kontroly	Rozsah	Četnost	Metoda kontroly	Plán reakce	
No.	Process / Flow-Chart	No.	Description	CI	Characteristics	Evaluation	Size	Frequency	Control Method	Reaction Plan	
1	Příjem základního materiálu Receipt of raw material		Dodací list Delivery note		Shoda s dokumentací According to contract	Vizuálně Visual	1	Šarže Charge	TOP 06-01-96 ; TOP 10-01-96	TOP 13-01-96 ; TOP 19-01-97	
		1	Množství Quantity		Shoda s objednávkou According to order	Vizuálně Visual	1	Šarže Charge	TOP 06-01-96 ; TOP 10-01-96	TOP 13-01-96 ; TOP 19-01-97	
		2	Kontrola hodnot uvedených na atestu Check of values mentioned on material atest		Hodnoty dle specifikace Results acc. to specification	Administrativní kontrola Administrative check	1	Šarže Charge	TOP 06-01-96 ; TOP 10-01-96	TOP 13-01-96 ; TOP 19-01-97	
		3	Kontrola balení Packaging		Bez porušení No damage	Vizuálně Visual	1	Šarže Charge	TOP 10-01-96	TOP 13-01-96 ; TOP 19-01-97	
2	Zaskladnění Storage		Příjem materiálu na hlavní sklad Material storage		Mat. označen žlutým štítkem Mat. marked by yellow label	Vizuálně Visual	1	Paleta Palette	TOP 15-01-96	TOP 13-01-96 ; TOP 19-01-97	
3	Příprava základního materiálu Raw material preparation		Druh a typ základního materiálu, použití vtoků Type of raw material, using of sprues		Shoda s dokumentací According to instruction	Vizuálně Visual	1	Paleta Palette	PP 09-14-99 ; PP 09-15-99	TOP 13-01-96 ; TOP 19-01-97	
		1	Množství Quantity		Shoda s objednávkou According to order	Vizálně Visual	1	Paleta Palette	PP 09-14-99 ; PP 09-15-99	PP 09-14-99 ; PP 09-15-99	
4	Sušení granulátu Granulate drying		Teplota a čas sušení Temperature and time of drying		Shoda s objednávkou According to order	Vizuálně Visual	1	Zakázka Order	PP 09-14-99 ; PP 09-15-99	PP 09-14-99 ; PP 09-15-99	
5	Vstřikování Injection moulding		Nasazení formy a seřízení lisu Preparation of mould and machine		Vstřikovací parametry dle SL Acc. to set-up card	Porovnáním nastavených hodnot a SL Review of set-up card and machine settings		Každé seřízení Each set-up	PP 09-01-96	TOP 13-01-96 ; TOP 19-01-97	
6	Kontrola 1.zdvihu Production approval		Kontrola 1.zdvihu Production approval		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Zakázka Order	PP 09-01-96	Přeseřdit nastavení vstřik. lisu Adjust machine setting	
		1	Vizuální kontrola Visual check		Kontrola dle Q-výkresu Check acc. to Q-drawing	Vizuálně Visual	1 zdvih 1 stroke	Zakázka Order	PP 09-01-96 ; Q-výkres	Přeseřdit nastavení vstřik. lisu Adjust machine setting	
		2	Zkoušky dle Q-výkresu Check acc. Q-drawing		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Zakázka Order	PP 09-01-96 ; Q-výkres	Přeseřdit nastavení vstřik. lisu Adjust machine setting	
		3	Hmotnost zdvihu - SPC Weigh of stroke - SPC		Dodržení regulačních mezí Cp, Cpk > 1,67	Vážení weighing	3 zdvihy 3 strokes	Zakázka Order	PP 09-01-96 ; Q-výkres	Přeseřdit nastavení vstřik. lisu Adjust machine setting	

7	Průběžná kontrola Current check	4	Významné znaky Significant characteristics	SC	Kontrola dle Q-výkresu / Requalifikace Check acc. to Q-drawing / requalification	Měření, funkční test Measuring, function test	Zakázka / 1 ročně Order / annually	Zakázka Order	PP 09-01-96 ; Q- výkres	Přeseřdit nastavení vstřik. lisu Adjust machine setting
			Průběžná kontrola Production approval		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Po 2 hod. Every 2 hours	PP 09-02-96	Informovat seřizovače Notify adjuster
		1	Vizuální kontrola Visual check		Kontrola dle Q-výkresu Check acc. to Q-drawing	Vizuálně Visual	1 zdvih 1 stroke	Po 2 hod. Every 2 hours	PP 09-02-96 ; Q- výkres	Informovat seřizovače Notify adjuster
		2	Zkoušky dle Q-výkresu Check acc. Q-drawing		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Po 2 hod. Every 2 hours	PP 09-02-96 ; Q- výkres	Informovat seřizovače Notify adjuster
		3	Hmotnost zdvihu - SPC Weigh of stroke - SPC		Dodržení regulačních mezí ; Cp, Cpk > 1,67	Vážení weighing	3 zdvihy 3 strokes	Po 2 hod. Every 2 hours	PP 09-02-96 ; Q- výkres	Informovat seřizovače Notify adjuster
8	Výstupní kontrola Final inspection	4	Významné znaky Significant characteristics	SC	Kontrola dle Q-výkresu / Requalifikace Check acc. to Q-drawing / requalification	Měření, funkční test Measuring, function test	Po 2 hod. / 1 ročně Every 2 hours / annually	Po 2 hod. Every 2 hours	PP 09-02-96 ; Q- výkres	Informovat seřizovače Notify adjuster Adjust machine setting
			Kontrola posledního zdvihu Check of last stroke		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Dávka Batch	TOP 10-01-96	TOP 13-01-96 ; TOP 19-01- 97
		1	Vizuální kontrola Visual check		Kontrola dle Q-výkresu Check acc. to Q-drawing	Vizuálně Visual	1 zdvih 1 stroke	Dávka Batch	TOP 10-01-96	TOP 13-01-96 ; TOP 19-01- 97
		2	Zkoušky dle Q-výkresu Check acc. Q-drawing		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Dávka Batch	TOP 10-01-96	TOP 13-01-96 ; TOP 19-01- 97
		3	Významné znaky Significant characteristics	SC	Kontrola dle Q-výkresu / requalifikace Check acc. to Q-drawing / requalification	Měření, funkční test Measuring, function test	Dávka / 1 ročně Batch / annually	Dávka Batch	TOP 10-01-96	TOP 13-01-96 ; TOP 19-01- 97 Adjust machine setting
9	Rekvalifikace Layout inspection and functional testing		Rekvalifikace na zástupce Layout inspection and functional testing for representative		Rozměry a fce dle PPAP výkresu Dimensions and functional testing acc. to PPAP.dwg	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	1 ročně annually	TOP 17-04-03	TOP 17-04-03 ; TOP 13-01- 96
10	Zaskladnění Storage		Hmotnost dílu Weight of part		Shoda se skl. systémem Acc. storage systém	Vážení weighing	1	Dávka Batch	PP 15-01-96 ; PP 15-06-99	TOP 13-01-96 ; TOP 19-01- 97
11	Balení Packaging		Množství a druh balení Quantity and sort of package		Shoda se skl. systémem Acc. storage systém	Vizuálně Visual	1	Dávka Batch	PP 15-01-96 ; PP 15-06-99	TOP 13-01-96 ; TOP 19-01- 97

