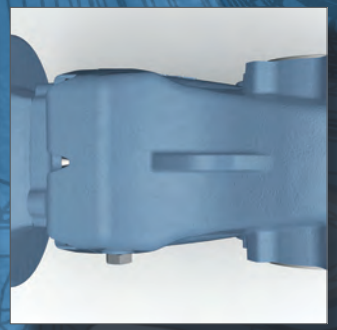
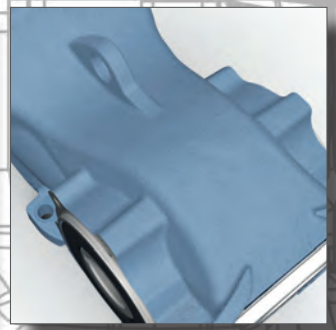
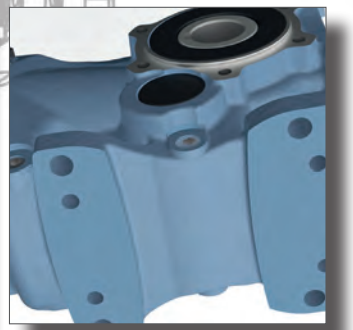
ENDURO BEVEL HELICAL GEARBOX

motive®







CERTIFICATO

Nr. 50 100 1185 Rev.012

SI ATTESTA CHE / *THIS IS TO CERTIFY THAT*

IL SISTEMA DI GESTIONE PER LA QUALITÀ DI
THE QUALITY MANAGEMENT SYSTEM OF

MOTIVE S.r.l.

SEDE LEGALE E OPERATIVA:
REGISTERED OFFICE AND OPERATIONAL SITE:

VIA LE GHISELLE 20
IT - 25014 CASTENEDOLO (BS)

È CONFORME AI REQUISITI DELLA NORMA
HAS BEEN FOUND TO COMPLY WITH THE REQUIREMENTS OF

UNI EN ISO 9001:2015

QUESTO CERTIFICATO È VALIDO PER IL SEGUENTE CAMPO DI APPLICAZIONE
THIS CERTIFICATE IS VALID FOR THE FOLLOWING SCOPE OF APPLICATION

Progettazione e fabbricazione di motori elettrici, riduttori meccanici ed inverter (IAF 19, 18)

Design and manufacture of electrical motors, mechanical gearboxes and variable speed drives (IAF 19, 18)

Per l'Organismo di Certificazione
For the Certification Body
TÜV Italia S.r.l.

Validità / *Validity*
Dal / From: **2025-03-03**
Al / To: **2028-03-02**

Data emissione / *Issuing Date*
2025-02-03

Francesco Scarlata
Direttore Divisione Business Assurance
Business Assurance Division Manager

PRIMA CERTIFICAZIONE / *FIRST CERTIFICATION:* 2001-07-20

"LA VALIDITÀ DEL PRESENTE CERTIFICATO È SUBORDINATA A SORVEGLIANZA PERIODICA A 12 MESI E AL RIESAME COMPLETO DEL SISTEMA DI GESTIONE AZIENDALE CON PERIODICITÀ TRIENNALE"
"THE VALIDITY OF THE PRESENT CERTIFICATE DEPENDS ON THE ANNUAL SURVEILLANCE EVERY 12 MONTHS AND ON THE COMPLETE REVIEW OF COMPANY'S MANAGEMENT SYSTEM AFTER THREE-YEARS"

TÜV Italia • Gruppo TÜV SÜD • Viale Fulvio Testi, 280/6 • 20126 Milano • Italia • www.tuvsud.com/it

ZERTIFIKAT ◆ CERTIFICATE ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Autorizzazione AEO — **IT AEOF 21 1809**

1. Titolare dell'Autorizzazione AEO
MOTIVE S.R.L.
Codice EORI IT03580280174

2. Autorità che rilascia l'Autorizzazione
Agenzia delle Dogane e dei Monopoli
Direzione Centrale Dogane
Ufficio AEO, compliance e grandi imprese

3. Stabile organizzazione

Il Titolare indicato nel riquadro 1 è un

Operatore economico autorizzato

Semplificazioni doganali / Sicurezza (AEOF)

5. Data di validità dell'Autorizzazione **15/05/2021**

Il Direttore dell'Ufficio

CERTIFICATE

EU-TYPE EXAMINATION CERTIFICATE

Equipment or Protective System intended for use in potentially explosive atmospheres Directive 2014/34/EU

[1]
[2]
[3] EU-Type Examination Certificate number:
TÜV IT 20 ATEX 048 X Rev 1

[4] Equipment or Protective System: Three-phase asynchronous electric motors DELPHI series
[5] Manufacturer: **MOTIVE S.r.l.**
[6] Address: **Via Le Ghiselle 20 I-25014 CASTENEDOLO (BS) ITALY**

[7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] TÜV Italia, notified body no. 0948 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. R 20 EX 046 Rev. 1.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with: **EN IEC 60079-0:2018 EN IEC 60079-7:2015/A1:2018 EN 60079-31:2014**

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:
II 2G Ex eb IIC T6..T3 Gb
II 2D Ex tb IIIC T85°C..T120°C Db

This certificate may only be reproduced in its entirety and without any change, schedule included.

Issue date: 12th March 2025
1st Issue date: 17th February 2021

TÜV Italia S.r.l.
Notified body N° 0948

PRD N° 081B

Industry Service - Real Estate & Infrastructure
Managing Director

page 1 di 12

TÜV Italia has been authorized by Italian government to operate as notified body for the certification of equipment or protective systems intended for use in potentially explosive atmospheres. This document is not valid without official signature and logo. The official reference code is 1222373A7.

ZERTIFIKAT ◆ CERTIFICATE ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

MADE IN ITALY

VISIT AND KNOW MOTIVE THANKS TO
THE MOVIE ON WWW.MOTIVE.IT

INDEX

motive®

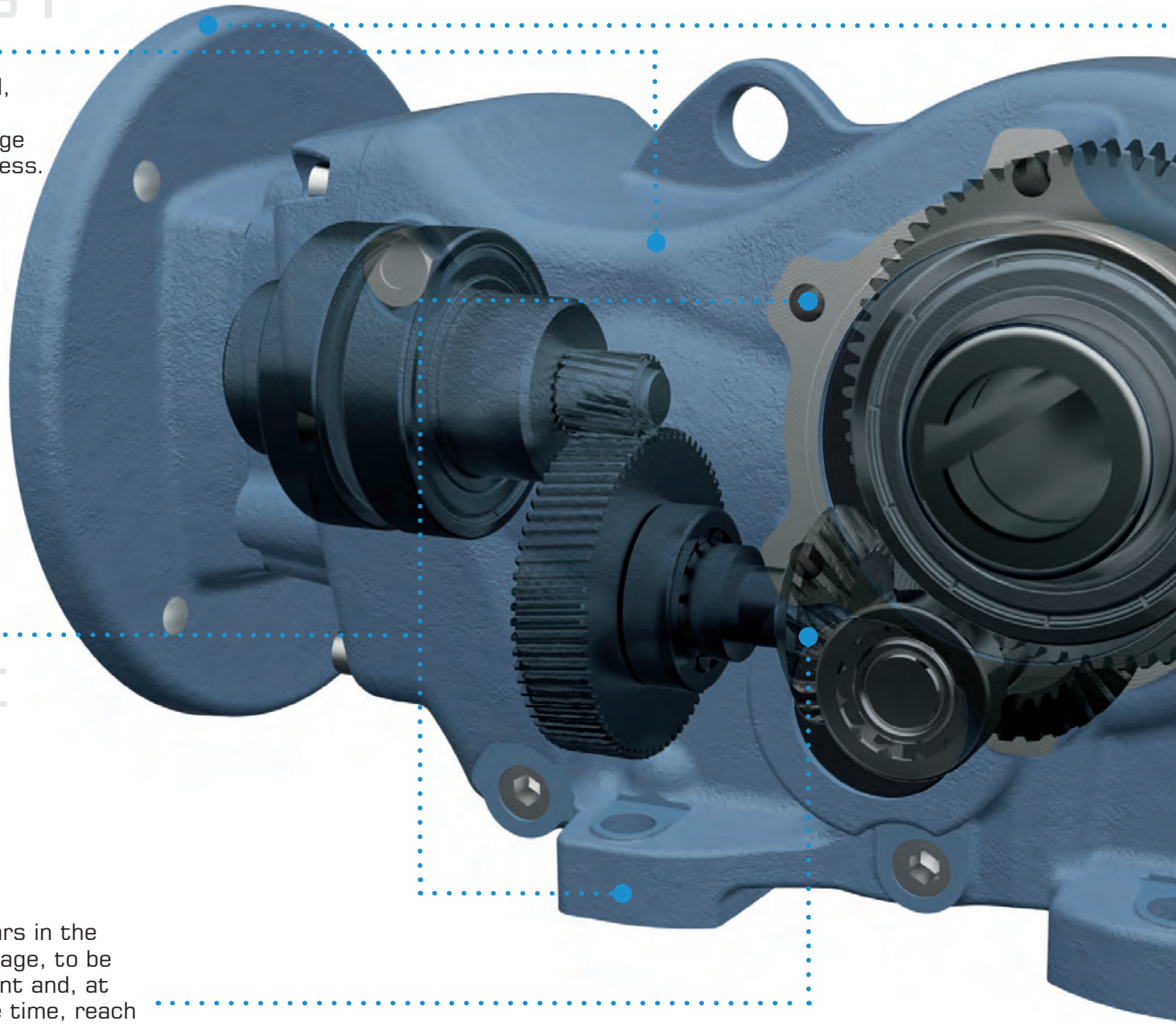
ROBUST

Uniquely contoured, rigid, precise, monobloc, cast iron Body, Base and Flange ensure extreme robustness.

VERSATILE

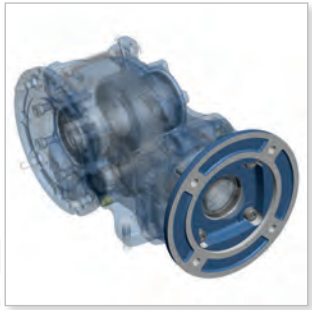
A modular design with detachable output flange and integral feet permits the easy and fast conversion between flange or foot mounting

Bevel gears in the middle stage, to be more silent and, at the same time, reach a higher service factor



REGISTERED DESIGN

FLEXIBLE MOUNTING



IEC flange and hollow shaft.

