V-Drive Value - Economical servo worm



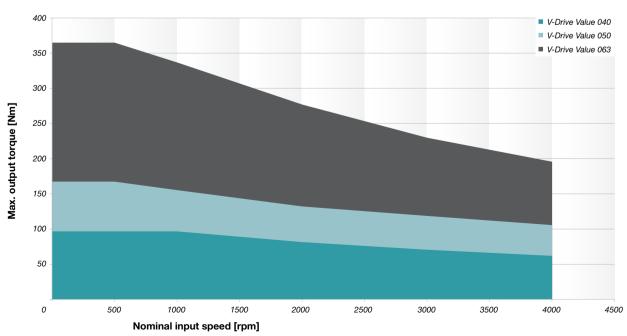
Low backlash servo worm gearheads with output shaft and hollow shaft. The V-Drive Value impresses with its high power density and medium torsional backlash.

It is especially suitable for economical applications in continuous operation.

VDSe

Quick size selection

V-Drive Value (example for i = 28) For applications in cyclic operation (DC \leq 60%) or continuous operation (DC \geq 60%)



Right-angle gearheads

Versions and Applications

Features	VDHe with smooth/keyed hollow shaft page 352	VDSe with smooth/keywayed solid shaft page 358
Power density	••	••
Smooth-running	•••	•••

Product features

Ratios	4 – 40	4 – 40
Torsional backlash [arcmin]	≤ 6	≤ 6
Output type		
Smooth output shaft		•
Keywayed output shaft		•
Hollow shaft interface Connected via shrink disc	•	
Hollow shaft interface, rear side Connected via shrink disc	•	
Shaft on both sides		•
Input type		
Motor mounted version	•	•
Туре		
Food-grade lubrication	•	•
Corrosion resistant a)	•	•
Accessories		
Coupling		•
Rack		•
Pinion		•
Shrink disc	•	

