



Part Name Speed Gear SR5		Customer Part Number 250.1.4224.37	
Shown on Drawing No. 250.1.4224.37		Organization Part #	
Engineering Change Level c 35622-1		Dated 23 Jan 2013	
Additional Engineering Changes		Dated	
Safety and/or Government Regulation <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Purchase Order No.	
Weight (kg) 0,4750			
Checking Aid No.		Checking Aid Engineering Change Level	
Dated			
ORGANIZATION MANUFACTURING INFORMATION		CUSTOMER SUBMITTAL INFORMATION	
GETRAG MODUGNO		RENAULT	
Organization Name & Supplier/Vendor Code		Customer Name/Division	
VIA DEI CICLAMINI N°4			
Street Address		Buyer/Buyer Code	
MODUGNO BARI	70026	ITALY	TYP 250
City	Region	Postal Code	Country
			Application
MATERIALS REPORTING			
Has customer-required Substances of Concern information been reported?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a	
Submitted by IMDS or other customer format:			
Are polymeric parts identified with appropriate ISO marking codes?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 checked="" type="checkbox"/> Other - please specify below	
REQUESTED SUBMISSION LEVEL (Check one)			
<input type="checkbox"/> Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.			
<input type="checkbox"/> Level 2 - Warrant with product samples and limited supporting data submitted to customer.			
<input checked="" type="checkbox"/> Level 3 - Warrant with product samples and complete supporting data submitted to customer.			
<input type="checkbox"/> Level 4 - Warrant and other requirements as defined by customer.			
<input type="checkbox"/> Level 5 - Warrant with product samples and complete supporting data reviewed at organization's manufacturing location.			
SUBMISSION RESULTS			
The results for <input checked="" type="checkbox"/> dimensional measurements <input checked="" type="checkbox"/> material and functional tests <input type="checkbox"/> appearance criteria <input checked="" type="checkbox"/> statistical process package			
These results meet all drawing and specification requirements: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 / 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: New documentation for first PPAP lost			
Is each Customer Tool properly tagged and numbered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a			
Organization Authorized Signature		Date 16 Jan 2015	
Print Name Pennacchia Vincenzo	Phone No. tel 390805858580	Fax No.	
Title GPS Leader	E-mail vincenzo.pennacchia@getrag.com		
FOR CUSTOMER USE ONLY (IF APPLICABLE)			
Part Warrant Disposition: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Rejected <input type="checkbox"/> Other			
Customer Signature		Date 16.01.15	
Print Name		Customer Tracking Number (optional)	

Point	Characteristic	Tolerance	Part 1	Part 2	Part 3	Part 4	Part 5
4	MDK	75,217/75,116	75,157	75,129	75,14	75,132	75,147

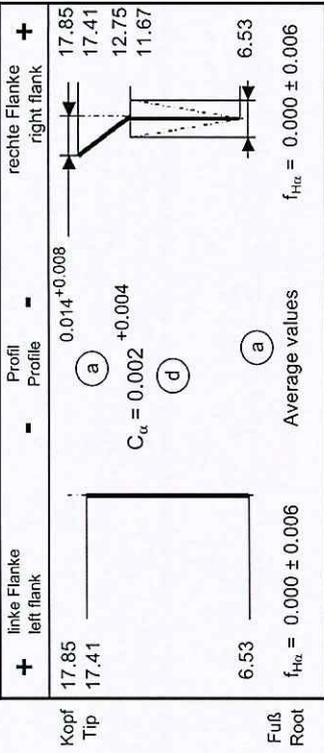
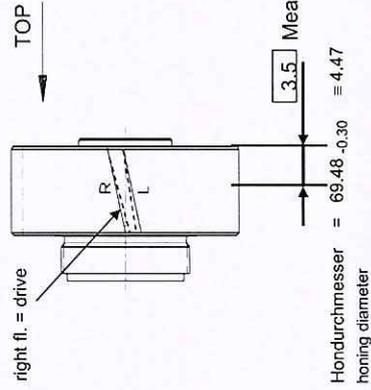
Manual measures by Marposs

SR5 2501 4225 37

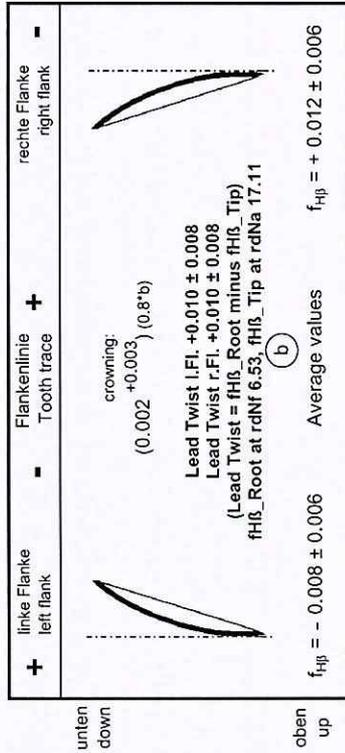
07,Jan,2015

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STIRNRAD		Toleranzen der Verzahnung (DIN 3961 vom Aug. 1978)		(8)	
GEAR		gültig für Werte am Einzelzahn		Tolerances of gearing (DIN 3961 of Aug. 1978)	
external		valid for values at individual tooth			
Zähnezahl Number of teeth	z	linke Fl. left flank	rechte Fl. right flank		
Modul Normal module	m_n	f_{fa}	f_{fb}	f_{pe}	f_{pb}
Eingriffswinkel Normal pressure angle	α_n	F_u		f_p	f_{pb}
Schrägungswinkel Helix angle	β	Total profile error		f_u	f_{pb}
Steigungsrichtung Hand of helix	LEFT	Profil-Winkelabweichung Profile angle error		Teilungs-Summenabweich. Cumulative circ. pitch error	F_{pk}
Profilschiebungsfaktor Addendum modification coeff.	x	Flanken-/Winkelabweich. Tooth alignment error		Rundlaufabweichung Radial run-out	F_r
Teilkreisradius Pitch diameter	d	Flanken-/Gesamtabweich. Total alignment error		Zahndickenschwankung Range of tooth thcktn. error	R_s
Kopfkreisradius Outside diameter	d_s	Flanken-/Formabweich. Longitudinal alignment err.		Teilungs-Wälzabweichung Radial composite error	$F_{r'}$
Kopfkreisradius Tip diam. usable theo.	d_{na}	Flanken-/Formabweich. Longitudinal alignment err.		Zweifl.-Wälzabweichung Radial composite error	$F_{r'}$
Kopfkreisradius Tip diam. usable theo.	d_{na}	Flanken-/Formabweich. Longitudinal alignment err.		Zweifl.-Wälzabweichung Radial composite error	f_r
Fußkreisradius Root diameter	d_f	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Fußkreisradius Root diameter	d_{fr}	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Fußkreisradius Root diameter usable	d_{fr}	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Grundkreisradius Base circle radius	r_b	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Grundkreisradius Base diameter	d_b	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Normalzahnstärke Normal tooth thickness	max. s_n	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Normalzahnstärke Normal tooth thickness	min. s_n	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Normalzahnstärke Normal tooth thickness	min. s_n	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Meßzähnezahl Number of teeth spanned	k	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Zahnweite Base tangent length	max. W_k	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Zahnweite Base tangent length	min. W_k	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Meßkugeldurchmesser Ball diameter	D_M	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Diam. Zweikugelmaß Measurement o. balls	max. M_{dk}	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Diam. Zweikugelmaß Measurement o. balls	min. M_{dk}	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r
Verdrehflankenspiel Circumferential backlash	theo. 0.070 0.175	Flanken-/Formabweich. Longitudinal alignment err.		Radial tooth to tooth comp. err.	f_r



* Schreibbeginn $\varnothing = 69.48 - 0.30 \approx 4.47$
 * Start of checking



$f_{Hfp} = -0.008 \pm 0.006$ Average values $f_{Hfp} = +0.012 \pm 0.006$
 * f_{fzf} (zwischen dNF und dem Schreibbeginn ds) max. $f_{fzf}/2$, jedoch 0.003 zulässig
 * f_{fzf} (zwischen dNF and start of checking ds) max. $f_{fzf}/2$, 0.003 allowable.

Profil- und Flankenlinienprüfung nach VDI/VDE 2612

Tabellenwerte für F_r und f_{Hfp} sind auf die gesamte Radbreite im Meßkreis d_M bezogen
 Flankenlinienprüfbereich $L\beta = 0.8 \cdot b$ hochgerechnet auf $1.0 \cdot b$
 Begriffe für Stirnräder nach DIN 868, 3960, 3998

Profile and helix checking according to VDI/VDE 2612

Listed tolerance data for F_r and f_{Hfp} refers to the total face width in the meas. dia. d_M

Tooth trace testing area $L\beta = 0.8 \cdot b$ calculated to $1.0 \cdot b$

Terms of the tooth system according to DIN (German Industrial Standards) No. 868, 3960, 3998

Verteiler:

Buch.	Anz.	Änd.Nr.	Datum	Name
d	1	36110	20141006	Cricenti
c	1	35639-1	20130828	Cricenti
b	1	35978	20130616	Cricenti
a	2	35392	13/05/2011	Cricenti

Abbildungen sind unmaßstäblich.
 Diagrams not to scale.

Ersatz für
 bei Getriebetypen: 250.0.0004.16

gesz.	Datum	Name	Verzahnungsblatt Endkontrolle
gesz.	2009-11-18	Paafen, Holger	Final Check Gear Data
gpr.			Benennung: Naming:

REMARK:
 GETRAG Getriebe- und Zahnradfabrik
 Hermann Hagenmeyer GmbH & Cie KG

Schalträd 5.Gg.

