

Further information is available in the „alpha Linear Systems“ catalog or online at www.wittenstein-alpha.com



RP+ available as RPM+ servo actuator version (series in an even more compact design)

RP+ 030 MF 1-stage

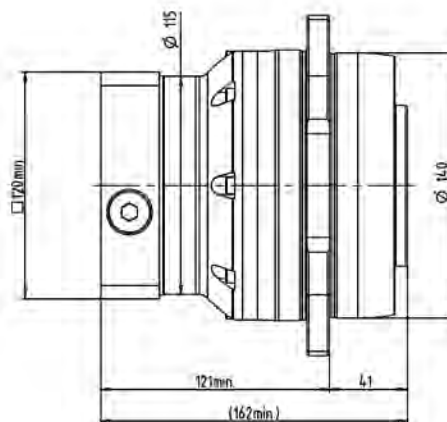
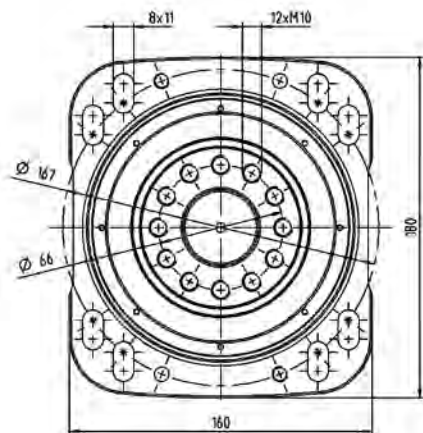
			1-stage
Ratio	i		4 / 5 / 7 / 10
Max. torque ^{a)}	T_{2a}	<i>Nm</i>	352 – 380
		<i>in.lb</i>	3115 – 3363
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	<i>Nm</i>	318 – 380
		<i>in.lb</i>	2815 – 3363
Nominal torque (at n_n)	T_{2N}	<i>Nm</i>	172 – 182
		<i>in.lb</i>	1522 – 1611
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	<i>Nm</i>	625
		<i>in.lb</i>	5532
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{1T}	<i>rpm</i>	2000 – 2800
Max. input speed	n_{1Max}	<i>rpm</i>	5500
Max. torsional backlash	j_t	<i>arcmin</i>	Standard ≤ 3 / Reduced ≤ 1
Torsional rigidity	C_{t21}	<i>Nm/arcmin</i>	62 – 86
		<i>in.lb/arcmin</i>	549 – 761
Max. tilting moment	M_{2KMax}	<i>Nm</i>	1800
		<i>in.lb</i>	15931
Operating noise ^{c)}	L_{PA}	<i>dB(A)</i>	≤ 61
Lubrication			Lubricated for life
Clamping hub diameter		<i>mm</i>	19 – 38

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.

1-stage



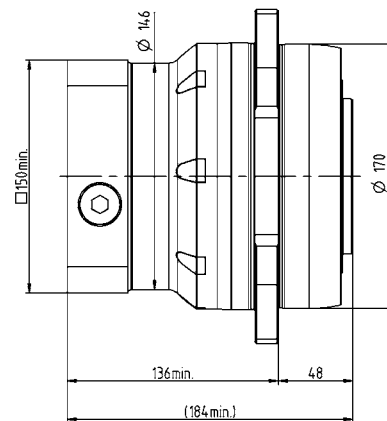
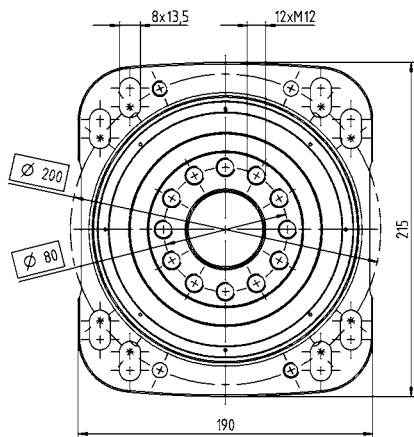
			1-stage
Ratio	i		4 / 5 / 7 / 10
Max. torque ^{a)}	T_{2a}	<i>Nm</i>	720 – 1120
		<i>in.lb</i>	6373 – 9913
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	<i>Nm</i>	540 – 700
		<i>in.lb</i>	4779 – 6196
Nominal torque (at n_n)	T_{2N}	<i>Nm</i>	272 – 318
		<i>in.lb</i>	2408 – 2810
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	<i>Nm</i>	1563
		<i>in.lb</i>	13829
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{TT}	<i>rpm</i>	2500 – 3200
Max. input speed	n_{1Max}	<i>rpm</i>	5000
Max. torsional backlash	j_t	<i>arcmin</i>	Standard ≤ 3 / Reduced ≤ 1
Torsional rigidity	C_{t21}	<i>Nm/arcmin</i>	123 – 190
		<i>in.lb/arcmin</i>	1089 – 1682
Max. tilting moment	M_{2KMax}	<i>Nm</i>	3600
		<i>in.lb</i>	31863
Operating noise ^{c)}	L_{PA}	<i>dB(A)</i>	≤ 61
Lubrication			Lubricated for life
Clamping hub diameter		<i>mm</i>	24 – 48

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.

