

BDB LINE

Heavy duty, very low backlash, high torsional stiffness for high torque servo applications

Up to 10100 Nm rated

- Rotating output flange instead of traditional output shaft enables unique power transmission solutions. It is supported by 2 angular contact bearings or tapered roller bearings for maximal radial and axial load acceptance
- Satellite gears are double-supported on hardened and ground shafts with full complement needle bearings for increased torsional stiffness
- Very low backlash (5 to 1 arc-min max*)
- Up to 14 standard ratios from 3 to 220 / custom ratios available
- ISO or DIN output interface
- Easy 1 minute clamping onto motor shaft (self-locating input flange)
- Standard case temperature range is -20°C to $+90^{\circ}\text{C}$ - Consult us for higher or lower temperature use
- Protection rated IP 65 standard. IP-67 & 1500 psi water jets available
- Washdown stainless steel version available
- Optional lubricating grease for the food-processing industry
- Estimated life time 20.000 hours

*depending upon ratio and size



BDB 120

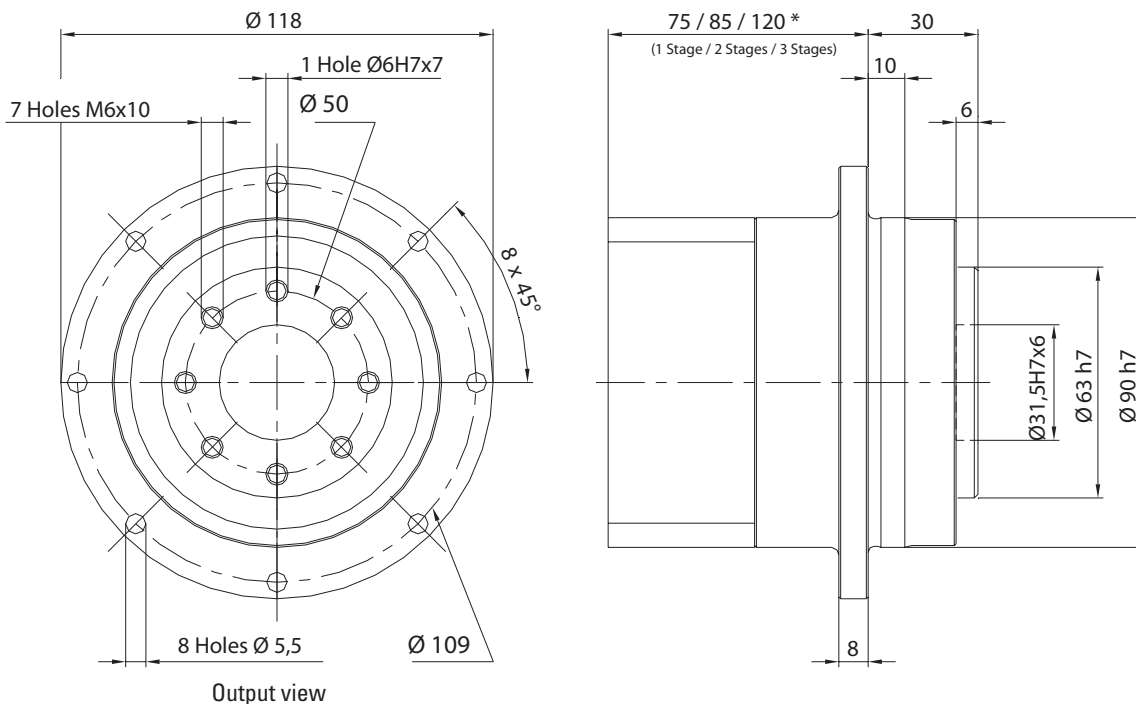
Technical characteristics

Number of stages		1 - Stage			2 - Stages				3 - Stages							
Ratio ⁽¹⁾		4	5.5	7	16	22	28	31	40	60	66	88	91	110	154	220
INPUT																
Rated / max speed	rpm	2 000 / 4 000 (consult us if you require higher input speed)														
Rated torque	Nm	22.1	15.1	10.4	5.7	4.1	3.2	2.9	4.1	2.7	2.5	1.9	1.8	1.35	1.1	0.7
Accel. torque	Nm ⁽²⁾	26	18.9	11.9	8	5.8	4.6	4.1	6.2	4.1	3.7	3.8	2.7	2.2	1.6	1.1
OUTPUT																
Rated torque	Nm	85	85	70	85				150							
Accel. torque	Nm ⁽²⁾	100	100	80	120				225							
Emergency stop torque	Nm	250			250				500							
Torsional stiffness	Nm / rd. x 10 ⁴	10			7				5							
Axial load	N	650														
Radial load	N ⁽⁵⁾	1 550														
GENERAL CHARACTERISTICS																
Input inertia	Kgm ² x10 ⁻⁵ ⁽³⁾	13.1	11.5	10.6	9.8	9.6	8.7	8.7	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
Max. backlash	arc-min.	≤ 5 or ≤ 3														
Efficiency	% ⁽⁴⁾	96			94				91							
Weight	Kg	5			8				10							
Gears life time	Hours	20 000														

- ¹⁾ Other ratios are possible, do not hesitate to contact us
²⁾ S5 duty service
³⁾ On the motorside
⁴⁾ Gear efficiency at rated torque
⁵⁾ Load applied in the middle of the output shaft at 300rpm

NOTE : Emergency stop torque is 2.5 times rated output torque for 1000 times max during the life of the gearhead.

Dimensions (mm)



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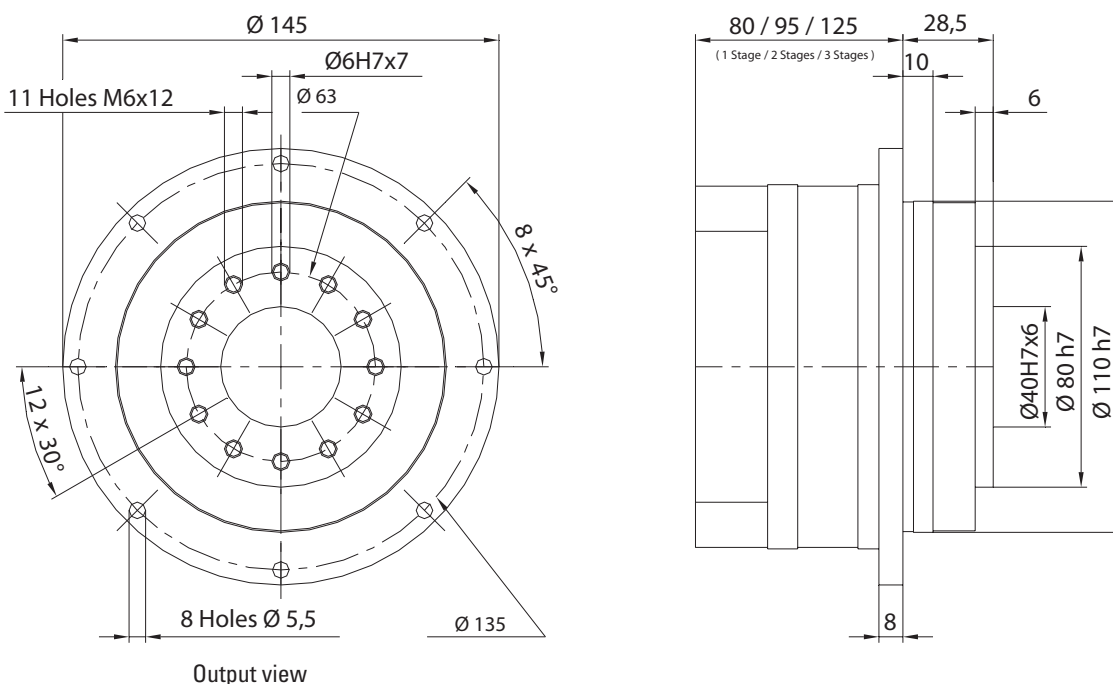
Technical characteristics