Choice of hollow input flanges permits direct mounting of any standard motor

Unique construction of Enduro makes it possible to mount any size in any position.
This flexibility is achieved by:

+ ZZ autolubricating bearings on input and output shaft

5 interchangeable plugs, including one breather plug and a level plug Please note that the vent plug also allows you to reduce the internal pressure on seals, and thus increases the efficiency of the gearbox

+ mechanical parts locked in their positions by snap rings.This also ensures better absorbtion of axial thrust and prolongs the life of bearings

ENGINEERED FOR HIGHER RELIABILITY

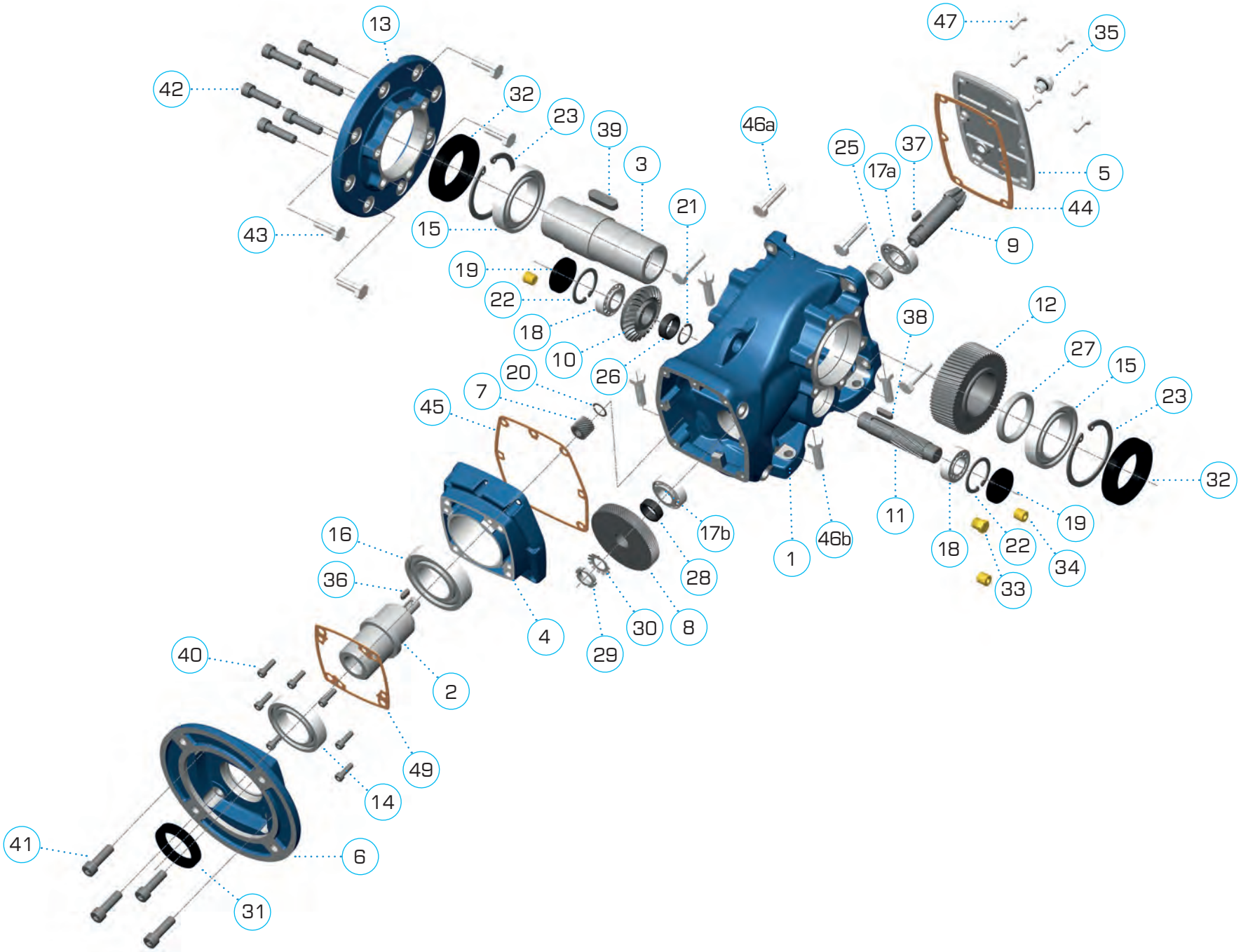
Use of high strength steels and case hardening to 58 ±2 HRC reduce the wear rate in wheels.
All wheels are profile ground to Din 3962 class 6 accuracy for low noise and high efficiency.

Single stages ratios between 2 and 6, together with proper gears sizes, result mathematically in higher teeth number and size (module) of each wheel and a better fractioned load among the reduction stages. That influences both durabilty and torque transmission capability

Dual bearing support on the input shaft assures precise alignment of the first stage gears and reduces vibrations and consequent gear wear

Abounding bearings size, in order to withstand higher loads

LIST OF COMPONENTS



LIST OF COMPONENTS

		ENDURO 3		ENDURO 4		ENDURO 5		ENDURO7		ENDURO8		ENDURO9	
item	code	description	q.ty	description	q.ty	description	q.ty	description	q.ty	description	q.ty	description	q.ty
1	HOUEN...	Housing	1	Housing	1	Housing	1	Housing	1	Housing	1	Housing	1
2	ISHDM...ID...	Input shaft	1	Input shaft	1	Input shaft	1	Input shaft	1	Input shaft	1	Input shaft	1
3	OSHEN...	Output shaft	1	Output shaft	1	Output shaft	1	Output shaft	1	Output shaft	1	Output shaft	1
4	ICVES...	Input cover	1	Input cover	1	Input cover	1	Input cover	1	Input cover	1	Input cover	1
5	TCVES...	Closing cover	1	Closing cover	1	Closing cover	1	Closing cover	1	Closing cover	1	Closing cover	1
6	IFL...	Input flange 63B5	1										
		Input flange 71B5		Input flange 71B5	1	Input flange 71B5	1						
		Input flange 80/90B5		Input flange 80/90B5		Input flange 80/90B5		Input flange 80/90B5	1	Input flange 80/90B5	1		
		Input flange 100/112B5		Input flange 100/112B5		Input flange 100/112B5		Input flange 100/112B5		Input flange 100/112B5		Input flange 100/112B5	1
								Input flange 132B5		Input flange 132B5		Input flange132B5	
										Input flange 160/180B5		Input flange 160/180B5	
												Input flange 200B5	
7	P1...	Pinion 1	1	Pinion 1	1	Pinion 1	1	Pinion 1	1	Pinion 1	1	Pinion 1	1
8	G1...	Gear 1	1	Gear 1	1	Gear 1	1	Gear 1	1	Gear 1	1	Gear 1	1
9	P2...	Bevel pinion 2	1	Bevel pinion 2	1	Bevel pinion 2	1	Bevel pinion 2	1	Bevel pinion 2	1	Bevel pinion 2	1
10	G2...	Bevel gear 2	1	Bevel gear 2	1	Bevel gear 2	1	Bevel gear 2	1	Bevel gear 2	1	Bevel gear 2	1
11	P3...	Pinion 3	1	Pinion 3	1	Pinion 3	1	Pinion 3	1	Pinion 3	1	Pinion 3	1
12	G3...	Gear 3	1	Gear 3	1	Gear 3	1	Gear 3	1	Gear 3	1	Gear 3	1
13	OFL...ES...	Output flange 160	1	Output flange 200	1	Output flange 250	1	Flangia uscita 300	1	Flangia uscita 350	1	Flangia uscita 450	1
14	BEA...	Bearing 6008ZZ-C3	1	Bearing 6009ZZ-C3	1	Bearing 6009ZZ-C3	1	Bearing 6211ZZ-C3	1	Bearing 6213ZZ-C3 (6009ZZ IFL90-112)	1	Bearing 6216ZZ-C3	1
15	BEA...	Bearing 6009ZZ-C3	2	Bearing 6010ZZ-C3	2	Bearing 6011ZZ-C3	2	Bearing 6014ZZ-C3	2	Bearing 6017ZZ-C3	2	Bearing 6219ZZ-C3	2
16	BEA...	Bearing 6008ZZ-C3	1	Bearing 6009ZZ-C3	1	Bearing 6009ZZ-C3	1	Bearing 6210ZZ-C3	1	Bearing 6212ZZ-C3 (6009ZZ IFL90112)	1	Bearing 6215ZZ-C3	1
17a	BEA...	Bearing 30303	1	Bearing 30204	1	Bearing 30205	1	Bearing 32306	1	Bearing 32008	1	Bearing 32308	1
17b	BEA...	Bearing 30203	1	Bearing 32004	1	Bearing 32005	1	Bearing 32206	1	Bearing 32007	1	Bearing 32208	1
18	BEA...	Bearing 30202	2	Bearing 32004	2	Bearing 30204	2	Bearing 30306	2	Bearing 30307	2	Bearing 30308	2
19	COV...	Plug D35x5	2	Plug D42x8	2	Plug D47x7	2	Plug D72x7	2	Plug D80x7	2	Plug D90x10	2
20	SNRD..A	Circlip ... input shaft	1	Circlip ... input shaft	1	Circlip ... input shaft	1	Circlip ... input shaft	1	Circlip ... input shaft	1	Circlip ... input shaft	1
21	SNRD...B	Circlip D40 holes	1	Circlip D42 holes	1	Circlip D47 holes	1	Circlip D62 holes	1	Circlip D62 holes	1	Circlip D80 holes	1
22	SNRD...B	Circlip D35 holes	2	Circlip D42 holes	2	Circlip D47 holes	2	Circlip D72 holes	2	Circlip D80 holes	2	Circlip D90 holes	2
23	SNRD...B	Circlip D75 holes	2	Circlip D80 holes	2	Circlip D90 holes	2	Circlip D110 holes	1	Circlip D130 holes	1	Circlip D170 holes	1
25	SPR...	Spacer	1	Spacer	1	Spacer	1	Spacer	1	Spacer	1	Spacer	1
26	SPR...	Spacer	1	Spacer	1	Spacer	1	Spacer	1	Spacer	1	Spacer	1
27	SPR...	Spacer	1	Spacer	1	Spacer	1	Spacer	1	Spacer	1	Spacer	1
28	SPR...			Spacer	1			Spacer	1	Spacer	1	Spacer	1
29	GHIM...	Tightening nut	1	Tightening nut	1	Tightening nut	1	Tightening nut	1	Tightening nut	1	Tightening nut	1
30	WSH...	Safety washer	1	Safety washer	1	Safety washer	1	Safety washer	1	Safety washer	1	Safety washer	1
31	OS...X...X...	Oil seal 40x55x8	1	Oil seal 45X60X9	1	Oil seal 45X60X9	1	Oil seal 55X80X10	1	Oil seal 65X90X12 (45X65X10 IFL90-112)	1	Oil seal 80X105X13	1
32	OS...X...X...	Oil seal 45x75x8	2	Oil seal 50X80X12	2	Oil seal 55X90X12	2	Oil seal 70X110X12	2	Oil seal 85X130X12	2	Oil seal 95X170X12	2
33	BPL	Breather plug 1/4"	1	Breather plug 1/4"	1	Breather plug 1/4"	1	Breather plug 1/4"	1	Breather plug 1/2"	1	Breather plug 1/2"	1
34	FPL	Filler plug 1/4"	3	Filler plug 1/4"	3	Filler plug 1/4"	3	Filler plug 1/4"	3	Filler plug 1/2"	3	Filler plug 1/2"	3
35	LPL	Level plug 1/4"	1	Level plug 1/4"	1	Level plug 1/4"	1	Level plug 1/4"	1	Level plug 1/2"	1	Level plug 1/2"	1
44	GK44ES...	Inspection cover gasket	1	Inspection cover gasket	1	Inspection cover gasket	1	Inspection cover gasket	1	Inspection cover gasket	1	Inspection cover gasket	1
45	GK45ES...	Input cover gasket	1	Input cover gasket	1	Input cover gasket	1	Input cover gasket	1	Input cover gasket	1	Input cover gasket	1
49	GK...	Input flange gasket	1	Input flange gasket	1	Input flange gasket	1	Input flange gasket	1	Input flange gasket	1	Input flange gasket	1

	ENDURO	ROBUS	STON
only for ENDURO series	✓		
this part can be used either on ENDURO or ROBUS series	✓	✓	
this part can be used either on STON or ENDURO series	✓		✓
same part can be used for ENDURO, ROBUS and STON series	✓	✓	✓

CODE SYSTEM

1 first 3 digits describe the ENDURO size

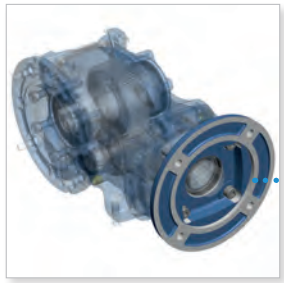
EN3	= ENDURO 3
EN4	= ENDURO 4
etc	

2 then 3 digits are the rated ratio

020	=i:20
120	=i:120
etc	

3 then 3 digits for the mounting type

160	=output flange 71B5 KP=160
200	=output flange 80/90B5 KP=200
250	=output flange 100/112B5 KP=250
UNV	= without output flange
SHR	= with shrink disk