a) Please contact WITTENSTEIN alpha

VDHe

DSe

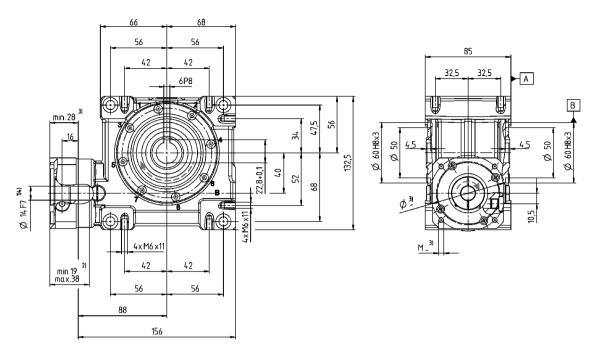


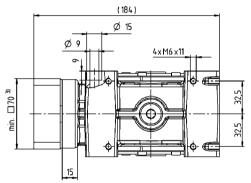
VDH Value 040 1-stage

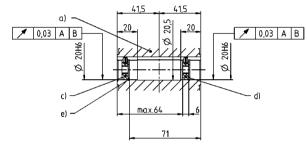
Max ii Servo iii Max ii Max ii Max ii Max ii Max ii Max ii	Nm In.lb	4 74 655 17 150 93 63 558 19 168	7 82 726 24 212 90 73 646 26	91 805 25 221 88	16 94 832 26 230	28 98 867 29	40 91 805			
Max ii Servo iii Max ii Max ii Max ii Max ii Max ii Max ii	in.lb Nm in.lb % Nm in.lb Nm in.lb Nm in.lb Nm in.lb	655 17 150 93 63 558 19	726 24 212 90 73 646	805 25 221 88	832 26	867	805			
Servo iii	Nm in.lb % Nm in.lb Nm in.lb	17 150 93 63 558 19	24 212 90 73 646	25 221 88	26					
Max iii	n.lb % Nm n.lb Nm n.lb	150 93 63 558 19	212 90 73 646	221 88		23				
Max iii	Nm n.lb Nm n.lb	63 558 19	73 646			257	25 221			
Max iii	Nm n.lb Nm n.lb	63 558 19	73 646		82	73	67			
Max ii Servo ii Max ii Max ii	n.lb Nm n.lb	558 19	646	0/	89	96	84			
Servo ii	n.lb		26	770	788	850	743			
Max i		100	230	28 248	29 257	32 283	28 248			
Max i		94	92	90	86	77	73			
	Nm	47	58	71	76	81	72			
1]	n.lb	416	513	628	673	717	637			
Servo i	Nm in lh	19 168	26 230	28 248	29 257	33 292	29 257			
	n.lb									
,	%	96	94	92	88	81	77			
Max :							62 549			
		19	26	28	29	32	28			
Servo i		168	230	248	257	283	248			
	%	96	95	93	90	83	79			
1	Nm	31	38	48	56	61	55			
							487			
Servo i							27 239			
		96	95	94	91	84	81			
1	Nm	118	126	125	129	134	122			
Not i	n.lb	1044	1115	1106	1142	1186	1080			
VICIA										
_		7.1	6.2	0.6 5.3	0.5 4.4	0.4 3.5	0.4 3.5			
a	arcmin			5	≤ 6					
<u> </u>		1,0								
_		3000								
1	N	2400								
1	Nm	205								
1.										
k		4,0								
1	-11	8,8								
4										
	F			1	94					
	F			5 to	104					
				Synthetic tra	ansmission oil					
		None								
		See drawing								
				IF	65					
	kgcm²	0.52	0.38	0.34	0.32	0.32	0.31			
	10-3 in.lb.s ²	0.46	0.34	0.30	0.28	0.28	0.27			
	kgcm²	0.54	0.40	0.37	0.35	0.34	0.33			
1	10 ⁻³ in.lb.s ²	0.48	0.35	0.33	0.31	0.30	0.29			
. 2:	22Servo i 22Servo i	Nm	228arvo	228arvo		No. No.	Min			

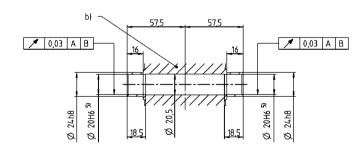
a) Idling torques decrease during operation

b) Refers to center of output shaft or flange at n₂ = 300 rpm









- a) Hollow shaft, keywayed
- b) Hollow shaft, smooth
- c) End disc for screw M6 (on request)
- d) End disc as forcing washer for screw M8 (on request)
- e) Locking ring DIN 472

Non-tolerated dimensions \pm 1 mm

- 1) Check motor shaft fit.
- 2) Min./Max. permissible motor shaft length. Longer motor shafts are adaptable, please contact us.
- 3) The dimensions depend on the motor.
- 4) Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm. Motor shaft diameters up to 19 mm available - please contact WITTENSTEIN alpha.
- 5) Tolerance h6 for mounted shaft.