250.1.4225.37

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

Wkz-Profil siehe Werkzeugdatenblatt Nr. 250.1.4225.37
 For Tooth profile, see tool data sheet number

Istruzioni di controllo



Materiale: 2501422437

Descrizione: Ruota dentata libera 5.M.com Stato:Rilasciato Produzione + Calcolo costi

Operazione: 0150 Levigatura di potenza

Centro di lavoro: HNW14440 LEVIGATURA DI POTENZA SG5

Indice del disegno finito:

Data emissione:

Data aggiornamento:

15.06.2011 / Stefano Billi

09.01.2015 / Rocco Tanzella

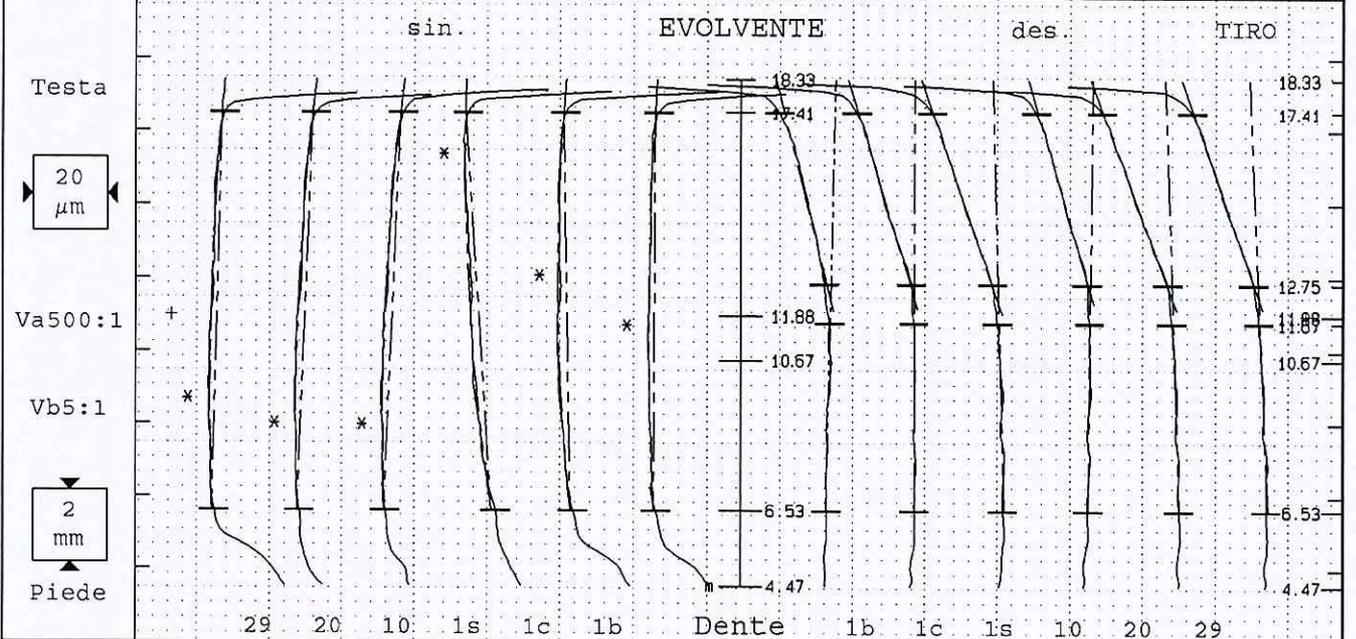
n. S.p. interno	GN 3010	Caratteristica	Misura nomin.	LTI	LTS	Strumento di controllo	Quantità	Frequenza RK1:	Quantità	Frequenza RK2:	Quantità	Frequenza Sala di misura	Cambio ut	Metodi di gestione / Documentazione
0004		Controllo 1° pz secondo Gear data 250.1.4225.3X				MVZ-400249 EVOLVENTIMETRO						1° pz 2.3.1.1-R 2		Misu: controllo primo pezzo
						MOA-416121 RUGOSIMETRO TIPO PRK						1° pz 2.3.1.1-R 2		
						MZA-450311 Calcolatore di misura E9066 Marposs						1° pz 2.3.1.1-R 2		
0010	M	Diametro Mdk	75,166 mm	75,116	75,217	MZA-450311 Calcolatore di misura E9066 Marposs	3	pz ogni 100 per macchina						CR1: calcolatore di misura
0020	M	Evolvente ed elica sec.G.D. con svergolamento				MVZ-400249 EVOLVENTIMETRO						pz ogni 100 per macchina		Misu: diagramma di dentatura
0022	M	Svergolamento evoluti				MVZ-400249 EVOLVENTIMETRO						Ultimo PZ. prima ravvivatu ra		Misu: diagramma di dentatura
0030	M	Errore globale di divisione Fp	0,000 mm	0,000	0,050	MVZ-400249 EVOLVENTIMETRO						pz. p. turno		Misu: diagramma di dentatura
0040	M	Oscillazione radiale dentat. Fr	0,000 mm	0,000	0,032	MVZ-400249 EVOLVENTIMETRO						pz. p. turno		Misu: diagramma di dentatura
0042	M	Rugosità dente Rz	0,000 mm	0,000	0,004	MOA-416121 RUGOSIMETRO TIPO PRK						1° pz 2.3.1.1-R 2		Misu: controllo primo pezzo
0044	M	Rugosità dente Rmax	0,000 mm	0,000	0,008	MOA-416121 RUGOSIMETRO TIPO PRK						1° pz 2.3.1.1-R 2		Misu: controllo primo pezzo
0046		Aspetto, privo di bava, senza danni					10	pz per rack						CR1: no documentazione
0070		Sup. dente completamente levigata Controllo visivo					10	pz per rack						CR1: no documentazione

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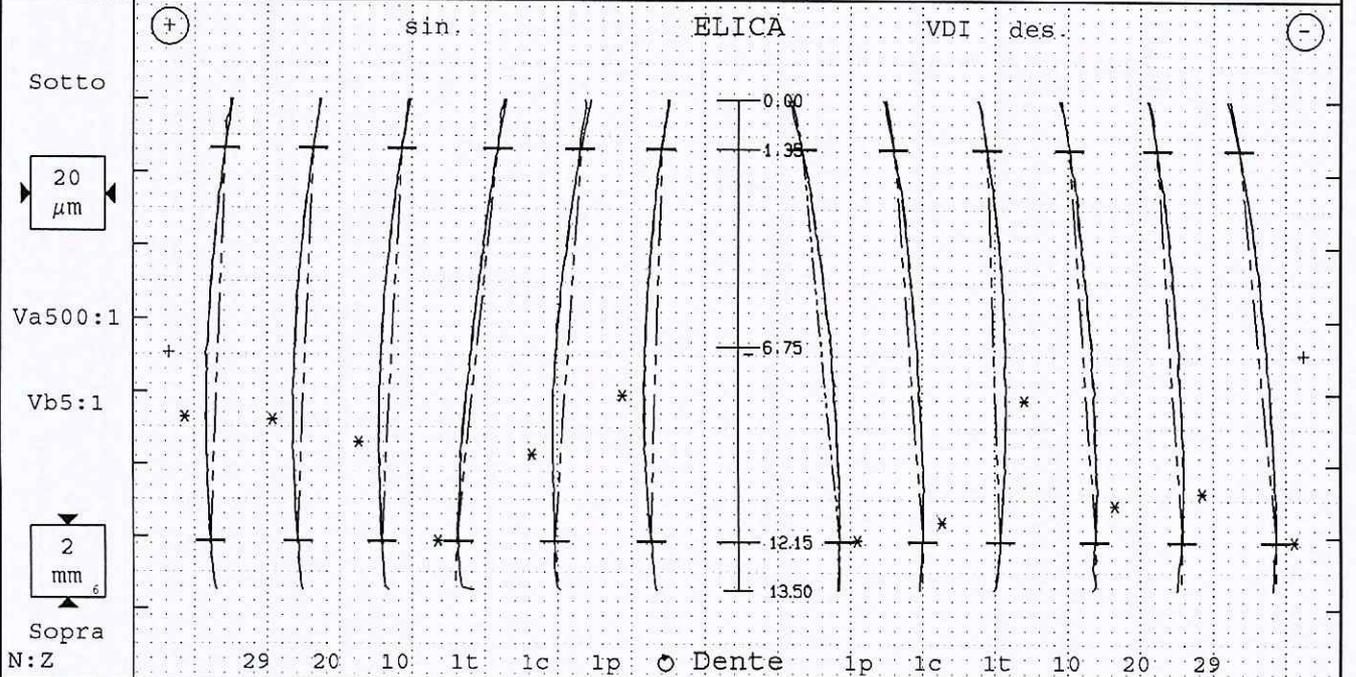
Ruota cilindrica Evolvente/Elica



Nr. prog.:	STI041005 0 P26 B7590	Controllore:	TURNO c	Data:	09.01.2015 15:57	
Denominazione:	SR5	Numero denti z	38	Largh.fasc.dent. b	13.5mm	
Numero disegno.:	250.1.4225.37-ICA	Modulo m	1.7mm	Tratto evolv. La	10.88/5.14mm	
Commessa/serie nr.:	ppap n 1	Angolo pressione	17° 30' 00"	Tratto elica Ls	10.8mm	
Masch.Nr.:	M001	Spindel: Formm	Angolo elica	-28° 00' 00"	Inizio elab. M1	6.53mm
Untersuchungszweck:	Laufende Messung	Ø Base db	68.9026mm	Palpatore Ø	(#2C)1mm	
Werkzeug:	Charge:	Ang. Base	-26° 35' 56"	Fat.scor.pr. x	-.083	



Tolerance	Medio	Val.misur[µm]							Qual	Tolerance	Val.misur[µm]							Medio	Qual		
fH _{am}	±6	-3	Var 7								±6	Var 3							-1		
fH _α	±7	-3	-3	-4	-5	7	2	0		±7	1	0	-1	1	-2	-2	-1				
F _α	14	4	3	5	5	8	3	2		9	1	1	1	1	1	1	1				
f _{fα}	9	1	1	1	1	2	1	1		9	1	1	1	1	1	1	1				
C _α	2/6	2	2	2	2	2	2	1		0	0	1	0	0	0	0	0				
fK _o	0	0	0	0	0	0	0	0		-22/-14	-14	-16	-17	-15	-17	-16	-16				
P/T-ρ[mm]	67.004		[66.75/67.1]								77.958		[77.89/78.05]								