4 3 digits for the input flange (that determines the input hole diameter too)

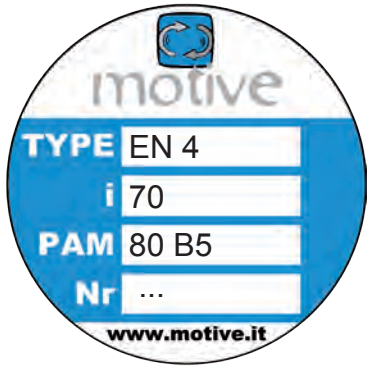
805	=80B5
905	=90B5
125	=100-112B5
135	=132B5
etc	

For instance:

EN4070200805

- Enduro 4
- ratio i:70
- output flange D=200mm
- input PAM flange 80 B5

Plate:



LUBRICATION

Each Enduro is supplied with long-life synthetic oil and do not require any maintenance.The oil quantity is suitable for B3 mounting position

ENDURO	oil (lt)						ISO	temp.	type	
	B3	B6	B7	B8	V5	V6				
EN3	0,37	1,2	1,2	1,25	1,4	1,0	VG 220	-25 +80°C	Mobil Glygoyle 30	Shell tivela S220
EN4	0,65	2,0	2,0	2,1	1,9	1,85				
EN5	0,90	2,9	2,9	3,0	2,8	2,5				
EN7	1,6	5,7	5,8	6,6	6,8	5,5				
EN8	2,5	10,0	10,3	10,8	10,4	9,1				
EN9	5,8	17,6	18,2	20,0	20,5	16,5				

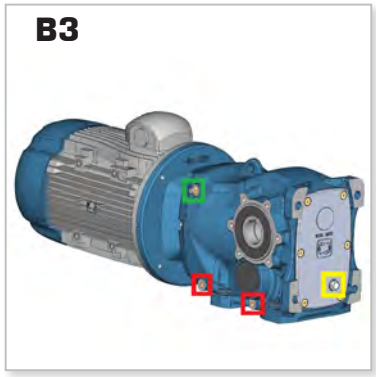
THE MANUAL FIRST OF ALL:

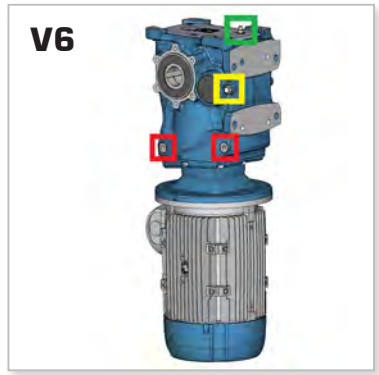
After adapting the oil quantity, each ENDURO can be mounted in ANY position, thus giving big advantages in the stock management and lead time, thanks to the following 3 characteristics:

ZZ autolubricating bearings on input and output shaft

5 interchangeable plugs, including one breather plug and a level plug. Level and breather plug must be positioned according to this chart

mechanical parts locked in their positions by circlips. This also ensures better absorbtion of axial thrust and prolongs the life of bearings





pressure breather plug

level plug

filler plug

Configure what you need by this automatic consultant, and get CAD files and data sheets

Motive configurator allows you to shape Motive products, combine them as you want, and finally to download 2D/3D CAD drawings, and a PDF datasheet.

Search by performance
If you're not sure about the best products combination that you should select for your purpose, you can input your wishes, like final torque, final speed, use, etc, and the configurator will act like a consultant.
It will give you a list of applicable product configurations; you can then download a PDF data sheet featuring performance data and dimensional drawings for each configuration, as well as 2D and 3D drawings.

Search by product
To be used if you already know the product configuration that you want, and you just want to get quicker a PDF data sheet featuring performance data and dimensional drawings for 2D and 3D drawings.

free access without login
http://www.motive.it/configuratore.php

Rated output torque M_{n2} [Nm]
Torque output transmissible under uniform loading and referred to the input speed n_1 and the corresponding output speed n_2.
The output torque can be calculated with the following formula:

$$M_{n2} = \frac{P_{n1}\,[kW] \cdot 9550}{n_2} \cdot \eta$$

Torque demand M_{r2} [Nm]
Torque calculated based on application requirements. It must be ≤ M_{n2} of the chosen BOX unit.

Input power P_{n1} [kW]
This is the power value of the motor applied to the input shaft and corresponding to a certain input speed n_1, a service factor $f_s = 1$ and a duty service S_1.
It is even possibile to calculate the motorsize necessary by using the formula:

$$P_{n1}\,[kW] = \frac{M_{r2} \cdot n_2}{9550 \cdot \eta}$$

Since the value calculated in this way could not really correspond to an input power actually available in the IEC standardised motors, it will be necessari to choose, among the input powers available, the one which is immediately higher, checking this in the Motive catalogue of the motors.

Efficiency η [%]

An inherent factor in the selection wormgear boxes is the efficiency h, defined as the ratio between the mechanical power coming out from the output shaft, and the power in the input shaft:

$$\eta = \frac{P_{n2}}{P_{n1}}$$

The efficiency in helical gearboxes is mainly determined by the gearing and bearing friction.
The efficiency of ENDURO varies with the nr of stages: it's 94% when the reduction stages are 3, 96% when the stages are 2. The starting efficiency is always less than the efficiency at rated speed.

Gear ratio i
It is the relationship of the input speed n1and the output speed n_2

$$i = \frac{n_1}{n_2}$$

In the combined, the total ratio is the result of the product of the ratio of the two single boxes.

Input speed n_1 [rpm]
It is the speed the BOX unit is driven at.

Output speed n_2 [rpm]
It is the rotation speed of the output shaft.

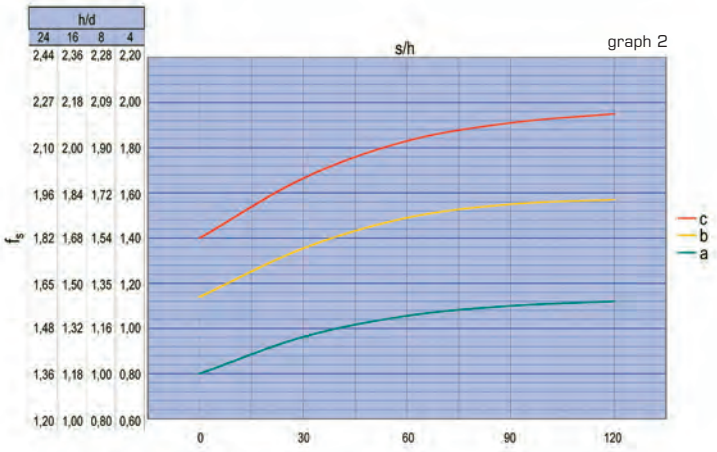
Service factor f_s
It is a numeric value describing the BOX unit service duty. With unavoidable approximation, it takes into consideration:

- the daily working hours **h/d**
- the load classification (see table 2), and then the moment of inertia of the driven masses.
- The number of starts per hour **s/h**
- The presence of brake motors, for which it is necessary to multiply for 1.12 the service factor value deducted by the graph 2.
- The significance of the application in terms of safety, for example lifting of parts

In the graph 2, the service factor f_{sr} required by a certain application can be attained, after having selected the proper "daily working hours" (h/d) column, by intersecting the number of starts per hour (s/h) and one of the a, b or c curves. The curves a, b and c are linked with the load classification described in the table 2.
If, after the selection of the right M_{r2} and n_2 in the following performance tables, you don't find a ENDURO unit whose service factor f_s is ≥ of the requested one f_{sr}, you can choose a ENDURO unit in which $M_{n2} > M_{r2}$.
In fact, in order to satisfy f_{sr}, you can choose another BOX unit whose output torque is ≥ M_{c2} output torque, where:
$M_{c2} = M_{r2} \cdot f_{sr}$
Note: This rule is valid only if the new ENDURO unit that has been selected in this way has a service factor $f_s \geq 1$ in the performance tables.
From another point of view, the value of f_s in the performance tables refers to a case in which the effective torque requested by the application M_{r2} matches perfectly with the one appearing on the catalogue M_{n2}.
Whenever the torque indicated in the performance table is higher than the requested one, the offered service factor of the performance table can be increased according to the formula:

$$f_s \text{ real} = \frac{f_s \text{ on the table} \cdot M_{n2} \text{ on the table}}{M_{r2}}$$

The value of f_s calculated in this way must be ≥ f_{sr}.



graph 2

tab. 2

	load classification	application
c	uneven operation, heavy loads, larger masses to be accelerated	conveyors with violent jerks; compressors ad alternate pumps with 1 or more cylinders; machinery for bricks, tiles and clay; kneaders; milling machines; lifting winches with buckets; rotting furnaces; heavy fans or mining purposes; mixers for heavy materials; machine-tools; planing kinds; alternating saws; shears; tumbling barrels; vibrators; shredders; turntables
b	starting with moderate loads, uneven operating conditions, medium size masses to be accelerated	belt conveyors with varied load with transfer of bridge trucks for light duty; levelling machines; shakers and mixed for liquid with variable density and viscosity; machines for the food industry (kneading troughs, mincing machines, slicing machines, etc); sifting machines for sand gravel; textile industry machines; cranes, hoists, goodstifts; fertilizer scrapers; concrete mixers; folding machines; winches; crane mechanisms
a	easy starting, smooth operation, small masses be accelerated	belt conveyors for light material; centrifugal pumps; rotary gear pumps; screw feeders for light materials; lifts; bottling machines; auxiliary controls of tool machines; fans; power generators; fillers; small mixers

MAX MOTOR KW

(WITH FS=1.0 ; N1=1400RPM)

i:	EN3	EN4	EN5	EN7	EN8	EN9
4			14,52			
5	5,15	8,46	11,90			92,28
6	4,25	6,90				
7		6,57		19,86	44,36	92,28
8			7,59	16,77		59,28
9	3,33	7,31	9,01			71,12
10				14,25	42,03	
11	2,74	5,97	7,37	19,86	29,19	59,28
12					29,45	
13		4,96	5,54	16,77	33,88	
14	1,86	3,35				45,50
15				15,67	22,88	
16		2,95	4,71	13,48		44,28
17	1,82		5,20		25,12	
18		3,62			18,76	35,25
19	1,47		4,34	11,99		35,69
20		2,58		12,19		
21	1,51			11,66		
22		2,41	4,49		18,89	29,25
23						
24					16,32	28,72
25		2,73		8,96		24,92
26	1,20	2,58	3,54		16,23	
27			3,37	9,32		
28						
29					14,76	24,77
30		2,28		8,30		24,65
31					12,75	23,72
32	1,13			7,73		
33	1,09	2,06	2,97	6,79	12,24	18,53
34					12,79	
35				6,95		
36				6,68		20,67
37	0,99			5,99	11,56	
38		1,85	2,31			
39						18,50
40	0,80	1,73		5,60		
41						16,44
42					9,30	
43			1,97	5,17	8,97	

