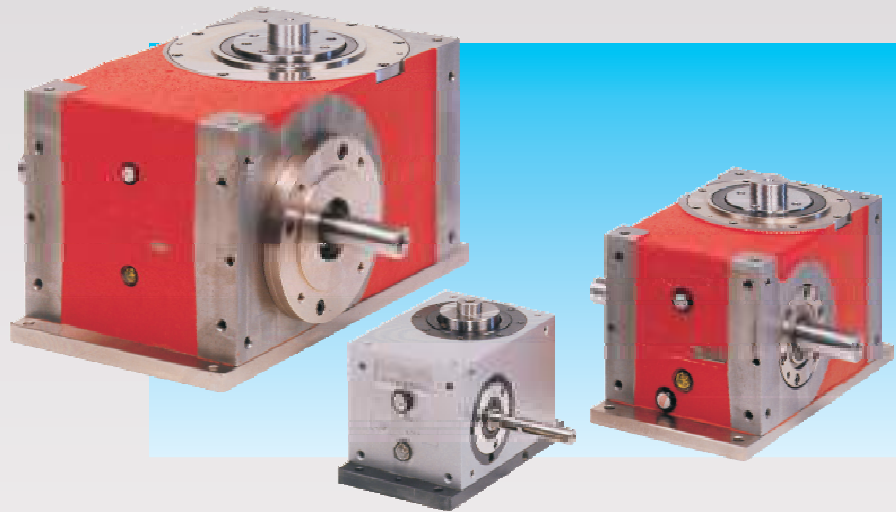


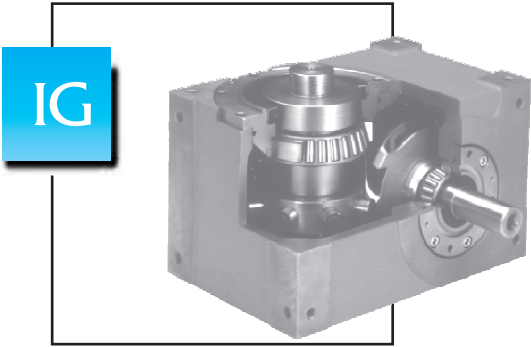


ROLLER GEAR INDEXERS IG

bettinelli f.lli s.p.a. div. **CDS**

Via Leonardo da Vinci, 56 - 26010 Bagnolo (CR) - ITALIA - Tel. + 39 0373 237311 Fax + 39 0373 648303 E-mail: cds@bettinelli.it

www.bettinelli.it



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IG series

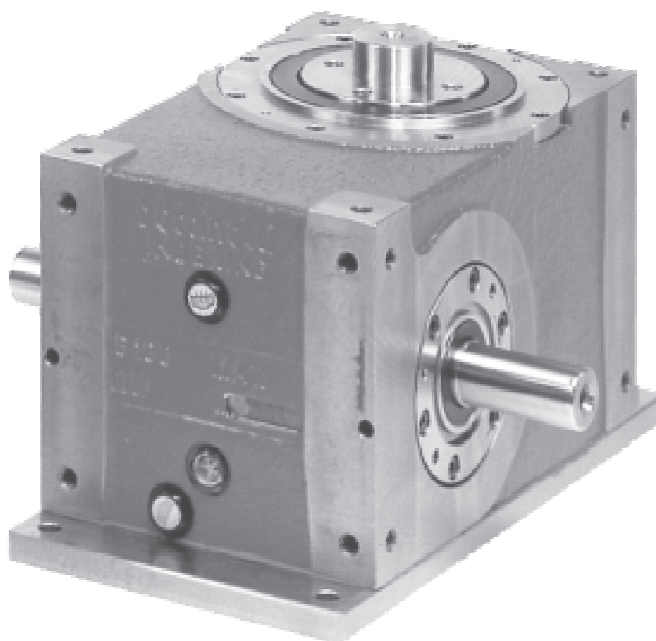
Sizes: **63 80 82,5 100 108 125 140 160 200**

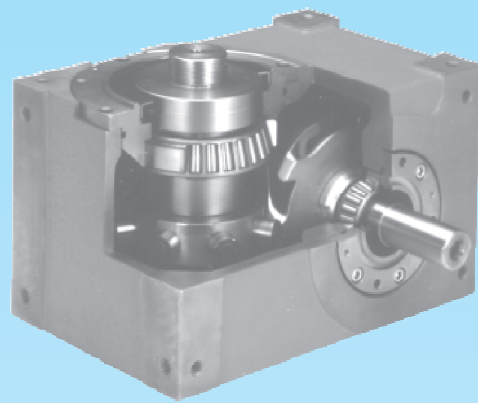
Stops: **1 to 24** including odd stops

Special Stops: from **1** to **36** *

- Compact cast iron alloy housing **IG 63** aluminium alloy
- Universal mounting position
- Available with flanged output or a solid output shaft (**IGA**)
- Through hole on request
- High station-to-station accuracy
- Double extended cam-shaft
- CNC hardened cam-profiles
- * Oscillating and complex cam-motions available
- Oil bath lubrication; appropriate seals prevent from oil leakage in any working position
- Can be fitted with reducer and drive

Size = distance between input and output axes in mm.



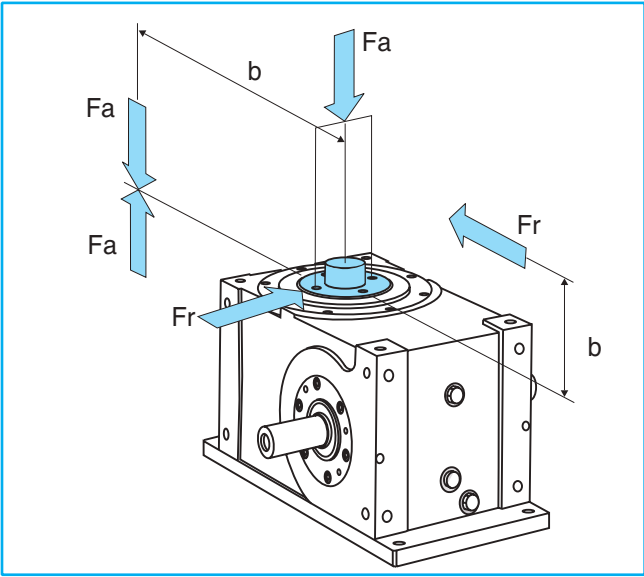


IG SERIES TECHNICAL DATA



LOADS ON IG SERIES

Loads on the output flange

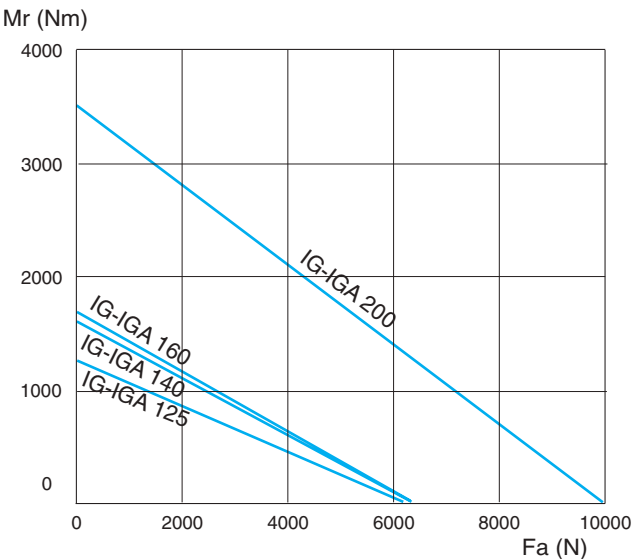
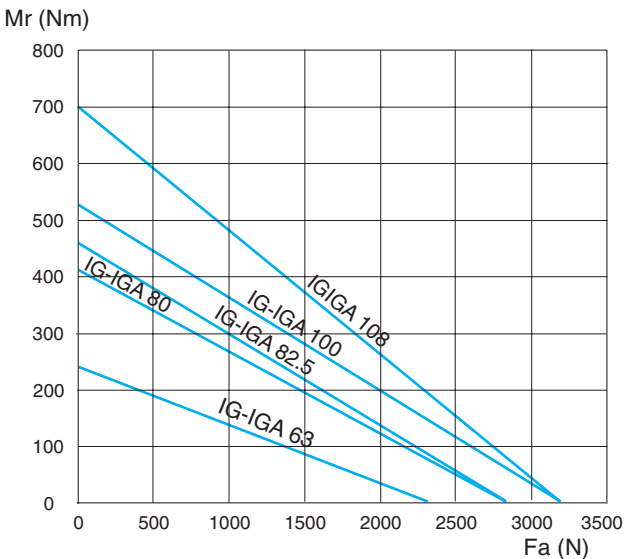
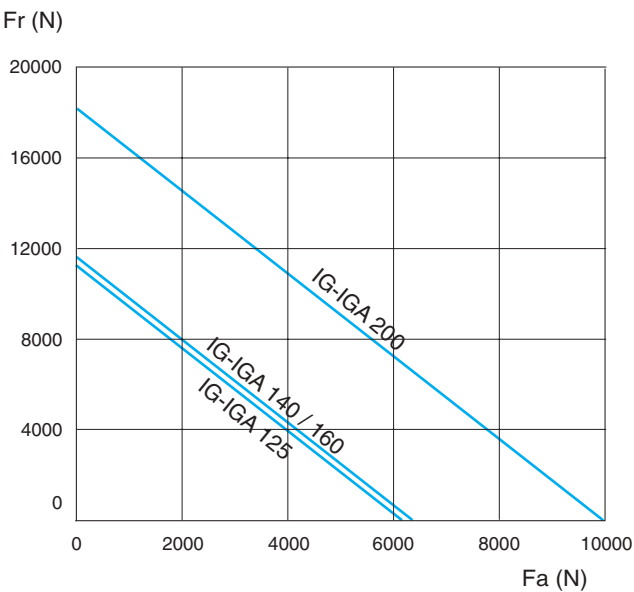
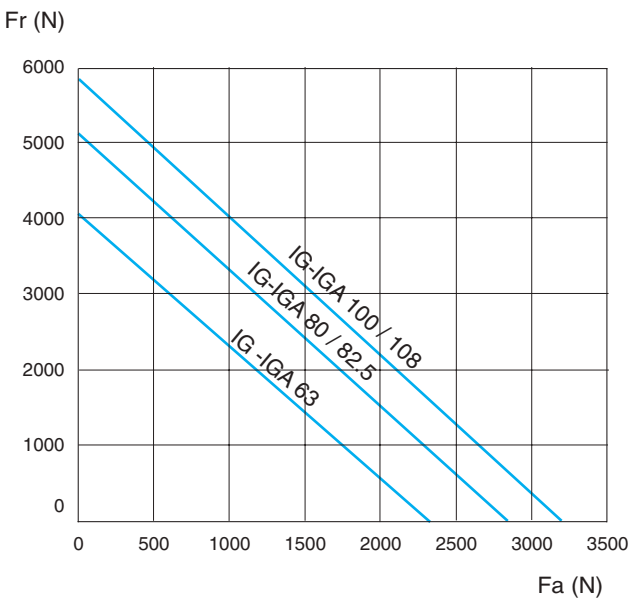


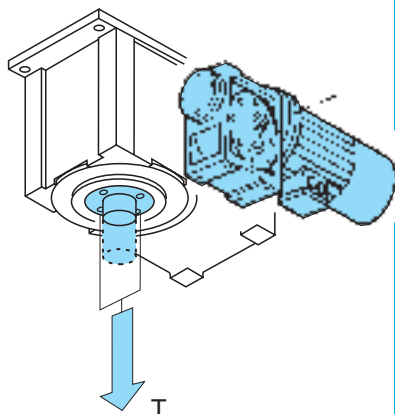
F_a = Axial force (N)
 F_r = Radial force (N)
 M_r = Overturning moment (Nm)
 b = Distance (m)

$$F_r \cdot b = M_r$$

$$F_a \cdot b = M_r$$

Rotating element





Position B

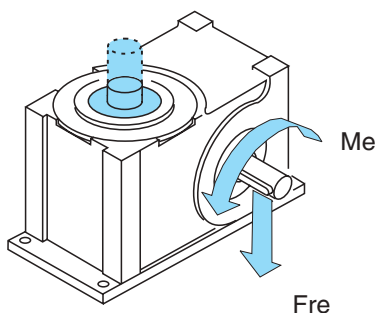
Loads with index drive upside-down (traction on the output axis)

When the roller gear is used in an **upside-down** position (B), the weight of transported masses generates an **axial traction force "T"** on the output axis. The schedule shows the maximum values in relation to size of the tables.

Rotating element

IG- IGA	63	80	82.5	100	108	125	140	160	200
Load T (N)	2313	2843	2843	3199	3199	6176	6341	6341	9974

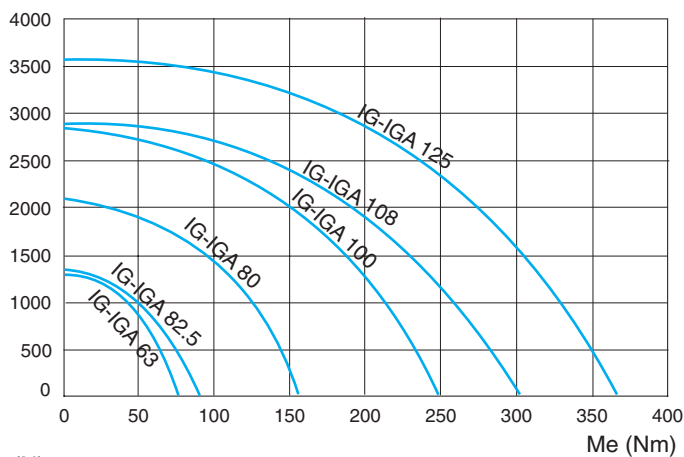
Loads on the cam-shaft



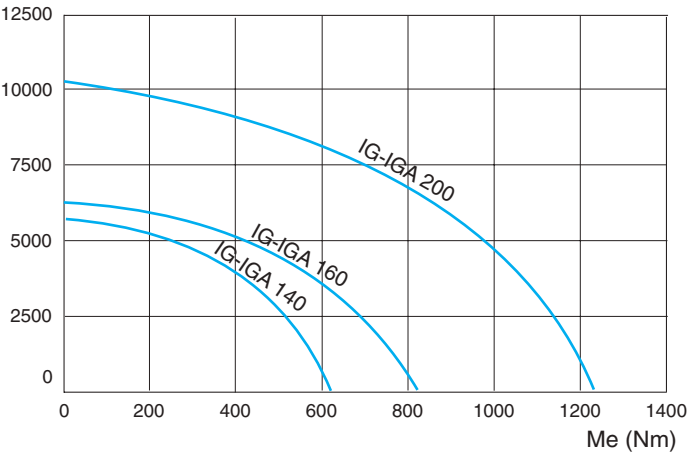
F_{re} = Input radial force (N)

M_e = Input torque (Nm)

F_{re} (N)

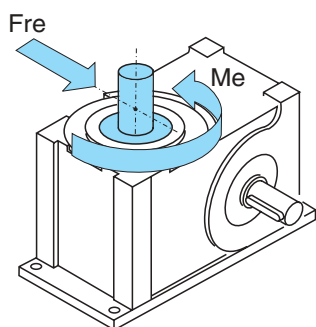


F_{re} (N)



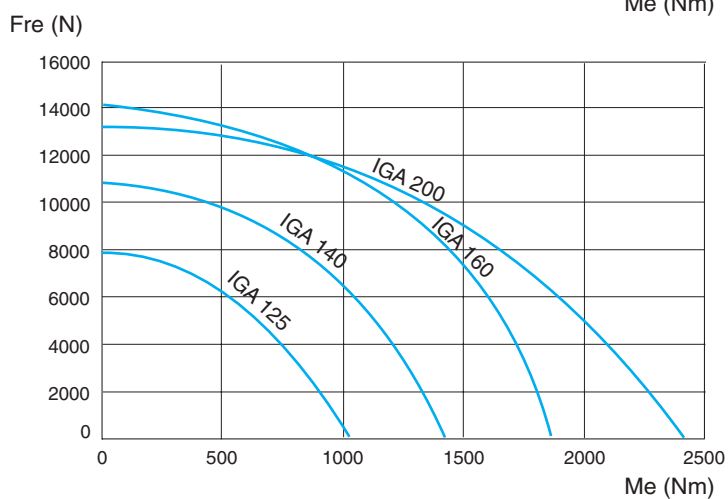
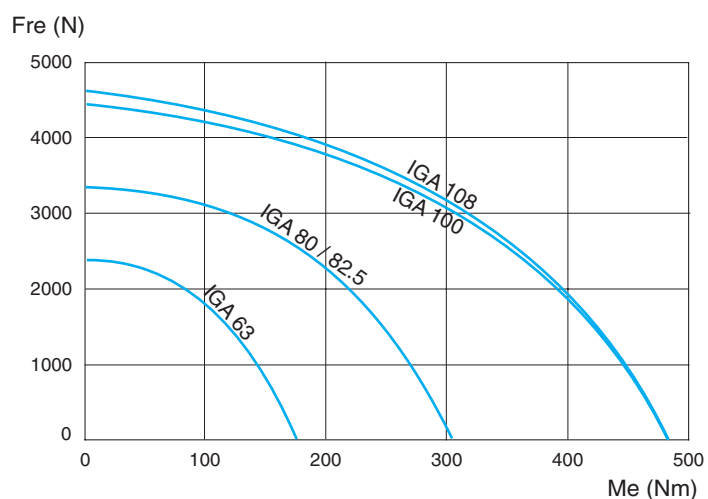
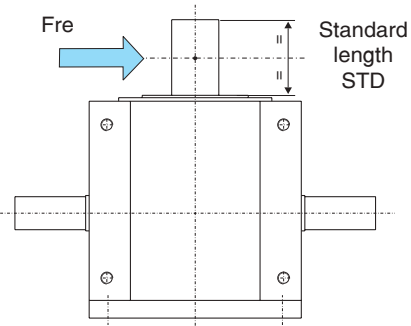
The diagrams show the curves referred to **maximum value (F_{re}/M_e)** for the input shaft. The values are referred to a **rotation speed of 100 rpm of the cam-shaft**.

