XP+ – the best performing solution for cyclic operation

XP+

The XP+ with specially designed output and extremely compact design offers new dimensions in the power transmission in cyclic operation that far exceed industry standards. The optimized interfaces on the output can generate much higher torques, tilting moments and rigidity that directly benefit your application.

The XP+ impresses with maximum power density,
- if you require an even more compact drive
- if you wish to enhance the performance of your machine in cyclic operation
- if you require high-performance linear systems

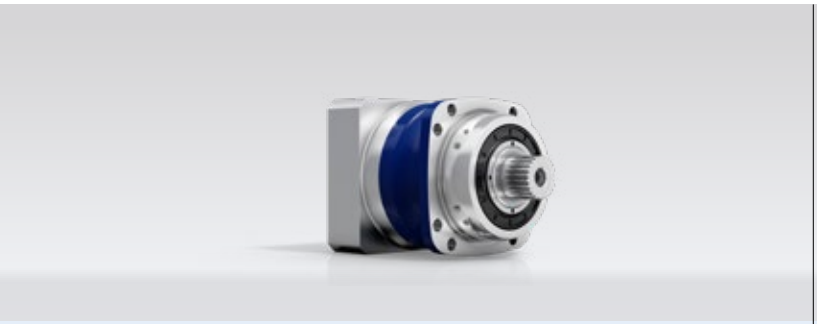
Produkthighlights

Max. backlash [arcmin] ≤ 1 - 3

High power density

Very smooth running

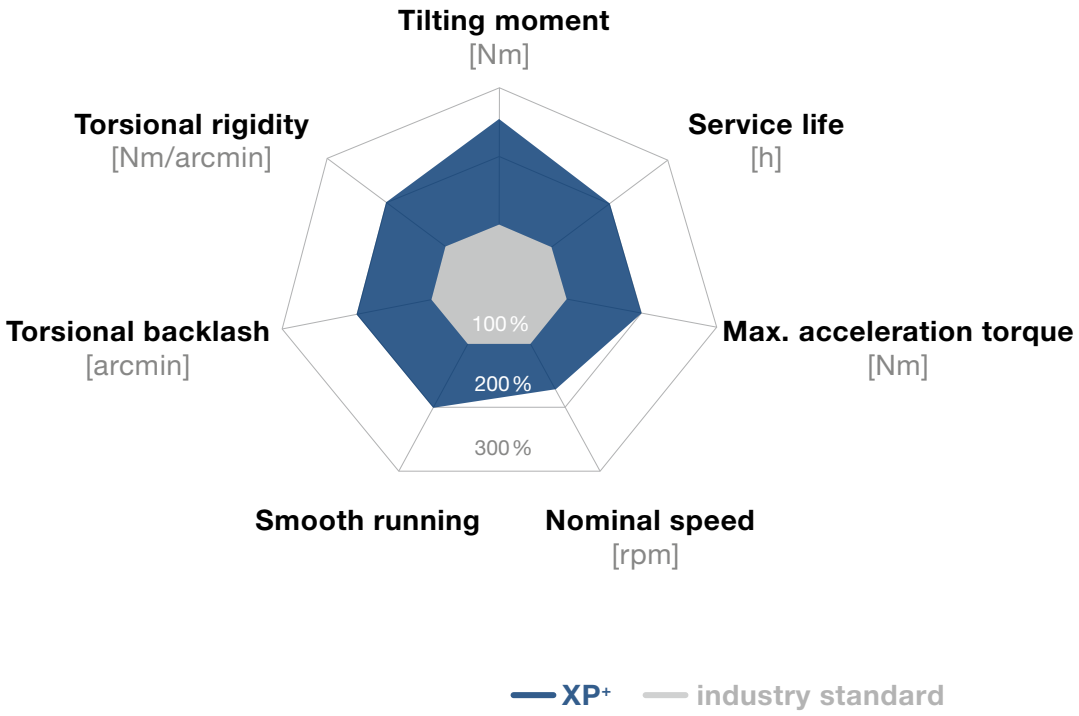
Multiple output configurations for greater flexibility
Smooth shaft, shaft with key, splined shaft (DIN 5480), blind hollow shaft, System output