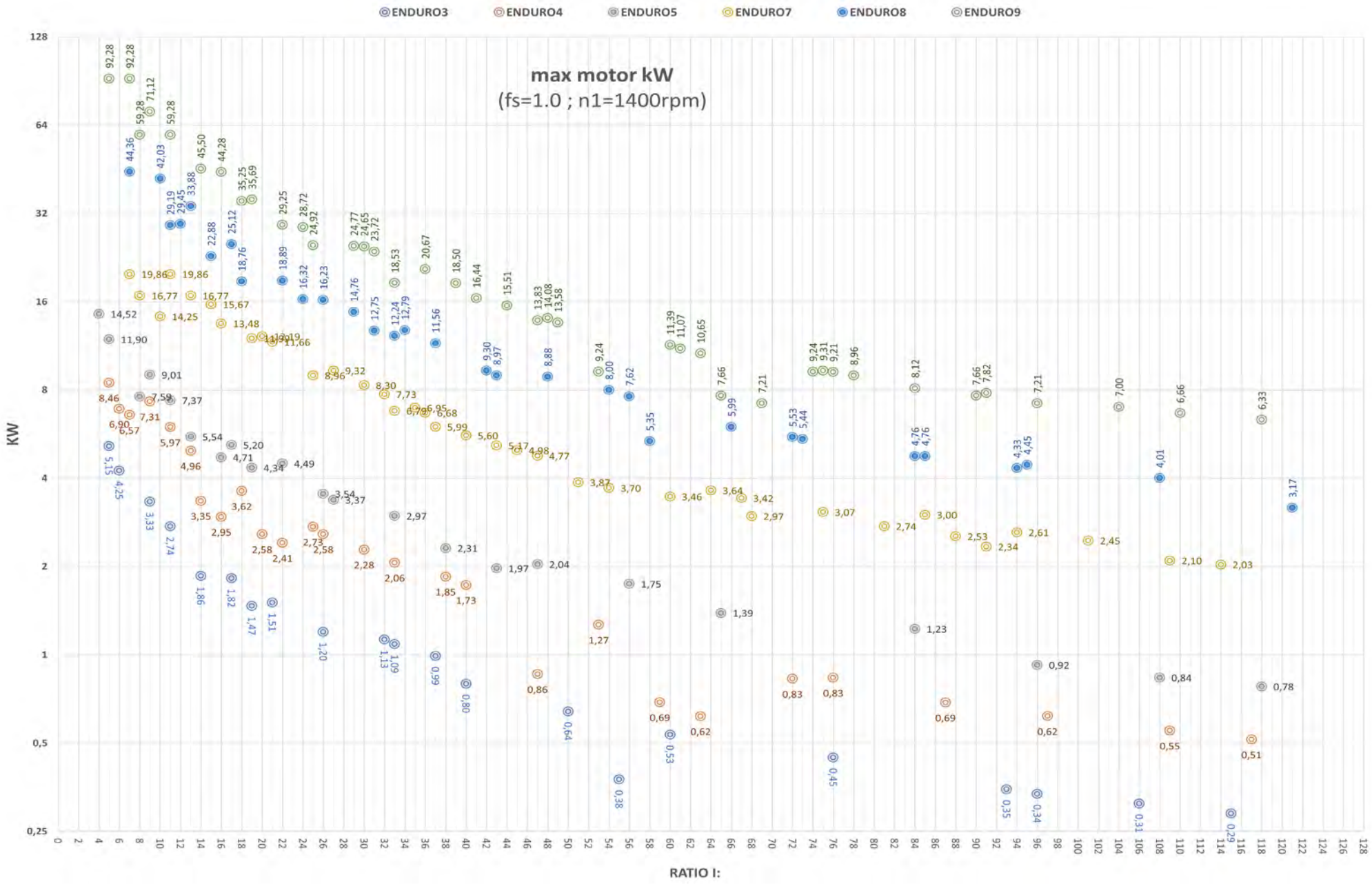
i:	EN3	EN4	EN5	EN7	EN8	EN9
44						15,51
45				4,98		
46						
47		0,86	2,04	4,77		13,83
48					8,88	14,08
49						13,58
50	0,64					
51				3,87		
52						
53		1,27				9,24
54				3,70	8,00	
55	0,38					
56			1,75		7,62	
57						
58					5,35	
59		0,69				
60	0,53			3,46		11,39
61						11,07
62						
63		0,62				10,65
64				3,64		
65			1,39			7,66
66					5,99	
67				3,42		
68				2,97		
69						7,21
70						
71						
72		0,83			5,53	
73					5,44	
74						9,24
75				3,07		9,31
76	0,45	0,83				9,21
77						
78						8,96
79						
80						
81				2,74		
82						

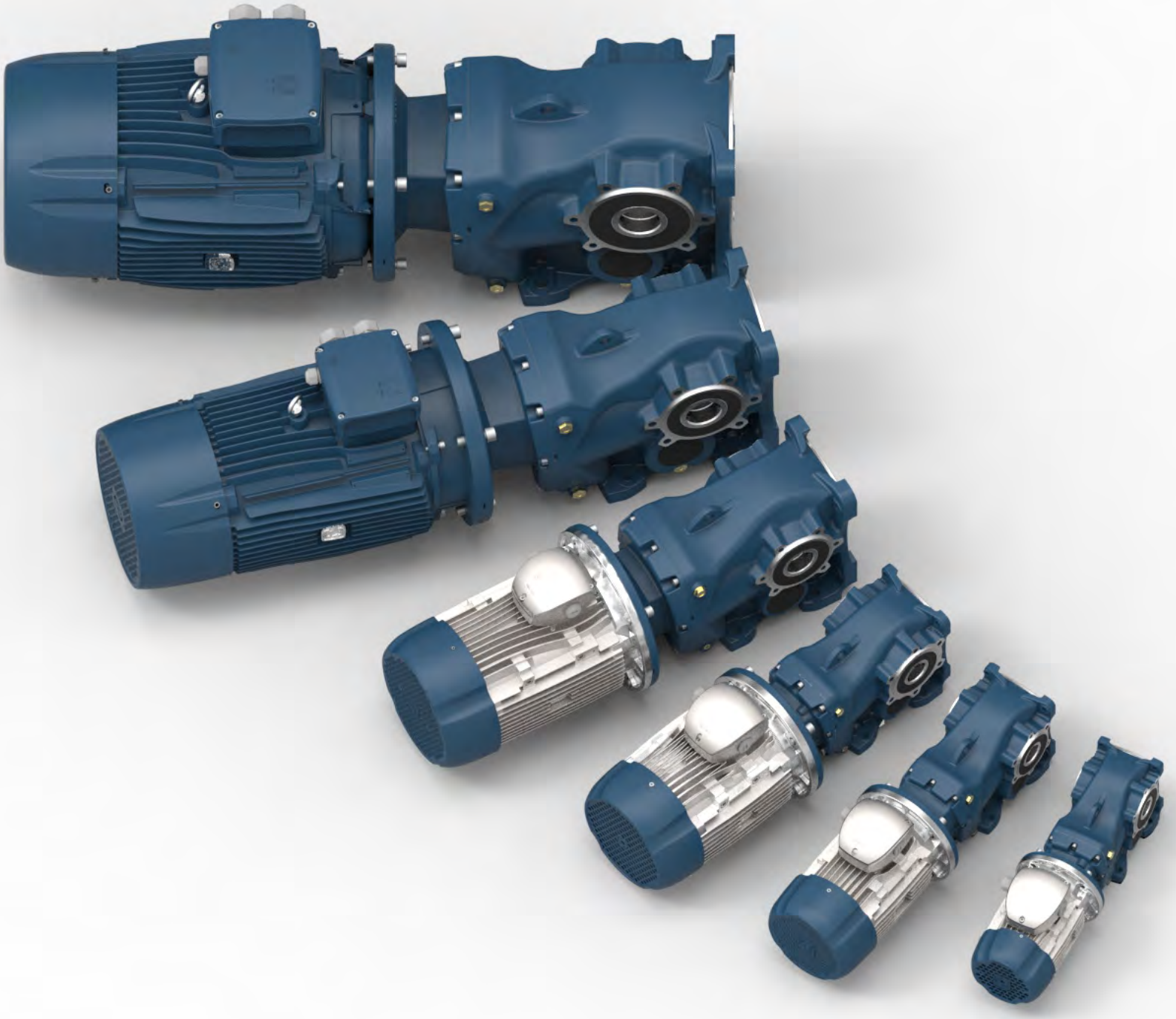
i:	EN3	EN4	EN5	EN7	EN8	EN9
83						
84			1,23		4,76	8,12
85				3,00	4,76	
86						
87		0,69				
88				2,53		
89						
90						7,66
91				2,34		7,82
92						
93	0,35					
94				2,61	4,33	
95					4,45	
96	0,34		0,92			7,21
97		0,62				
98						
99						
100						
101				2,45		
102						
103						
104						7,00
105						
106	0,31					
107						
108			0,84		4,01	
109		0,55		2,10		
110						6,66
111						
112						
113						
114				2,03		
115	0,29					
116						
117		0,51				
118			0,78			6,33
119						
120						
121					3,17	

at 60Hz 1700rpm, max motor kW increases 19%

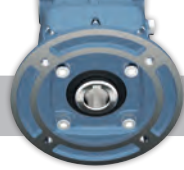
MAX MOTOR KW

(FS=1.0 ; N1=1400RPM)





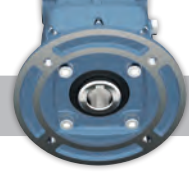
PERFORMANCE TABLE



ENDURO 3		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
115	115,07	**0,13**	0,18	71B-8	650	**1,24**	5,6	195	19,6									
		0,25	0,35	71B-6	910	**0,83**	7,9	281	28,3									
		0,18	0,25	71A-6	910	**1,15**	7,9	202	20,4									
		0,13	0,18	63A-4	1350	**2,15**	12	97	9,8									
		0,18	0,25	63B-4	1390	**1,60**	12	135	13,6									
		0,25	0,35	71A-4	1400	**1,16**	12	187	18,9									
		0,37	0,5	71B-4	1400	**0,78**	12	277	27,9									
106	106,21	**0,13**	0,18	71B-8	650	**1,33**	6,1	195	19,6									
		0,25	0,35	71B-6	910	**0,89**	8,6	249	25,2									
		0,18	0,25	71A-6	910	**1,23**	8,6	180	18,1									
		0,13	0,18	63A-4	1350	**2,30**	13	90	9,1									
		0,18	0,25	63B-4	1390	**1,71**	13	124	12,5									
		0,25	0,35	71A-4	1400	**1,24**	13	173	17,4									
		0,37	0,5	71B-4	1400	**0,84**	13	255	25,8									
96	96,33	**0,13**	0,18	71B-8	650	**1,44**	6,7	167	16,8									
		0,25	0,35	71B-6	910	**0,96**	9,4	249	25,2									
		0,18	0,25	71A-6	910	**1,33**	9,4	180	18,1									
		0,13	0,18	63A-4	1350	**2,49**	14	83	8,4									
		0,18	0,25	63B-4	1390	**1,85**	14	115	11,6									
		0,25	0,35	71A-4	1400	**1,34**	15	150	15,1									
		0,37	0,5	71B-4	1400	**0,91**	15	221	22,3									
93	92,84	**0,13**	0,18	71B-8	650	**1,49**	7,0	167	16,8									
		0,25	0,35	71B-6	910	**0,99**	10	224	22,6									
		0,18	0,25	71A-6	910	**1,38**	10	162	16,3									
		0,13	0,18	63A-4	1350	**2,58**	15	78	7,8									
		0,18	0,25	63B-4	1390	**1,92**	15	108	10,9									
		0,25	0,35	71A-4	1400	**1,39**	15	150	15,1									
		0,37	0,5	71B-4	1400	**0,94**	15	221	22,3									
76	75,58	**0,13**	0,18	71B-8	650	**1,93**	8,6	130	13,1									
		0,13	0,18	63A-4	1350	**3,34**	18	65	6,5									
		0,18	0,25	63B-4	1390	**2,48**	18	90	9,1									
		0,25	0,35	71A-4	1400	**1,80**	19	118	11,9									
		0,37	0,5	71B-4	1400	**1,22**	19	175	17,6									
60	59,67	**0,13**	0,18	63A-4	1350	**3,97**	23	51	5,1									
		0,18	0,25	63B-4	1390	**2,95**	23	70	7,1									
		0,25	0,35	71A-4	1400	**2,14**	23	98	9,8									
		0,37	0,5	71B-4	1400	**1,44**	23	144	14,6									
55	55,18	**0,13**	0,18	63A-4	1350	**2,82**	24	49	4,9									
		0,18	0,25	63B-4	1390	**2,10**	25	65	6,5									
		0,25	0,35	71A-4	1400	**1,52**	25	90	9,1									
		0,37	0,5	71B-4	1400	**1,03**	25	133	13,4									