Loads on the output shaft IGA



F_{re} = Output radial force (N)

M_e = Output torque (Nm)



The diagrams show the curves referred to **maximum value (F_{re}/M_e)** for the output shaft. The values are referred to a **rotation speed of 100 rpm of the cam-shaft**.

IG SERIES TECHNICAL DATA

Type		Number of Stops S	Index angle (α°)	Maximum output torque - Mtu - (Nm)				Motion coefficients			Ptc. rad. Rp (mm)	Roller o. d. Dr (mm)	Inertia Jc (kgm²)	Mch. frt(•) Mam (Nm)
				50 rpm	100 rpm	200 rpm	300 rpm	Acc. Ca	Speed Cv	Disp. Ck				
IG 63		1	270	41	37	27	20	8.01	1.28	5.73	33	12	0.0031	5.9
IG 80				77	71	54	41	8.01	1.28	5.73	42	16	0.0052	10.2
IG 100				228	227	193	160	8.01	1.28	5.73	54	30	0.0085	22.0
IG 125				274	271	216	175	8.01	1.28	5.73	64	30	0.0121	27.3
IG 140				451	448	370	307	8.01	1.28	5.73	75	35	0.0146	36.1
IG 160				507	501	383	290	8.01	1.28	5.73	85	35	0.0359	41.7
IG 200				1273	1245	981	669	8.01	1.28	5.73	108	50	0.1473	72.8
IG 63			330	52	50	39	31	8.01	1.28	5.73	33	14	0.0031	6.8
IG 80				84	79	61	49	8.01	1.28	5.73	42	16	0.0052	10.2
IG 100				251	250	216	184	8.01	1.28	5.73	54	30	0.0085	22.0
IG 125				300	299	242	203	8.01	1.28	5.73	64	30	0.0121	27.3
IG 140				495	493	412	351	8.01	1.28	5.73	75	35	0.0146	36.1
IG 160				559	554	436	353	8.01	1.28	5.73	85	35	0.0359	41.7
IG 200				1407	1389	1145	880	8.01	1.28	5.73	108	50	0.1473	72.8
IG 63		2	150	50	49	43	31	8.01	1.28	5.73	33	14	0.0031	6.8
IG 80				110	108	102	81	8.01	1.28	5.73	42	20	0.0053	12.5
IG 82.5				138	137	130	111	8.01	1.28	5.73	42	25	0.0055	15.5
IG 100				172	169	160	127	8.01	1.28	5.73	54	25	0.0079	18.6
IG 108				176	174	160	124	8.01	1.28	5.73	51	25	0.0078	21.9
IG 140				335	331	309	245	8.01	1.28	5.73	75	30	0.0128	31.2
IG 160				534	523	480	352	8.01	1.28	5.73	85	35	0.0386	47.2
IG 200				1338	1293	1115	764	8.01	1.28	5.73	108	50	0.1473	72.8
IG 63			180	54	53	48	38	8.01	1.28	5.73	33	14	0.0031	6.8
IG 80				118	117	112	94	8.01	1.28	5.73	42	20	0.0053	12.5
IG 82.5				149	147	143	127	8.01	1.28	5.73	42	25	0.0055	15.5
IG 100				186	184	178	148	8.01	1.28	5.73	54	25	0.0079	18.6
IG 108				187	186	174	143	8.01	1.28	5.73	51	25	0.0078	21.9
IG 125				310	308	298	252	8.01	1.28	5.73	64	30	0.0121	27.3
IG 140				512	509	497	439	8.01	1.28	5.73	75	35	0.0146	36.1
IG 160				737	729	697	584	8.01	1.28	5.73	85	40	0.0386	47.2
IG 200				1455	1424	1300	1034	8.01	1.28	5.73	108	50	0.1473	72.8
IG 63			270	76	75	74	65	8.01	1.28	5.73	33	16	0.0031	7.7
IG 80				132	131	129	114	8.01	1.28	5.73	42	20	0.0053	12.5
IG 82.5				166	165	163	151	8.01	1.28	5.73	42	25	0.0055	15.5
IG 100				293	292	289	273	8.01	1.28	5.73	54	30	0.0085	22.0
IG 108				287	286	283	256	8.01	1.28	5.73	51	30	0.0083	25.8
IG 125				493	492	487	463	8.01	1.28	5.73	64	35	0.0134	31.5
IG 140				736	734	728	683	8.01	1.28	5.73	75	40	0.0168	40.9
IG 160				1311	1307	1289	1260	8.01	1.28	5.73	85	50	0.0472	58.1
IG 200				2419	2403	2341	2236	8.01	1.28	5.73	108	60	0.1682	86.3
IG 63		3	120	67	67	63	58	6.62	1.4	5.21	33	16	0.0031	7.7
IG 80				118	117	111	102	6.62	1.4	5.21	42	20	0.0053	12.5
IG 82.5				119	117	112	103	6.62	1.4	5.21	42	20	0.0053	12.6
IG 100				186	184	175	162	6.62	1.4	5.21	54	25	0.0079	18.6
IG 108				187	185	177	159	6.62	1.4	5.21	51	25	0.0078	21.9
IG 125				310	307	295	274	6.62	1.4	5.21	64	30	0.0121	27.3
IG 140				512	508	493	468	6.62	1.4	5.21	75	35	0.0146	36.1
IG 160				737	727	687	620	6.62	1.4	5.21	85	40	0.0386	47.2
IG 200				1452	1414	1261	1006	6.62	1.4	5.21	108	50	0.1473	72.8
IG 63			180	76	75	74	71	6.62	1.4	5.21	33	16	0.0031	7.7
IG 80				132	131	129	125	6.62	1.4	5.21	42	20	0.0053	12.5
IG 82.5				132	132	129	125	6.62	1.4	5.21	42	20	0.0053	12.6
IG 100				293	292	288	282	6.62	1.4	5.21	54	30	0.0085	22.0
IG 108				287	286	282	275	6.62	1.4	5.21	51	30	0.0083	25.8
IG 125				629	628	621	609	6.62	1.4	5.21	64	40	0.015	35.7
IG 140				736	734	726	713	6.62	1.4	5.21	75	40	0.0168	40.9
IG 160				1311	1306	1284	1247	6.62	1.4	5.21	85	50	0.0472	58.1
IG 200				2418	2399	2321	2191	6.62	1.4	5.21	108	60	0.1682	86.3
IG 63			270	80	80	80	78	6.62	1.4	5.21	33	16	0.0031	7.7
IG 80				175	175	173	172	6.62	1.4	5.21	42	25	0.0055	15.3
IG 82.5				175	175	174	172	6.62	1.4	5.21	42	25	0.0055	15.5
IG 100				312	312	310	307	6.62	1.4	5.21	54	30	0.0085	22.0
IG 108				424	424	422	419	6.62	1.4	5.21	51	35	0.0092	29.8
IG 125				669	668	665	660	6.62	1.4	5.21	64	40	0.0150	35.7
IG 140				783	782	779	773	6.62	1.4	5.21	75	40	0.0168	40.9
IG 160				1397	1395	1385	1369	6.62	1.4	5.21	85	50	0.0472	58.1
IG 200				2587	2579	2544	2486	6.62	1.4	5.21	108	60	0.1682	86.3

(•) Starting torque - Tolerance on the values indicated ± 15%

IG SERIES TECHNICAL DATA

Type		Number of Stops S	Index angle (α°)	Maximum output torque - Mtu - (Nm)				Motion coefficients			Ptc. rad. Rp (mm)	Roller o. d. Dr (mm)	Inertia Jc (kgm²)	Mch. frt(*) Mam (Nm)
				50 rpm	100 rpm	200 rpm	300 rpm	Acc. Ca	Speed Cv	Disp. Ck				
IG 63		4	90	46	45	40	33	6.62	1.4	5.21	33	12	0.0031	5.9
IG 80				69	67	60	48	6.62	1.4	5.21	42	14	0.0052	9.0
IG 82.5				87	85	78	66	6.62	1.4	5.21	42	16	0.0053	10.3
IG 100				148	145	135	117	6.62	1.4	5.21	54	20	0.0077	15.1
IG 108				149	147	136	118	6.62	1.4	5.21	51	20	0.0077	17.9
IG 125				177	173	157	132	6.62	1.4	5.21	64	20	0.011	18.9
IG 140				258	254	237	209	6.62	1.4	5.21	75	25	0.0122	26.4
IG 160				406	394	346	265	6.62	1.4	5.21	85	30	0.0348	36.3
IG 200				712	666	483	176	6.62	1.4	5.21	108	35	0.1326	52.7
IG 63			180	63	63	62	60	6.62	1.4	5.21	33	14	0.0031	6.8
IG 80				138	137	136	132	6.62	1.4	5.21	42	20	0.0055	12.5
IG 82.5				138	138	136	133	6.62	1.4	5.21	42	20	0.0055	12.6
IG 100				220	219	217	212	6.62	1.4	5.21	54	25	0.0082	18.6
IG 108				212	212	209	204	6.62	1.4	5.21	51	25	0.008	21.9
IG 125				365	364	360	353	6.62	1.4	5.21	64	30	0.0127	27.3
IG 140				428	426	422	414	6.62	1.4	5.21	75	30	0.0137	31.2
IG 160				684	681	668	646	6.62	1.4	5.21	85	35	0.0379	41.7
IG 200				1102	1090	1042	962	6.62	1.4	5.21	108	40	0.1384	59.4
IG 63			270	65	65	65	64	6.62	1.4	5.21	33	14	0.0031	6.8
IG 80				143	143	142	140	6.62	1.4	5.21	42	20	0.0055	12.5
IG 82.5				143	143	142	141	6.62	1.4	5.21	42	20	0.0055	12.6
IG 100				229	229	227	225	6.62	1.4	5.21	54	25	0.0082	18.6
IG 108				218	218	217	215	6.62	1.4	5.21	51	25	0.008	21.9
IG 125				379	379	377	374	6.62	1.4	5.21	64	30	0.0127	27.3
IG 140				802	801	798	793	6.62	1.4	5.21	75	40	0.019	40.9
IG 160				908	906	900	889	6.62	1.4	5.21	85	40	0.0415	47.2
IG 200				1813	1807	1783	1743	6.62	1.4	5.21	108	50	0.1563	72.8
IG 63		5	90	49	48	45	39	6.62	1.4	5.21	33	12	0.0031	5.9
IG 80				74	72	66	57	6.62	1.4	5.21	42	14	0.0052	9.0
IG 100				117	115	107	93	6.62	1.4	5.21	54	16	0.0075	12.3
IG 108				116	114	105	92	6.62	1.4	5.21	51	16	0.0075	14.8
IG 125				190	187	174	153	6.62	1.4	5.21	64	20	0.0113	18.9
IG 140				278	274	260	237	6.62	1.4	5.21	75	25	0.0128	26.4
IG 160				438	428	388	322	6.62	1.4	5.21	85	30	0.036	36.3
IG 200				773	735	585	334	6.62	1.4	5.21	108	35	0.1357	52.7
IG 63			180	55	55	54	53	6.62	1.4	5.21	33	12	0.0031	5.9
IG 80				82	82	81	78	6.62	1.4	5.21	42	14	0.0052	9.0
IG 100				180	180	178	174	6.62	1.4	5.21	54	20	0.0079	15.1
IG 108				173	172	170	167	6.62	1.4	5.21	51	20	0.0078	17.9
IG 125				268	267	263	258	6.62	1.4	5.21	64	25	0.012	23.1
IG 140				438	437	433	426	6.62	1.4	5.21	75	30	0.0147	31.2
IG 160				701	699	687	669	6.62	1.4	5.21	85	35	0.0398	41.7
IG 200				1131	1122	1082	1016	6.62	1.4	5.21	108	40	0.143	59.4
IG 63			240	56	56	56	55	6.62	1.4	5.21	33	12	0.0031	5.9
IG 80				84	84	83	82	6.62	1.4	5.21	42	14	0.0052	9.0
IG 100				184	184	183	181	6.62	1.4	5.21	54	20	0.0079	15.1
IG 108				175	175	174	172	6.62	1.4	5.21	51	20	0.0078	17.9
IG 125				273	272	270	267	6.62	1.4	5.21	64	25	0.012	23.1
IG 140				447	446	444	440	6.62	1.4	5.21	75	30	0.0147	31.2
IG 160				716	714	708	698	6.62	1.4	5.21	85	35	0.0398	41.7
IG 200				1157	1151	1129	1092	6.62	1.4	5.21	108	40	0.143	59.4
IG 63			270	57	57	56	56	6.62	1.4	5.21	33	12	0.0031	5.9
IG 80				84	84	84	82	6.62	1.4	5.21	42	14	0.0052	9.0
IG 100				185	185	184	182	6.62	1.4	5.21	54	20	0.0079	15.1
IG 108				176	176	175	173	6.62	1.4	5.21	51	20	0.0078	17.9
IG 125				274	274	272	270	6.62	1.4	5.21	64	25	0.012	23.1
IG 140				449	449	447	444	6.62	1.4	5.21	75	30	0.0147	31.2
IG 160				720	719	714	705	6.62	1.4	5.21	85	35	0.0398	41.7
IG 200				1164	1160	1142	1113	6.62	1.4	5.21	108	40	0.143	59.4

Values referred to the worst running conditions - Equivalent service factor = 1.75 already applied

(*) Starting torque - Tolerance on the values indicated ± 15%

Type		Number of Stops S	Index angle (α°)	Maximum output torque - Mtu - (Nm)				Motion coefficients			Ptc. rad. Rp (mm)	Roller o. d. Dr (mm)	Inertia Jc (kgm²)	Mch. frt(*) Mam (Nm)
				50 rpm	100 rpm	200 rpm	300 rpm	Acc. Ca	Speed Cv	Disp. Ck				
IG 63		6	90	76	75	73	69	5.53	1.76	5.46	33	16	0.0031	7.7
IG 80				132	131	127	120	5.53	1.76	5.46	42	20	0.0053	12.5
IG 100				209	208	202	192	5.53	1.76	5.46	54	25	0.0079	18.6
IG 108				205	203	197	187	5.53	1.76	5.46	51	25	0.0078	21.9
IG 125				348	346	337	321	5.53	1.76	5.46	64	30	0.0121	27.3
IG 140				576	573	562	543	5.53	1.76	5.46	75	35	0.0146	36.1
IG 160				830	823	793	743	5.53	1.76	5.46	85	40	0.0386	47.2
IG 200				1636	1608	1494	1305	5.53	1.76	5.46	108	50	0.1473	72.8
IG 63			180	112	112	111	110	5.53	1.76	5.46	33	20	0.0032	9.5
IG 80				179	178	177	176	5.53	1.76	5.46	42	25	0.0055	15.3
IG 100				320	320	318	315	5.53	1.76	5.46	54	30	0.0085	22.0
IG 108				305	305	303	301	5.53	1.76	5.46	51	30	0.0083	25.8
IG 125				685	684	681	676	5.53	1.76	5.46	64	40	0.015	35.7
IG 140				802	801	798	792	5.53	1.76	5.46	75	40	0.0168	40.9
IG 160				1431	1429	1420	1405	5.53	1.76	5.46	85	50	0.0472	58.1
IG 200				2654	2646	2613	2559	5.53	1.76	5.46	108	60	0.1682	86.3
IG 63			240	114	113	113	113	5.53	1.76	5.46	33	20	0.0032	9.5
IG 80				181	181	180	179	5.53	1.76	5.46	42	25	0.0055	15.3
IG 100				325	324	323	322	5.53	1.76	5.46	54	30	0.0085	22.0
IG 108				308	308	307	306	5.53	1.76	5.46	51	30	0.0083	25.8
IG 125				694	694	692	689	5.53	1.76	5.46	64	40	0.015	35.7
IG 140				813	813	811	808	5.53	1.76	5.46	75	40	0.0168	40.9
IG 160				1452	1451	1446	1437	5.53	1.76	5.46	85	50	0.0472	58.1
IG 200				2695	2690	2672	2642	5.53	1.76	5.46	108	60	0.1682	86.3
IG 63			270	114	114	114	113	5.53	1.76	5.46	33	20	0.0032	9.5
IG 80				182	182	181	180	5.53	1.76	5.46	42	25	0.0055	15.3
IG 100				326	326	325	324	5.53	1.76	5.46	54	30	0.0085	22.0
IG 108				309	309	308	307	5.53	1.76	5.46	51	30	0.0083	25.8
IG 125				697	696	695	693	5.53	1.76	5.46	64	40	0.015	35.7
IG 140				816	816	814	812	5.53	1.76	5.46	75	40	0.0168	40.9
IG 160				1458	1457	1453	1446	5.53	1.76	5.46	85	50	0.0472	58.1
IG 200				2706	2703	2688	2664	5.53	1.76	5.46	108	60	0.1682	86.3
IG 63		8	90	79	79	77	74	5.53	1.76	5.46	33	16	0.0032	7.7
IG 80				101	100	97	92	5.53	1.76	5.46	42	16	0.0053	10.2
IG 100				176	175	170	163	5.53	1.76	5.46	54	20	0.0077	15.1
IG 108				212	211	207	199	5.53	1.76	5.46	51	25	0.008	21.9
IG 125				261	259	253	241	5.53	1.76	5.46	64	25	0.0116	23.1
IG 140				427	425	417	404	5.53	1.76	5.46	75	30	0.0137	31.2
IG 160				683	678	656	620	5.53	1.76	5.46	85	35	0.0379	41.7
IG 200				1736	1714	1623	1472	5.53	1.76	5.46	108	50	0.1563	72.8
IG 63			180	83	83	83	82	5.53	1.76	5.46	33	16	0.0032	7.7
IG 80				145	145	144	142	5.53	1.76	5.46	42	20	0.0055	12.5
IG 82.5				145	145	144	142	5.53	1.76	5.46	42	20	0.0055	12.6
IG 100				232	232	231	229	5.53	1.76	5.46	54	25	0.0082	18.6
IG 108				221	220	219	217	5.53	1.76	5.46	51	25	0.008	21.9
IG 125				384	384	382	379	5.53	1.76	5.46	64	30	0.0127	27.3
IG 140				637	636	634	630	5.53	1.76	5.46	75	35	0.0162	36.1
IG 160				921	919	913	903	5.53	1.76	5.46	85	40	0.0415	47.2
IG 200				1841	1835	1812	1775	5.53	1.76	5.46	108	50	0.1563	72.8
IG 63			240	84	84	84	83	5.53	1.76	5.46	33	16	0.0032	7.7
IG 80				146	146	145	145	5.53	1.76	5.46	42	20	0.0055	12.5
IG 82.5				146	146	145	145	5.53	1.76	5.46	42	20	0.0055	12.6
IG 100				234	234	233	232	5.53	1.76	5.46	54	25	0.0082	18.6
IG 108				222	222	221	220	5.53	1.76	5.46	51	25	0.008	21.9
IG 125				387	387	386	384	5.53	1.76	5.46	64	30	0.0127	27.3
IG 140				642	642	641	638	5.53	1.76	5.46	75	35	0.0162	36.0
IG 160				929	928	924	919	5.53	1.76	5.46	85	40	0.0415	47.2
IG 200				1857	1854	1841	1820	5.53	1.76	5.46	108	50	0.1563	72.8
IG 63			270	84	84	84	84	5.53	1.76	5.46	33	16	0.0032	7.7
IG 80				146	146	146	145	5.53	1.76	5.46	42	20	0.0055	12.5
IG 82.5				146	146	146	145	5.53	1.76	5.46	42	20	0.0055	12.6
IG 100				328	328	327	326	5.53	1.76	5.46	54	30	0.009	22.0
IG 108				222	222	222	221	5.53	1.76	5.46	51	25	0.008	21.9
IG 125				388	388	387	386	5.53	1.76	5.46	64	30	0.0127	27.3
IG 140				644	643	642	641	5.53	1.76	5.46	75	35	0.0162	36.1
IG 160				931	930	927	923	5.53	1.76	5.46	85	40	0.0415	47.2
IG 200				1862	1859	1849	1833	5.53	1.76	5.46	108	50	0.1563	72.8