1-stage



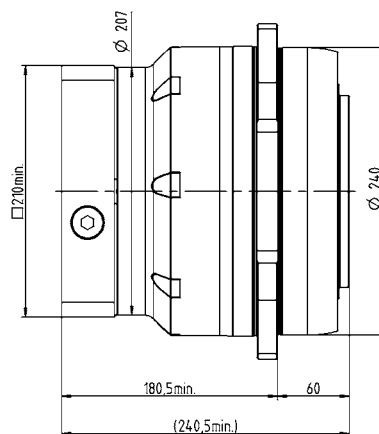
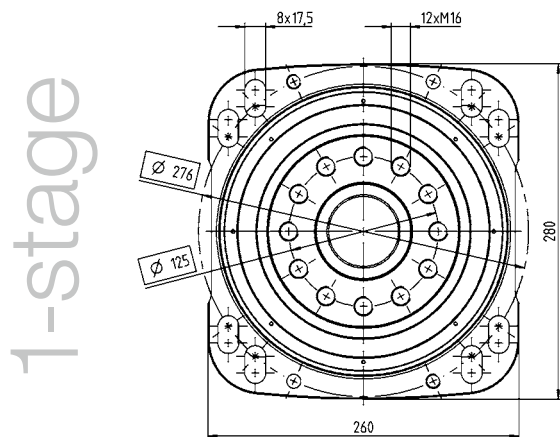
RP+ 050 MF 1-stage

			1-stage
Ratio	i		4 / 5 / 7 / 10
Max. torque ^{a)}	T_{2a}	<i>Nm</i>	2240 – 2560
		<i>in.lb</i>	19826 – 22658
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	<i>Nm</i>	1400 – 1600
		<i>in.lb</i>	12391 – 14161
Nominal torque (at n_n)	T_{2N}	<i>Nm</i>	725 – 927
		<i>in.lb</i>	6419 – 8203
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	<i>Nm</i>	3204 – 3438
		<i>in.lb</i>	28357 – 30425
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{1T}	<i>rpm</i>	1500 – 2300
Max. input speed	n_{1Max}	<i>rpm</i>	4500
Max. torsional backlash	j_t	<i>arcmin</i>	Standard ≤ 3 / Reduced ≤ 1
Torsional rigidity	C_{t21}	<i>Nm/arcmin</i>	445 – 610
		<i>in.lb/arcmin</i>	3939 – 5399
Max. tilting moment	M_{2KMax}	<i>Nm</i>	11000
		<i>in.lb</i>	97359
Operating noise ^{c)}	L_{PA}	<i>dB(A)</i>	≤ 66
Lubrication			Lubricated for life
Clamping hub diameter		<i>mm</i>	38 – 48

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.





Planetary gearboxes

RP+ 030 MA 1-/2-stage

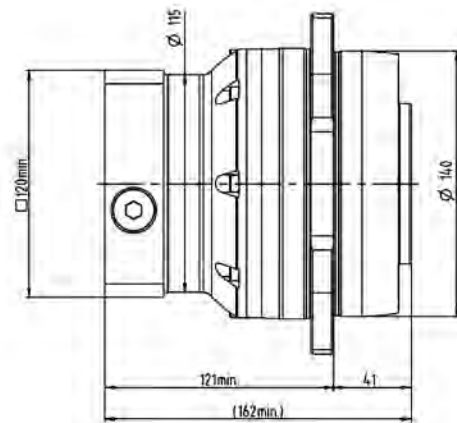
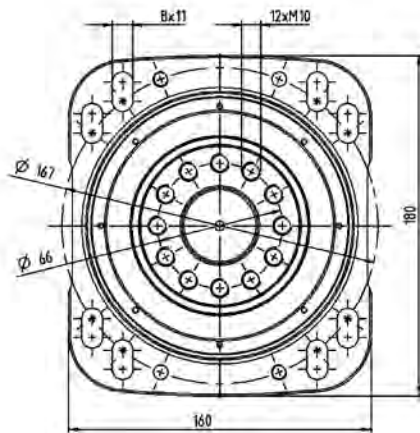
			1-stage	2-stage
Ratio	i		5.5	16 / 22 / 27.5 / 38.5 / 55
Max. torque ^{a)}	T_{2a}	<i>Nm</i>	583	583
		<i>in.lb</i>	5160	5160
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	<i>Nm</i>	530	530
		<i>in.lb</i>	4691	4691
Nominal torque (at n_n)	T_{2N}	<i>Nm</i>	243	315 – 432
		<i>in.lb</i>	2150	2788 – 3823
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	<i>Nm</i>	1200	1200
		<i>in.lb</i>	10621	10621
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{TT}	<i>rpm</i>	2000	3000
Max. input speed	n_{1Max}	<i>rpm</i>	5500	7500
Max. torsional backlash	j_t	<i>arcmin</i>	Standard ≤ 1	Standard ≤ 1
Torsional rigidity	C_{t21}	<i>Nm/arcmin</i>	105	100 – 105
		<i>in.lb/arcmin</i>	929	885 – 929
Max. tilting moment	M_{2KMax}	<i>Nm</i>	1800	1800
		<i>in.lb</i>	15931	15931
Operating noise ^{c)}	L_{PA}	<i>dB(A)</i>	≤ 65	≤ 58
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		<i>mm</i>	19 – 38	19 – 24