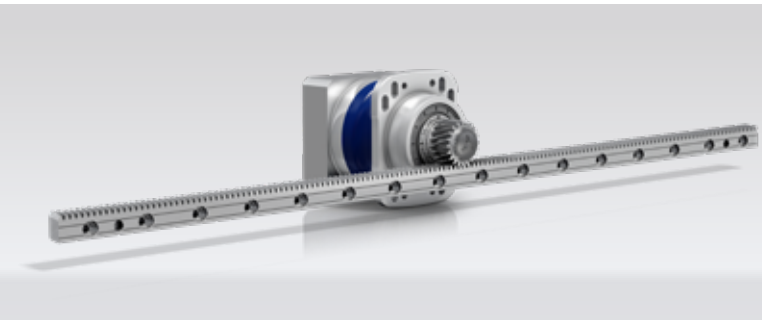


XP+ with splined shaft

XP+ with pinion and slots

XP+ compared to industry standard





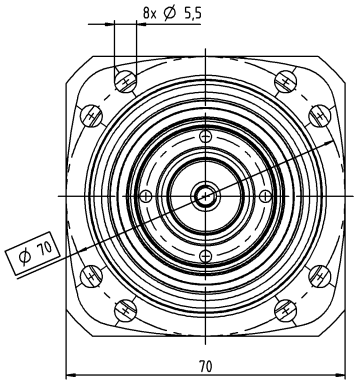
XP+ with pinion, slots and rack

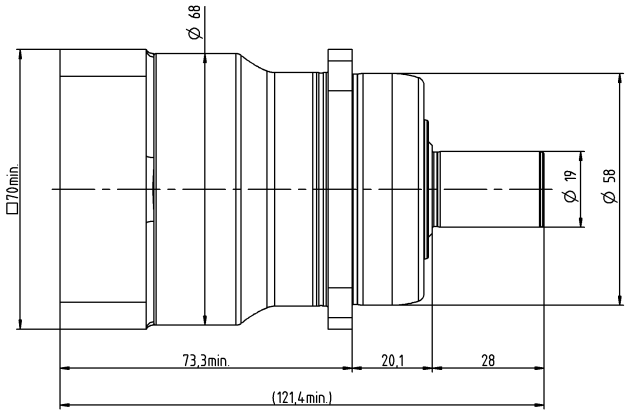
premo® XP Line with pinion

			1-stage	2-stage
Ratio	*i*		**3 / 4 / 5 / 7 / 8 / 10**	**16 / 20 / 25 / 28 / 32 / 35 / 40 / 50 / 64 / 70 / 100**
Max. torque [a]	T_{2a}	*Nm*	56 – 128	50 – 119
		in.lb	496 – 1133	446 – 1051
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	*Nm*	42 – 108	42 – 99
		in.lb	372 – 956	372 – 876
Nominal torque (at n_{1N})	T_{2N}	*Nm*	21 – 27	34 – 53
		in.lb	190 – 239	297 – 467
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	*Nm*	110 – 165	110 – 165
		in.lb	974 – 1458	974 – 1458
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) [b]	n_{1T}	*rpm*	3300 – 4000	4400 – 5500
Max. input speed	n_{1Max}	*rpm*	7500	8500
Max. torsional backlash	j_t	*arcmin*	Standard ≤ 4 / Reduced ≤ 2	Standard ≤ 5 / Reduced ≤ 3
Torsional rigidity	C_{t21}	*Nm/arcmin*	5 – 6.5	5 – 6.5
		in.lb/arcmin	44 – 58	44 – 58
Max. tilting moment	M_{2KMax}	*Nm*	339	339
		in.lb	3000	3000
Operating noise [c]	L_{PA}	*dB(A)*	≤ 55	≤ 53
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		*mm*	11 – 19	11 – 14

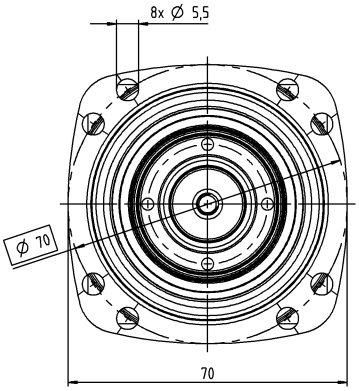
[a] Application-specific design with cymex® – www.wittenstein-cymex.com
[b] For higher ambient temperatures, please reduce input speed
[c] At reference ratio and reference speed. Ratio-specific values available in cymex®.

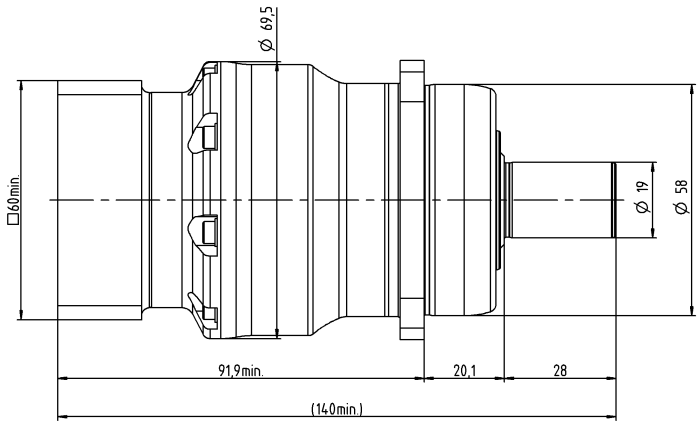
1-stage





2-stage

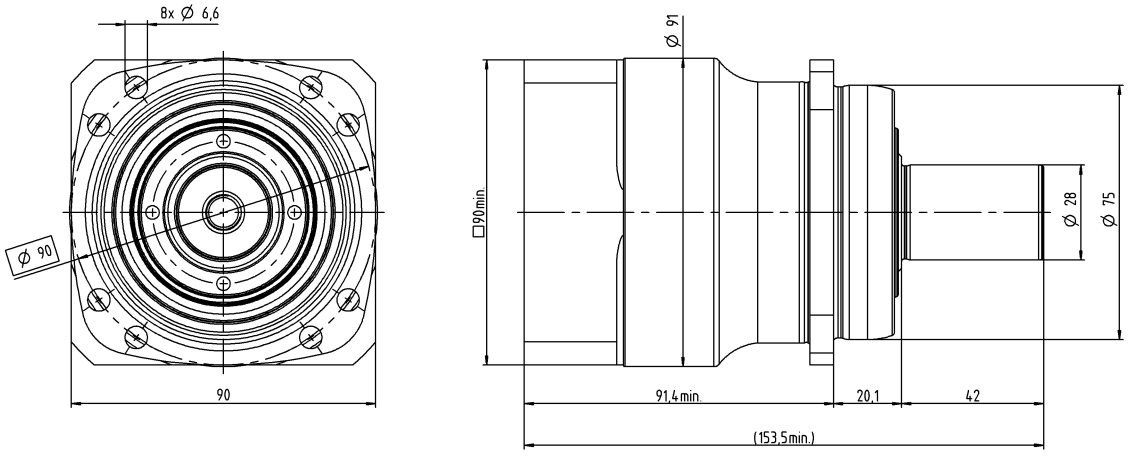




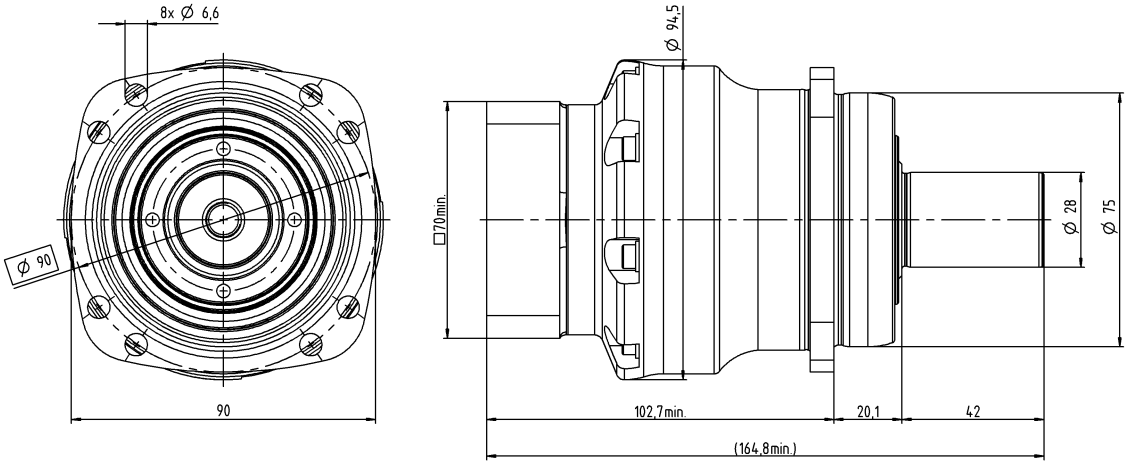
			1-stage	2-stage
Ratio	*i*		**3 / 4 / 5 / 7 / 8 / 10**	**16 / 20 / 25 / 28 / 32 / 35 / 40 / 50 / 64 / 70 / 100**
Max. torque [a]	T_{2a}	*Nm*	168 – 330	139 – 348
		in.lb	1487 – 2921	1227 – 3080
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	*Nm*	126 - 275	126 - 303
		in.lb	1115 - 2434	1115 - 2682
Nominal torque (at n_{1N})	T_{2N}	*Nm*	63 - 81	101 - 145
		in.lb	558 - 720	101 - 145
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	*Nm*	325 – 390	325 – 418
		in.lb	2877 – 3452	2877 – 3696
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) [b]	n_{1T}	*rpm*	2900 – 3100	3500 – 4500
Max. input speed	n_{1Max}	*rpm*	7500	8500
Max. torsional backlash	j_t	*arcmin*	Standard ≤ 3 / Reduced ≤ 1	Standard ≤ 4 / Reduced ≤ 2
Torsional rigidity	C_{t21}	*Nm/arcmin*	14 – 17	15 – 20
		in.lb/arcmin	124 – 150	133 – 173
Max. tilting moment	M_{2KMax}	*Nm*	675	675
		in.lb	5974	5974
Operating noise [c]	L_{PA}	*dB(A)*	≤ 56	≤ 53
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		*mm*	14 – 24	11 – 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®.

