

312981



Part Submission Warrant

Part Name	INPUT SHAFT OUTER		Customer Part Number	250.6.5176.35	
Shown on Drawing No.	250.6.5176.35		Organization Part #		
Engineering Change Level	3 Index (f)		Dated	22-ott-14	
Additional Engineering Changes			Dated		
Safety and/or Government Regulation	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Purchase Order No.		
Checking Aid No.			Weight (kg)	1,563	
Checking Aid Engineering Change Level			Dated		

ORGANIZATION MANUFACTURING INFORMATION	CUSTOMER SUBMITTAL INFORMATION
GETRAG MODUGNO	EDISON
Organization Name & Supplier/Vendor Code	Customer Name/Division
VIA DEI CICLAMINI N°4	EDISON
Street Address	Buyer/Buyer Code
MODUGNO BARI 70026 ITALY	TYP 250 EDISON
City Region Postal Code Country	Application

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? Yes No n/a

Submitted by IMDS or other customer format: _____

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: First Submission PPAP

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

Organization Authorized Signature _____ Date **27-nov-14**

Print Name **Dario Tursi** Phone No. **cell +39-393-9814554** Fax No. _____

Title **GPS 2 Leader** E-mail **dario.tursi@getrag.com**

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: Approved Rejected Other

Customer Signature _____ Date **27-11-14**

Print Name _____ Customer Tracking Number (optional) _____

Part Name INPUT SHAFT OUTER		Customer Part Number 250.6.5176.35	
Shown on Drawing No. 250.6.5176.35		Organization Part # _____	
Engineering Change Level 3 Index (e)		Dated 01-ago-14	
Additional Engineering Changes _____		Dated _____	
Safety and/or Government Regulation <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Purchase Order No. _____	
		Weight (kg) 1,563	
Checking Aid No. _____		Checking Aid Engineering Change Level _____	
		Dated _____	

ORGANIZATION MANUFACTURING INFORMATION

GETRAG MODUGNO

Organization Name & Supplier/Vendor Code _____

VIA DEI CICLAMINI N°4

Street Address _____

MODUGNO BARI	70026	ITALY
City	Region	Postal Code
		Country

CUSTOMER SUBMITTAL INFORMATION

EDISON

Customer Name/Division _____

EDISON

Buyer/Buyer Code _____

TYP 250 EDISON

Application _____

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? Yes No n/a

Submitted by IMDS or other customer format: _____

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
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EXPLANATION / COMMENTS: First Submission PPAP

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

Organization Authorized Signature Date **13-nov-14**

Print Name **Dario Tursi** Phone No. **cell +39-393-9814554** Fax No. _____

Title **GPS 2 Leader** E-mail **dario.tursi@getrag.com**

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: Approved Rejected Other

Customer Signature Date **13-11-14**

Print Name _____ Customer Tracking Number (optional) _____



Part Submission Warrant

Part Name INPUT SHAFT OUTER		Customer Part Number 250.6.5176.35	
Shown on Drawing No. 250.6.5176.35		Organization Part # _____	
Engineering Change Level 3 Index (c)		Dated 11-dic-13	
Additional Engineering Changes _____		Dated _____	
Safety and/or Government Regulation <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Purchase Order No. _____	
		Weight (kg) 1,563	
Checking Aid No. _____		Checking Aid Engineering Change Level _____	
		Dated _____	

ORGANIZATION MANUFACTURING INFORMATION

GETRAG MODUGNO

Organization Name & Supplier/Vendor Code _____

VIA DEI CICLAMINI N°4

Street Address _____

MODUGNO BARI	70026	ITALY
City	Region	Postal Code
		Country

CUSTOMER SUBMITTAL INFORMATION

EDISON

Customer Name/Division _____

EDISON

Buyer/Buyer Code _____

TYP 250 EDISON

Application _____

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? Yes No n/a

Submitted by IMDS or other customer format: _____

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

REASON FOR SUBMISSION (Check at least one)

<input checked="" type="checkbox"/> Initial Submission	<input type="checkbox"/> Change to Optional Construction or Material
<input type="checkbox"/> Engineering Change(s)	<input type="checkbox"/> Supplier or Material Source Change
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EXPLANATION / COMMENTS: First Submission PPAP