12	Doprava Shipping		Číslo dílu a množství Part Number and quantity		Shoda s dodacím listem Acc. delivery note	Vizuálně Visual	1	Dodávka Delivery	PP 15-01-96 ; PP 15-06-99	TOP 13-01-96 ; TOP 19-01- 97
----	---------------------	--	---	--	--	--------------------	---	---------------------	------------------------------	---------------------------------

Initial Process Study - SPC

Variable characteristic - weight

Part number: **224699001**

Mould number: **400009343**

Gauge: **Sartorius LP 1200 (0 - 1200 g)**

Part name: **paska 2K**

Sample size: **3**

Char. code: **40**

Sample freq.: **0**

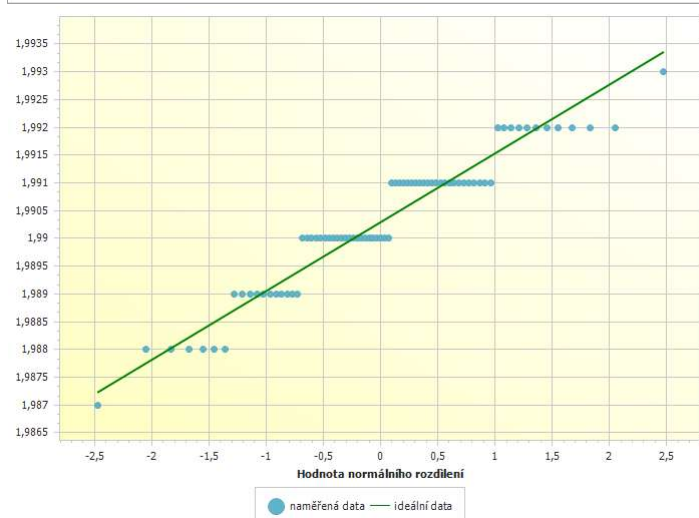
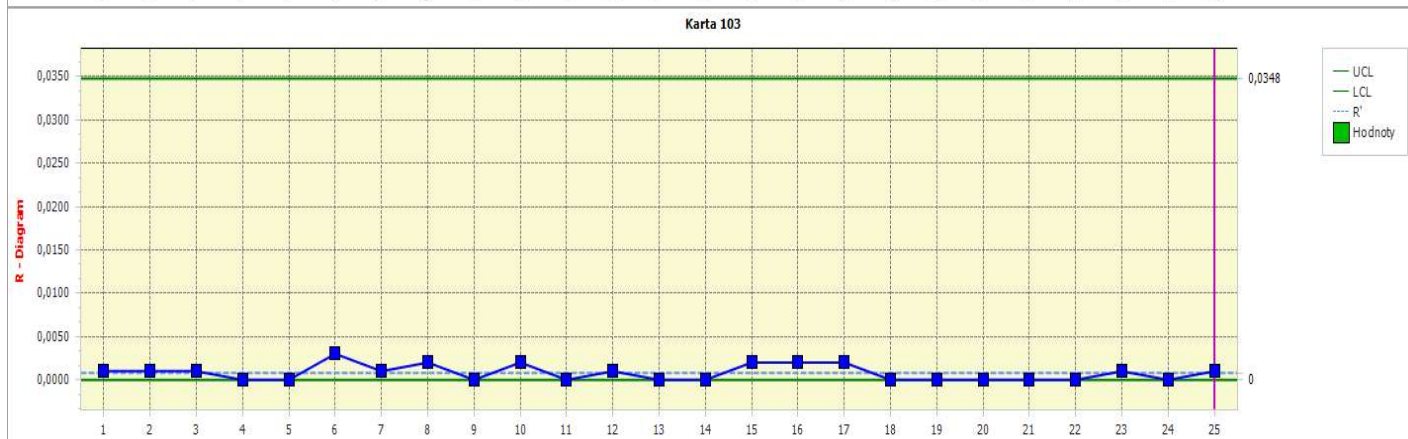
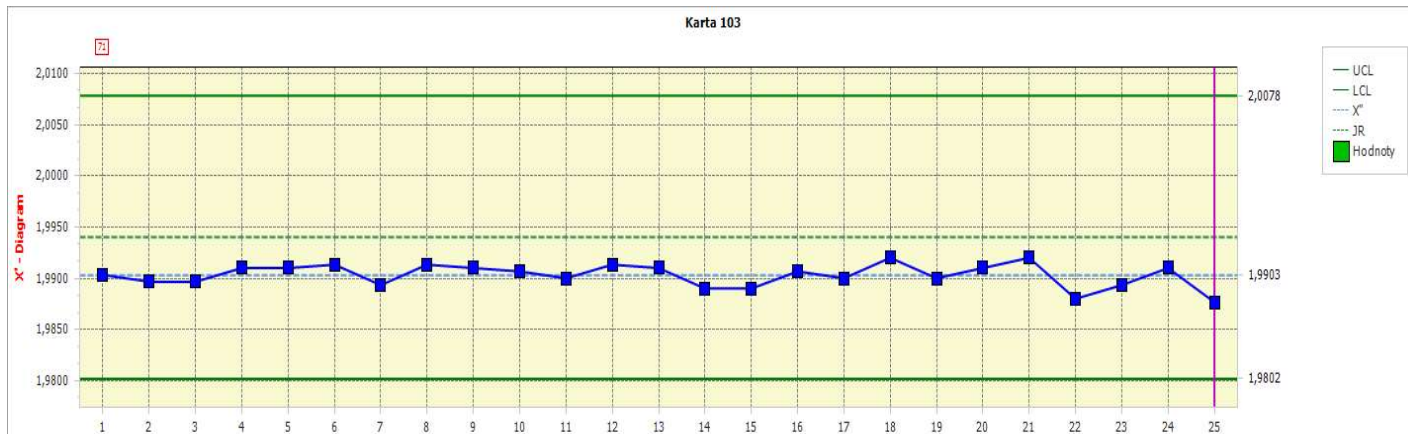
Char. name: **hmotnost / weight**

Card size: **25**

Nom.: **1,994**

USL: **2,034**

LSL: **1,954**



Pp **10,76** Cp **26,77**
 Ppk **9,77** Cpk **24,29**
 Calculation method: DIN 21747
 M1 (L1;D4) M1 (L1;D2)

X': **1,9903**

Over USL: **0**

PE: **0**

R: **0,0060**

Under LSL: **0**

Expected error % **0**

S: **0,0012**

Scope of laboratory ARaymond Jablonec

Page No.
1

From
9

Determined for: Quality Department

Issue No.: **10**

Approved by: J. Klápště

Validity: **11.05.2022**

The laboratory ARaymond Jablonec include an office of quality department and room for the 3D measuring machine.
This laboratory scope covers a tests that an internal laboratory has ability and competency to perform. Tests are performed for a new designed part, inspected parts in processes product audit and calibration.