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

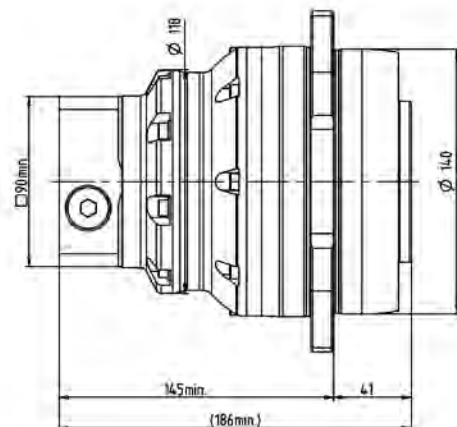
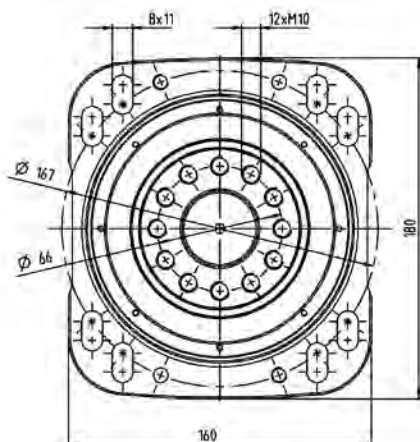
^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.

1-stage



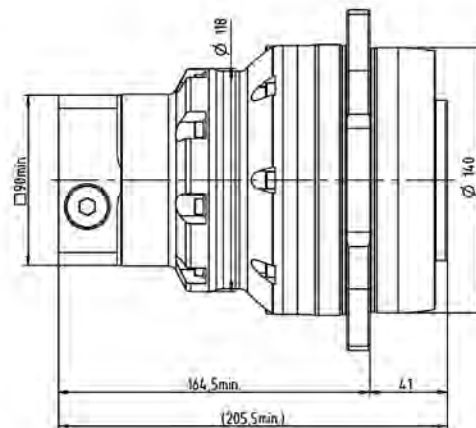
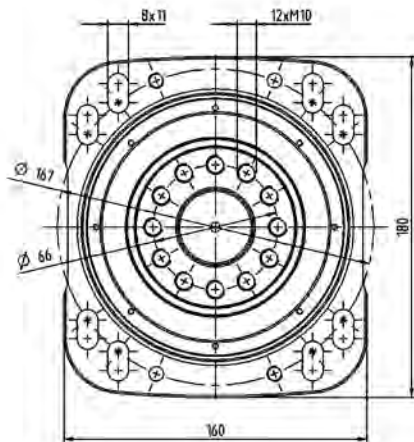
2-stage



			3-stage
Ratio	i		66 / 88 / 110 / 154 / 220
Max. torque ^{a)}	T_{2a}	Nm	583
		$in.lb$	5160
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	530
		$in.lb$	4691
Nominal torque (at n_n)	T_{2N}	Nm	284 – 397
		$in.lb$	2513 – 3513
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	1200
		$in.lb$	10621
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{1T}	rpm	3000
Max. input speed	n_{1Max}	rpm	7500
Max. torsional backlash	j_t	$arcmin$	Standard ≤ 1
Torsional rigidity	C_{t21}	$Nm/arcmin$	95
		$in.lb/arcmin$	841
Max. tilting moment	M_{2KMax}	Nm	1800
		$in.lb$	15931
Operating noise ^{c)}	L_{PA}	$dB(A)$	≤ 56
Lubrication			Lubricated for life
Clamping hub diameter		mm	19

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com
^{b)} For higher ambient temperatures, please reduce input speed
^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.

