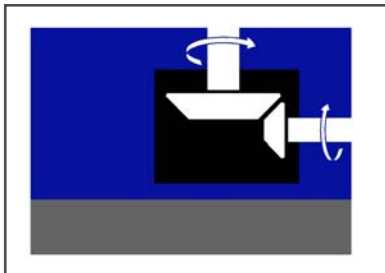
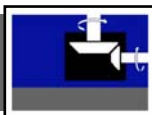




**RIGHT ANGLE
SPIRAL BEVEL
GEARBOXES**



R Series
Heavy Duty range



SUMMARY

Shaft arrangement	4
Direction of rotation	4
Mounting position & Mounting surface	5
Sizing	5
Lubrication - Cooling	5
Unit rating tables	6
Dimensions	7
Shaft details	8
Fixation Screws	8
Other Bevel gearboxes products	9

OVERVIEW



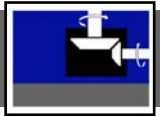
REDEX-ANDANTEX, a well known supplier of high quality transmission products, is proud to introduce its R-Series Spiral-Bevel gearbox product line .

The three larger sizes of rugged units take over for the Z-Series in high power requirement applications.

These R Series Gearboxes were specifically designed for heavy duty working conditions .

Max. output torque :
up to 12 000 N.m

Max transmissible power :
up to 1980 kW

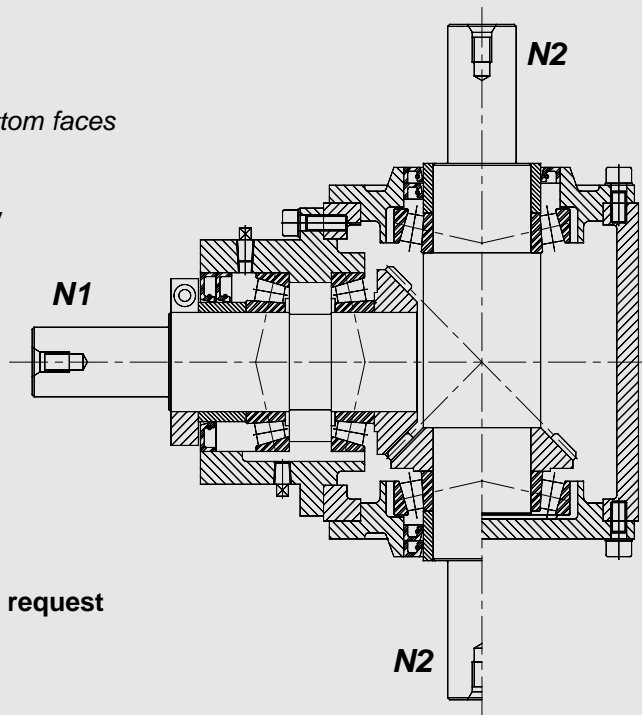


CONSTRUCTION

Features :

- **Cast iron housing**
Machined for mounting on upper or bottom faces
- **Standard range of gear ratios**
For use as reducer up to ratio 1:3
- **Spiral bevel gears (HPG-S technology on request)**
Case hardened alloy steel .Gears are shrunk fit onto shaft to eliminate key fretting
- **Efficiency of 95 - 98 %**
Fully reversible direction of rotation
- **Tapered Roller bearings**
High radial and axial load capacity combined with high torsional rigidity
- **Viton^(*) sealing**
High speed / high temperature
- **Compliance with ATEX standards on request**

(*) registered trademark of E.I. DuPont Co.

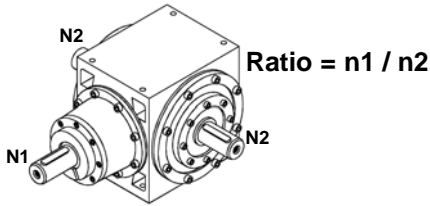
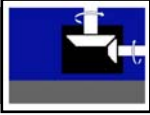


DESIGNATION

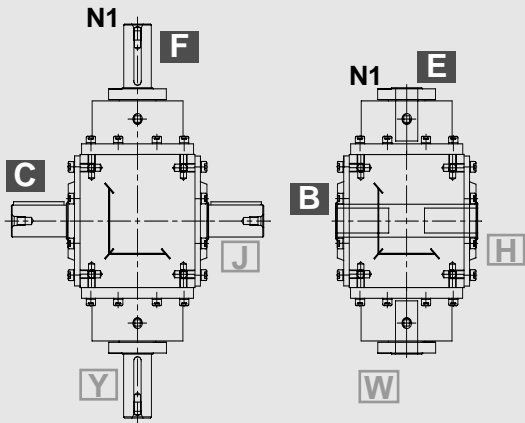
R 41 CF 2 O K S 2 N

Model Type	page 4	R		
Unit Size	page 8	41	51	63
Shaft Arrangement	page 5	Solid shaft, hollow bore		
Ratio <i>i</i>	page 4	1:1	1:2	1:3
Direction of Rotation	page 5	I	O	
Mounting Position	page 6	K		
Mounting Surface	page 6	R	S	
Lubrication Code	page 7	1	to	3
Cooling Type	page 7	N	R	