Tolerance	Medio	Val.misur[µm]							Qual	Tolerance	Val.misur[µm]							Medio	Qual	
fH _{sm}	-8±6	-7	Var 4								12±6	Var 4							10	
fH _s	-8±13	-7	-5	-6	-7	-14	-9	-4		12±13	13	10	4	9	9	13	10			
F _s	16	3	3	3	2	5	2	4		16	1	2	6	3	4	1	3			
f _{f_s}	9	1	1	1	1	1	1	1		9	1	1	1	1	1	1	1			
C _s	2/5	3	3	3	3	2	3	3		2/5	3	2	3	2	2	2	2			
B _d		10																	9	



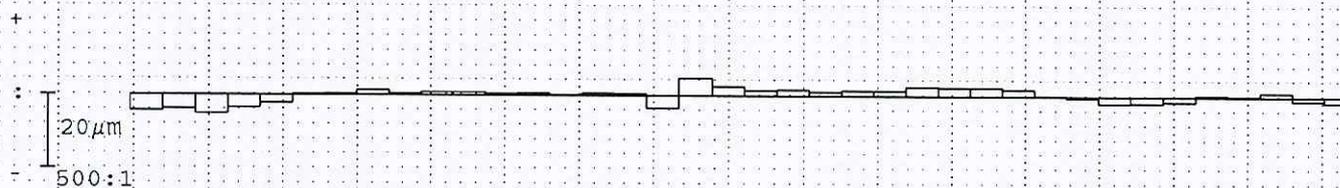
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Ruota cilindrica Divisione

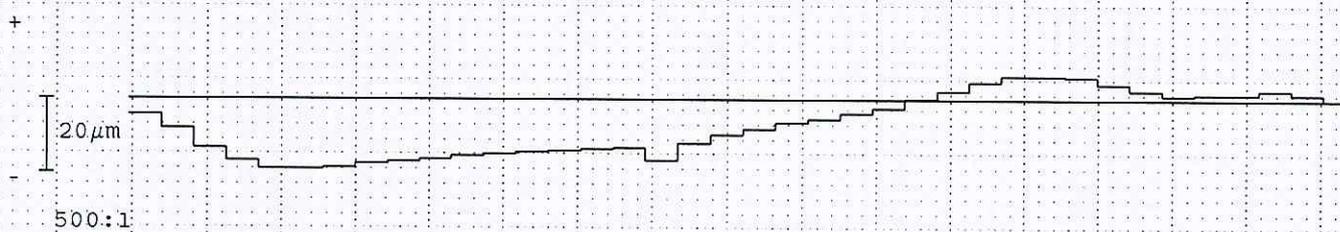


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Denominazione: SR5		Numero denti z: 38	Angolo pressione: 17° 30' 00"
Numero disegno: 250.1.4225.37-ICA		Modulo m: 1.7mm	Angolo elica: -28° 00' 00"
Commessa/serie nr.: ppap n 1		Untersuchungszweck: Laufende Messung	
Masch.Nr.: M001	Spindel: Form	Gr.zedg:	Charge:

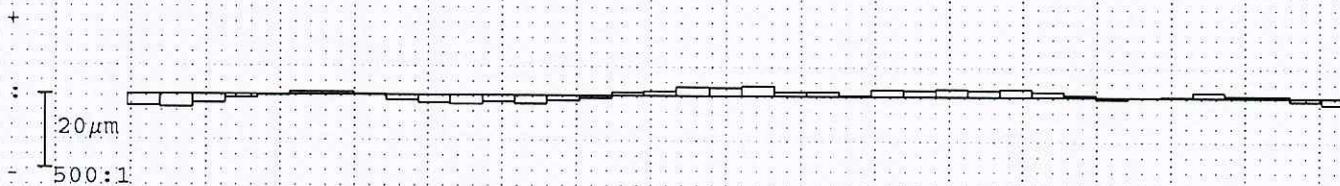
Errori singoli di divisione fp fianco sinistro



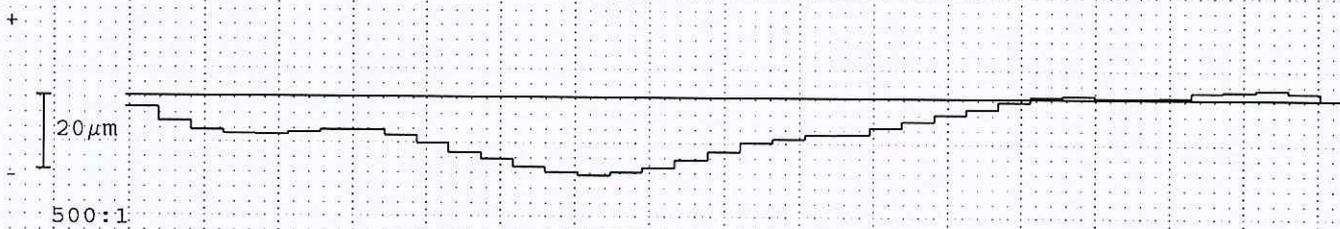
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro



Errore somma di divisione Fp fianco destro



Corsa per misura divis.: 72.884 z=6.8mm

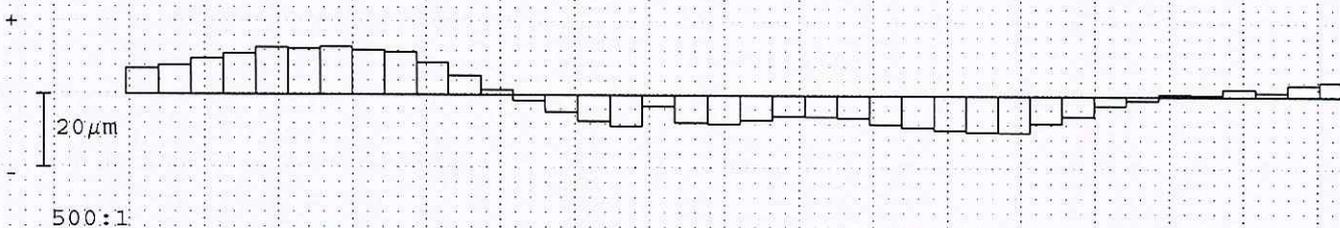
fianco sinistro

fianco destro / TIRO

	Val. misur	Qual.	Val. amm	Qual.	Val. misur	Qual.	Val. amm	Qual.
Gr. err. singoli divisione fp max	5		14		4		14	
Gr. salto di passo fu max	8		18		2		18	
Scarto di divisione Rp	10				7			
Err. globale di divisione Fp	25		50		24		50	
Err. cordale di divisione Fpz/8	19				12			

Centricità Fr (Ø-sfera =3mm)

⊙ : 20µm



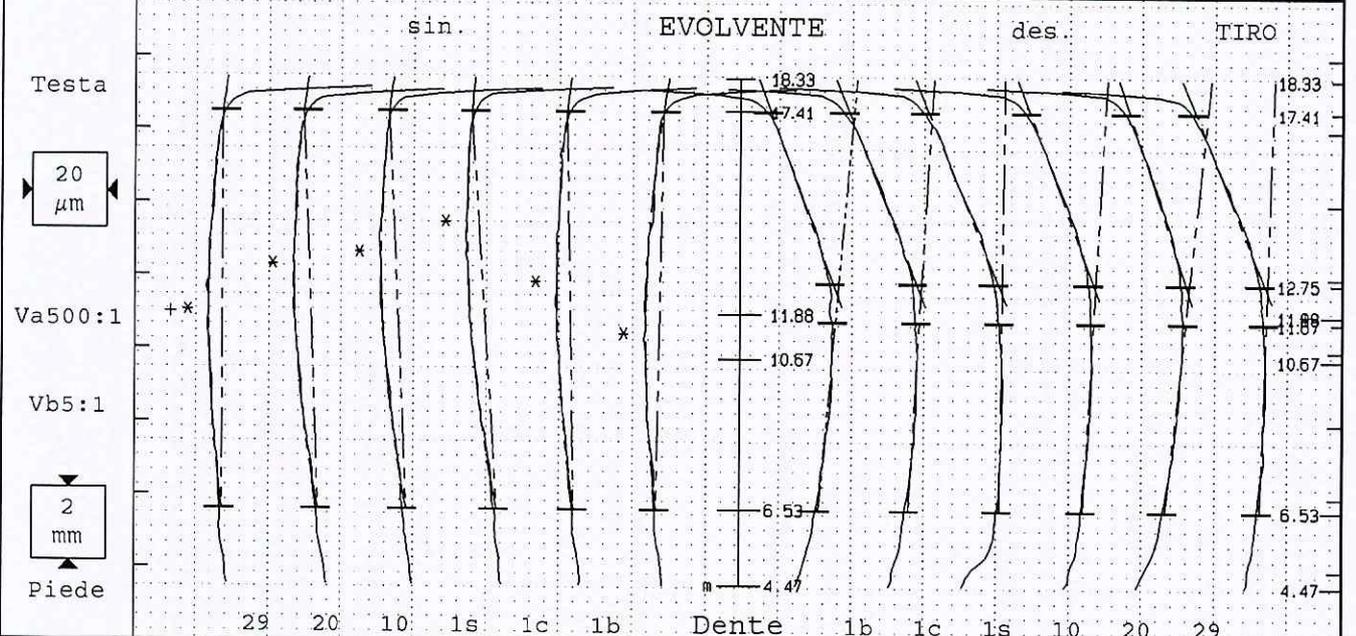
Err. di concentricità Fr	23	32	
Variab. spessore dente Rs			