3-stage



Planetary gearboxes

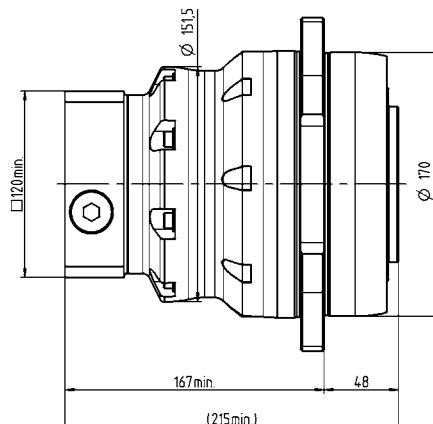
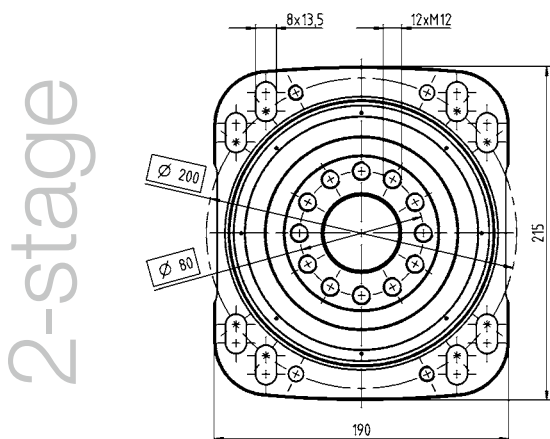
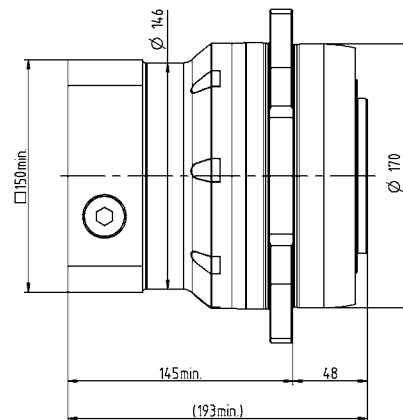
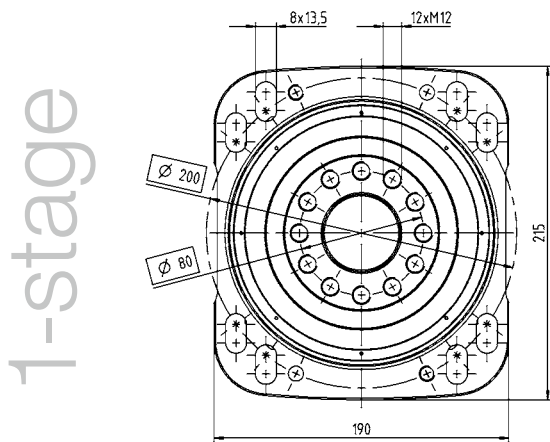
RP+ 040 MA 1-/2-stage

			1-stage	2-stage
Ratio	i		5.5	16 / 22 / 27.5 / 38.5 / 55
Max. torque ^{a)}	T_{2a}	Nm	1402	1270 – 1402
		in.lb	12406	11243 – 12406
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	950	950
		in.lb	8408	8408
Nominal torque (at n_n)	T_{2N}	Nm	417	476 – 653
		in.lb	3695	4217 – 5779
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	2865	2420 – 2613
		in.lb	25358	21416 – 25358
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{1T}	rpm	2500	4000 – 4100
Max. input speed	n_{1Max}	rpm	5000	6250
Max. torsional backlash	j_t	arcmin	Standard ≤ 1	Standard ≤ 1
Torsional rigidity	C_{t21}	Nm/arcmin	220	220
		in.lb/arcmin	1947	1947
Max. tilting moment	M_{2KMax}	Nm	3600	3600
		in.lb	31863	31863
Operating noise ^{c)}	L_{PA}	dB(A)	≤ 63	≤ 61
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		mm	38 – 48	24 – 38

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.