Number of stages		1 - Stage			2 - Stages				3 - Stages							
Ratio ⁽¹⁾		4	5.5	7	16	22	28	31	40	60	66	88	91	110	154	220
INPUT																
Rated / max speed	rpm	2 000 / 4 000 (consult us if you require higher input speed)														
Rated torque	Nm	70	41	20	20	14	11	10	9	6	5.8	4.3	4.2	3.5	2.5	1.7
Accel. torque	Nm ⁽²⁾	92	53	25	26	19	15	13	15	10	9.1	6.8	6.6	5.5	3.9	2.7
OUTPUT																
Rated torque	Nm	270	215	135	300				350							
Accel. torque	Nm ⁽²⁾	355	280	167	400				550							
Emergency stop torque	Nm	600			600				900							
Torsional stiffness	Nm / rd. x 10 ⁴	20			15				14							
Axial load	N									1 000						
Radial load	N ⁽⁵⁾									2 500						
GENERAL CHARACTERISTICS																
Input inertia	Kgm ² x10 ⁻⁵ ⁽³⁾	19.3	17.8	16.4	11.5	11.5	10	10	11	11	11	10	10	9	9	9
Max. backlash	arc-min.									≤ 5 or ≤ 3						
Efficiency	% ⁽⁴⁾	96			94				91							
Weight	Kg	7			10				13							
Gears life time	Hours									20 000						

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⁵⁾ Load applied in the middle of the output shaft at 300rpm

NOTE : Emergency stop torque is 2.5 times rated output torque for 1000 times max during the life of the gearhead.

Dimensions (mm)



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Consult us if the solution you are looking for cannot be found in our regular catalog.
 Our design department can create a custom gearbox most adapted to your needs.