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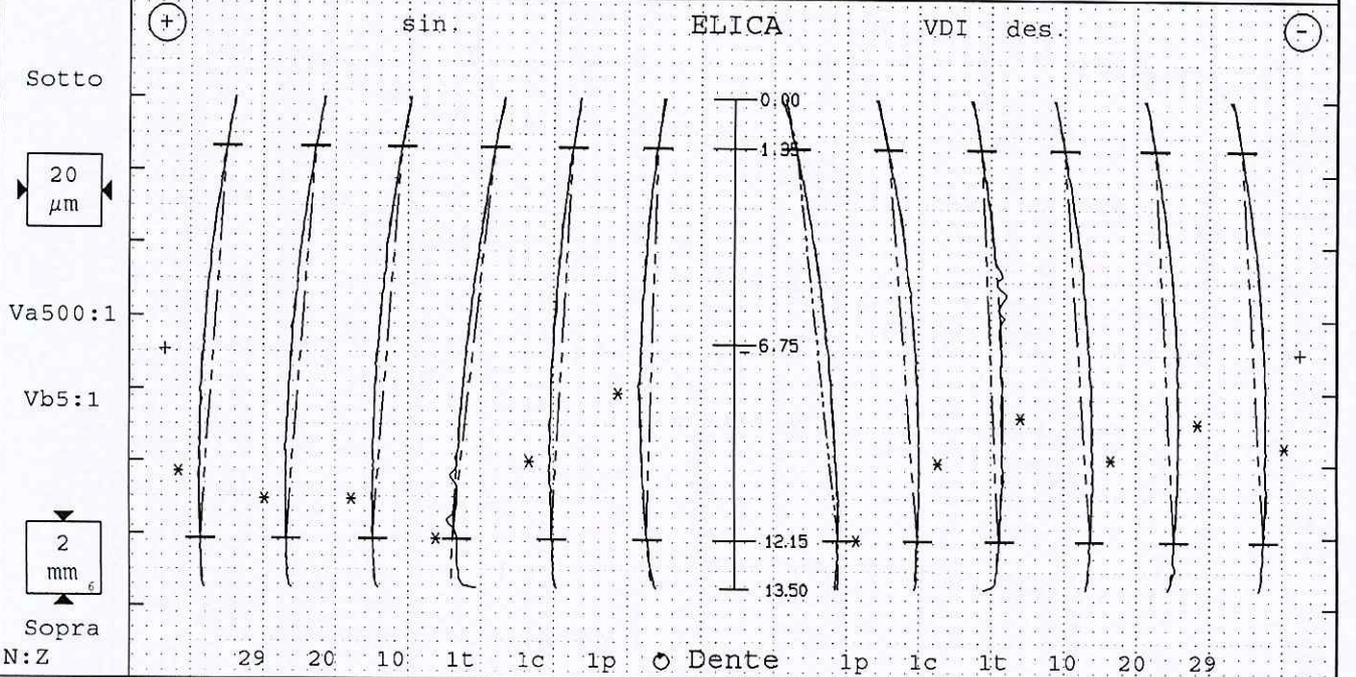
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Numero disegno.:	250.1.4225.37-ICA		Modulo m	1.7mm	Tratto evolv. La	10.88/5.14mm
Comessa/serie nr.:	ppap n 2		Angolo pressione	17° 30' 00"	Tratto elica LS	10.8mm
Masch.Nr.:	M001	Spindel: Form	Angolo elica	-28° 00' 00"	Inizio elab. M1	6.53mm
Untersuchungszweck:	Laufende Messung		Ø Base db	68.9026mm	Palpatore Ø	(#2C) 1mm
Werkzeug:	Charge:		Ang. Base	-26° 35' 56"	Fat.scor.pr. x	- .083



Tolerance	Medio	Val. misur [µm]							Qual	Tolerance	Val. misur [µm]							Medio	Qual		
		Var									Var										
fHm	±6	3									±6								3		
fHa	±7	3	0	4	5	7	2	-2		±7	5	3	1	3	5	2	3				
Fa	14	4	3	5	5	7	3	4		9	5	4	2	3	5	2	4				
ffa	9	2	2	2	2	2	1	1		9	2	2	1	1	1	2	2				
Ca	2/6	4	4	4	4	4	4	4		9	1	2	1	1	1	1	1				
fKo	0	0	0	0	0	0	0	0		-22/-14	-23	-21	-21	-21	-21	-21	-21				
P/T-φ [mm]	67.006		[66.75/67.1]								77.953		[77.89/78.05]								



Tolerance	Medio	Val. misur [µm]							Qual	Tolerance	Val. misur [µm]							Medio	Qual	
		Var									Var									
fHm	-8±6	-9									12±6								9	
fHs	-8±13	-9	-9	-10	-10	-15	-7	-4		12±13	14	10	6	9	7	8				
Fs	16	2	2	2	2	7	1	4		16	3	3	6	3	5	4				
ffs	9	1	1	1	1	3	1	1		9	1	1	3	1	1	1				
Cs	2/5	3	3	3	2	2	2	3		2/5	3	3	3	3	3	3				
Bd		11																	8	



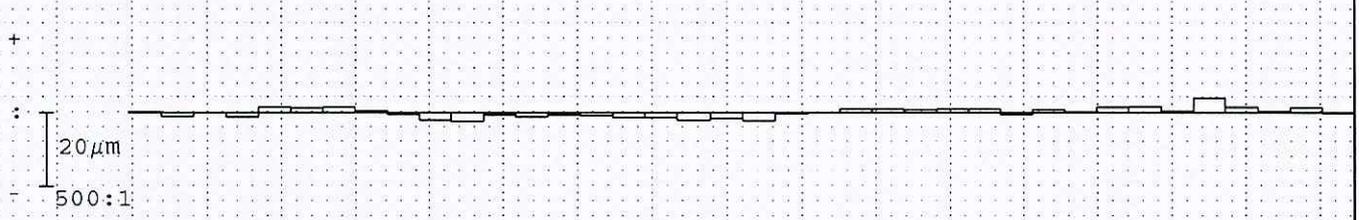
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Ruota cilindrica Divisione



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Denominazione:	SR5		Numero denti z	38	Angolo pressione	17° 30' 00"
Numero disegno.:	250.1.4225.37-ICA		Modulo m	1.7mm	Angolo elica	-28° 00' 00"
Commessa/serie nr.:	ppap n 2		Untersuchungszweck:	Laufende Messung		
Masch.Nr.:	M001	Spindel: Formn	Edg:	Charge:		

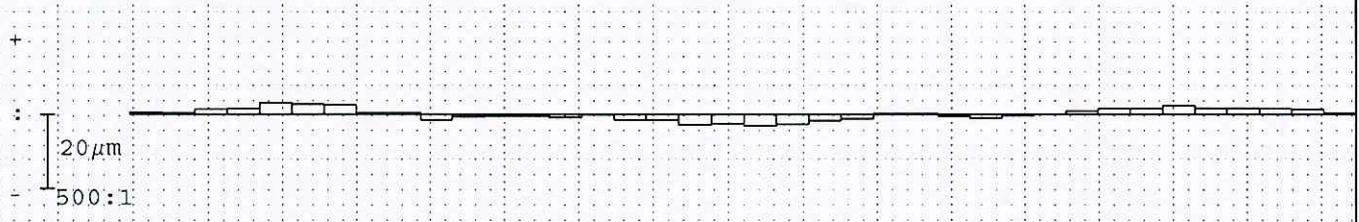
Errori singoli di divisione fp fianco sinistro



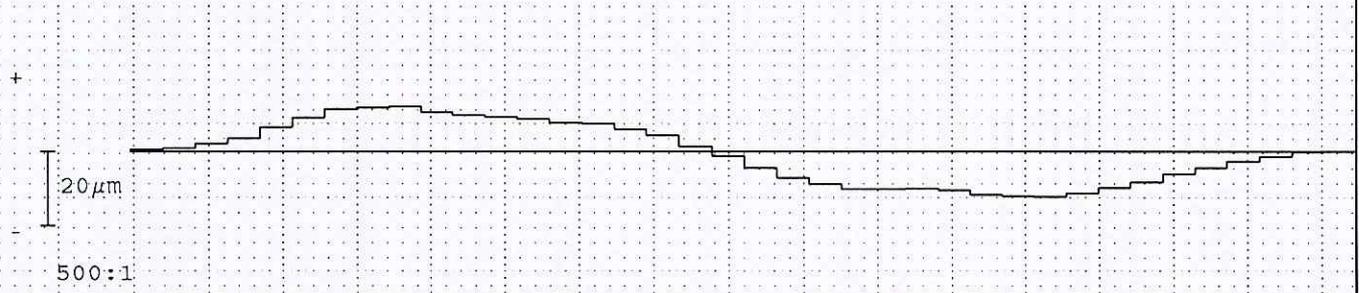
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro



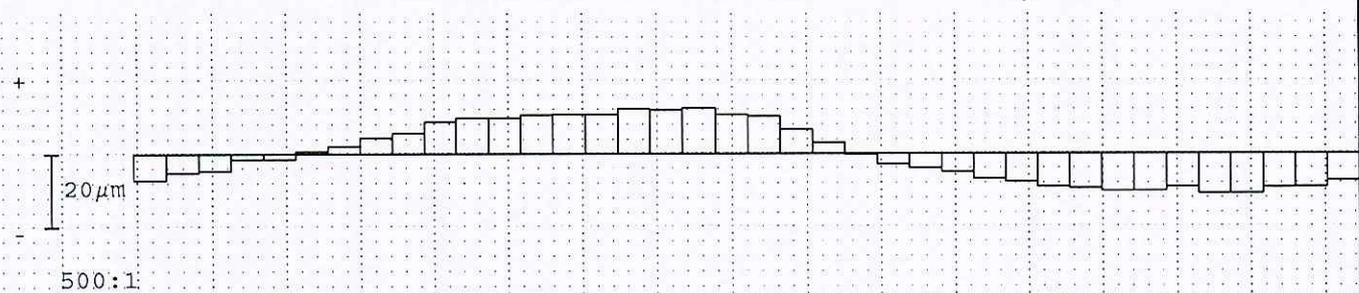
Errore somma di divisione Fp fianco destro



Corsa per misura divis.: 72.884 z=6.8mm	fianco sinistro				fianco destro / TIRO			
	Val. misur	Qual.	Val. amm	Qual.	Val. misur	Qual.	Val. amm	Qual.
Gr. err. singoli divisione fp max	4		14		3		14	
Gr. salto di passo fu max	3		18		2		18	
Scarto di divisione Rp	6				6			
Err. globale di divisione Fp	18		50		24		50	
Err. cordale di divisione Fpz/8	9				13			

Centricità Fr (Ø-sfera =3mm)