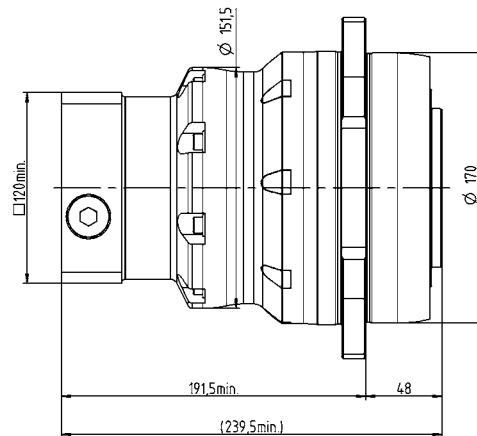
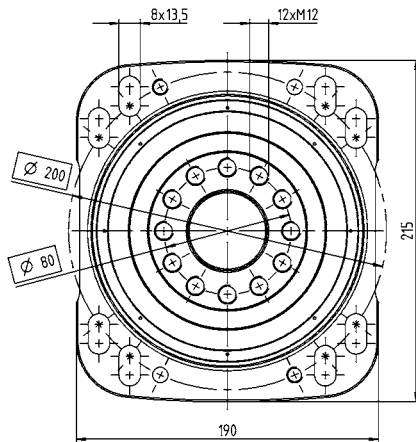
			3-stage
Ratio	i		66 / 88 / 110 / 154 / 220
Max. torque ^{a)}	T_{2a}	Nm	1402
		in.lb	12406
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	950
		in.lb	8408
Nominal torque (at n_n)	T_{2N}	Nm	690 – 760
		in.lb	6103 – 6727
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	2865
		in.lb	25358
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{TT}	rpm	4100
Max. input speed	n_{1Max}	rpm	6250
Max. torsional backlash	j_t	arcmin	Standard ≤ 1
Torsional rigidity	C_{t21}	Nm/arcmin	205
		in.lb/arcmin	1814
Max. tilting moment	M_{2KMax}	Nm	3600
		in.lb	31863
Operating noise ^{c)}	L_{PA}	dB(A)	≤ 58
Lubrication			Lubricated for life
Clamping hub diameter		mm	24

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.

3-stage



RP+ 050 MA 1-/2-stage

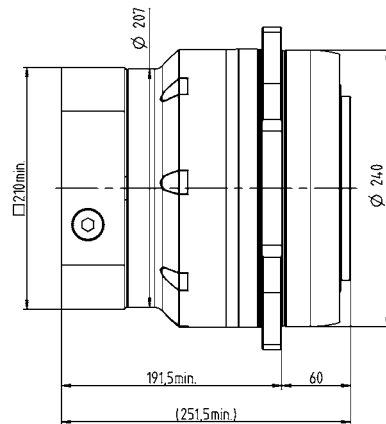
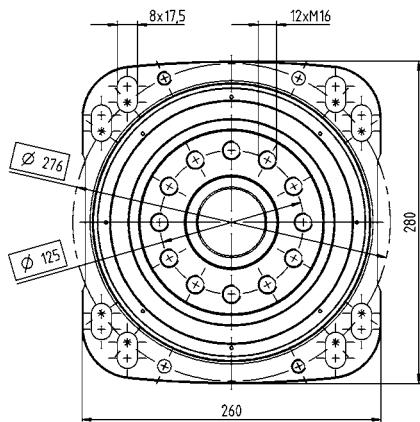
			1-stage	2-stage
Ratio	i		5.5	16 / 22 / 27.5 / 38.5 / 55
Max. torque ^{a)}	T_{2a}	Nm	3822	3518 – 3822
		in.lb	33826	28323 – 33826
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	3100	2000 – 3100
		in.lb	27437	17702 – 27437
Nominal torque (at n_n)	T_{2N}	Nm	1167	1174 – 1977
		in.lb	10326	10387 – 17501
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	6250	7150
		in.lb	55318	63283
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{1T}	rpm	1500	3100 – 3300
Max. input speed	n_{1Max}	rpm	4500	5625
Max. torsional backlash	j_t	arcmin	Standard ≤ 1	Standard ≤ 1
Torsional rigidity	C_{t21}	Nm/arcmin	730	670 – 730
		in.lb/arcmin	6461	5930 – 6461
Max. tilting moment	M_{2KMax}	Nm	11000	11000
		in.lb	97359	97359
Operating noise ^{c)}	L_{PA}	dB(A)	≤ 66	≤ 64
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		mm	48	38 – 48

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

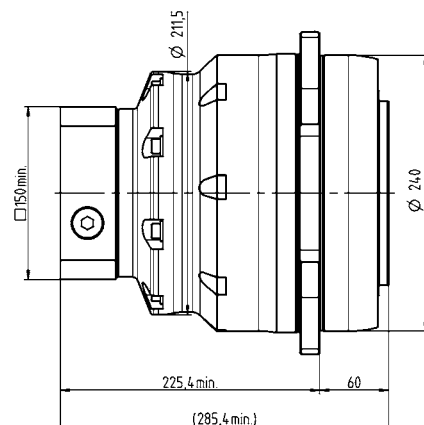
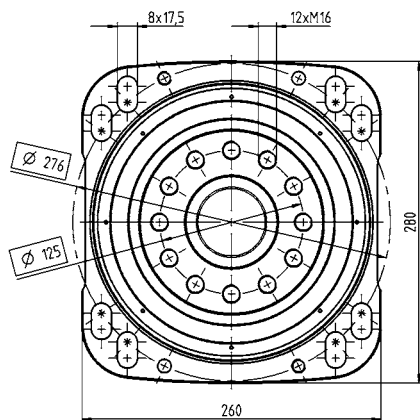
^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.

