Technical data Part-turn gearboxes and primary reduction									GS 315 – GS 500									
gearings, version with worm wheel made of spheroidal cast iron										GZ 30.1 – GZ 40.1								
Type	Out	worm	gearbo	oxes GS	5 315 – G arv redu	tion	th prima Input to	ary reduc	tion ge Va	aring C	ng GZ 30.1 – GZ 40.1							
Type	torques ¹⁾		Ounte	gea	ring		input to	attachment		for 90		1 actor 9	sha	ift	Weight+)			
					ratio (I)		at ou torqu	e of		max.				Ø		GS +		
	100% max. Nm	140% max Nm	Tvp	GS	GZ	GS/ GZ	100 % Nm	140 % ⁵⁾ Nm	EN ISO 5211 ⁶⁾	Ømm				mr	n	GZ ka		
			-	53:1	-	-	2,636	3,766			13.25	5	23.9	6	0	520		
GS 315	63,000	63,000 90,000		53:1	8:1	424:1	389	556	F40	200	106	_	162	30/4	$\frac{10^{7}}{10^{7}}$	620		
			GZ 30	53:1	32:1	1,696:1	97	138	-		424	-	650	2	0	030		
			-	54:1	-	-	5,144	7,407	-		13.5		24.3	8	0	980		
GS 400	S 400 125,000 180,0		67 35	54:1	8:1	432:1	758	1,091	F48	250	108	-	165	4	0	1 100		
				54:1	32:1	1 728:1	189	272		432		661	3	0	1,100			
				52:1	-	-	10,684	10,684 15,385			13		23.4	10	00	1,800		
GS 500	250.000	360.000	GZ 40	.1 52:1	16:1	832:1	786 1,132		F 60	315	208	+	318 636	4	0	2,000		
	200,000	250,000 500,000		.1 .1 52:1	64:1	3,328:1	218	314	1 00	010	832		1,147	30		2,030		
				Po	ssible c	ombinati	ons wit	h multi-tu	Irn actu	ators								
Gearbox	Gearbox Primary reduct gearing		tion	Flan mour act	ge for iting to uator	Perm. actuator weight	Su Mu Mu	Suitable AUMA multi-turn actuator for 100 %/140 % output		0	perating in se at actua	g tim cone ator s	times for 50 Hz ⁸⁾ onds for 90° or speed in rpm					
_				EN ISO		max.	100 %/1					.						
Гуре	Тур	e		5210 E20	DIN 3210	kg	to	rque ³⁾	16 50	22	32	45	63	90	125	180		
		-	8:1	F30	_	100	5	A 30.1 A 14.5	- 50	289	199	- 141	101	71	51	35		
GS 315	GZ	30.1	16:1	F14	G½	80	s	A 14.1	_	_	-	283	202	141	102	71		
		=	32 : 1	F10	G0	60	S	A 10.1	-	-	-	-	_	283	204	141		
	_		_	F35	-	800	S	SA 35.1		37	-	-	_	-	_	-		
GS 400			8:1	F16	G3	160	S	SA 16.1		295	203	144	103	72	52	36		
	GZ :	35.1	16:1	F14	G½	100	S	SA 14.5		-	- 3	288	206	144	104	72		
			32 : 1	F 40		80	S	SA 14.1		-	-	-	-	288	207	144		
	GZ 40.1 - GZ 40.1		16 · 1	F40	- G3	160	د د	A 40.1 A 16 1	49	35	390	- 277	198	130	100			
GS 500			32:1	110	00	100	s	SA 14.5		_	_	_	-	277	200	139		
			64 : 1	F14	G½	80	S	SA 14.1		-	-	-	_	-	399	277		
1) 100 % = nominal torque 2) In new condition (for the first 10 - 20 cycles) approx 15 % bioher input torque required																		
 c) In new condition (for the list 10 - 20 cycles) approx. 15 % higher input torque required 3) Conversion factor from output torque to input torque to determine the actuator size 4) With coupling (without bore) and grease filling in the gear housing 5) Observe max. output torques of actuators 6) Assignment according to EN ISO 5211 for 100 % of output torque 7) Option 8) Approximately at 50 Hz; at 60 Hz the speeds increase by 20 % and the operating times are reduced to 83 % of the indicated values 																		
VVC 16261V6		aner uala	according			AUE. FIEVIOUS	succumer		IVAIIU WI(I)	une ISSU		ocult				1/3		
auma®										Issue		1.09	Ð	Y004	457/002/en			

GS 315 – GS 500 with GZ 30.1 – GZ 40.1

Technical data Part-turn gearboxes and primary reduction gearings, version with worm wheel made of spheroidal cast iron

Application														
For motor or manual operation of valves (e.g. butterfly valves and ball valves).														