IG SERIES TECHNICAL DATA

Type		Number of Stops S	Index angle (α°)	Maximum output torque - Mtu - (Nm)				Motion coefficients			Ptc. rad. Rp (mm)	Roller o. d. Dr (mm)	Inertia Jc (kgm²)	Mch. frt(*) Mam (Nm)
				50 rpm	100 rpm	200 rpm	300 rpm	Acc. Ca	Speed Cv	Disp. Ck				
IG 63		10	90	55	55	53	51	5.53	1.76	5.46	33	12	0.0031	5.9
IG 80				82	82	79	75	5.53	1.76	5.46	42	14	0.0052	9.0
IG 100				132	131	128	122	5.53	1.76	5.46	54	16	0.0075	12.3
IG 125				214	212	207	198	5.53	1.76	5.46	64	20	0.0113	18.9
IG 140				313	312	306	296	5.53	1.76	5.46	75	25	0.0128	26.4
IG 160				495	491	474	447	5.53	1.76	5.46	85	30	0.036	36.3
IG 200				884	868	805	700	5.53	1.76	5.46	108	35	0.1357	52.7
IG 63			180	67	67	66	66	5.53	1.76	5.46	33	14	0.0031	6.8
IG 80				107	107	106	105	5.53	1.76	5.46	42	16	0.0053	10.2
IG 100				234	234	233	231	5.53	1.76	5.46	54	25	0.0085	18.6
IG 125				387	387	385	382	5.53	1.76	5.46	64	30	0.0134	27.3
IG 140				641	641	639	635	5.53	1.76	5.46	75	35	0.0177	36.1
IG 160				726	725	721	713	5.53	1.76	5.46	85	35	0.0398	41.7
IG 200				1175	1171	1155	1127	5.53	1.76	5.46	108	40	0.143	59.4
IG 63			240	67	67	67	66	5.53	1.76	5.46	33	14	0.0031	6.8
IG 80				107	107	107	106	5.53	1.76	5.46	42	16	0.0053	10.2
IG 100				235	235	234	233	5.53	1.76	5.46	54	25	0.0085	18.6
IG 125				389	389	388	386	5.53	1.76	5.46	64	30	0.0134	27.3
IG 140				645	644	643	641	5.53	1.76	5.46	75	35	0.0177	36.1
IG 160				730	730	727	723	5.53	1.76	5.46	85	35	0.0398	41.7
IG 200				1183	1180	1171	1155	5.53	1.76	5.46	108	40	0.143	59.4
IG 63			270	67	67	67	67	5.53	1.76	5.46	33	14	0.0031	6.8
IG 80				107	107	107	107	5.53	1.76	5.46	42	16	0.0053	10.2
IG 100				235	235	235	234	5.53	1.76	5.46	54	25	0.0085	18.6
IG 125				389	389	389	387	5.53	1.76	5.46	64	30	0.0134	27.3
IG 140				646	645	644	643	5.53	1.76	5.46	75	35	0.0177	36.1
IG 160				731	731	729	726	5.53	1.76	5.46	85	35	0.0398	41.7
IG 200				1185	1183	1175	1163	5.53	1.76	5.46	108	40	0.143	59.4
IG 63		12	90	56	56	54	52	5.53	1.76	5.46	33	12	0.0031	5.9
IG 80				83	83	81	77	5.53	1.76	5.46	42	14	0.0053	9.0
IG 82.5				83	83	81	77	5.53	1.76	5.46	42	14	0.0053	9.1
IG 100				134	133	130	126	5.53	1.76	5.46	54	16	0.0077	12.3
IG 108				128	127	124	119	5.53	1.76	5.46	51	16	0.0076	14.8
IG 125				217	215	211	204	5.53	1.76	5.46	64	20	0.0116	18.9
IG 140				317	316	311	302	5.53	1.76	5.46	75	25	0.0133	26.4
IG 160				502	499	484	460	5.53	1.76	5.46	85	30	0.0372	36.3
IG 200				897	884	830	741	5.53	1.76	5.46	108	35	0.1389	52.7
IG 63			180	57	57	57	56	5.53	1.76	5.46	33	12	0.0031	5.9
IG 80				85	85	85	84	5.53	1.76	5.46	42	14	0.0053	9.0
IG 82.5				85	85	85	84	5.53	1.76	5.46	42	14	0.0053	9.1
IG 100				188	187	187	185	5.53	1.76	5.46	54	20	0.0081	15.1
IG 108				130	130	129	128	5.53	1.76	5.46	51	16	0.0076	14.8
IG 125				278	277	276	274	5.53	1.76	5.46	64	25	0.0124	23.1
IG 140				326	325	324	322	5.53	1.76	5.46	75	25	0.0133	26.4
IG 160				516	515	511	505	5.53	1.76	5.46	85	30	0.0372	36.3
IG 200				1180	1177	1162	1139	5.53	1.76	5.46	108	40	0.1476	59.4
IG 63			240	58	57	57	57	5.53	1.76	5.46	33	12	0.0031	5.9
IG 80				86	86	85	85	5.53	1.76	5.46	42	14	0.0053	9.0
IG 82.5				86	86	85	85	5.53	1.76	5.46	42	14	0.0053	9.1
IG 100				188	188	188	187	5.53	1.76	5.46	54	20	0.0081	15.1
IG 108				178	178	178	177	5.53	1.76	5.46	51	20	0.008	17.9
IG 125				279	279	278	277	5.53	1.76	5.46	64	25	0.0124	23.1
IG 140				457	457	456	454	5.53	1.76	5.46	75	30	0.0156	31.2
IG 160				732	731	729	725	5.53	1.76	5.46	85	35	0.0418	41.7
IG 200				1185	1183	1175	1162	5.53	1.76	5.46	108	40	0.1476	59.4
IG 63			270	58	58	57	57	5.53	1.76	5.46	33	12	0.0031	5.9
IG 80				86	86	85	85	5.53	1.76	5.46	42	14	0.0053	9.0
IG 82.5				86	86	85	85	5.53	1.76	5.46	42	14	0.0053	9.1
IG 100				189	188	188	188	5.53	1.76	5.46	54	20	0.0081	15.1
IG 108				178	178	178	177	5.53	1.76	5.46	51	20	0.008	17.9
IG 125				279	279	278	277	5.53	1.76	5.46	64	25	0.0124	23.1
IG 140				457	457	456	455	5.53	1.76	5.46	75	30	0.0156	31.2
IG 160				733	732	730	727	5.53	1.76	5.46	85	35	0.0418	41.7
IG 200				1187	1185	1179	1168	5.53	1.76	5.46	108	40	0.1476	59.4

Values referred to the worst running conditions - Equivalent service factor = 1.75 already applied

(*) Starting torque - Tolerance on the values indicated ± 15%

Type		Number of Stops S	Index angle (α°)	Maximum output torque - Mtu - (Nm)				Motion coefficients			Ptc. rad. Rp (mm)	Roller o. d. Dr (mm)	Inertia Jc (kgm²)	Mch. frt.(*) Mam (Nm)
				Speed 50 rpm	100 rpm	200 rpm	300 rpm	Acc. Ca	Speed Cv	Disp. Ck				
IG 63	*	16	50	44	43	40	35	5.53	1.76	5.46	33	14	0.0031	6.8
IG 80	*			80	79	74	66	5.53	1.76	5.46	42	16	0.0053	10.2
IG 100	*			134	133	125	112	5.53	1.76	5.46	54	25	0.0082	18.6
IG 108	*			151	149	141	129	5.53	1.76	5.46	51	25	0.008	21.9
IG 125	*			227	224	212	192	5.53	1.76	5.46	64	30	0.0127	27.3
IG 140	*			372	368	353	328	5.53	1.76	5.46	75	35	0.0162	36.1
IG 160	*			526	517	478	413	5.53	1.76	5.46	85	40	0.0415	47.2
IG 200	*			1027	991	844	600	5.53	1.76	5.46	108	50	0.1563	72.8
IG 63	*		90	83	83	82	81	5.53	1.76	5.46	33	16	0.0032	7.7
IG 80	*			145	144	143	140	5.53	1.76	5.46	42	20	0.0055	12.5
IG 100	*			232	232	229	225	5.53	1.76	5.46	54	25	0.0082	18.6
IG 108	*			221	220	218	214	5.53	1.76	5.46	51	25	0.008	21.9
IG 125	*			384	383	380	374	5.53	1.76	5.46	64	30	0.0127	27.3
IG 140	*			637	636	631	623	5.53	1.76	5.46	75	35	0.0162	36.1
IG 160	*			920	917	905	885	5.53	1.76	5.46	85	40	0.0415	47.2
IG 200	*			1839	1827	1782	1707	5.53	1.76	5.46	108	50	0.1563	72.8
IG 63	*		120	84	84	83	82	5.53	1.76	5.46	33	16	0.0032	7.7
IG 80	*			146	146	145	143	5.53	1.76	5.46	42	20	0.0055	12.5
IG 100	*			234	234	232	230	5.53	1.76	5.46	54	25	0.0082	18.6
IG 108	*			222	221	220	218	5.53	1.76	5.46	51	25	0.008	21.9
IG 125	*			387	387	385	381	5.53	1.76	5.46	64	30	0.0127	27.3
IG 140	*			642	641	639	634	5.53	1.76	5.46	75	35	0.0162	36.1
IG 160	*			928	927	920	909	5.53	1.76	5.46	85	40	0.0415	47.2
IG 200	*			1856	1850	1824	1782	5.53	1.76	5.46	108	50	0.1563	72.8
IG 63	*		140	84	84	84	83	5.53	1.76	5.46	33	16	0.0032	7.7
IG 80	*			146	146	145	144	5.53	1.76	5.46	42	20	0.0055	12.5
IG 100	*			235	235	234	232	5.53	1.76	5.46	54	25	0.0082	18.6
IG 108	*			222	222	221	219	5.53	1.76	5.46	51	25	0.008	21.9
IG 125	*			388	388	387	384	5.53	1.76	5.46	64	30	0.0127	27.3
IG 140	*			644	643	642	638	5.53	1.76	5.46	75	35	0.0162	36.0
IG 160	*			931	930	925	917	5.53	1.76	5.46	85	40	0.0415	47.2
IG 200	*			1862	1858	1839	1808	5.53	1.76	5.46	108	50	0.1563	72.8
IG 63	*	20	50	46	45	43	39	5.53	1.76	5.46	33	12	0.0031	5.9
IG 80	*			76	75	71	64	5.53	1.76	5.46	42	14	0.0052	9.0
IG 100	*			129	127	122	112	5.53	1.76	5.46	54	16	0.0075	12.3
IG 125	*			203	201	192	178	5.53	1.76	5.46	64	20	0.0113	18.9
IG 140	*			274	272	262	246	5.53	1.76	5.46	75	25	0.0128	26.4
IG 160	*			405	398	371	326	5.53	1.76	5.46	85	30	0.036	36.3
IG 200	*			762	736	634	465	5.53	1.76	5.46	108	35	0.1357	52.7
IG 63	*		90	67	66	66	65	5.53	1.76	5.46	33	14	0.0031	6.8
IG 80	*			107	106	105	103	5.53	1.76	5.46	42	16	0.0053	10.2
IG 100	*			187	186	185	182	5.53	1.76	5.46	54	20	0.0079	15.1
IG 125	*			277	276	273	268	5.53	1.76	5.46	64	25	0.012	23.1
IG 140	*			453	452	449	443	5.53	1.76	5.46	75	30	0.0147	31.2
IG 160	*			726	724	715	699	5.53	1.76	5.46	85	35	0.0398	41.7
IG 200	*			1174	1166	1133	1078	5.53	1.76	5.46	108	40	0.143	59.4
IG 63	*		120	67	67	67	66	5.53	1.76	5.46	33	14	0.0031	6.8
IG 80	*			107	107	106	105	5.53	1.76	5.46	42	16	0.0053	10.2
IG 100	*			188	188	187	185	5.53	1.76	5.46	54	20	0.0079	15.1
IG 125	*			278	278	276	273	5.53	1.76	5.46	64	25	0.012	23.1
IG 140	*			456	455	453	450	5.53	1.76	5.46	75	30	0.0147	31.2
IG 160	*			730	729	724	715	5.53	1.76	5.46	85	35	0.0398	41.7
IG 200	*			1182	1177	1159	1128	5.53	1.76	5.46	108	40	0.143	59.4
IG 63	*		140	67	67	67	66	5.53	1.76	5.46	33	14	0.0031	6.8
IG 80	*			108	107	107	106	5.53	1.76	5.46	42	16	0.0053	10.2
IG 100	*			188	188	187	186	5.53	1.76	5.46	54	20	0.0079	15.1
IG 125	*			279	278	277	275	5.53	1.76	5.46	64	25	0.012	23.1
IG 140	*			457	456	455	453	5.53	1.76	5.46	75	30	0.0147	31.2
IG 160	*			732	731	727	721	5.53	1.76	5.46	85	35	0.0398	41.7
IG 200	*			1184	1181	1167	1145	5.53	1.76	5.46	108	40	0.143	59.4

Values referred to the worst running conditions - Equivalent service factor = 1.75 already applied

(*) Starting torque - Tolerance on the values indicated ± 15%

* Double cycle cam configuration (see page 25)

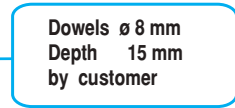
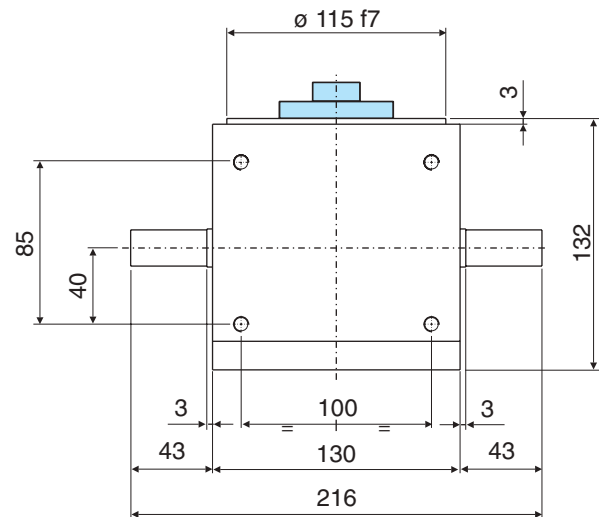
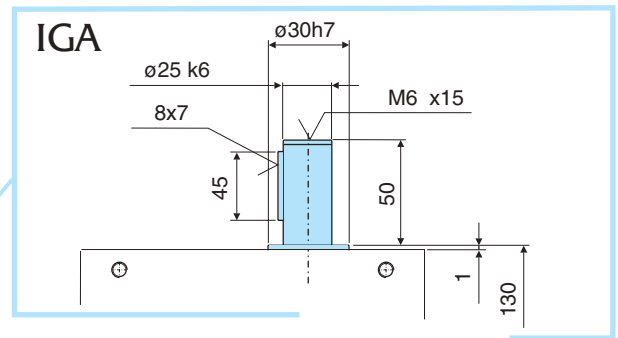
Type		Number of Stops S	Index angle (α°)	Maximum output torque - Mtu - (Nm)				Motion coefficients			Ptc. rad. Rp (mm)	Roller o. d. Dr (mm)	Inertia Jc (kgm²)	Mch. frt(*) Mam (Nm)
				50 rpm	100 rpm	200 rpm	300 rpm	Acc. Ca	Speed Cv	Disp. Ck				
IG 63	*	24	60	57	56	55	53	5.53	1.76	5.46	33	12	0.0031	5.9
IG 80	*			84	84	82	78	5.53	1.76	5.46	42	14	0.0053	9.0
IG 100	*			136	135	132	126	5.53	1.76	5.46	54	16	0.0077	12.3
IG 125	*			219	218	213	205	5.53	1.76	5.46	64	20	0.0116	18.9
IG 140	*			322	320	315	305	5.53	1.76	5.46	75	25	0.0133	26.4
IG 160	*			507	503	487	460	5.53	1.76	5.46	85	30	0.0372	36.3
IG 200	*			910	895	835	735	5.53	1.76	5.46	108	35	0.1389	52.7
IG 63	*		90	57	57	57	56	5.53	1.76	5.46	33	12	0.0031	5.9
IG 80	*			107	107	106	104	5.53	1.76	5.46	42	16	0.0054	10.2
IG 100	*			188	187	186	183	5.53	1.76	5.46	54	20	0.0081	15.1
IG 125	*			278	277	275	271	5.53	1.76	5.46	64	25	0.0124	23.1
IG 140	*			455	454	451	446	5.53	1.76	5.46	75	30	0.0156	31.2
IG 160	*			729	727	719	705	5.53	1.76	5.46	85	35	0.0418	41.7
IG 200	*			1179	1172	1143	1096	5.53	1.76	5.46	108	40	0.1476	59.4
IG 63	*		120	58	57	57	57	5.53	1.76	5.46	33	12	0.0031	5.9
IG 80	*			108	107	107	106	5.53	1.76	5.46	42	16	0.0054	10.2
IG 100	*			188	188	187	186	5.53	1.76	5.46	54	20	0.0081	15.1
IG 125	*			279	278	277	275	5.53	1.76	5.46	64	25	0.0124	23.1
IG 140	*			457	456	455	452	5.53	1.76	5.46	75	30	0.0156	31.2
IG 160	*			732	731	726	719	5.53	1.76	5.46	85	35	0.0418	41.7
IG 200	*			1185	1181	1165	1138	5.53	1.76	5.46	108	40	0.1476	59.4
IG 63	*		140	58	58	57	57	5.53	1.76	5.46	33	12	0.0031	5.9
IG 80	*			108	108	107	106	5.53	1.76	5.46	42	16	0.0054	10.2
IG 100	*			189	188	188	187	5.53	1.76	5.46	54	20	0.0081	15.1
IG 125	*			279	279	278	276	5.53	1.76	5.46	64	25	0.0124	23.1
IG 140	*			457	457	456	454	5.53	1.76	5.46	75	30	0.0156	31.2
IG 160	*			733	732	729	723	5.53	1.76	5.46	85	35	0.0418	41.7
IG 200	*			1187	1184	1172	1152	5.53	1.76	5.46	108	40	0.1476	59.4