1-stage



2-stage



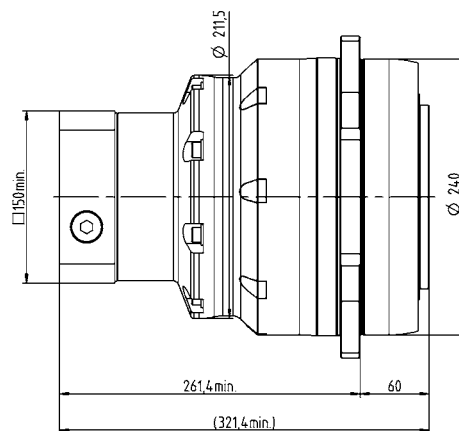
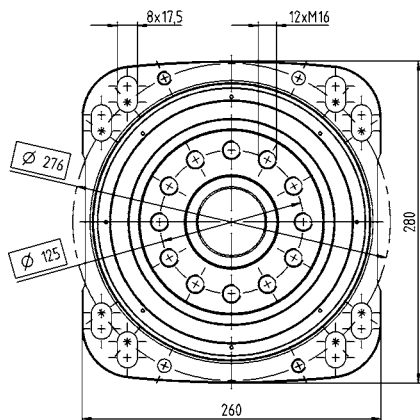
			3-stage
Ratio	i		66 / 88 / 110 / 154 / 220
Max. torque ^{a)}	T_{2a}	<i>Nm</i>	3023
		<i>in.lb</i>	26757
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	<i>Nm</i>	2600
		<i>in.lb</i>	23012
Nominal torque (at n_n)	T_{2N}	<i>Nm</i>	1602 – 2080
		<i>in.lb</i>	14182 – 18410
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	<i>Nm</i>	8125
		<i>in.lb</i>	71913
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{TT}	<i>rpm</i>	3300
Max. input speed	n_{1Max}	<i>rpm</i>	5625
Max. torsional backlash	j_t	<i>arcmin</i>	Standard ≤ 1
Torsional rigidity	C_{t21}	<i>Nm/arcmin</i>	650
		<i>in.lb/arcmin</i>	5753
Max. tilting moment	M_{2KMax}	<i>Nm</i>	11000
		<i>in.lb</i>	97359
Operating noise ^{c)}	L_{PA}	<i>dB(A)</i>	≤ 59
Lubrication			Lubricated for life
Clamping hub diameter		<i>mm</i>	38

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.

3-stage



RP+ 060 MA 1-/2-stage

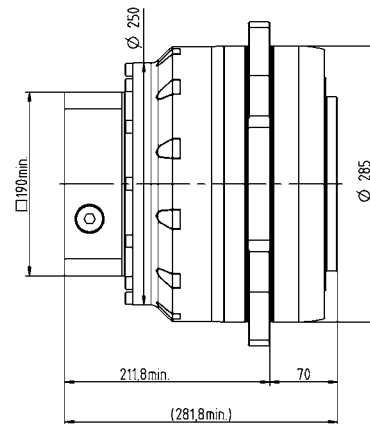
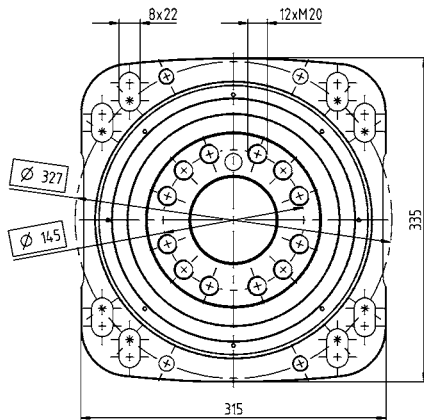
			1-stage	2-stage
Ratio	i		5.5	22 / 27.5 / 38.5 / 55
Max. torque ^{a)}	T_{2a}	<i>Nm</i>	7360	6240 – 7535
		<i>in.lb</i>	65142	55229 – 66691
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	<i>Nm</i>	4600	3900 – 5500
		<i>in.lb</i>	40714	34518 – 48679
Nominal torque (at n_n)	T_{2N}	<i>Nm</i>	2829	3120 – 3530
		<i>in.lb</i>	25035	27614 – 31243
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	<i>Nm</i>	10938	15296 – 15333
		<i>in.lb</i>	96806	135377 – 135709
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization ^{b)})	n_{IT}	<i>rpm</i>	1000	2750
Max. input speed	n_{IMax}	<i>rpm</i>	3125	4375
Max. torsional backlash	j_t	<i>arcmin</i>	Standard ≤ 1	Standard $\leq 1,5$
Torsional rigidity	C_{t21}	<i>Nm/arcmin</i>	1200	1200
		<i>in.lb/arcmin</i>	10621	10621
Max. tilting moment	M_{2KMax}	<i>Nm</i>	21000	21000
		<i>in.lb</i>	185867	185867
Operating noise ^{c)}	L_{PA}	<i>dB(A)</i>	≤ 68	≤ 64
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		<i>mm</i>	55	48

