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Questo catalogo annulla e sostituisce ogni precedente edizione o revisione. Tutti i dati elencati sono indicativi e s'intendono senza impegno alcuno da parte nostra. Ci riserviamo il diritto di apportare modifiche senza alcun preavviso.

This catalogue cancels and replaces any previous edition and revision. All listed data are approximate and it's understood that this entails no obligation on our part. We reserve the right to implement modifications without notice.



Generalit 

I riduttori Alliance Transmission sono idonei per la maggior parte delle applicazioni, sia in posizione orizzontale che verticale. Nuovo design ed un progetto innovativo offrono:

- prestazioni pi  elevate
- maggior numero di grandezze
- maggior competitivit  ad elevata affidabilit 

L'elevato rapporto potenza -dimensioni garantisce installazioni perfette nelle condizioni pi  gravose.

Sono stati utilizzati nuovi criteri per migliorare in modo sostanziale il livello di rumorosit  , rettificando sia gli ingranaggi cilindrici che gli spiroidali Gleason.

Per ottenere prestazioni elevate , si   curato il rendimento del ruotismo e la forma della superficie di scambio della carcassa per dissipare il calore prodotto.

Qualora richiesto dall' applicazione, si fornisce pure:

- ventola/e di raffreddamento sul lato veloce
- serpentina d'acqua di raffreddamento
- ventole e serpentina congiuntamente
- scambiatore esterno di calore con centralina

Carcassa : di ghisa meccanica fino alla grandezza 110. Di acciaio elettrosaldato e disteso di serie per le grandezze superiori e, a richiesta, per le altre.

Ingranaggi : in acciaio da cementazione, cementati, temprati e rettificati sia cilindrici che conici (normalmente). Calcolo a durata e fatica secondo ISO 6336, DIN 3990 e verificati secondo AGMA 2001.

General information

Alliance Transmission gear units are suitable for most applications in both horizontal and vertical drives. New design, outstanding innovations offer :

- increased power capacity
- more sizes
- more competitiveness with the same high reliability.

The high power to weight ratio of all units combined with low volume enable installation in the most critical situations.

New concepts have been used to improve the **noise level** in a consistent way, by grinding all gears sets both helical and Gleason spiral bevel type.

Because of **higher capacity**, particular consideration has been taken on efficiency and housing surface area to guarantee a convenient heat dissipation in most cases.

When necessary, units can be supplied with:

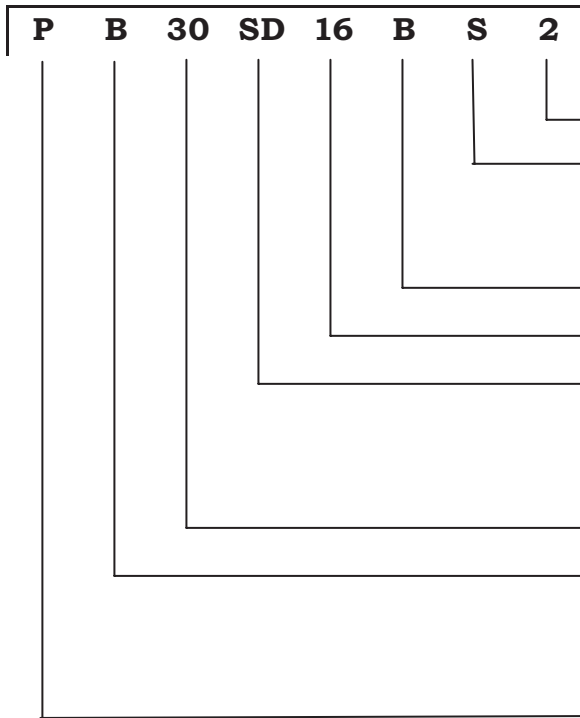
- fans fitted to high speed shafts
- cooling water coil
- fan and cooling coil
- separate oil cooler incorporated in forced lubrication system.

Gear cases: are of rigid close grained grey cast iron construction up to size 110. Fabricated steel cases are available as standard from size 120 up and as optional for smaller sizes. Computer designed and CNC machined.

Gears: high quality alloy case hardening materials provide long life wear resistance and fatigue strength. Helical and spiral bevel gears(usually) are ground to high standards and quiet running characteristics. Life and wear calculations based on recommendations ISO 6336, DIN 3990 and AGMA 2001.

Designazione

Designation



Forme costruttive	<i>Mounting position</i>
Albero veloce S pieno PAM dia. flangia motore BC giunto+campana	<i>Input shaft solid motor flange dia. bell housing & coupling</i>
Esecuzione grafica	<i>Shaft arrangement</i>
Rapporto di trasmissione i	<i>Ratio i_N</i>
Albero lento S pieno C cavo normale UB cavo con unità di bloccaggio	<i>Output shaft solid hollow shrink disc</i>
Grandezza	<i>Size</i>
N°. di stadi A monostadio B due stadi C tre stadi D quattro stadi	<i>No. of stages single reduction double reduction triple reduction quadruple reduction</i>
Tipo P assi paralleli RH assi ortogonali orizzontali RV assi ortogonali verticali	<i>Type helical unit horizontal bevel-helical unit vertical bevel-helical unit</i>

Legenda

Key to symbols

f_m	fattore di servizio	<i>mechanical service factor</i>	
i	rapporto di trasmissione	<i>transmission ratio</i>	
i_N	rapporto di trasmissione nominale	<i>nominal transmission ratio</i>	
n_1	velocità angolare albero veloce	<i>high speed</i>	min ⁻¹ or RPM
n_2	velocità angolare albero lento	<i>low speed</i>	min ⁻¹ or RPM
P_{tN}	potenza termica nominale	<i>nominal thermal capacity</i>	kW
P_N	potenza nominale	<i>nominal power</i>	kW
P	potenza assorbita	<i>absorbed motor power</i>	kW
t	temperatura	<i>temperature</i>	°C Celsius
T	momento torcente	<i>torque</i>	Nm
T_N	momento torcente nominale	<i>nominal torque</i>	Nm
Fr_1	carico radiale albero veloce	<i>high speed shaft overhung load</i>	N
Fr_2	carico radiale albero lento	<i>low speed shaft overhung load</i>	N
J_1	momento d'inerzia albero veloce	<i>high speed shaft mass moment of inertia</i>	Kgm ²

Fattore di servizio f_m

Mechanical service factor f_m

Per avviamenti/ora superiori a 5, prego consultarci.

For startings per hour exceeding 5, please refer to us.

Macchina motrice <i>Prime Mover</i>	Durata del Funzionamento (h/giorno) Duration of service (hrs/day)	Tipo di carico <i>Load classification</i>		
		Uniforme <i>Uniform load</i>	Moderato <i>Moderate shock</i>	Pesante <i>Heavy shock</i>
Motore elettrico, turbina, motore idraulico. <i>El. motor, steam turbine, hydraulic motor.</i>	< 3	0.8	1.0	1.5
	3 - 10	1.0	1.25	1.75
	>10	1.25	1.5	2.0
Motore a scoppio pluricilindrico. <i>Multi-cylinder internal combustion engine.</i>	< 3	1.0	1.25	1.75
	3 - 10	1.25	1.5	2.0
	>10	1.5	1.75	2.25
Motore a scoppio monocilindrico. <i>Singlecylinder internal combustion engine.</i>	< 3	1.25	1.5	2.0
	3 - 10	1.5	1.75	2.25
	>10	1.75	2.0	2.5

Potenza termica

Potenza termica nominale P_{tN} (kW)

In tabella vengono forniti i valori della capacità termica del riduttore a temperatura ambiente di 20°C. Poiché vari fattori influiscono sulla capacità di dissipazione del calore prodotto (velocità di trasmissione, ciclo di lavoro, ecc) si consiglia di considerare tale tabella solamente in maniera indicativa e di contattarci qualora la potenza assorbita P sia superiore ai valori indicati di P_{tN}

Therma I capacity

Nominal thermal capacity P_{tN} (kW)

Each gearbox combination has a certain thermal capacity to dissipate the heat which is generated during operation. The following is a guide only for initial selection, based on an ambient temperature of 20° Celsius. Whenever absorbed power P is not below the shown values of P_{tN} , to confirm suitability we need data such as input speed, ratio, cycle of operation, maximum ambient temperature expected, etc.

Grandezza Size	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
PA	55	72	93	115	148	180	212	271	338	408	505					
PB	30	40	53	66	86	106	125	163	206	252	316	395	502	630	768	960
PC	23	31	40	51	66	82	98	127	162	199	252	320	405	494	622	778
PD	18	24	32	40	52	65	78	102	130	161	205	256	325	419	512	640
RB	30	40	53	66	86	106	125	163	206	252	316					
RC	23	31	40	51	66	82	98	127	162	199	252	320	405	494		
RD	18	24	32	40	52	65	78	102	130	161	205	256	325	419	512	640

Scelta del riduttore

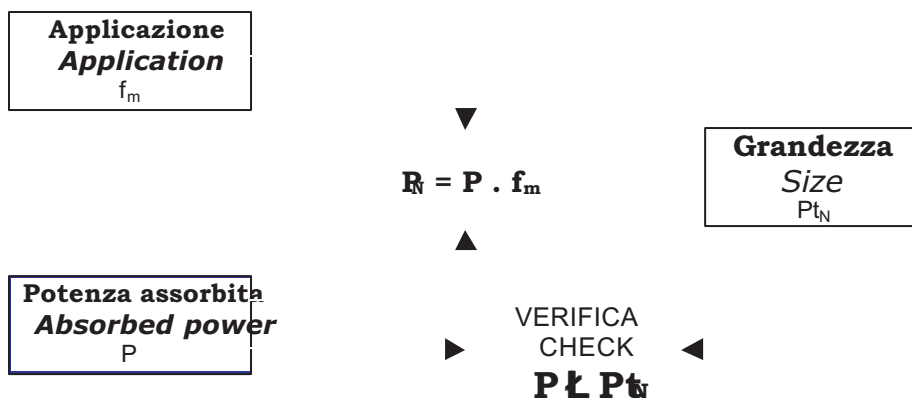
Dati richiesti:

- Potenza motore utilizzata P (kW)
- Velocità in entrata n_1 (min^{-1})
- Rapporto di trasmissione i_N
- Applicazione : f_m

Selection procedures

Data required :

- Absorbed motor power P (kW)
- Input speed n_1 (RPM)
- Gearbox ratio i_N
- Application : to state f_m



SI YES

Verifiche ulteriori. *Additional checks*
(Carichi radiali, ecc. *Overhung loads, etc*)

NO

Prego contattarci. *Refer to us.*

Esempio:

Riduttore parallelo $P = 670$ kW

- $n_1 = 1500$ min^{-1}
- $i_N = 5,6$
- $f_m = 1,25$

$$R_t = P \cdot f_m = 670 \times 1,25 = 837 \text{ kW}$$

Il riduttore PA 80 fornisce 858 kW ed è idoneo meccanicamente per l'applicazione. Poiché P è maggiore della potenza termica P_{tN} (271 kW), è necessario prevedere un raffreddamento artificiale: prego contattarci per la scelta del metodo più idoneo.

Example :

Helical unit $P = 670$ kW

- $n_1 = 1500$ RPM
- $i_N = 5.6$
- $f_m = 1.25$

$$P_N = P \cdot f_m = 670 \times 1.25 = 837 \text{ kW}$$

The unit PA 80 - with 858 kW - is suitable from a mechanical point of view. Since the absorbed motor power P is higher than the nominal thermal capacity P_{tN} (271 kW), it is necessary to fit an auxiliary cooling. For the best selection, please refer to us.

Riduttori assi ortogonali
Serie R - Potenze Nominali (kW)

Bevel-helical units
R series - Nominal power rating (kW)

Grandezze Size

i_N	$n_1 \quad n_2$ min ⁻¹		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	
	5	1500 1000 750	300 200 150	75 50 39	107 74 55	147 100 77	207 140 107	287 193 148	401 272 207	573 388 296	814 553 420	1186 805 612	1698 1153 878	2363 1606 1221					
5.6	1500 1000 750	268 179 134	73 51 38	106 73 55	146 99 76	209 141 107	287 193 148	400 273 207	571 389 295	812 551 419	1186 805 612	1698 1154 877	2363 1606 1222						
6.3	1500 1000 750	238 159 119	74 51 38	108 75 55	147 100 76	209 141 107	285 193 148	401 273 207	572 388 295	814 553 420	1187 807 613	1697 1152 877	2363 1606 1222						
7.1	1500 1000 750	211 141 106	68 51 38	99 72 55	134 99 76	192 141 108	262 194 148	369 272 207	526 388 295	747 552 420	1092 805 612	1561 1152 877	2175 1605 1221						
8	1500 1000 750	188 125 94	64 47 37	85 64 51	123 93 74	174 129 103	249 185 148	348 260 206	497 370 295	703 524 418	996 742 592	1413 1052 839	2051 1528 1218						
9	1500 1000 750	167 111 83	63 45 33	86 60 45	124 85 65	173 120 91	225 156 119	350 243 185	502 347 264	702 487 371	993 688 524	1410 977 743	1825 1265 962						
10	1500 1000 750	150 100 75	47 32 24	60 41 32	110 75 57	154 105 80	181 123 94	244 166 126	343 233 177	485 330 251	888 603 459	1262 857 652	1465 995 757						
11.2	1500 1000 750	134 89 67	37 25 19	48 32 25	66 44 34	91 63 48	144 98 74	194 131 100	271 184 140	382 259 197	525 357 271	740 503 383	1163 790 601						
12.5	1500 1000 750	120 80 60	33 23 17	46 32 24	64 44 33	91 62 47	125 85 65	177 120 91	250 170 129	357 243 185	517 352 268	731 497 378	993 675 513						
14	1500 1000 750	107 71 54	33 22 17	47 32 24	64 43 33	91 62 47	126 86 65	177 121 92	250 170 129	357 243 185	517 351 267	730 497 378	992 675 513						
16	1500 1000 750	94 63 47	32 21 17	42 29 22	59 39 30	82 56 42	121 82 62	171 115 88	241 163 124	341 231 176	467 316 241	657 445 339	956 647 493						
18	1500 1000 750	83 56 42	25 17 13	32 22 16	44 29 22	61 42 32	96 65 49	130 88 77	181 123 94	254 173 131	348 236 180	490 333 253	766 520 396						
20	1500 1000 750	75 50 38	26 20 15	35 26 20	50 37 29	71 53 41	101 75 59	137 102 79	194 144 112	283 211 164	406 303 236	576 429 334	810 604 471	1114 831 648	1560 1162 906	2323 1732 1350			
22.5	1500 1000 750	67 44 33	26 18 13	35 24 18	49 33 25	70 48 36	99 67 51	143 98 74	203 148 105	279 190 144	403 274 209	567 385 293	794 539 411	1167 792 604	1641 1114 849	2289 1555 1184			
25	1500 1000 750	60 40 30	22 15 11	32 22 17	46 31 24	66 44 34	92 63 48	125 85 65	177 120 91	260 177 135	377 256 195	529 359 274	740 502 383	1021 693 528	1430 971 740	2137 1451 1106			
28	1500 1000 750	54 36 27	21 14 11	28 19 15	40 27 21	56 38 29	79 54 41	116 79 60	164 112 85	226 153 117	329 223 170	458 311 237	636 432 329	945 642 489	1329 903 688	1849 1256 957			
31.5	1500 1000 750	48 32 24	18 12 9.2	26 17 13	35 23 18	53 35 27	73 50 38	99 68 51	140 95 73	209 142 108	284 193 147	424 288 220	587 398 304	807 548 417	1133 770 586	1718 1167 889			
35.5	1500 1000 750	42 28 21	16 11 8.4	22 15 11	32 22 16	44 30 23	68 46 35	91 62 47	130 88 67	178 121 92	262 178 136	360 245 186	540 366 279	743 505 385	1042 708 539	1457 989 754			
40	1500 1000 750	38 25 18.8	15 10 7.7	20 14 10	29 20 15	41 28 21	56 38 29	84 57 43	118 80 61	163 111 84	242 164 125	330 224 171	450 306 233	682 463 353	954 648 494	1337 908 692			
45	1500 1000 750	33 22 16.7	14 9 7	18 12 9.5	27 18 14	37 25 19	51 34 26	76 52 39	108 73 56	148 101 77	221 150 114	300 204 155	407 276 211	622 422 322	869 590 449	1216 826 629			
50	1500 1000 750	30 20 15	12 8 6.2	17 11 8.6	23 16 12	34 23 17	49 33 25	66 45 34	94 64 49	129 88 67	175 119 91	261 178 135	360 245 186	537 365 278	750 510 388	1045 710 541			