Values referred to the worst running conditions - Equivalent service factor = 1.75 already applied

(*) Starting torque - Tolerance on the values indicated ± 15%

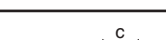
* Double cicle cam configuration (see page 25)

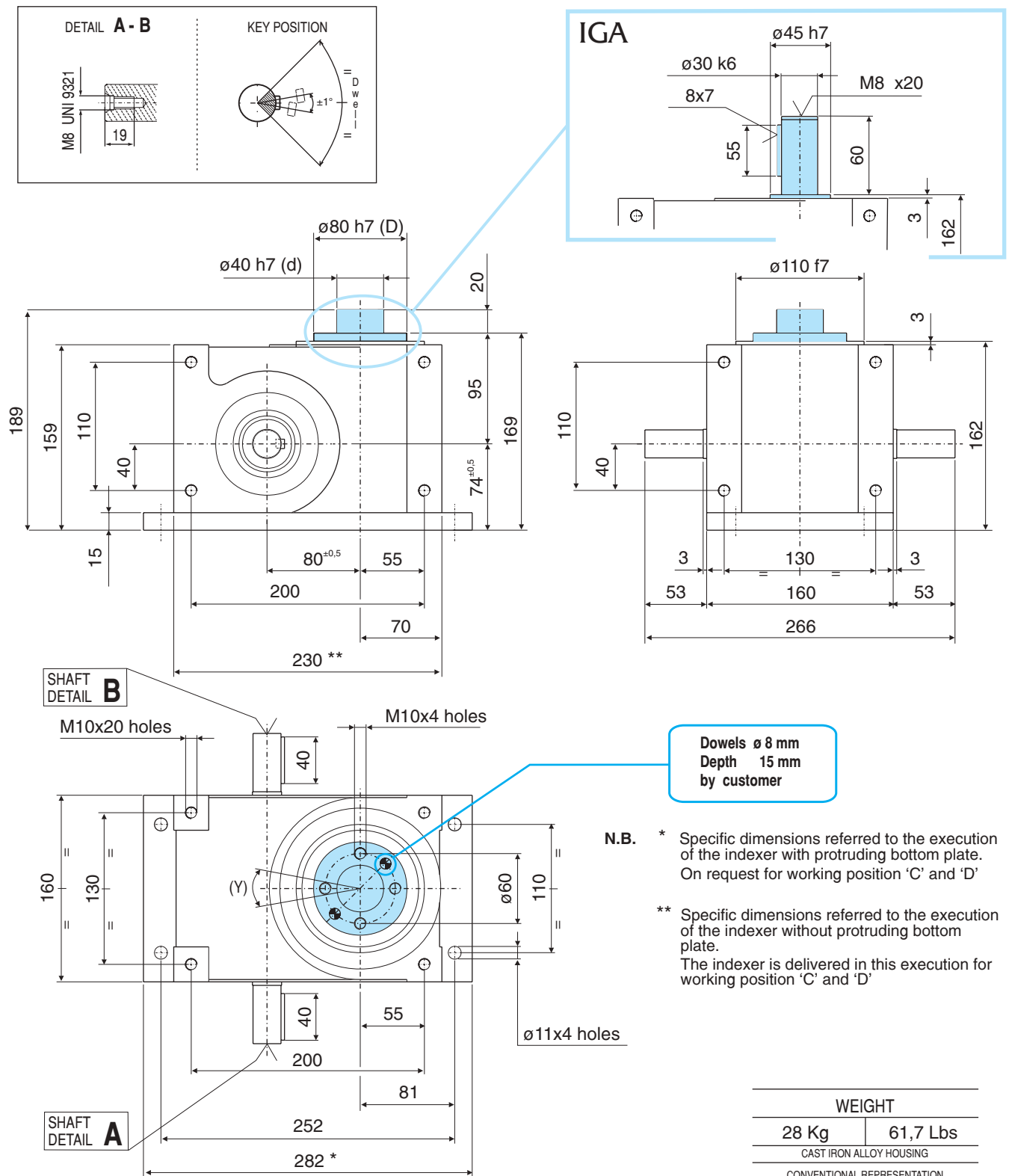
 CAD File: IG-IGA63
DXF - IGS - Pro/Eng.



Specific dimensions referred to the execution of the indexer without protruding bottom plate.
The indexer is delivered in this execution for working position 'C' and 'D'

WEIGHT	
14 Kg	30,8 Lbs
CAST ALUMINIUM ALLOY HOUSING	
CONVENTIONAL REPRESENTATION	
	

					Reference	Concentricity	Planarity	Repeatability - R -			(Y) Position of the threaded holes	General manufacturing tolerance in compliance with UNI - ISO 2768-1 EN 22768-1
								Standard	2 cycles cam	3 cycle cam		
						*						
d1 a b c					d	±0,02				± 0,1mm ± 30'		
STD diameter	19 ^{k6}	21,5	6	6	D		±0,02					
MAX diameter	22 ^{k6}	24,5	6	6	Rp			±0,02 + 2'5"	± 0,03 + 3'7"	± 0,04 + 4'10"		



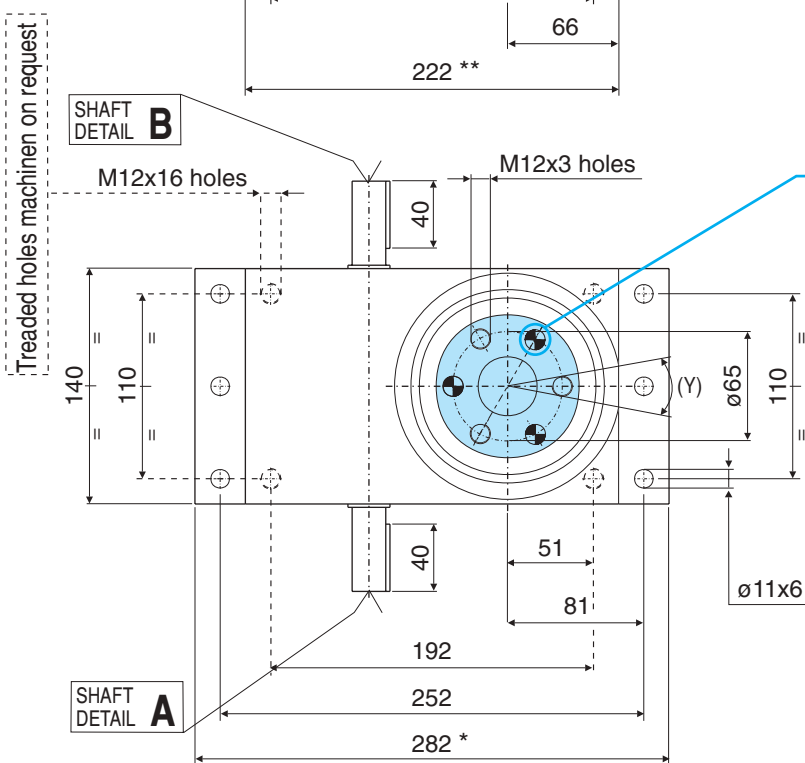
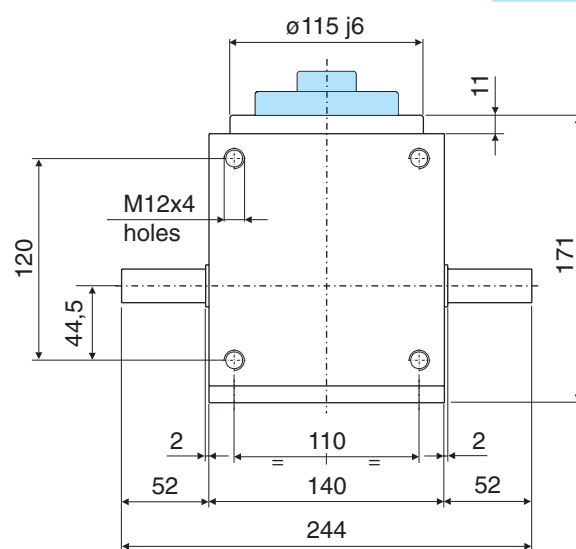
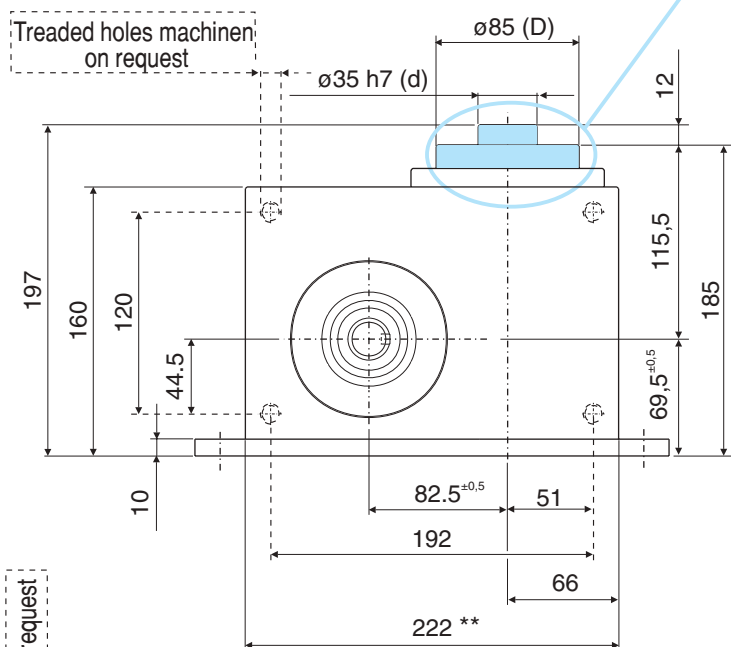
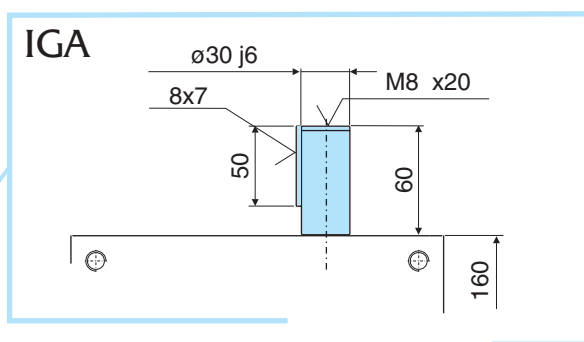
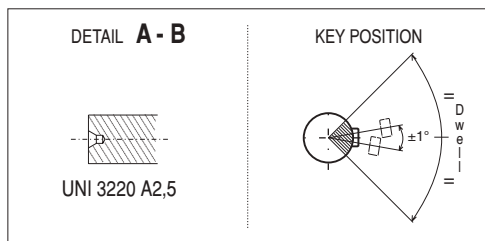
Rotating element

SHAFT DETAIL A - B					Reference	Concentricity	Planarity	Repeatability - R -			(Y) Position of the threaded holes	General manufacturing tolerance in compliance with UNI - ISO 2768-1 EN 22768-1
d1	a	b	c	d				Standard	2 cycles cam	3 cycle cam		
STD diameter	24 ^{k6}	27	8	7	D	±0,02	±0,02		*		±0,14 mm ± 30'	
MAX diameter	25 ^{k6}	28	8	7	Rp			± 0,02 ± 1'37"	± 0,03 ± 2'27"	± 0,04 ± 3'14"		

ROLLER GEAR INDEXER IG 82.5



CAD File:IG-IGA82,5
DXF - IGS - Pro/Eng.



DOWELS ø 12 mm
Depth 18 mm
by customer

N.B. * Specific dimensions referred to the execution of the indexer with protruding bottom plate. On request for working position 'C' and 'D'

** Specific dimensions referred to the execution of the indexer without protruding bottom plate. The indexer is delivered in this execution for working position 'C' and 'D'

Treaded holes machinen on request

WEIGHT

30 Kg 66 Lbs

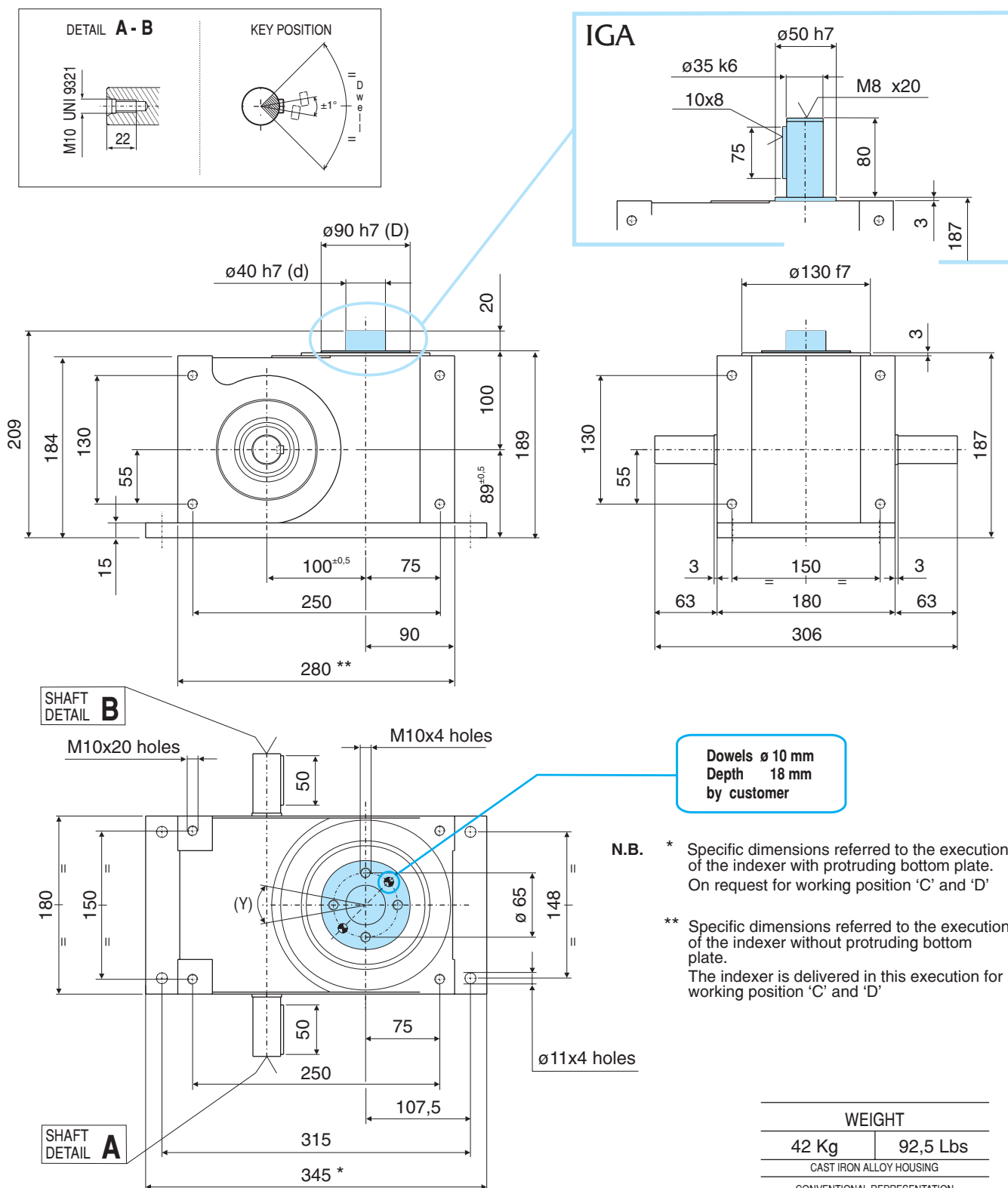
CAST IRON ALLOY HOUSING

CONVENTIONAL REPRESENTATION



Rotating element

SHAFT DETAIL A - B					Reference	Concentricity	Planarity	Repeatability - R -			(Y) Position of the threaded holes	General manufacturing tolerance in compliance with UNI - ISO 2768-1 EN 22768-1
d1	a	b	c	d				Standard	2 cycles cam	3 cycle cam		
STD diameter	20 ^{h6}	22,5	6	6	D	±0,02	±0,02		*		±0,15 mm ± 30'	
MAX diameter	25	28	8	7	Rp			± 0,02 ± 1'37"	± 0,03 ± 2'27"	± 0,04 ± 3'14"		