Content

1. Testing of parts during APQP process
2. Incoming inspection
3. Outcoming inspection
4. Annual recertification
5. Calibration of gauge plugs, metal sheets and special gauges

1. Testing of parts during APQP process

 A. RAYMOND JABLONEC s.r.o.		Working Instruction				PP 10 – 04 – 98	
		Scope of laboratory ARaymond Jablonec				Page No. 2	From 9
Charakteristic	Responsible person	Range	Technique	Control method	Equipment	Standart	Record
Length (mm)	Laboratory & quality engineers		Measuring	Optically	Digital profile projector CMM (non contact scanning)	Not applicable	SW for PPAP Process, documents and protocols
				Mechanically	Calliper CMM (contact) Micrometer Dial indicator Depth gauge Gauge plugs Feeler gauges Thread gauge Inside calliper		
Fastening and application forces		25 kN	Function test	Mechanically	Tensile machine		

 A. RAYMOND JABLONEC s.r.o.		Working Instruction Scope of laboratory ARaymond Jablonec				PP 10 – 04 – 98	
						Page No. 3	From 9
Water content (%)		0 – 100 °C	Conditioning of plastic parts	Climatic tests	Climacell		
			Drying	Loss of weight	Halogen moisture analyser		
Troque (Nm)		max 75 Nm	Measuring	Mechanically	Torque wrench		

2. Incoming inspection

 A. RAYMOND JABLONEC s.r.o.		Working Instruction Scope of laboratory ARaymond Jablonec				PP 10 – 04 – 98	
						Page No. 4	From 9
<i>Characteristic</i>	<i>Responsible person</i>	<i>Range</i>	<i>Technique</i>	<i>Control Method</i>	<i>Equipment</i>	<i>Standart</i>	<i>Record</i>
Length (mm)	Laboratory & quality engineers		Measuring	Optically	Profile projector	Not applicable	SAP
				Mechanically	Calliper gauge plugs		

3. Outcoming inspection

 A. RAYMOND JABLONEC s.r.o.		Working Instruction Scope of laboratory ARaymond Jablonec				PP 10 – 04 – 98	
						Page No. 5	From 9
<i>Charakteristic</i>	<i>Responsible person</i>	<i>Range</i>	<i>Technique</i>	<i>Control method</i>	<i>Equipment</i>	<i>Standart</i>	<i>Record</i>
Length (mm)	Laboratory & quality engineers		Measuring	Optically	Digital profile projector CMM (non contact scanning)	Not applicable	SAP
				Mechanically	Calliper CMM (contact) Micrometer Dial indicator Depth gauge Gauge plugs Feeler gauges Thread gauge Inside calliper		
Fastening and application forces		25 kN	Function test	Mechanically	Tensile machine		

 A. RAYMOND JABLONEC s.r.o.		Working Instruction Scope of laboratory ARaymond Jablonec				PP 10 – 04 – 98	
						Page No. 6	From 9
Water content (%)			Drying	Loss of weight	Halogen moisture analyser		
Troque (Nm)		max 75 Nm	Measuring	Mechanically	Torque wrench		

4. Annual recertification

 A. RAYMOND JABLONEC s.r.o.		Working Instruction				PP 10 – 04 – 98	
		Scope of laboratory ARaymond Jablonec				Page No. 7	From 9
Charakteristic	Responsible person	Range	Technique	Control method	Equipment	Standart	Record
Length (mm)	Laboratory & quality engineers		Measuring	Optically	Digital profile projector CMM (non contact scanning)	Not applicable	SW for PPAP Process, documents and protocols
				Mechanically	Calliper CMM (contact) Micrometer Dial indicator Depth gauge Gauge plugs Feeler gauges Thread gauge Inside calliper		
Fastening and application forces		25 kN	Function test	Mechanically	Tensile machine		

 A. RAYMOND JABLONEC s.r.o.		Working Instruction Scope of laboratory ARaymond Jablonec				PP 10 – 04 – 98	
						Page No. 8	From 9
Water content (%)			Drying	Loss of weight	Halogen moisture analyser		
Torque (Nm)		max 75 Nm	Measuring	Mechanically	Torque wrench		

5. Calibration of gauge plugs, metal sheets and special gauges

ARaymond A. RAYMOND JABLONEC s.r.o.			Working Instruction					PP 10 – 04 – 98	
			Scope of laboratory ARaymond Jablonec					Page No. 9	From 9
Charatktteristic	Responsible person	Range	Technique	Control method	Equipment	Standart	Record	Accreditation of external laboratory	
Length (mm)	Laboratory & quality engineers			Optically	Profile projector	Not applicable	SW for maintenance of measurement system, calibration protocols	630 2021 Osvědčení o akreditaci Kalibrační laboratoř.pdf (cmi.cz) Appendix no.1 Appendix no.2	
				Mechanically	Calliper CMM Gauge plugs			SZU osvědčení a akreditaci.pdf + Appendix https://brtservis.cz/	
								ZEMAN VÁHY/CALIBRA2000 osvědčení o akreditaci Sartorius váhy/Břetislav Toman osvědčení o akreditaci + Appendix Altran CZ a.s	

ARaymond Network members*

A. RAYMOND JABLONEC s.r.o.

Cs. Armady 27 466 05

Jablonec nad Nisou 5

CZECH REPUBLIC

Tel. +420 483 358 111

Fax +420 483 358 711

araymond@araymond.com

Subject : DECLARATION LETTER (REACH)

Concerning pre-registration, as downstream user, we won't have to preregister and register our articles, but we ask our suppliers to preregister and register the substances we use that require registration.

ECHA has published (updated) substances of very high concern in January 2023 and gave us information about the SCIP database. We follow their website and communicate with our suppliers.

Our products are free of PFOA.

Best regards,



on 14th of February 2023

Adéla Bienová

EMS specialist

A.Raymond Jablonec s.r.o.

Registry number: ICO 60486414 Ústí nad
Labem

Headquarter: Jablonec nad Nisou (Czech Republic)
Tel: +420 483 358 234

* ARaymond Network: Network of independent companies in Europe, Americas, Asia and
North Africa



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選擇你的語言:
사용할 언어를 선택하십시오.
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Sélectionner la langue préférée ici:
Seleccione Preferència de Idioma Aquí:
Wählen sie hier die Sprache:
Selecione el lenguaje de preferencia aquí:
Selezionare la lingua di preferenza qui:
Burada Dil Tercihini Belirleyin:

Conflict Minerals Reporting Template (CMRT)

English

Revision 6.22
May 11, 2022

The purpose of this document is to collect sourcing information on tin, tantalum, tungsten and gold used in products

[Link to Terms & Conditions](#)

Mandatory fields are noted with an asterisk (*). Consult the instructions tab for guidance on how to answer each question.

