

# CVS 040 MF 1-stage

			1-stage						
Ratio	$i$		7	10	16	28	40		
Max. torque <sup>a) b) e)</sup> (at $n_1 = 500$ rpm)	$T_{2a}$	Nm	68	76	78	82	76		
		in.lb	602	673	690	726	673		
Emergency stop torque <sup>a) b) e)</sup> (permitted 1000 times during the service life of the gearbox)	$T_{2Not}$	Nm	126	125	129	134	122		
		in.lb	1115	1106	1142	1186	1080		
Permitted average input speed <sup>d)</sup> (at 20 °C ambient temperature)	$n_{1N}$	rpm	4000						
Max. input speed	$n_{1Max}$	rpm	6000						
Mean no load running torque <sup>b)</sup> (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	$T_{012}$	Nm	0.7	0.6	0.5	0.4	0.4		
		in.lb	6.2	5.3	4.4	3.5	3.5		
Max. backlash	$j_t$	arcmin	≤ 15						
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	3.5	3.5	3.5	3.5	3.5		
		in.lb/arcmin	31	31	31	31	31		
Max. axial force <sup>c)</sup> (Standard / HIGH FORCES)	$F_{2AMax}$	N	1200 / 3000						
		lb <sub>f</sub>	270 / 675						
Max. lateral force <sup>b)</sup> (Standard / HIGH FORCES)	$F_{2OMax}$	N	1000 / 2400						
		lb <sub>f</sub>	225 / 540						
Max. tilting moment (Standard / HIGH FORCES)	$M_{2KMax}$	Nm	97 / 205						
		in.lb	858 / 1814						
Efficiency at full load (at $n_1 = 500$ rpm)	$\eta$	%	89	87	81	72	66		
Service life	$L_n$	h	> 15000						
Weight (incl. standard adapter plate)	$m$	kg	4.5						
		lb <sub>m</sub>	10						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex <sup>®</sup> )	$L_{PA}$	dB(A)	≤ 54						
Max. permitted housing temperature		°C	+90						
		°F	+194						
Ambient temperature		°C	-15 to +40						
		°F	+5 to +104						
Lubrication			Lubricated for life						
Direction of rotation			See drawing						
Protection class			IP 65						
Elastomer coupling (recommended product type – validate sizing with cymex <sup>®</sup> )			ELC - 00060B - 016.000 - X						
Bore diameter of coupling on the application side		mm	X = 016.000 - 032.000						
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	$J_1$	kgcm <sup>2</sup>	0.38	0.38	0.34	0.32	0.31
				10 <sup>-3</sup> in.lb.s <sup>2</sup>	0.34	0.34	0.30	0.28	0.27
	E	19	$J_1$	kgcm <sup>2</sup>	0.40	0.37	0.35	0.34	0.33
				10 <sup>-3</sup> in.lb.s <sup>2</sup>	0.35	0.33	0.31	0.30	0.29

Please use our sizing software cymex<sup>®</sup> for a detailed sizing – [www.wittenstein-cymex.com](http://www.wittenstein-cymex.com)

- <sup>a)</sup> At max. 10 %  $F_{2OMax}$
- <sup>b)</sup> Valid for standard clamping hub diameter
- <sup>c)</sup> Refers to center of the output shaft or flange
- <sup>d)</sup> Please reduce input speed at higher ambient temperatures
- <sup>e)</sup> Valid for: Smooth shaft