ENDURO 3		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
50	49,51	**0,18**	0,25	63B-4	1390	**3,54**	28	58	5,8									
		0,25	0,35	71A-4	1400	**2,56**	28	80	8,1									
		0,37	0,5	71B-4	1400	**1,73**	28	119	12,0									
		0,55	0,75	80A-4	1400	**1,17**	28	176	17,8									
		0,75	1	80B-4	1400	**0,85**	28	240	24,3									
40	39,64	**0,18**	0,25	63B-4	1390	**4,39**	35	46	4,7									
		0,25	0,35	71A-4	1400	**3,18**	35	64	6,5									
		0,37	0,5	71B-4	1400	**2,15**	35	95	9,6									
		0,55	0,75	80A-4	1400	**1,45**	35	141	14,2									
		0,75	1	80B-4	1400	**1,06**	35	192	19,4									
37	36,59	**0,18**	0,25	63B-4	1390	**5,46**	38	43	4,3									
		0,25	0,35	71A-4	1400	**3,96**	38	59	6,0									
		0,37	0,5	71B-4	1400	**2,68**	38	87	8,8									
		0,55	0,75	80A-4	1400	**1,80**	38	130	13,1									
		0,75	1	80B-4	1400	**1,32**	38	177	17,9									
33	33,18	**0,25**	0,35	71A-4	1400	**4,36**	42	53	5,4									
		0,37	0,5	71B-4	1400	**2,95**	42	79	8,0									
		0,55	0,75	80A-4	1400	**1,98**	42	118	11,9									
		0,75	1	80B-4	1400	**1,45**	42	160	16,2									
		1,1	1,5	80C-4	1400	**0,99**	42	235	23,7									
32	31,98	**0,25**	0,35	71A-4	1400	**4,52**	44	51	5,1									
		0,37	0,5	71B-4	1400	**3,05**	44	75	7,6									
		0,55	0,75	80A-4	1400	**2,05**	44	112	11,3									
		0,75	1	80B-4	1400	**1,51**	44	153	15,4									
		1,1	1,5	80C-4	1400	**1,03**	44	224	22,6									
		1,1	1,5	90S-4	1400	**1,03**	44	224	22,6									
26	26,04	**0,25**	0,35	71A-4	1400	**4,79**	54	42	4,2									
		0,37	0,5	71B-4	1400	**3,24**	54	62	6,2									
		0,55	0,75	80A-4	1400	**2,18**	54	91	9,2									
		0,75	1	80B-4	1400	**1,60**	54	125	12,6									
		1,1	1,5	80C-4	1400	**1,09**	54	183	18,4									
		1,1	1,5	90S-4	1400	**1,09**	54	183	18,4									
21	20,56	**0,37**	0,5	71B-4	1400	**4,07**	68	49	4,9									
		0,55	0,75	80A-4	1400	**2,74**	68	73	7,3									
		0,75	1	80B-4	1400	**2,01**	68	99	10,0									
		1,1	1,5	80C-4	1400	**1,37**	68	145	14,7									
		1,1	1,5	90S-4	1400	**1,37**	68	145	14,7									
		1,5	2	90L-4	1410	**1,01**	69	195	19,7									

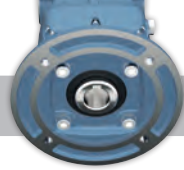
PERFORMANCE TABLE



ENDURO 3		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
19	19,01	**0,25**	0,35	71A-4	1400	**5,88**	74	30	3,1									
		0,37	0,5	71B-4	1400	**3,97**	74	45	4,5									
		0,55	0,75	80A-4	1400	**2,67**	74	67	6,7									
		0,75	1	80B-4	1400	**1,96**	74	91	9,2									
		1,1	1,5	80C-4	1400	**1,34**	74	133	13,5									
		1,1	1,5	90S-4	1400	**1,34**	74	133	13,5									
		1,5	2	90L-4	1410	**0,99**	74	182	18,4									
17	16,62	**0,37**	0,5	71B-4	1400	**4,92**	84	40	4,0									
		0,55	0,75	80A-4	1400	**3,31**	84	59	5,9									
		0,75	1	80B-4	1400	**2,43**	84	80	8,1									
		1,1	1,5	80C-4	1400	**1,65**	84	118	11,9									
		1,1	1,5	90S-4	1400	**1,65**	84	118	11,9									
		1,5	2	90L-4	1410	**1,22**	85	158	16,0									
14	13,53	**0,37**	0,5	71B-4	1400	**5,02**	103	32	3,3									
		0,55	0,75	80A-4	1400	**3,38**	103	48	4,8									
		0,75	1	80B-4	1400	**2,48**	103	65	6,6									
		1,1	1,5	80C-4	1400	**1,69**	103	96	9,7									
		1,1	1,5	90S-4	1400	**1,69**	103	96	9,7									
		1,5	2	90L-4	1410	**1,25**	104	129	13,1									
11	11,09	**0,55**	0,75	80A-4	1400	**4,99**	126	39	4,0									
		0,75	1	80B-4	1400	**3,66**	126	53	5,4									
		1,1	1,5	90S-4	1400	**2,49**	126	78	7,9									
		1,5	2	90L-4	1410	**1,84**	127	106	10,7									
		1,9	2,6	90LB-4	1415	**1,46**	128	133	13,4									
9	9,09	**0,55**	0,75	80A-4	1400	**6,05**	154	32	3,2									
		0,75	1	80B-4	1400	**4,44**	154	44	4,4									
		1,1	1,5	90S-4	1400	**3,02**	154	64	6,5									
		1,5	2	90L-4	1410	**2,23**	155	87	8,8									
		1,9	2,6	90LB-4	1415	**1,77**	156	109	11,0									
		2,2	3	100LA-4	1420	**1,53**	156	127	12,8									
		3	4	100LB-4	1420	**1,12**	156	173	17,4									
		3	4	100L-2	2880	**2,05**	317	85	8,6									
		4	5,5	112M-2	2890	**1,55**	318	113	11,4									

ENDURO 3		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
6	5,76	**0,55**	0,75	80A-4	1400	**7,73**	243	20	2,0									
		0,75	1	80B-4	1400	**5,67**	243	28	2,8									
		1,1	1,5	80C-4	1400	**3,86**	243	41	4,1									
		1,1	1,5	90S-4	1400	**3,86**	243	41	4,1									
		1,5	2	90L-4	1410	**2,85**	245	55	5,5									
		1,9	2,6	90LB-4	1415	**2,26**	246	69	7,0									
		2,2	3	100LA-4	1420	**1,96**	246	80	8,1									
		3	4	100LB-4	1420	**1,44**	246	109	11,0									
		4	5,5	112M-4	1420	**1,08**	246	146	14,7									
		3	4	100L-2	2880	**2,62**	500	54	5,4									
		4	5,5	112M-2	2890	**1,97**	502	72	7,2									
5	4,73	**0,75**	1	80B-4	1400	**6,86**	296	23	2,3									
		1,1	1,5	80C-4	1400	**4,68**	296	33	3,4									
		1,1	1,5	90S-4	1400	**4,68**	296	33	3,4									
		1,5	2	90L-4	1410	**3,45**	298	45	4,6									
		1,9	2,6	90LB-4	1415	**2,74**	299	57	5,8									
		2,2	3	100LA-4	1420	**2,37**	301	66	6,6									
		3	4	100LB-4	1420	**1,74**	301	89	9,0									
		4	5,5	112M-4	1420	**1,30**	301	119	12,0									
		5	6,8	112MB-4	1450	**1,07**	307	146	14,8									
		3	4	100L-2	2880	**3,18**	610	44	4,5									
		4	5,5	112M-2	2890	**2,39**	612	59	5,9									

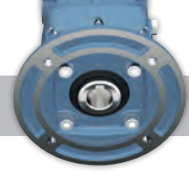
PERFORMANCE TABLE



ENDURO 4		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
117	116,8	**0,13**	0,18	71B-8	650	**2,21**	5,6	195	19,6									
		0,18	0,25	80A-8	690	**1,69**	5,9	269	27,2									
		0,25	0,35	80B-8	690	**1,22**	5,9	374	37,7									
		0,25	0,35	71B-6	910	**1,47**	7,8	281	28,3									
		0,18	0,25	71A-6	910	**2,04**	7,8	202	20,4									
		0,25	0,35	71A-4	1400	**2,06**	12	187	18,9									
		0,37	0,5	71B-4	1400	**1,39**	12	277	27,9									
		0,55	0,75	80A-4	1400	**0,94**	12	411	41,5									
109	108,9	**0,13**	0,18	71B-8	650	**2,36**	6,0	195	19,6									
		0,18	0,25	80A-8	690	**1,81**	6,3	269	27,2									
		0,25	0,35	80B-8	690	**1,30**	6,3	374	37,7									
		0,25	0,35	71B-6	910	**1,58**	8,4	281	28,3									
		0,18	0,25	71A-6	910	**2,19**	8,4	202	20,4									
		0,25	0,35	71A-4	1400	**2,21**	13	173	17,4									
		0,37	0,5	71B-4	1400	**1,49**	13	255	25,8									
		0,55	0,75	80A-4	1400	**1,00**	13	380	38,3									
97	96,9	**0,13**	0,18	71B-8	650	**2,65**	6,7	167	16,8									
		0,18	0,25	80A-8	690	**2,03**	7,1	231	23,3									
		0,25	0,35	80B-8	690	**1,46**	7,1	321	32,3									
		0,25	0,35	71B-6	910	**1,77**	9,4	249	25,2									
		0,18	0,25	71A-6	910	**2,45**	9,4	180	18,1									
		0,25	0,35	71A-4	1400	**2,47**	14	160	16,2									
		0,37	0,5	71B-4	1400	**1,67**	14	237	23,9									
		0,55	0,75	80A-4	1400	**1,12**	14	353	35,6									
87	86,9	**0,13**	0,18	71B-8	650	**2,95**	7,5	167	16,8									
		0,18	0,25	80A-8	690	**2,26**	7,9	202	20,4									
		0,25	0,35	80B-8	690	**1,63**	7,9	281	28,3									
		0,25	0,35	71B-6	910	**1,97**	10	224	22,6									
		0,18	0,25	71A-6	910	**2,73**	10	162	16,3									
		0,25	0,35	71A-4	1400	**2,75**	16	140	14,2									
		0,37	0,5	71B-4	1400	**1,86**	16	208	20,9									
		0,55	0,75	80A-4	1400	**1,25**	16	309	31,1									
		0,75	1	80B-4	1400	**0,92**	16	421	42,5									