1-stage



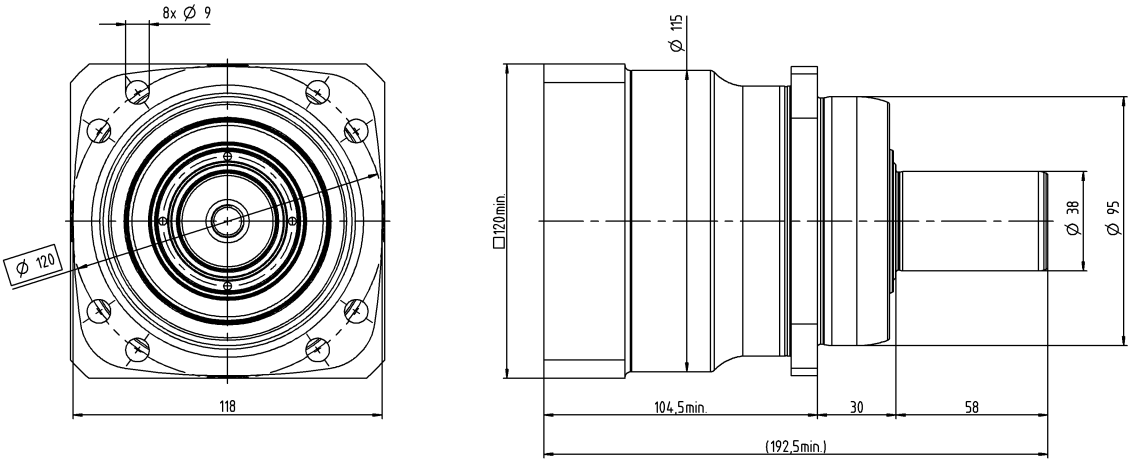
2-stage



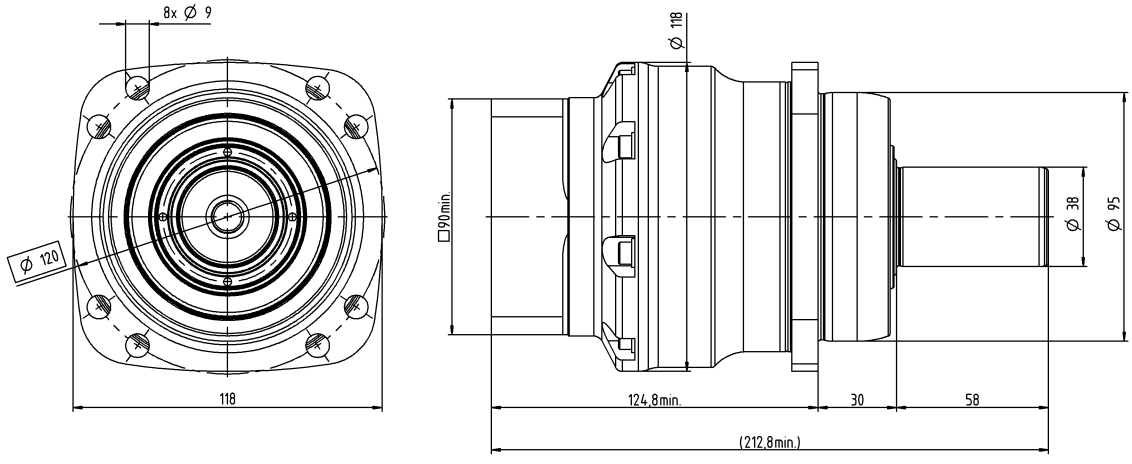
			1-stage	2-stage
Ratio	*i*		**3 / 4 / 5 / 7 / 8 / 10**	**16 / 20 / 25 / 28 / 32 / 35 / 40 / 50 / 64 / 70 / 100**
Max. torque [a]	T_{2a}	*Nm*	388 – 600	363 – 660
		in.lb	3434 – 5310	3213 – 5842
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	*Nm*	320 – 550	303 – 550
		in.lb	2832 – 4868	2682 – 4868
Nominal torque (at n_{1N})	T_{2N}	*Nm*	131 – 174	242 – 319
		in.lb	1157 – 1538	2142 – 2826
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	*Nm*	650 – 900	750 – 1125
		in.lb	5753 – 7966	6638 – 9957
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) [b]	n_{1T}	*rpm*	2500 – 2800	3100 – 4200
Max. input speed	n_{1Max}	*rpm*	5500	6500
Max. torsional backlash	j_t	*arcmin*	Standard ≤ 3 / Reduced ≤ 1	Standard ≤ 4 / Reduced ≤ 2
Torsional rigidity	C_{t21}	*Nm/arcmin*	32 – 40	35 – 45
		in.lb/arcmin	283 – 354	310 – 398
Max. tilting moment	M_{2KMax}	*Nm*	1296	1296
		in.lb	11471	11471
Operating noise [c]	L_{PA}	*dB(A)*	≤ 59	≤ 56
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		*mm*	19 – 38	14 – 28