All data subject to change without notice



SHAFT ARRANGEMENTS



Letter code

Letter in box designates chosen shaft extension type and location .
Shaft arrangement can be combined as required .

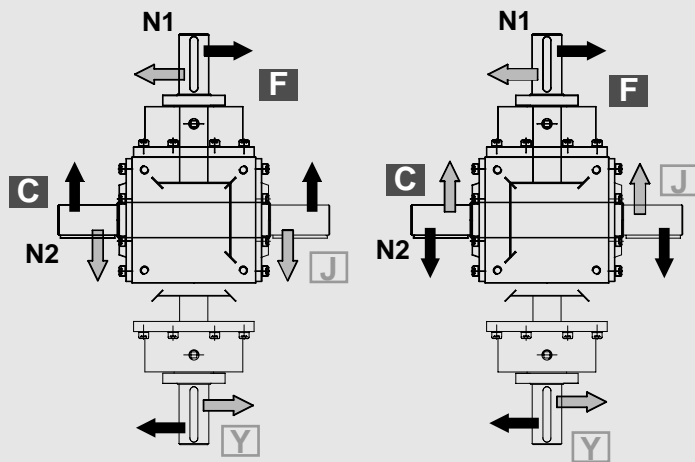
Note : shaft letters must follow alphabetical order

eg : ~~CF~~ ~~FC~~
~~EW~~ ~~HB~~ ~~BE~~ ~~HW~~

Solid Shafts

Hollow Bores

DIRECTION OF ROTATION



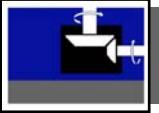
Letter code

Letters below designate relative direction of rotation.

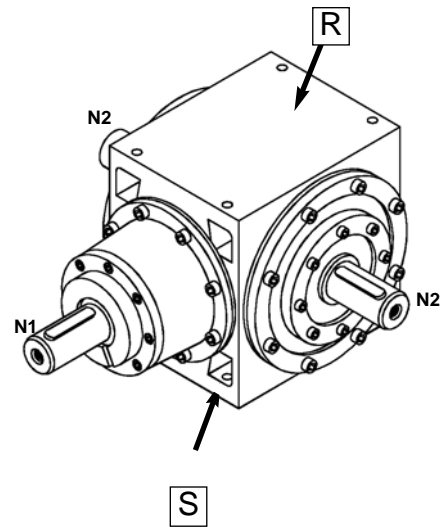
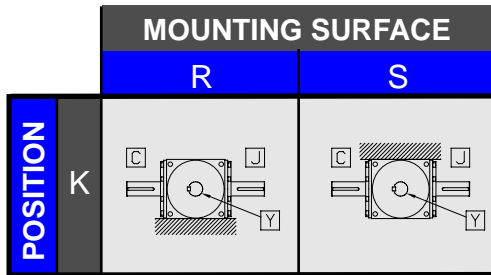
Direction of rotation is fully reversible .

Rotation O

Rotation I



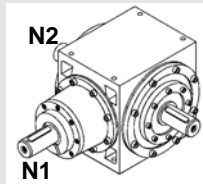
MOUNTING POSITION & MOUNTING SURFACE



SIZING

Required data :

- ➔ Absorbed Power **P**
- ➔ Speed **N1** & **N2**



Based on the coefficients shown on the opposite, the Design Power (**P_d**) is given by the Formula :

$$P_d = P \times K_a \times K_i$$

Select the unit so that **P_{n1}** (see the rating tables) is greater than the result **P_d**

K_a	Service Factor		
	Uniform load	Moderate shock	Heavy shock
Electric Motor	1.00	1.25	1.50
Diesel Engine 4-6 cyl.	1.25	1.50	1.75
Diesel Engine 1-3 cyl.	1.50	1.75	2.25

K_i	Lifetime factor						
	100	1000	5000	10000	15000	20000	40000
h	0.65	0.80	0.95	1.00	1.05	1.15	1.40

LUBRICATION - COOLING

Requirements :

The tables shown on following pages provide basic guidelines for the lubrication requirements. It is always strongly recommended to contact your supplier to insure correct choice.

