

313068



Part Submission Warrant

Part Name	Speed Gear 6	Customer Part Number	250.1.4227.37
Shown on Drawing No.	250.1.4227.37	Organization Part #	
Engineering Change Level	b C007260_MIP_1	Dated	11-gen-17
Additional Engineering Changes		Dated	
Safety and/or Government Regulation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Purchase Order No.	
Weight (kg)			0.2890
Checking Aid No.		Checking Aid Engineering Change Level	
		Dated	

ORGANIZATION MANUFACTURING INFORMATION	CUSTOMER SUBMITTAL INFORMATION
GETRAG MODUGNO	
Organization Name & Supplier/Vendor Code	Customer Name/Division
VIA DEI CICLAMINI N°4	
Street Address	Buyer/Buyer Code
MODUGNO BARI 70026 ITALY	DCT250
City Region Postal Code Country	Application

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported?
Submitted by IMDS or other customer format: Yes No n/a

Are polymeric parts identified with appropriate ISO marking codes? Yes No n/a

REASON FOR SUBMISSION (Check at least one)

<input type="checkbox"/> Initial Submission	<input type="checkbox"/> Change to Optional Construction or Material
<input checked="" type="checkbox"/> Engineering Change(s)	<input type="checkbox"/> Supplier or Material Source Change
<input type="checkbox"/> Tooling: Transfer, Replacement, Refurbishment, or additional	<input type="checkbox"/> Change in Part Processing
<input type="checkbox"/> Correction of Discrepancy	<input type="checkbox"/> Parts Produced at Additional Location
<input type="checkbox"/> Tooling Inactive > than 1 year	<input type="checkbox"/> Other - please specify below

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 results for dimensional measurements material and functional tests appearance criteria statistical process package

These results meet all drawing and specification requirements: Yes NO (If "NO" - Explanation Required)

Mold / Cavity / Production Process _____

DECLARATION

I hereby 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 2000 / 24 hours.

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: Drawing correction with standard Tip diameter tolerance used for topping machining (increased)

Is each Customer Tool properly tagged and numbered? Yes No n/a

Organization Authorized Signature *Camarda* Date **31/01/2017**

Print Name **Camarda Ettore** Phone No. **tel 390805858220** Fax No. _____

Title **Area 1 Manager** E-mail **ettore.camarda@magna.com**

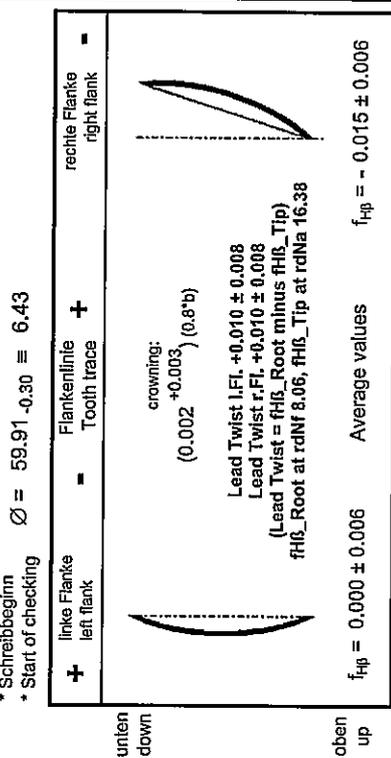
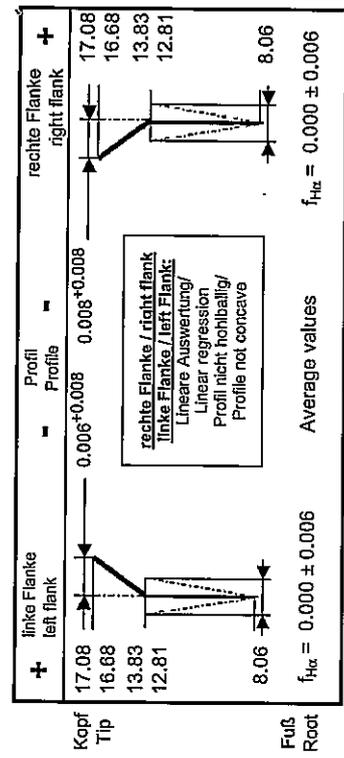
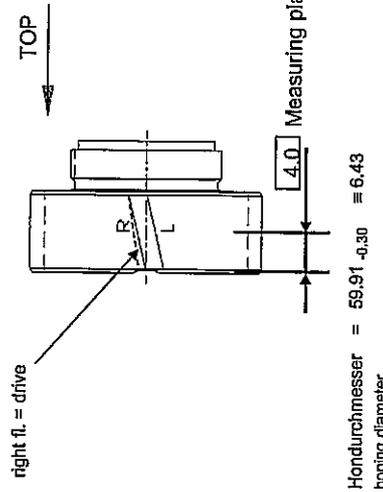
FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: Approved Rejected Other