[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



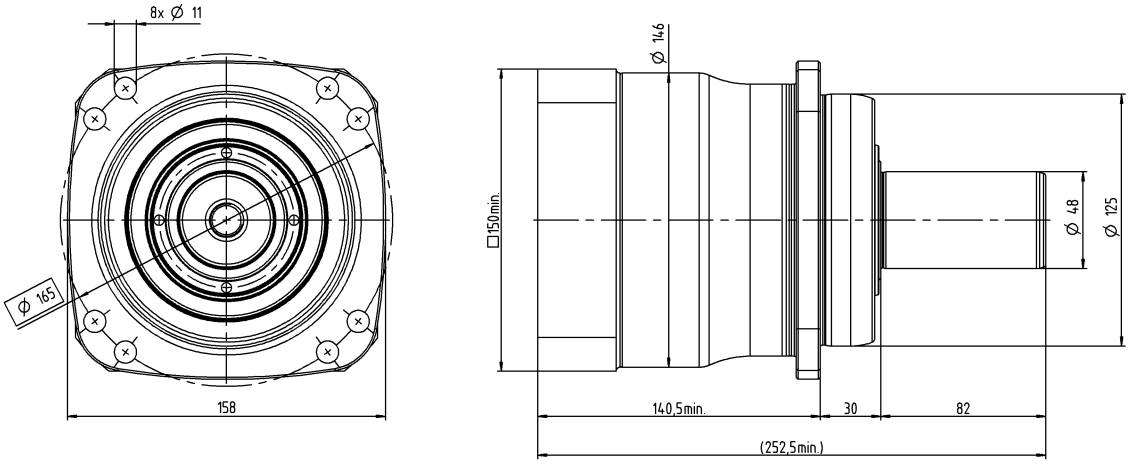
2-stage



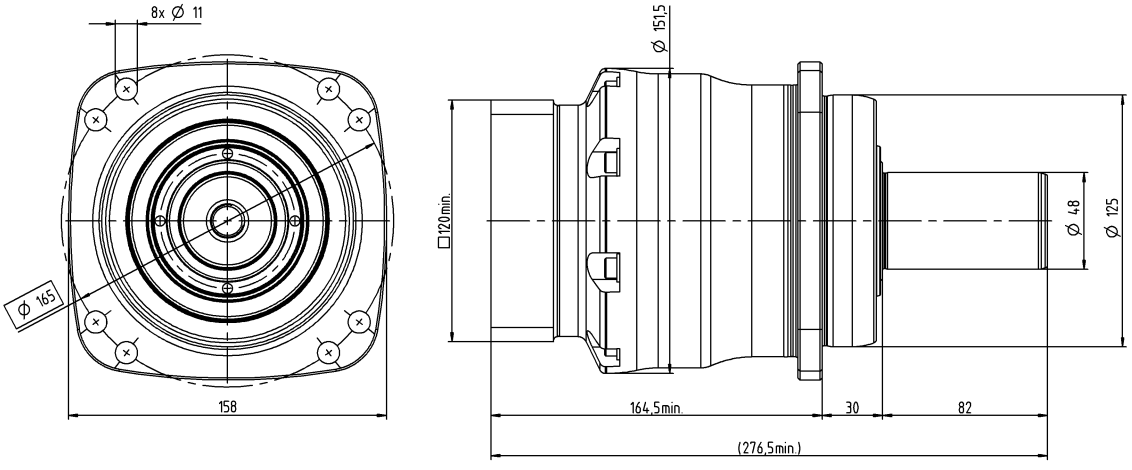
			1-stage	2-stage
Ratio	*i*		**3 / 4 / 5 / 7 / 8 / 10**	**16 / 20 / 25 / 28 / 32 / 35 / 40 / 50 / 64 / 70 / 100**
Max. torque [a]	T_{2a}	*Nm*	792 – 1312	792 – 1188
		in.lb	7010 – 11612	7010 – 10515
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	*Nm*	710 – 1080	660 – 990
		in.lb	6284 – 9559	5842 – 8762
Nominal torque (at n_{1N})	T_{2N}	*Nm*	202 – 335	461 – 607
		in.lb	1786 – 2962	4078 – 5370
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	*Nm*	1375 – 2310	1375 – 2310
		in.lb	12170 – 20449	12170 – 20449
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) [b]	n_{1T}	*rpm*	2100 – 2600	2900 – 3900
Max. input speed	n_{1Max}	*rpm*	5000	6000
Max. torsional backlash	j_t	*arcmin*	Standard ≤ 3 / Reduced ≤ 1	Standard ≤ 4 / Reduced ≤ 2
Torsional rigidity	C_{t21}	*Nm/arcmin*	62 – 85	75 – 95
		in.lb/arcmin	549 – 752	664 – 841
Max. tilting moment	M_{2KMax}	*Nm*	1635	1635
		in.lb	14471	14471
Operating noise [c]	L_{PA}	*dB(A)*	≤ 60	≤ 57
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		*mm*	24 – 48	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