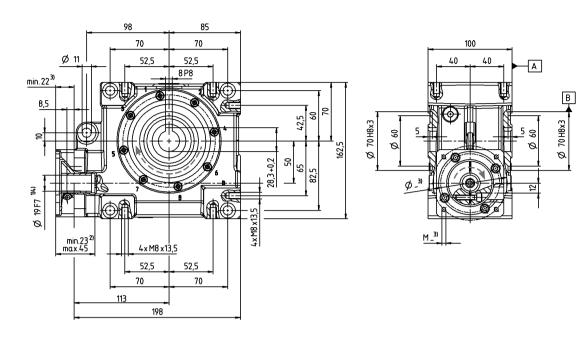
VDH Value 050 1-stage

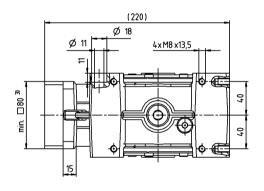
					1-s	stage					
Ratio	i		4	7	10	16	28	40			
	т	Nm	-	150	153	157	167	141			
	T _{2Max}	in.lb	-	1328	1354	1389	1478	1248			
n _{1N} =500 rpm	T _{2Servo}	Nm	-	62	64	70	78	64			
IN TO THE TENT	2Servo	in.lb	_	549	566	620	690	566			
	η	%	-	89	86	82	72	64			
	T _{2Max}	Nm	-	127	130	146	155	112			
	ZIVIdX	in.lb Nm		1124 66	1151 70	1292 76	1372	991 70			
n _{1N} =1000 rpm	T _{2Servo}	in.lb		584	620	673	84 743	620			
	η	%	_	91	89	85	77	69			
		Nm	_	104	109	124	132	115			
0000	T _{2Max}	in.lb		920	965	1097	1168	1018			
		Nm	_	68	71	77	86	72			
n _{1N} =2000 rpm	T _{2Servo}	in.lb	_	602	628	681	761	637			
	η	%	-	93	91	88	75	75			
		Nm	_	90	94	107	119	101			
	T _{2Max}	in.lb		797	832	947	1053	894			
0000	-	Nm	-	67	70	76	84	70			
n _{1N} =3000 rpm	T _{2Servo}	in.lb	-	593	620	673	743	620			
	η	%	-	94	93	90	83	78			
4000		Nm	_	77	82	97	105	91			
	T _{2Max}	in.lb	-	681	726	858	929	805			
		Nm	-	64	69	75	83	69			
n _{1N} =4000 rpm	T _{2Servo}	in.lb	-	566	611	664	735	611			
	η	%	-	95	93	91	85	80			
	T-	Nm	_	242	242	250	262	236			
Emergency stop torque	T _{2Not}	in.lb	-	2142	2142	2213	2319	2089			
Max. input speed	n _{1Max}	rpm	6000								
Mean no load running torque a) (With n,=3000 min ⁻¹ and 20° C gear temperature)	T ₀₁₂	Nm	-	2.2 19.5	1.6 14.2	1.5 13.3	1.2 10.6	1.1 9.7			
		in.lb	=	19.5			10.6	9.7			
Max. torsional backlash	\dot{J}_t	arcmin			:	≤ 6					
Torsional rigidity	C ₁₂₁	Nm/arcmin in.lb/arcmin				71					
Max. axial force b)	F _{2AMax}	N			5	0000					
		lb _f				125 800					
Max. radial force b)	F _{2RMax}	lb _f		855							
Max. tilting moment	M _{2KMax}	Nm in.lb				409 620					
Service life	L _n	h				20000					
(For calculation see "Information")		kg				7,4					
Weight incl. standardadapter plate	m	lb _m				16,4					
Operating noise (with n,=3000 rpm no load)	L _{PA}	dB(A)				62					
Max. permitted housing temperature		°C F									
Ambient temperature		°C	-15 to +40								
Lubrication			F 5 to 104 Synthetic transmission oil								
Paint			None								
Direction of rotation			See drawing								
Protection class											
				_		P 65					
Moment of inertia		kgcm ²	-	2,02	1,93	1,84	1,81	1,86			
(relates to the drive)	9 J ₁										

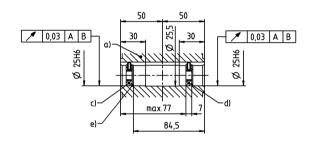
a) Idling torques decrease during operation

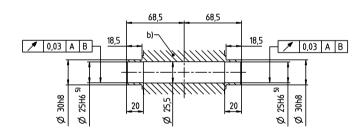
b) Refers to center of output shaft or flange at n₂ = 300 rpm











- a) Hollow shaft, keywayed
- b) Hollow shaft, smooth
- c) End disc for screw M10 (on request)
- d) End disc as forcing washer for screw M12 (on request)
- e) Locking ring DIN 472 (on request)

Non-tolerated dimensions ± 1 mm

- 1) Check motor shaft fit.
- 2) Min./Max. permissible motor shaft length. Longer motor shafts are adaptable, please contact us.
- 3) The dimensions depend on the motor.
- 4) Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm.
- 5) Tolerance h6 for mounted shaft.