Riduttori assi ortogonali
Serie R - Potenze Nominali (kW)

Bevel-helical units
R series - Nominal power rating (kW)

Grandezze Size

i_N	n_1 n_2		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
	min ⁻¹																	
56	1500	27	11	14	21	30	41	61	86	119	161	240	330	492	690	960		
	1000	17.9	7.4	9.7	15	20	28	41	59	80	109	163	224	334	469	652		
	750	13.4	5.7	7.4	11	15	21	32	45	61	83	124	171	254	357	497		
63	1500	24	10	13	18	27	38	51	79	109	148	220	300	611	575	881		
	1000	15.9	6.7	8.8	12	19	26	35	54	74	100	150	204	279	390	598		
	750	11.9	5.2	6.8	9.4	14	19	26	41	56	76	114	155	213	298	456		
71	1500	21	8.2	12	17	22	34	46	65	99	135	201	272	373	520	801		
	1000	14	5.6	8	11	15	23	31	44	67	91	136	184	253	353	544		
	750	10.6	4.2	6.1	8.6	12	18	24	34	51	70	104	141	193	269	414		
80	1500	18.8	7.9	11	16	20	31	41	58	90	122	181	244	339	506	726		
	1000	12.5	5.4	7.4	11	14	21	28	40	61	83	123	166	230	344	493		
	750	9.4	4.2	5.5	8.1	10	16	21	30	46	63	94	126	175	261	376		
90	1500	16.7	7.2	9.7	14	19	28	39	56	78	111	155	228	319	447	635	895	1236
	1000	11	4.8	6.6	9.4	13	19	27	38	53	75	106	155	217	304	432	608	840
	750	8.3	3.7	5.1	7.1	10	15	20	29	41	57	80	118	165	231	328	463	639
100	1500	15	6.2	8.4	12	17	25	35	49	69	98	136	200	281	391	556	787	1083
	1000	10	4.3	5.7	8.3	11	17	24	33	47	66	92	136	191	265	378	534	736
	750	7.5	3.2	4.4	6.3	8.7	13	18	25	35	50	70	103	145	202	287	407	560
112	1500	13.4	5.8	8	11	16	22	30	46	64	91	127	187	246	365	518	736	1010
	1000	8.9	4	5.3	7.7	11	15	21	31	44	62	86	127	167	248	352	500	686
	750	6.7	3	4.1	5.9	8.1	11	16	23	33	47	65	96	126	188	267	379	520
125	1500	12	5	6.9	9.9	15	20	28	40	55	79	118	162	230	316	449	640	874
	1000	8	3.4	4.7	6.8	9.9	14	19	27	38	54	80	110	156	215	305	435	594
	750	6	2.6	3.5	5.1	7.4	10	15	20	28	41	61	83	117	161	229	327	447
140	1500	10.7	4.6	6.3	9.3	13	19	24	37	51	74	102	150	198	293	415	595	811
	1000	7.1	3.1	4.3	6.3	8.5	13	17	25	35	50	69	102	134	199	282	404	550
	750	5.4	2.4	3.2	4.7	6.4	10	12	19	26	38	52	76	100	149	211	303	412
160	1500	9.4	4	5.4	7.9	12	16	23	31	44	63	94	127	183	249	353	509	689
	1000	6.3	2.6	3.6	5.3	7.9	11	15	21	29	42	63	86	123	167	237	342	463
	750	4.7	2	2.7	4	5.9	8	11	16	22	32	48	64	92	125	178	257	347
180	1500	8.3	3.6	5	7.3	10	15	21	28	40	58	79	117	168	228	322	468	631
	1000	5.6	2.4	3.3	4.9	6.6	9.8	14	19	27	39	53	78	113	152	216	313	422
	750	4.2	1.8	2.5	3.7	4.9	7.3	10	14	20	29	40	59	85	114	162	235	317
200	1500	7.5	3.3	4.5	6.7	8.9	13	17	26	36	53	72	106	140	207	294	428	574
	1000	5	2.2	3	4.4	5.9	8.8	12	17	24	35	48	71	94	138	196	285	383
	750	3.8	1.6	2.2	3.3	4.5	6.6	8.7	13	18	27	36	53	70	104	147	214	287
225	1500	6.7	2.8	3.9	5.7	7.7	11	16	22	33	47	62	92	131	179	254	363	491
	1000	4.5	1.9	2.6	3.8	5.1	7.6	11	15	22	31	42	61	88	119	169	242	327
	750	3.3	1.4	1.9	2.8	3.8	5.7	8.1	11	16	23	31	46	66	89	127	181	246
250	1500	6	2.6	3.6	5.2	7	10	15	20	29	40	57	84	121	164	232	334	450
	1000	4	1.7	2.4	3.5	4.7	7	10	14	19	26	38	56	81	109	155	222	300
	750	3	1.3	1.8	2.6	3.5	5.2	7.5	10	14	20	29	42	60	82	116	167	225
280	1500	5.4	2.4	3.2	4.8	6.4	10	12	19	26	36	52	77	101	149	212	306	410
	1000	3.6	1.6	2.2	3.2	4.3	6.4	8.3	12	17	24	35	51	67	100	141	204	273
	750	2.7	1.2	1.6	2.4	3.2	4.8	6.2	9.3	13	18	26	38	51	75	106	153	205
315	1500	4.8	2.1	2.9	3.9	5.8	8.7	11	17	24	33	47	62	92	135	192	252	372
	1000	3.2	1.4	2	2.6	3.9	5.8	7.6	11	16	22	31	42	61	90	128	168	248
	750	2.4	1.1	1.5	2	2.9	4.3	5.7	8.5	12	16	24	31	46	68	96	126	186
355	1500	4.2	1.9	2.6	3.6	5.2	7.7	10	15	19	29	42	56			173		
	1000	2.8	1.3	1.8	2.4	3.5	5.1	6.8	10	13	20	28	37			115		
	750	2.1	1	1.3	1.8	2.6	3.8	5.1	7.5	9.5	15	21	28			86		
400	1500	3.8							13		26	37						
	1000	2.5							8.9		18	25						
	750	1.9							6.7		13	19						

Riduttori assi ortogonali

Bevel-helical units

Serie RH/RV - Momenti Torcenti TN2 (Nm)

RH/RV series - Output Torques TN2 (Nm)

Grandezze Size

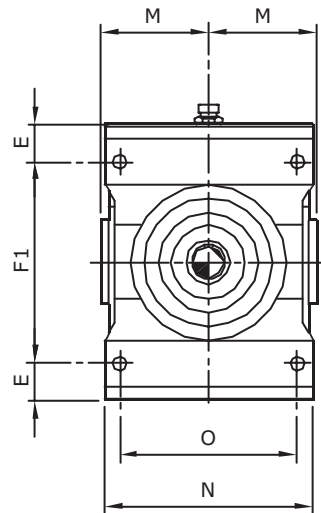
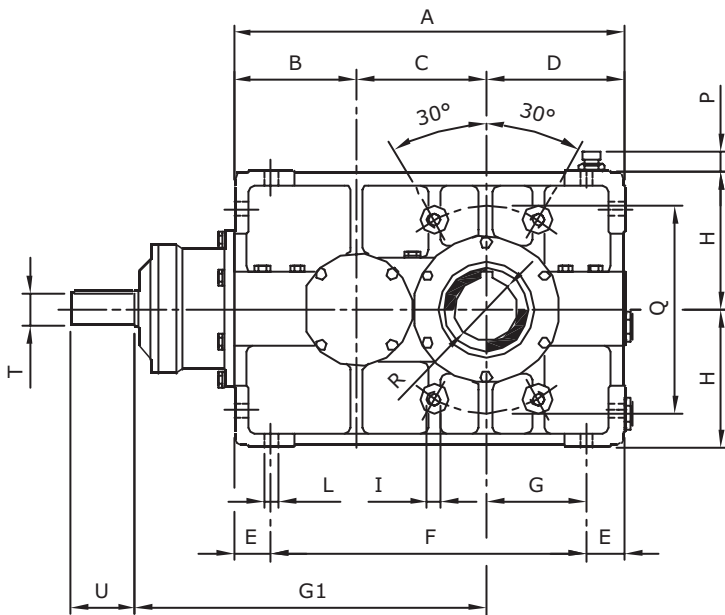
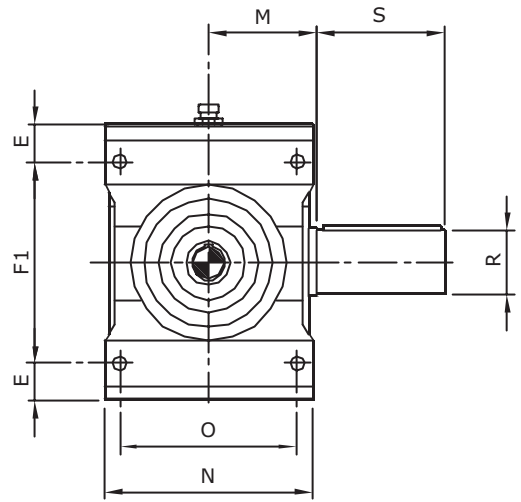
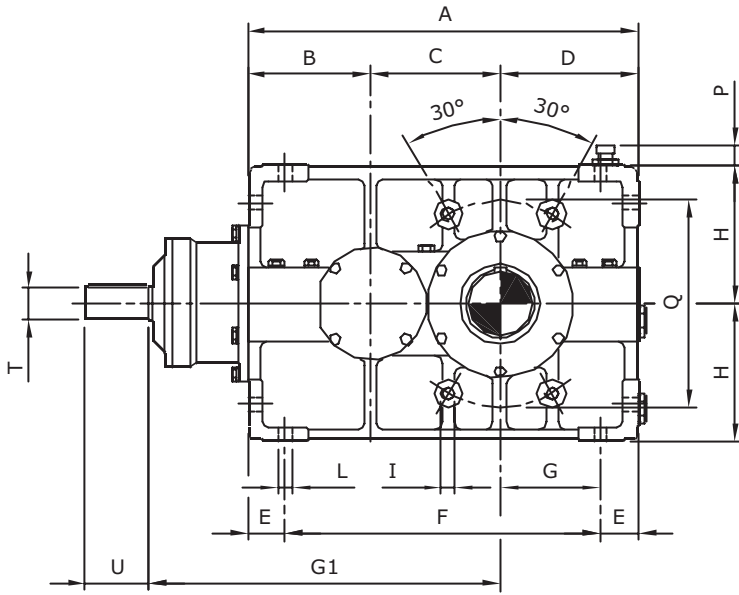
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6.3	2900	4200	5900	8300	11200	16000	22400	31900	47100	67200	91500					
7.1	3400	4900	6300	9000	13000	17200	26100	37200	50700	78300	105800					
8	3600	4900	7200	10100	14000	19900	28400	40200	57500	81300	114000					
9	3500	4700	6900	9700	13300	19300	27700	38900	55500	78500	106400					
10	3000	4000	6700	9300	11500	15700	22400	31700	53200	75400	91600					
11.2	2700	3500	4800	6800	10000	13700	19600	27700	38400	54100	80000					
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18	2700	3500	4900	6900	10200	14100	20100	28200	39300	55300	91800					
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355	3800	5200	7500	10500	15000	21000	30000	42000	60000	85000	120000			340000		
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Riduttori assi ortogonali

Serie RHB due stadi

Bevel-helical units

RHB series double reduction



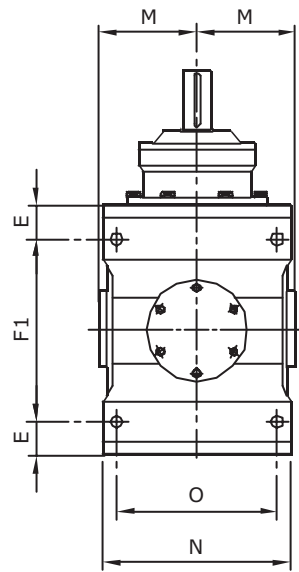
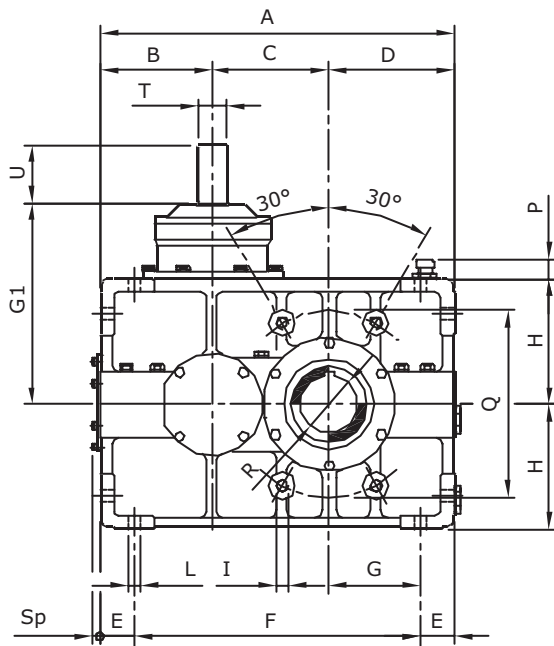
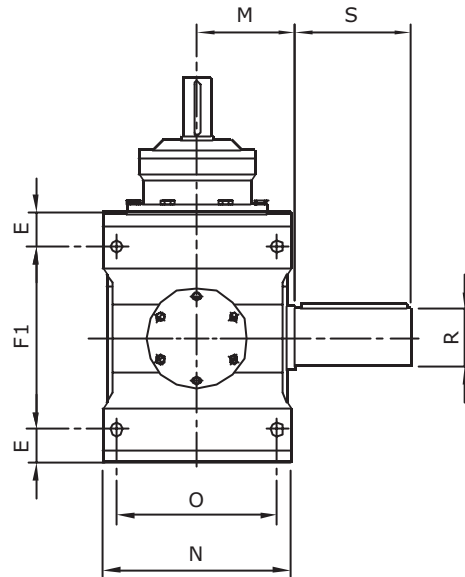
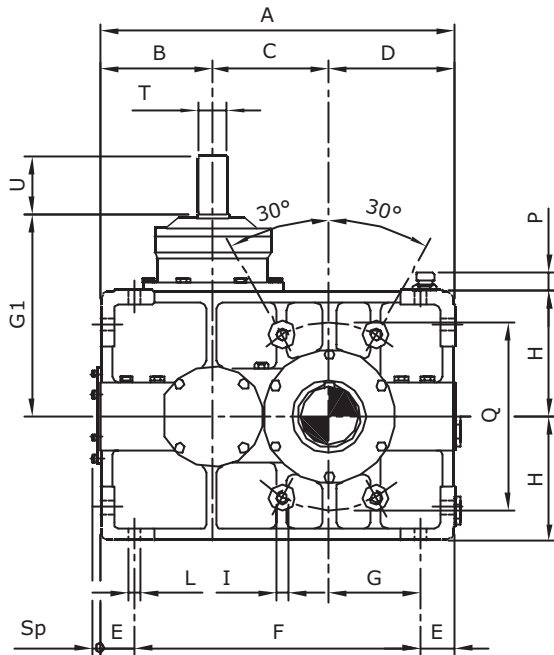
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20	450	140	150	160	42	366	236	118	400	160	M18	16	135	235	200	22	240	80	140	40	80	35	70
30	510	160	170	180	46	418	268	134	450	180	M20	18	145	260	220	22	270	90	160	45	90	40	80
40	570	180	190	200	52	466	296	148	505	200	M22	20	160	295	250	22	300	100	180	50	100	45	90
50	641	200	216	225	57	527	336	168	571	225	M24	22	170	325	275	22	340	110	200	55	110	50	100
60	715	225	240	250	62	591	376	188	640	250	M27	25	190	360	300	22	380	120	210	60	120	55	110
70	792	250	262	280	72	648	416	208	712	280	M30	27	225	415	350	25	430	140	250	70	140	60	120
80	895	280	300	315	80	735	470	235	800	315	M33	30	250	455	385	25	490	160	280	80	160	70	140
90	1010	315	340	355	87	836	536	268	900	355	M36	33	280	535	460	25	560	170	300	90	180	80	160
100	1135	355	380	400	93	949	614	307	1010	400	M39	36	310	600	520	25	640	200	350	100	200	90	180
110	1282	400	432	450	100	1082	700	350	1142	450	M42	39	375	710	620	25	730	220	390	110	220	100	200