Company Information

Company Name (*):	ARaymond Jablonec s.r.o.
Declaration Scope or Class (*):	A. Company
Description of Scope:	
Company Unique ID:	7351
Company Unique ID Authority:	
Address:	Čs armády 27, Jablonec nad Nisou, 466 05, Czech Republic
Contact Name (*):	Adéla Bienová
Email - Contact (*):	adela.bienova@email.cz
Phone - Contact (*):	+420 483 358 234
Authorizer (*):	Adéla Bienová
Title - Authorizer:	EMS specialist
Email - Authorizer (*):	adela.bienova@email.cz
Phone - Authorizer:	+420 483 358 234
Effective Date (*):	13-Dec-2022

Answer the following questions 1 - 8 based on the declaration scope indicated above

1) Is any 3TG intentionally added or used in the product(s) or in the production process? (*)	Answer	Comments
Tantalum	No	
Tin	No	
Gold	No	
Tungsten	No	

2) Does any 3TG remain in the product(s)?	Answer	Comments
Tantalum		
Tin		
Gold		
Tungsten		

3) Do any of the smelters in your supply chain source the 3TG from the covered countries? (SEC term, see definitions tab)	Answer	Comments
Tantalum		
Tin		
Gold		
Tungsten		

4) Do any of the smelters in your supply chain source the 3TG from conflict-affected and high-risk areas?	Answer	Comments
Tantalum		
Tin		
Gold		
Tungsten		

5) Does 100 percent of the 3TG (necessary to the functionality or production of your products) originate from recycled or scrap sources?	Answer	Comments
Tantalum		
Tin		
Gold		
Tungsten		

6) What percentage of relevant suppliers have provided a response to your supply chain survey?	Answer	Comments
Tantalum		
Tin		
Gold		
Tungsten		

7) Have you identified all of the smelters supplying the 3TG to your supply chain?	Answer	Comments
--	--------	----------



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사용할 언어를 선택하십시오.

表示言語をここから選択してください

Sélectionner la langue préférée ici:

Seleccione Preferència de Idioma Aquí:

Wählen sie hier die Sprache:

Selecione el lenguaje de preferencia aquí:

Selezionare la lingua di preferenza qui:

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Conflict Minerals Reporting Template (CMRT)

English

Revision 6.22
May 11, 2022

The purpose of this document is to collect sourcing information on tin, tantalum, tungsten and gold used in products

[Link to Terms & Conditions](#)

Mandatory fields are noted with an asterisk (*). Consult the instructions tab for guidance on how to answer each question.

Tantalum		
Tin		
Gold		
Tungsten		



Select Language Preference Here:
通過得る語言:
사용할 언어를 선택하십시오.
表示言語をここから選択してください
Sélectionner la langue préférée ici:
Seleccione Preferència de Idioma Aquí:
Wählen sie hier die Sprache:
Selecione el lenguaje de preferencia aquí:
Selezionare la lingua di preferenza qui:
Burada Dil Tercihini Belirleyin:

Conflict Minerals Reporting Template (CMRT)

English

Revision 6.22
May 11, 2022

The purpose of this document is to collect sourcing information on tin, tantalum, tungsten and gold used in products

[Link to Terms & Conditions](#)

Mandatory fields are noted with an asterisk (*). Consult the instructions tab for guidance on how to answer each question.

8) Has all applicable smelter information received by your company been reported in this declaration?

	Answer	Comments
Tantalum		
Tin		
Gold		
Tungsten		

Answer the Following Questions at a Company Level

Question	Answer	Comments
A. Have you established a responsible minerals sourcing policy?	Yes	
B. Is your responsible minerals sourcing policy publicly available on your website? (Note – If yes, the user shall specify the URL in the comment field.)	No	
C. Do you require your direct suppliers to source the 3TG from smelters whose due diligence practices have been validated by an independent third party audit program?	Yes	
D. Have you implemented due diligence measures for responsible sourcing?	Yes	
E. Does your company conduct Conflict Minerals survey(s) of your relevant supplier(s)?	Yes, in conformance with IPC1755 (e.g., C	
F. Do you review due diligence information received from your suppliers against your company's expectations?	Yes	
G. Does your review process include corrective action management?	Yes	
H. Is your company required to file an annual conflict minerals disclosure?	No	

A.RAYMOND JABLONEC s.r.o.										MSA (GRR method)		
Part Number 200600000					Gage Name Digital optical profilprojector			Appraiser A Bradáč Petr				
Part Name Cable tie					Gage Number I 004			Appraiser B Halbych, Ondrej				
Characteristic	DT 4,9	JR 5	HT 5,1	Tolerance +/- 0,0999	Gage Type IM-7500			Appraiser C Kobr Tomáš				
Classification length			Units mm	Result Measurement system passed			Parts 10	Appraisers 3	Date 03.01.2023			

APPRaiser TRIAL	PART										AVERAGE	
	1	2	3	4	5	6	7	8	9	10		
A	1	4,947	4,953	4,938	4,935	4,942	4,963	4,95	4,934	4,957	4,946	4,9465
	2	4,946	4,952	4,937	4,936	4,942	4,961	4,95	4,932	4,958	4,948	4,9462
	3	4,946	4,953	4,938	4,938	4,942	4,962	4,95	4,935	4,959	4,946	4,9469
	AVE	4,9463	4,9527	4,9377	4,9363	4,942	4,962	4,95	4,9337	4,958	4,9467	Xa = 4,9465
	R	0,001	0,001	0,001	0,003	0	0,002	0	0,003	0,002	0,002	Ra = 0,0015
PART AVERAGE		4,9462	4,9517	4,9372	4,9364	4,9424	4,9623	4,9499	4,9337	4,9582	4,9466	X" = 4,9465Rp = 0,0287
B	1	4,946	4,951	4,937	4,939	4,941	4,964	4,948	4,935	4,958	4,946	4,9465
	2	4,947	4,952	4,937	4,937	4,943	4,964	4,95	4,933	4,96	4,947	4,947
	3	4,947	4,952	4,937	4,937	4,942	4,961	4,951	4,934	4,958	4,947	4,9466
	AVE	4,9467	4,9517	4,937	4,9377	4,942	4,963	4,9497	4,934	4,9587	4,9467	Xb = 4,9467
	R	0,001	0,001	0	0,002	0,002	0,003	0,003	0,002	0,002	0,001	Rb = 0,0017
PART AVERAGE		4,9462	4,9517	4,9372	4,9364	4,9424	4,9623	4,9499	4,9337	4,9582	4,9466	X" = 4,9465Rp = 0,0287
C	1	4,945	4,951	4,936	4,935	4,943	4,962	4,95	4,933	4,957	4,946	4,9458
	2	4,946	4,95	4,938	4,935	4,944	4,962	4,949	4,934	4,959	4,946	4,9463
	3	4,946	4,951	4,937	4,936	4,943	4,962	4,951	4,933	4,958	4,947	4,9464
	AVE	4,9457	4,9507	4,937	4,9353	4,9433	4,962	4,95	4,9333	4,958	4,9463	Xc = 4,9462
	R	0,001	0,001	0,002	0,001	0,001	0	0,002	0,001	0,002	0,001	Rc = 0,0012
PART AVERAGE		4,9462	4,9517	4,9372	4,9364	4,9424	4,9623	4,9499	4,9337	4,9582	4,9466	X" = 4,9465Rp = 0,0287
([Ra = 0,0015] + [Rb = 0,0017] + [Rc = 0,0012]) / [Count Appraiser = 3] = R" = 0,00147												
[Max X = 4,964] - [Min X = 4,932] = Xdiff = 0,001												
* [R" = 0,001] x [D4 = 2,574] = UCLr = 0												