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

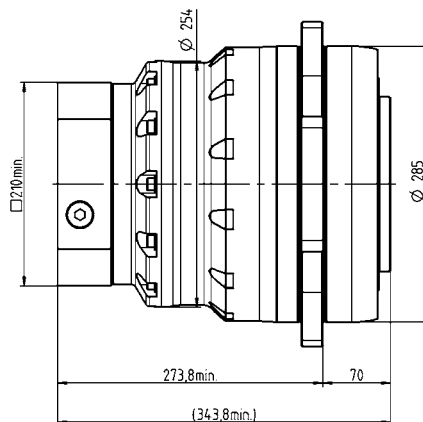
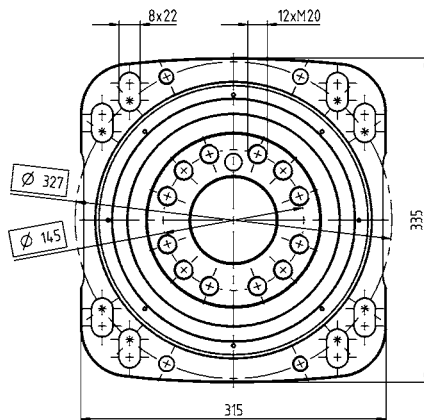
^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.

1-stage



2-stage



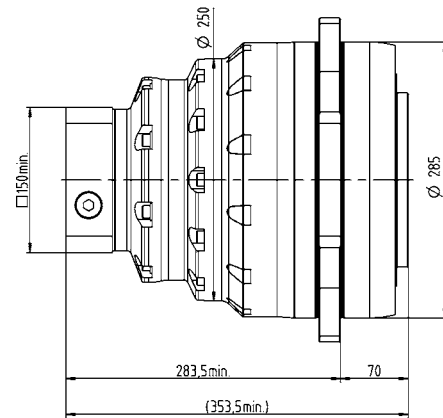
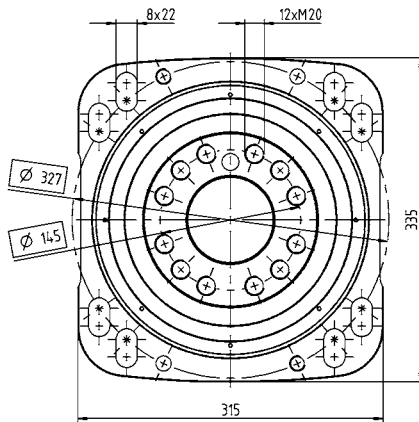
			3-stage
Ratio	i		66 / 88 / 110 / 154 / 220
Max. torque ^{a)}	T_{2a}	Nm	6987
		$in.lb$	61838
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	5500
		$in.lb$	48679
Nominal torque (at n_n)	T_{2N}	Nm	2923 – 4196
		$in.lb$	25869 – 37136
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	15333
		$in.lb$	135709
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{TT}	rpm	2750
Max. input speed	n_{1Max}	rpm	4375
Max. torsional backlash	j_t	$arcmin$	Standard $\leq 1,5$
Torsional rigidity	C_{t21}	$Nm/arcmin$	1200
		$in.lb/arcmin$	10621
Max. tilting moment	M_{2KMax}	Nm	21000
		$in.lb$	185867
Operating noise ^{c)}	L_{PA}	$dB(A)$	≤ 59
Lubrication			Lubricated for life
Clamping hub diameter		mm	38

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.