BDB 180

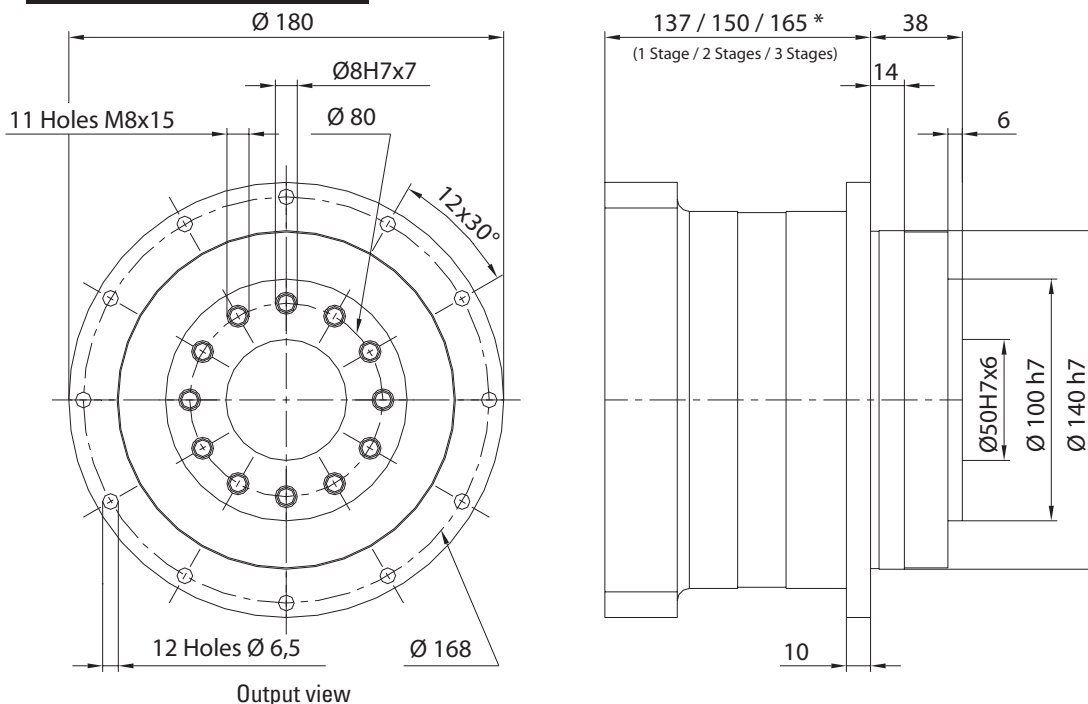
Technical characteristics

Number of stages		1 - Stage		2 - Stages				3 - Stages							
Ratio ⁽¹⁾		4	5.5	16	22	28	31	40	60	66	88	91	110	154	220
INPUT															
Rated / max speed	rpm	2 000 / 4 000 (consult us if you require higher input speed)													
Rated torque	Nm	219	125	53	39	30	27	27	18	17	12	12	10	7	5
Accel. torque	Nm ⁽²⁾	260	163	80	60	46	41	41	27	25	19	18	15	11	7
OUTPUT															
Rated torque	Nm	840	660	800				1000							
Accel. torque	Nm ⁽²⁾	1 000	860	1 200				1 500							
Emergency stop torque	Nm	2 000		2 000				2 500							
Torsional stiffness	Nm / rd. x 10 ⁴	60		58				53							
Axial load	N	6 500													
Radial load	N ⁽⁵⁾	8 000													
GENERAL CHARACTERISTICS															
Input inertia	Kgm ² x10 ⁻⁵ ⁽³⁾	104	67	53	42	40	39	41	40	39	38	38	38	38	38
Max. backlash	arc-min.	≤ 3 or ≤ 1													
Efficiency	% ⁽⁴⁾	96		94				91							
Weight	Kg	15		17				20							
Gears life time	Hours	20 000													

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⁴⁾ Gear efficiency at rated torque
⁵⁾ Load applied in the middle of the output shaft at 300rpm