⊙ : 23µm



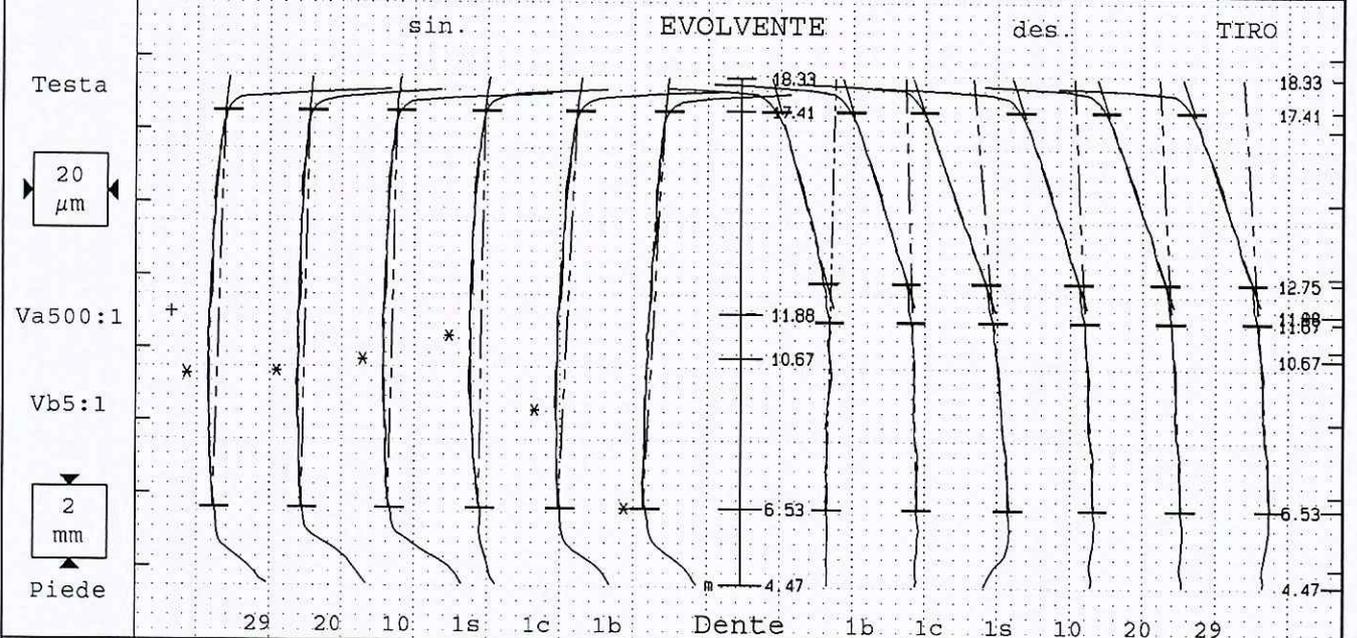
Err. di concentricità Fr	23	32	
Variab. spessore dente Rs			

GETRAG B7590

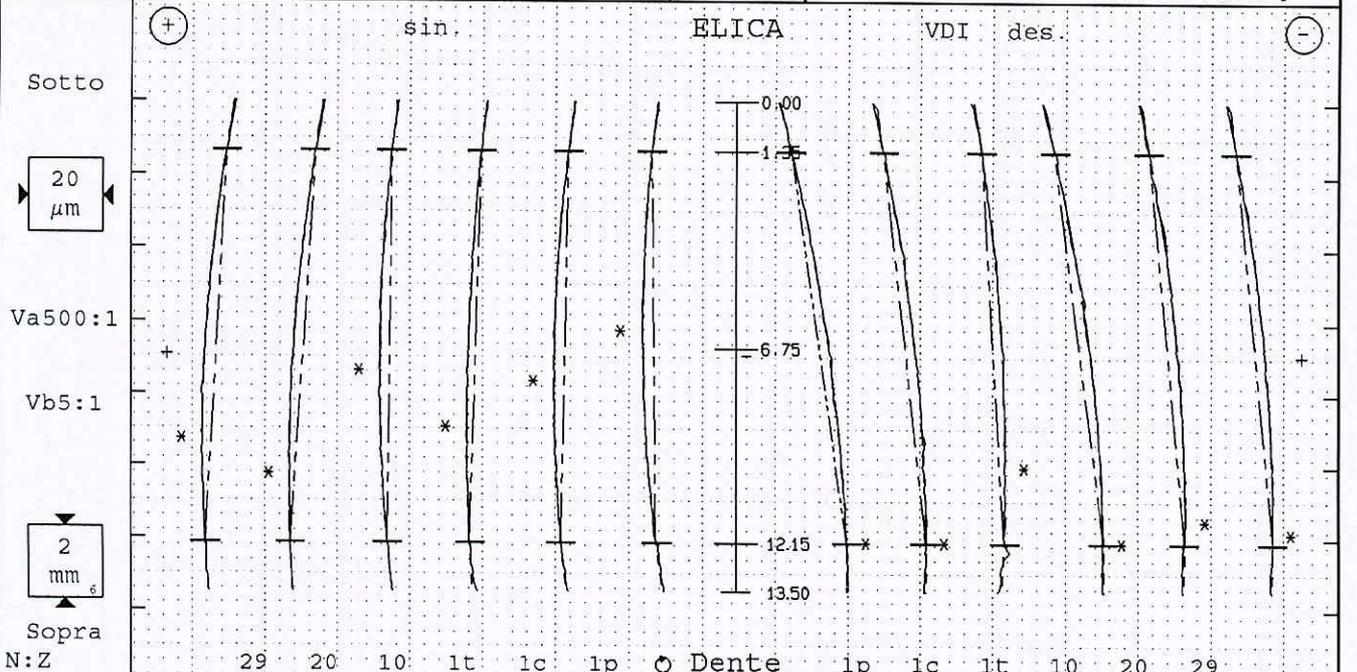
Ruota cilindrica Evolvente/Elica



Nr. prog.:	STI0410005 0	P26 B7590	Controllere:	TURNO c	Data:	09.01.2015 16:30
Denominazione:	SR5		Numero denti z	38	Largh.fasc.dent. b	13.5mm
Numero disegno.:	250.1.4225.37-ICA		Modulo m	1.7mm	Tratto evolv. La	10.88/5.14mm
Commessa/serie nr.:	ppap n 3		Angolo pressione	17° 30' 00"	Tratto elica Ls	10.8mm
Masch.Nr.:	M001	Spindel: Form	Angolo elica	-28° 00' 00"	Inizio elab. M1	6.53mm
Untersuchungszweck:	Laufende Messung		Ø Base db	68.9026mm	Palpatore Ø	(#2C) 1mm
Werkzeug:	Charge:		Ang. Base	-26° 35' 56"	Fat.scor.pr. x	-.083



Tolerance	Medio	Val. misur [µm]							Qual	Tolerance	Val. misur [µm]							Medio	Qual
fH _{sm}	±6	Var 3								±6	Var 1							-3	
fH _α	±7	-3	-3	-2	-2	-2	-5	-6		±7	1	-2	-4	-2	-3	-3	-3		
F _α	14	4	4	3	4	3	6	7		9	1	1	1	1	1	1	1		
ff _α	9	2	1	2	2	1	1	2		9	1	1	1	1	1	1	1		
c _α	2/6	2	3	2	2	3	2	1		0	0	0	0	0	0	0	0		
fK _o	0	0	0	0	0	0	0	0		-22/-14	-15	-15	-14	-14	-14	-14	-14		
P/T-φ[mm]	66.993	[66.75/67.1]								77.940	[77.89/78.05]								

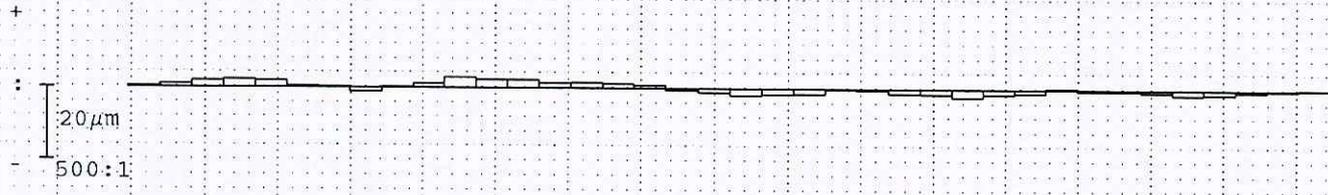


fH _{sm}	-8±6	-5	Var 7								12±6	Var 5							14
fH _s	-8±13	-5	-7	-9	-2	-4	-2	1		12±13	19	15	8	17	12	13	14		
F _s	16	4	2	1	6	4	5	8		16	6	3	4	4	2	1	3		
ff _s	9	1	1	0	1	1	0	1		9	1	1	1	1	1	1	1		
c _s	2/5	3	3	3	3	2	3	3		2/5	3	3	3	3	3	3	3		
B _d		5															11		



Nr. prog.: STI0410005 0	P26 B7590	Controllore: TURNO C	Data: 09.01.2015 16:30
Denominazione: SR5		Numero denti z: 38	Angolo pressione: 17° 30' 00"
Numero disegno.: 250.1.4225.37-ICA		Modulo m: 1.7mm	Angolo elica: -28° 00' 00"
Commessa/serie nr.: ppap n 3		Untersuchungszweck: Laufende Messung	
Masch.Nr.: M001	Spindel: FORMER	Erzeuger: GETRAG	Charge:

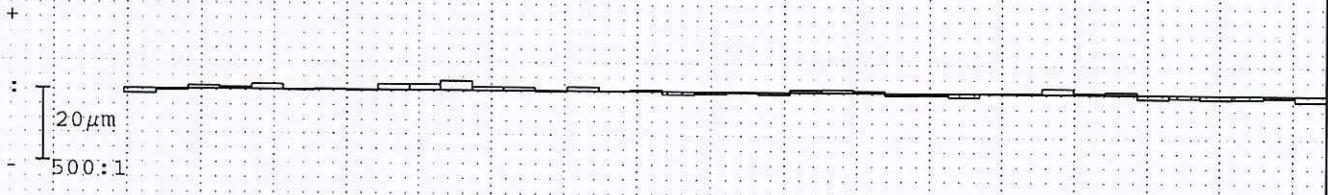
Errori singoli di divisione fp fianco sinistro