For special applications, please co	Insuit Auma.													
Version	Standard: cl	nckw	ise rotatio	n BB co	nur	tercl	ockwise	rotation		ontior	n' BL (or I B		
Housing material	Standard: C	ast ir	on (G.II -2	250) onti	on	sph	eroidal c	ast iron	(G.	1S-400)-15)			
Self-locking	elf-locking The gearboxes are self-locking when at standstill under normal service conditions: stro							rona						
vibrations may cancel the self-locking eff						ig effect. While in motion, safe breaking is not								
F 1 .	guaranteed.	<u>If thi</u>	s is requi	ed, a se	par	ate b	rake mu	ist be u	sed.					
End stops	Adjustable e	nd s	tops by tra	avelling r	nut	\ f		tala area						
Strength of end stop	Guaranteed strength of end stop (in INM) for input side operation													
	Туре		GS 315				GS 400		GS 500					
	Primary red.		07.00.1				07.05.1			07.40	4	07 40 1	07 10 1	
	geaning		GZ 30.1				GZ 35.1			GZ 40.	1	GZ 40.1	GZ 10.1	
	Reduction	8 · 1	16 · 1	32 · 1	8	• 1	16.1	32 · 1	16	• 1 :	32 · 1	16 · 1	4 · 1	
	Nm		450	250	-		450			450		15	<u></u>	
			430	200			430			430		450	, 	
Swing angle	Standard [.]	Ad	liustable 0	° – 135°	SE	t in t	he facto	rv to 92	° un	less o	rdered	otherwise	į	
GS 315 – GS 500	Option: Swing angle > 100°, multi-turn version without end stops, GSD version													
Mechanical position indicator	Standard: Pointer cover for continuous position indication													
	Options: Sealed pointer cover for horizontal outdoor installation ⁹⁾													
		Pr	otection c	over for b	ouri	ed se	ervice in	stead o	f poi	nter co	over			
Input shaft	Cylindrical w	ith p	arallel key	/ accordi	ng	to DI	N 6885.	1 (reter	to ta	ables o	on page	e 1)		
Operation Motor operation	Mith alastria	-	ti turn ooti	iotor dir	o. o. t	hu or	through	CZ prin		roduo	tion as	oring		
Motor operation	Flanges for i	moui	nting the r	nulti-turn	ac	iy or tuato	r (refer t	to table	nary s nai	reduc ne 1)	tion ge	anng		
Type of duty	Short-time du	itv S	2 - 15 min	(open-cl	lose	a duty	/)		s pa	go 1).				
	Push-to-run o	opera	ation perm	issible. m	ax.	10 s	teps in c	ne direc	ction	and m	ax. of 3	30 starts p	er hour	
Manual operation	Via handwhe	el ir	aluminiu	m throug	h	GZ pr	imarv re	duction	dea	rina			01 110 01	
	Available ha	ndwl	heel diam	eters, se	lec	tion a	accordin	g to the	max	. outp	ut torq	ue:		
		-			-				-					
	Туре	+	GS 31	5	_		GS 400		 		GS	500		
	Primary red.		67.20.1				67.3	5		G7 40 1		G7 40 1/G7 16 1		
	Beduction ratio		8 · 1 16	· 1 32 · 1		8.	1 16 · 1	32.1		16 · 1	32 · 1	6/	· 1	
	Handwhool Ø		0.1 10	. 1 02.1		0.	1 10.1	02.1		10.1	52.1	04		
	mm	-	800 500/	830 400	-	-	800	500/630	-	-	800	500/	630	
	Standard:	1///i	thout hall	handlo										
	Ontions:	_ \/	Vith hall h	andlo										
	Options.	- N	laterial G	JL-200										
Primary reduction gearing														
Primary reduction gearing	- Type GZ	as s	our gear v	ith vario	us	redu	ction rat	ios for r	educ	cing th	e input	t torques		
	(refer to ta	ables	s page 1).						_		_			
	- Combina	tion	with GK b	evel gea	rbc	ox dir	ectly on	GS or o	on G	S with	GZ po	ossible.		