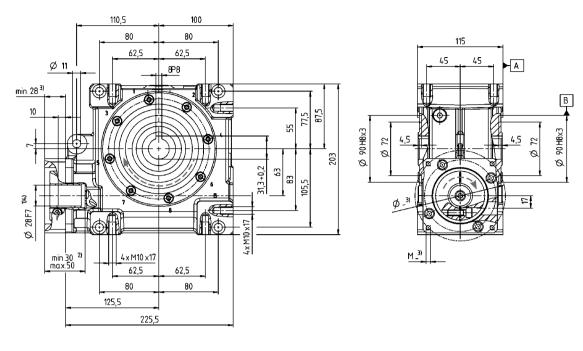
VDH Value 063 1-stage

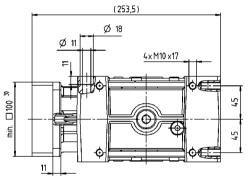
					1-s	tage				
Ratio	i		4	7	10	16	28	40		
	T	Nm	-	303	319	331	365	321		
	T _{2Max}	in.lb	-	2682	2823	2929	3230	2841		
n _{1N} =500 rpm	T _{2Servo}	Nm in.lb		183 1620	195 1726	198 1752	215 1903	201 1779		
	η	%		91	88	83	74	68		
		Nm	_	269	287	302	337	308		
	T _{2Max}	in.lb	-	2381	2540	2673	2982	2726		
n _{1N} =1000 rpm	т	Nm	-	197	208	212	230	215		
111 _{1N} = 1000 1pm	T _{2Servo}	in.lb	-	1743	1841	1876	2036	1903		
	η	%	-	93	91	86	78	73		
	T _{2Max}	Nm	-	234	252	263	277	269		
	2Max	in.lb	-	2071	2230	2328	2451	2381		
n _{1N} =2000 rpm	T _{2Servo}	Nm	-	188	203	212	224	217		
IIN .	236170	in.lb	-	1664	1797	1876	1982	1920		
	η	%	-	94	93	89	83	78		
	T _{2Max}	Nm	-	183	198	209	230	224		
	∠Max	in.lb	-	1620	1752	1850	2036	1982		
n _{1N} =3000 rpm	T _{2Servo}	Nm in.lb	-	145 1283	163 1443	181 1602	182 1611	177 1566		
	η	%		95	94	91	85	81		
	-1									
	T _{2Max}	Nm in.lb	-	146 1292	162 1434	175 1549	196 1735	193 1708		
		Nm	-	114	134	1549	152	149		
n _{1N} =4000 rpm	T _{2Servo}	in.lb	-	1009	1186	1345	1345	1319		
	η	%	-	96	94	92	86	83		
		Nm	_	484	491	494	518	447		
Emergency stop torque	T _{2Not}	in.lb	_	4283	4345	4372	4584	3956		
Max. input speed	n _{1Max}	rpm	4500							
Mean no load running torque a) (With n ₁ =3000 min ⁻¹ and 20° C gear temperature)	T ₀₁₂	Nm	-	3.1 27.4	3.0 26.6	2.4 21.2	2.3 20.4	2.2 19.5		
Max. torsional backlash		in.lb arcmin	_	27.4		 ≤ 6	20.4	19.5		
Wax. torsional backlash	j _t	1								
Torsional rigidity	C _{t21}	Nm/arcmin in.lb/arcmin				28 248				
Max. axial force b)	F _{2AMax}	N			8	250				
		lb _f	1856 6000							
Max. radial force b)	F _{2RMax}	lb _f			1;	350				
Max. tilting moment	M _{2KMax}	Nm in.lb	843 7461							
Service life (For calculation see "Information")	L _n	h				20000				
Weight incl. standardadapter plate	m	kg	12							
		lb _m				16,5	,			
Operating noise (with n,=3000 rpm no load)	L _{PA}	dB(A)	≤ 64							
Max. permitted housing temperature		F	194							
Ambient temperature		°C F								
Lubrication						ansmission oil				
Paint			None							
Direction of rotation			See drawing							
Protection class						P 65				
		lear		F 77			F 40	5.05		
Moment of inertia (relates to the drive) H 28	J_1	kgcm ²	-	5,77	5,53	5,44	5,40	5,35		
Clamping hub diameter [mm]	1	10 ⁻³ in.lb.s ²	-	5,11	4,89	4,81	4,78	4,74		

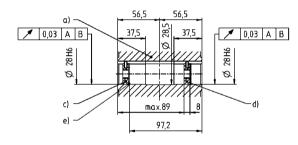
a) Idling torques decrease during operation