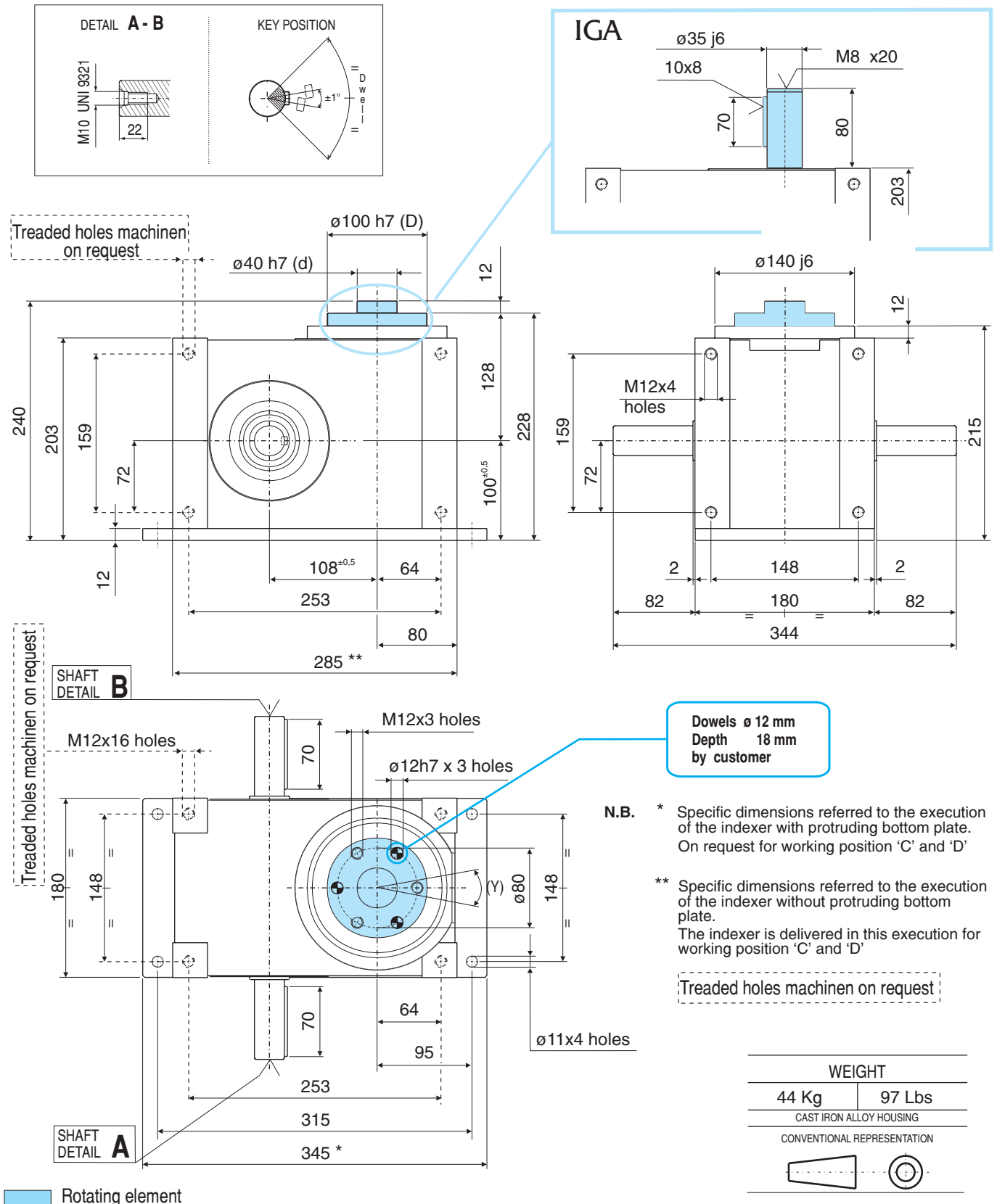
Rotating element

SHAFT DETAIL A - B					Reference	Concentricity	Planarity	Repeatability - R -			(Y) Position of the threaded holes	General manufacturing tolerance in compliance with UNI - ISO 2768-1 EN 22768-1
d1	a	b	c					Standard	2 cycles cam	3 cycle cam		
STD diameter	28 ^{k6}	31	8	7	D	±0,02	±0,02		*		± 0,15 mm ± 30'	
MAX diameter	30 ^{k6}	33	8	7	Rp			± 0,02 ± 1'16"	± 0,03 ± 1'54"	± 0,04 ± 2'32"		

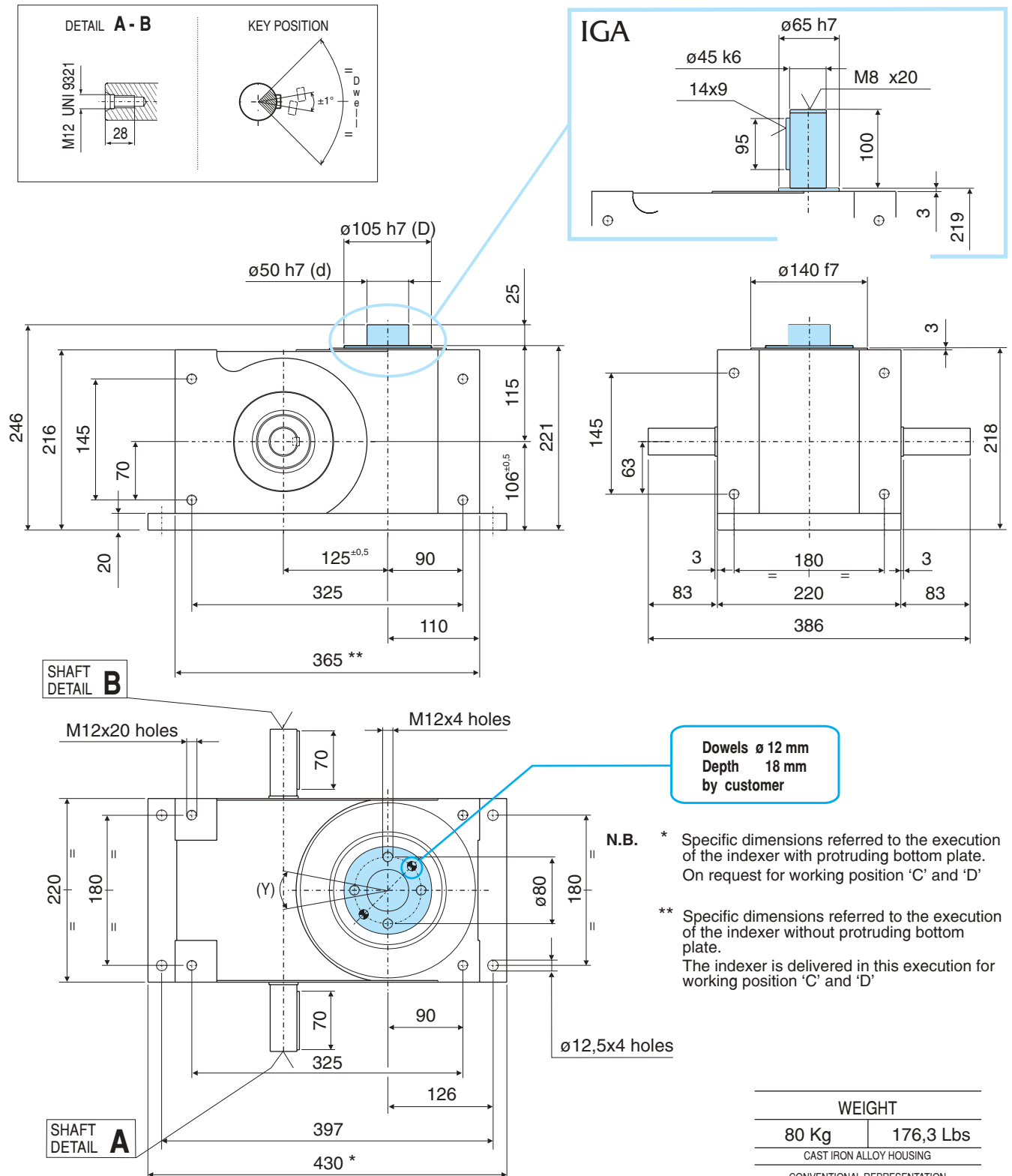
ROLLER GEAR INDEXER IG 108



CAD File: IG-IGA108
DXF - IGS - Pro/Eng.



SHAFT DETAIL A - B					Reference	Concentricity	Planarity	Repeatability - R -			(Y) Position of the threaded holes	General manufacturing tolerance in compliance with UNI - ISO 2768-1 EN 22768-1
d1	a	b	c	d				Standard	2 cycles cam	3 cycle cam		
STD diameter	30 ⁺⁶	33	8	7	D	±0,02	±0,02		*		± 0,18 mm ± 30'	
MAX diameter	40	43	12	8	Rp			± 0,02 ± 1'20"	± 0,03 ± 2'1"	± 0,04 ± 2'40"		



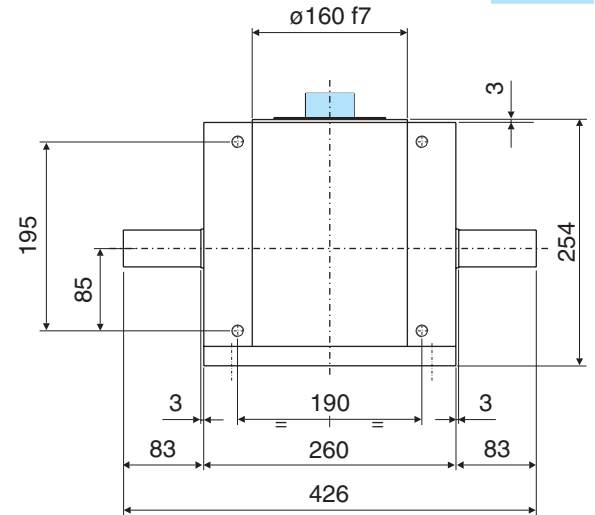
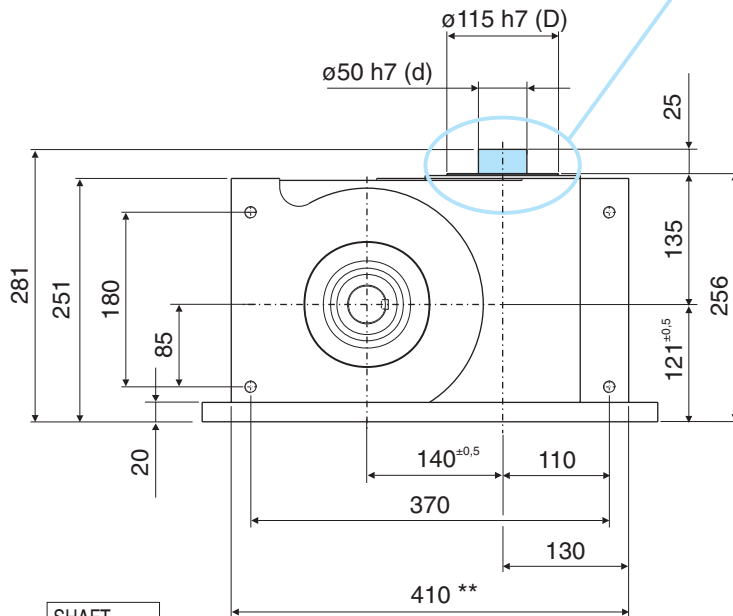
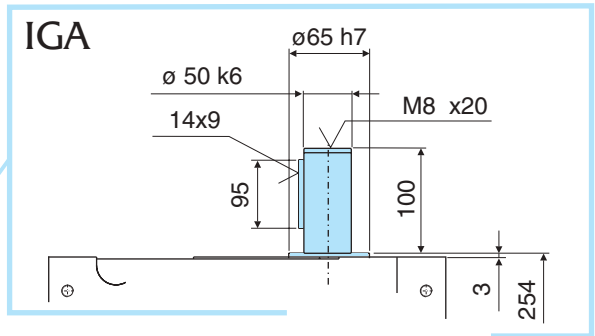
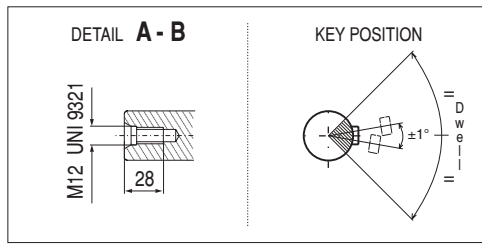
Rotating element

SHAFT DETAIL A - B					Reference	Concentricity	Planarity	Repeatability - R -			(Y) Position of the threaded holes	General manufacturing tolerance in compliance with UNI - ISO 2768-1 EN 22768-1
d1	a	b	c	d				Standard	2 cycles cam	3 cycle cam		
STD diameter	32 ^{k6}	35	10	8	D	$\pm 0,02$	$\pm 0,02$		*		$\pm 0,18 \text{ mm}$ $\pm 30'$	
MAX diameter	35 ^{k6}	38	10	8	Rp			$\pm 0,02$ $\pm 1'4''$	$\pm 0,03$ $\pm 1'36''$	$\pm 0,04$ $\pm 2'8''$		

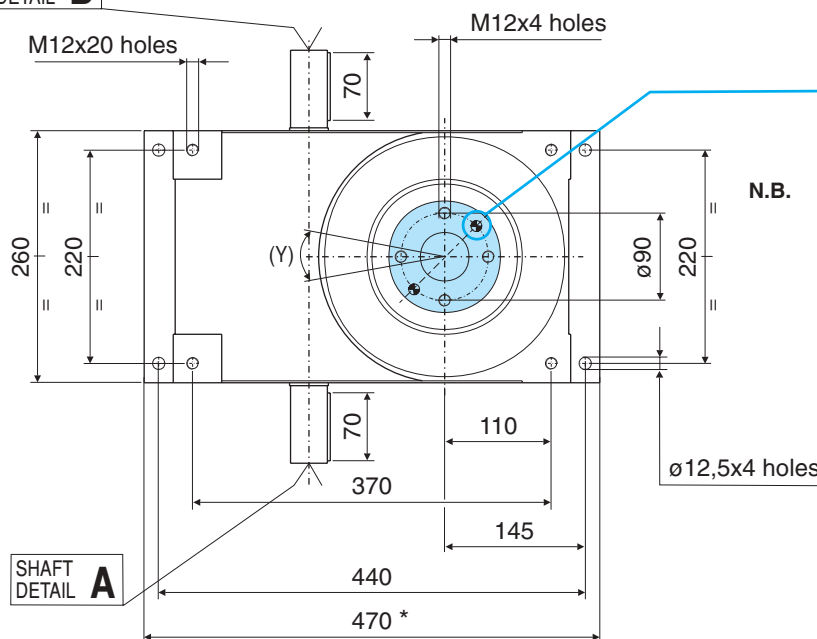
ROLLER GEAR INDEXER IG 140



CAD File: IG-IGA140
DXF - IGS - Pro/Eng.



SHAFT
DETAIL **B**



Dowels ø 12 mm
Depth 18 mm
by customer

N.B. * Specific dimensions referred to the execution of the indexer with protruding bottom plate. On request for working position 'C' and 'D'

** Specific dimensions referred to the execution of the indexer without protruding bottom plate. The indexer is delivered in this execution for working position 'C' and 'D'

SHAFT
DETAIL **A**

WEIGHT

120 Kg 264,5 Lbs

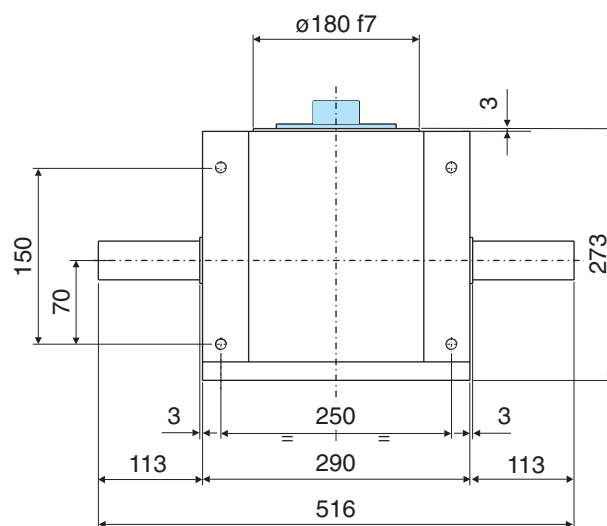
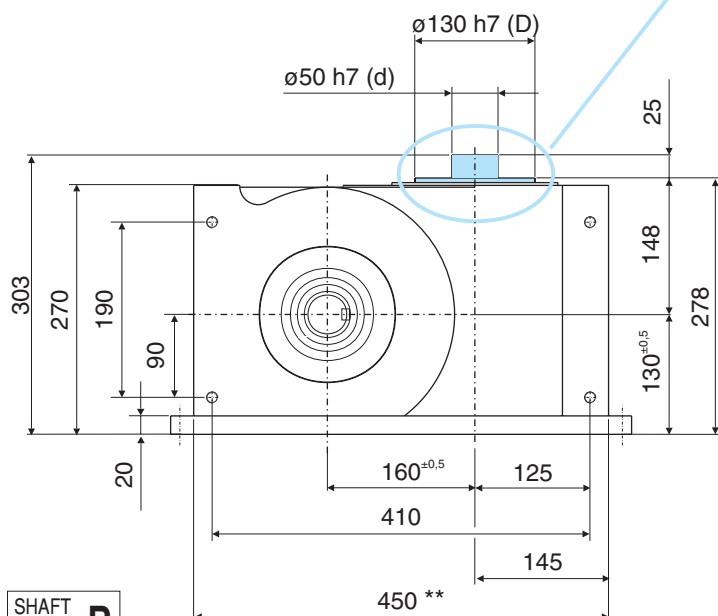
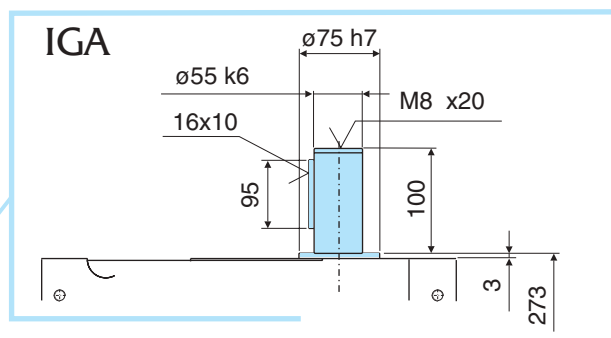
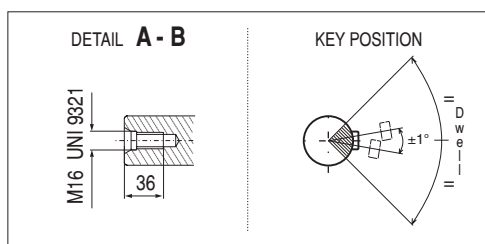
CAST IRON ALLOY HOUSING