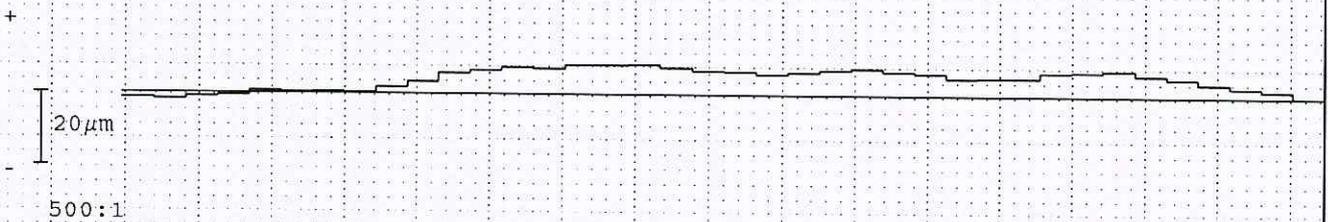
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro



Errore somma di divisione Fp fianco destro

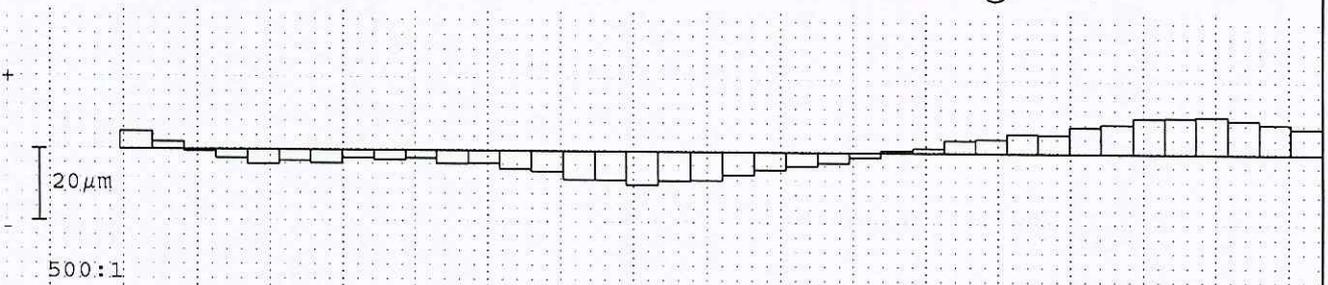


Corsa per misura divis.: 72.884 z=6.8mm

	fianco sinistro				fianco destro / TIRO			
	Val. misur	Qual.	Val. amm	Qual.	Val. misur	Qual.	Val. amm	Qual.
Gr. err. singoli divisione fp max	3		14		2		14	
Gr. salto di passo fu max	2		18		2		18	
Scarto di divisione Rp	5				4			
Err. globale di divisione Fp	19		50		10		50	
Err. cordale di divisione Fpz/8	10				7			

Centricità Fr (Ø-sfera = 3mm)

⊙ : 16µm



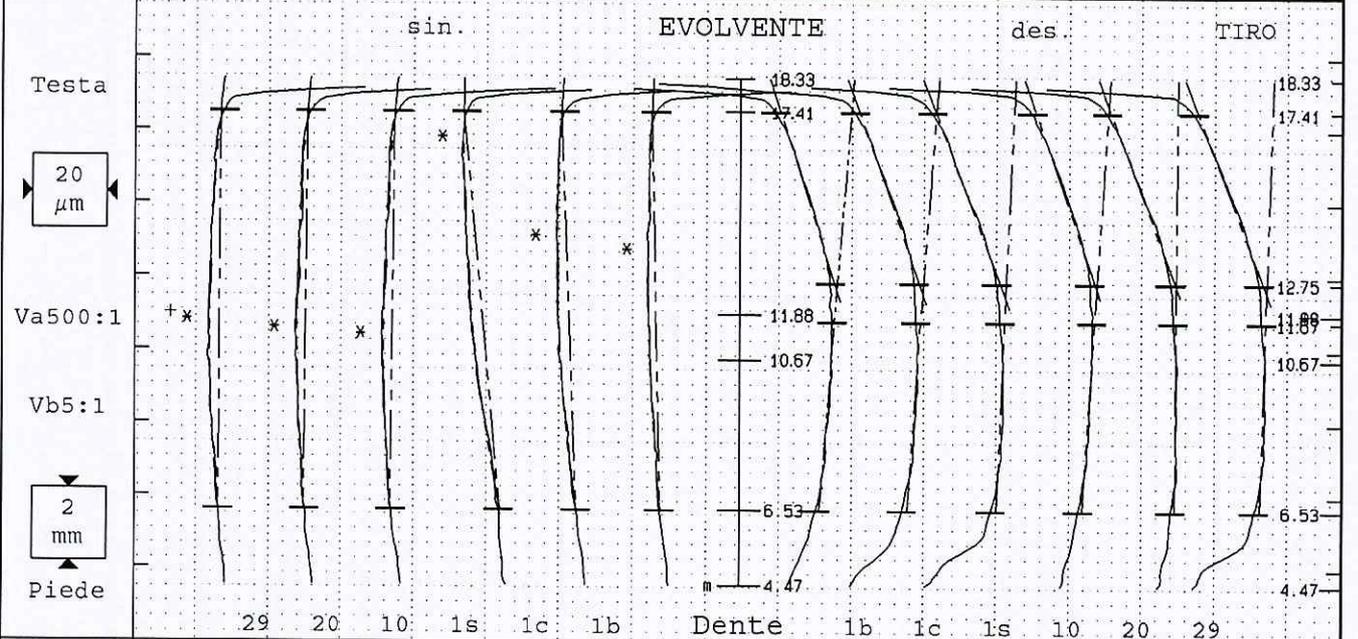
Err. di concentricità Fr	20	32	
Variab. spessore dente Rs			

GETRAG B7590

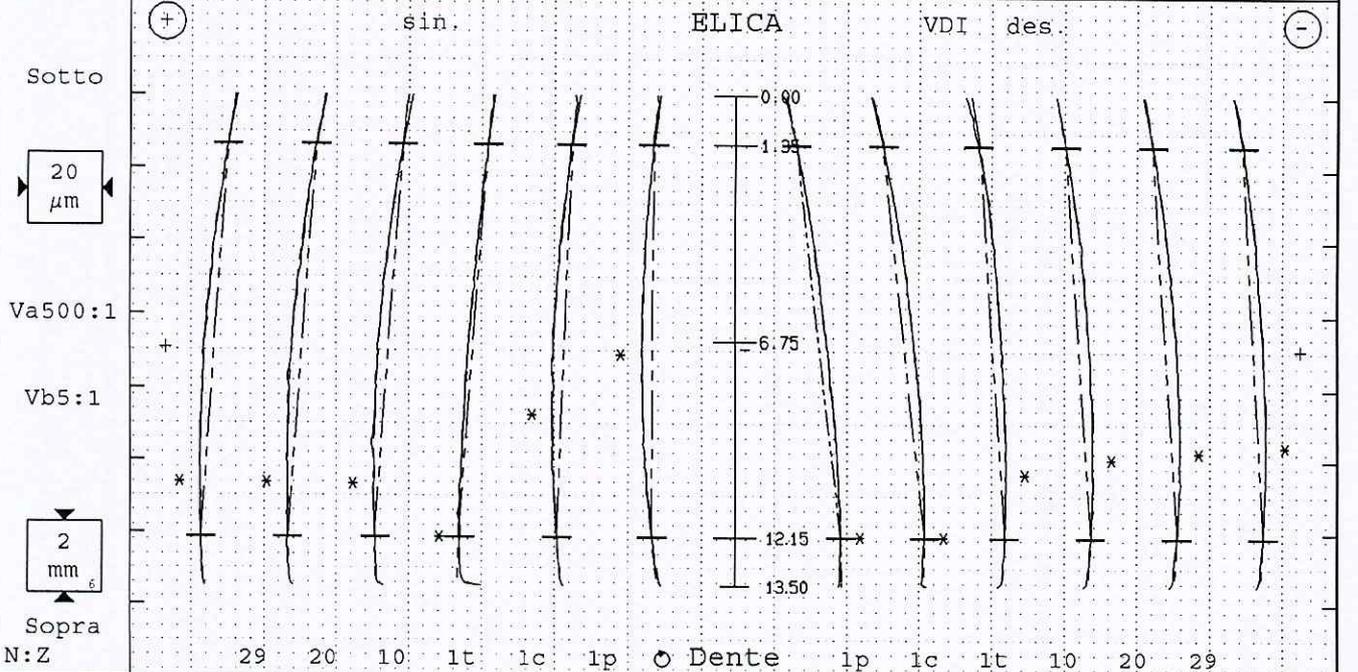
Ruota cilindrica Evolvente/Elica



Nr. prog.:	STI0410005 0	P26 B7590	Controllore:	TURNO c	Data:	09.01.2015 16:38
Denominazione:	SR5		Numero denti z	38	Largh.fasc.dent. b	13.5mm
Numero disegno.:	250.1.4225.37-ICA		Modulo m	1.7mm	Tratto evolv. La	10.88/5.14mm
Commessa/serie nr.:	ppap n 4		Angolo pressione	17° 30' 00"	Tratto elica Ls	10.8mm
Masch.Nr.:	M001	Spindel: Formr	Angolo elica	-28° 00' 00"	Inizio elab. Ml	6.53mm
Untersuchungszweck:	Laufende Messung		Ø Base db	68.9026mm	Palpatore Ø	(#2C)1mm
Werkzeug:	Charge:		Ang. Base	-26° 35' 56"	Fat.scor.pr. x	- .083



Tolerance	Medio	Val.misur[µm]							Qual	Tolerance	Val.misur[µm]							Medio	Qual	
fH _{0m}	±6	0	Var 5								±6	Var 4								2
fH _α	±7	0	-1	-1	-1	10	4	2		±7	4	4	2	3	0	2	2			
F _α	14	3	3	2	2	10	4	3		5	5	4	4	2	3	4				
f _{fα}	9	1	1	2	1	1	1	2		9	2	2	2	2	2	2				
C _α	2/6	3	3	2	2	3	3	2		1	2	2	1	1	2	2				
fK ₀	0	0	0	0	0	0	0	0		-22/-14	-19	-21	-21	-20	-18	-20	-20			
P/T-φ[mm]	67.009	[66.75/67.1]								77.955	[77.89/78.05]									



