

AHK series (2-stage)



Overview

- Heavy Duty right angel Hypoid gearbox
- Black coated steel housing, aluminum output and motor adapter flange
- Steel output shaft, flange ISO 9409
- Helical gear technology
- Nominal Torques:
 - T_{2N} : 24 Nm – 5.615 Nm
- Ratios
 - 2-stage : 12 / 15 / 16 / 20 / 25 / 28 / 35 / 40 / 49 / 50 / 70 / 100
- Low Backlash
 - 2-traps : ≤ 2 arcmin (bouwgrootte 064 ≤ 3 arcmin)
- High Efficiency
 - 2-stage : $\geq 94\%$
- Easy mount
- Low noise
- Compact structure
- Sizes available: AHK064 / AHK090 / AHK110 / AHK140 / AHK200 / AHK255 / AHK285 / AHK355

Specifications

Model	Stage	Ratio ¹	AHK064	AHK090	AHK110	AHK140	AHK200	AHK255	AHK285	AHK355	
Nominal output torque T_{2N} Nm	2	12	95	195	360	615	1.315	-	-	-	
		15	-	-	-	-	-	1.770	3.330	5.595	
		16	95	200	360	516	1.320	-	-	-	
		20	95	200	360	615	1.320	1.775	3.335	5.605	
		25	80	170	310	535	1.165	1.775	3.335	5.610	
		28	95	200	360	615	1.325	-	-	-	
		35	80	170	310	535	1.170	1.775	3.340	5.615	
		40	60	160	340	615	1.325	-	-	-	
		49	60	130	250	440	990	1.510	2.550	4.820	
		50	50	170	310	535	1.170	1.775	3.000	5.500	
		70	60	130	250	440	990	1.510	3.550	4.820	
		100	24	55	160	290	290	1.005	1.685	3.315	
Emergency stop torque T_{2NOT}^3	Nm	2	4~100	2 times nominal output torque T_{2N}							
Max. Acceleration torque T_{2B}	Nm	2	4~100	1,5 times nominal output torque T_{2N}							
No load running torque ⁽³⁾	Nm	2	12~100	1	1,3	2	3,1	6	13	16	20
Backlash ⁽²⁾	arcmin	2	12~100	≤ 3	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
Torsional rigidity	Nm/ arcmin	2	12~100	12	27	56	112	389	642	1.275	2.500
Nominal input speed N_{1N}	rpm	2	12~100	3.000	3.000	2.800	2.700	2.200	2.100	2.000	1.600
Max. input speed N_{1B}	rpm	2	12~100	6.000	6.000	6.000	4.500	4.500	4.000	3.000	2.500
Max. radial load F_{2a}	N	2	12~100	1.690	2.220	4.070	8.530	17.000	26.900	39.200	101.500
Max. Bending moment M_{2k}	Nm	2	12~100	120	280	480	1.310	3.530	5.920	9.230	29.100
Service Life ⁽⁴⁾	hr	2	12~100	20,000							
Operating temperature	°C	2	12~100	-10°C ~+ 90°C							
Degree of Protection		2	12~100	IP65							
Lubrication		2	12~100	Synthetisch lubrication grease (NYOGEL 792D)							
Mounting position		2	12~100	All directions							
Running noise ($n_1=3000$ rpm, No Load)	dB(A)	2	12~100	≤ 64	≤ 66	≤ 68	≤ 68	≤ 70	≤ 70	≤ 72	≤ 74
Efficiency	%	2	12~100	≥ 94 %							

(1) Ratio ($i = N_{in} / N_{out}$)

(2) Backlash is measured at 2% of Nominal output torque T_{2N} .

(3) These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at 3.000 rpm without load.

(4) Continuous operation (S1) is not recommended.