Riduttori assi ortogonali

Serie RVB due stadi

Bevel-helical units

RVB series double reduction



iN 5-11.2 iN 12.5-18

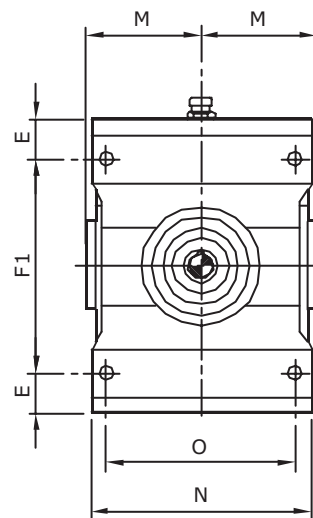
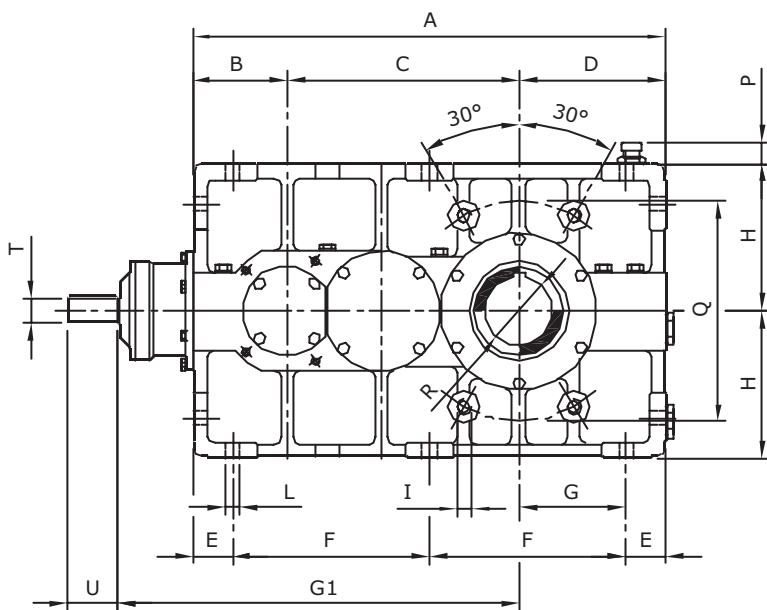
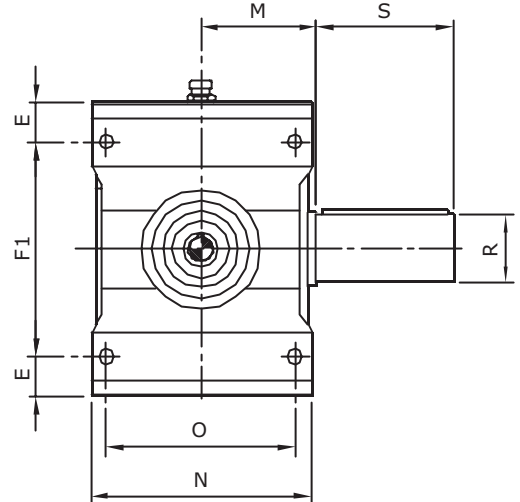
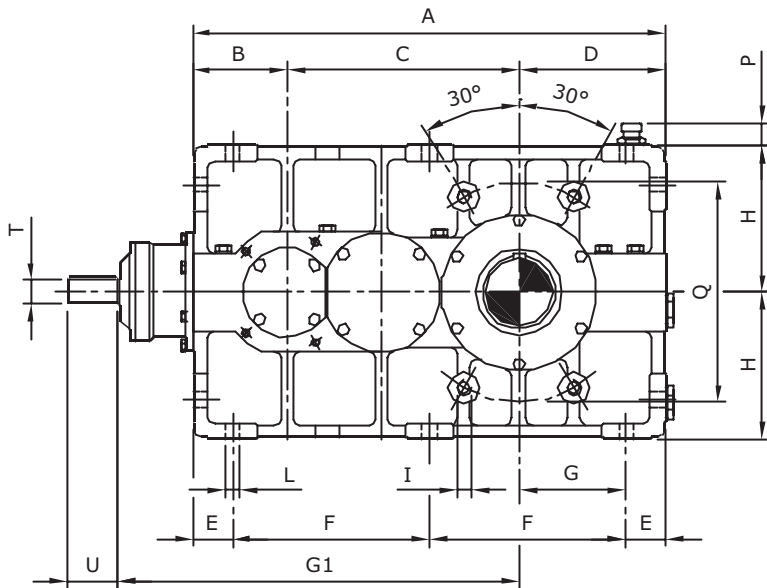
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20	450	140	150	160	42	366	236	118	250	160	M18	16	135	235	200	22	240	80	140	40	80	35	70	16
30	510	160	170	180	46	418	268	134	280	180	M20	18	145	260	220	22	270	90	160	45	90	40	80	17
40	570	180	190	200	52	466	296	148	315	200	M22	20	160	295	250	22	300	100	180	50	100	45	90	18
50	641	200	216	225	57	527	336	168	355	225	M24	22	170	325	275	22	340	110	200	55	110	50	100	22
60	715	225	240	250	62	591	376	188	400	250	M27	25	190	360	300	22	380	120	210	60	120	55	110	23
70	792	250	262	280	72	648	416	208	450	280	M30	27	225	415	350	25	430	140	250	70	140	60	120	25
80	895	280	300	315	80	735	470	235	500	315	M33	30	250	455	385	25	490	160	280	80	160	70	140	26
90	1010	315	340	355	87	836	536	268	560	355	M36	33	280	535	460	25	560	170	300	90	180	80	160	29
100	1135	355	380	400	93	949	614	307	630	400	M39	36	310	600	520	25	640	200	350	100	200	90	180	30
110	1282	400	432	450	100	1082	700	350	710	450	M42	39	375	710	620	25	730	220	390	110	220	100	200	32

Riduttori assi ortogonali

Serie RHC tre stadi

Bevel-helical units

RHC series triple reduction



iN 20-45 iN 50-71

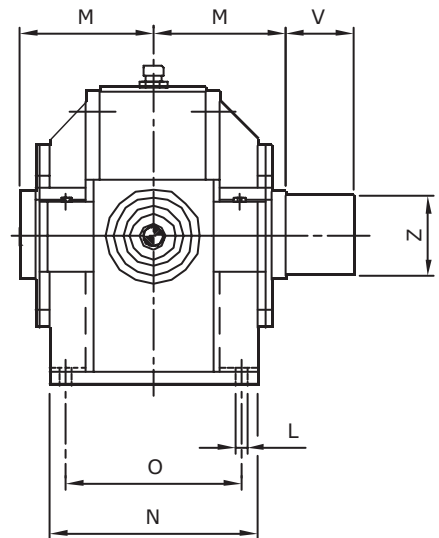
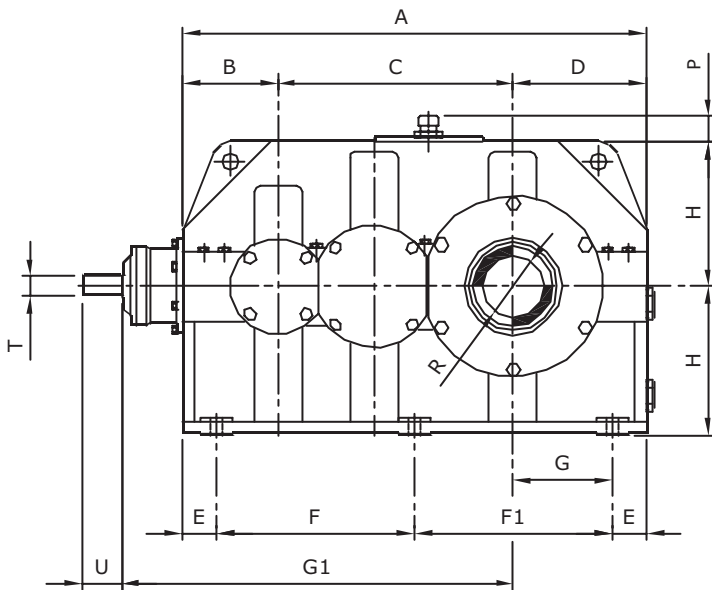
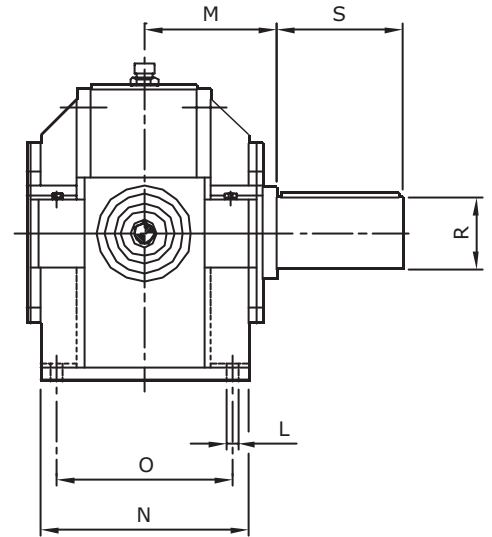
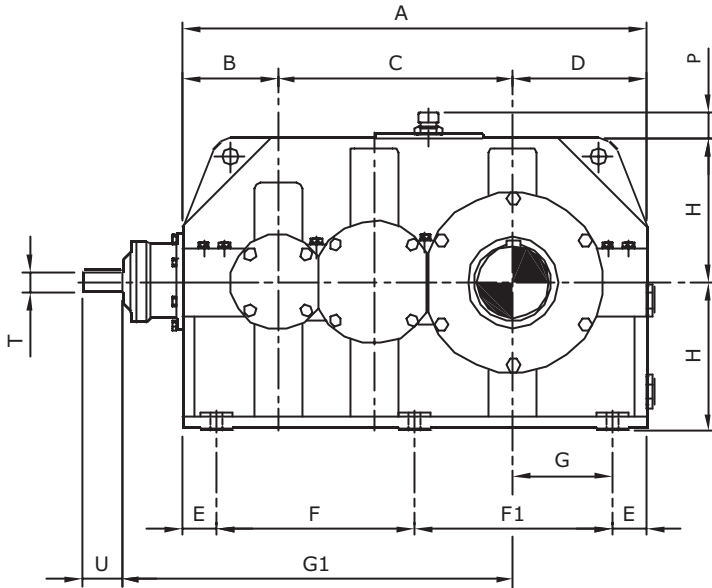
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30	574	112	282	180	46	241	268	134	482	180	M20	18	145	260	220	22	270	90	160	32	65	28	55
40	640	125	315	200	52	268	296	148	540	200	M22	20	160	295	250	22	300	100	180	35	70	32	65
50	721	140	356	225	57	303,5	336	168	606	225	M24	22	170	325	275	22	340	110	200	40	80	35	70
60	810	160	400	250	62	343	376	188	680	250	M27	25	190	360	300	22	380	120	210	45	90	40	80
70	902	180	442	280	72	379	416	208	757	280	M30	27	225	415	350	25	430	140	250	50	100	45	90
80	1015	200	500	315	80	427,5	470	235	855	315	M33	30	250	455	385	25	490	160	280	55	110	50	100
90	1145	225	565	355	87	485,5	536	268	965	355	M36	33	280	535	460	25	560	170	300	60	120	55	110
100	1280	250	630	400	93	547	614	307	1080	400	M39	36	310	600	520	25	640	200	350	70	140	60	120
110	1442	280	712	450	100	621	700	350	1212	450	M42	39	375	710	620	25	730	220	390	80	160	70	140

Riduttori assi ortogonali

Serie RHC tre stadi

Bevel-helical units

RHC series triple reduction



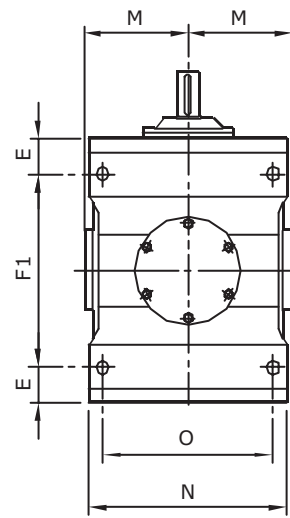
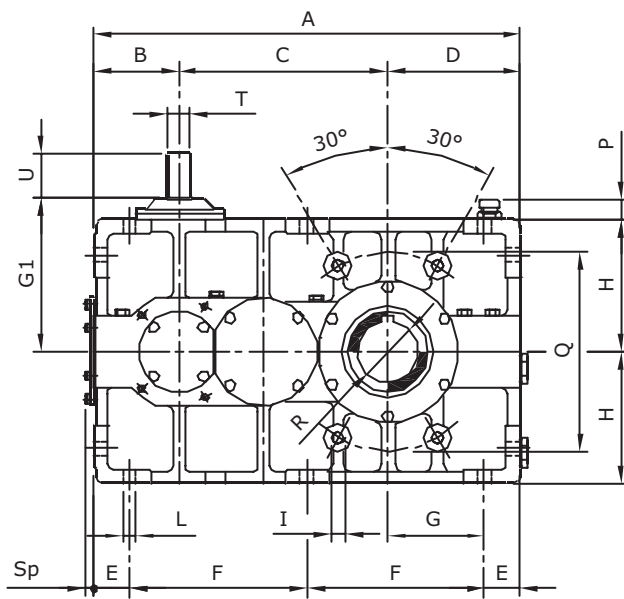
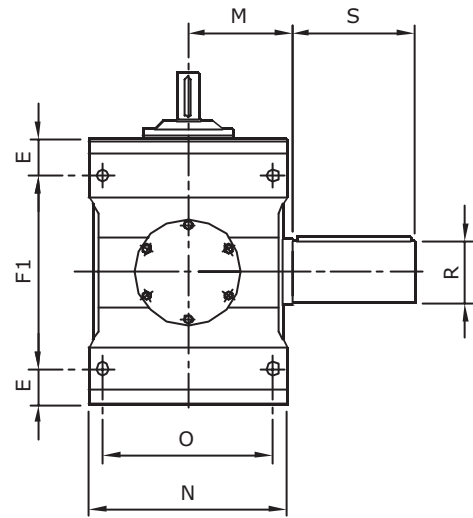
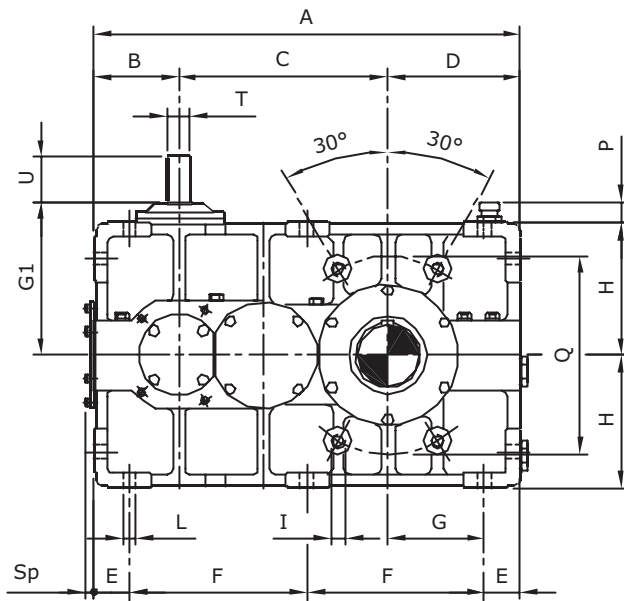
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130	1739	355	884	500	125	739	750	375	1514	560	45	480	780	660	35	270	470	100	200	90	180	190	340
140	1960	400	1000	560	150	840	820	410	1710	630	48	505	850	720	37	300	500	110	220	100	200	205	380