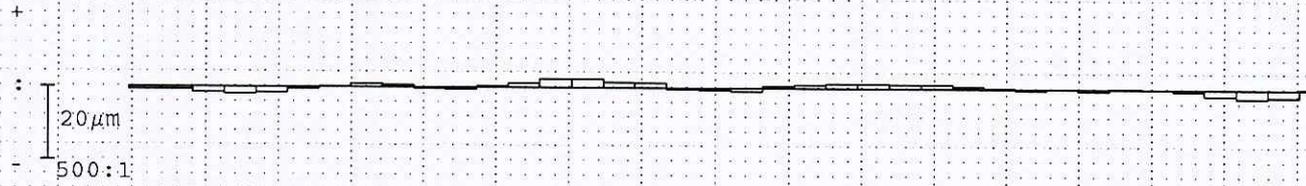
Tolerance	Medio	Val.misur[µm]							Qual	Tolerance	Val.misur[µm]							Medio	Qual	
fH _{0m}	-8±6	-9	Var 5								12±6	Var 8								10
fH _α	-8±13	-9	-9	-10	-10	-10	-5	-1		12±13	15	15	9	9	9	7	10			
F _α	16	2	2	2	2	2	3	7		16	3	3	3	3	3	4	3			
f _{fα}	9	1	1	1	1	1	1	1		9	1	1	1	1	1	1	1			
C _α	2/5	3	3	3	3	1	3	3		2/5	2	3	3	3	3	3	3			
B _d		9															6			



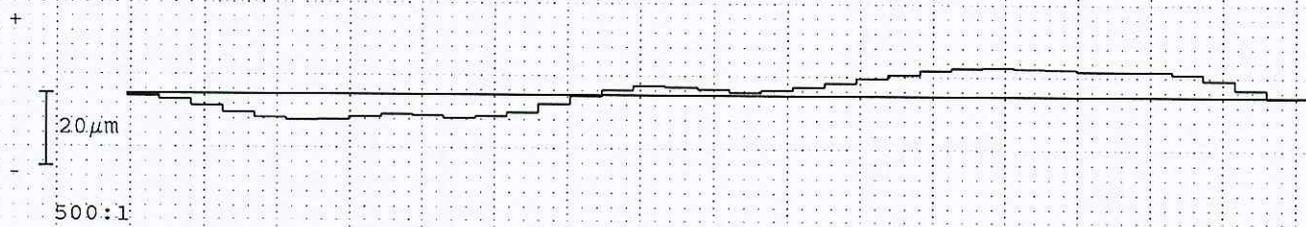


Nr. prog.: STI0410005 0 P26 B7590	Controllore: TURNO C	Data: 09.01.2015 16:38
Denominazione: SR5	Numero denti z 38	Angolo pressione 17° 30' 00"
Numero disegno.: 250.1.4225.37-ICA	Modulo m 1.7mm	Angolo elica -28° 00' 00"
Commessa/serie nr.: ppap n 4	Untersuchungszweck: Laufende Messung	
Masch.Nr.: M001	Spindel: Formm. 0612edg	Charge:

Errori singoli di divisione fp fianco sinistro



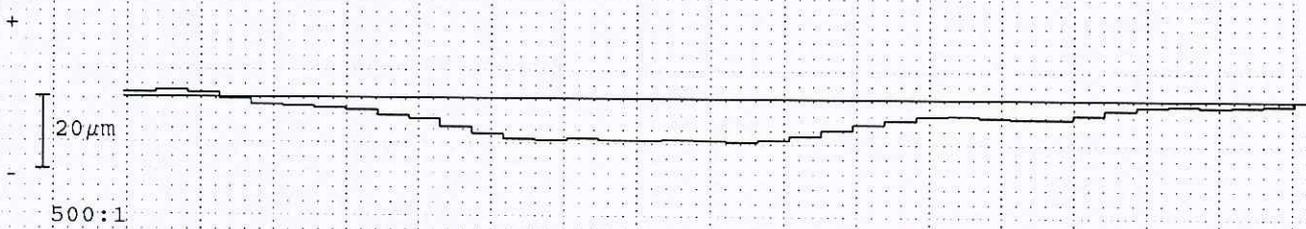
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro



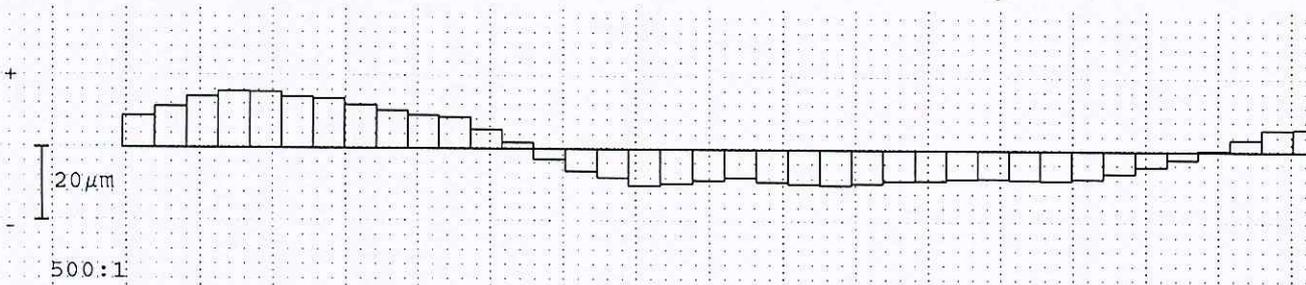
Errore somma di divisione Fp fianco destro



Corsa per misura divis.: 72.884 z=6.8mm	fianco sinistro				fianco destro / TIRO			
	Val. misur	Qual.	Val. amm	Qual.	Val. misur	Qual.	Val. amm	Qual.
Gr. err. singoli divisione fp max	3		14		2		14	
Gr. salto di passo fu max	2		18		1		18	
Scarto di divisione Rp	5				4			
Err. globale di divisione Fp	15		50		14		50	
Err. cordale di divisione Fpz/8	9				8			

Centricità Fr (Ø-sfera = 3mm)

⊙ : 24µm



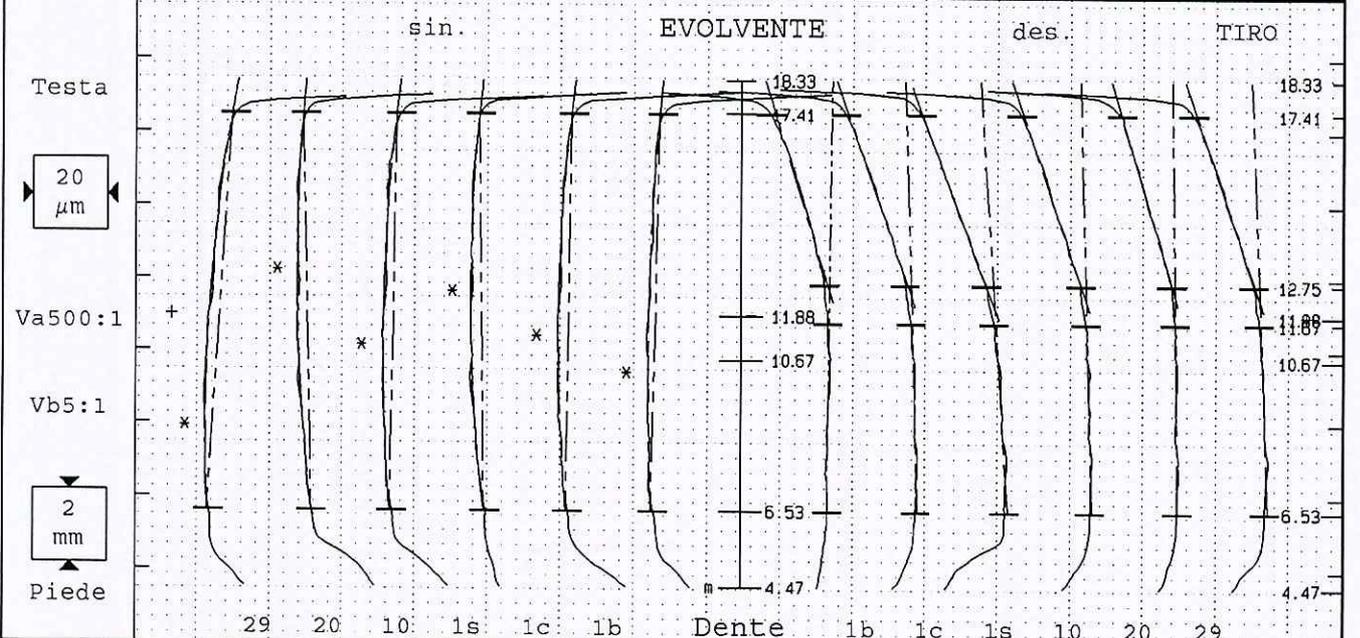
Err. di concentricità Fr	26	32	
Variab. spessore dente Rs			