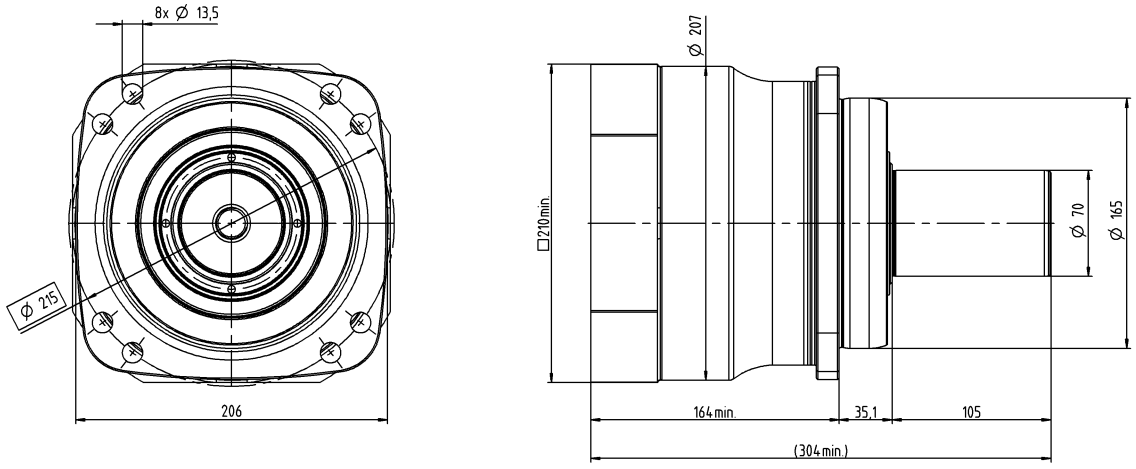
2-stage



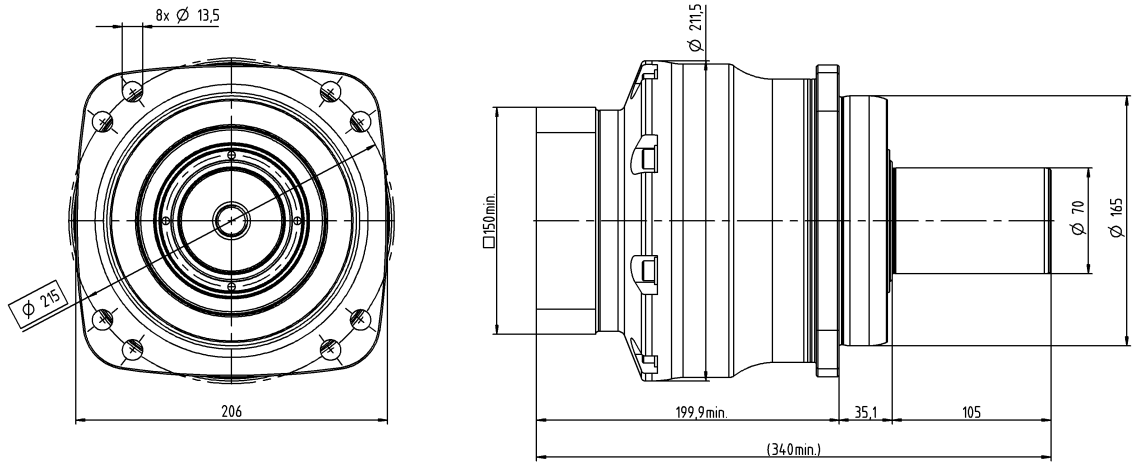
			1-stage	2-stage
Ratio	*i*		**3 / 4 / 5 / 7 / 8 / 10**	**16 / 20 / 25 / 28 / 32 / 35 / 40 / 50 / 64 / 70 / 100**
Max. torque [a]	T_{2a}	*Nm*	2400 – 3840	1980 – 3696
		in.lb	21242 – 33987	17525 – 32713
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	*Nm*	1800 – 3360	1650 – 3080
		in.lb	15931 – 29739	14604 – 27260
Nominal torque (at n_{1N})	T_{2N}	*Nm*	513 – 927	1179 – 1505
		in.lb	4544 – 8203	10426 – 13323
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	*Nm*	3445 – 5000	3505 – 5000
		in.lb	30493 – 44254	31022 – 44254
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) [b]	n_{1T}	*rpm*	1500 – 2300	2700 – 3400
Max. input speed	n_{1Max}	*rpm*	4500	5000
Max. torsional backlash	j_t	*arcmin*	Standard ≤ 3 / Reduced ≤ 1	Standard ≤ 4 / Reduced ≤ 1
Torsional rigidity	C_{t21}	*Nm/arcmin*	160 – 250	240 – 290
		in.lb/arcmin	1416 – 2213	2124 – 2567
Max. tilting moment	M_{2KMax}	*Nm*	3256	3256
		in.lb	28818	28818
Operating noise [c]	L_{PA}	*dB(A)*	≤ 64	≤ 58
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		*mm*	38 – 55	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



2-stage



XP+ HIGH SPEED – for more performance in continuous operation

XP+

The XP+ HIGH SPEED enables new dimensions in power transmission for applications in continuous operation - in the smallest installation space. An optimized drive and lubrication system enables higher nominal speeds and an increased service life of up to 30,000 hours.

The XP+ HIGH SPEED impresses with maximum power density
- if you require an even more compact drive
- if you wish to enhance the performance of your machine in continuous operation
- if maximum reliability and service life are required

Produkthighlights

Max. backlash [arcmin] ≤ 2 - 6

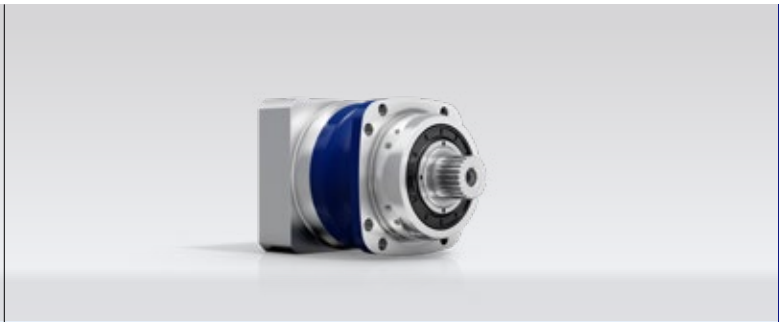
Lower temperature development

Maximum nominal speeds

30,000 h service life

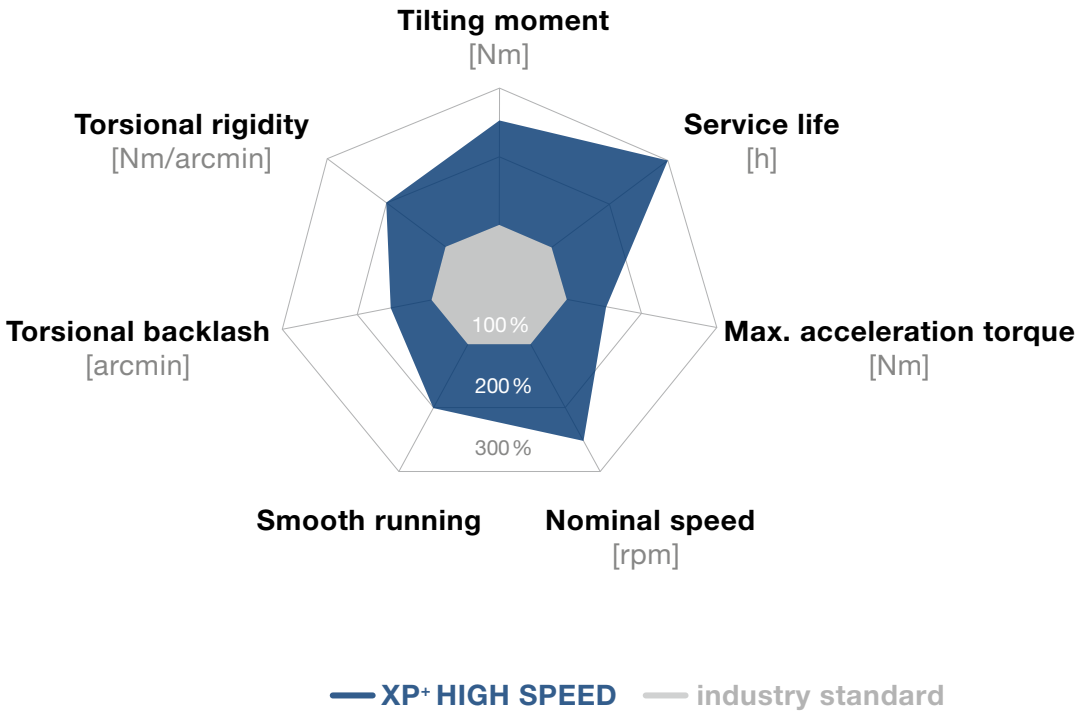
Multiple output configurations for greater flexibility
Smooth shaft, shaft with key, splined shaft (DIN 5480), blind hollow shaft, System output