Inertia

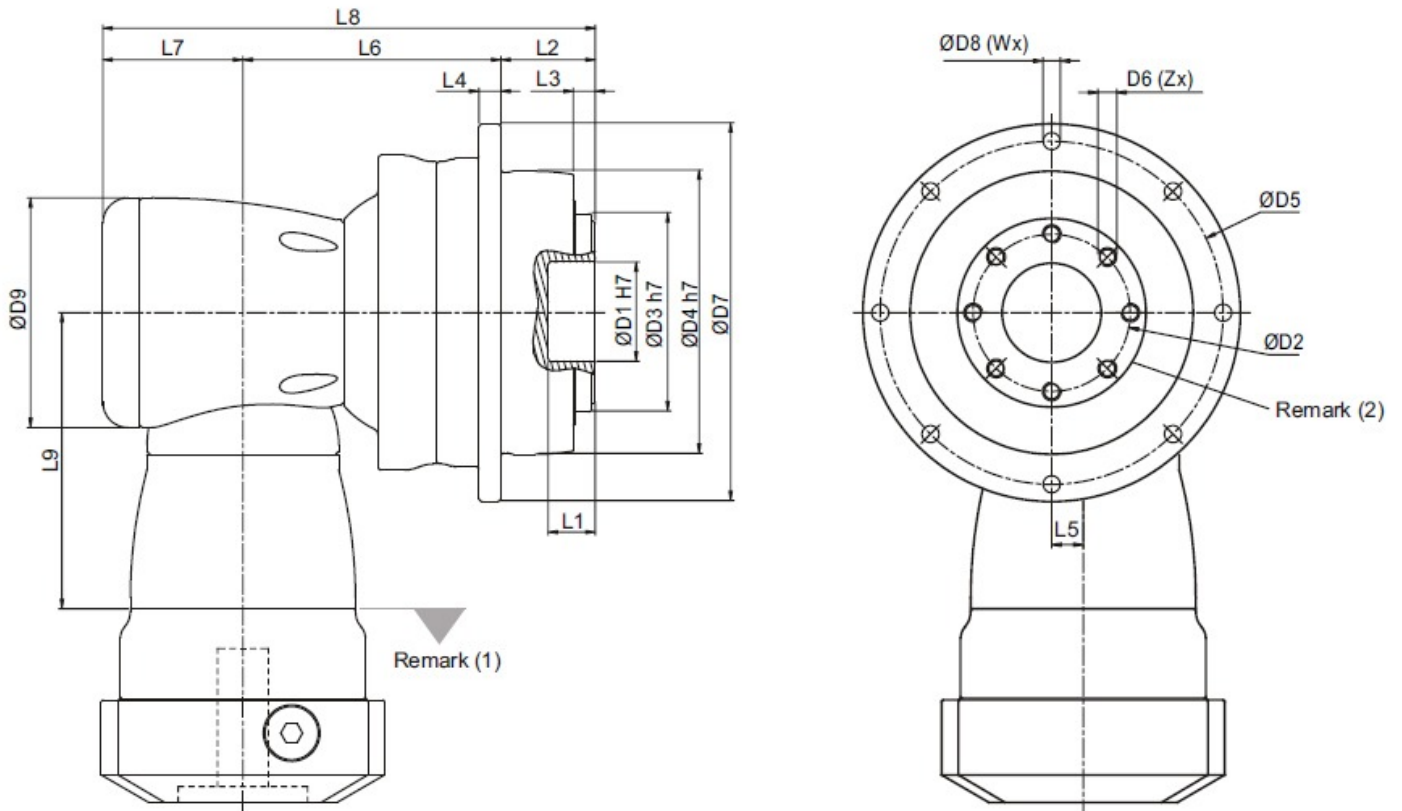
Model No.	AHK064	AHK090	AHK110	AHK140	AHK200	AHK255	AHK285	AHK355
$\varnothing^{(A)}$ (C3)	2-st.	2-st.	2-st.	2-st.	2-st.	2-st.	2-st.	2-st.
8	0,01	-	-	-	-	-	-	-
11	0,17	0,18	-	-	-	-	-	-
14	0,21	0,50	0,52	-	-	-	-	-
19	-	0,65	1,69	1,71	-	-	-	-
24	-	-	4,89	5,05	6,92	-	-	-
28	-	-	-	6,55	6,98	-	-	-
32	-	-	-	9,47	10,18	10,18	-	-
35	-	-	-	14,91	15,21	15,21	15,68	-
38	-	-	-	20,69	20,70	20,70	21,69	23,46
42	-	-	-	-	22,83	22,83	23,59	25,28
48	-	-	-	-	58,45	58,45	59,30	61,61
55	-	-	-	-	-	-	-	89,67

kg*cm²

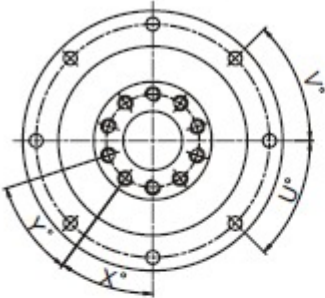
(A) \varnothing = Input shaft diameter

Sizes

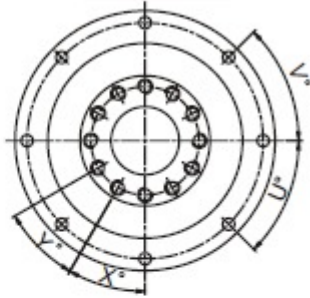
AHK 2-stage series:



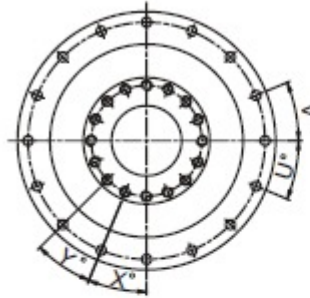
AHK064



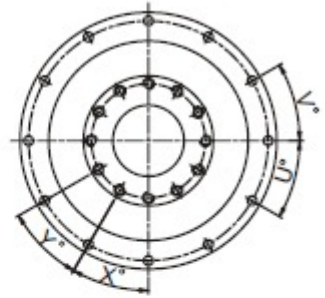
AHK090



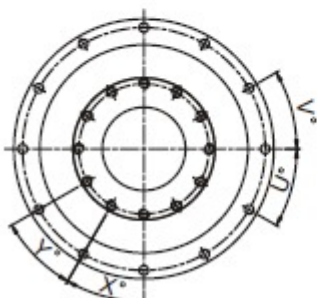
AHK110



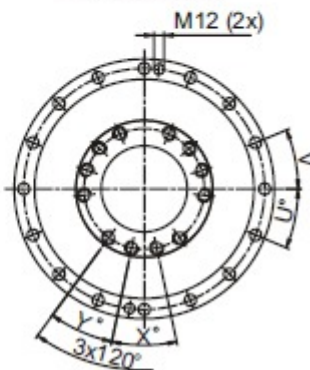
AHK140



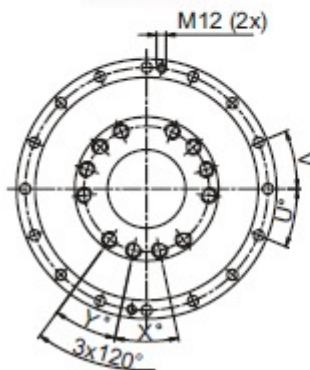
AHK200



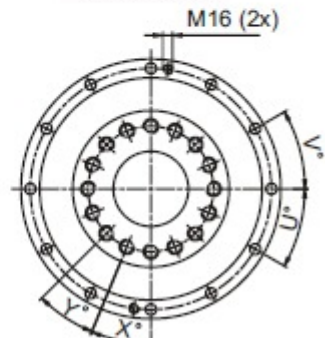
AHK255



AHK285



AHK355



D1 H7	20	31,5	40	50	80	100	100	120
D2	31,5	50	63	80	125	140	160	200
D3 h7	40	63	80	100	160	180	200	250
D4 h7	64	90	110	140	200	255	285	355
D5	79	109	135	168	233	280	310	385
D6 x pitch x deep	M5 x 0.8P x 8	M6 x 1P x 10	M6 x 1P x 11	M8 x x1.25P x15	M10 x 1.5P x 20	M16 x 2P x 25	M20 x 2.5P x 31	M24 x 3P x 32
D7	88	120	147	180	249,5	302	332	415
D8	4,5	5,5	5,5	6,6	9	13,5	13,5	17,5
L1	8	15	15	15	16	16	16	35
L2	19,5	30	29	38	50	66	75	80
L3	4	7	7	7,5	8,5	13,5	16,5	20
L4	5	7	8	10	12	18	20	45
L5	10	13	17	25	31	31	36	43
L6	87	90,5	114	147,5	175	191,5	249,5	290
L7	44,5	53	68,3	89	115	115	131	165
L8	151	173,5	211,3	274,5	340	372,5	455,5	535
L9	94	114,5	129	173,5	228	228	265,5	294,5
X in degrees	36	30	22,5	30	30	24	24	22,5
Y in degrees	36	30	22,5	30	30	24	24	22,5
Z	10	12	16	12	12	12	13	16
U in degrees	45	45	22,5	30	30	22,5	22,5	30
V in degrees	45	45	22,5	30	30	22,5	22,5	30
W	8	8	16	12	12	16	16	12

(1) Input dimensions vary according to motor flange. Please contact Apex Dynamics for details.