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

Organization Authorized Signature _____ Date: **31-lug-14**

Print Name **Dario Tursi** Phone No. **cell +39-393-9814554** Fax No. _____

Title **GPS 2 Leader** E-mail **dario.tursi@getrag.com**

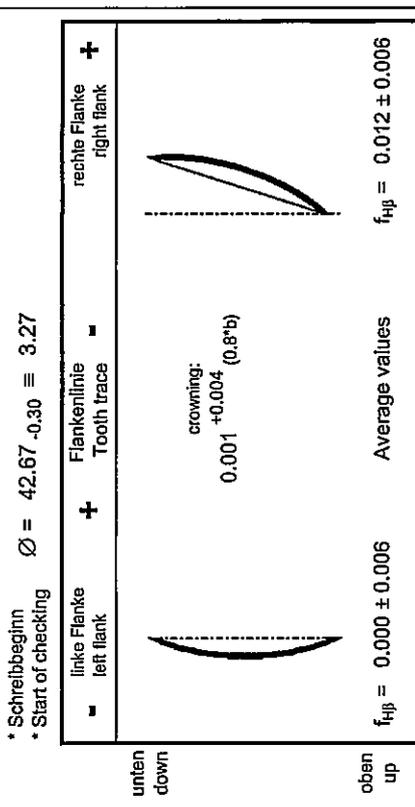
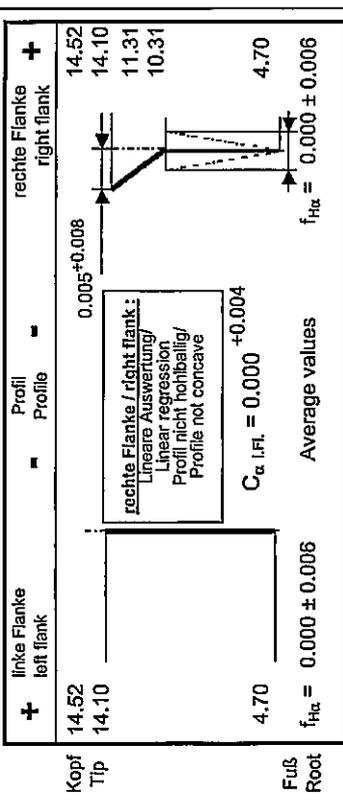
FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: Approved Rejected Other

Customer Signature _____ Date **31-07-14**

Print Name _____ Customer Tracking Number (optional) _____

STIRNRAD		Toleranzen der Verzahnung (DIN 3961 vom Aug. 1978)				(8)	
GEAR		gültig für Werte am Einzelzahn				Tolerances of gearing (DIN 3961 of Aug. 1978)	
valid for values at individual tooth		linke Fl. left flank	rechte Fl. right flank	linke Flanke left flank	rechte Flanke right flank		
Zähnezahl Number of teeth	z			# 0.004		Eingriffsteilungs-Abweich. Normal pitch error	f_{po}
Modul Normal module	m_n					Teilungs-Einzelabweichung Adjacent pitch error	f_p
Eingriffswinkel Normal pressure angle	α_n					Teilungs-Teilungsabweichung Diff. bet. adjacent pitches	f_{α}
Schrägungswinkel Helix angle	β					Teilungs-Summenabweich. Cumulative circ. pitch error	F_{pk}
Steigungsrichtung Hand of helix	RIGHT					Rundlaufabweichung Radial run-out	F_r
Profilverschiebungsfaktor Addendum modification coeff.	x					Zahndickenschwankung Range of tooth thic kn. error	R_s
Teilkreisdurchmesser Pitch diameter	d			# 0.004			
Kopfkreisdurchmesser Outside diameter	d_o			0.036			
Kopfnutkreisd. theo. max. d_{Na} Tip diam. usable theo.							
Kopfnutkreisd. theo. min. d_{Nb} Tip diam. usable theo.							
Fußkreisdurchmesser Root diameter	d_f						
Fußnutkreisdurchmesser Root diameter usable	d_{fN}						
Grundkreisradius Base circle radius	r_b						
Grundkreisdurchmesser Base diameter	d_b						
Normalzahnstärke Normal tooth thickness	max. s_n						
Normalzahnstärke Normal tooth thickness	min. s_n						
Meßzähnezahl Number of teeth spanned	k						
Zahnweite Base tangent length	max. W_k						
Zahnweite Base tangent length	min. W_k						
Meßkugeldurchmesser Ball diameter	D_M						
Diam. Zweikugelmessung Measurement o. balls	max. M_{gk}						
Diam. Zweikugelmessung Measurement o. balls	min. M_{gk}						
Verdreiflankenspiel Circumferential backlash	theo. 0.063						
	0.177						



* $f_{H\alpha}$ (zwischen d_{NF} und dem Schreibbeginn ds) max $f_{H\alpha}/2$, jedoch 0.003 zulässig

* $f_{H\beta}$ (between d_{NF} and start of checking ds) max $f_{H\beta}/2$, 0.003 allowable.