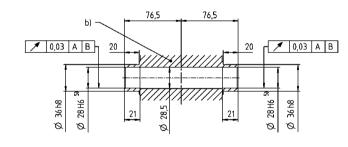
b) Refers to center of output shaft or flange at n₂ = 300 rpm











- a) Hollow shaft, keywayed
- b) Hollow shaft, smooth
- c) End disc for screw M10 (on request)
- d) End disc as forcing washer for screw M12 (on request)
- e) Locking ring DIN 472 (on request)

Non-tolerated dimensions ± 1 mm

- 1) Check motor shaft fit.
- 2) Min./Max. permissible motor shaft length. Longer motor shafts are adaptable, please contact us.
- 3) The dimensions depend on the motor.
- 4) Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm.
- 5) Tolerance h6 for mounted shaft.

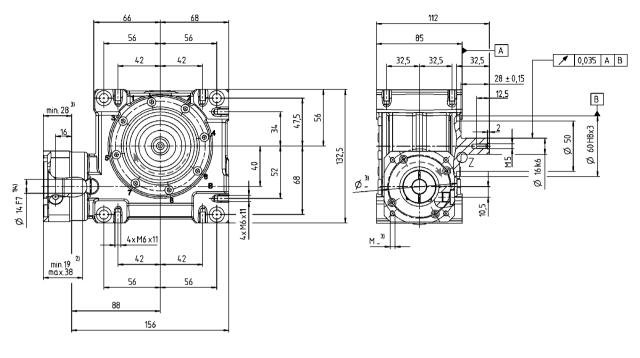


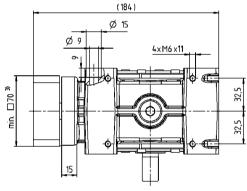
VDS Value 040 1-stage

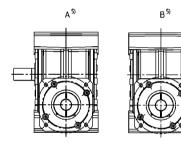
							1-si	tage				
Ratio			i		4	7	10	16	28	40		
			т	Nm	63	73	87	89	96	84		
			T _{2Max}	in.lb	558	646	770	788	850	743		
n _{1N} =500 rpm			T _{2Servo}	Nm	19	26	28	29	32	28		
			236170	in.lb	168	230	248	257	283	248		
			η	%	93	90	88	82	73	67		
			T _{2Max}	Nm	63	73	87	89	96	84		
			2Max	in.lb	558	646	770	788	850	743		
n _{1N} =1000 rpm			T _{2Servo}	Nm in.lb	19 168	26 230	28 248	29 257	32 283	28 248		
			η	%	94	92	90	86	77	73		
				Nm	47	58	71	76	81	72		
			T _{2Max}	in.lb	416	513	628	673	717	637		
				Nm	19	26	28	29	33	29		
n _{1N} =2000 rpm			T _{2Servo}	in.lb	168	230	248	257	292	257		
			η	%	96	94	92	88	81	77		
			T	Nm	37	47	59	65	70	62		
			T _{2Max}	in.lb	327	416	522	575	620	549		
n _{1N} =3000 rpm			T _{2Servo}	Nm in lb	19	26	28	29	32	28		
				in.lb	168	230	248	257	283	248		
			η	%	96	95	93	90	83	79		
			т	Nm	31	38	48	56	61	55		
			T _{2Max}	in.lb	274	336	425	496	540	487		
n _{1N} =4000 rpm			T _{2Servo}	Nm in lh	19	25	27	28	31	27		
IN .			η	in.lb %	168 96	95	239 94	248 91	274 84	239 81		
				Nm	118	126	125	129	134	122		
Emergency stop torque			T _{2Not}	in.lb	1044	1115	1106	1142	1186	1080		
Max. input speed			n _{1Max}	rpm		6000						
Mean no load running torque $^{a)}$ (With $_{n,=3000 \text{ min}^{-1}}$ and $^{20^{\circ}}$ C gear temperature)			T ₀₁₂	Nm in.lb	0.8 7.1	0.7 6.2	0.6 5.3	0.5 4.4	0.4 3.5	0.4 3.5		
Max. torsional backlash			\dot{J}_t	arcmin			≤	6				
Torsional rigidity			C _{t21}	Nm/arcmin in.lb/arcmin				,5 40				
Max. axial force b)			F _{2AMax}	N			30	000				
Max. radial force b)			F _{2RMax}	lb _f			24	75 100				
				lb _f Nm				40 05				
Max. tilting moment Service life			M _{2KMax}	in.lb				314				
(For calculation see "Information")			L _h	h	> 20000							
Weight incl. standardadapter p	late		m	kg lb _m	4,1 9,1							
Operating noise (with n, = 3000 rpm no load)			L _{PA}	dB(A)	≤ 54							
Max. permitted housing tempe	rature)		°C F			1	90 94				
Ambient temperature				°C F	-15 to +40 5 to 104							
Lubrication								ınsmission oil				
Paint							No	one				
Direction of rotation					See drawing							
Protection class					IP 65							
Moment of inertia				kgcm ²	0.52	0.38	0.34	0.32	0.32	0.31		
(relates to the drive)	С	14	$J_{\scriptscriptstyle 1}$	10°3 in.lb.s²								
Moments of inertia for motor shaft diameter 14 and 19 mm					0.46	0.34	0.30	0.28	0.28	0.27		
	Е	19	$J_{\scriptscriptstyle 1}$	kgcm ²	0.54	0.40	0.37	0.35	0.34	0.33		
				10 ⁻³ in.lb.s ²	0.48	0.35	0.33	0.31	0.30	0.29		