CONVENTIONAL REPRESENTATION

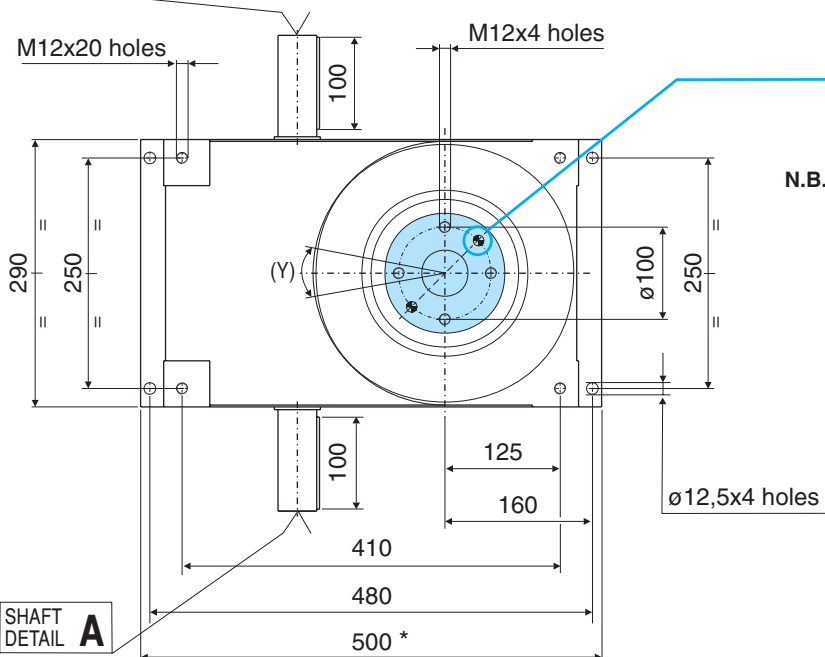


Rotating element

SHAFT DETAIL A - B					Reference	Concentricity	Planarity	Repeatability - R -			(Y) Position of the threaded holes	General manufacturing tolerance in compliance with UNI - ISO 2768-1 EN 22768-1
d1	a	b	c					Standard	2 cycles cam	3 cycle cam		
STD diameter	38 ^{k6}	41	10	8	D	±0,02	±0,02		*		± 0,2 mm ± 30'	
MAX diameter	40 ^{k6}	43	12	8	Rp			± 0,02 ± 55"	± 0,03 ± 1'22"	± 0,04 ± 1'50"		



SHAFT
DETAIL **B**



Dowels ø 12 mm
Depth 18 mm
by customer

N.B. * Specific dimensions referred to the execution of the indexer with protruding bottom plate. On request for working position 'C' and 'D'

** Specific dimensions referred to the execution of the indexer without protruding bottom plate. The indexer is delivered in this execution for working position 'C' and 'D'

SHAFT
DETAIL **A**

WEIGHT

160 Kg 352,7 Lbs

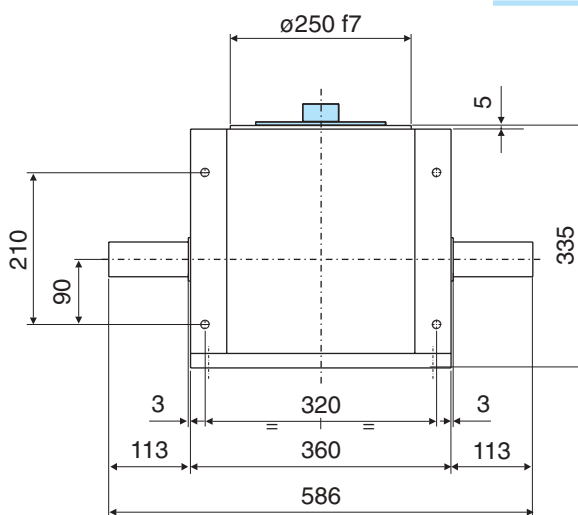
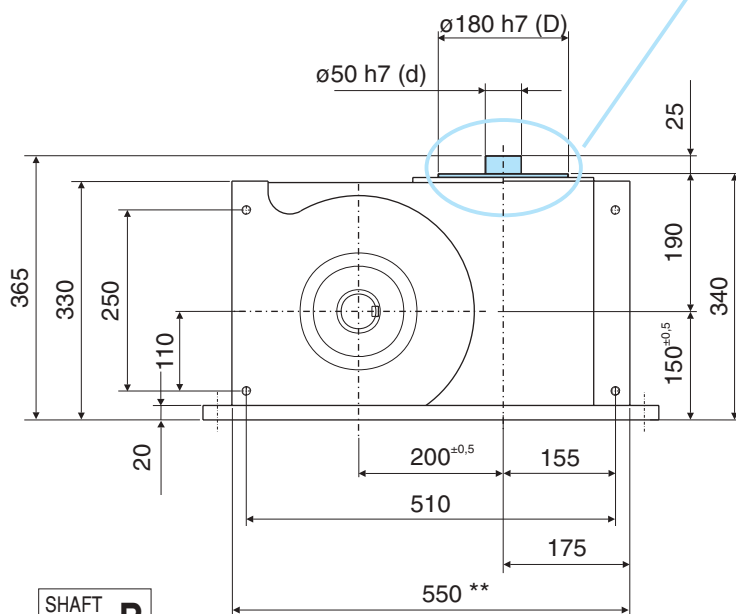
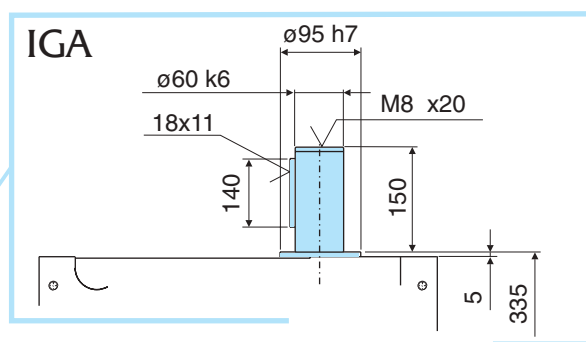
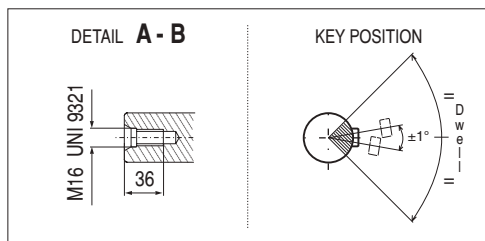
CAST IRON ALLOY HOUSING

CONVENTIONAL REPRESENTATION

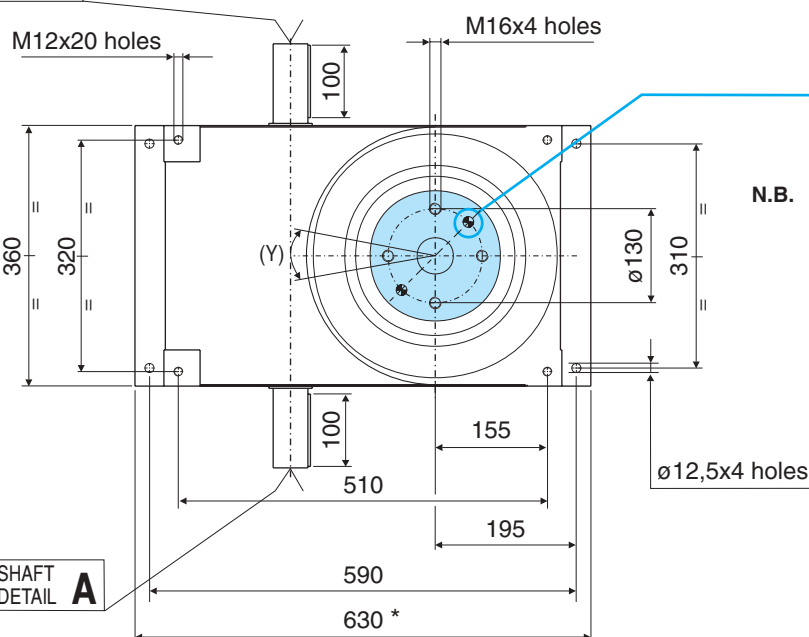


Rotating element

SHAFT DETAIL A - B					Reference	Concentricity	Planarity	Repeatability - R -			(Y) Position of the threaded holes	General manufacturing tolerance in compliance with UNI - ISO 2768-1 EN 22768-1
d1	a	b	c					Standard	2 cycles cam	3 cycle cam		
					d	±0,02			*		± 0,22 mm ± 30'	
STD diameter	42 ^{k6}	45	12	8	D		±0,02					
MAX diameter	50 ^{k6}	53,5	14	9	Rp			± 0,02 ± 48"	± 0,03 ± 1'12"	± 0,04 ± 1'36"		



SHAFT
DETAIL B



Dowels ø 16 mm
Depth 20 mm
by customer

N.B. * Specific dimensions referred to the execution of the indexer with protruding bottom plate. On request for working position 'C' and 'D'

** Specific dimensions referred to the execution of the indexer without protruding bottom plate. The indexer is delivered in this execution for working position 'C' and 'D'

SHAFT
DETAIL A

WEIGHT

210 Kg 462,9 Lbs

CAST IRON ALLOY HOUSING

CONVENTIONAL REPRESENTATION



Rotating element

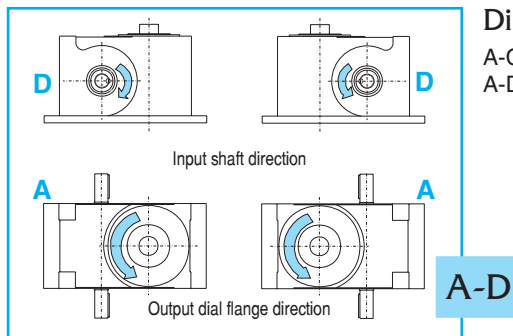
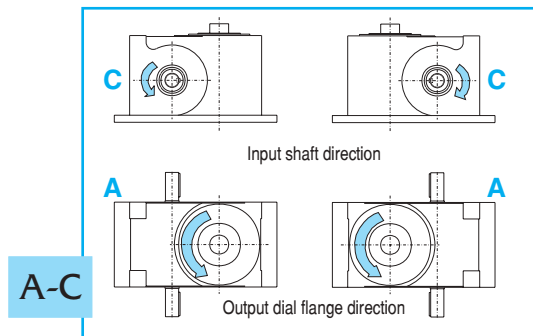
SHAFT DETAIL A - B					Reference	Concentricity	Planarity	Repeatability - R -			(Y) Position of the threaded holes	General manufacturing tolerance in compliance with UNI - ISO 2768-1 EN 22768-1
d1	a	b	c					Standard	2 cycles cam	3 cycle cam		
					d	±0,02			*		± 0,3 mm ± 30'	
STD diameter	48 ^{h6}	51,5	14	9	D		±0,02					
MAX diameter	55 ^{h6}	59	16	10	Rp			± 0,02 ± 38"	± 0,03 ± 57"	± 0,04 ± 1'16"		

CUSTOMIZING AND ACCESSORIES



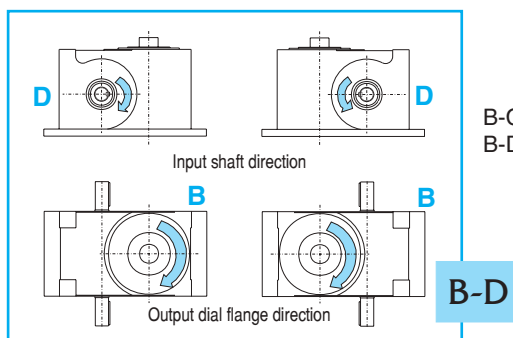
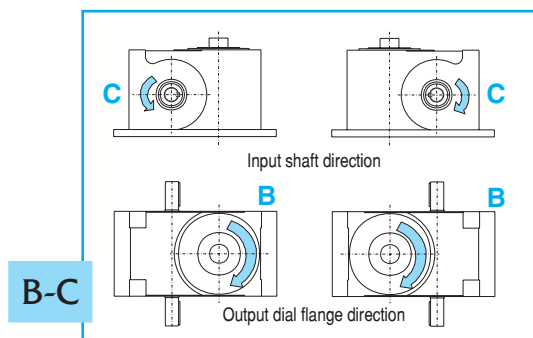
UNIDIRECTIONAL FUNCTION

Single Cycle cam

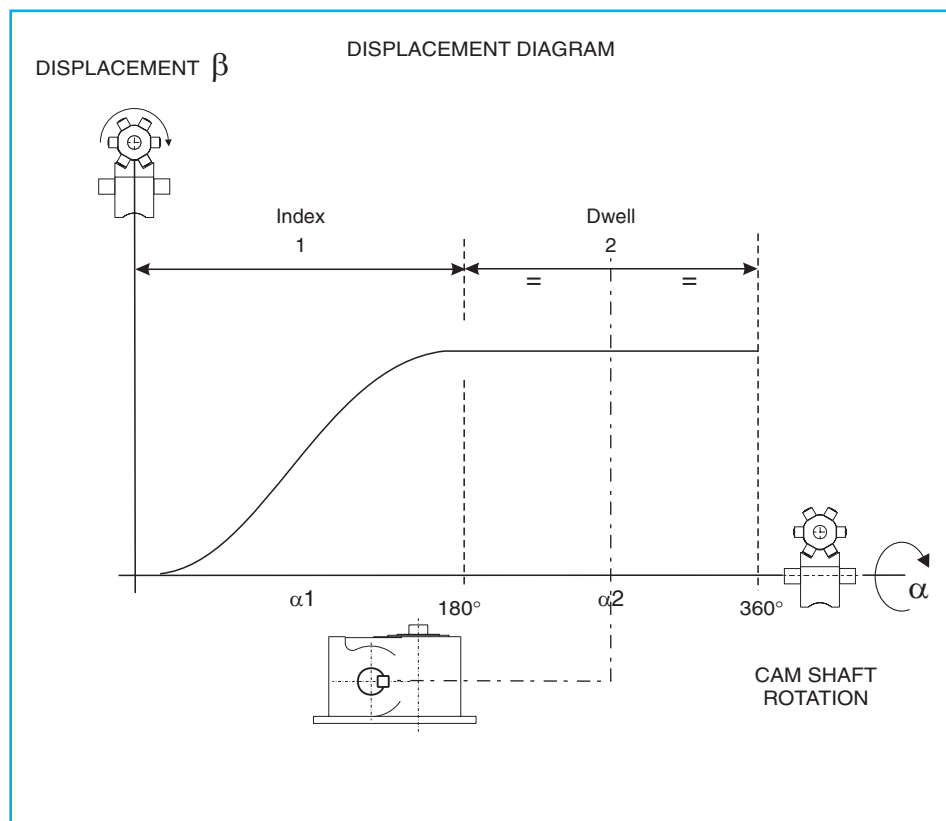


Directions of rotation

A-C = Left hand cam
A-D = Right hand cam



B-C = Right hand cam
B-D = Left hand cam



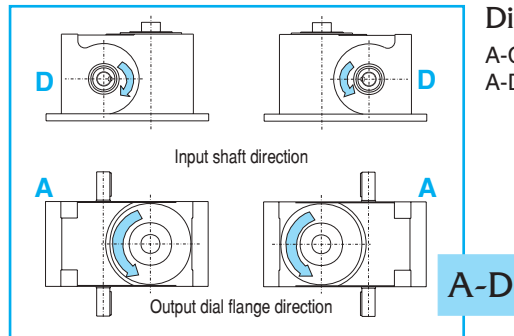
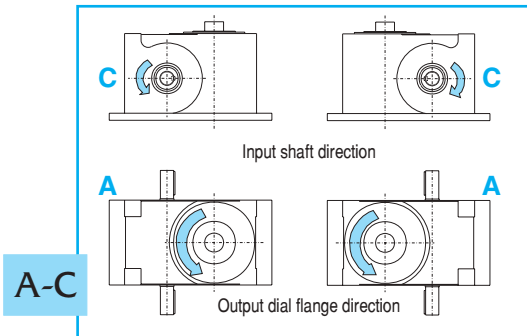
The diagram on the side shows the displacement of a roller gear with a **single cycle cam**. In a rotation of 360° of the cam shaft the phases are:

- 1) **index**
- 2) **dwell** = The camshaft keyway oriented to the output axis identifies the middle position of Dwell period ($1/2 \alpha_2$)

Type	Size	Stops	$\alpha 1 + \alpha 2 = 360^\circ$				Direction of rotation	Working position	Reducer fitting position	
			Index 1	Dwell 2						
Pg.18	Pg.18	Pg.7	Pg.7	Pg.7			Pg.24	Pg.32	Pg. 31	
IG	125	2	$\alpha 1 \ 180^\circ$	$\alpha 2 \ 180^\circ$			BC	A	1-S2-90°	

The indications on the side refer to the **preliminary coding**.