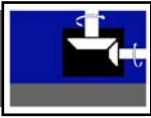
Standard lubrication codes :

- 1 : Standard grease (grade NLGI O or OO)
- 2 : Oil splash lubrication (ISO viscosity 150)
- 3 : Others (please consult your supplier)

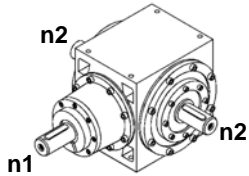
Cooling Type

- N** : No external cooling required
- R** : External cooling required

All data subject to change without notice



SPIRAL-BEVEL GEARBOXES for Robotics & Industry - R Series



Ratio = $n1 / n2$

UNIT RATING TABLES

- n1** = Speed of input shaft (bearing housing shaft)
- n2** = Speed of through shaft (output shaft)
- Pn1** = Power on input shaft (bearing housing shaft)
- Tn1** = Torque on input shaft (bearing housing shaft)
- Tn2** = Torque on through shaft (output shaft)

Ratio = 1	SPEED		SIZE 41				SIZE 51				SIZE 63			
	n1	n2	Pn1	Tn1	Tn2	THn2	Pn1	Tn1	Tn2	THn2	Pn1	Tn1	Tn2	THn2
	rpm	rpm	kW	N.m	N.m	N.m	kW	N.m	N.m	N.m	kW	N.m	N.m	N.m
10	10	6.9	6589	6589	3000	13	12414	12414	6000	26	24828	24828	12000	
50	50	31.4	5997	5997	3000	60	11456	11456	6000	120	22918	22918	12000	
125	125	73.2	5592	5592	3000	140	10695	10695	6000	280	21390	21390	12000	
250	250	125	4774	4774	3000	250	9549	9549	6000	500	19098	19098	12000	
500	500	216	4125	4125	3000	430	8212	8212	6000	774	14782	14782	12000	
750	750	302	3845	3845	3000	600	7639	7639	6000	1080	13750	13750	12000	
1000	1000	372	3552	3552	3000	750	7161	7161	6000	1350	12891	12891	12000	
1250	1250	420	3208	3208	3000	840	6417	6417	6000	1510	11535	11535	11535	
1500	1500	500	3183	3183	3000	1000	6366	6366	6000	1800	11459	11459	11459	
1750	1750	550	3001	3001	3000	1100	6002	6002	6000	1980	10804	10804	10804	
2000	2000	600	2864	2864	2864	1200	5729	5729	5729					
2500	2500	722	2757	2757	2757									

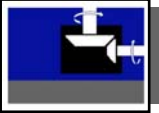
Ratio = 2	SPEED		SIZE 41				SIZE 51				SIZE 63			
	n1	n2	Pn1	Tn1	Tn2	THn2	Pn1	Tn1	Tn2	THn2	Pn1	Tn1	Tn2	THn2
	rpm	rpm	kW	N.m	N.m	N.m	kW	N.m	N.m	N.m	kW	N.m	N.m	N.m
10	5	3	2925	5850	3000	6	5729	11458	6000	9.4	8979	17958	12000	
50	25	15.3	2925	5850	3000	30	5729	11458	6000	47	8979	17958	12000	
125	62.5	38.3	2925	5850	3000	75	5729	11458	6000	117.5	8979	17958	12000	
250	125	76.6	2925	5850	3000	150	5729	11458	6000	235	8979	17958	12000	
500	250	135	2578	5156	3000	270	5156	10312	6000	470	8979	17958	12000	
750	375	170	2164	4328	3000	340	4329	8658	6000	650	8278	16556	12000	
1000	500	210	2005	4010	3000	420	4010	8010	6000	800	7642	15284	12000	
1250	625	240	1833	3666	3000	480	3666	7332	6000	930	7107	14214	12000	
1500	750	275	1750	3500	3000	550	3500	7000	6000	1000	6368	12736	12000	
1750	875	310	1691	3382	3000	620	3383	6766	6000	1150	6277	12554	12000	
2000	1000	340	1623	3246	3000	680	3246	6492	6000					
2500	1250	375	1432	2864	2864									