NOTE : Emergency stop torque is 2.5 times rated output torque for 1000 times max during the life of the gearhead.

Dimensions (mm)



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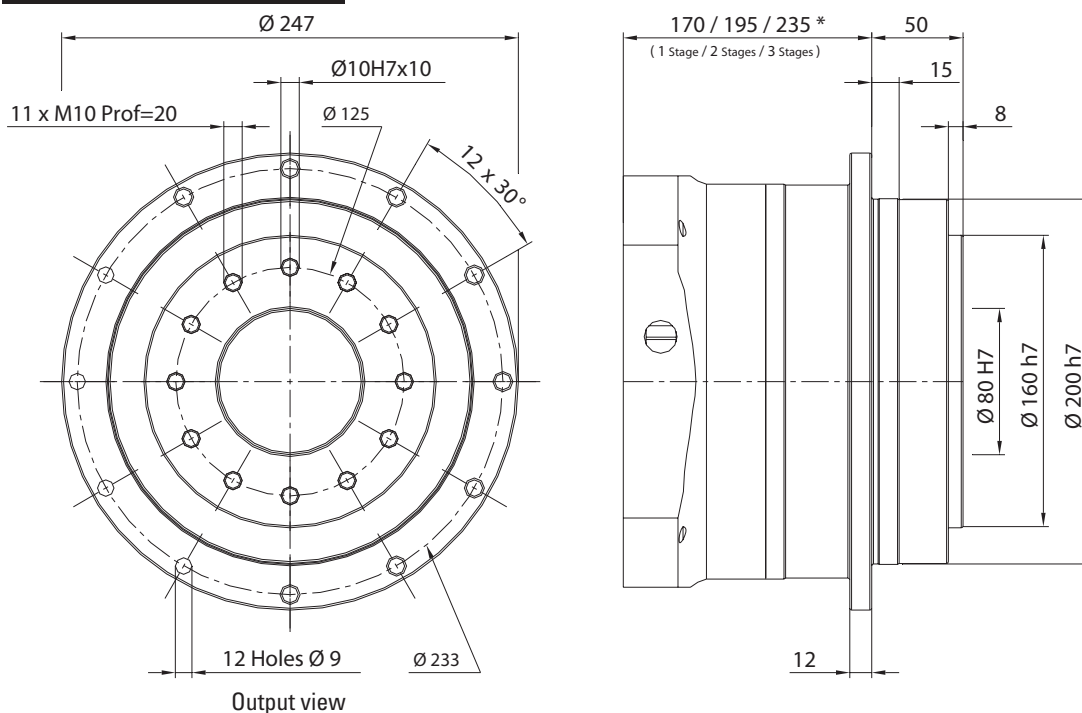
Technical characteristics

Number of stages		1 - Stage				2 - Stages				3 - Stages					
Ratio ⁽¹⁾		4	5.5	16	22	28	31	40	60	66	88	91	110	154	220
INPUT															
Rated / max speed	rpm	2 000 / 3 000 (consult us if you require higher input speed)													
Rated torque	Nm	406	233	100	73	57	51	52	35	32	24	23	19	14	9
Accel. torque	Nm ⁽²⁾	521	303	133	97	76	69	82	55	50	37	36	30	21	15
OUTPUT															
Rated torque	Nm	1 560	1 230	1 500				1 900							
Accel. torque	Nm ⁽²⁾	2 000	1 600	2 000				3 000							
Emergency stop torque	Nm	3 000			3 000				5 000						
Torsional stiffness	Nm / rd. x 10 ⁴	209	220	201	246	244	239	213							
Axial load	N	13 500													
Radial load	N ⁽⁵⁾	25 000													
GENERAL CHARACTERISTICS															
Input inertia	Kgm ² x10 ⁻⁵ ⁽³⁾	474	305	132	110	89	67	90	88	87	86	86	86	86	86
Max. backlash	arc-min.	≤ 3 or ≤ 1													
Efficiency	% ⁽⁴⁾	96			94				91						
Weight	Kg	40			50				55						
Gears life time	Hours	20 000													