Profil- und Flankenlinienprüfung nach VDI/VDE 2612

Tabellenwerte für F_p und $f_{H\beta}$ sind auf die gesamte Radbreite im Meßkreis d_M bezogen

Flankenlinienprüfbereich $L\beta = 0.8^*b$ hochgerechnet auf 1.0^*b

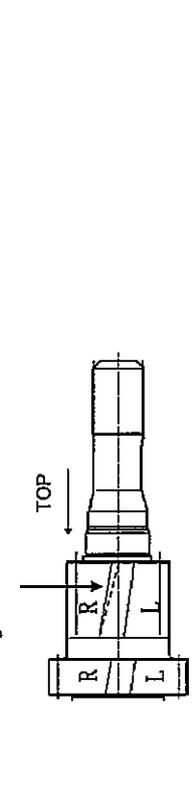
Begriffe für Stirnräder nach DIN 868, 3960, 3998

Profile and helix checking according to VDI/VDE 2612

Listed tolerance data for F_p 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, 3950, 3998



Verteiler:		
Schutzvermerk nach ISO 16016 beachten Protection per ISO 16016		
■ ■ ■ GETRAG		
GETRAG Getriebe- und Zahnradfabrik Hermann Hagenmeyer GmbH & Cie KG		
Remark:		
Ersatz für		
Erstverwendung bei Getriebe type:		
Abbildungen sind unvermaßstabilch. Diagrams not to scale.		
Buch.	Anz.	Änd.Nr.
Verzahnungsblatt Endkontrolle		
Datum	Name	
gez. 2012-04-04	Cricenti, Fabrizio	
gepr.	Final Check Gear Data	
Benennung: Naming:		
Input Shaft Outer 2nd		
Zeichnungsnummer: Drawing number:		
250.6.5176.35		

Hondurchmesser = $42.67 - 0.30 \approx 3.27$
honing diameter

Der Verlauf der Profil- und Flankenlinie muss über den Messbereich stetig sein (ein- oder mehrfache Richtungsänderungen sind nicht zulässig)

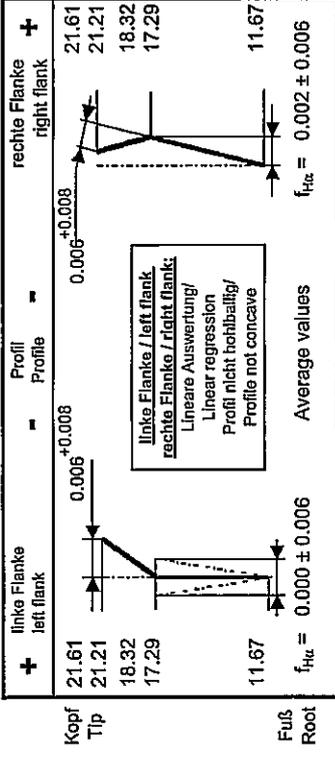
The form of the profile and helix has to be continuous (one or more changes of directions are not allowed)

Für f_p max. zwei Wellen zulässig
For f_p max. two waves allowed

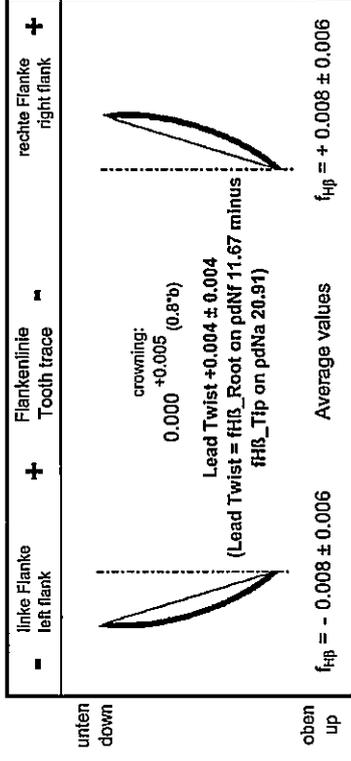
Vorbereitungsdaten siehe Verzahnungsblatt Vorbearbeitung gleicher Nr.
For pre-machining dimensions, see gear data sheet same number