ENDURO 4		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
76	76,3	**0,13**	0,18	71B-8	650	**3,56**	8,5	130	13,1									
		0,18	0,25	80A-8	690	**2,73**	9,0	180	18,1									
		0,25	0,35	80B-8	690	**1,96**	9,0	249	25,2									
		0,25	0,35	71A-4	1400	**3,32**	18	125	12,6									
		0,37	0,5	71B-4	1400	**2,24**	18	185	18,6									
		0,55	0,75	80A-4	1400	**1,51**	18	274	27,7									
		0,75	1	80B-4	1400	**1,11**	18	374	37,7									
72	71,8	**0,13**	0,18	71B-8	650	**3,55**	9,1	130	13,1									
		0,18	0,25	80A-8	690	**2,72**	9,6	162	16,3									
		0,25	0,35	80B-8	690	**1,96**	9,6	224	22,6									
		0,25	0,35	71A-4	1400	**3,31**	20	112	11,3									
		0,37	0,5	71B-4	1400	**2,24**	20	166	16,8									
		0,55	0,75	80A-4	1400	**1,51**	20	247	24,9									
		0,75	1	80B-4	1400	**1,10**	20	337	34,0									
63	63,3	**0,13**	0,18	71B-8	650	**2,66**	10	117	11,8									
		0,18	0,25	80A-8	690	**2,04**	11	147	14,8									
		0,25	0,35	80B-8	690	**1,47**	11	204	20,6									
		0,25	0,35	71A-4	1400	**2,48**	22	102	10,3									
		0,37	0,5	71B-4	1400	**1,68**	22	151	15,2									
		0,55	0,75	80A-4	1400	**1,13**	22	224	22,6									
59	59,0	**0,25**	0,35	71A-4	1400	**2,76**	24	94	9,4									
		0,37	0,5	71B-4	1400	**1,86**	24	138	14,0									
		0,55	0,75	80A-4	1400	**1,25**	24	206	20,8									
53	53,3	**0,25**	0,35	71A-4	1400	**5,08**	26	86	8,7									
		0,37	0,5	71B-4	1400	**3,43**	26	128	12,9									
		0,55	0,75	80A-4	1400	**2,31**	26	190	19,2									
		0,75	1	80B-4	1400	**1,69**	26	259	26,1									
		1,1	1,5	80C-4	1400	**1,15**	26	380	38,3									
47	47,1	**0,25**	0,35	71A-4	1400	**3,44**	30	75	7,5									
		0,37	0,5	71B-4	1400	**2,32**	30	111	11,2									
		0,55	0,75	80A-4	1400	**1,56**	30	165	16,6									
		0,75	1	80B-4	1400	**1,15**	30	224	22,6									
40	40,2	**0,55**	0,75	80A-4	1400	**3,15**	35	141	14,2									
		0,75	1	80B-4	1400	**2,31**	35	192	19,4									
		1,1	1,5	80C-4	1400	**1,57**	35	282	28,5									
		1,1	1,5	90S-4	1400	**1,57**	35	282	28,5									
		1,5	2	90L-4	1410	**1,16**	35	385	38,8									
		1,9	2,6	90LB-4	1415	**0,92**	35	487	49,2									

PERFORMANCE TABLE



ENDURO 4		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
38	37,5	**0,55**	0,75	80A-4	1400	**3,36**	37	133	13,5									
		0,75	1	80B-4	1400	**2,46**	37	182	18,4									
		1,1	1,5	80C-4	1400	**1,68**	37	267	26,9									
		1,1	1,5	90S-4	1400	**1,68**	37	267	26,9									
		1,5	2	90L-4	1410	**1,24**	38	354	35,8									
		1,9	2,6	90LB-4	1415	**0,98**	38	449	45,3									
33	33,4	**0,55**	0,75	80A-4	1400	**3,75**	42	118	11,9									
		0,75	1	80B-4	1400	**2,75**	42	160	16,2									
		1,1	1,5	80C-4	1400	**1,87**	42	235	23,7									
		1,1	1,5	90S-4	1400	**1,87**	42	235	23,7									
		1,5	2	90L-4	1410	**1,38**	42	321	32,3									
		1,9	2,6	90LB-4	1415	**1,10**	42	406	41,0									
30	29,9	**0,55**	0,75	80A-4	1400	**4,15**	47	105	10,6									
		0,75	1	80B-4	1400	**3,04**	47	143	14,5									
		1,1	1,5	80C-4	1400	**2,08**	47	210	21,2									
		1,1	1,5	90S-4	1400	**2,08**	47	210	21,2									
		1,5	2	90L-4	1410	**1,53**	47	287	28,9									
		1,9	2,6	90LB-4	1415	**1,21**	47	363	36,6									
26	26,3	**0,55**	0,75	80A-4	1400	**4,69**	53	93	9,4									
		0,75	1	80B-4	1400	**3,44**	53	127	12,8									
		1,1	1,5	80C-4	1400	**2,34**	53	186	18,8									
		1,1	1,5	90S-4	1400	**2,34**	53	186	18,8									
		1,5	2	90L-4	1410	**1,73**	54	249	25,2									
		1,9	2,6	90LB-4	1415	**1,37**	54	316	31,9									
25	24,7	**0,55**	0,75	80A-4	1400	**4,97**	57	87	8,7									
		0,75	1	80B-4	1400	**3,64**	57	118	11,9									
		1,1	1,5	80C-4	1400	**2,48**	57	173	17,5									
		1,1	1,5	90S-4	1400	**2,48**	57	173	17,5									
		1,5	2	90L-4	1410	**1,83**	57	236	23,8									
		1,9	2,6	90LB-4	1415	**1,45**	57	299	30,2									
22	21,8	**0,55**	0,75	80A-4	1400	**4,38**	64	77	7,8									
		0,75	1	80B-4	1400	**3,21**	64	105	10,6									
		1,1	1,5	80C-4	1400	**2,19**	64	154	15,6									
		1,1	1,5	90S-4	1400	**2,19**	64	154	15,6									
		1,5	2	90L-4	1410	**1,62**	65	207	20,9									
		1,9	2,6	90LB-4	1415	**1,28**	65	262	26,5									

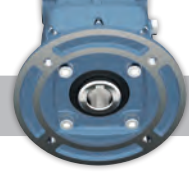
ENDURO 4		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
20	20,3	**0,55**	0,75	80A-4	1400	**4,69**	69	72	7,2									
		0,75	1	80B-4	1400	**3,44**	69	98	9,8									
		1,1	1,5	80C-4	1400	**2,35**	69	143	14,4									
		1,1	1,5	90S-4	1400	**2,35**	69	143	14,4									
		1,5	2	90L-4	1410	**1,73**	69	195	19,7									
		1,9	2,6	90LB-4	1415	**1,37**	70	244	24,6									
18	18,4	**0,75**	1	80B-4	1400	**4,82**	76	89	8,9									
		1,1	1,5	80C-4	1400	**3,29**	76	130	13,1									
		1,1	1,5	90S-4	1400	**3,29**	76	130	13,1									
		1,5	2	90L-4	1410	**2,43**	77	175	17,6									
		1,9	2,6	90LB-4	1415	**1,92**	77	222	22,3									
		2,2	3	100LA-4	1420	**1,67**	77	256	25,9									
		3	4	100LB-4	1420	**1,22**	77	350	35,3									
16	16,2	**0,75**	1	80B-4	1400	**3,93**	86	78	7,9									
		1,1	1,5	80C-4	1400	**2,68**	86	115	11,6									
		1,1	1,5	90S-4	1400	**2,68**	86	115	11,6									
		1,5	2	90L-4	1410	**1,98**	87	155	15,6									
		1,9	2,6	90LB-4	1415	**1,57**	87	196	19,8									
		2,2	3	100LA-4	1420	**1,36**	88	224	22,6									
		3	4	100LB-4	1420	**1,00**	88	306	30,9									
14	14,2	**0,75**	1	80B-4	1400	**4,47**	98	69	6,9									
		1,1	1,5	80C-4	1400	**3,05**	98	101	10,2									
		1,1	1,5	90S-4	1400	**3,05**	98	101	10,2									
		1,5	2	90L-4	1410	**2,25**	99	136	13,7									
		1,9	2,6	90LB-4	1415	**1,78**	99	172	17,4									
		2,2	3	100LA-4	1420	**1,54**	100	197	19,9									
		3	4	100LB-4	1420	**1,13**	100	269	27,2									
13	13,1	**1,5**	2	90L-4	1410	**3,33**	107	126	12,7									
		1,9	2,6	90LB-4	1415	**2,64**	108	158	15,9									
		2,2	3	100LA-4	1420	**2,29**	108	183	18,4									
		3	4	100LB-4	1420	**1,68**	108	249	25,2									
		4	5,5	112M-4	1420	**1,26**	108	332	33,5									
		5	6,8	112MB-4	1450	**1,03**	110	408	41,2									
11	10,8	**1,5**	2	90L-4	1410	**4,01**	131	103	10,4									
		1,9	2,6	90LB-4	1415	**3,18**	131	130	13,1									
		2,2	3	100LA-4	1420	**2,75**	131	151	15,2									
		3	4	100LB-4	1420	**2,02**	131	206	20,7									
		4	5,5	112M-4	1420	**1,51**	131	274	27,7									
		5	6,8	112MB-4	1450	**1,24**	134	335	33,8									

PERFORMANCE TABLE

ENDURO 4		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
9	8,7	**1,5**	2	90L-4	1410	**4,91**	162	83	8,4									
		1,9	2,6	90LB-4	1415	**3,89**	162	105	10,6									
		2,2	3	100LA-4	1420	**3,37**	163	121	12,2									
		3	4	100LB-4	1420	**2,47**	163	165	16,7									
		4	5,5	112M-4	1420	**1,85**	163	220	22,2									
		5	6,8	112MB-4	1450	**1,51**	166	270	27,3									
		3	4	100L-2	2880	**4,51**	330	82	8,2									
		4	5,5	112M-2	2890	**3,39**	331	108	10,9									
7	7,1	**1,5**	2	90L-4	1410	**4,41**	198	68	6,9									
		1,9	2,6	90LB-4	1415	**3,49**	199	86	8,6									
		2,2	3	100LA-4	1420	**3,03**	200	99	10,0									
		3	4	100LB-4	1420	**2,22**	200	135	13,6									
		4	5,5	112M-4	1420	**1,67**	200	180	18,1									
		5	6,8	112MB-4	1450	**1,36**	204	220	22,2									
		3	4	100L-2	2880	**4,05**	405	66	6,7									
		4	5,5	112M-2	2890	**3,05**	406	88	8,9									
6	5,9	**1,5**	2	90L-4	1410	**4,63**	241	56	5,6									
		1,9	2,6	90LB-4	1415	**3,67**	242	70	7,1									
		2,2	3	100LA-4	1420	**3,18**	243	81	8,2									
		3	4	100LB-4	1420	**2,33**	243	111	11,2									
		4	5,5	112M-4	1420	**1,75**	243	148	14,9									
		5	6,8	112MB-4	1450	**1,43**	248	181	18,3									
		3	4	100L-2	2880	**4,26**	492	55	5,5									
		4	5,5	112M-2	2890	**3,20**	494	73	7,3									
5	4,7	**1,9**	2,6	90LB-4	1415	**4,50**	299	57	5,8									
		2,2	3	100LA-4	1420	**3,90**	300	66	6,6									
		3	4	100LB-4	1420	**2,86**	300	90	9,1									
		4	5,5	112M-4	1420	**2,15**	300	120	12,1									
		5	6,8	112MB-4	1450	**1,75**	307	146	14,8									
		3	4	100L-2	2880	**5,22**	609	44	4,5									
		4	5,5	112M-2	2890	**3,93**	611	59	5,9									

