

313069



Part Submission Warrant

Part Name	Speed Gear 6	Customer Part Number	250.1.4322.35
Shown on Drawing No.	250.1.4322.35	Organization Part #	
Engineering Change Level	c 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)			0.3680
Checking Aid No.		Checking Aid Engineering Change Level	
		Dated	

ORGANIZATION MANUFACTURING INFORMATION

CUSTOMER SUBMITTAL INFORMATION

GETRAG MODUGNO

Organization Name & Supplier/Vendor Code
VIA DEI CICLAMINI N°4

Street Address
MODUGNO BARI 70026 ITALY

City	Region	Postal Code	Country
MODUGNO	BARI	70026	ITALY

Customer Name/Division
DCT250

Buyer/Buyer Code
DCT250

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)

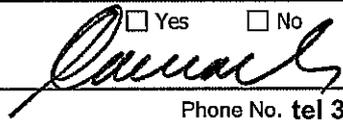
Mold / Cavity / Production Process _____

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

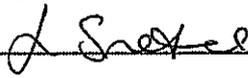
Organization Authorized Signature  Date **31/01/2017**

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

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

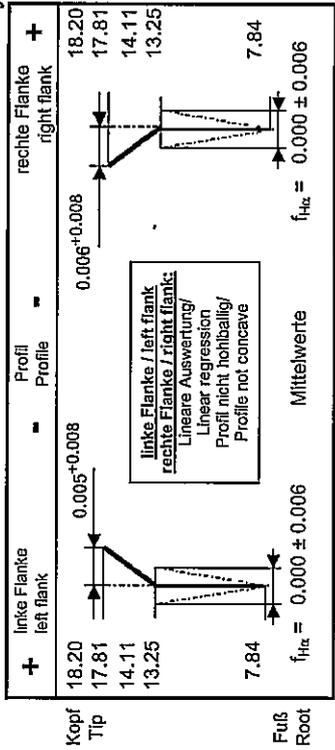
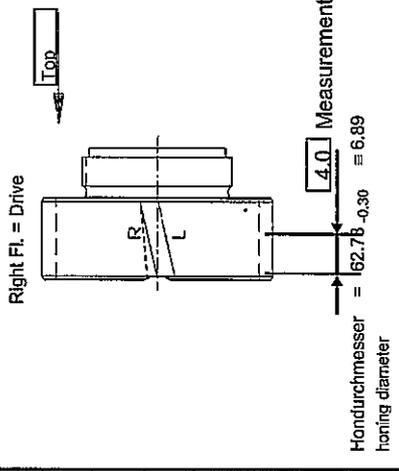
FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: Approved Rejected Other

Customer Signature  Date **31.01.17**

Print Name _____ Customer Tracking Number (optional) _____

STIRNRAD GEAR	außenverzahnt external	Toleranzen der Verzahnung (DIN 3961 vom Aug. 1978) gültig für Worm- und Einzelzahn Tolerances of gearing (DIN 3961 for Aug. 1978) valid for values at individual tooth.	
Zähnezahl Number of teeth	z	linke Fl. left flank	rechte Fl. right flank
Modul Normal module	m_n	0.009	0.014
Eingriffswinkel Normal pressure angle	α_n		0.014
Schrägungswinkel Helix angle	β		0.018
Steigungsrichtung Hand of helix	LINKS		
Profilverschiebungsfaktor Addendum modification coeff.	x	0.000	0.000
Teilkreisdurchmesser Pitch diameter	d	± 0.007	± 0.007
Kopfkreisdurchmesser Outside diameter	d_a	0.000	-0.015
Kopfnutkreis. theo. max. d_{ha} Tip diam. usable theo.		0.000	-0.013
Kopfnutkreis. theo. min. d_{ha} Tip diam. usable theo.		0.000	-0.013
Fußkreisdurchmesser Root diameter	d_f	0.000	0.009
Fußnutkreisdurchmesser Root diameter usable	d_{fr}	0.050	0.050
Grundkreisradius Base circle radius	r_b		
Grundkreisradius Base diameter	d_b		
Normalzahnstärke max. s_n Normal tooth thickness			
Normalzahnstärke min. s_n Normal tooth thickness			
Meßzahnzahl Number of teeth spanned	k		
Zahnweite max. W_k Base tangent length			
Zahnweite min. W_k Base tangent length			
Meßkugeldurchmesser Ball diameter	D_M		
Diam. Zweikugelmaß max. M_{2k} Measurement o. balls			
Diam. Zweikugelmaß min. M_{2k} Measurement o. balls			
Verdrehtflankenspiel Circumferential backlash	theo. 0.069 0.172		