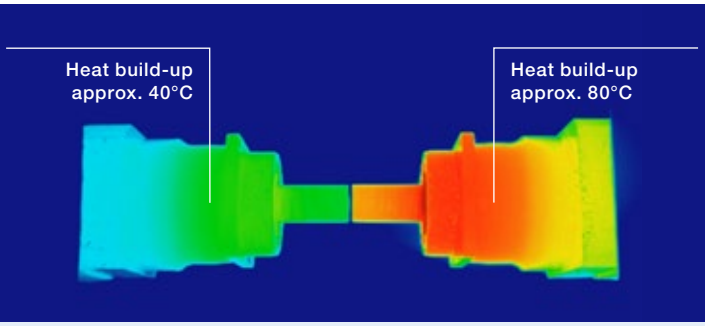
XP+ HIGH SPEED with cynapse®



XP+ HIGH SPEED with splined shaft

XP+ HIGH SPEED compared to industry standard





XP+ HIGH SPEED
MC version

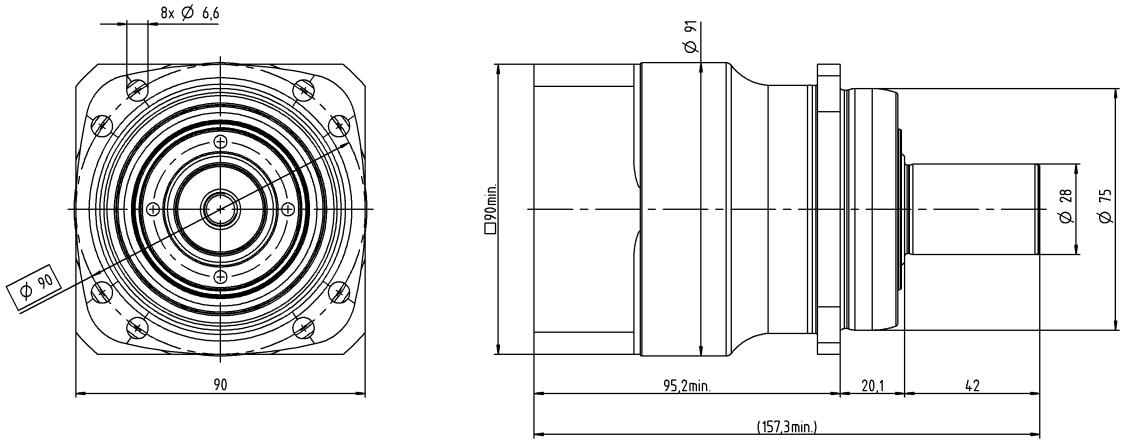
Industry standard

Matched accessories for your XP+ gearbox
You can find more information in the "Accessories" product catalog

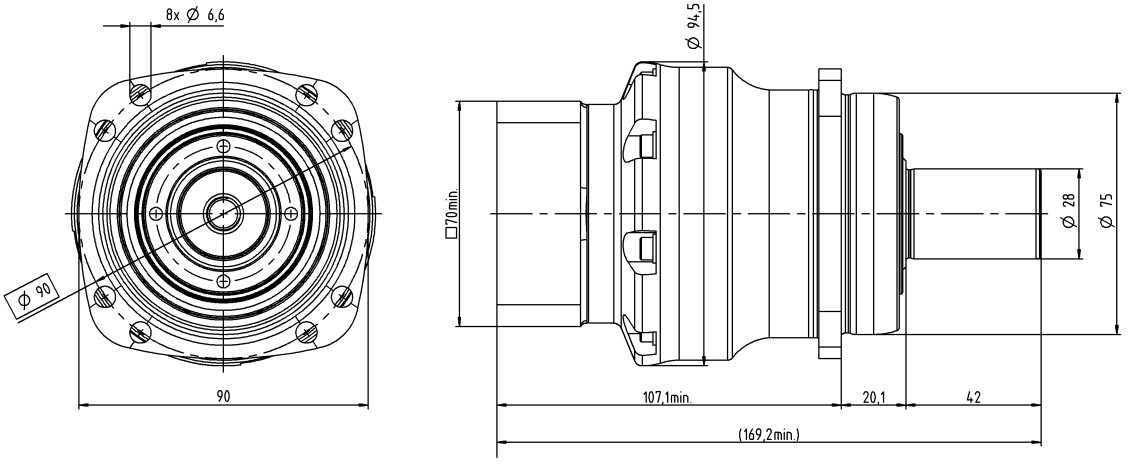
			1-stage	2-stage
Ratio	*i*		**3 / 4 / 5 / 7 / 8 / 10**	**16 / 20 / 25 / 28 / 32 / 35 / 40 / 50 / 64 / 70 / 100**
Max. torque [a]	T_{2a}	*Nm*	68 – 90	70 – 90
		in.lb	602 – 797	620 – 797
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	*Nm*	68 – 90	70 – 90
		in.lb	602 – 797	620 – 797
Nominal torque (at n_{1N})	T_{2N}	*Nm*	41 – 53	56 – 72
		in.lb	362 – 468	496 – 637
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	*Nm*	325 – 390	325 – 418
		in.lb	2877 – 3452	2877 – 3696
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) [b]	n_{1T}	*rpm*	4500	4500
Max. input speed	n_{1Max}	*rpm*	6000	6000
Max. torsional backlash	j_t	*arcmin*	Standard ≤ 6 / Reduced ≤ 4	Standard ≤ 8 / Reduced ≤ 6
Torsional rigidity	C_{t21}	*Nm/arcmin*	14 – 17	15 – 20
		in.lb/arcmin	124 – 150	133 – 177
Max. tilting moment	M_{2KMax}	*Nm*	675	675
		in.lb	5974	5974
Operating noise [c]	L_{PA}	*dB(A)*	≤ 56	≤ 53
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		*mm*	19 – 24	14 – 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®.