Riduttori assi ortogonali

Serie RVC tre stadi

Bevel-helical units

RVC series triple reduction



iN 20-45 iN 50-71

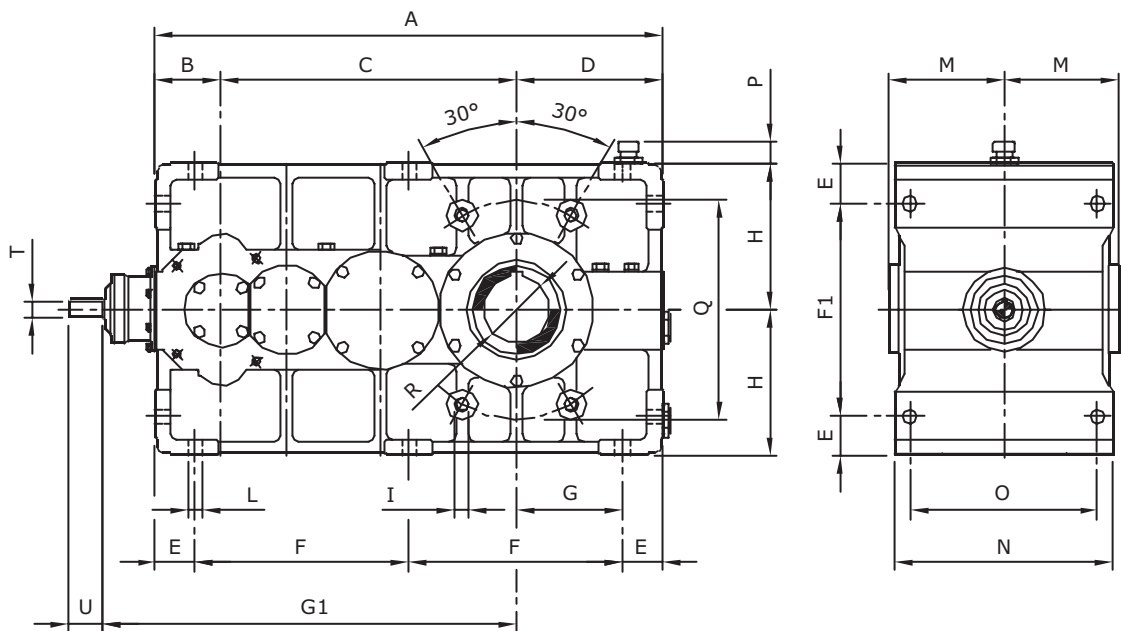
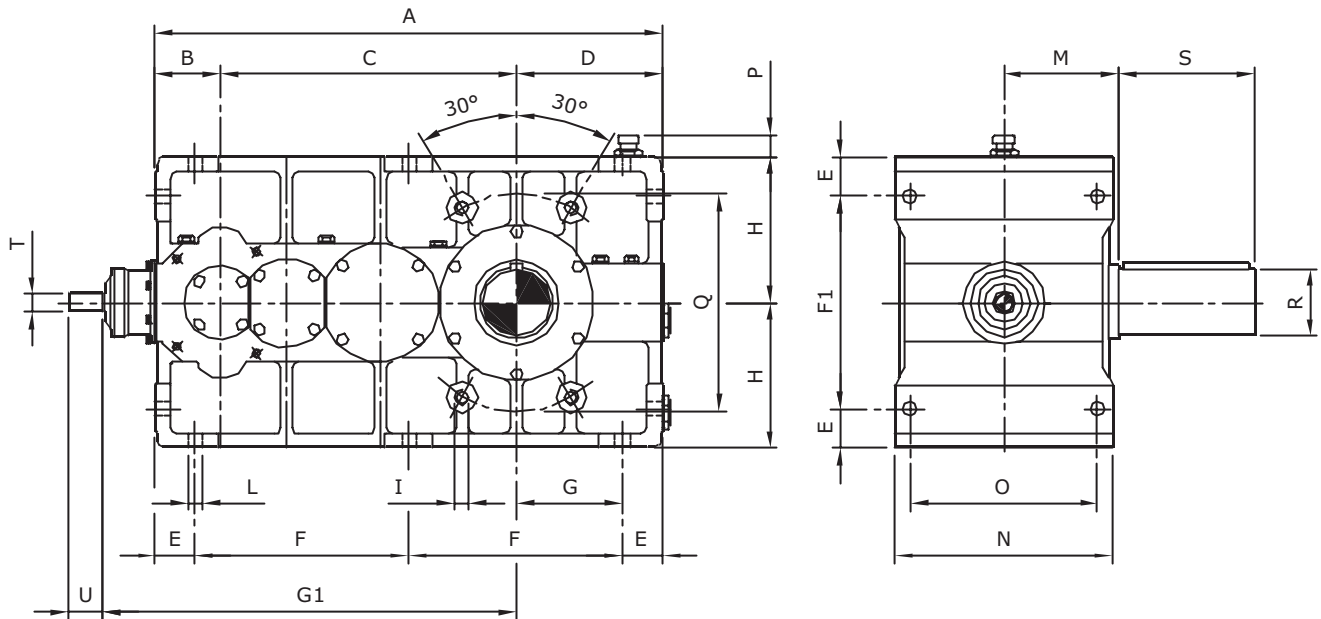
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																				T	U	T	U	
10	451	90	221	140	38	187,5	204	102	160	140	M16	14	115	210	180	20	210	65	110	24	50	22	45	11
20	510	100	250	160	42	213	236	118	180	160	M18	16	135	235	200	22	240	80	140	28	55	24	50	11
30	574	112	282	180	46	241	268	134	200	180	M20	18	145	260	220	22	270	90	160	32	65	28	55	12
40	640	125	315	200	52	268	296	148	225	200	M22	20	160	295	250	22	300	100	180	35	70	32	65	13
50	721	140	356	225	57	303,5	336	168	250	225	M24	22	170	325	275	22	340	110	200	40	80	35	70	16
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70	902	180	442	280	72	379	416	208	315	280	M30	27	225	415	350	25	430	140	250	50	100	45	90	18
80	1015	200	500	315	80	427,5	470	235	355	315	M33	30	250	455	385	25	490	160	280	55	110	50	100	22
90	1145	225	565	355	87	485,5	536	268	400	355	M36	33	280	535	460	25	560	170	300	60	120	55	110	23
100	1280	250	630	400	93	547	614	307	450	400	M39	36	310	600	520	25	640	200	350	70	140	60	120	25
110	1442	280	712	450	100	621	700	350	500	450	M42	39	375	710	620	25	730	220	390	80	160	70	140	26

Riduttori assi ortogonali

Serie RHD quattro stadi

Bevel-helical units

RHD series quadruple reduction



iN 80-225 iN 250-355

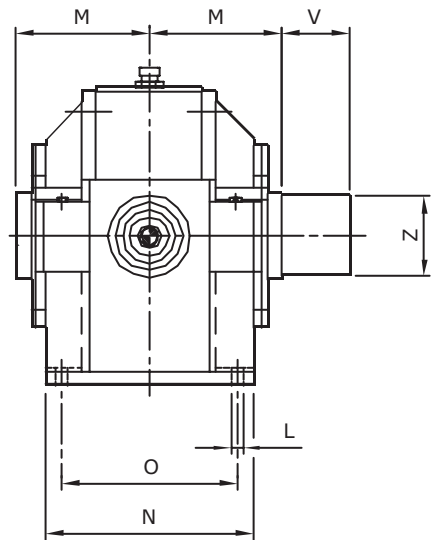
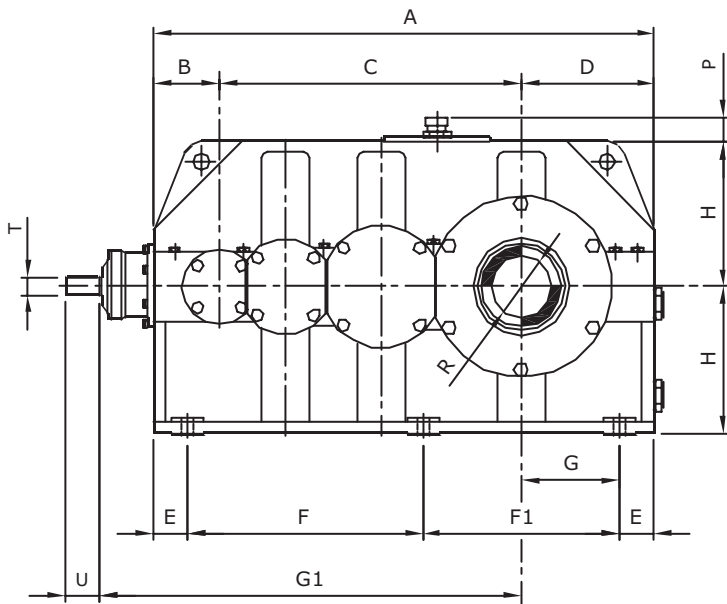
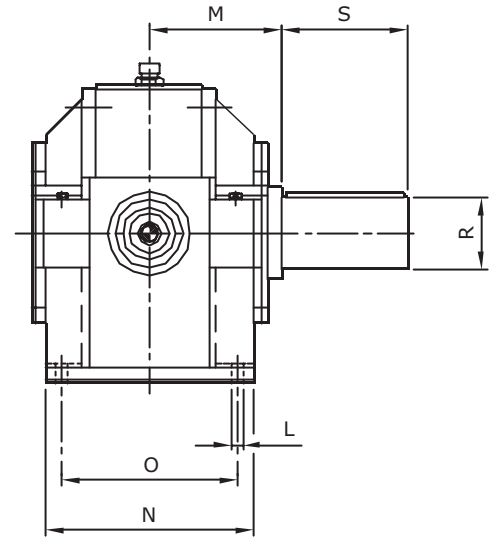
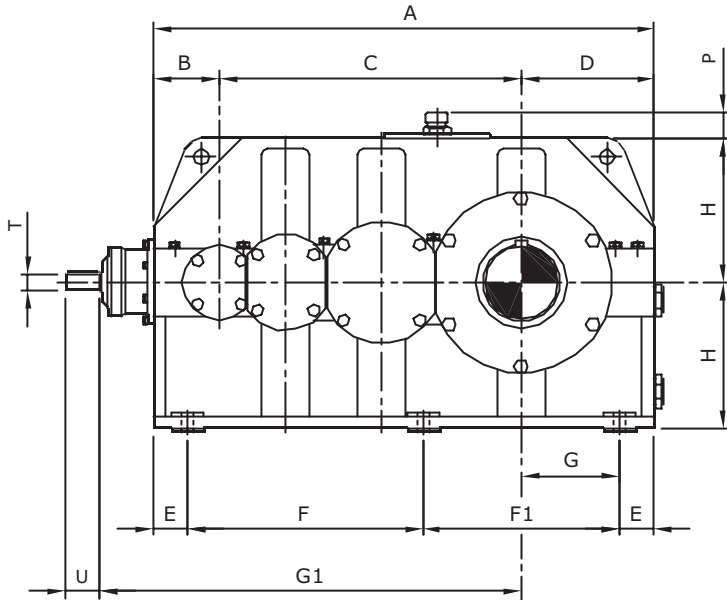
Gr. Size																				iN 80-225		iN 250-355	
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20	550	70	320	160	42	233	236	118	445	160	M18	16	135	235	200	22	240	80	140	20	40	20	40
30	622	80	362	180	46	265	268	134	502	180	M20	18	145	260	220	22	270	90	160	22	45	20	40
40	695	90	405	200	52	295,5	296	148	565	200	M22	20	160	295	250	22	300	100	180	24	50	22	45
50	781	100	456	225	57	333,5	336	168	636	225	M24	22	170	325	275	22	340	110	200	28	55	24	50
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Riduttori assi ortogonali

Serie RHD quattro stadi

Bevel-helical units

RHD series quadruple reduction



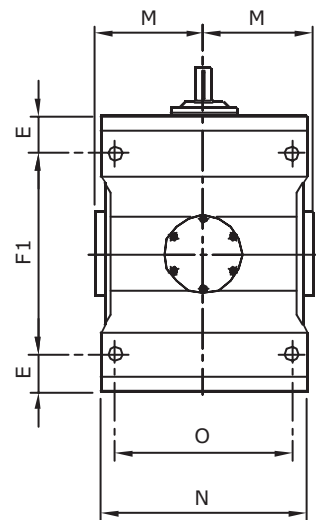
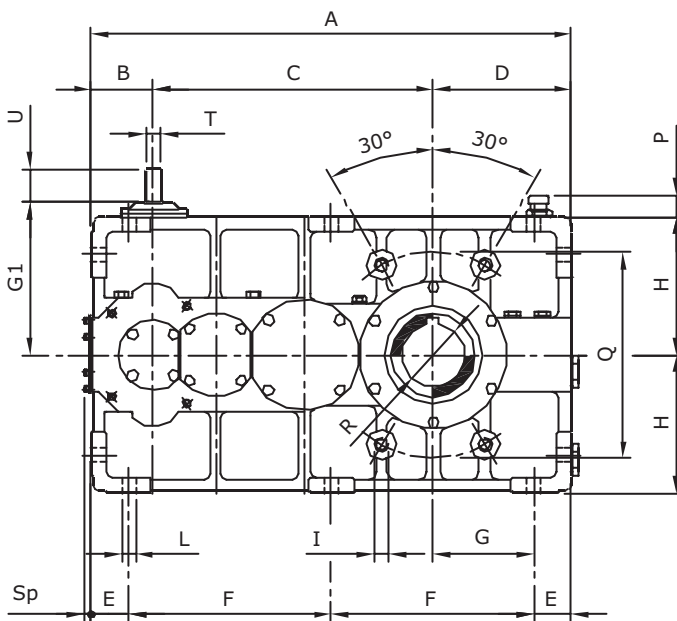
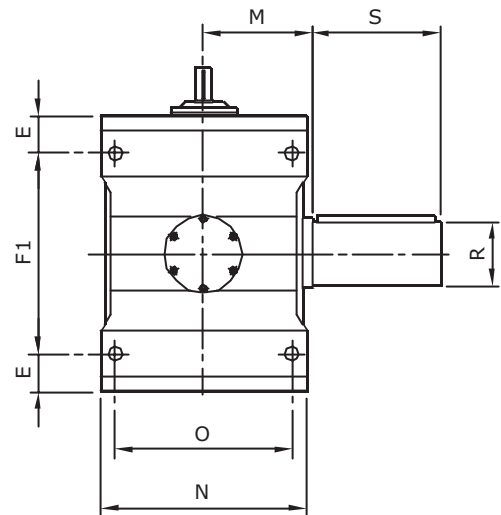
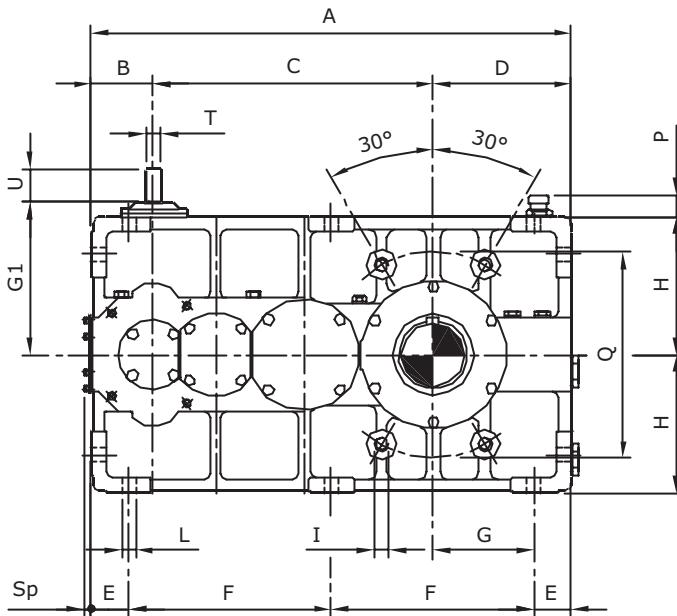
Gr. Size	A	B	C	D	E	F	F1	G	G1	H	L	M	N	O	P	R	S	iN 80-225		iN 250-355		V	Z
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130	1884	250	1134	500	125	884	750	375	1584	560	45	480	780	660	35	270	470	70	140	60	120	190	340
140	2120	280	1280	560	150	1000	820	410	1780	630	48	505	850	720	37	300	500	80	160	70	140	205	380
150	2395	315	1450	630	170	1135	920	460	2010	710	52	565	930	790	40	340	550	90	180	80	160	235	420
160	2685	355	1620	710	200	1265	1020	510	2250	800	56	630	1020	870	43	380	630	100	200	90	180	260	460