Repeatability - Equipment Variation (EV) $EV = \bar{R} * K_1$ $EV = 0,001 * 0,591$ $= 0,001$				<table border="1" style="width: 100%;"> <tr><th>Trials</th><th>K1</th></tr> <tr><td>2</td><td>0,8862</td></tr> <tr><td>3</td><td>0,5908</td></tr> </table>	Trials	K1	2	0,8862	3	0,5908	%EV = TV = 100 [0,001/0,009] = 9,56 %				
Trials	K1														
2	0,8862														
3	0,5908														
Reproducibility - Appraiser Variation (AV) $AV = \sqrt{(\bar{X}_{DIFF} * K_2)^2 - \left(\frac{EV^2}{n * r}\right)}$ $AV = \sqrt{(0,001 * 0,523)^2 - \left(\frac{0,001^2}{10 * 3}\right)}$ $= 0,000$ n = díly r = měření				<table border="1" style="width: 100%;"> <tr><th>Appraisers</th><th>2</th><th>3</th></tr> <tr><td>K2</td><td>0,7071</td><td>0,5231</td></tr> </table>	Appraisers	2	3	K2	0,7071	0,5231	%AV = TV = 100 [2,298E-4/0,009] = 2,54 %				
Appraisers	2	3													
K2	0,7071	0,5231													
Repeatability & Reproducibility (GRR) $GRR = \sqrt{EV^2 + AV^2}$ $GRR = \sqrt{0,001^2 + 2,298E-4^2}$ $= 0,001$				<table border="1" style="width: 100%;"> <tr><th>Parts</th><th>K3</th></tr> <tr><td>2</td><td>0,7071</td></tr> <tr><td>3</td><td>0,5231</td></tr> </table>	Parts	K3	2	0,7071	3	0,5231	%GRR = TV = 100 [0,001/0,009] = 9,89 %				
Parts	K3														
2	0,7071														
3	0,5231														
Part Variation (PV) $PV = R_P * K_3$ $PV = 0,029 * 0,315$ $= 0,009$				<table border="1" style="width: 100%;"> <tr><td>4</td><td>0,4467</td></tr> <tr><td>5</td><td>0,4030</td></tr> <tr><td>6</td><td>0,3742</td></tr> <tr><td>7</td><td>0,3534</td></tr> <tr><td>8</td><td>0,3375</td></tr> </table>	4	0,4467	5	0,4030	6	0,3742	7	0,3534	8	0,3375	%PV = TV = 100 [0,009/0,009] = 99,51 %
4	0,4467														
5	0,4030														
6	0,3742														
7	0,3534														
8	0,3375														
Tolerance (TV) $TV = \sqrt{GRR^2 + PV^2}$ $TV = \sqrt{0,001^2 + 0,009^2}$ $= 0,009$				<table border="1" style="width: 100%;"> <tr><td>9</td><td>0,3249</td></tr> <tr><td>10</td><td>0,3146</td></tr> </table>	9	0,3249	10	0,3146	ndc = 1.41[PV/GRR] = 1.41 [0,009/0,001] = 14,185 ~ 14						
9	0,3249														
10	0,3146														

Notes:	Notes: This analysis could be use as a representative for the similar group of parts ☒ yes <i>for X</i>
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TÜV®



CERTIFICATE

The Certification Body
of TÜV SÜD Asia Pacific TÜV SÜD Group

certifies that

KEYENCE

KEYENCE CORPORATION

1-3-14, Higashinakajima, Higashiyodogawa-ku,
Osaka, 533-8555, Japan

has established and applies
an Environmental Management System for

**Design, Development, Production and Service of Industrial Automation
Sensors, Measuring Instruments, Industrial Control Equipments and
Microscopes**

An audit was performed, Report No. **73589879**.

Proof has been furnished that the requirements according to

ISO 14001:2015

are fulfilled. The certificate is valid from **2021-12-19** until **2024-12-18**.

Certificate Registration No.: TUV104 06 2808

2021-12-16

Certification Body
of TÜV SÜD Asia Pacific
TÜV SÜD Group



Accreditation by the Joint Accreditation System
of Australia and New Zealand, URL
www.jas-anz.org/register

certifies that

**1-3-14, Higashinakajima, Higashiyodogawa-ku,
Osaka, 533-8555, Japan**

see enclosure

has established and applies
a Quality Management System

An audit was performed, Report No. **73589879**.

Proof has been furnished that the requirements according to

ISO 9001:2015

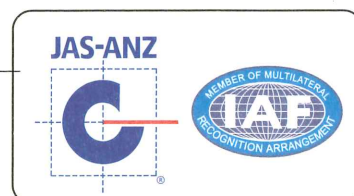
are fulfilled. The certificate is valid from **2022-01-22** until **2025-01-21**.

Certificate Registration No.: TUV100 06 2808

2021-12-16

Just back Sea

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Accreditation by the Joint Accreditation System
of Australia and New Zealand, URL
www.jas-anz.org/register

A.RAYMOND JABLONEC s.r.o.						MSA (GRR method)					
Part Number 270103000					Gage Name Posuvka digi. - caliper			Appraiser A Kobr Tomáš			
Part Name Assembly-Swivel clip					Gage Number A 084			Appraiser B Skrbek, Pavel			
Characteristic	DT 4	JR 4,5	HT 5	Tolerance +/- 0,5	Gage Type CD-15CPX			Appraiser C Janoušek Milan			
Classification length			Units mm	Result Measurement system passed			Parts 20	Appraisers 3	Date 03.01.2023		