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⁵⁾ Load applied in the middle of the output shaft at 300rpm

NOTE : Emergency stop torque is 2.5 times rated output torque for 1000 times max during the life of the gearhead.

Dimensions (mm)



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Technical characteristics

	Number of stages	1 - Stage				2 - Stages				3 - Stages					
		4	5.5	16	22	28	31	40	60	66	88	91	110	154	220
Ratio ⁽¹⁾		4	5.5	16	22	28	31	40	60	66	88	91	110	154	220
INPUT															
Rated / max speed	rpm	2 000 / 3 000 (consult us if you require higher input speed)													
Rated torque	Nm	781	407	199	145	114	103	96	64	58	44	42	35	25	17
Accel. torque	Nm ⁽²⁾	1042	568	332	242	190	172	165	110	100	75	72	60	43	30
OUTPUT															
Rated torque	Nm	3 000	2 150	3 000				3 500							
Accel. torque	Nm ⁽²⁾	4 000	3 000	5 000				6 000							
Emergency stop torque	Nm	7 500		7 500				8 500							
Torsional stiffness	Nm / rd. x 10 ⁴	480	470	403				393							
Axial load	N	19 000													
Radial load	N ⁽⁵⁾	36 000													
GENERAL CHARACTERISTICS															
Input inertia	Kgm ² x10 ⁻⁵ ⁽³⁾	1300	736	371	275	232	232	290							
Max. backlash	arc-min.	≤ 3 or ≤ 1													
Efficiency	% ⁽⁴⁾	96		94				91							
Weight	Kg	55		65				70							
Gears life time	Hours	20 000													