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

STIRNRAD		Toleranzen der Verzahnung (DIN 3961 vom Aug. 1978)				(8)	
GEAR		gültig für Werte am Einzelzahn				Tolerances of gearing (DIN 3961 of Aug. 1978)	
valid for values at individual tooth		linke Fl. left flank		rechte Fl. right flank			
Zahnezahl Number of teeth	z	47					
Modul Normal module	m _n	1.750000					
Eingriffswinkel Normal pressure angle	α _n	17° 30' 0"					
Schrägungswinkel Helix angle	β	27° 18' 0"					
Steigungsrichtung Hand of helix		RIGHT					
Profilverschiebungsfaktor Addendum modification coeff.	x	0.200					
Teilkreisdurchmesser Pitch diameter	d	92.560					
Kopfkreisdurchmesser Outside diameter	d _a	98.00 -0.26					
Kopfnutkreisd. theo. max. d _{fa}		97.35					
Kopfnutkreisd. theo. min. d _{fa}		97.00					
Fußkreisdurchmesser Root diameter	d _f	87.50 -0.45					
Fußnutkreisdurchmesser Root diameter usable	d _{fr}	90.30					
Grundkreisradius Base circle radius	r _b	43.616					
Grundkreisdurchmesser Base diameter	d _b	87.231					
Normalzahnstärke Normal tooth thickness	max. s _n	2.970					
Normalzahnstärke Normal tooth thickness	min. s _n	2.940					
Melzähnezahl Number of teeth spanned	k						
Zahnweite max. W _k							
Zahnweite min. W _k							
Melzkugeldurchmesser Ball diameter	D _M	3.0000					
Diam. Zweikugelmessung Measurement o. balls	max. M _{sk}	97.331					
Diam. Zweikugelmessung Measurement o. balls	min. M _{sk}	97.248					
Verdrehtlankenspiel Circumferential backlash	theo.						



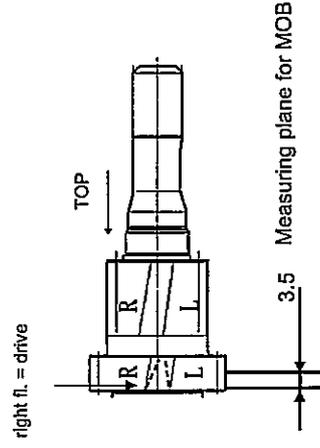
* Schreiblehnen Ø = 88.91 -0.30 ≈ 8.60
 * Start of checking



* f_{if} (zwischen d_{nf} und dem Schreiblehnen ds) max f_{ifz}/2, jedoch 0.003 zulässig
 * f_{ifz} (between d_{nf} and start of checking ds) max f_{ifz}/2, 0.003 allowable.

Profil- und Flankenlinienprüfung nach VDI/VDE 2612
 Tabellenwerte für F_p und f_{fp} sind auf die gesamte Radbreite im Meßkreis d_M bezogen
 Flankenlinienprüfbereich L_β = 0.8*b hochgerechnet auf 1.0*b
 Begriffe für Stirnräder nach DIN 868, 3960, 3988

Profile and helix checking according to VDI/VDE 2612
 Listed tolerance data for F_p and f_{fp} refers to the total face width in the meas. dia. d_M
 Tooth trace testing area L_β = 0.8*b calculated to 1.0*b
 Terms of the tooth system according to DIN (German Industrial Standards) No. 868, 3960, 3988



Hondurchmesser = 88.91 -0.30 ≈ 8.60
 honing diameter

Der Verlauf der Profil- und Flankenlinie muss über den Messbereich stetig sein (ein- oder mehrfache Richtungsänderungen sind nicht zulässig)

The form of the profile and helix has to be continuous (one or more changes of directions are not allowed)
 Für f_p max. zwei Wellen zulässig
 For f_p max. two waves allowed

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

Wtz-Profil siehe Werkzeugdatenblatt Nr.
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Verteiler:	
	Schutzvermerk nach ISO 16016 beachten Protection per ISO 16016
	■ ■ ■ GETRAG GETRAG Getriebe- und Zahnradfabrik Hermann Hagemeyer GmbH & Cie KG
Remark:	
Ersatz für Ersaverwendung bei Getriebe-type:	
Buch.	And.Nr.
Abbildungen sind unmaßstäblich. Diagrams not to scale.	
Datum	Name
gez. 04/04/2012	Cricenti, Fabrizio
gepr.	
Verzahnungsblatt Endkontrolle Final Check Gear Data	
Benennung: Naming:	
Input Shaft Outer 4th	
Zeichnungsnummer: Drawing number:	
250.6.5176.35	