* Schreibbeginn $\varnothing = 62.78_{-0.30} \approx 6.89$
* Start of checking

+	linke Flanke left flank	Profil Profile	-	rechte Flanke right flank	+
+	linke Flanke left flank	Flankenlinie Tooth trace	-	rechte Flanke right flank	-

unten
down

oben
up

Längsbilligkeit:
0.000 +0.004 (0.8* b)
Lead Twist $\pm 0.010 \pm 0.008$
(Lead Twist = $f_{H\beta}$ Fuß (pdNF=7.84) minus $f_{H\beta_Kopf}$ (pdNa=17.51))

$f_{H\beta} = 0.000 \pm 0.006$ Mittelwerte $f_{H\beta} = -0.015 \pm 0.006$

* Plusabweichung des bis zum Schreibbeginn verlängerten vermittelnden Ist-Profiles max $f_{H\beta/2}$
* Plus deviation of the average profile, extended to the start of checking, max $f_{H\beta/2}$

Profil- und Flankenlinienprüfung nach VDI/VDE 2612
Tabellenwerte für F_{β} und $f_{H\beta}$ sind auf die gesamte Radbreite im Melkreis d_M bezogen
Flankenlinienprüfbereich $L_{\beta} = 0.8*b$ hochgerechnet auf $1.0*b$
Begriffe für Stirnräder nach DIN 868, 3960, 3969

Profile and helix checking according to VDI/VDE 2612
Listed tolerance data for F_{β} and $f_{H\beta}$ refers to the total face width in the meas. dia. d_M
Tooth trace testing area $L_{\beta} = 0.8*b$ calculated to $1.0*b$
Terms of the tooth system according to DIN (German Industrial Standards) No. 868, 3960, 3969

Verteiler:		Schubvermerk nach DIN 34 beachten	
Buch:	ANZ	Datum	Name
a	1	2017017	Cricenti
Abbildungen sind unmaßstäblich. Diagrams not to scale.		Ersatz für Erstverwendung bei Getriebetypen:	
Datum		250.0.0003.10	
Name		Verzahnungsblatt Endkontrolle	
gez.		Final Check Gear Data	
gepr.		Berechnung:	
		Name:	
		Schaltrad 6 Gg	
		Zählungsummer Drawing number	
		250.1.4322.35	

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

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

Ruota cilindrica Evolvente/Elica



Nr. prog.: STI0412 06 0	P26 B7590	Controllore: turno a	Data: 31.01.2017 12:53
Denominazione: SR6		Numero denti z: 33	Largh.fasc.dent. b: 15.66mm
Numero disegno.: 250.1.4322.35-ICA		Modulo m: 1.75mm	Tratto evolv. La: 5.41mm
Commessa/serie nr.: 1		Angolo pressione: 17.5°	Tratto elica LE: 12.53mm
Masch.Nr.: M001	Spindel: FORME	Angolo elica: -27.3°	Inizio elab. M1: 7.84mm
Untersuchungszweck: Laufende Messung		Ø Base db: 61.2474mm	Palpatore Ø (#2C) 1mm
Werkzeug:	Charge:	Ang. Base: -25.94°	Fat.scor.pr. x: .542

Testa-Ø: 71.373mm	[71.34/71.6]	TIRO

	VDI



Ruota cilindrica Evolvente/Elica



Nr. prog.: STI0412_06_0	P26 B7590	Controllore: turno a	Data: 31.01.2017 12:55
Denominazione: SR6		Numero denti z 33	Largh. fasc. dent. b 15.66mm
Numero disegno.: 250.1.4322.35-ICA		Modulo m 1.75mm	Tratto evolv. La 5.41mm
Comessa/serie nr.: 2		Angolo pressione 17.5°	Tratto elica Lf 12.53mm
Masch.Nr.: M001	Spindel: Forme	Angolo elicale -27.3°	Inizio elab. Ml 7.84mm
Untersuchungszweck: Laufende Messung		Ø Base db 61.2474mm	Palpatore ø (#2C) 1mm
Werkzeug:	Charge:	Ang. Base -25.94°	Fat. scor. pr. x .542