1-stage



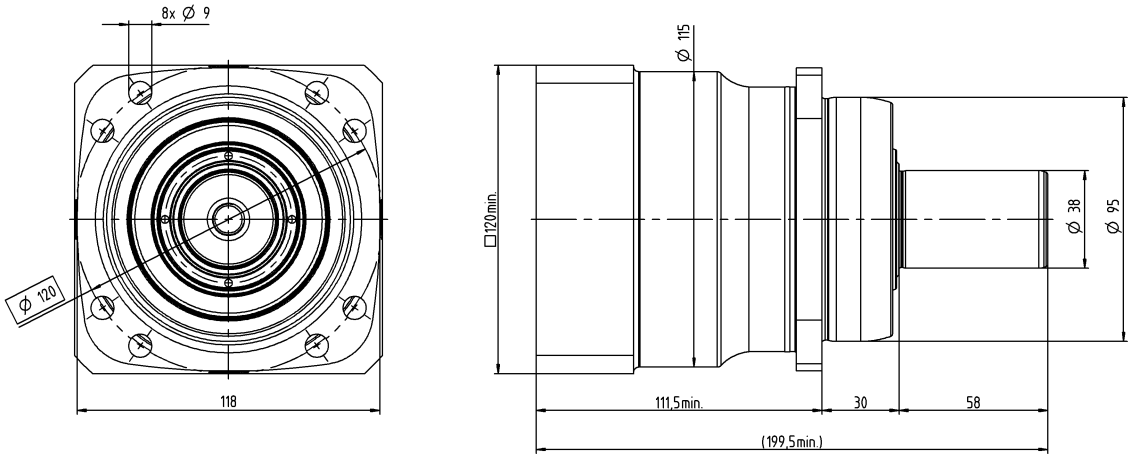
2-stage



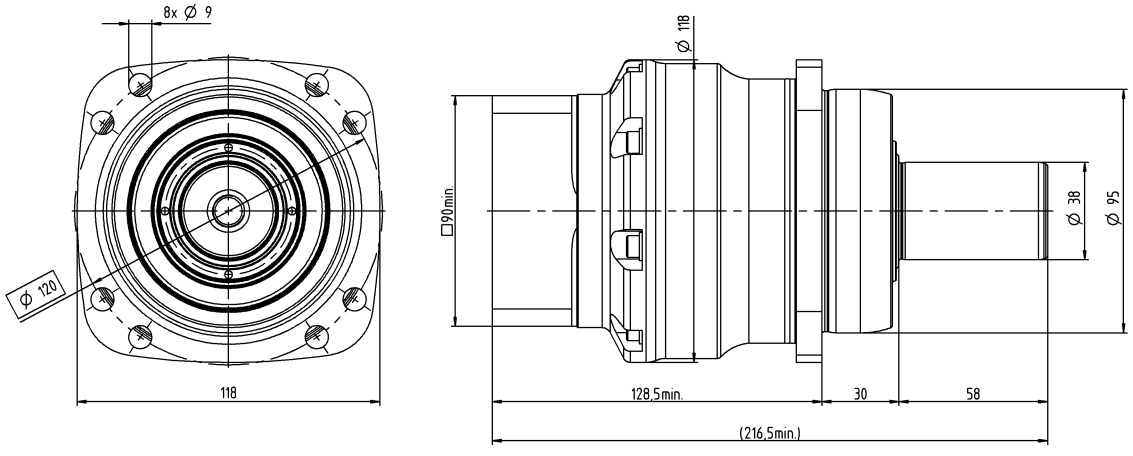
			1-stage	2-stage
Ratio	*i*		**3 / 4 / 5 / 7 / 8 / 10**	**16 / 20 / 25 / 28 / 32 / 35 / 40 / 50 / 64 / 70 / 100**
Max. torque [a]	T_{2a}	*Nm*	180 – 240	180 – 240
		in.lb	1593 – 2124	1593 – 2124
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	*Nm*	180 – 240	180 – 240
		in.lb	1593 – 2124	1593 – 2124
Nominal torque (at n_{1N})	T_{2N}	*Nm*	76 – 97	138 – 189
		in.lb	677 – 861	1221 – 1673
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	*Nm*	650 – 900	750 – 1125
		in.lb	5753 – 7966	6638 – 9957
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) [b]	n_{1T}	*rpm*	3500 – 4500	4500
Max. input speed	n_{1Max}	*rpm*	6000	6000
Max. torsional backlash	j_t	*arcmin*	Standard ≤ 4 / Reduced ≤ 2	Standard ≤ 6 / Reduced ≤ 4
Torsional rigidity	C_{t21}	*Nm/arcmin*	32 – 40	35 – 45
		in.lb/arcmin	283 – 354	310 – 398
Max. tilting moment	M_{2KMax}	*Nm*	1296	1296
		in.lb	11471	11471
Operating noise [c]	L_{PA}	*dB(A)*	≤ 59	≤ 56
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		*mm*	24 – 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