Customer Signature *J. Snellee* Date **31.01.17**

Print Name _____ Customer Tracking Number (optional) _____

STIRNRAD GEAR		Toleranzen der Verzahnung (DIN 3961 vom Aug. 1978) gültig für Maße am Einzelzahn Tolerances of bearing (DIN 3961 of Aug. 1978) valid for values at individual tooth		Toleranzen der Verzahnung (DIN 3961 vom Aug. 1978) gültig für Maße am Einzelzahn Tolerances of bearing (DIN 3961 of Aug. 1978) valid for values at individual tooth	
ausserverzahnt external	außenverzahnung external	linke Fl. left flank	rechte Fl. right flank	linke Fl. left flank	rechte Fl. right flank
Zähnezahl Number of teeth	34				
Modul Normal module	1.600000		0.009		0.014
Eingriffswinkel Normal pressure angle	17° 30' 0"				0.014
Schraubungswinkel Helix angle	29° 0' 0"		0.000		0.018
Steigungsrichtung Hand of helix	LEFT		± 0.007		
Profilschiebungswinkel Addendum modification coeff.	0.687		± 0.007		
Teilkreisdurchmesser Pitch diameter	62.198		± 0.013		0.032
Kopfkreisradius Outside diameter	68.20 -0.26		0.016		
Kopfnutkreis, theo. max. d _{ka} Tip diam. usable theo.	67.75		0.009		
Kopfnutkreis, theo. min. d _{ka} Tip diam. usable theo.	67.35				
Fußkreisradius Root diameter	58.60 -0.35				17.20
Fußnutkreisradius Root diameter usable	60.69				
Grundkreisradius Base circle radius	29.256				
Grundkreisdurchmesser Base diameter	58.512				
Normalzahnstärke Normal tooth thickness	3.129				
Normalzahnstärke min. s _n	3.099				
Meßzähnezahl Number of teeth spanned	k				
Zahnweite max. W _k					
Zahnweite min. W _k					
Meßkugeldurchmesser D _M	2.5000				
Diam. Zweikugelmäß max. M _{sk} Measurement o. balls	66.757				
Diam. Zweikugelmäß min. M _{sk} Measurement o. balls	66.679				
Verdrehtflankenspiel Circumferential backlash	0.070 0.181				



* f_{flot} (zwischen dNf und dem Schreibbeginn ds) max f_{flot}/2, jedoch 0.003 zulässig
* f_{flot} (between dNf and start of checking ds) max f_{flot}/2, 0.003 allowable.

Profil- und Flankenlinienprüfung nach VDI/VDE 2612
Tabellenwerte für F_p und f_{HP} sind auf die gesamte Radbreite im Meßkreis d_M bezogen
Flankenlinienprüfbereich L_f = 0.8°b hochgerechnet auf 1.0°b
Begriffe für Stirnräder nach DIN 858, 3960, 3969

Listed tolerance data for F_p and f_{HP} refers to the total face width in the meas. dia. d_M
Tooth trace testing area L_f = 0.8°b calculated to 1.0°b
Terms of the tooth system according to DIN (German Industrial Standards) No. 858, 3960, 3969

Verteiler:		Schutzvermerk nach DIN 34 beachten	
Buch.	Anz.	Änd.Nr.	
1	0007260	See CO	
Abbildungen sind unmaßstäblich. Diagrams not to scale.			
Ersatz für Erstverwendung bei Getriebeart: 250.0.0004.16			
Datum	Name	Verzahnungsblatt Endkontrolle	
2014-05-08	Cricenti, Fabrizio	Final Check Gear Data	
gepr.	gepr.	Zeilungsnummer/ Drawing number	
250.1.4227.37		250.1.4227.37	

Abbildungen sind unmaßstäblich.
Diagrams not to scale.