Riduttori assi ortogonali

Serie RVD quattro stadi

Bevel-helical units

RVD series quadruple reduction



in 80-225 in 250-355

Gr. Size																					in 80-225		in 250-355		Sp
	A	B	C	D	E	F	F1	G	G1	H	I	L	M	N	O	P	Q	R	S	T	U	T	U		
10	487	63	284	140	38	205,5	204	102	160	140	M16	14	115	210	180	20	210	65	110	20	40	20	40	10	
20	550	70	320	160	42	233	236	118	180	160	M18	16	135	235	200	22	240	80	140	20	40	20	40	10	
30	622	80	362	180	46	265	268	134	200	180	M20	18	145	260	220	22	270	90	160	22	45	20	40	11	
40	695	90	405	200	52	295,5	296	148	225	200	M22	20	160	295	250	22	300	100	180	24	50	22	45	11	
50	781	100	456	225	57	333,5	336	168	250	225	M24	22	170	325	275	22	340	110	200	28	55	24	50	11	
60	874	112	512	250	62	375	376	188	280	250	M27	25	190	360	300	22	380	120	210	32	65	28	55	12	
70	972	125	567	280	72	414	416	208	315	280	M30	27	225	415	350	25	430	140	250	35	70	32	65	13	
80	1095	140	640	315	80	467,5	470	235	355	315	M33	30	250	455	385	25	490	160	280	40	80	35	70	16	
90	1240	160	725	355	87	533	536	268	400	355	M36	33	280	535	460	25	560	170	300	45	90	40	80	17	
100	1390	180	810	400	93	602	614	307	450	400	M39	36	310	600	520	25	640	200	350	50	100	45	90	18	
110	1562	200	912	450	100	681	700	350	500	450	M42	39	375	710	620	25	730	220	390	55	110	50	100	22	

Esecuzione grafica

Shaft arrangement

PA - PC	
PB - PD	
RH - RV	

Forme costruttive

Mounting position

P	
RH	
RV	

▼ *Tappo carico*
Breather plug

● *Tappo livello*
Level plug

▲ *Tappo scarico*
Drain plug

Riduttori assi ortogonali

Serie RH/RV - Rapporti esatti

Bevel-helical units

RH & RV series - Actual ratios

i _N	Grandezze															Size
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
5	5.078	5.078	5.177	5.177	5.132	4.409	5.078	5.078	5.143	5.129	5.063					
5.6	5.436	5.436	5.541	5.541	5.476	5.576	5.436	5.436	5.504	5.489	5.775					
6.3	6.273	6.273	6.389	6.389	6.273	6.383	6.273	6.273	6.346	6.329	6.188					
7.1	7.318	7.318	6.888	6.888	7.257	6.854	7.318	7.318	6.842	7.379	7.158					
8	7.945	7.945	8.085	8.085	7.841	7.972	7.945	7.945	8.031	8.01	7.734					
9	8.662	8.662	8.812	8.812	9.26	8.642	8.662	8.662	8.753	8.73	9.134					
10	10.455	10.455	9.65	9.65	10.133	10.294	10.455	10.455	9.586	9.56	9.995					
11.2	11.595	11.595	11.785	11.785	11.152	11.326	11.595	11.595	11.706	11.675	11					
12.5	12.16	12.16	12.373	12.373	12	12.2	12.16	12.16	12.373	12.373	12					
14	14.523	14.523	13.486	13.486	14.171	14.4	14.523	14.523	14.769	13.486	14.171					
16	16	16	16.267	16.267	15.508	15.754	16	16	16.267	16.267	15.508					
18	17.745	17.745	18.036	18.036	17.067	17.333	17.745	17.745	18.036	18.036	17.067					
20	19.41	19.842	19.72	19.739	19.842	20.61	20.787	19.842	19.72	19.739	19.842	20.473	20.593	19.572		
22.5	22.3	22.775	22.517	22.678	22.906	22.111	22.3	22.775	22.517	22.678	22.906	21.963	22.093	22.465		
25	25.833	24.473	24.126	24.38	24.693	25.614	25.833	24.473	24.126	24.38	24.693	25.442	25.592	24.14		
28	27.91	28.469	27.879	38.383	28.937	27.674	27.91	28.469	27.879	28.383	28.937	27.489	27.65	28.082		
31.5	32.897	30.841	32.57	30.76	31.483	32.618	32.897	30.841	32.57	30.76	31.483	32.4	32.59	30.422		
35.5	35.925	36.602	35.385	36.533	34.393	35.62	35.925	36.602	35.385	36.533	34.393	35.382	35.59	36.105		
40	39.418	40.148	38.601	40.086	41.669	39.084	39.418	40.148	38.601	40.086	41.669	38.822	39.051	39.602		
45	43.494	44.284	42.313	44.231	46.299	43.125	43.494	44.284	42.313	44.231	46.299	42.837	43.088	43.683		
50	50.347	49.015	49.846	49.129	48.183	49.92	50.347	51.315	54.154	51.2	52.637	49.92	50.347	51.315		
56	54.98	58.092	54.154	55.912	57.776	54.514	54.98	56.018	59.077	55.912	57.776	54.514	54.98	56.018		
63	60.327	63.678	64.757	61.349	63.771	66	60.327	61.444	64.757	61.349	63.771	66	66.564	61.444		
71	73.936	70.195	71.385	75.189	70.857	73.309	73.936	67.774	71.385	67.692	70.857	73.309	73.936	67.774		
80	77.926	77.897	78.361	84.185	79.36	82.08	82.782	75.256	79.217	75.189	79.36	82.656	77.926	75.256	77.837	78.508
90	88.964	88.569	89.361	90.472	87.126	88.125	88.964	88.569	89.231	90.472	87.126	88.125	88.964	88.569	88.634	89.629
100	102.21	101.85	89.231	103.94	100.01	100.625	102.21	101.85	102.17	103.94	100.01	100.63	102.21	101.85	101.49	102.974
112	109.88	109.55	102.17	111.74	115.75	115.757	109.88	109.55	109.61	111.74	107.46	115.76	109.88	109.55	108.88	110.7
125	127.92	127.64	126.97	120.41	125.01	124.583	127.92	127.64	126.97	120.41	125.01	124.58	127.92	127.64	126.12	128.88
140	138.64	138.39	137.19	140.99	135.42	145.547	138.64	138.39	137.19	140.99	135.42	145.55	138.64	138.39	136.27	139.67
160	164.65	164.49	161.7	153.33	160.72	158.125	164.654	164.48	161.7	153.33	160.72	158.13	164.65	164.49	160.62	165.89
180	180.67	180.54	176.58	183.73	176.29	172.5	180.67	180.54	176.58	183.73	176.29	172.5	180.67	180.54	175.4	182.02
200	199.35	199.28	193.75	202.72	194.46	208.438	199.35	199.28	193.75	202.72	194.45	208.44	199.35	199.28	192.45	200.84
225	230.76	230.43	227.54	234.67	225.33	222.75	230.76	221.42	219.69	234.67	225.33	222.75	230.76	230.43	227.54	234.67
250	251.99	251.73	247.47	256.26	245.98	242	251.99	251.73	260.92	256.26	245.98	242	251.99	251.73	247.47	256.26
280	276.5	276.31	270.24	281.18	269.8	289.385	276.5	276.31	286.3	281.18	269.8	289.4	276.5	276.31	270.24	281.18
315	305.09	304.99	327.18	310.26	297.6	319	305.09	304.98	315.9	310.26	330.45	319	305.09	304.99	327.18	310.26
355	338.87	338.87	363.41	344.62	335.78	354	345.03	379.54	350.88	350.88	369.87				338.87	
400							386.31									

Gruppi motorizzati

Tutti i riduttori sono disponibili con flange unificate per motori IEC e NEMA. Normalmente il collegamento tra albero riduttore e albero motore viene effettuato tramite un giunto elastico. Esecuzioni speciali e compatte a richiesta.

Motorised gear units

Gear units are available as standard assemblies with IEC metric B5 flanged motors as well as NEMA C-face motors. Normally gearbox and motor shaft are connected by flexible couplings, but other more compact and special solutions can be supplied.

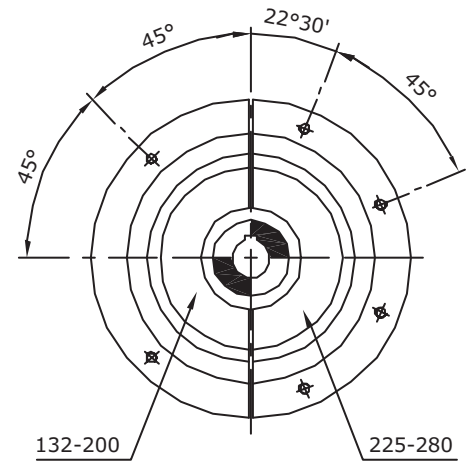
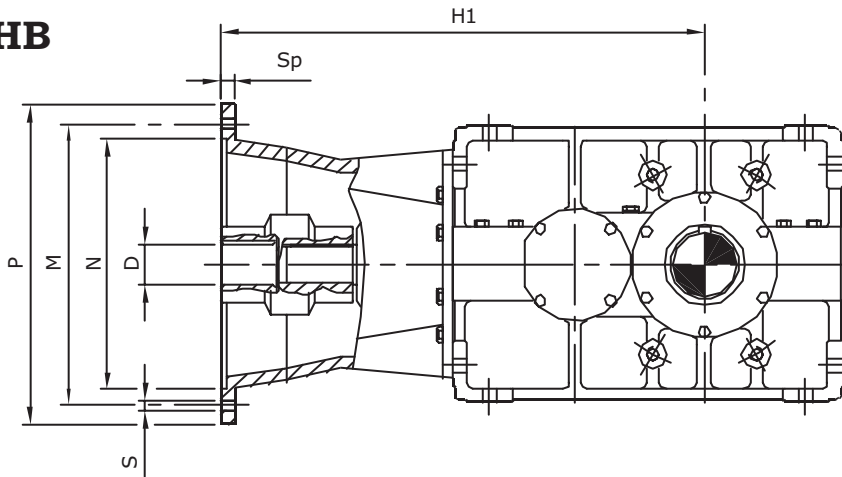
Gruppi motoriduttori

Riduttori ortogonali RHB/RVB

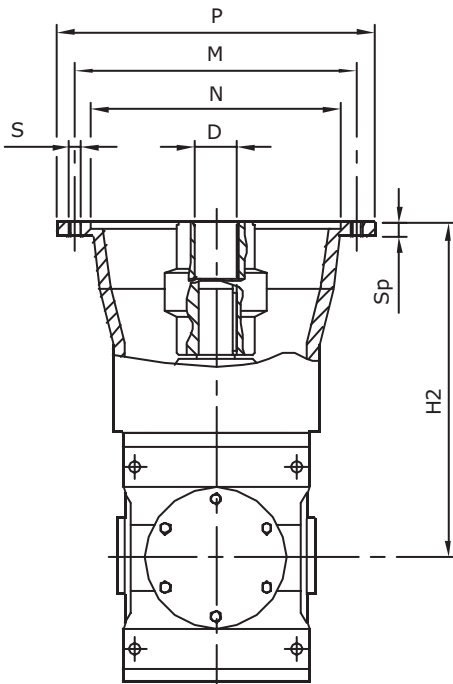
Gearmotor units

Bevel-helical units RHB/RVB

RHB



RVB



Gr. Riduttore Unit size	Motore IEC motor	D H7	M	N	P	S	Sp	H1	H2
10	132	38	265	230	300	M12	16	510	379
	160	42	300	250	350	M16	18	540	409
	180	48	300	250	350	M16	18	540	409
	200	55	350	300	400	M16	20	540	409
20	132	38	265	230	300	M12	16	564	414
	160	42	300	250	350	M16	18	594	444
	180	48	300	250	350	M16	18	594	444
	200	55	350	300	400	M16	20	594	444
	225	60	400	350	450	M16	20	624	474
30	160	42	300	250	350	M16	18	654	484
	180	48	300	250	350	M16	18	654	484
	200	55	350	300	400	M16	20	654	484
	225	60	400	350	450	M16	20	684	514
	250	65	500	450	550	M16	20	684	514
40	160	42	300	250	350	M16	18	719	529
	180	48	300	250	350	M16	18	719	529
	200	55	350	300	400	M16	20	719	529
	225	60	400	350	450	M16	20	749	559
	250	65	500	450	550	M16	20	749	559
50	160	42	300	250	350	M16	18	795	579
	180	48	300	250	350	M16	18	795	579
	200	55	350	300	400	M16	20	795	579
	225	60	400	350	450	M16	20	825	609
	250	65	500	450	550	M16	20	825	609
60	280	75	500	450	550	M16	20	825	609
	200	55	350	300	400	M16	20	874	634
	225	60	400	350	450	M16	20	904	664
	250	65	500	450	550	M16	20	904	664
70	280	75	500	450	550	M16	20	904	664
	200	55	350	300	400	M16	20	966	704
	225	60	400	350	450	M16	20	996	734
	250	65	500	450	550	M16	20	996	734
80	280	75	500	450	550	M16	20	996	734
	200	55	350	300	400	M16	20	1074	774
	225	60	400	350	450	M16	20	1104	804
	250	65	500	450	550	M16	20	1104	804
90	280	75	500	450	550	M16	20	1104	804
	200	55	350	300	400	M16	20	1194	854
	225	60	400	350	450	M16	20	1224	884
	250	65	500	450	550	M16	20	1224	884
		280	75	500	450	M16	20	1224	884

Tutte le quote sono relative a motori normalizzati IEC
 All dimensions refer to IEC frame size motors

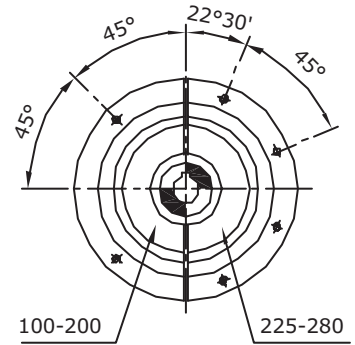
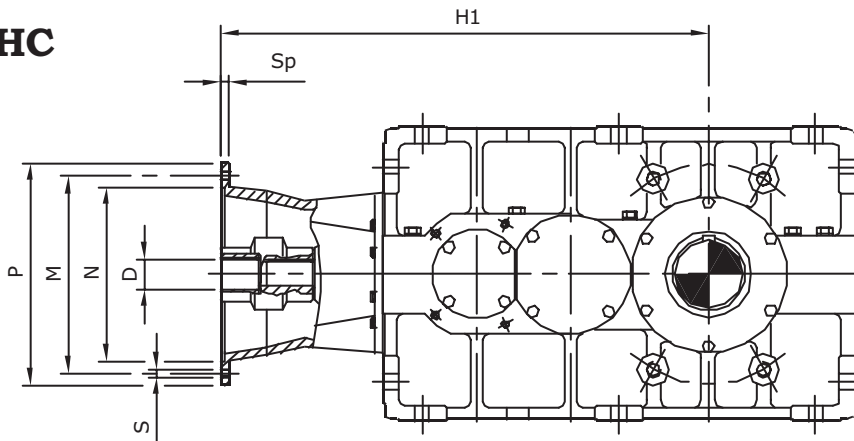
Gruppi motoriduttori