ENDURO 5		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
118	118,4	**0,18**	0,25	80A-8	690	**2,56**	5,8	269	27,2									
		0,25	0,35	80B-8	690	**1,84**	5,8	374	37,7									
		0,55	0,75	80B-6	920	**1,02**	7,8	617	62,3									
		0,37	1	80A-6	930	**1,54**	7,9	415	41,9									
		0,25	0,35	71A-4	1400	**3,12**	12	187	18,9									
		0,37	0,5	71B-4	1400	**2,11**	12	277	27,9									
		0,55	0,75	80A-4	1400	**1,42**	12	411	41,5									
		0,75	1	80B-4	1400	**1,04**	12	561	56,6									
108	108,3	**0,18**	0,25	80A-8	690	**2,75**	6,4	269	27,2									
		0,25	0,35	80B-8	690	**1,98**	6,4	374	37,7									
		0,55	0,75	80B-6	920	**1,10**	8,5	617	62,3									
		0,37	1	80A-6	930	**1,65**	8,6	369	37,2									
		0,25	0,35	71A-4	1400	**3,34**	13	173	17,4									
		0,37	0,5	71B-4	1400	**2,26**	13	255	25,8									
		0,55	0,75	80A-4	1400	**1,52**	13	380	38,3									
		0,75	1	80B-4	1400	**1,11**	13	518	52,3									
96	95,7	**0,18**	0,25	80A-8	690	**3,03**	7,2	231	23,3									
		0,25	0,35	80B-8	690	**2,18**	7,2	321	32,3									
		0,55	0,75	80B-6	920	**1,21**	10	494	49,8									
		0,37	1	80A-6	930	**1,82**	10	332	33,5									
		0,25	0,35	71A-4	1400	**3,69**	15	150	15,1									
		0,37	0,5	71B-4	1400	**2,49**	15	221	22,3									
		0,55	0,75	80A-4	1400	**1,68**	15	329	33,2									
		0,75	1	80B-4	1400	**1,23**	15	449	45,3									
84	84,3	**0,18**	0,25	80A-8	690	**4,04**	8,2	202	20,4									
		0,25	0,35	80B-8	690	**2,91**	8,2	281	28,3									
		0,55	0,75	80B-6	920	**1,62**	11	449	45,3									
		0,37	1	80A-6	930	**2,43**	11	302	30,5									
		0,37	0,5	71B-4	1400	**3,32**	17	195	19,7									
		0,55	0,75	80A-4	1400	**2,24**	17	290	29,3									
		0,75	1	80B-4	1400	**1,64**	17	396	40,0									
		1,1	1,5	80C-4	1400	**1,12**	17	581	58,6									
		1,1	1,5	90S-4	1400	**1,12**	17	581	58,6									
65	65,1	**0,18**	0,25	80A-8	690	**4,57**	11	147	14,8									
		0,25	0,35	80B-8	690	**3,29**	11	204	20,6									
		0,37	0,5	71B-4	1400	**3,76**	21	158	16,0									
		0,55	0,75	80A-4	1400	**2,53**	21	235	23,7									
		0,75	1	80B-4	1400	**1,85**	21	321	32,3									
		1,1	1,5	80C-4	1400	**1,26**	21	470	47,4									
		1,1	1,5	90S-4	1400	**1,26**	21	470	47,4									
		1,5	2	90L-4	1410	**0,93**	22	612	61,8									

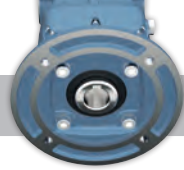
PERFORMANCE TABLE



ENDURO 5		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
56	56,2	**0,37**	0,5	71B-4	1400	**4,73**	25	133	13,4									
		0,55	0,75	80A-4	1400	**3,18**	25	197	19,9									
		0,75	1	80B-4	1400	**2,33**	25	269	27,2									
		1,1	1,5	80C-4	1400	**1,59**	25	395	39,9									
		1,1	1,5	90S-4	1400	**1,59**	25	395	39,9									
		1,5	2	90L-4	1410	**1,18**	25	539	54,3									
		1,9	2,6	90LB-4	1415	**0,93**	25	682	68,8									
47	46,8	**0,37**	0,5	71B-4	1400	**5,51**	30	111	11,2									
		0,55	0,75	80A-4	1400	**3,71**	30	165	16,6									
		0,75	1	80B-4	1400	**2,72**	30	224	22,6									
		1,1	1,5	80C-4	1400	**1,85**	30	329	33,2									
		1,1	1,5	90S-4	1400	**1,85**	30	329	33,2									
		1,5	2	90L-4	1410	**1,37**	30	449	45,3									
		1,9	2,6	90LB-4	1415	**1,09**	30	569	57,4									
43	42,5	**0,55**	0,75	80A-4	1400	**3,59**	33	150	15,1									
		0,75	1	80B-4	1400	**2,63**	33	204	20,6									
		1,1	1,5	80C-4	1400	**1,79**	33	299	30,2									
		1,1	1,5	90S-4	1400	**1,79**	33	299	30,2									
		1,5	2	90L-4	1410	**1,32**	33	408	41,2									
		1,9	2,6	90LB-4	1415	**1,05**	33	517	52,1									
38	37,9	**0,75**	1	80B-4	1400	**3,08**	37	182	18,4									
		1,1	1,5	80C-4	1400	**2,10**	37	267	26,9									
		1,1	1,5	90S-4	1400	**2,10**	37	267	26,9									
		1,5	2	90L-4	1410	**1,55**	37	364	36,7									
		1,9	2,6	90LB-4	1415	**1,23**	37	461	46,5									
		2,2	3	100LA-4	1420	**1,07**	38	520	52,4									
33	33,3	**0,75**	1	80B-4	1400	**3,96**	42	160	16,2									
		1,1	1,5	80C-4	1400	**2,70**	42	235	23,7									
		1,1	1,5	90S-4	1400	**2,70**	42	235	23,7									
		1,5	2	90L-4	1410	**1,99**	42	321	32,3									
		1,9	2,6	90LB-4	1415	**1,58**	42	406	41,0									
		2,2	3	100LA-4	1420	**1,37**	43	459	46,3									
27	26,6	**0,75**	1	80B-4	1400	**4,49**	53	127	12,8									
		1,1	1,5	80C-4	1400	**3,06**	53	186	18,8									
		1,1	1,5	90S-4	1400	**3,06**	53	186	18,8									
		1,5	2	90L-4	1410	**2,26**	53	254	25,6									
		1,9	2,6	90LB-4	1415	**1,79**	53	322	32,5									
		2,2	3	100LA-4	1420	**1,55**	53	373	37,6									
		3	4	100LB-4	1420	**1,14**	53	508	51,3									

ENDURO 5		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
26	25,8	**0,75**	1	80B-4	1400	**4,72**	54	125	12,6									
		1,1	1,5	80C-4	1400	**3,22**	54	183	18,4									
		1,1	1,5	90S-4	1400	**3,22**	54	183	18,4									
		1,5	2	90L-4	1410	**2,38**	55	245	24,7									
		1,9	2,6	90LB-4	1415	**1,88**	55	310	31,3									
		2,2	3	100LA-4	1420	**1,63**	55	359	36,2									
		3	4	100LB-4	1420	**1,20**	55	490	49,4									
22	21,5	**1,1**	1,5	80C-4	1400	**4,08**	65	152	15,3									
		1,1	1,5	90S-4	1400	**4,08**	65	152	15,3									
		1,5	2	90L-4	1410	**3,01**	65	207	20,9									
		1,9	2,6	90LB-4	1415	**2,39**	66	258	26,1									
		2,2	3	100LA-4	1420	**2,07**	66	299	30,2									
		3	4	100LB-4	1420	**1,52**	66	408	41,2									
		4	5,5	112M-4	1420	**1,14**	66	544	54,9									
19	18,7	**1,1**	1,5	80C-4	1400	**3,95**	75	132	13,3									
		1,1	1,5	90S-4	1400	**3,95**	75	132	13,3									
		1,5	2	90L-4	1410	**2,91**	75	180	18,1									
		1,9	2,6	90LB-4	1415	**2,31**	76	224	22,6									
		2,2	3	100LA-4	1420	**2,00**	76	260	26,2									
		3	4	100LB-4	1420	**1,47**	76	354	35,8									
		4	5,5	112M-4	1420	**1,10**	76	472	47,7									
17	16,8	**1,1**	1,5	80C-4	1400	**4,73**	83	119	12,0									
		1,1	1,5	90S-4	1400	**4,73**	83	119	12,0									
		1,5	2	90L-4	1410	**3,49**	84	160	16,2									
		1,9	2,6	90LB-4	1415	**2,77**	84	203	20,5									
		2,2	3	100LA-4	1420	**2,40**	84	235	23,7									
		3	4	100LB-4	1420	**1,76**	84	321	32,3									
		4	5,5	112M-4	1420	**1,32**	84	427	43,1									
16	16,5	**1,1**	1,5	80C-4	1400	**4,28**	85	116	11,7									
		1,1	1,5	90S-4	1400	**4,28**	85	116	11,7									
		1,5	2	90L-4	1410	**3,16**	85	158	16,0									
		1,9	2,6	90LB-4	1415	**2,51**	86	198	20,0									
		2,2	3	100LA-4	1420	**2,17**	86	230	23,2									
		3	4	100LB-4	1420	**1,59**	86	313	31,6									
		4	5,5	112M-4	1420	**1,19**	86	418	42,1									
13	12,7	**1,5**	2	90L-4	1410	**3,72**	111	121	12,2									
		1,9	2,6	90LB-4	1415	**2,95**	111	154	15,5									
		2,2	3	100LA-4	1420	**2,55**	111	178	18,0									
		3	4	100LB-4	1420	**1,87**	111	243	24,5									
		4	5,5	112M-4	1420	**1,40**	111	323	32,6									
		5	6,8	112MB-4	1450	**1,15**	114	394	39,7									

PERFORMANCE TABLE



ENDURO 5		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
11	10,5	**2,2**	3	100LA-4	1420	**3,40**	135	146	14,8									
		3	4	100LB-4	1420	**2,49**	135	199	20,1									
		4	5,5	112M-4	1420	**1,87**	135	266	26,8									
		5	6,8	112MB-4	1450	**1,53**	138	325	32,8									
9	8,5	**2,2**	3	100LA-4	1420	**4,15**	167	118	11,9									
		3	4	100LB-4	1420	**3,05**	167	161	16,3									
		4	5,5	112M-4	1420	**2,28**	167	215	21,7									
		5	6,8	112MB-4	1450	**1,87**	170	264	26,6									
		4	5,5	112M-2	2890	**4,18**	339	106	10,7									
		5,5	7,5	112MB-2	2880	**3,03**	338	146	14,7									
8	8,3	**3**	4	100LB-4	1420	**2,57**	171	157	15,9									
		4	5,5	112M-4	1420	**1,93**	171	210	21,2									
		5	6,8	112MB-4	1450	**1,57**	174	258	26,0									
		4	5,5	112M-2	2890	**3,53**	347	103	10,4									
		5,5	7,5	112MB-2	2880	**2,56**	346	143	14,4									
5	5,2	**3**	4	100LB-4	1420	**4,02**	273	99	10,0									
		4	5,5	112M-4	1420	**3,02**	273	132	13,3									
		5	6,8	112MB-4	1450	**2,46**	279	161	16,2									
		4	5,5	112M-2	2890	**5,53**	556	65	6,5									
		5,5	7,5	112MB-2	2880	**4,00**	554	89	9,0									
4	4,2	**3**	4	100LB-4	1420	**4,91**	337	80	8,1									
		4	5,5	112M-4	1420	**3,68**	337	107	10,8									
		5	6,8	112MB-4	1450	**3,01**	344	130	13,2									
		5,5	7,5	112MB-2	2880	**4,89**	683	72	7,3									