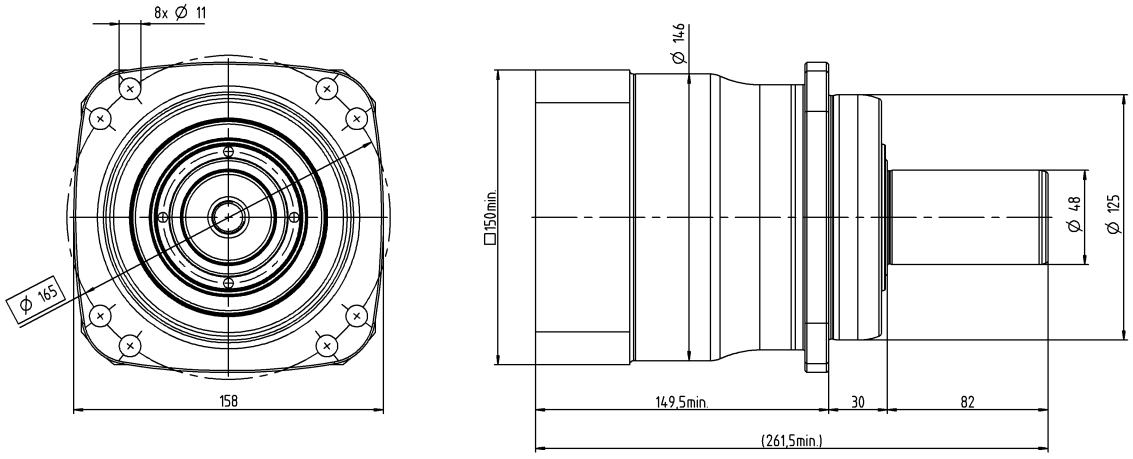
2-stage



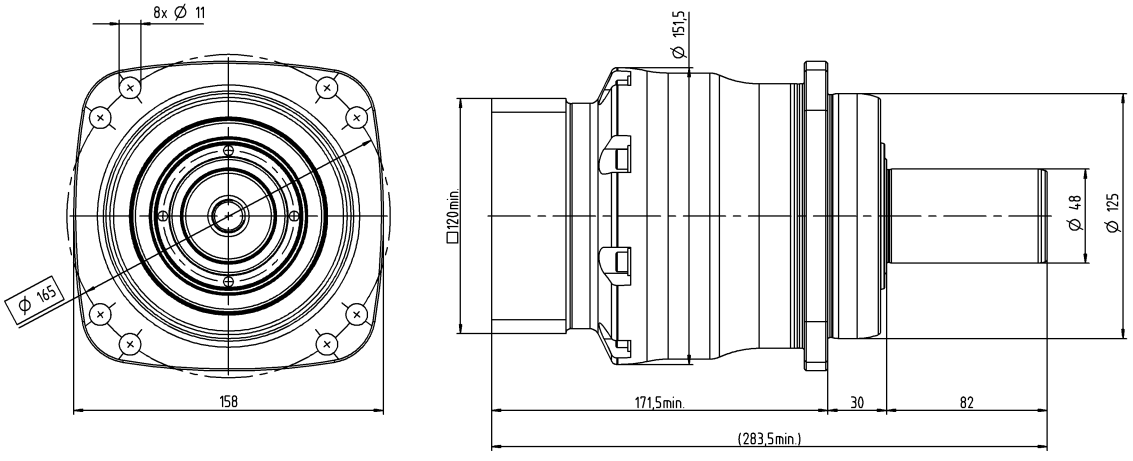
			1-stage	2-stage
Ratio	*i*		**3 / 4 / 5 / 7 / 8 / 10**	**16 / 20 / 25 / 28 / 32 / 35 / 40 / 50 / 64 / 70 / 100**
Max. torque [a]	T_{2a}	*Nm*	310 – 480	380 – 480
		in.lb	2744 – 4248	3363 – 4248
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	*Nm*	310 – 480	380 – 480
		in.lb	2744 – 4248	3363 – 4248
Nominal torque (at n_{1N})	T_{2N}	*Nm*	127 – 195	277 – 367
		in.lb	1122 – 1730	2447 – 3250
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	*Nm*	1375 – 2310	1375 – 2310
		in.lb	12170 – 20445	12170 – 20445
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) [b]	n_{1T}	*rpm*	3000 – 4500	4500
Max. input speed	n_{1Max}	*rpm*	6000	6000
Max. torsional backlash	j_t	*arcmin*	Standard ≤ 4 / Reduced ≤ 2	Standard ≤ 6 / Reduced ≤ 4
Torsional rigidity	C_{t21}	*Nm/arcmin*	62 – 85	75 – 95
		in.lb/arcmin	549 – 752	664 – 841
Max. tilting moment	M_{2KMax}	*Nm*	1635	1635
		in.lb	14471	14471
Operating noise [c]	L_{PA}	*dB(A)*	≤ 60	≤ 57
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®.

1-stage



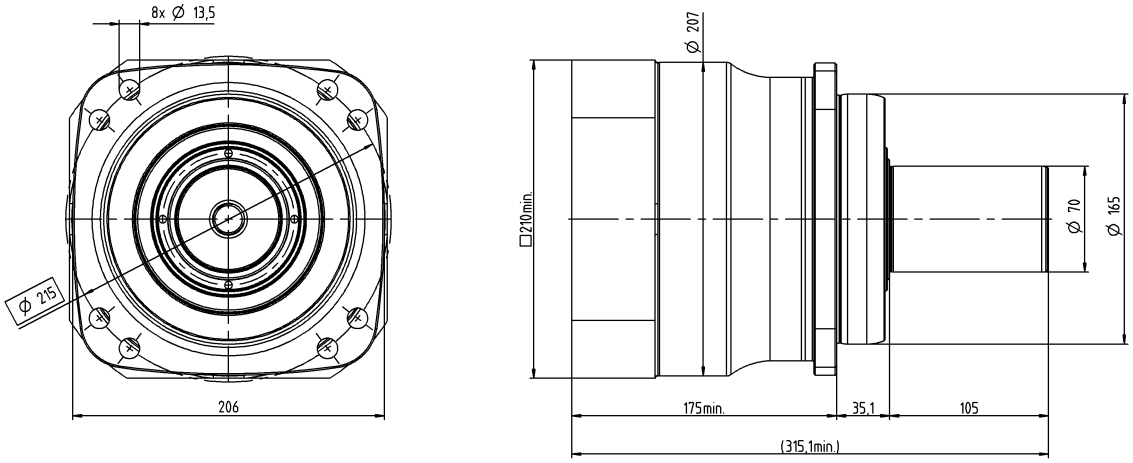
2-stage



			1-stage	2-stage
Ratio	*i*		**3 / 4 / 5 / 7 / 8 / 10**	**16 / 20 / 25 / 28 / 32 / 35 / 40 / 50 / 64 / 70 / 100**
Max. torque [a]	T_{2a}	*Nm*	700 – 880	700 – 880
		in.lb	6196 – 7789	6196 – 7789
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	*Nm*	700 – 880	700 – 880
		in.lb	6196 – 7789	6196 – 7789
Nominal torque (at n_{1N})	T_{2N}	*Nm*	289 – 492	560 – 704
		in.lb	2554 – 4355	4956 – 6231
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T_{2Not}	*Nm*	3445 – 5000	3505 – 5000
		in.lb	30493 – 44254	31022 – 44254
Thermal speed limit (with 20°C ambient temperature and 10% torque utilization) [b]	n_{1T}	*rpm*	3000 – 4500	4500
Max. input speed	n_{1Max}	*rpm*	4500 – 6000	6000
Max. torsional backlash	j_t	*arcmin*	Standard ≤ 4 / Reduced ≤ 2	Standard ≤ 6 / Reduced ≤ 4
Torsional rigidity	C_{t21}	*Nm/arcmin*	160 – 250	240 – 290
		in.lb/arcmin	1416 – 2213	2124 – 2567
Max. tilting moment	M_{2KMax}	*Nm*	3256	3256
		in.lb	28818	28818
Operating noise [c]	L_{PA}	*dB(A)*	≤ 64	≤ 58
Lubrication			Lubricated for life	Lubricated for life
Clamping hub diameter		*mm*	48	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



2-stage