Ratio = 3	SPEED		SIZE 41				SIZE 51				SIZE 63			
	n1	n2	Pn1	Tn1	Tn2	THn2	Pn1	Tn1	Tn2	THn2	Pn1	Tn1	Tn2	THn2
	rpm	rpm	kW	N.m	N.m	N.m	kW	N.m	N.m	N.m	kW	N.m	N.m	N.m
10	3.3	2	1909	5727	3000	3.6	3437	10311	6000	6.5	6207	18621	11400	
50	16.7	9	1718	5154	3000	16.5	3151	9453	6000	31	5920	17760	11400	
125	41.7	19	1451	4353	3000	36.5	2788	8364	6000	70	5347	16041	11400	
250	83.3	33	1260	3780	3000	75	2864	8592	6000	122	4660	13980	11400	
500	166.7	60	1145	3435	3000	130	2635	7905	6000	212	4048	12144	11400	
750	250	88	1120	3360	3000	210	2673	8019	6000	301	3832	11496	11400	
1000	333.3	115	1098	3294	3000	280	2673	8019	6000	401	3829	11487	11400	
1250	416.7	152	1161	3483	3000	310	2368	7104	6000	501	3827	11451	11400	
1500	500	172	1094	3282	3000	334	2126	6378	6000	602	3827	11451	11400	
1750	583.3	195	1064	3192	3000	387	2111	6333	6000	702	3827	11451	11400	
2000	666.7	225	1074	3222	3000	450	2148	6444	6000					
2500	833.7	270	1031	3093	3000									

XX	XX	XX	XX	XX	XX	XX
XX	XX	XX	XX	XX	XX	XX
XX	XX	XX	XX	XX	XX	XX

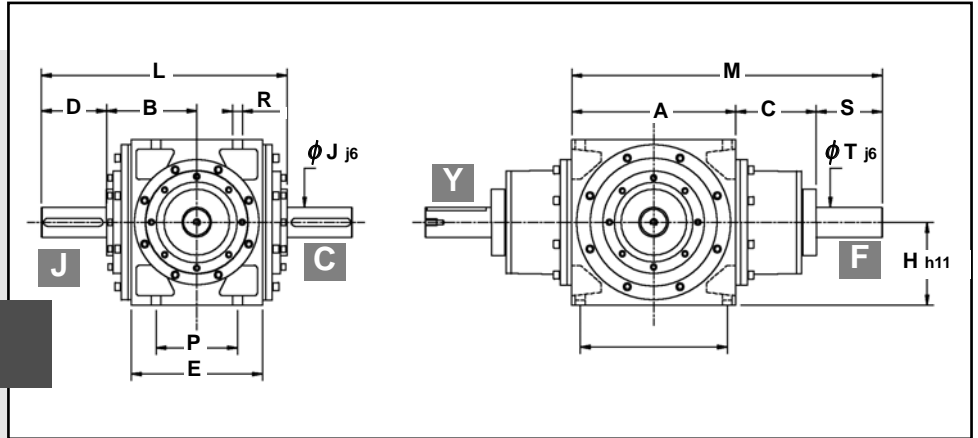
→ Forced lubrication required !

All data subject to change without notice



DIMENSIONS

**Type R
solid shafts**



Outline Dimensions (All Ratios)

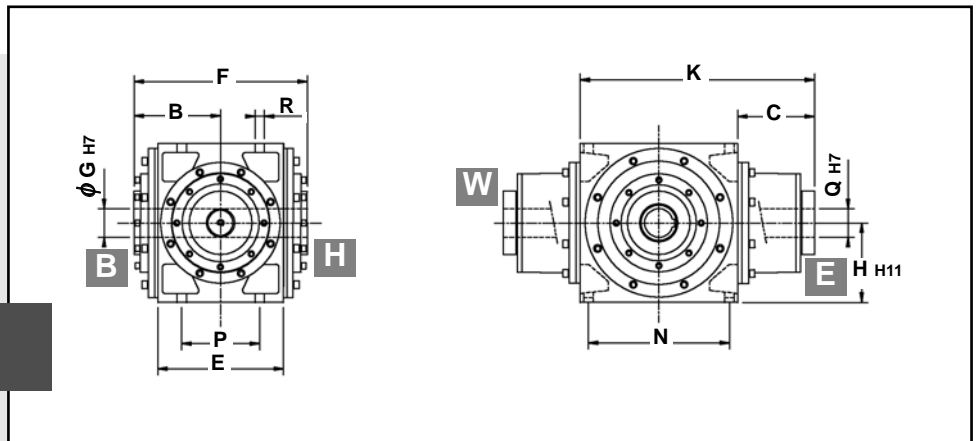
Size	A	B	C	D	E	H	J	L	N	P	Diam R	F	K	G
41	400	230	200	160	328	200	90	618	355	200	22	460	700	75
51	500	280	250	200	400	250	110	755	450	280	22	560	750	90
63	630	345	315	220	520	315	125	905	560	350	26	690	945	110