Ersatz für
Erstverwendung bei Getriebeart: 250.0.0004.16

Verzahnungsblatt Endkontrolle
Final Check Gear Data

Zeilungsnummer/
Drawing number

250.1.4227.37

Vorbereitungsdaten siehe Verzahnungsblatt Vorbearbeitung gleicher Nr.
For pre-machining dimensions, see gear data sheet same number

Wkz-Profil siehe Werkzeugdatenblatt Nr. 250.1.4227.37
For Tooth profile, see tool data sheet number

Ruota cilindrica Evolvente/Elica



Nr. prog.: STI0412 06 0	P26 B7681	Controllore: turno d	Data: 31.01.2017 12:20
Denominazione: SR6		Numero denti z 34	Largh.fasc.dent. b 15.48mm
Numero disegno.: 250.1.4227.37-ICA		Modulo m 1.6mm	Tratto evol. La 4.75mm
Comessa/serie nr.: 1		Angolo pressione 17°30'00"	Tratto elica Lg 12.38mm
Masch.Nr.: M001	Spindel: Form. ang. elica	-29°00'00"	Inizio elab. M1 8.06mm
Untersuchungszweck: Laufende Messung	Ø Base db	58.5125mm	Palpatore Ø (#2C) 1mm
Werkzeug: Charge:	Ang. Base	-27°32'25"	Fat.scor.pr. x .687

<p>Testa Ø: 68.022mm [67.94/68.2]</p>	<p style="text-align: right;">TIRO</p>
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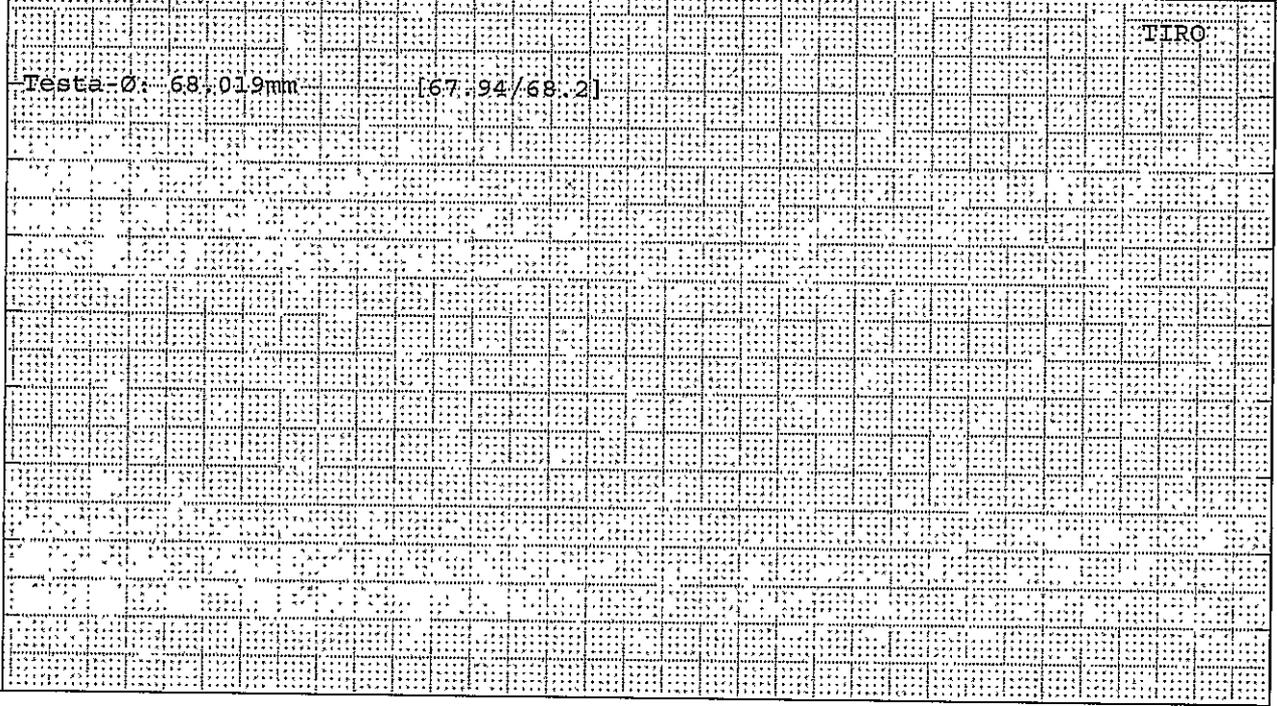
Empty grid area	<p style="text-align: center;">VDI</p>
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Ruota cilindrica Evolvente/Elica