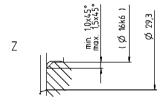
^{a)} Idling torques decrease during operation

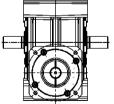
b) Refers to center of output shaft or flange at n₂ = 300 rpm







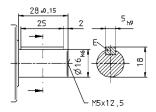




Optional dual-shaft output. Drawings available upon request.

Alternatives: Output shaft variants

Keywayed output shaft in mm E = key as per DIN 6885, sheet 1, form A



Non-tolerated dimensions ± 1 mm

- 1) Check motor shaft fit.
- 2) Min./Max. permissible motor shaft length. Longer motor shafts are adaptable, please contact us.
- 3) The dimensions depend on the motor.
- 4) Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm. Motor shaft diameters up to 19 mm available - please contact WITTENSTEIN alpha
- 5) Output side



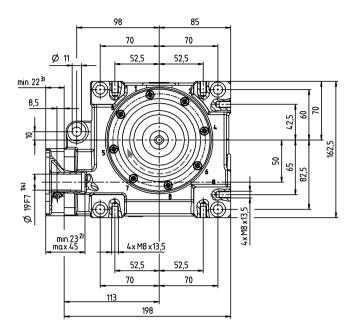


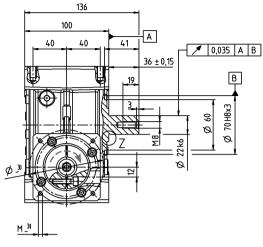
VDS value 050 1-stage

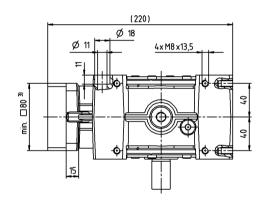
					1-s	tage				
Ratio	i		4	7	10	16	28	40		
	T _{2Max}	Nm	-	150	153	157	167	141		
	2Max	in.lb	-	1328	1354	1389	1478	1248		
n _{1N} =500 rpm	T _{2Servo}	Nm in.lb	<u> </u>	62 549	64 566	70 620	78 690	64 566		
	η	%		89	86	82	72	64		
		Nm	_	127	130	146	155	112		
	T _{2Max}	in.lb	-	1124	1151	1292	1372	991		
n _{1N} =1000 rpm	T	Nm	-	66	70	76	84	70		
111 _{1N} =1000 1pm	T _{2Servo}	in.lb	-	584	620	673	743	620		
	η	%	-	91	89	85	77	69		
	T _{2Max}	Nm	-	104	109	124	132	115		
	ZIVIAX	in.lb Nm	-	920	965	1097	1168	1018		
n _{1N} =2000 rpm	T _{2Servo}	in.lb	<u> </u>	68 602	71 628	77 681	86 761	72 637		
	η	%	-	93	91	88	75	75		
	T _{2Max}	Nm in the	_	90	94	107	119	101		
		in.lb Nm	-	797 67	832 70	947 76	1053 84	894 70		
n _{1N} =3000 rpm	T _{2Servo}	in.lb		593	620	673	743	620		
	η	%	-	94	93	90	83	78		
	T _{2Max}	Nm	-	77	82	97	105	91		
	ZIWAX	in.lb Nm		681 64	726 69	858 75	929 83	805 69		
n _{1N} =4000 rpm	T _{2Servo}	in.lb		566	611	664	735	611		
	η	%	-	95	93	91	85	80		
_	_	Nm	_	242	242	250	262	236		