**Type Z
Common additional
dimensions**

Shaft Dimensions

Size	Gear Ratios : 1				Gear Ratios : 2 - 3			
	M	S	T	Q	M	S	T	Q
8	760	160	90	75	725	125	75	60
10	950	200	110	90	910	160	90	75
12	1165	220	125	110	1145	200	110	90

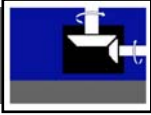
**Type R
hollow bore**



Outline Dimensions (All Ratios)

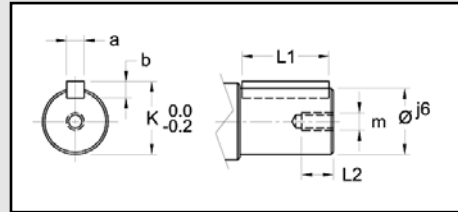
Size	A	B	C	D	E	H	J	L	N	P	Diam R	F	K	G
41	400	230	200	160	328	200	90	618	355	200	22	460	700	75
51	500	280	250	200	400	250	110	755	450	280	22	560	750	90
63	630	345	315	220	520	315	125	905	560	350	26	690	945	110

All data subject to change without notice



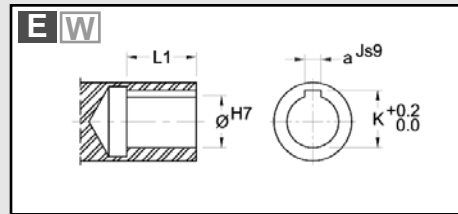
SHAFT DETAILS

Shaft	Keyway					
Ø	a	b	K	L1	m	L2
75	20	12	79.5	120	M16	29
90	25	14	95	155	M20	33
110	28	16	116	195	M24	39
125	32	18	132	215	M24	39



Shaft Keyway Dimensions

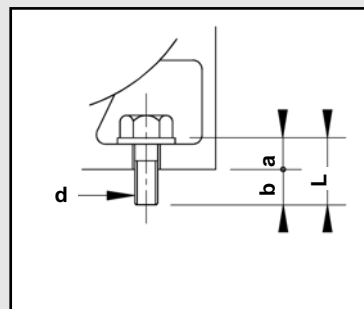
Ø	a	K	L1
60	18	64.4	130
75	20	79.5	140
90	25	95	170
110	28	116	200

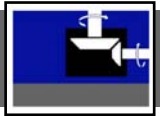


Hollow Bore Keyway Dimensions

FIXATION SCREWS

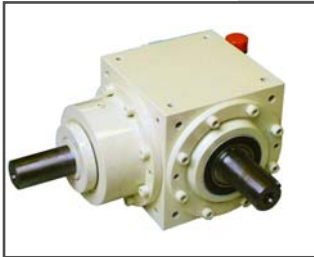
Size	Fixation screws			
Ø	a	b	Ø d	L
41	28	22	20	50
51	30	60	20	80
63	35	55	24	90





Other Bevel Gearbox products

R Series - Standard Range



The Z-Series product line offers 7 different sizes, 6 model types, and 9 ratios, with various input-output arrangements including solid shaft or hollow bore options, as well as universal mounting capability.

All of these options are made possible by a modular design concept that starts with a cubic housing. The Z-Series is an extremely versatile product line, meeting virtually all of the technical offices requests .



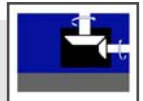
Z Series - Labyrinth seals version



A product line dedicated to the applications where very low maintenance, high operating speed and self contained lubrication systems are required .
REDEX ANDANTEX's Type Z with labyrinth seal option offers continuous duty input speed up to 5500 RPM.
 In addition to cool operation at high speeds, this option offers

several other advantages, specifically :

- Improved efficiency (98 -99 %) because of the frictionless design
- An average seal life > 50 000 hours (non contacting design)
- Dramatically reduced starting torque.

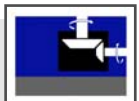


ZX Series - Tri-Directional Units



Based on the modular design of the Z-Series, all sizes can be offered with shafts in 3 planes.

This allows the simplification of designs requiring one input and two outputs at right angle to each other .



HPG-S Gear cutting - Sub-contracting capabilities

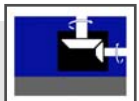


For many years, **REDEX ANDANTEX** has been well known for his technical expertise and his top quality industrial facility .

These advantages allow **REDEX-ANDANTEX** to offer a wide range of gear cutting sub-contracting operations :

- **Straight bevel gears**
- **Spiral bevel gears**
- **HPG-S finishing**

*Hardened & ground
 bevel gears to quality
 AGMA 13*



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