Nr. prog.: STI0412 06 0	P26 B7681	Controllore: turno d	Data: 31.01.2017 12:22
Denominazione: SR6		Numero denti z: 34	Largh.fasc.dent. b: 15.48mm
Numero disegno.: 250.1.4227.37-ICA		Modulo m: 1.6mm	Tratto evolv. La: 4.75mm
Comessa/serie nr.: 2		Angolo pressiona: 17°30'00"	Tratto elica LS: 12.38mm
Masch.Nr.: M001	Spindel: Forme	Angolo elica: -29°00'00"	Inizio elab. MI: 8.06mm
Untersuchungszweck: Laufende Messung		Ø Base db: 58.5125mm	Palpatore Ø (#2C): 1mm
Werkzeug:	Charge:	Ang. Base: -27°32'25"	Fat.scor.pr. x: .687



Ruota cilindrica Evolvente/Elica



Nr. prog.: STI0412 06 0	P26 B7681	Controllore: turno d	Data: 31.01.2017 12:25
Denominazione: SR6		Numero denti z: 34	Largh.fasc.dent. b: 15.48mm
Numero disegno.: 250.1.4227.37-ICA		Modulo m: 1.6mm	Tratto evolv. La: 4.75mm
Commessa/serie nr.: 5		Angolo pressione: 17°30'00"	Tratto elica LB: 12.38mm
Masch.Nr.: M001	Spindel: Forme	Angolo elica: -29°00'00"	Inizio elab. M1: 8.06mm
Untersuchungszweck: Laufende Messung		Ø Base db: 58.5125mm	Palpatore Ø (#2C): 1mm
Werkzeug: Charge:		Ang. Base: -27°32'25"	Fat.scor.pr. x: .687

Testa: Ø: 68.042mm	[67.94/68.2]	TIRO

		VDI



Drawing 4227 update from index "a" to "b"
Gear Data update from index "-" to "a"

Short description:

b	1x	007260_HIP_1	VIEW MAIN: Kopfkreis-Ø/11P DIAMETER Ø68.2-0.26 war/WAS Ø68.2-0.16	20170111
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PPAP Requirements		Required	Note for ind. "b"
1	Design Records	Yes	
2	Authorized Engineering change documents	Yes	see dwg
3	Customer Engineering approval	n.a.	
4	DFMEA	NO	
5	Process flow diagram(s)	NO	
6	PFMEA	NO	only drawing correction with increased tolerance
7	Control plan	Yes	Correlation sheet change
8	Measurement system analysis studies	NO	
9	Dimensional results	Yes	
10	Records of Material / Performance test results	NO	
11	Initial process studies	NO	
12	Qualified laboratory documentation	NO	
13	Appearance Approval Report (A.A.R.)	n.a.	
14	Sample Production Parts	Yes	
15	Master sample	Yes	
16	Checking aids	n.a.	
17	Customer-Specific Requirements	NO	
18	Part Submission Warrant (PSW)	Yes	

PPAP Docs updated
Yes
Yes
Yes
Yes
Yes
Yes

Other requirements			
1	PSW Raw part	NO	
2	PSW E.P. part	NO	
3	PSW Engagement Rings	NO	