Riduttori ortogonali RHC/RVC

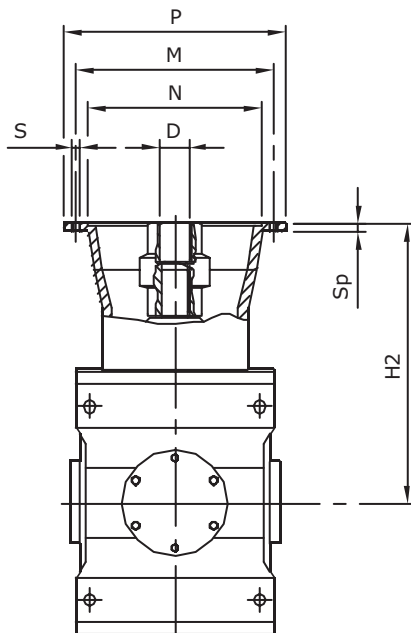
Gearmotor units

Bevel-helical units RHC/RVC

RHC



RVC

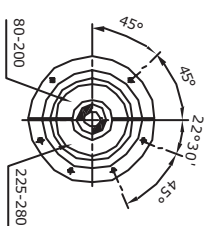
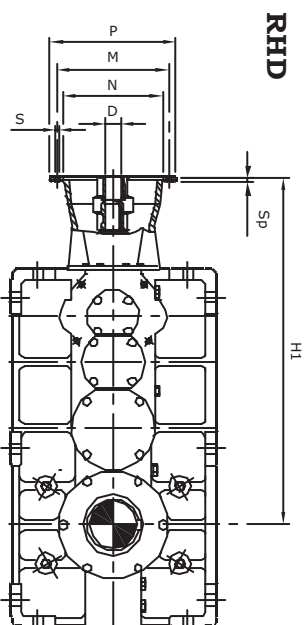


Tutte le quote sono relative a motori normalizzati IEC
All dimensions refer to IEC frame size motors

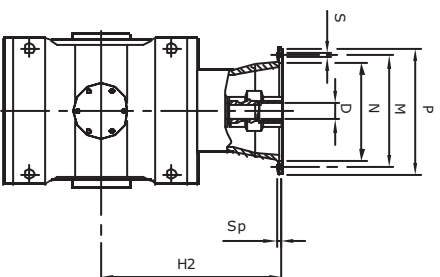
Gr. Riduttore Unit size	Motore IEC motor	D H7	M	N	P	S	Sp	H1	H2
10	100-112	28	215	180	250	M12	14	495	274
	132	38	265	230	300	M12	16	515	294
	160	42	300	250	350	M16	18	545	324
	180	48	300	250	350	M16	18	545	324
20	100-112	28	215	180	250	M12	14	549	299
	132	38	265	230	300	M12	16	569	319
	160	42	300	250	350	M16	18	599	349
	180	48	300	250	350	M16	18	599	349
	200	55	350	300	400	M16	20	599	349
30	132	38	265	230	300	M12	16	631	349
	160	42	300	250	350	M16	18	661	379
	180	48	300	250	350	M16	18	661	379
	200	55	350	300	400	M16	20	661	379
	225	60	400	350	450	M16	20	691	409
40	132	38	265	230	300	M12	16	694	379
	160	42	300	250	350	M16	18	724	409
	180	48	300	250	350	M16	18	724	409
	200	55	350	300	400	M16	20	724	409
	225	60	400	350	450	M16	20	754	439
	250	65	500	450	550	M16	20	754	439
50	160	42	300	250	350	M16	18	800	444
	180	48	300	250	350	M16	18	800	444
	200	55	350	300	400	M16	20	800	444
	225	60	400	350	450	M16	20	830	474
	250	65	500	450	550	M16	20	830	474
	280	75	500	450	550	M16	20	830	474
60	180	48	300	250	350	M16	18	884	484
	200	55	350	300	400	M16	20	884	484
	225	60	400	350	450	M16	20	914	514
	250	65	500	450	550	M16	20	914	514
	280	75	500	450	550	M16	20	914	514
70	200	55	350	300	400	M16	20	971	529
	225	60	400	350	450	M16	20	1001	559
	250	65	500	450	550	M16	20	1001	559
	280	75	500	450	550	M16	20	1001	559
80	225	60	400	350	450	M16	20	1109	609
	250	65	500	450	550	M16	20	1109	609
	280	75	500	450	550	M16	20	1109	609
90	250	65	500	450	550	M16	20	1229	664
	280	75	500	450	550	M16	20	1229	664

Gruppi motoriduttori
Riduttori ortogonali RHD/RVD

Gearmotor units
Bevel-helical units RHD/RVD



RVD

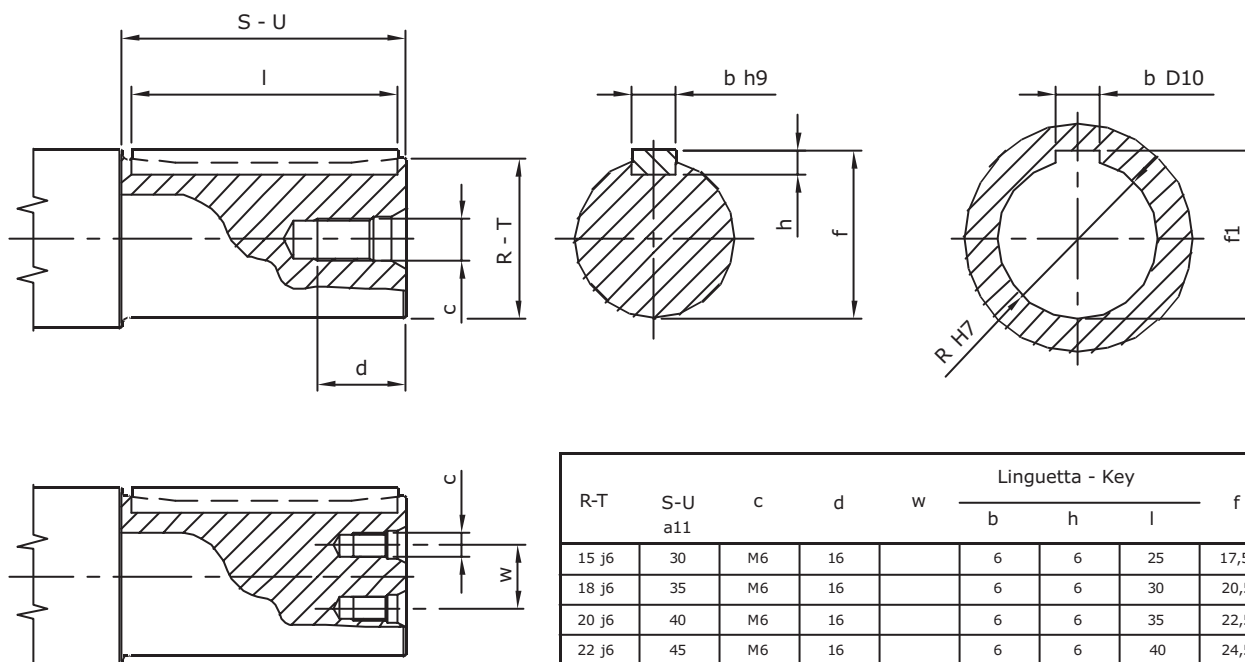


Gr-Riduttore Unit size	Motor IEC	D H7	M	N	P	S	Sp	H1	H2
10	80	19	165	130	200	M10	12	475	239
	90	24	165	130	200	M10	12	485	249
	00-112	28	215	180	250	M12	14	495	259
20	90	24	165	130	200	M10	12	539	274
	00-112	28	215	180	250	M12	14	549	284
	132	38	265	230	300	M12	16	569	304
30	90	24	165	130	200	M10	12	601	289
	00-112	28	215	180	250	M12	14	611	299
	132	38	265	230	300	M12	16	631	329
40	160	42	300	250	350	M16	18	661	359
	00-112	28	215	180	250	M12	14	679	339
	132	38	265	230	300	M12	16	699	359
50	160	42	300	250	350	M16	18	729	389
	00-112	28	215	180	250	M12	14	755	369
	132	38	265	230	300	M12	16	775	389
60	160	42	300	250	350	M16	18	805	419
	00-112	28	215	180	250	M12	14	841	409
	132	38	265	230	300	M12	16	861	429
70	160	42	300	250	350	M16	18	891	459
	00-112	28	215	180	250	M12	14	927	449
	132	38	265	230	300	M12	16	946	469
80	160	42	300	250	350	M16	18	976	499
	00-112	28	215	180	250	M12	14	1012	489
	132	38	265	230	300	M12	16	1032	519
90	160	42	300	250	350	M16	18	1064	549
	00-112	28	215	180	250	M12	14	1084	529
	132	38	265	230	300	M12	16	1104	559
200	200	55	350	300	400	M16	20	1084	549
	225	60	400	350	450	M16	20	1114	579
	250	65	500	450	550	M16	20	1144	579
160	160	42	300	250	350	M16	18	1209	604
	180	48	300	250	350	M16	18	1209	604
	200	55	350	300	400	M16	20	1209	604
225	225	60	400	350	450	M16	20	1239	634
	250	65	500	450	550	M16	20	1239	634
	280	75	500	450	550	M16	20	1239	634

Tutte le quote sono relative a motori normalizzati IEC
Alle dimensioni relative a IEC, riprendi solo i motori

Estremità d'albero

Shaft ending



Fori filettati in testa secondo DIN 332
Lingette secondo UNI 6604-69

Tapped holes according to DIN 332
Keys according to DIN 6885

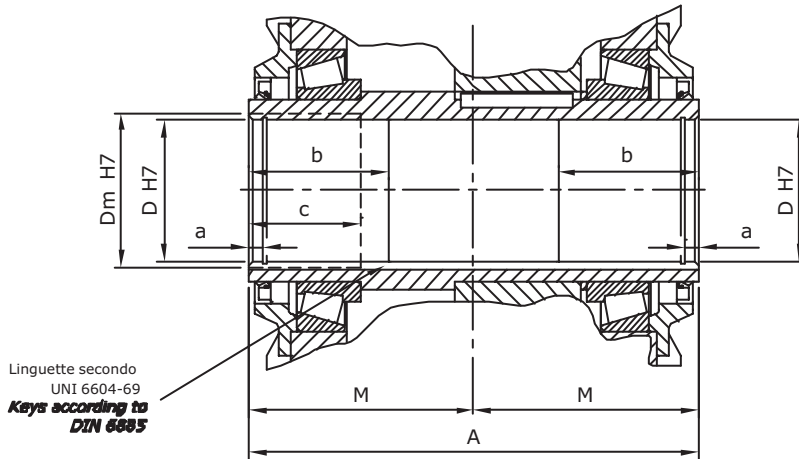
R-T	S-U a11	c	d	w	Linguetta - Key			f	f1
					b	h	l		
15 j6	30	M6	16		6	6	25	17,5	
18 j6	35	M6	16		6	6	30	20,5	
20 j6	40	M6	16		6	6	35	22,5	
22 j6	45	M6	16		6	6	40	24,5	
24 j6	50	M8	19		8	7	45	27	
28 j6	55	M8	19		8	7	50	31	
32 k6	65	M10	22		10	8	60	35	
35 k6	70	M10	22		10	8	60	38	
40 k6	80	M10	22		12	8	70	43	
45 k6	90	M10	22		14	9	80	48,5	
50 k6	100	M12	28		14	9	90	53,5	
55 m6	110	M12	28		16	10	100	59	
60 m6	120	M12	28		18	11	110	64	
65 m6	110	M16	36		18	11	100	69	69,4
70 m6	140	M16	36		20	12	125	74,5	
75 m6	150	M16	36		20	12	125	79,5	
80 m6	140	M16	36		22	14	125	85	
80 m6	160	M16	36		22	14	140	85	85,4
85 m6	170	M16	36		22	14	140	90	
90 m6	160	M16	36		25	14	140	95	95,4
90 m6	180	M16	36		25	14	160	95	
100 m6	180	M20	42		28	16	160	106	106,4
100 m6	200	M20	42		28	16	180	106	
110 m6	200	M20	42		28	16	180	116	116,4
110 m6	220	M20	42		28	16	200	116	
120 m6	210	M20	42		32	18	180	127	127,4
130 m6	260	M20	42		32	18	220	137	
140 m6	250	M24	50		36	20	220	148	148,4
140 m6	280	M24	50		36	20	250	148	
150 m6	300	M24	50		36	20	280	158	
160 m6	280	M24	50		40	22	250	169	169,4
160 m6	320	M24	50		40	22	280	169	
170 m6	300	M24	50		40	22	280	179	179,4
180 m6	360	M24	50		45	25	320	190	
190 m6	380	M30	64		45	25	360	200	
200 m6	350	M30	64		45	25	320	210	210,4
220 m6	390	M30	64		50	28	360	231	231,4
240 m6	410	2 off M30	64	150	56	32	360	252	
270 m6	470	2 off M30	64	150	63	32	400	282	
300 m6	500	2 off M30	64	180	70	36	450	314	
340 m6	550	2 off M30	64	180	80	40	500	355	
380 m6	630	2 off M30	64	210	90	45	550	397	

Estremità d'albero

Albero cavo con linguetta

Shaft ending

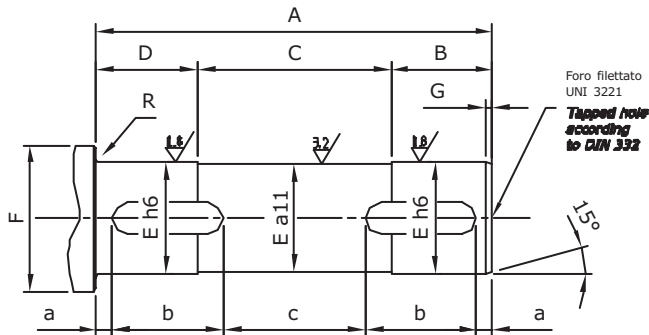
Hollow shaft with keyway



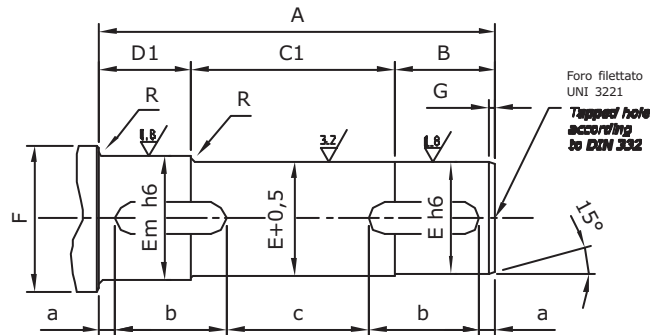
Gr. Size	10	20	30	40	50	60	70	80	90	100	110
A	230	270	290	320	340	380	450	500	560	620	750
D	65	80	90	100	110	120	140	160	170	200	220
Dm	70	90	100	110	120	130	155	175	185	215	235
M	115	135	145	160	170	190	225	250	280	310	375
a	7	8	9	10	11	12	14	16	18	20	22
b	65	80	90	100	110	120	140	160	170	200	220
c	56	70	80	90	100	110	125	140	160	180	200