3-stage



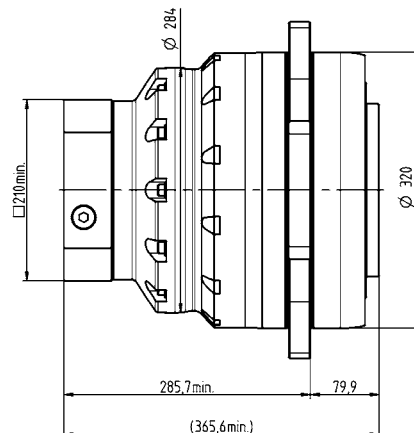
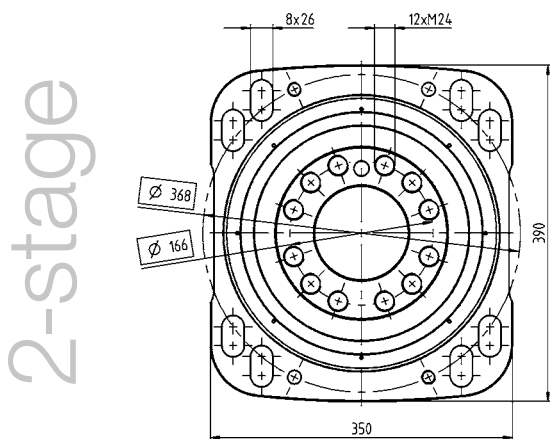
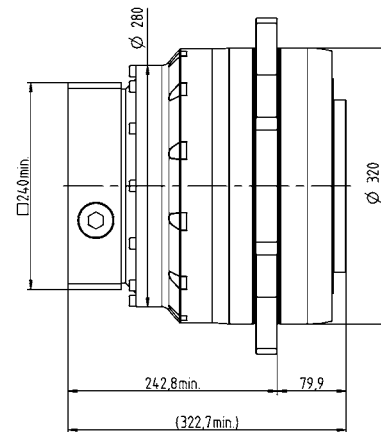
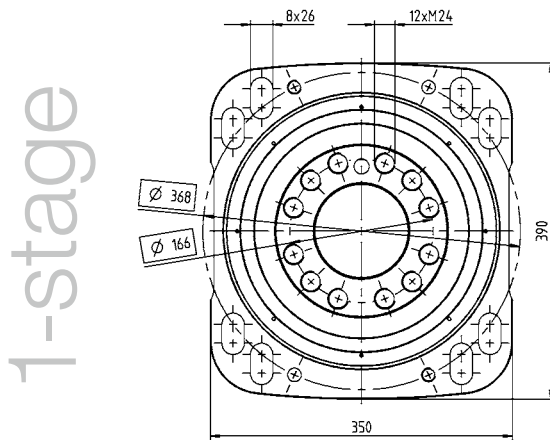
RP+ 080 MA 1-/2-stage

			1-stage	2-stage
Ratio	i		5.5	22 / 27.5 / 38.5 / 55
Max. torque ^{a)}	T_{2a}	Nm	10450	10450
		in.lb	92491	92491
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	8000	7200 – 10000
		in.lb	70806	63726 – 88508
Nominal torque (at n_n)	T_{2N}	Nm	4313	4602 – 4921
		in.lb	38174	40736 – 43558
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	18750	25000
		in.lb	165953	221270
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{IT}	rpm	900	1950
Max. input speed	n_{IMax}	rpm	3125	4375
Max. torsional backlash	j_t	arcmin	Standard ≤ 1	Standard $\leq 1,5$
Torsional rigidity	C_{t21}	Nm/arcmin	2000	2000
		in.lb/arcmin	17702	17702
Max. tilting moment	M_{2KMax}	Nm	34000	34000
		in.lb	300927	300927
Operating noise ^{c)}	L_{PA}	dB(A)	≤ 68	≤ 65
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		mm	60	48

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com

^{b)} For higher ambient temperatures, please reduce input speed

^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.



			3-stage
Ratio	i		66 / 88 / 110 / 154 / 220
Max. torque ^{a)}	T_{2a}	<i>Nm</i>	10450
		<i>in.lb</i>	92491
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	<i>Nm</i>	10000
		<i>in.lb</i>	88508
Nominal torque (at n_n)	T_{2N}	<i>Nm</i>	4567 – 7308
		<i>in.lb</i>	40418 – 64684
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	<i>Nm</i>	25000
		<i>in.lb</i>	221270
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) ^{b)}	n_{TT}	<i>rpm</i>	1950
Max. input speed	n_{1Max}	<i>rpm</i>	4375
Max. torsional backlash	j_t	<i>arcmin</i>	Standard $\leq 1,5$
Torsional rigidity	C_{t21}	<i>Nm/arcmin</i>	1800
		<i>in.lb/arcmin</i>	15931
Max. tilting moment	M_{2KMax}	<i>Nm</i>	34000
		<i>in.lb</i>	300927
Operating noise ^{c)}	L_{PA}	<i>dB(A)</i>	≤ 62
Lubrication			Lubricated for life
Clamping hub diameter		<i>mm</i>	38 – 48

^{a)} Application-specific design with cymex® – www.wittenstein-cymex.com
^{b)} For higher ambient temperatures, please reduce input speed
^{c)} At reference ratio and reference speed. Ratio-specific values available in cymex®.

3-stage