# CVS 050 MF 1-stage

			1-stage					
Ratio	$i$		7	10	16	28	40	
Max. torque <sup>a) b) e)</sup> (at $n_1 = 500$ rpm)	$T_{2a}$	Nm	125	127	131	140	116	
		in.lb	1106	1124	1159	1239	1027	
Emergency stop torque <sup>a) b) e)</sup> (permitted 1000 times during the service life of the gearbox)	$T_{2Not}$	Nm	242	242	250	262	236	
		in.lb	2142	2142	2213	2319	2089	
Permitted average input speed <sup>d)</sup> (at 20 °C ambient temperature)	$n_{1N}$	rpm	4000					
Max. input speed	$n_{1Max}$	rpm	6000					
Mean no load running torque <sup>b)</sup> (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	$T_{012}$	Nm	2.2	1.6	1.5	1.2	1.1	
		in.lb	19.5	14.2	13.3	10.6	9.7	
Max. backlash	$j_t$	arcmin	≤ 15					
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	5.5	5.5	5.5	5.5	5.5	
		in.lb/arcmin	49	49	49	49	49	
Max. axial force <sup>c)</sup> (Standard / HIGH FORCES)	$F_{2AMax}$	N	1500 / 5000					
		lb <sub>f</sub>	337.5 / 1125					
Max. lateral force <sup>b)</sup> (Standard / HIGH FORCES)	$F_{2OMax}$	N	1200 / 3800					
		lb <sub>f</sub>	270 / 855					
Max. tilting moment (Standard / HIGH FORCES)	$M_{2KMax}$	Nm	130 / 409					
		in.lb	1150 / 3620					
Efficiency at full load (at $n_1 = 500$ rpm)	$\eta$	%	89	85	80	70	63	
Service life	$L_n$	h	> 15000					
Weight (incl. standard adapter plate)	$m$	kg	8					
		lb <sub>m</sub>	18					
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex <sup>®</sup> )	$L_{PA}$	dB(A)	≤ 62					
Max. permitted housing temperature		°C	+90					
		°F	+194					
Ambient temperature		°C	-15 to +40					
		°F	+5 to +104					
Lubrication			Lubricated for life					
Direction of rotation			See drawing					
Protection class			IP 65					
Elastomer coupling (recommended product type – validate sizing with cymex <sup>®</sup> )			ELC - 00150B - 022.000 - X					
Bore diameter of coupling on the application side		mm	X = 022.000 - 036.000					
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E 19	$J_1$	kgcm <sup>2</sup>	1.22	1.17	1.06	1.05	1.01
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	1.08	1.04	0.94	0.93	0.89

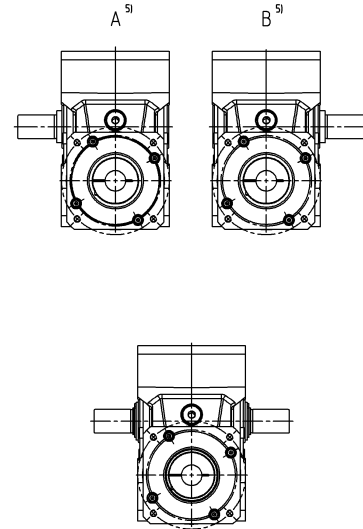
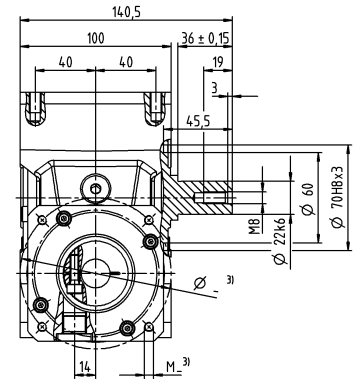
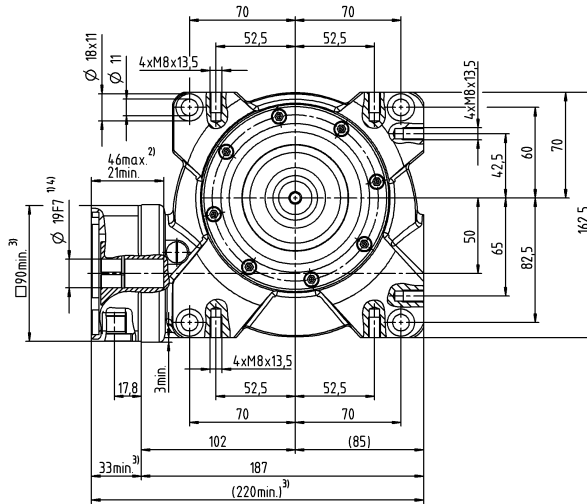
Please use our sizing software cymex<sup>®</sup> for a detailed sizing – [www.wittenstein-cymex.com](http://www.wittenstein-cymex.com)