Emergency stop torque	T _{2Not}	in.lb	-	2142	2142	2213	2319	2089		
Max. input speed	n _{1Max}	rpm	6000							
Mean no load running torque a) (With n ₁ =3000 min ⁻¹ and 20° C gear temperature)	T ₀₁₂	Nm in.lb	- -	2.2 19.5	1.6 14.2	1.5 13.3	1.2 10.6	1.1 9.7		
Max. torsional backlash	j_t	arcmin		.0.0		<u> </u>	1010	0		
Torsional rigidity	C ₁₂₁	Nm/arcmin				8				
<u> </u>		in.lb/arcmin	<u>71</u> 5000							
Max. axial force b)	F _{2AMax}	lb _f				125				
Max. radial force ^{b)}	F _{2RMax}	N lb,	3800 855							
NACY Allain or the control of		Nm				109				
Max. tilting moment	M _{2KMax}	in.lb			30	620				
Service life (For calculation see "Information")	L_h	h	> 20000							
Weight incl. standardadapter plate	m	kg lb	7,7 17,0							
Operating noise (with n,=3000 rpm no load)	L _{PA}	dB(A)	≤ 62							
Max. permitted housing temperature		°C F								
Ambient temperature		°C	-15 to +40							
Lubrication		F				nsmission oil				
Paint			None							
Direction of rotation			See drawing							
Protection class				I	IF	P 65				
Moment of inertia (relates to the drive) E 19	$J_{\scriptscriptstyle 1}$	kgcm ²	-	2,01	1,93	1,84	1,81	1,86		
Clamping hub diameter [mm]		10 ⁻³ in.lb.s ²	-	1,78	1,71	1,63	1,60	1,64		

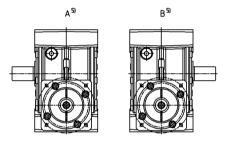
a) Idling torques decrease during operation

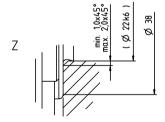
b) Refers to center of output shaft or flange at n₂ = 300 rpm

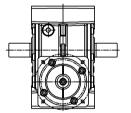








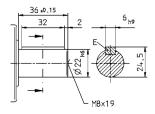




Optional dual-shaft output. Drawings available upon request.

Alternatives: Output shaft variants

Keywayed output shaft in mm E = key as per DIN 6885, sheet 1, form A



Non-tolerated dimensions ± 1 mm

- 1) Check motor shaft fit.
- 2) Min./Max. permissible motor shaft length. Longer motor shafts are adaptable, please contact us.
- 3) The dimensions depend on the motor.
- 4) Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm.
- 5) Output side