APPRaiser TRIAL	PART										AVERAGE	
	1	2	3	4	5	6	7	8	9	10		
A	1	4,55	4,83	4,34	4,63	4,2	4,75	4,8	4,42	4,26	4,11	4,4875
	2	4,55	4,82	4,33	4,63	4,2	4,76	4,79	4,42	4,26	4,1	4,487
	3	4,54	4,83	4,34	4,64	4,2	4,75	4,8	4,42	4,25	4,1	4,4875
	AVE	4,5467	4,8267	4,3367	4,6333	4,2	4,7533	4,7967	4,42	4,2567	4,1033	Xa = 4,4873
	R	0,01	0,01	0,01	0,01	0	0,01	0,01	0	0,01	0,01	Ra = 0,0085
PART AVERAGE		4,5478	4,8311	4,3344	4,6333	4,2044	4,7544	4,7944	4,4178	4,2567	4,1044	X" = 4,4877Rp = 0,7267
B	1	4,54	4,84	4,33	4,63	4,21	4,76	4,79	4,41	4,26	4,11	4,487
	2	4,54	4,83	4,33	4,64	4,21	4,75	4,8	4,42	4,26	4,1	4,488
	3	4,55	4,84	4,34	4,63	4,2	4,76	4,8	4,42	4,26	4,11	4,4905
	AVE	4,5433	4,8367	4,3333	4,6333	4,2067	4,7567	4,7967	4,4167	4,26	4,1067	Xb = 4,4885
	R	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0	0,01	Rb = 0,0095
PART AVERAGE		4,5478	4,8311	4,3344	4,6333	4,2044	4,7544	4,7944	4,4178	4,2567	4,1044	X" = 4,4877Rp = 0,7267
C	1	4,56	4,84	4,33	4,63	4,2	4,75	4,79	4,41	4,25	4,1	4,4855
	2	4,55	4,83	4,34	4,64	4,21	4,76	4,79	4,42	4,25	4,1	4,49
	3	4,55	4,82	4,33	4,63	4,21	4,75	4,79	4,42	4,26	4,11	4,4865
	AVE	4,5533	4,83	4,3333	4,6333	4,2067	4,7533	4,79	4,4167	4,2533	4,1033	Xc = 4,4873
	R	0,01	0,02	0,01	0,01	0,01	0,01	0	0,01	0,01	0,01	Rc = 0,011
PART AVERAGE		4,5478	4,8311	4,3344	4,6333	4,2044	4,7544	4,7944	4,4178	4,2567	4,1044	X" = 4,4877Rp = 0,7267
([Ra = 0,0085] + [Rb = 0,0095] + [Rc = 0,011]) / [Count Appraiser = 3] =												R" = 0,00967
[Max X = 4,840] - [Min X = 4,1] = Xdiff = 0,001												
* [R" = 0,010] x [D4 = 2,574] = UCLr = 0												

Repeatability - Equipment Variation (EV) $EV = \bar{R} * K_1$ $EV = 0,010 * 0,591$ $= 0,006$				<table border="1" style="width: 100%;"> <tr><th>Trials</th><th>K1</th></tr> <tr><td>2</td><td>0,8862</td></tr> <tr><td>3</td><td>0,5908</td></tr> </table>	Trials	K1	2	0,8862	3	0,5908	%EV = TV = 100 [0,006/0,191] = 2,99 %				
Trials	K1														
2	0,8862														
3	0,5908														
Reproducibility - Appraiser Variation (AV) $AV = \sqrt{(\bar{X}_{DIFF} * K_2)^2 - \left(\frac{EV^2}{n * r}\right)}$ $AV = \sqrt{(0,001 * 0,523)^2 - \left(\frac{0,006^2}{20 * 3}\right)}$ $= 0,000$ n = díly r = měření				<table border="1" style="width: 100%;"> <tr><th>Appraisers</th><th>2</th><th>3</th></tr> <tr><td>K2</td><td>0,7071</td><td>0,5231</td></tr> </table>	Appraisers	2	3	K2	0,7071	0,5231	%AV = TV = 100 [0/0,191] = 0,00 %				
Appraisers	2	3													
K2	0,7071	0,5231													
Repeatability & Reproducibility (GRR) $GRR = \sqrt{EV^2 + AV^2}$ $GRR = \sqrt{0,006^2 + 0^2}$ $= 0,006$				<table border="1" style="width: 100%;"> <tr><th>Parts</th><th>K3</th></tr> <tr><td>2</td><td>0,7071</td></tr> <tr><td>3</td><td>0,5231</td></tr> </table>	Parts	K3	2	0,7071	3	0,5231	%GRR = TV = 100 [0,006/0,191] = 2,99 %				
Parts	K3														
2	0,7071														
3	0,5231														
Part Variation (PV) $PV = R_p * K_3$ $PV = 0,727 * 0,253$ $= 0,191$				<table border="1" style="width: 100%;"> <tr><td>4</td><td>0,4467</td></tr> <tr><td>5</td><td>0,4030</td></tr> <tr><td>6</td><td>0,3742</td></tr> <tr><td>7</td><td>0,3534</td></tr> <tr><td>8</td><td>0,3375</td></tr> </table>	4	0,4467	5	0,4030	6	0,3742	7	0,3534	8	0,3375	%PV = TV = 100 [0,191/0,191] = 99,96 %
4	0,4467														
5	0,4030														
6	0,3742														
7	0,3534														
8	0,3375														
Tolerance (TV) $TV = \sqrt{GRR^2 + PV^2}$ $TV = \sqrt{0,006^2 + 0,191^2}$ $= 0,191$				<table border="1" style="width: 100%;"> <tr><td>9</td><td>0,3249</td></tr> <tr><td>10</td><td>0,3146</td></tr> </table>	9	0,3249	10	0,3146	ndc = 1.41[PV/GRR] = 1.41 [0,191/0,006] = 47,148 ~ 47						
9	0,3249														
10	0,3146														