¹⁾ Other ratios are possible, do not hesitate to contact us

²⁾ S5 duty service

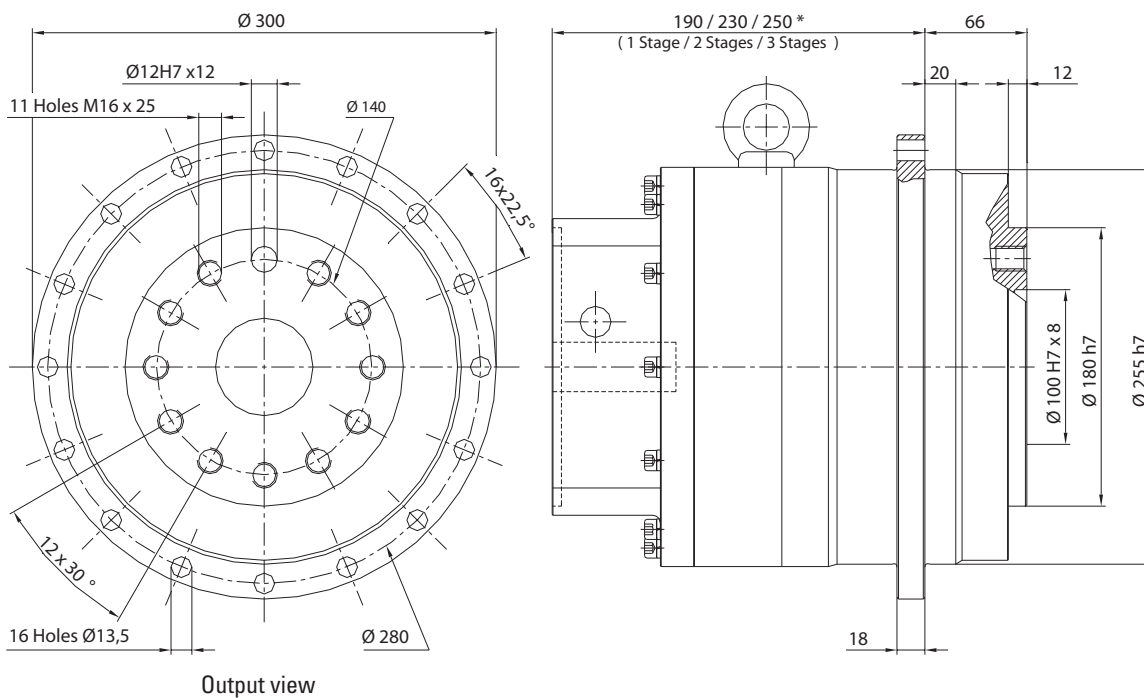
³⁾ On the motorside

⁴⁾ Gear efficiency at rated torque

⁵⁾ Load applied in the middle of the output shaft at 300rpm

NOTE : Emergency stop torque is 2.5 times rated output torque for 1000 times max during the life of the gearhead.

Dimensions (mm)



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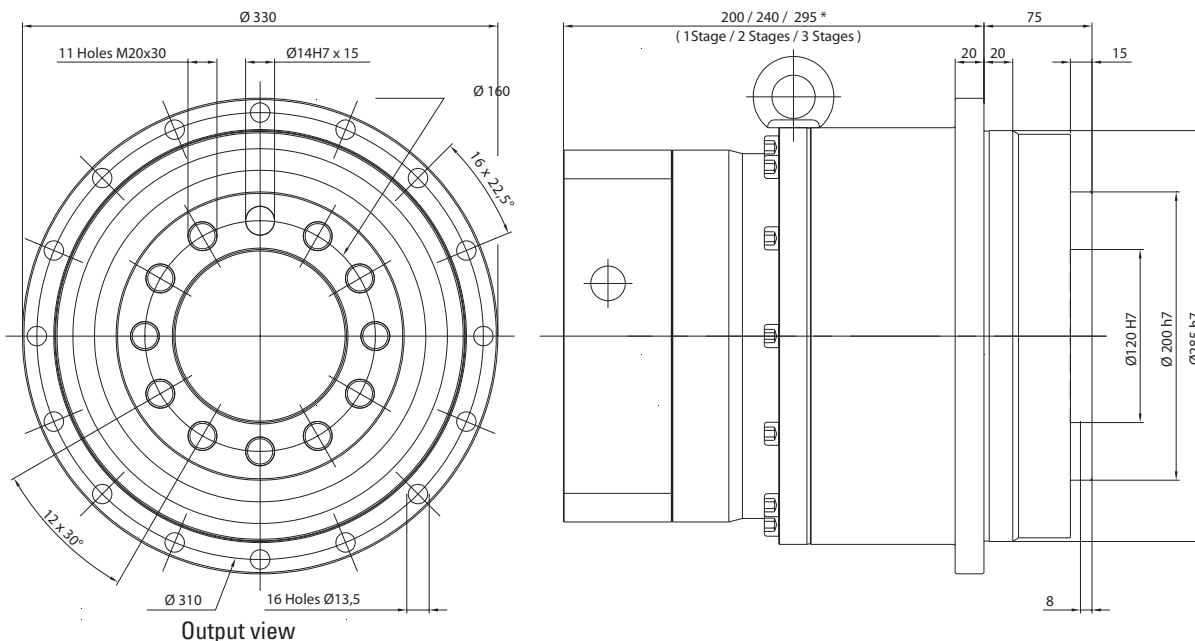
Technical characteristics

Number of stages	1 - Stage				2 - Stages				3 - Stages						
	4	5.5	16	22	28	31	40	60	66	88	91	110	154	220	
Ratio ⁽¹⁾															
INPUT															
Rated / max speed	rpm	2 000 / 3 000 (consult us if you require higher input speed)													
Rated torque	Nm	1 393	805	399	297	237	214	174	128	117	87	85	70	50	35
Accel. torque	Nm ⁽²⁾	1 563	947	531	411	340	312	261	193	167	125	121	100	71	50
OUTPUT															
Rated torque	Nm	5 350	4 250	6 000	6 150	6 250	6 250	6 350				7 000			
Accel. torque	Nm ⁽²⁾	6 000	5 000	7 980	8 500	8 950	9 100	9 500				10 000			
Emergency stop torque	Nm	13 000		15 000				18 000							
Torsional stiffness	Nm / rd. x 10 ⁴	515		677				500							
Axial load	N							25 000							
Radial load	N ⁽⁵⁾							55 000							
GENERAL CHARACTERISTICS															
Input inertia	Kgm ² x10 ⁻⁵ ⁽³⁾	2 320	1400	646	453	400	290	330	290	270	260	260	260	260	250
Max. backlash	arc-min.							≤ 3 or ≤ 1							
Efficiency	% ⁽⁴⁾	96		94				91							
Weight	Kg	65		80				90							
Gears life time	Hours							20 000							