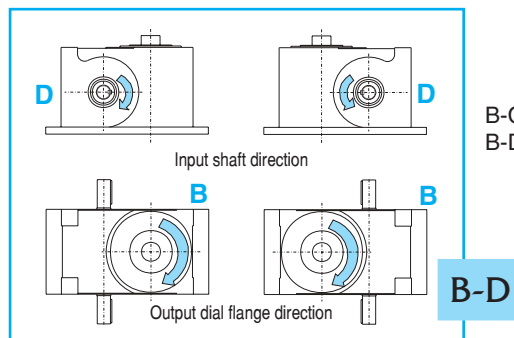
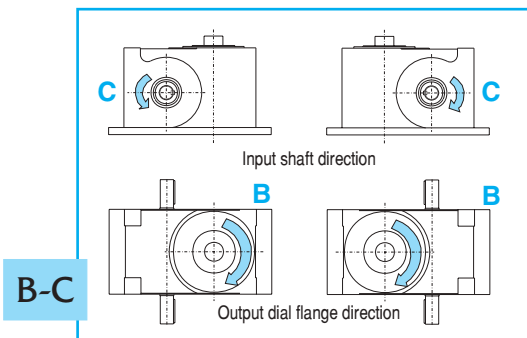
Double Cycle cam



Directions of rotation

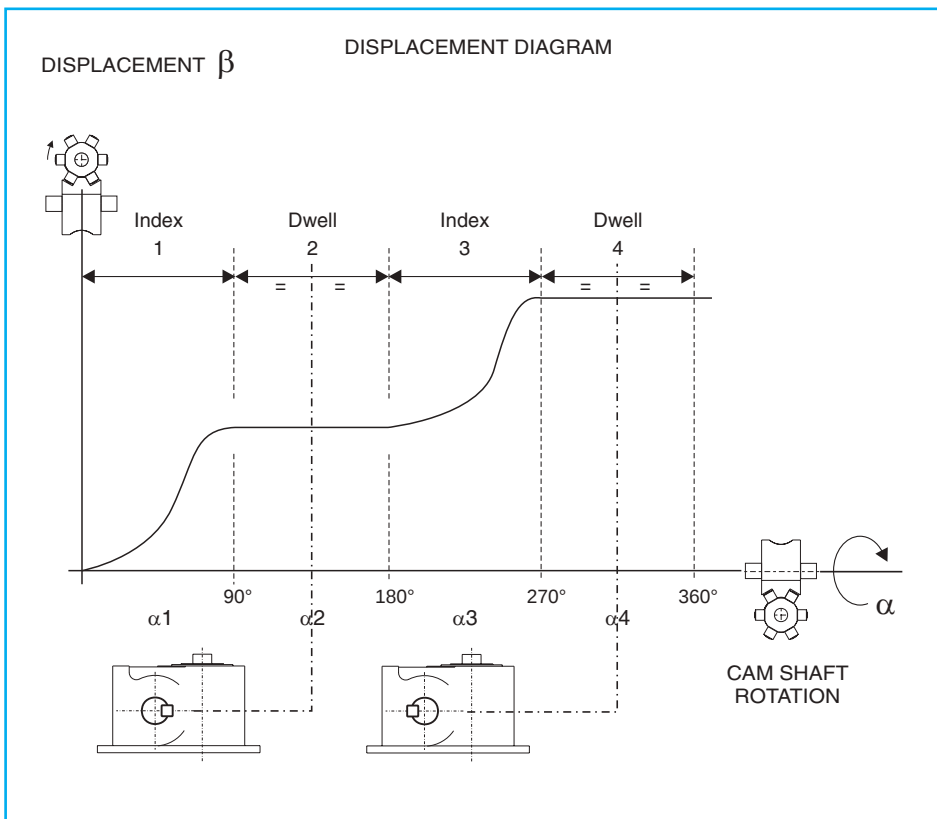
A-C = Left hand cam

A-D = Right hand cam



B-C = Right hand cam

B-D = Left hand cam



The diagram on the side shows the displacement of a roller gear with **double cycle cam**.

In a rotation of 360° of the cam shaft the phases are:

- 1) **first index**
- 2) **first dwell**
- 3) **second index**
- 4) **second dwell** - center of dwell angle = **key parallel to the bottom plane and opposed to the output axis**

Note: For example, 60 rpm on the cam shaft will result in 120 indexes per minute at the output (see technical guidelines chapter 2.6)

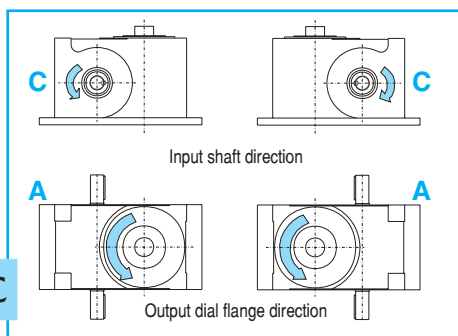
Type	Size	Stops	$\alpha 1 + \alpha 2 + \alpha 3 + \alpha 4 = 360^\circ$				Direction of rotation	Working position	Reducer fitting position	
			Index 1	Dwell 2	Index 3	Dwell 4				
Pg.18	Pg.18	Pg.11	Pg.11	Pg.11	Pg.11	Pg.11	Pg.25	Pg.32	Pg.31	
IG	125	16	$\alpha 1 \ 90^\circ$	$\alpha 2 \ 90^\circ$	$\alpha 3 \ 90^\circ$	$\alpha 4 \ 90^\circ$	BC	A	1-S2-90°	

The indications on the side refer to the **preliminary coding**.

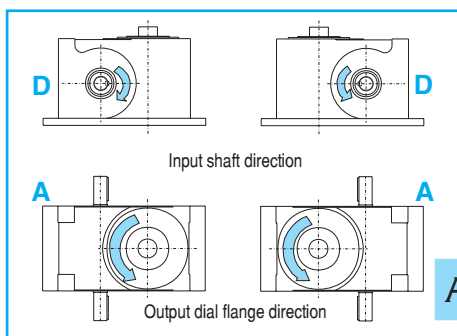
OSCILLATING FUNCTION

Directions of rotation
on cycle start

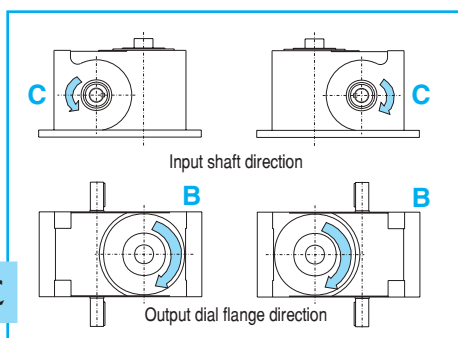
A-C



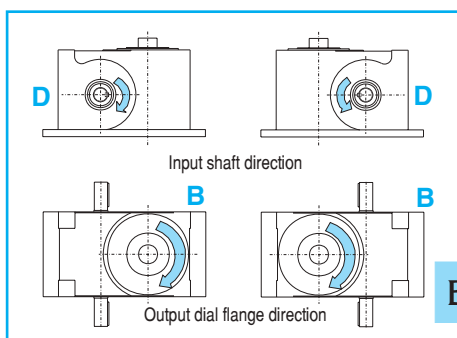
A-D



B-C



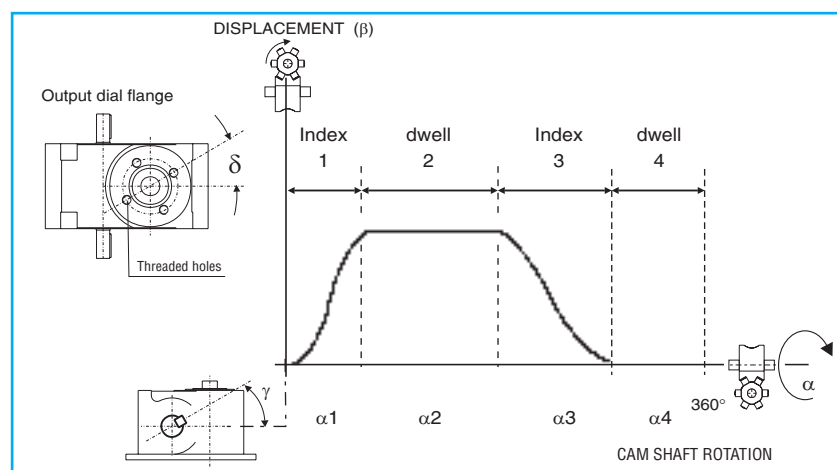
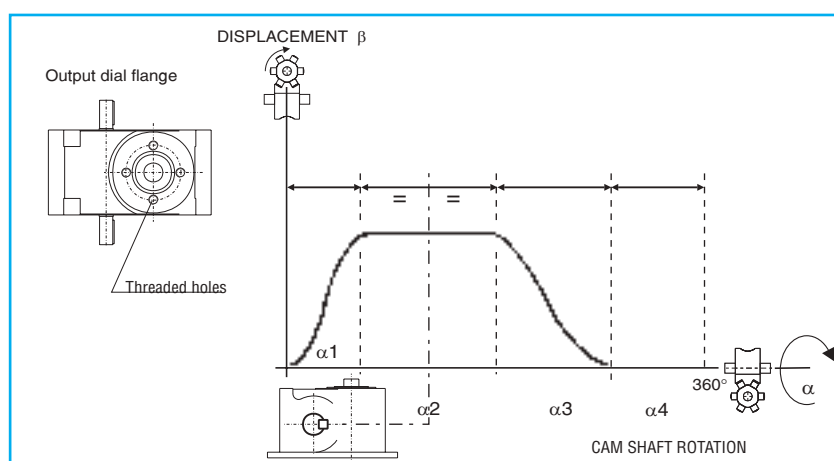
B-D



Note: By convention the beginning of the cycle coincides with the first displacement (1)

Under the company standard, the values of the γ angle for the key of the cam shaft and the δ angle for the threaded holes on the dial flange are both **equal to 0 (zero) at the center of the first dwell phase** (see diagram on the side). This position is identified as a **phase axis**.

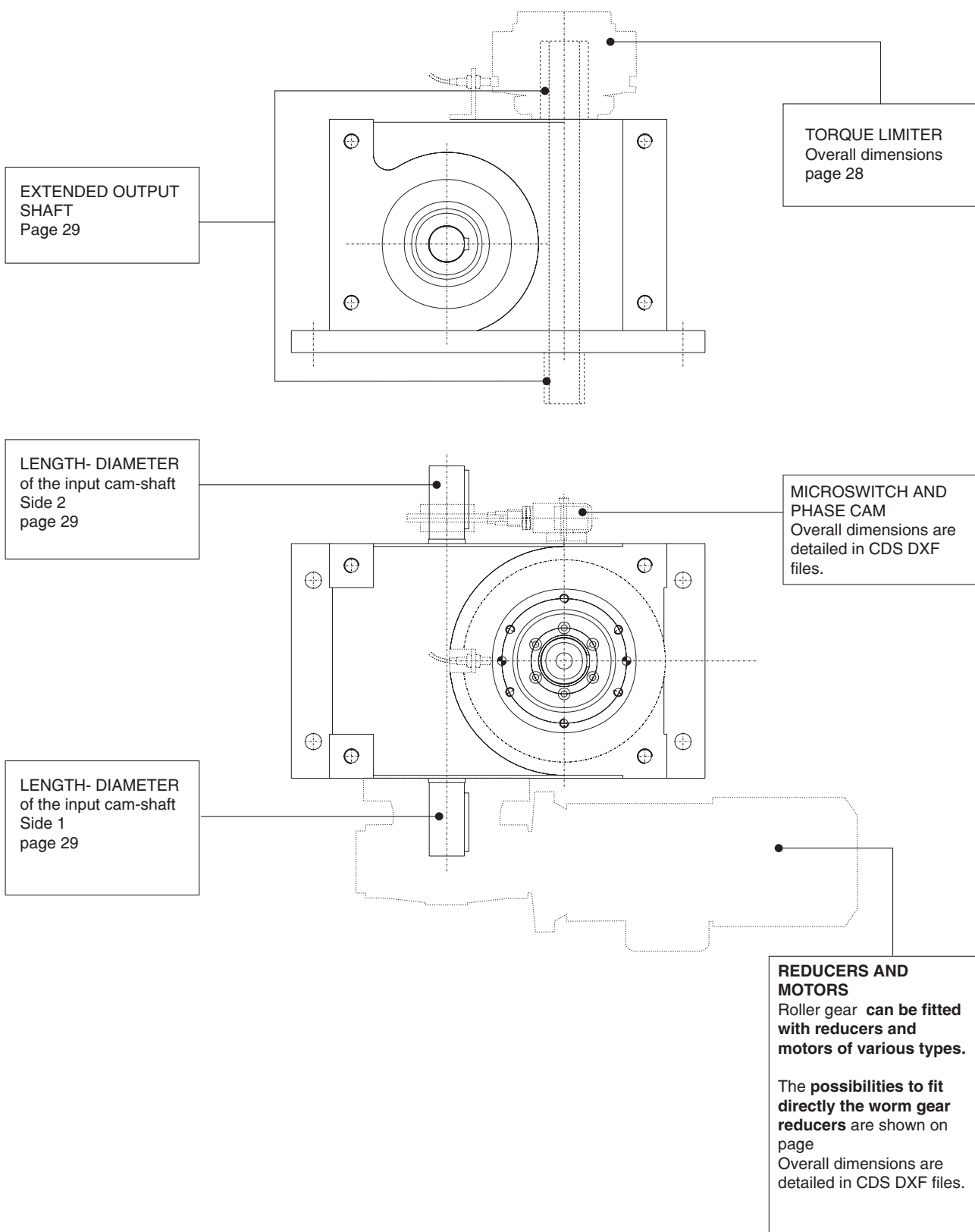
In case of specific necessity it is possible to indicate the values for the γ angle and the δ angle referred to the required position of the key and of the output dial flange **at the beginning of the cycle** (see diagram on the bottom)



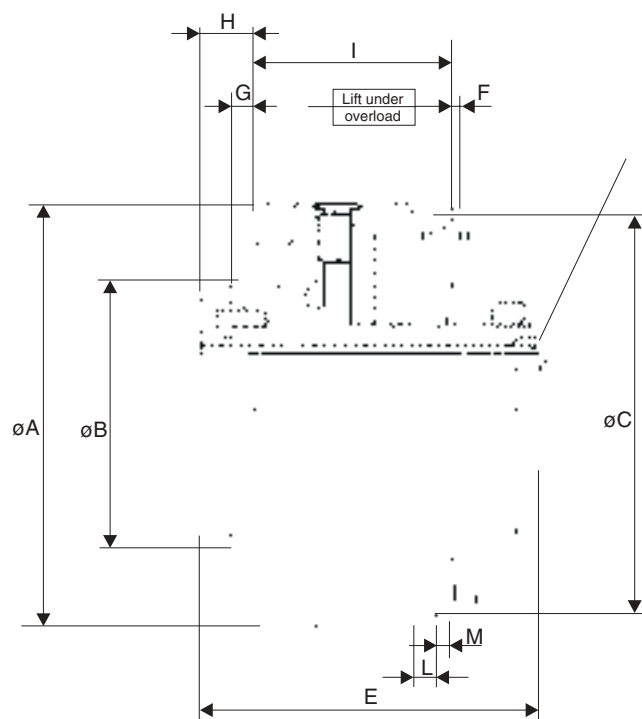
Oscillating angle β	Minimum input cam angle α
15°	30°
30°	45°
45°	60°
60°	75°
75°	75°
90°	90°
120°	120°

Typ	Size	β	$\alpha_1 + \alpha_2 + \alpha_3 + \alpha_4 = 360^\circ$				Cycle start direction	γ	δ	Working position	Reducer fitting position
			Index 1	Dwell 2	Return 3	Dwell 4					
Pg.29	Pg.29						Pg.5-36	Pg.36	Pg.36	Pg.49	Pg.49
IG	125	90°	α_1 90°	α_2 90°	α_3 90°	α_4 90°	BC	0°	0°	A	1-S2-90°

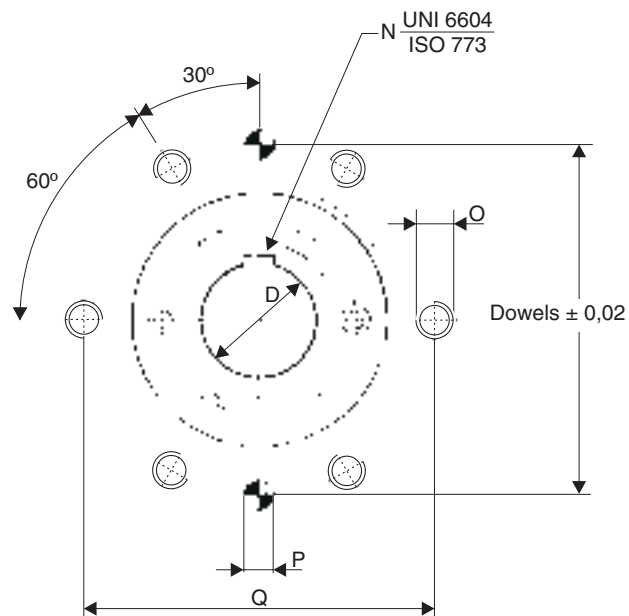
The indications on the side refer to the **preliminary coding**.