Notes:	Notes: This analysis could be use as a representative for the similar group of parts ☒ yes <i>Janoušek</i>
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A.RAYMOND JABLONEC s.r.o.					MSA (GRR method)										
Part Number 205456000					Gage Name Váha - scale				Appraiser A Kovalova, Natalia						
Part Name Bushing holder					Gage Number F 012				Appraiser B Trpisovsky, Lukas						
Characteristic	DT 126,714	JR 129,3	HT 131,886	Tolerance 5,172	Gage Type Sartorius LP 1200 (0 - 1200 g)				Appraiser C Knajfl Patrik						
Classification weight			Units		Result Measurement system passed			Parts 10		Appraisers 3		Date			
APPRAISER TRIAL		PART										AVERAGE			
		1	2	3	4	5	6	7	8	9	10				
A		1	128,756	128,664	128,638	128,883	129,002	128,942	129,015	129,101	128,658	128,972	128,8631		
		2	128,752	128,675	128,639	128,881	129,005	128,952	129,009	129,111	128,657	128,977	128,8658		
		3	128,757	128,669	128,631	128,89	128,994	128,948	129,013	129,104	128,656	128,975	128,8637		
AVE			128,755	128,669 3	128,636	128,884 7	129,000 3	128,947 3	129,012 3	129,105 3	128,657	128,974 7	Xa = 128,8642		
R			0,005	0,011	0,008	0,009	0,011	0,01	0,006	0,01	0,002	0,005	Ra = 0,0077		
PART AVERAGE			128,752 1	128,667	128,632 9	128,886 7	128,999 4	128,948 1	129,010 7	129,108 1	128,656 3	128,974	X" = 128,8635Rp = 0,4752		
B		1	128,749	128,666	128,628	128,891	128,996	128,949	129,014	129,113	128,659	128,973	128,8638		
		2	128,753	128,671	128,633	128,892	129,001	128,95	129,013	129,106	128,659	128,97	128,8648		
		3	128,751	128,665	128,634	128,884	128,997	128,946	129,008	129,109	128,653	128,976	128,8623		
AVE			128,751	128,667 3	128,631 7	128,889	128,998	128,948 3	129,011 7	129,109 3	128,657	128,973	Xb = 128,8636		
R			0,004	0,006	0,006	0,008	0,005	0,004	0,006	0,007	0,006	0,006	Rb = 0,0058		
PART AVERAGE			128,752 1	128,667	128,632 9	128,886 7	128,999 4	128,948 1	129,010 7	129,108 1	128,656 3	128,974	X" = 128,8635Rp = 0,4752		
C		1	128,752	128,664	128,631	128,883	128,996	128,948	129,006	129,11	128,654	128,975	128,8619		
		2	128,75	128,661	128,629	128,886	129,003	128,947	129,01	129,107	128,657	128,972	128,8622		
		3	128,749	128,668	128,633	128,89	129,001	128,951	129,008	129,112	128,654	128,976	128,8642		
AVE			128,750 3	128,664 3	128,631	128,886 3	129	128,948 7	129,008	129,109 7	128,655	128,974 3	Xc = 128,8628		
R			0,003	0,007	0,004	0,007	0,007	0,004	0,004	0,005	0,003	0,004	Rc = 0,0048		
PART AVERAGE			128,752 1	128,667	128,632 9	128,886 7	128,999 4	128,948 1	129,010 7	129,108 1	128,656 3	128,974	X" = 128,8635Rp = 0,4752		
([Ra = 0,0077] + [Rb = 0,0058] + [Rc = 0,0048]) / [Count Appraiser = 3] =												R" = 0,0061			
[Max X = 129,11] - [Min X= 128,6] = Xdiff = 0,001 3 28															
* [R" = 0,006] x [D4 = 2,574] = UCLr = 0															
Repeatability - Equipment Variation (EV)								%EV = TV							
$EV = \bar{R} * K_1$								= 100 [0,004/0,150]							
$EV = 0,006 * 0,591$								= 2,41 %							
= 0,004															
								Trials		K1					
								2		0,8862					
								3		0,5908					
Reproducibility - Appraiser Variation (AV)								%AV = TV							
$AV = \sqrt{(\bar{X}_{DIFF} * K_2)^2 - \left(\frac{EV^2}{n * r}\right)}$								= 100 [3,595E-4/0,150]							
$AV = \sqrt{(0,001 * 0,523)^2 - \left(\frac{0,004^2}{10 * 3}\right)}$								= 0,24 %							
= 0,000															
n = díly r = měření								Appraisers		2 3					
								K2		0,7071 0,5231					
Repeatability & Reproducibility (GRR)								%GRR = TV							
$GRR = \sqrt{EV^2 + AV^2}$								= 100 [0,004/0,150]							
$GRR = \sqrt{0,004^2 + 3,595E-4^2}$								= 2,42 %							
= 0,004															
								Parts		K3					
								2		0,7071					
								3		0,5231					
Part Variation (PV)								%PV = TV							
$PV = R_P * K_3$								= 100 [0,150/0,150]							
$PV = 0,475 * 0,315$								= 99,97 %							
= 0,150															
								4		0,4467					
								5		0,4030					
								6		0,3742					
								7		0,3534					
								8		0,3375					
Tolerance (TV)								9		0,3249					
								10		0,3146					
$TV = \sqrt{GRR^2 + PV^2}$								ndc = 1.41[PV/GRR]							
$TV = \sqrt{0,004^2 + 0,150^2}$								= 1.41 [0,150/0,004]							
= 0,150								= 58,204 ~ 58							

Notes:

Notes: This analysis could be use as a representative for the similar group of parts ☒ yes

guy

This document provides basic information for correct usage of parts manufactured by the company

To achieve required mechanical properties, some parts are water conditioned. Before using the parts, it is necessary to store these parts in closed bags, see figure 1. We recommend resealing the bags after 8 hours (maximum) of open condition to maintain its mechanical properties.



The figure 1 Water conditioned parts

Parts with film hinges

Thin surfaces (see figure 2) of film hinges can become fragile during cold weather months, such as on winter season. Consequently, parts' breaking on this area maybe observed therefore we recommend before using them to heat them (20-25°C / 48 h).

For parts manufactured with polypropylene (PP) material a whitening of the material on the area when flex or bend may appear. This whitening condition is not a defect nor does it affect the fit and function.



The figure 2 Parts with film hinges

Small visual defects

Parts which have prescribed tread pattern and appearance can appear small visual defects (like burr/flash, ejector mark, parting line, burn, spots, short shot/not completely moulded, sink marks, see figure 3 to 9), these types of defects do not have negative impact for proper part usage.



The figure 3 Burr/flash



The figure 4 Ejector marks and burrs



The figure 5 Parting line



The figure 6 Burn



The figure 7 Spots



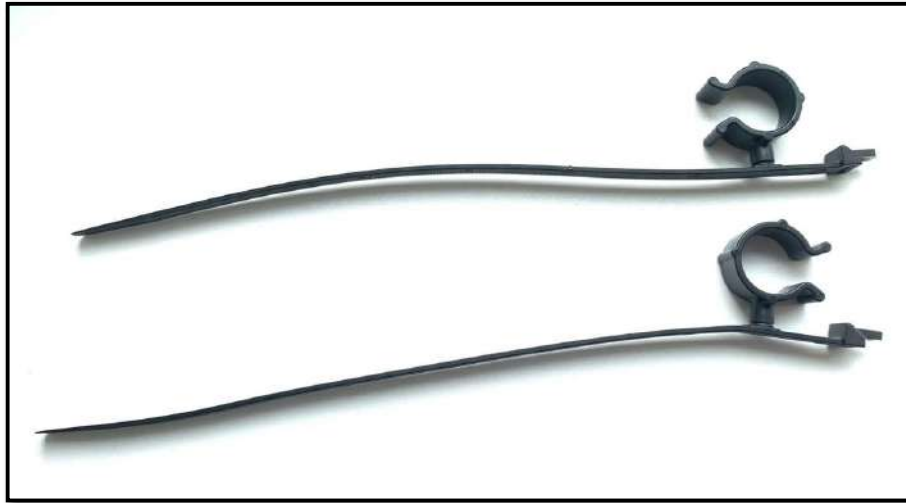
The figure 8 Short shot/not completely moulded



The figure 9 sink marks

Assembled swivel clips

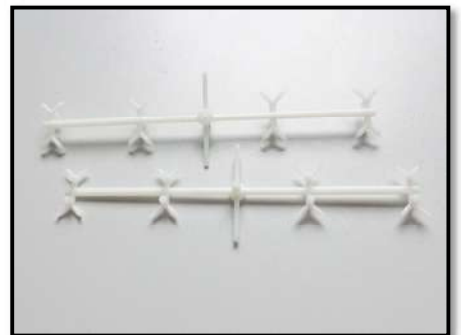
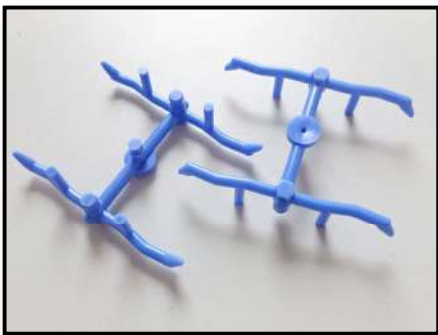
During the transport of the part can happen that clip will turn, (regarding the drawing), this is given by property of the part which is revolving according to its axis, see picture 10. Also, the straps can lightly bend because of transport and they will not be straight → even this is not the defect and it does not influence the function of the product, see figure 10.