- <sup>a)</sup> At max. 10 %  $F_{2OMax}$
- <sup>b)</sup> Valid for standard clamping hub diameter
- <sup>c)</sup> Refers to center of the output shaft or flange
- <sup>d)</sup> Please reduce input speed at higher ambient temperatures
- <sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

1-stage

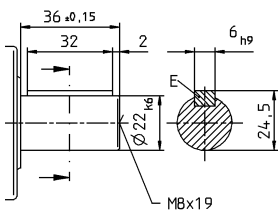
up to 19<sup>4)</sup> (E<sup>6)</sup>  
clamping hub diameter



Optional dual-shaft output. Drawings available on request.  
Involute gearing is not possible.

### Other output variants

Shaft with key



See technical data sheet for available clamping hub diameters (mass moment of inertia). Dimensions available on request.

Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min./Max. permissible motor shaft length

Longer motor shafts are adaptable, please contact us

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

<sup>5)</sup> Output side

<sup>6)</sup> Standard clamping hub diameter

# CVS 063 MF 1-stage

			1-stage					
Ratio	$i$		7	10	16	28	40	
Max. torque <sup>a) b) e)</sup> (at $n_1 = 500$ rpm)	$T_{2a}$	Nm	265	270	280	301	282	
		in.lb	2345	2390	2478	2664	2496	
Emergency stop torque <sup>a) b) e)</sup> (permitted 1000 times during the service life of the gearbox)	$T_{2Not}$	Nm	484	491	494	518	447	
		in.lb	4283	4345	4372	4584	3956	
Permitted average input speed <sup>d)</sup> (at 20 °C ambient temperature)	$n_{1N}$	rpm	4000					
Max. input speed	$n_{1Max}$	rpm	4500					
Mean no load running torque <sup>b)</sup> (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	$T_{012}$	Nm	3.1	3	2.4	2.3	2.2	
		in.lb	27.4	26.6	21.2	20.4	19.5	
Max. backlash	$j_t$	arcmin	≤ 15					
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	23	23	23	23	23	
		in.lb/arcmin	204	204	204	204	204	
Max. axial force <sup>c)</sup> (Standard / HIGH FORCES)	$F_{2AMax}$	N	2000 / 8250					
		lb <sub>f</sub>	450 / 1856					
Max. lateral force <sup>b)</sup> (Standard / HIGH FORCES)	$F_{2OMax}$	N	2000 / 6000					
		lb <sub>f</sub>	450 / 1350					
Max. tilting moment (Standard / HIGH FORCES)	$M_{2KMax}$	Nm	281 / 843					
		in.lb	2487 / 7461					
Efficiency at full load (at $n_1 = 500$ rpm)	$\eta$	%	90	87	82	73	67	
Service life	$L_n$	h	> 15000					
Weight (incl. standard adapter plate)	$m$	kg	13					
		lb <sub>m</sub>	29					
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex <sup>®</sup> )	$L_{PA}$	dB(A)	≤ 64					
Max. permitted housing temperature		°C	+90					
		°F	+194					
Ambient temperature		°C	-15 to +40					
		°F	+5 to +104					
Lubrication			Lubricated for life					
Direction of rotation			See drawing					
Protection class			IP 65					
Elastomer coupling (recommended product type – validate sizing with cymex <sup>®</sup> )			ELC - 00150B - 032.000 - X					
Bore diameter of coupling on the application side		mm	X = 032.000 - 036.000					
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H 28	$J_1$	kgcm <sup>2</sup>	3.75	3.61	3.52	3.48	3.36
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	3.32	3.19	3.12	3.08	2.97