Albero macchina

Driven machine shaft end



Linguette dimensionate su E in accordo con UNI 6604



Keys based on E according to DIN 6885

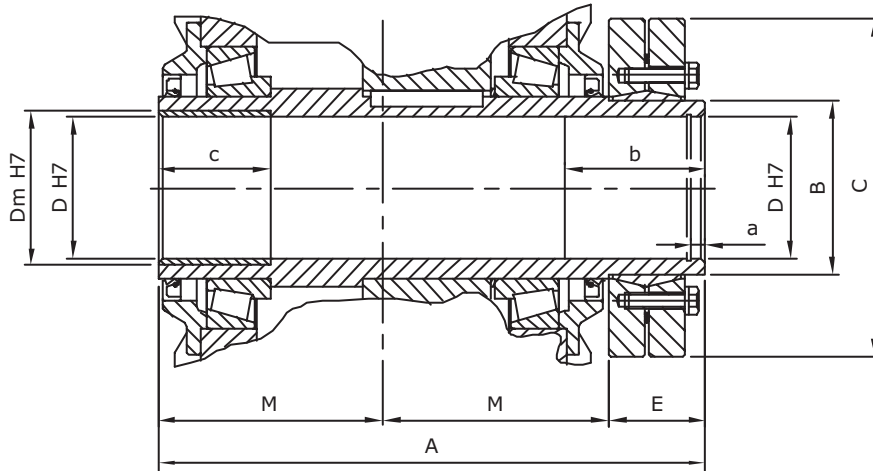
Gr. Size	10	20	30	40	50	60	70	80	90	100	110
A	212	250	265	295	310	350	415	460	515	570	695
B	50	65	70	80	85	95	110	125	130	155	170
C	97	105	105	115	115	135	165	175	215	215	305
C1	108	117	117	127	127	147	182	197	227	237	327
D	65	80	90	100	110	120	140	160	170	200	220
D1	54	68	78	88	98	108	123	138	158	178	198
E	65	80	90	100	110	120	140	160	170	200	220
Em	70	90	100	110	120	130	155	175	185	215	235
F	83	97	107	122	135	145	175	195	205	235	255
G	3	3,5	4	4,5	5	5,5	6	7	8	9	10
R	2	2,2	2,5	2,8	3	3,5	4	4,5	5	5,5	6
a	5	5	5	5	8	8	8	8	10	10	10
b	60	80	90	100	110	110	125	150	160	180	200
c	82	80	75	85	74	114	149	144	175	190	275

Estremità d'albero

Albero cavo con unità di bloccaggio

Shaft ending

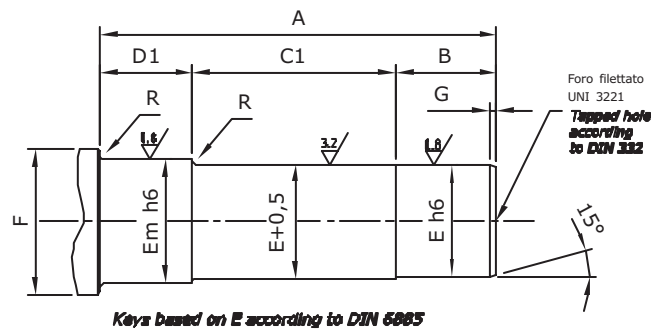
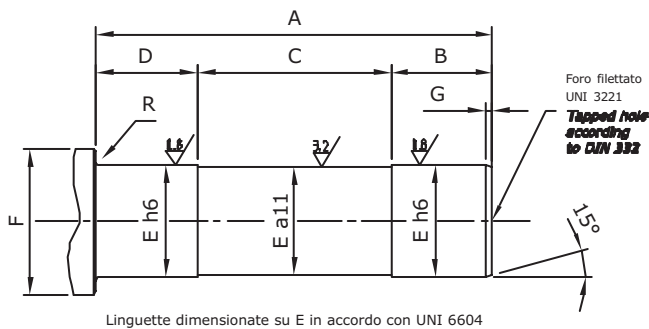
Hollow shaft with shrink disc



Gr. Size	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
A	278	333	366	396	429	476	564	614	694	770	914	1015	1150	1215	1365	1520
B	80	100	120	130	155	165	185	200	220	260	280	300	340	380	420	460
C	145	170	215	215	265	290	330	350	370	430	460	485	570	645	690	770
D	65	80	90	100	110	120	140	160	170	200	220	240	270	300	340	380
Dm	70	90	100	110	120	130	155	175	185	215	235	260	290	320	360	400
E	48	63	76	76	89	96	114	114	134	150	164	175	190	205	235	260
M	115	135	145	160	170	190	225	250	280	310	375	420	480	505	565	630
a	7	8	9	10	11	12	14	16	18	20	22	25	28	31	35	40
b	65	80	90	100	110	120	140	160	170	200	220	240	270	300	340	380
c	56	70	80	90	100	110	125	140	160	180	200	225	250	280	310	350

Albero macchina

Driven machine shaft end

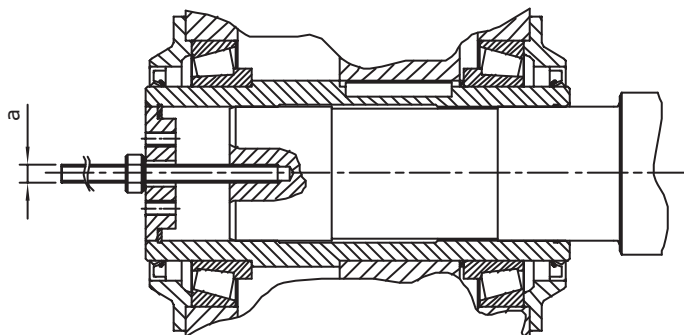


Gr. Size	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
A	260	313	341	371	399	446	529	574	649	720	859	955	1085	1140	1280	1425
B	50	65	70	80	85	95	110	125	130	155	170	185	210	230	260	290
C	145	168	181	191	204	231	279	289	349	365	469	530	605	610	680	755
C1	156	180	193	203	216	243	296	311	361	387	491	548	628	633	713	788
D	65	80	90	100	110	120	140	160	170	200	220	240	270	300	340	380
D1	54	68	78	88	98	108	123	138	158	178	198	222	247	277	307	347
E	65	80	90	100	110	120	140	160	170	200	220	240	270	300	340	380
Em	70	90	100	110	120	130	155	175	185	215	235	260	290	320	360	400
F	83	97	107	122	135	145	175	195	205	235	255	290	320	350	390	430
G	3	3,5	4	4,5	5	5,5	6	7	8	9	10	11	12	14	16	18
R	2	2,2	2,5	2,8	3	3,5	4	4,5	5	5,5	6	6,5	7	8	9	10

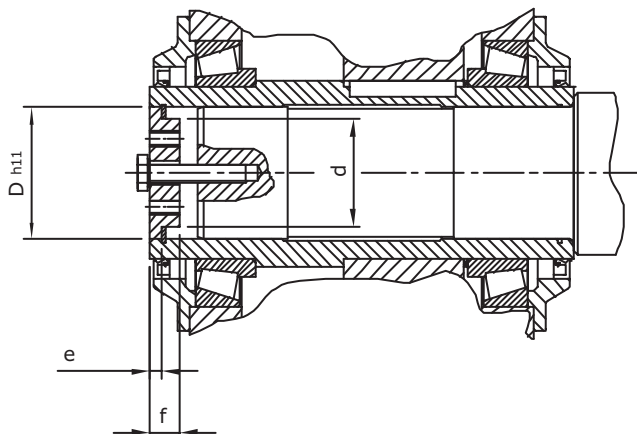
Estremità d'albero

Shaft ending

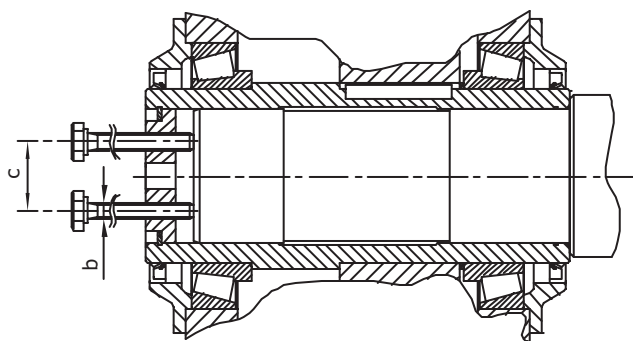
Montaggio
Mounting



Fissaggio
Fixing



Smontaggio
Removing



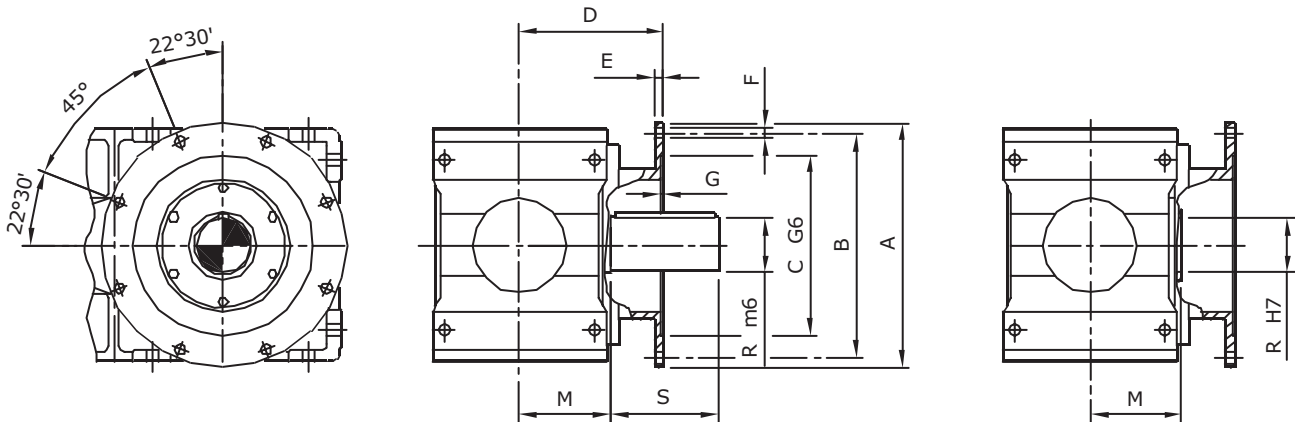
Gr. Size	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
a	M 16	M 16	M 16	M 20	M 20	M 20	M 24	M 24	M 24	M 30	M 30	M 30	M 30	M 36	M 36	M 36
b	M 10	M 12	M 14	M 14	M 16	M 16	M 18	M 18	M 20	M 20	M 24	M 24	M 24	M 24	M 30	M 30
c	37	48	55	60	65	75	95	105	115	140	155	165	190	210	235	260
Ř D	65	80	90	100	110	120	140	160	170	200	220	240	270	300	340	380
Ř d	52	66	74	82	90	100	120	136	148	172	190	205	230	255	290	320
e	7	8	9	10	11	12	14	16	18	20	22	25	28	32	35	40
f	16	18	20	22	25	28	32	36	40	45	50	55	60	70	80	90
Seeger Circlip	I 65	I 80	I 90	I 100	I 110	I 120	I 140	I 160	I 170	I 200	I 220	I 240	I 270	I 300	I 340	I 380

Flange di uscita

Le flange in uscita vengono utilizzate per collegare il riduttore direttamente alla macchina. Sono fornibili a disegno o standard B5, di cui si allegano le dimensioni.

Output flange

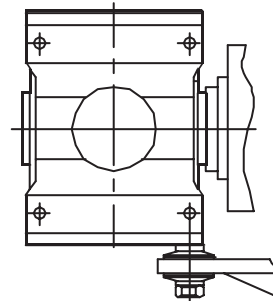
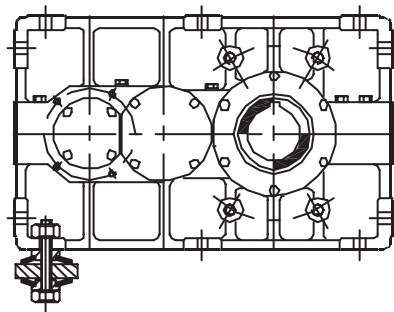
Flanged gearbox output casing normally allow direct assembly to the driven machine. Special designs, as well as B5 standard patterns (see dimensional data sheet), are available.



Gr. Size	Ř A	Ř B	Ř C	D	E	Ř F	G	M	Ř R	S
10	300	265	230	170	14	18	5	115	65	110
20	300	265	230	185	14	20	5	135	80	140
30	350	300	250	210	16	22	6	145	90	160
40	400	350	300	225	16	22	6	160	100	180
50	450	400	350	245	16	24	6	170	110	200
60	550	500	450	270	18	27	7	190	120	210
70	550	500	450	300	20	30	7	225	140	250
80	660	600	550	350	22	33	7	250	160	280
90	660	600	550	390	22	36	7	280	170	300
100	ON REQUEST									
110	ON REQUEST									

Fissaggio pendolare

Shaft-mounted applications



Tutti i riduttori vengono forniti per applicazione pendolare con vincolo elastico, semielastico e rigido.

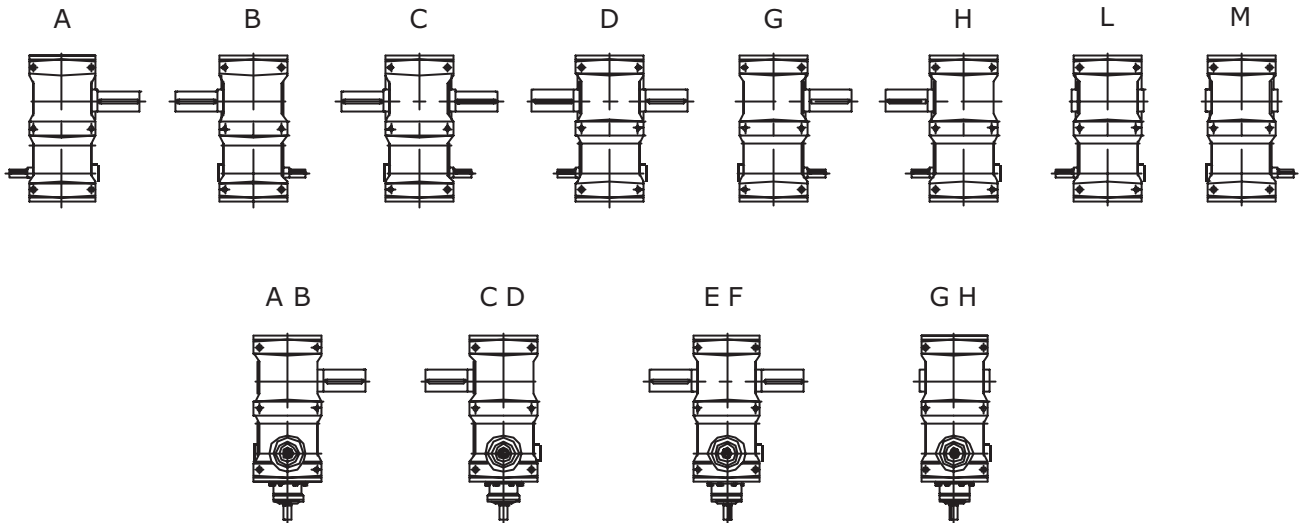
All units can be supplied with elastic constraint, semi-flexible and rigid reaction arrangement.

Dispositivo antiretro

Backstop devices

Tutti i riduttori sono fornibili con dispositivo antiretro, posizionato esternamente come indicato nelle figure sottostanti. Dettagli costruttivi vengono forniti a richiesta.

Holdbacks can be fitted to all gear units. They are located externally on helical pinion shaft as shown in the diagrams below.



Carichi radiali

Qualora al riduttore vengano collegati sia all'entrata che all'uscita organi di trasmissione che possono produrre carichi assiali sugli alberi del riduttore stesso, è opportuno verificare che l'entità di questi sia compatibile con le capacità di sopportazione del riduttore.

In tabella vengono forniti i valori massimi dei carichi radiali sull'albero veloce FR1 e su quello lento Fr2 accettabili nel caso in cui il carico agisca in mezz'ora dell'estremità d'albero (quota U ed S delle relative tabelle dimensionali).

a) Per posizione del carico a 0,25 U o S dalla battuta moltiplicare i valori indicati per 2

b) Per posizione del carico a 0,75 U o S dalla battuta, moltiplicare i valori indicati per 0,67

Qualora il carico radiale generato è inferiore al 20% dei valori indicati in tabella, non è necessaria alcuna verifica.

Contemporaneamente al carico radiale è ammissibile un carico assiale pari al 20% di quello radiale.

Per valori superiori, prego contattarci.

I carichi radiali possono essere calcolati in maniera approssimativa con la seguente formula :

$$Fr = k \frac{P}{D \cdot n}$$

D (mm) : diametro primitivo organo calettato

Dove k :

1. 2000 per trasmissione a catena
2. 2500 per trasmissione ad ingranaggio
3. 5000 per trasmissione a cinghia trapezoidale

Overhung loads

Whenever transmission components, generating radial loads are fitted on input and output shafts, it is necessary to check that the values of such loads are compatible with the gearbox capacity.