The figure 10 swivel clips

Sprues in packaging

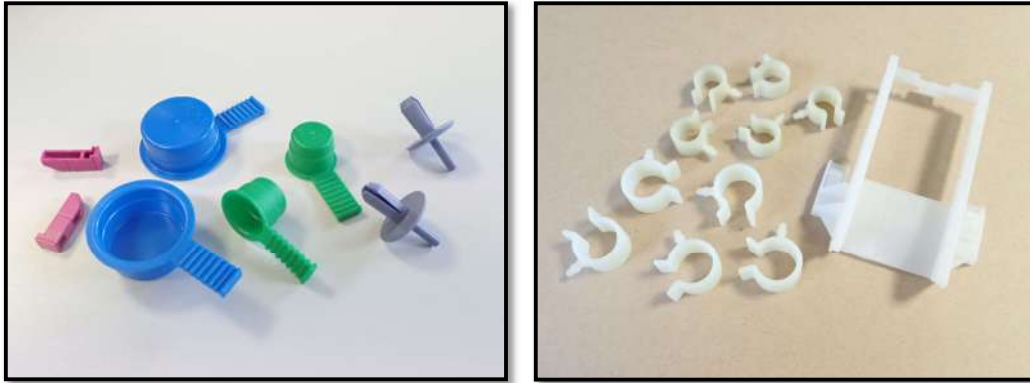
Despite maximum trying to separate sprues system from completed parts can happen appearing of sprues in the final packaging, see figure 11.



The figure 11 Sprues in packaging

Color of parts

For parts that have not been defined with shade of color by RAL or others agreed standards, are parts delivered in general range according to the color defined in the drawing (natural color, black, etc.), see figure 12. In case that the customer uses a camera for part presence inspection, the customer must notify the manufacturer prior to implementing vision camera system.



The figure 12 Parts colors

Parts application

Customers must use the parts as specified on the drawing (see figure 13). In the case of using parts on a different specification, A.Raymond Jablonec can do informative parts testing.

Nekotované rozměry převzít z 3D modelu
Missing dimensions have to be taken
from 3D data

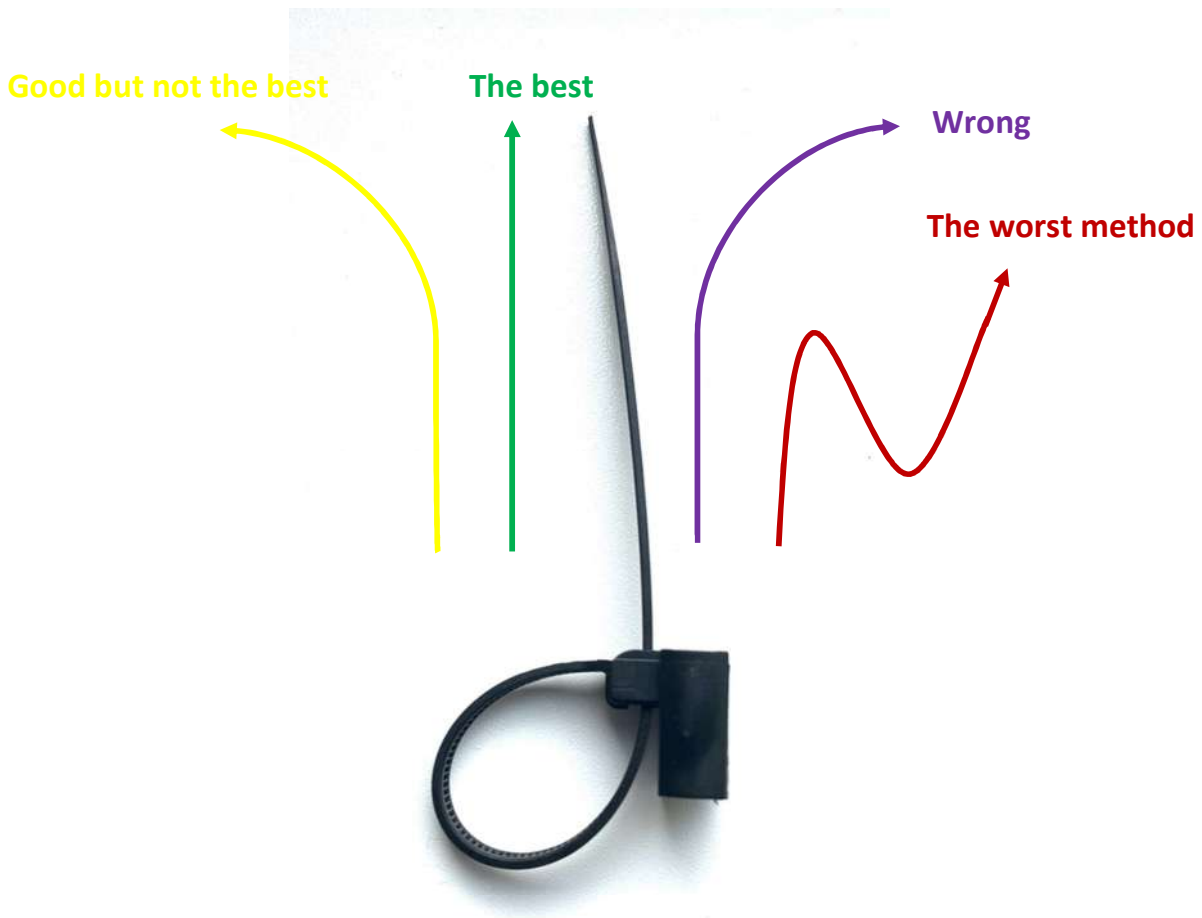
Urceno pro svazky $\varnothing$ 0.5 ... 25 mm
Upinací průměr díry $\varnothing$ 6.5+0.2 mm
Upinací tloušťka plechu: 0.6 ... 1.3 mm

Suitable for cable bundles $\varnothing$ 0.5 ... 25 mm
Fastening hole $\varnothing$ 6.5+0.2 mm
Fastening thickness: 0.6 ... 1.3 mm

The figure 13 Parts application

Cable straps

For tightening cable straps, we recommend using tightening gun set up to the force 110+/-10N, unless otherwise defined in the drawing. We recommend doing the tightening perpendicular to the bundle.
Figure 14 – comparison of tightening methods.



The figure 14 Comparison of tightening methods

Automatic assembly

If the offer has not explicit agreement to use a part for automatic assembly, please let us know. Figure 15 is the mark in the drawing.

Vor Auslegung einer automatisierten Verarbeitung des Teils sollte Ruecksprache mit Fa. A.Raymond gehalten werden.
Fully automatic processing of the part requires prior consultation with A.Raymond GmbH.

The figure 15 Mark in the drawing

Metal parts

According to a technology of manufacturing and the shape of metal parts, conditions with parts sticking and mixed with similar parts cannot be prevented 100% (see figure 16).

Due to the manufacturing technology and necessary additional operations (see process diagram), PPM 250 is set for metal parts, this PPM index corresponds to the number of non-compliant products delivered within six (6) months from the start of serial production.



The figure 16 parts stuck together