GETRAG B7590

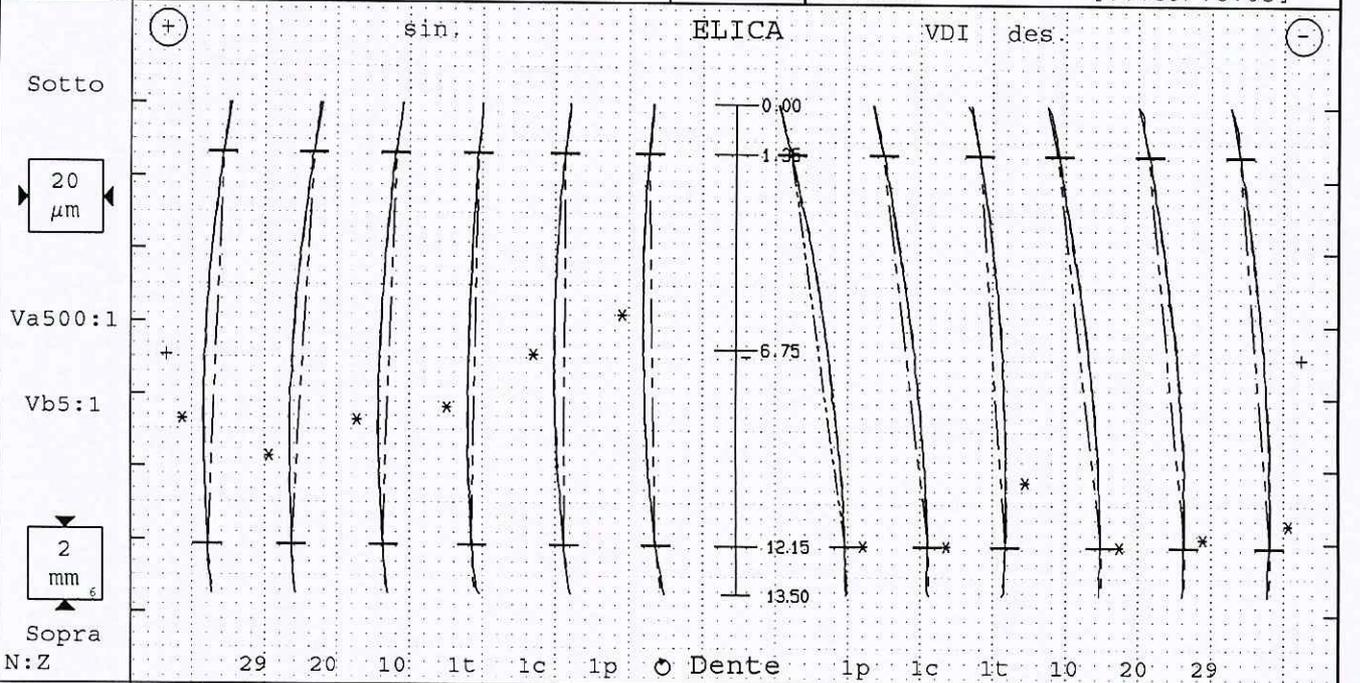
Ruota cilindrica Evolvente/Elica



Nr. prog.:	STI041005 0 P26 B7590	Controllore:	TURNO c	Data:	09.01.2015 16:43	
Denominazione:	SR5	Numero denti z	38	Largh.fasc.dent. b	13.5mm	
Numero disegno.:	250.1.4225.37-ICA	Modulo m	1.7mm	Tratto evol. La	10.88/5.14mm	
Comessa/serie nr.:	ppap n 5	Angolo pressione	17° 30' 00"	Tratto elica Ls	10.8mm	
Masch.Nr.:	M001	Spindel: Form	Angolo elica	-28° 00' 00"	Inizio elab. M1	6.53mm
Untersuchungszweck:	Laufende Messung	Ø Base db	68.9026mm	Palpatore Ø	(#2C)1mm	
Werkzeug:	Charge:	Ang. Base	-26° 35' 56"	Fat.scor.pr. x	- .083	



Tolerance	Medio	Val.misur[µm]							Qual	Tolerance	Val.misur[µm]							Medio	Qual		
fHm	±6	-2	Var 9								±6	Var 1							-2		
fHα	±7	-2	-7	2	-2	1	-1	-2		±7	1	-2	-3	-1	-1	-2	-2				
Fα	14	4	8	3	3	2	3	3			1	2	4	2	1	3	2				
ffα	9	2	2	1	2	2	1	1		9	1	1	2	1	1	2	1				
Cα	2/6	3	3	3	3	3	3	2			0	1	1	0	0	1	1				
fKo	0	0	0	0	0	0	0	0		-22/-14	-15	-16	-17	-16	-14	-15	-15				
P/T-φ[mm]	66.974		[66.75/67.1]								77.923		[77.89/78.05]								



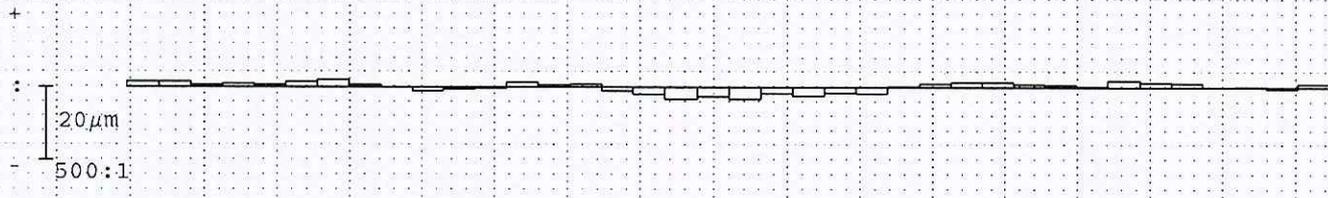
Tolerance	Medio	Val.misur[µm]							Qual	Tolerance	Val.misur[µm]							Medio	Qual	
fHsm	-8±6	-5	Var 8								12±6	Var 6							13	
fHs	-8±13	-5	-5	-8	-5	-2	0	2		12±13	18	16	9	15	12	10	13			
Fs	16	3	2	1	3	6	7	9		16	6	3	3	2	1	2	2			
ffs	9	1	1	1	1	1	1	1		9	1	1	1	1	1	1	1			
Cs	2/5	3	3	3	3	2	3	2		2/5	3	2	3	2	3	2	2			
Bd		4															9			



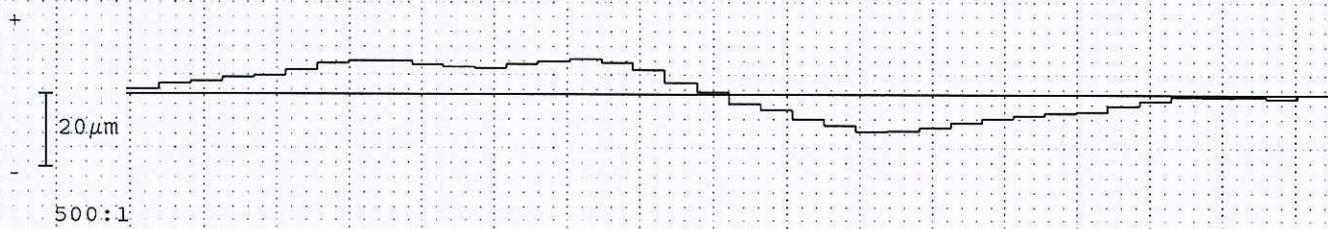


Nr. prog.: STI0410005 0 P26 B7590	Controllore: TURNO c	Data: 09.01.2015 16:43
Denominazione: SR5	Numero denti z 38	Angolo pressione 17° 30' 00"
Numero disegno.: 250.1.4225.37-ICA	Modulo m 1.7mm	Angolo elica -28° 00' 00"
Commessa/serie nr.: ppap n 5	Untersuchungszweck: Laufende Messung	
Masch.Nr.: M001	Spindel: Formr. 0412	Charge:

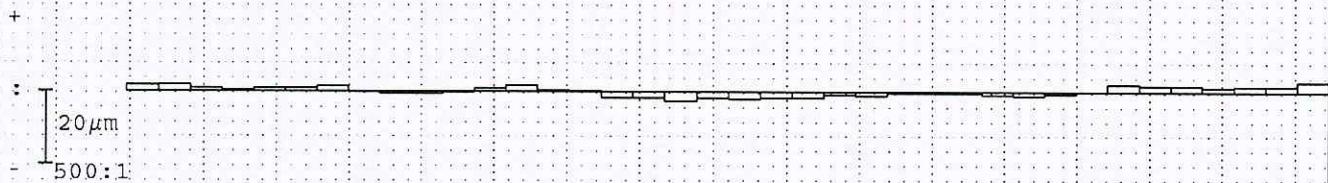
Errori singoli di divisione fp fianco sinistro



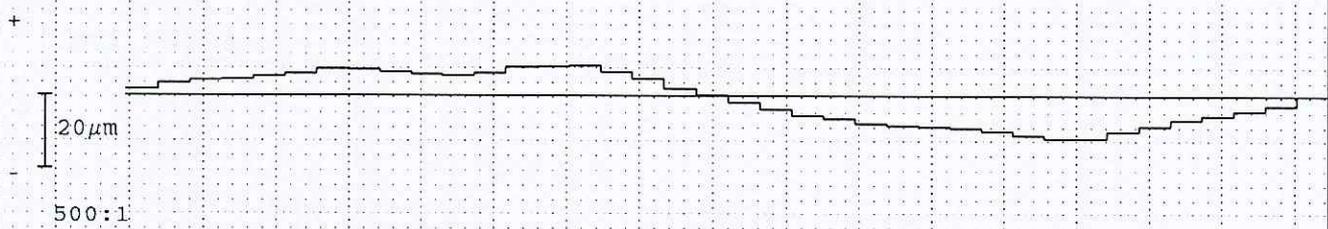
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro



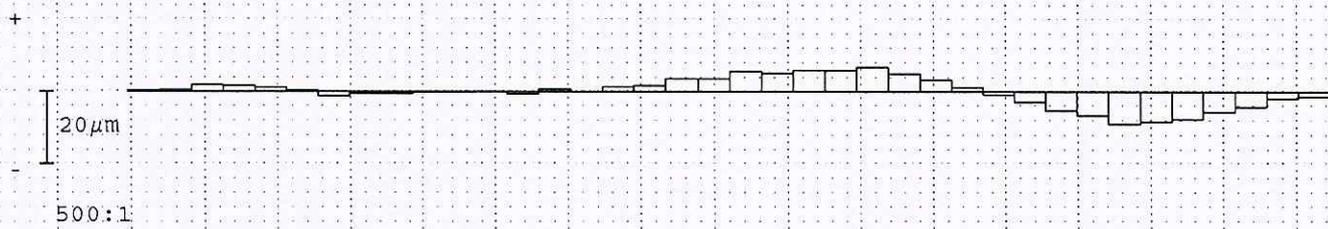
Errore somma di divisione Fp fianco destro



Corsa per misura divis.: 72.884 z=6.8mm	fianco sinistro				fianco destro / TIRO			
	Val. misur	Qual.	Val. amm	Qual.	Val. misur	Qual.	Val. amm	Qual.
Gr. err. singoli divisione fp max	3		14		3		14	
Gr. salto di passo fu max	2		18		2		18	
Scarto di divisione Rp	5				6			
Err. globale di divisione Fp	20		50		20		50	
Err. cordale di divisione Fpz/8	13				10			

Centricità Fr (Ø-sfera = 3mm)

⊙ : 7 μm



Err. di concentricità Fr	16	32	
Variab. spessore dente Rs			