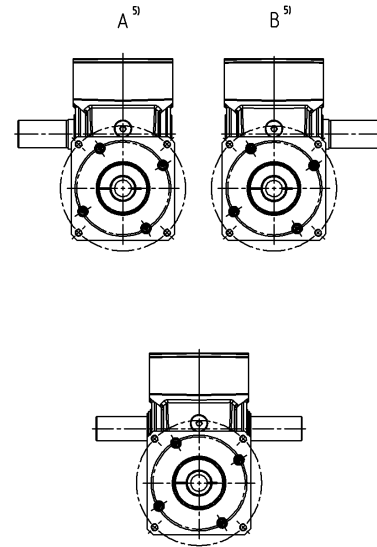
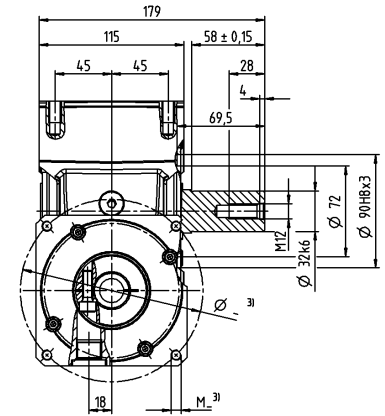
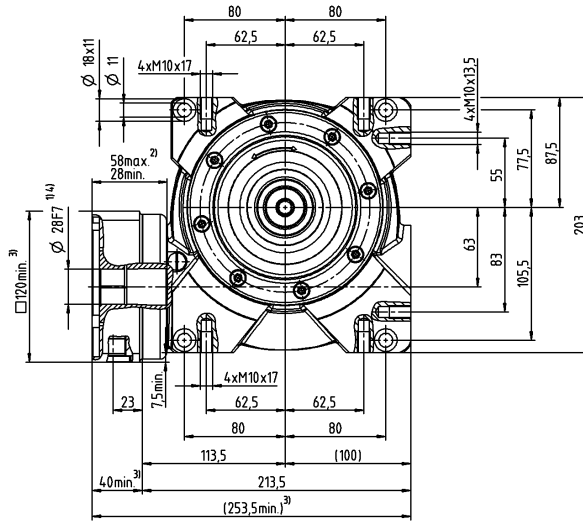
Please use our sizing software cymex<sup>®</sup> for a detailed sizing – [www.wittenstein-cymex.com](http://www.wittenstein-cymex.com)

- <sup>a)</sup> At max. 10 %  $F_{2OMax}$
- <sup>b)</sup> Valid for standard clamping hub diameter
- <sup>c)</sup> Refers to center of the output shaft or flange
- <sup>d)</sup> Please reduce input speed at higher ambient temperatures
- <sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

1-stage

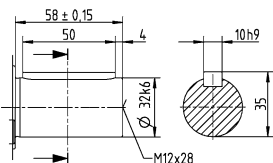
up to 28<sup>4)</sup> (H)<sup>6)</sup>  
clamping hub diameter



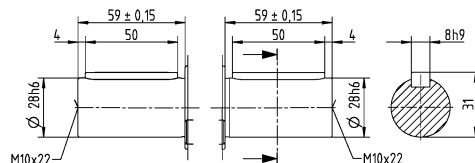
Optional dual-shaft output. Drawings available on request.  
Involute gearing is not possible.

Other output variants

Shaft with key



Shaft with parallel key on both sides



See technical data sheet for available clamping hub diameters (mass moment of inertia). Dimensions available on request.

Non-tolerated dimensions are nominal dimensions

- <sup>1)</sup> Check motor shaft fit
- <sup>2)</sup> Min./Max. permissible motor shaft length  
Longer motor shafts are adaptable, please contact us
- <sup>3)</sup> The dimensions depend on the motor
- <sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm
- <sup>5)</sup> Output side
- <sup>6)</sup> Standard clamping hub diameter