Valve attachment	D:													
Valve attachment Dimensions according to EN ISO 5211 (refer to tables page 1):														
Collined coupling for connection	Standard:		th spigot											
to the valve shaft	Standard:	Pa	th pliot bo	re arbox cai	n h	e ren	ositione	$d 4 \times 90$)° ∩r		lina			
	Options:	Ma	achined w	ith bore a	and	kev	way, squ	lare bor	e or	bore v	with tw	o-flats		
Service conditions	<u> </u>													
Mounting position	Any position													
Enclosure protection according	Standard:	IP	67											
to EN 60 529	Options:	IP	68 du	st and wa	ate	r tigh	it up to r	nax. 6	m h	ead of	water			
		IP	68-10, du	st and w	ate	r tigh	t up to r	nax. 10	mh	ead of	water			
Correction protection	Standard		00-20, 00	st and w	ale	r ugr allativ	n up to r	nax. 20	III II Inite	in wa	water	owor pla	nte	
Conosion protection	Stanuaru.	RI,	with	a low po	llut	ana io	oncentra	ation	inits	, III wa		power pia	1115	
	Options:	KS	S Suita	able for in	nsta	allatio	on in occ	casional	llv or	perm	anently	v address	ive	
	optioner		atmo	sphere v	with	nam	oderate	polluta	nt cc	ncent	ration	,		
			(e.g.	in waste	ewa	iter tr	reatmen	t plants,	, che	mical	industi	ry)		
		КX	C Suita	able for ir	nsta	allatio	on in ext	remely	aggr	ressive	atmo	sphere		
Deint	Ota is allo inclu	D	with	high hun	nidi	ity an	nd high p	ollutant	t con	centra	ation			
Paint	Standard:	Pri	mer coati	ng nant iran			mbinati	~~						
	Option:	IW	vo-compoi		-11)	ca co	momati	011						
(a) For gas applications with socied relations	over on elevert	n tha	pointor cours	r or vontin -			in the veloc	mountin	a flor	ao m	he prov	idod		
 For gas applications with sealed pointer of We reserve the right to alter data according to 	over, an air vent	n trie	Provious de	i or venting	gro	oves I	alid with th		y rian	ye must	ue prov	idea.		
we reserve the right to alter trata according t		aue.			5001		anu with th	e issue of	u 115 C	Jocumer	π.			
					_			••••• (F	B					
Issue 1.09					C			ld`						
Y004.45	7/002/en													

Technical data Part-tu gearings, version with iron	urn gearboxes a h worm wheel m	nd primary reduction ade of spheroidal of	on cast	GS 3 GZ 3	315 – GS 500 with 0.1 – GZ 40.1			
Colour	Standard: AUI	MA silver-grey (similar to R	RAL 703	57) if finish paint	ed			
Ambient temperature	Standard:40	er colours on request 1° C to +80 °C						
	Options: -60 -0	°C to +60 °C (extreme low °C to +120 °C (high temperative)	temper ature, H	rature), EL versi I version	on			
Lifetime	Open-close duty: The lifetime is based on a load profile typical for part-turn valves							
	Туре	Operation cycles (OPEI for swivel movements and a maximum ou	N - CLO of 90° (utput to	SE - OPEN) max. 100°) rque of				
	00.015	100 %		140 %				
	GS 315	7,500		2,500				
	GS 500	4,000		1,200				
Accession		.,		.,====				
Valve position indicators	WSG valve position and low-backlash (refer to separate WGD valve position > 180° (refer to se	on indicator for signalling inf feedback for swing angles data sheet) on indicator for signalling inf parate data sheet)	termedi ranging termedi	ate and end pos 1 from 82° – 98° iate and end pos	sitions to ensure precise sitions for swing angles			
Limit switching device	WSH limit switch of positions (refer to	device for manually operate separate data sheet)	ed valve	es. For signalling	the position and end			
Special features for use in po	otentially explosive at	mospheres						
Explosion protection	II2G c IIC T4 acco	ording to ATEX 94/9/EC	0051	01005 055				
i ype of duty ¹⁰⁾	Short-time duty Sa	2 - 15 min., max. 3 cycles ((rature	UPEN -	CLOSE - OPE	N) 90°, then cool-down			
Swing angle	Swing angle > 90°	° on request						
Umgebungstemperatur	Standard: -40	0 °C to +60 °C						
	Options: $-50 ^{\circ}\text{C}$ to $+60 ^{\circ}\text{C}$ (extreme low temperature)							
	-60	°C to +60 °C (extreme low	tempe	rature)				
	Combinations with	n SAExC actuators at ambie	ent tem	peratures > 40 °	C with special sizing			
Further information	.				- 00 - 00			
Reference documents	Product descriptio	on Part-turn gearboxes GS &	50.3 – 0	GS 250.3/GS 31	5 – GS 500			
	Dimension sheets	GS 315 - GS 500						
10) The type of duty must not be exceed	ed.							
We reserve the right to alter data accord	ing to improvements made. F	Previous documents become invalid	d with the	issue of this docume	ent.			
	auma	8		Issue	^{3/3}			