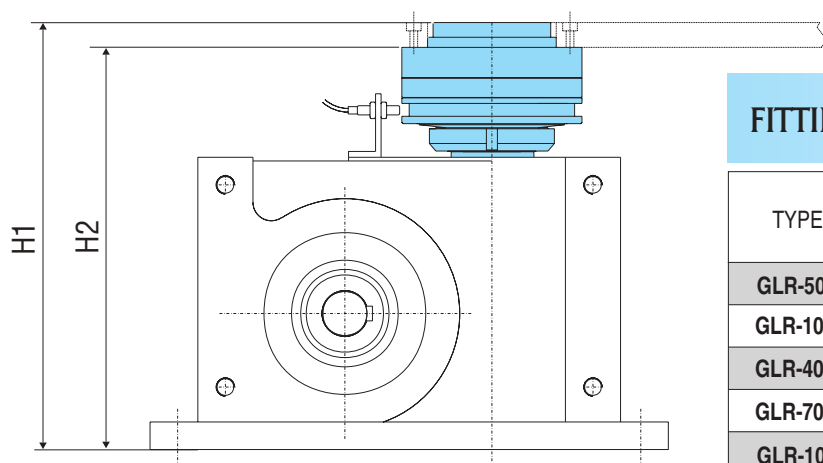
TORQUE LIMITER - GLR



CONE CLAMPINGS



TYPE	A	B (h7)	C	D (H7)	E	F	G	H	I	L	M	N	O	P (H7)	Q			CAD FILE
GLR-50	79	55	73	19	50,3	1,32	3	10	27,3	5	2	6x6	M5	5	65			LR50
GLR-100	98	70	90	28	70,3	1,32	5,5	13,5	41,5	7	4	8x7	M6	6	85			LR100
GLR-400	118	80	110	30	90,3	1,71	5	14	57,4	9	4	8x7	M8	8	100			LR400
GLR-700	158	100	150	42	121	1,71	8,5	20,5	69,9	9	4	12x8	M10	10	130			LR700
GLR-1000	216	145	208	55	156	2,93	10	25	95	9	4	16x10	M12	12	180			LR1000

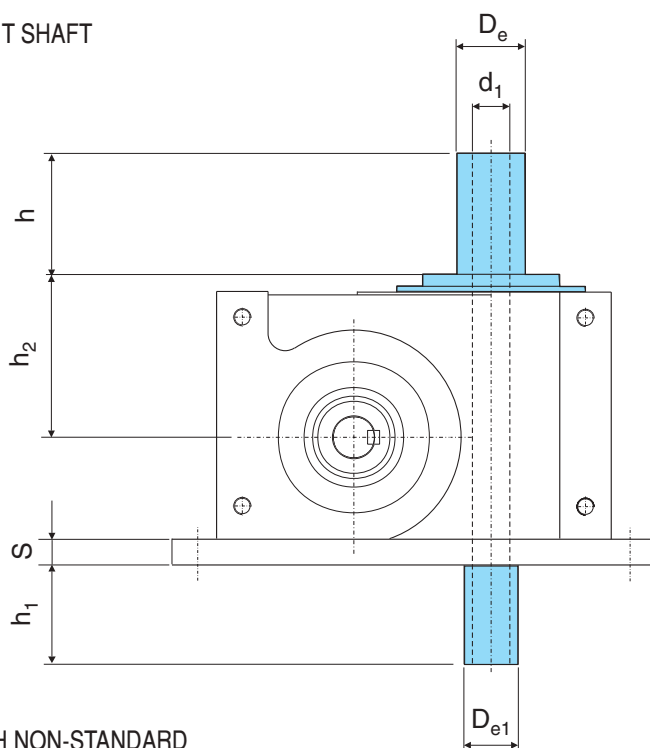


FITTING COMBINATIONS

TYPE	IGA 63	IGA 80	IGA 82.5	IGA 100	IGA 108	IGA 125	IGA 140	IGA 160	IGA 200
GLR-50	•								
GLR-100		•	•						
GLR-400				•	•				
GLR-700						•	•		
GLR-1000								•	•
H1	180.3	232.3	230.3	277.3	293.3	340	375	429	491
H2	170.3	218.8	216.8	263.3	279.3	319.5	354.5	404	466

SPECIAL EXECUTIONS

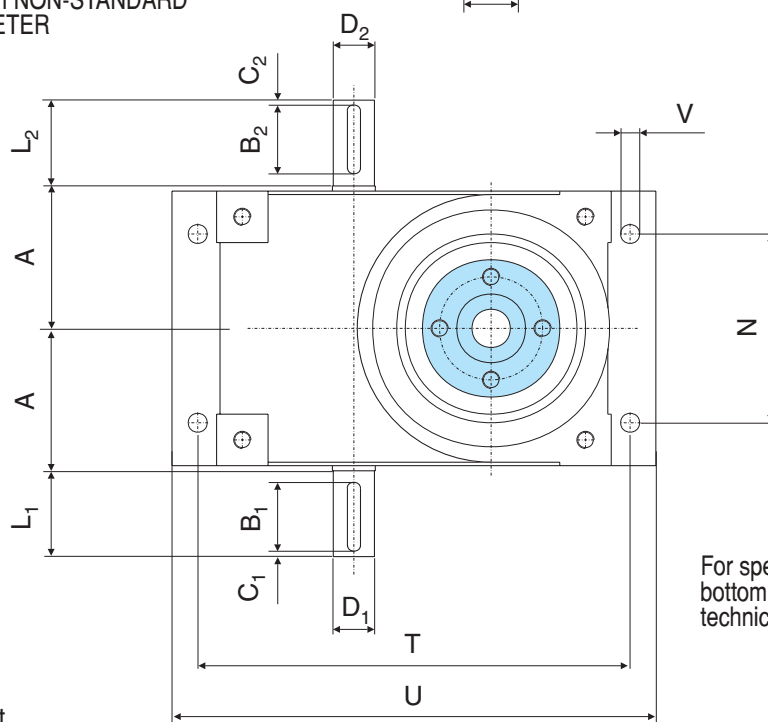
EXTENDED OUTPUT SHAFT



INPUT SHAFT WITH NON-STANDARD LENGTH OR DIAMETER

SIDE
2

SIDE
1



For specific connections to bottom plate consult **CDS'** technical service.

Rotating element

	A (STD)	B ₁	B ₂	C ₁	C ₂	øD ₁ (k6) max	øD ₂ (k6) max	ø D _e (h7) max	ø D _{e1} (g6) max	ø d ₁ max	h	h ₁	h ₂	L ₁	L ₂	N	S	T	U	V
IG 63	68					22	22	60	20	10										
IG 80	83					25	25	80	25	15										
IG 82.5	72					25	25	85	25	15										
IG 100	93					30	30	90	30	20										
IG 108	92					40	40	100	30	20										
IG 125	113					35	35	105	45	20										
IG 140	133					40	40	115	45	30										
IG 160	148					48	48	130	50	32										
IG 200	183					55	55	180	65	40										

The empty boxes indicate the possibility to specify the required dimension

CYCLE TIMES WITH MOTOREDUCER

- 50Hz -

Combined gear	4 Poles - 50Hz 1400 rpm		T Cycle Time [s]	Index Angle [°]															
	Reducer Ratio	Cycles/m		30°	45°	60°	75°	90°	105°	120°	135°	150°	180°	210°	240°	270°	300°	315°	330°
				Index time - t_i - [s]															
	7	200,0	0,30	0,03	0,04	0,05	0,06	0,08	0,09	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,25	0,26	0,28
	10	140,0	0,43	0,04	0,05	0,07	0,09	0,11	0,13	0,14	0,16	0,18	0,21	0,25	0,29	0,32	0,36	0,38	0,39
	13	107,7	0,56	0,05	0,07	0,09	0,12	0,14	0,16	0,19	0,21	0,23	0,28	0,33	0,37	0,42	0,46	0,49	0,51
	16	87,5	0,69	0,06	0,09	0,11	0,14	0,17	0,20	0,23	0,26	0,29	0,34	0,40	0,46	0,51	0,57	0,60	0,63
	20	70,0	0,86	0,07	0,11	0,14	0,18	0,21	0,25	0,29	0,32	0,36	0,43	0,50	0,57	0,64	0,71	0,75	0,79
	25	56,0	1,07	0,09	0,13	0,18	0,22	0,27	0,31	0,36	0,40	0,45	0,54	0,63	0,71	0,80	0,89	0,94	0,98
(*)	32	43,8	1,37	0,11	0,17	0,23	0,29	0,34	0,40	0,46	0,51	0,57	0,69	0,80	0,91	1,03	1,14	1,20	1,26
(*)	40	35,0	1,71	0,14	0,21	0,29	0,36	0,43	0,50	0,57	0,64	0,71	0,86	1,00	1,14	1,29	1,43	1,50	1,57
(*)	50	28,0	2,14	0,18	0,27	0,36	0,45	0,54	0,63	0,71	0,80	0,89	1,07	1,25	1,43	1,61	1,79	1,88	1,96
(**)	63	22,2	2,70	0,23	0,34	0,45	0,56	0,68	0,79	0,90	1,01	1,13	1,35	1,58	1,80	2,03	2,25	2,36	2,48
(**)	80	17,5	3,43	0,29	0,43	0,57	0,71	0,86	1,00	1,14	1,29	1,43	1,71	2,00	2,29	2,57	2,86	3,00	3,14
(**)	100	14,0	4,29	0,36	0,54	0,71	0,89	1,07	1,25	1,43	1,61	1,79	2,14	2,50	2,86	3,21	3,57	3,75	3,93
(**)	125	11,2	5,36	0,45	0,67	0,89	1,12	1,34	1,56	1,79	2,01	2,23	2,68	3,13	3,57	4,02	4,46	4,69	4,91
(**)	160	8,8	6,86	0,57	0,86	1,14	1,43	1,71	2,00	2,29	2,57	2,86	3,43	4,00	4,57	5,14	5,71	6,00	6,29
(**)	200	7,0	8,57	0,71	1,07	1,43	1,79	2,14	2,50	2,86	3,21	3,57	4,29	5,00	5,71	6,43	7,14	7,50	7,86
(**)	250	5,6	10,71	0,89	1,34	1,79	2,23	2,68	3,13	3,57	4,02	4,46	5,36	6,25	7,14	8,04	8,93	9,38	9,82

- 60Hz -

Combined gear	4 Poles - 60Hz 1700 rpm		T Cycle Time [s]	Index Angle [°]															
	Reducer Ratio	Cycles/m		30°	45°	60°	75°	90°	105°	120°	135°	150°	180°	210°	240°	270°	300°	315°	330°
				Index time - t_i - [s]															
	7	242,9	0,25	0,02	0,03	0,04	0,05	0,06	0,07	0,08	0,09	0,10	0,12	0,14	0,16	0,19	0,21	0,22	0,23
	10	170,0	0,35	0,03	0,04	0,06	0,07	0,09	0,10	0,12	0,13	0,15	0,18	0,21	0,24	0,26	0,29	0,31	0,32
	13	130,8	0,46	0,04	0,06	0,08	0,10	0,11	0,13	0,15	0,17	0,19	0,23	0,27	0,31	0,34	0,38	0,40	0,42
	16	106,3	0,56	0,05	0,07	0,09	0,12	0,14	0,16	0,19	0,21	0,24	0,28	0,33	0,38	0,42	0,47	0,49	0,52
	20	85,0	0,71	0,06	0,09	0,12	0,15	0,18	0,21	0,24	0,26	0,29	0,35	0,41	0,47	0,53	0,59	0,62	0,65
	25	68,0	0,88	0,07	0,11	0,15	0,18	0,22	0,26	0,29	0,33	0,37	0,44	0,51	0,59	0,66	0,74	0,77	0,81
(*)	32	53,1	1,13	0,09	0,14	0,19	0,24	0,28	0,33	0,38	0,42	0,47	0,56	0,66	0,75	0,85	0,94	0,99	1,04
(*)	40	42,5	1,41	0,12	0,18	0,24	0,29	0,35	0,41	0,47	0,53	0,59	0,71	0,82	0,94	1,06	1,18	1,24	1,29
(*)	50	34,0	1,76	0,15	0,22	0,29	0,37	0,44	0,51	0,59	0,66	0,74	0,88	1,03	1,18	1,32	1,47	1,54	1,62
(**)	63	27,0	2,22	0,19	0,28	0,37	0,46	0,56	0,65	0,74	0,83	0,93	1,11	1,30	1,48	1,67	1,85	1,95	2,04
(**)	80	21,3	2,82	0,24	0,35	0,47	0,59	0,71	0,82	0,94	1,06	1,18	1,41	1,65	1,88	2,12	2,35	2,47	2,59
(**)	100	17,0	3,53	0,29	0,44	0,59	0,74	0,88	1,03	1,18	1,32	1,47	1,76	2,06	2,35	2,65	2,94	3,09	3,24
(**)	125	13,6	4,41	0,37	0,55	0,74	0,92	1,10	1,29	1,47	1,65	1,84	2,21	2,57	2,94	3,31	3,68	3,86	4,04
(**)	160	10,6	5,65	0,47	0,71	0,94	1,18	1,41	1,65	1,88	2,12	2,35	2,82	3,29	3,76	4,24	4,71	4,94	5,18
(**)	200	8,5	7,06	0,59	0,88	1,18	1,47	1,76	2,06	2,35	2,65	2,94	3,53	4,12	4,71	5,29	5,88	6,18	6,47
(**)	250	6,8	8,82	0,74	1,10	1,47	1,84	2,21	2,57	2,94	3,31	3,68	4,41	5,15	5,88	6,62	7,35	7,72	8,09

Index angle - suggested for CONTINUOUS RUN mode

Index angle - suggested for CYCLE ON DEMAND mode

(*) Direct or combined ratio available

(**) Combined ratio with 1 pair cylindrical gear + worm gear

REDUCER MATCHING TABLE

REDUCER		Shaft Diameter	IG index drive									
Type ↓	Shaft Diameter ↓		IG63	IG 80	IG 82.5	IG 100	IG 108	IG 125	IG 140	IG 160	IG 200	
			Std →	19	24	20	28	30	32	38	42	48
			Max→	22	25	25	30	40	35	40	48	55
MRV 32	19		●	●	●							
MRIV 32	19		●	●	●							
MRV 40	24			●	●	●						
MRV 40	24			●	●	●						
MRV 50	28					●	●	●				
MRIV 50	28					●	●	●				
MRV 63	32						●	●	●			
MRIV 63	32						●	●	●			
MRV 80	38						●		●			
MRIV 80	38						●		●	●		
MRV 100	48									●	●	
MRIV 100	48									●	●	
MRV 125	60											
MRIV 125	60											

• Reducer direct fitting

FITTING POSITION

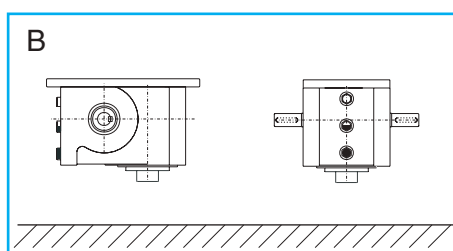
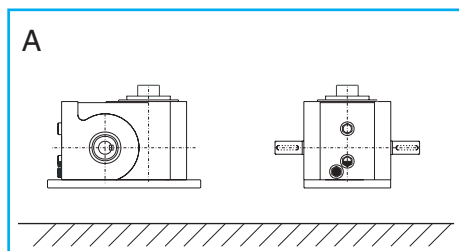
FITTING SIDE ORIENTATION

1	S1	0°	90°	180°	270°
		1-S1-0°	1-S1-90°	1-S1-180°	1-S1-270°
S2	S2	0°	90°	180°	270°
		1-S2-0°	1-S2-90°	1-S2-180°	1-S2-270°

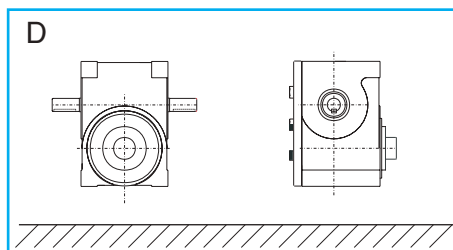
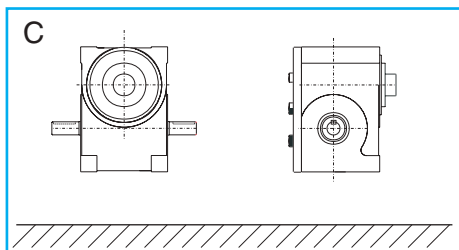
FITTING SIDE ORIENTATION

2	S1	0°	90°	180°	270°
		2-S1-0°	2-S1-90°	2-S1-180°	2-S1-270°
S2	S2	0°	90°	180°	270°
		2-S2-0°	2-S2-90°	2-S2-180°	2-S2-270°

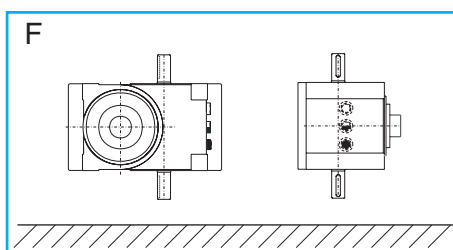
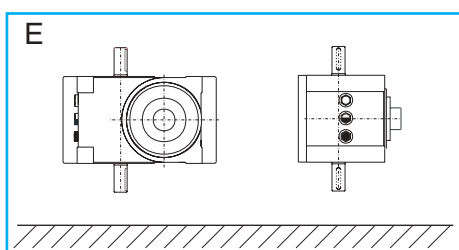
WORKING POSITION - LUBRICATION



- Lubricant refilling plug
- ◐ Lubricant level control plug
- Lubricant drain plug



NOTE: If necessary the exact coordinates of the position of the refill plug, level control plug and drain plug can be supplied.



CONVERSION CHART

	Unit	Symbol	Kg	lb	N
Weight	Kilogram	Kg	1	2.2046	9.8066
	Pound	lb	0.4536	1	4.4818
Force	Newton	N	0.1019	0.2246	1
	Unit	Symbol	m	mm	In
Lenght	Meter	m	1	1000	39.37
	Millimeter	mm	0.001	1	0.3937
	Inch	In	0.0254	25.4	1
	Unit	Symbol	Kg x m	lb x in	N x m
Torque	Kilogram - meter	Kg x m	1	86.7951	9.8066
	Inch – Pound	lb x in	0.015213	1	0.11308
	Newton - meter	N x m	0.01152	8.6425	1
	Unit	Symbol	Kg x m ²	lb x in ²	
Inertia	Kilogram – square meter	Kg x m ²	1	3417.1231	
	Pounds – square Inch	lb x in ²	0.0002926	1	
	Unit	Symbol	Kw	HP	CV
Power	Kilowatt	Kw	1	1.34	1.01
	British Horsepower	HP	0.746	1	1.01
	Metric Horsepower	CV	0.736	0.966	1

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Head Office

CDS - Bettinelli S.p.A.

Via Leonardo da Vinci, 56
26010 Bagnolo (CR) - ITALIA

Tel. (+ 39) 0373 237 311
Fax (+ 39) 0373 648 303

E-mail: cds@bettinelli.it
Web: www.bettinelli.it



Head Office

CDS Corp.



532 Route 15
Sparta NJ 07871 (USA)

Phone (001) 973 579 3400
Fax (001) 973 579 3222

Area

Dealer

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