In the sheet below, maximum admissible overhung loads on high speed shaft FR1 and on the low speed shaft FR2 are shown, having as reference the load operating at the middle of the shaft ends (dimensions U and S of relevant dimensional tables).

a) if acting at 0.25 U or S from the gearbox side, multiply such values by 2.

b) If acting at 0.75 U or S from the gearbox side, multiply such values by 0.67.

When overhung load is less than 20% of admissible load shown in the sheet, no check is required.

Along with overhung load, a thrust load of 20% of overhung load is acceptable. For higher value, please refer to us.

Roughly overhung loads can be obtained using the following formula :

$$Fr = k \cdot \frac{P}{D \cdot n}$$

Where D (mm) is pitch circle diameter of the driving or driven component

Where k :

1. 2000 for chain drive
2. 2500 for gear drive
3. 5000 for V-belt drive

Momenti di inerzia J₁

Si riferiscono all'albero veloce del riduttore standard senza ventola di raffreddamento.

Il momento di inerzia riferito all'asse lento si ottiene dalla formula :

$$J_2 = J_1 \cdot i^2$$

Mass Moments of Inertia

The mass moments of inertia J₁ in kgm² refer to the high speed shaft of a standard gearbox without fan.

The mass moments of inertia J₂ referring to the low speed shaft are given by the following formula :

$$J_2 = J_1 \cdot i^2$$

Riduttori assi ortogonali
Carichi radiali Fr_1, Fr_2
Momenti d'inerzia

Bevel-helical units
Overhung loads Fr_1, Fr_2
Mass Moments of Inertia

Grandezze Size

i_n			10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	
5	Fr_1	N	4100	5300	7800	9200	11500	12400	14300	22400	33100	42500	52000						
	Fr_2	N	14200	18600	24800	30600	37000	44700	60800	77800	102700	131000	144000						
	J_1	kgm ²	0,0036	0,0062	0,0111	0,0199	0,0357	0,0634	0,1097	0,1990	0,3663	0,6611	1,1745						
5,6	Fr_1	N	4300	5500	8200	9700	12100	13000	15000	23600	34900	44800	54800						
	Fr_2	N	13300	17400	23500	29200	35300	42700	58200	74700	100300	128400	141000						
	J_1	kgm ²	0,0035	0,0059	0,0106	0,0188	0,0339	0,0602	0,1042	0,1890	0,3480	0,6279	1,1154						
6,3	Fr_1	N	4500	5800	8600	10200	12800	13700	15800	24800	36600	47000	57500						
	Fr_2	N	12500	16800	22800	28200	33000	40200	56600	72600	97300	124700	137000						
	J_1	kgm ²	0,0033	0,0056	0,0100	0,0179	0,0322	0,0572	0,0990	0,1795	0,3305	0,5962	1,0592						
7,1	Fr_1	N	4800	6100	9000	10700	13400	14300	16500	26000	38400	49300	60200						
	Fr_2	N	14100	18500	25700	31800	36600	48100	65400	83900	93200	142000	156100						
	J_1	kgm ²	0,0031	0,0054	0,0096	0,0173	0,0311	0,0553	0,0956	0,1733	0,3192	0,5662	1,0059						
8	Fr_1	N	5000	6400	9400	11200	14000	15000	17300	27100	40100	51500	63000						
	Fr_2	N	10900	14200	32500	26500	34600	42200	60000	73300	107800	126800	139300						
	J_1	kgm ²	0,0030	0,0051	0,0092	0,0163	0,0294	0,0522	0,0903	0,1638	0,3015	0,5467	0,9713						
9	Fr_1	N	5200	6700	9900	11700	14600	15600	18100	28300	41900	53800	65700						
	Fr_2	N	11100	14500	21600	22300	33200	40100	58100	71400	95400	131400	144300						
	J_1	kgm ²	0,0029	0,0049	0,0087	0,0155	0,0278	0,0495	0,0856	0,1552	0,2859	0,5167	0,9179						
10	Fr_1	N	5400	6900	10300	12200	15200	16300	18800	29500	43600	56000	68500						
	Fr_2	N	11300	13200	20800	25100	30000	38800	56600	69900	86400	124900	137300						
	J_1	kgm ²	0,0027	0,0046	0,0083	0,0148	0,0266	0,0473	0,0819	0,1486	0,2735	0,4897	0,8700						
11,2	Fr_1	N	5600	7200	10700	12700	15800	16900	19600	30700	45300	58200	71200						
	Fr_2	N	13000	15400	21900	28100	30900	34900	56400	69100	86100	123600	135800						
	J_1	kgm ²	0,0026	0,0045	0,0080	0,0143	0,0258	0,0459	0,0793	0,1438	0,2648	0,4686	0,8325						
12,5	Fr_1	N	5400	6600	9900	11800	14900	16100	17400	27900	41900	55400	67200						
	Fr_2	N	16400	21400	31000	38200	44800	48400	69900	86200	84600	155300	170600						
	J_1	kgm ²	0,0025	0,0042	0,0076	0,0135	0,0243	0,0431	0,0746	0,1352	0,2490	0,4536	0,8059						
14	Fr_1	N	5600	6800	10200	12300	15500	16700	18100	28900	43400	56400	69700						
	Fr_2	N	17900	23500	32900	40400	46000	53400	75500	96300	119300	166400	182800						
	J_1	kgm ²	0,0023	0,0041	0,0074	0,0132	0,0237	0,0422	0,0730	0,1324	0,2438	0,4266	0,7578						
16	Fr_1	N	6200	7500	11300	13600	17100	18500	20000	32000	48100	62500	77200						
	Fr_2	N	16200	21400	28900	37300	44800	49300	65600	84400	126500	161000	176900						
	J_1	kgm ²	0,0023	0,0039	0,0071	0,0127	0,0228	0,0407	0,0704	0,1276	0,2350	0,4176	0,7419						
18	Fr_1	N	6300	7700	11500	13800	17400	18800	20300	32500	48800	63500	78400						
	Fr_2	N	15600	20600	30300	36300	43500	45600	67700	82900	124300	163600	179700						
	J_1	kgm ²	0,0022	0,0038	0,0070	0,0124	0,0214	0,0397	0,0688	0,1248	0,2298	0,4026	0,7152						
20	Fr_1	N	2000	3600	6900	7400	9900	11700	14600	17100	19600	28800	33200	37600	42600	48200			
	Fr_2	N	11300	13700	21200	27500	29900	35700	43100	54000	79500	114400	129600	147000	171800	199900			
	J_1	kgm ²	0,0025	0,0044	0,0073	0,0131	0,0238	0,0426	0,0744	0,1326	0,2375	0,4187	0,7474	1,3437	2,3522	4,1911			
22,5	Fr_1	N	2000	3600	6900	7400	9900	11800	14700	17200	19900	29000	33400	37800	42800	48500			
	Fr_2	N	11300	13700	21200	27500	29900	35700	43100	54000	79500	114400	129600	147000	171800	199900			
	J_1	kgm ²	0,0024	0,0040	0,0069	0,0123	0,0222	0,0397	0,0694	0,1238	0,2216	0,3907	0,6976	1,2542	2,1956	3,9119			
25	Fr_1	N	2000	3600	6900	7400	10000	11900	14800	17400	20100	29200	33600	38000	43100	48800			
	Fr_2	N	10100	12200	20300	26000	28200	33700	40600	50900	75000	108000	122300	138700	162100	188600			
	J_1	kgm ²	0,0021	0,0037	0,0064	0,0116	0,0207	0,0371	0,0648	0,1155	0,2068	0,3646	0,6511	1,1705	2,0491	3,6511			
28	Fr_1	N	2200	3700	7000	7500	10000	12100	14900	17600	20300	29400	33800	38200	43300	49000			
	Fr_2	N	10100	12200	20300	26000	28200	33700	40600	50900	75000	108000	122300	138700	162100	188600			
	J_1	kgm ²	0,0019	0,0034	0,0061	0,0108	0,0193	0,0346	0,0605	0,1078	0,1930	0,3402	0,6077	1,0926	1,9127	3,4079			
31,5	Fr_1	N	2200	3700	7000	7500	10100	12200	15000	17800	20400	29700	34100	38500	43500	49300			
	Fr_2	N	10100	12200	20300	26000	28200	33600	40600	50900	75000	108000	122300	138700	162100	188600			
	J_1	kgm ²	0,0018	0,0032	0,0057	0,0101	0,0179	0,0323	0,0565	0,1006	0,1801	0,3175	0,5671	1,0198	1,7853	3,1809			
35,5	Fr_1	N	2200	3700	7000	7500	10100	12300	15100	17900	20600	29700	34300	38700	43800	49600			
	Fr_2	N	9500	11700	19800	24500	26600	31800	38400	48100	70900	102000	115500	131000	153100	178100			
	J_1	kgm ²	0,0017	0,0030	0,0053	0,0094	0,0167	0,0301	0,0530	0,0939	0,1681	0,2963	0,5293	0,9518	1,6662	2,9688			
40	Fr_1	N	2200	3700	7000	7500	10200	12400	15200	18100	20900	30100	34500	38900	44000	49900			
	Fr_2	N	9500	11700	19800	24500	26600	31800	38400	48100	70900	102000	115500	131000	153100	178100			
	J_1	kgm ²	0,0016	0,0028	0,0049	0,0088	0,0156	0,0281	0,0492	0,0877	0,1569	0,2766	0,4941	0,8884	1,5551	2,7709			
45	Fr_1	N	2300	3800	7100	7700	10200	12500	15400	18200	21100	30300	34700	39100	44300	50200			
	Fr_2	N	9500	11700	19800	24500	26600	31800	38400	48100	70900	102000	115500	131000	153100	178100			
	J_1	kgm ²	0,0015	0,0026	0,0047	0,0081	0,0146	0,0262	0,0460	0,0818	0,1465	0,2581	0,4611	0,8292	1,4515	2,5862			

Riduttori assi ortogonali

Carichi radiali Fr_1, Fr_2

Momenti d'inerzia J_1

Bevel-helical units

Overhung loads Fr_1, Fr_2

Mass Moments of Inertia J_1

Grandezze Size

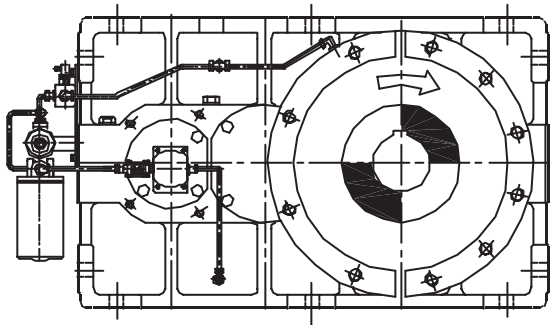
i_N			10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	
50	Fr_1	N	1900	3100	5800	6400	8400	10300	12600	15200	17600	25300	28600	32200	36400	41300			
	Fr_2	N	7900	11300	19200	23600	25600	30700	37000	46300	68300	98300	111300	126300	147600	171700			
	J_1	kgm2	0,0014	0,0025	0,0043	0,0076	0,0136	0,0244	0,0428	0,0763	0,1365	0,2406	0,4298	0,7729	1,3530	2,4108			
56	Fr_1	N	1900	3100	5800	6400	8400	10400	12700	15300	17800	25500	28800	32400	36600	41500			
	Fr_2	N	7900	11300	19200	23600	25600	30700	37000	46300	68300	98300	111300	126300	147600	171700			
	J_1	kgm2	0,0012	0,0023	0,0040	0,0071	0,0126	0,0227	0,0397	0,0707	0,1266	0,2231	0,3986	0,7167	1,2547	2,2355			
63	Fr_1	N	1900	3100	5800	6400	8500	10500	12800	15500	18000	25700	28900	32500	36800	41700			
	Fr_2	N	7900	11300	19200	23600	25600	30700	37000	46300	68300	98300	111300	126300	147600	171500			
	J_1	kgm2	0,0011	0,0021	0,0037	0,0065	0,0116	0,0209	0,0366	0,0652	0,1167	0,2056	0,3673	0,6605	1,1562	2,0601			
71	Fr_1	N	2000	3200	5900	6400	8500	10600	12900	15600	18200	25900	29100	32700	37000	42000			
	Fr_2	N	7400	10800	18500	22600	24600	29400	35400	44400	65400	94100	106600	120900	141300	164400			
	J_1	kgm2	0,0011	0,0019	0,0033	0,0060	0,0106	0,0191	0,0334	0,0596	0,1067	0,1881	0,3360	0,6043	1,0579	1,8849			
80	Fr_1	N	1900	3200	3200	6400	8600	10700	13000	15800	18300	26000	29300	27700	30200	42200			
	Fr_2	N	4100	10800	9600	22600	24600	29400	35400	44400	65400	94100	106600	68800	76500	164400			
	J_1	kgm2	0,0001	0,0018	0,0007	0,0057	0,0134	0,0182	0,0319	0,0568	0,1018	0,1794	0,3205	0,0988	0,1703	1,7973			
90	Fr_1	N	1900	2400	3200	3900	5300	6400	11900	14900	17700	19300	23100	27700	30200	33600	34400	40500	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
100	Fr_1	N	1900	2400	3200	3900	5300	6400	11900	14900	17700	19300	23100	27700	30200	33600	34400	40500	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
112	Fr_1	N	1900	2400	3200	3900	5300	6400	11900	14900	17700	19300	23100	27700	30200	33600	34400	40500	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
125	Fr_1	N	1900	2400	3200	3900	5300	6400	11900	14900	17700	19300	23100	27700	30200	33600	34400	40500	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
140	Fr_1	N	1900	2400	3200	3900	5300	6400	11900	14900	17700	19300	23100	27700	30200	33600	34400	40500	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
160	Fr_1	N	1900	2400	3200	3900	5300	6400	11900	14900	17700	19300	23100	27700	30200	33600	34400	40500	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
180	Fr_1	N	1900	2400	3200	3900	5300	6400	11900	14900	17700	19300	23100	27700	30200	33600	34400	40500	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
200	Fr_1	N	1900	2400	3200	3900	5300	6400	11900	14900	17700	19300	23100	27700	30200	33600	34400	40500	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
225	Fr_1	N	1900	2400	3200	3900	5300	6400	11900	14900	17700	19300	23100	27700	30200	33600	34400	40500	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
250	Fr_1	N	1600	2200	2900	3600	4500	5600	10900	13400	16100	17700	19800	24200	27200	30500	31500	34700	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
280	Fr_1	N	1600	2200	2900	3600	4500	5600	10900	13400	16100	17700	19800	24200	27200	30500	31500	34700	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
315	Fr_1	N	1600	2200	2900	3600	4500	5600	10900	13400	16100	17700	19800	24200	27200	30500	31500	34700	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
355	Fr_1	N	1600	2200	2900	3600	4500	5600	10900	13400	16100	17700	19800	24200	27200	30500	31500	34700	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	
400	Fr_1	N	1600	2200	2900	3600	4500	5600	10900	13400	16100	17700	19800	24200	27200	30500	31500	34700	
	Fr_2	N	4100	5200	9600	14400	20000	25700	31900	37600	46100	50400	60700	68800	76500	81800	93000	100000	
	J_1	kgm2	0,0001	0,0005	0,0007	0,0009	0,0018	0,0029	0,0051	0,0096	0,0177	0,0311	0,0501	0,0988	0,1703	0,3111	0,5629	1,0018	

Raffreddamento artificiale

Tutti i riduttori possono essere forniti con un sistema di raffreddamento artificiale, qualora le condizioni di utilizzo ed ambientali lo richiedano.

Comunemente si utilizzano ventole di raffreddamento montate sull'albero veloce o una centralina di raffreddamento olio-acqua o olio-aria nei casi più gravosi.

Si consiglia di contattarci per maggiori informazioni tecniche.



Artificial cooling

All gear units can be supplied with an artificial cooling system, whenever application or ambient conditions may require.

At growing heat dissipation demand, fan(s) fitted on the speed shaft to a more efficient oil-water cooler or occasionally to an oil-air cooler are used.

Please refer to us for any additional information.