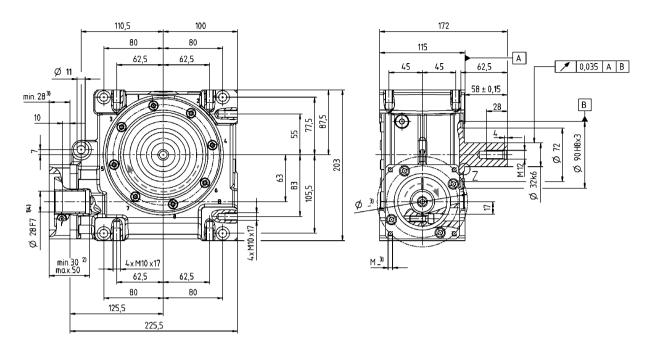


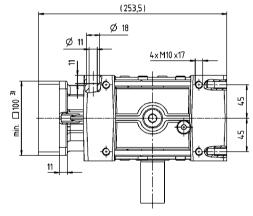
VDS Value 063 1-stage

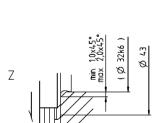
					1-s	tage				
Ratio	i		4	7	10	16	28	40		
	т	Nm	-	303	319	331	365	321		
	T _{2Max}	in.lb	-	2682	2823	2929	3230	2841		
n _{1N} =500 rpm	T _{2Servo}	Nm in.lb	<u> </u>	183 1620	195 1726	198 1752	215 1903	201 1779		
	η	%		91	88	83	74	68		
		Nm		269	287	302	337	308		
	T _{2Max}	in.lb	-	2381	2540	2673	2982	2726		
n _{1N} =1000 rpm	т	Nm	-	197	208	212	230	215		
11 _{1N} =1000 1p111	T _{2Servo}	in.lb		1743	1841	1876	2036	1903		
	η	%	-	93	91	86	78	73		
	T _{2Max}	Nm	-	234	252	263	277	269		
	2Max	in.lb	-	2071	2230	2328	2451	2381		
n _{1N} =2000 rpm	T _{2Servo}	Nm		188	203	212	224	217		
IN .	2Servo	in.lb		1664	1797	1876	1982	1920		
	η	%	-	94	93	89	83	78		
	T _{2Max}	Nm		183	198	209	230	224		
	∠wax	in.lb		1620	1752	1850	2036	1982		
n _{1N} =3000 rpm	T _{2Servo}	Nm in.lb	<u> </u>	145 1283	163 1443	181 1602	182 1611	177 1566		
	η	%		95	94	91	85	81		
	-1									
	T _{2Max}	Nm in.lb	<u> </u>	146 1292	162 1434	175 1549	196 1735	193 1708		
}		Nm		114	134	152	152	149		
n _{1N} =4000 rpm	T _{2Servo}	in.lb	_	1009	1186	1345	1345	1319		
	η	%	_	96	94	92	86	83		
		Nm	_	484	491	494	518	447		
Emergency stop torque	T _{2Not}	in.lb		4283	4345	4372	4584	3956		
	n _{1Max}	rpm	4500							
Mean no load running torque a) (With n,=3000 min ⁻¹ and 20° C gear temperature)	T ₀₁₂	Nm	-	3.1 27.4	3.0 26.6	2.4 21.2	2.3 20.4	2.2 19.5		
Max. torsional backlash	_	in.lb arcmin	-	27.4	1	21.2 ≤6	20.4	19.5		
Wax. torsional backlasm	\dot{J}_t	n .								
Torsional rigidity	C _{t21}	Nm/arcmin in.lb/arcmin				28 248				
Max. axial force b)	F _{2AMax}	N			8	250				
		lb _f				856 000				
Max. radial force b)	F _{2RMax}	lb _f				350				
Max. tilting moment	M _{2KMax}	Nm in.lb	843 7461							
Service life	L	h	> 20000							
(For calculation see "Information") Weight incl. standardadapter plate	m	kg	12,5							
		lb _m				7,6				
Operating noise (with n ₁ =3000 rpm no load)	L _{PA}	dB(A)	≤ 64							
Max. permitted housing temperature		°C F								
Ambient temperature	°C		-15 to +40							
Lubrication						ansmission oil				
			•							
Paint			None							
Direction of rotation			See drawing							
Protection class					IF	P 65				
Moment of inertia		kgcm ²	-	5,78	5,53	5,44	5,40	5,35		
(relates to the drive) H 28	J_1									

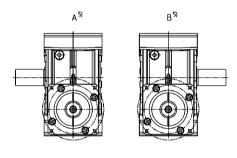
a) Idling torques decrease during operation

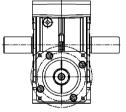
b) Refers to center of output shaft or flange at n₂ = 300 rpm







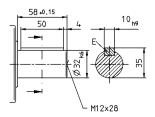




Optional dual-shaft output. Drawings available upon request.

Alternatives: Output shaft variants

Keywayed output shaft in mm E = key as per DIN 6885, sheet 1, form A



Non-tolerated dimensions ± 1 mm

- 1) Check motor shaft fit.
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- 4) Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm.
- 5) Output side