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Dimensions (mm)



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BDB 365

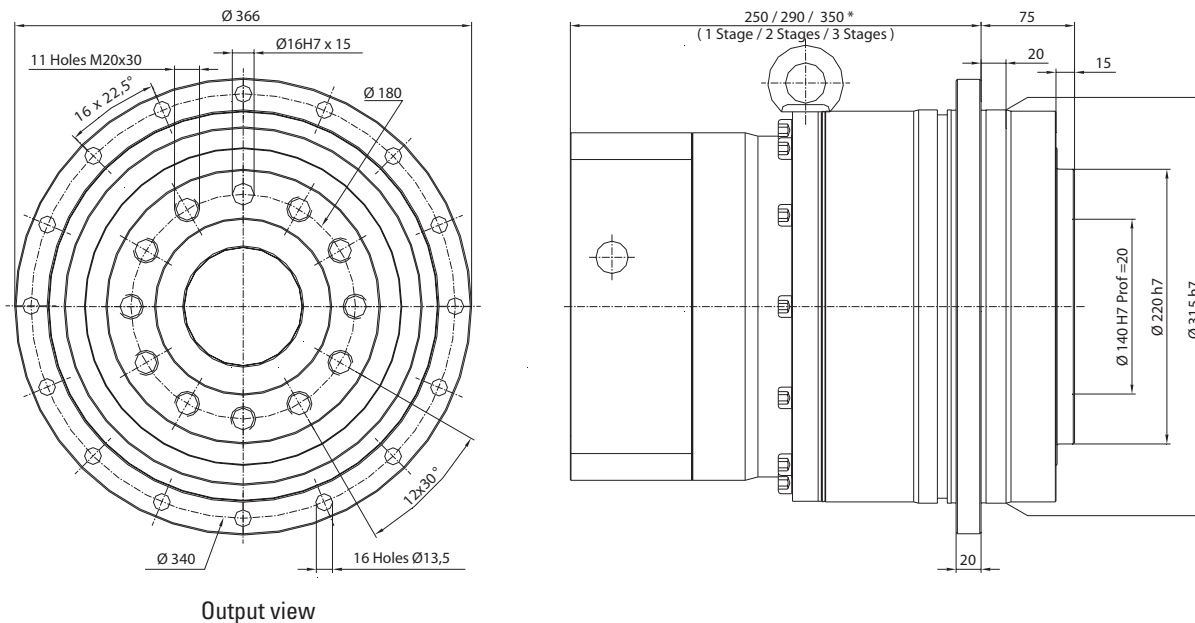
Technical characteristics

Number of stages		1 - Stage					2 - Stages					3 - Stages				
Ratio ⁽¹⁾		4	5.5	16	22	28	31	40	60	66	88	91	110	154	220	
INPUT																
Rated / max speed	rpm	2 000 / 3 000 <i>(consult us if you require higher input speed)</i>														
Rated torque	Nm	1 666	1 000	671	488	383	346	186	185	168	126	122	101	72	50	
Accel. torque	Nm ⁽²⁾	1 822	1 135	804	585	459	415	206	221	201	151	146	121	86	60	
OUTPUT																
Rated torque	Nm	6 400	5 300	10 100				6 800	10 100							
Accel. torque	Nm ⁽²⁾	7 000	6 000	12 100				7 500	12 100							
Emergency stop torque	Nm	16 000		25 000				25 000								
Torsional stiffness	Nm / rd. x 10 ⁴	-		-				-								
Axial load	N								35 000							
Radial load	N ⁽⁵⁾								75 000							
GENERAL CHARACTERISTICS																
Input inertia	Kgm ² x10 ⁻⁵ ⁽³⁾	3900	2330	910	712	610	471	540	530	500	489	489	489	489	489	
Max. backlash	arc-min.								≤ 3 or ≤ 1							
Efficiency	% ⁽⁴⁾	96			94				91							
Weight	Kg	80			100				120							
Gears life time	Hours								20 000							

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Dimensions (mm)



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