TIRO									
Testa Ø: 71.372mm					[71.34/71.6]				
[Empty grid for data entry]									

VDI									
[Empty grid for data entry]									

Docum.archiviato elettronicamente.Archiviazione cartacea non necessaria



Ruota cilindrica Evolvente/Elica



Nr. prog.: STI0412_06 0	P26 B7590	Controllore: turno a	Data: 31.01.2017 12:56
Denominazione: SR6		Numero denti z: 33	Largh.fasc.dent. b: 15.66mm
Numero disegno.: 250.1.4322.35-ICA		Modulo m: 1.75mm	Tratto evolv. La: 5.41mm
Comessa/serie nr.: <i>M</i>		Angolo pressione: 17.5°	Tratto elica Lb: 12.53mm
Masch.Nr.: M001	Spindel: FORM	Angolo elica: -27.3°	Inizio elab. Ml: 7.84mm
Untersuchungszweck: Laufende Messung		Ø Base: 61.2474mm	Palpatore ø: (#2C) 1mm
Werkzeug:	Charge:	Ang. Base: -25.94°	Fat.scor.pr. x: .542

Testa-Ø: 71.368mm	[71.34/71.6]
TIRO	

	VDI
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Ruota cilindrica Evolvente/Elica



Nr. prog.: STI0412 06 0	P26 B7590	Controllore: turno a	Data: 31.01.2017 12:57
Denominazione: SR6		Numero denti z: 33	Largh.fasc.dent. b: 15.66mm
Numero disegno.: 250.1.4322.35-ICA		Modulo m: 1.75mm	Tratto evolv. La: 5.41mm
Comessa/serie nr.: 4		Angolo pressione: 17.5°	Tratto elica Ls: 12.53mm
Masch.Nr.: M001	spindel: Forme	Angolo elica: -27.3°	Inizio elab. Ml: 7.84mm
Untersuchungszweck: Laufende Messung		Ø Base: 61.2474mm	Palpatore Ø (#2C): 1mm
Werkzeug:	Charge:	Ang. Base: -25.94°	Fat.scor.pr. x: .542

Testa Ø: 71.39mm	[71.34/71.6]	TIRO

	VDI



Ruota cilindrica Evolvente/Elica



Nr. prog.: STI0412 06 0	P26 B7590	Controllatore: turno a	Data: 31.01.2017 12:58
Denominazione: SR6		Numero denti: 33	Largh. fasc. dent. b 15.66mm
Numero disegno.: 250.1.4322.35-ICA		Modulo m 1.75mm	Tratto evolv. 'La 5.41mm
Comessa/serie nr.: 5		Angolo pressione 17.5°	Tratto elica L8 12.53mm
Masch.Nr.: M001	Spindel: Form. elicoidale	Angolo elicoidale -27.3°	Inizio elab. M1 7.84mm
Untersuchungszweck: Laufende Messung		Ø Base db 61.2474mm	Palpatore Ø (#2C) 1mm
Werkzeug:	Charge:	Ang. Base -25.94°	Fat.scor.pr. x .542

Testa Ø: 71.383mm [71.34/71.6]	TIRO

	VDI



Drawing 4322 update from index "b" to "c"
Gear Data update from index "-" to "a"

Short description:

c	1x	007260_MIP-	VIEW MAIN: KONTAKS-Ø/TIP DIAMETER Ø71.6-0.26 WSP/WAS Ø71.6-0.16	20170111
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PPAP Requirements		Required	Note for ind. "b"	PPAP Docs updated
1	Design Records	Yes		Yes
2	Authorized Engineering change documents	Yes	see dwg	Yes
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	Yes
8	Measurement system analysis studies	NO		
9	Dimensional results	Yes		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		Yes
15	Master sample	Yes		Yes
16	Checking aids	n.a.		
17	Customer-Specific Requirements	NO		
18	Part Submission Warrant (PSW)	Yes		Yes

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