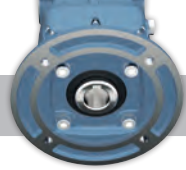
ENDURO 7		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
114	113,8	**0,25**	0,35	80B-8	690	**4,80**	6,1	374	37,7									
		0,37	0,5	90S-8	670	**3,15**	5,9	554	55,9									
		0,55	0,75	90L-8	700	**2,21**	6,2	823	83,0									
		0,37	0,5	80A-6	930	**4,01**	8,2	415	41,9									
		0,55	0,75	80B-6	920	**2,67**	8,1	617	62,3									
		0,75	1	90S-6	915	**1,95**	8,0	842	84,9									
		1,1	1,5	90L-6	915	**1,33**	8,0	1234	124,5									
		0,75	1	80B-4	1400	**2,71**	12	561	56,6									
		1,1	1,5	80C-4	1400	**1,85**	12	823	83,0									
		1,1	1,5	90S-4	1400	**1,85**	12	823	83,0									
		1,5	2	90L-4	1410	**1,36**	12	1122	113,2									
		1,9	2,6	90LB-4	1415	**1,08**	12	1421	143,4									
109	109,3	**0,25**	0,35	80B-8	690	**4,97**	6,3	374	37,7									
		0,37	0,5	90S-8	670	**3,26**	6,1	554	55,9									
		0,55	0,75	90L-8	700	**2,29**	6,4	823	83,0									
		0,37	0,5	80A-6	930	**4,15**	8,5	369	37,2									
		0,55	0,75	80B-6	920	**2,76**	8,4	617	62,3									
		0,75	1	90S-6	915	**2,01**	8,4	842	84,9									
		1,1	1,5	90L-6	915	**1,37**	8,4	1234	124,5									
		0,75	1	80B-4	1400	**2,80**	13	518	52,3									
		1,1	1,5	80C-4	1400	**1,91**	13	760	76,6									
		1,1	1,5	90S-4	1400	**1,91**	13	760	76,6									
		1,5	2	90L-4	1410	**1,41**	13	1036	104,5									
		1,9	2,6	90LB-4	1415	**1,12**	13	1312	132,4									
101	100,7	**0,25**	0,35	80B-8	690	**5,80**	6,9	321	32,3									
		0,37	0,5	90S-8	670	**3,80**	6,7	474	47,9									
		0,55	0,75	90L-8	700	**2,67**	7,0	705	71,2									
		0,75	1	100LA-8	702	**1,97**	7,0	962	97,0									
		1,1	1,5	100LB-8	702	**1,34**	7,0	1411	142,3									
		0,37	0,5	80A-6	930	**4,84**	9,2	369	37,2									
		0,55	0,75	80B-6	920	**3,22**	9,1	549	55,3									
		0,75	1	90S-6	915	**2,35**	9,1	748	75,5									
		1,1	1,5	90L-6	915	**1,60**	9,1	1097	110,7									
		1,5	2	100L-6	940	**1,21**	9,3	1496	151,0									
		0,75	1	80B-4	1400	**3,27**	14	481	48,5									
		1,1	1,5	80C-4	1400	**2,23**	14	705	71,2									
		1,1	1,5	90S-4	1400	**2,23**	14	705	71,2									
		1,5	2	90L-4	1410	**1,65**	14	962	97,0									
		1,9	2,6	90LB-4	1415	**1,30**	14	1218	122,9									
		2,2	3	100LA-4	1420	**1,13**	14	1411	142,3									

PERFORMANCE TABLE

ENDURO 7		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
94	93,6	**0,25**	0,35	80B-8	690	**6,17**	7,4	321	32,3									
		0,37	0,5	90S-8	670	**4,05**	7,2	474	47,9									
		0,55	0,75	90L-8	700	**2,85**	7,5	705	71,2									
		0,75	1	100LA-8	702	**2,09**	7,5	842	84,9									
		1,1	1,5	100LB-8	702	**1,43**	7,5	1234	124,5									
		0,37	0,5	80A-6	930	**5,15**	10	332	33,5									
		0,55	0,75	80B-6	920	**3,43**	10	494	49,8									
		0,75	1	90S-6	915	**2,50**	10	673	67,9									
		1,1	1,5	90L-6	915	**1,71**	10	987	99,6									
		1,5	2	100L-6	940	**1,29**	10	1347	135,9									
		0,75	1	80B-4	1400	**3,48**	15	449	45,3									
		1,1	1,5	80C-4	1400	**2,37**	15	658	66,4									
		1,1	1,5	90S-4	1400	**2,37**	15	658	66,4									
		1,5	2	90L-4	1410	**1,75**	15	898	90,6									
		1,9	2,6	90LB-4	1415	**1,39**	15	1137	114,7									
		2,2	3	100LA-4	1420	**1,20**	15	1317	132,8									
91	91,2	**0,25**	0,35	80B-8	690	**5,54**	7,6	281	28,3									
		0,37	0,5	90S-8	670	**3,63**	7,3	474	47,9									
		0,55	0,75	90L-8	700	**2,55**	7,7	617	62,3									
		0,75	1	100LA-8	702	**1,88**	7,7	842	84,9									
		1,1	1,5	100LB-8	702	**1,28**	7,7	1234	124,5									
		0,37	0,5	80A-6	930	**4,62**	10	332	33,5									
		0,55	0,75	80B-6	920	**3,08**	10	494	49,8									
		0,75	1	90S-6	915	**2,24**	10	673	67,9									
		1,1	1,5	90L-6	915	**1,53**	10	987	99,6									
		1,5	2	100L-6	940	**1,15**	10	1347	135,9									
		0,75	1	80B-4	1400	**3,12**	15	449	45,3									
		1,1	1,5	80C-4	1400	**2,13**	15	658	66,4									
		1,1	1,5	90S-4	1400	**2,13**	15	658	66,4									
		1,5	2	90L-4	1410	**1,57**	15	898	90,6									
		1,9	2,6	90LB-4	1415	**1,24**	16	1066	107,6									
		2,2	3	100LA-4	1420	**1,08**	16	1234	124,5									

ENDURO 7		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
88	87,6	**0,37**	0,5	90S-8	670	**3,91**	7,6	415	41,9									
		0,55	0,75	90L-8	700	**2,75**	8,0	617	62,3									
		0,75	1	100LA-8	702	**2,02**	8,0	842	84,9									
		1,1	1,5	100LB-8	702	**1,38**	8,0	1234	124,5									
		1,5	2	112M-8	710	**1,02**	8,1	1683	169,8									
		0,37	0,5	80A-6	930	**4,98**	11	302	30,5									
		0,55	0,75	80B-6	920	**3,31**	11	449	45,3									
		0,75	1	90S-6	915	**2,42**	10	673	67,9									
		1,1	1,5	90L-6	915	**1,65**	10	987	99,6									
		1,5	2	100L-6	940	**1,24**	11	1224	123,5									
		0,75	1	80B-4	1400	**3,36**	16	421	42,5									
		1,1	1,5	80C-4	1400	**2,29**	16	617	62,3									
		1,1	1,5	90S-4	1400	**2,29**	16	617	62,3									
		1,5	2	90L-4	1410	**1,69**	16	842	84,9									
		1,9	2,6	90LB-4	1415	**1,34**	16	1066	107,6									
		2,2	3	100LA-4	1420	**1,16**	16	1234	124,5									
85	84,6	**0,37**	0,5	90S-8	670	**4,66**	7,9	415	41,9									
		0,55	0,75	90L-8	700	**3,27**	8,3	617	62,3									
		0,75	1	100LA-8	702	**2,41**	8,3	842	84,9									
		1,1	1,5	100LB-8	702	**1,64**	8,3	1234	124,5									
		1,5	2	112M-8	710	**1,22**	8,4	1683	169,8									
		0,37	0,5	80A-6	930	**5,92**	11	302	30,5									
		0,55	0,75	80B-6	920	**3,94**	11	449	45,3									
		0,75	1	90S-6	915	**2,88**	11	612	61,8									
		1,1	1,5	90L-6	915	**1,96**	11	898	90,6									
		1,5	2	100L-6	940	**1,48**	11	1224	123,5									
		0,75	1	80B-4	1400	**4,00**	17	396	40,0									
		1,1	1,5	80C-4	1400	**2,73**	17	581	58,6									
		1,1	1,5	90S-4	1400	**2,73**	17	581	58,6									
		1,5	2	90L-4	1410	**2,01**	17	792	79,9									
		1,9	2,6	90LB-4	1415	**1,60**	17	1003	101,2									
		2,2	3	100LA-4	1420	**1,38**	17	1162	117,2									
		3	4	100LB-4	1420	**1,01**	17	1584	159,8									

PERFORMANCE TABLE



ENDURO 7		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
81	80,7	**0,37**	0,5	90S-8	670	**4,25**	8,3	415	41,9									
		0,55	0,75	90L-8	700	**2,99**	8,7	549	55,3									
		0,75	1	100LA-8	702	**2,20**	8,7	748	75,5									
		1,1	1,5	100LB-8	702	**1,50**	8,7	1097	110,7									
		1,5	2	112M-8	710	**1,11**	8,8	1496	151,0									
		0,37	0,5	80A-6	930	**5,41**	12	277	27,9									
		0,55	0,75	80B-6	920	**3,60**	11	449	45,3									
		0,75	1	90S-6	915	**2,63**	11	612	61,8									
		1,1	1,5	90L-6	915	**1,79**	11	898	90,6									
		1,5	2	100L-6	940	**1,35**	12	1122	113,2									
		0,75	1	80B-4	1400	**3,65**	17	396	40,0									
		1,1	1,5	80C-4	1400	**2,49**	17	581	58,6									
		1,1	1,5	90S-4	1400	**2,49**	17	581	58,6									
		1,5	2	90L-4	1410	**1,84**	17	792	79,9									
		1,9	2,6	90LB-4	1415	**1,46**	18	948	95,6									
		2,2	3	100LA-4	1420	**1,26**	18	1097	110,7									
75	75,3	**0,37**	0,5	90S-8	670	**4,77**	8,9	369	37,2									
		0,55	0,75	90L-8	700	**3,35**	9,3	549	55,3									
		0,75	1	100LA-8	702	**2,46**	9,3	748	75,5									
		1,1	1,5	100LB-8	702	**1,68**	9,3	1097	110,7									
		1,5	2	112M-8	710	**1,25**	9,4	1496	151,0									
		0,75	1	80B-4	1400	**4,09**	19	354	35,8									
		1,1	1,5	80C-4	1400	**2,79**	19	520	52,4									
		1,1	1,5	90S-4	1400	**2,79**	19	520	52,4									
		1,5	2	90L-4	1410	**2,06**	19	709	71,5									
		1,9	2,6	90LB-4	1415	**1,63**	19	898	90,6									
		2,2	3	100LA-4	1420	**1,42**	19	1039	104,9									
68	67,8	**0,37**	0,5	90S-8	670	**4,61**	10	332	33,5									
		0,55	0,75	90L-8	700	**3,24**	10	494	49,8									
		0,75	1	100LA-8	702	**2,38**	10	673	67,9									
		1,1	1,5	100LB-8	702	**1,62**	10	987	99,6									
		1,5	2	112M-8	710	**1,20**	10	1347	135,9									
		0,75	1	80B-4	1400	**3,96**	21	321	32,3									
		1,1	1,5	80C-4	1400	**2,70**	21	470	47,4									
		1,1	1,5	90S-4	1400	**2,70**	21	470	47,4									
		1,5	2	90L-4	1410	**1,99**	21	641	64,7									
		1,9	2,6	90LB-4	1415	**1,58**	21	812	81,9									
		2,2	3	100LA-4	1420	**1,37**	21	940	94,9									

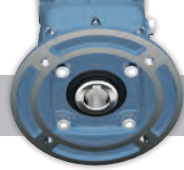
ENDURO 7		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
67	67,1	**0,37**	0,5	90S-8	670	**5,31**	10	332	33,5									
		0,55	0,75	90L-8	700	**3,73**	10	494	49,8									
		0,75	1	100LA-8	702	**2,74**	10	673	67,9									
		1,1	1,5	100LB-8	702	**1,87**	10	987	99,6									
		1,5	2	112M-8	710	**1,39**	11	1224	123,5									
		0,75	1	80B-4	1400	**4,56**	21	321	32,3									
		1,1	1,5	80C-4	1400	**3,11**	21	470	47,4									
		1,1	1,5	90S-4	1400	**3,11**	21	470	47,4									
		1,5	2	90L-4	1410	**2,30**	21	641	64,7									
		1,9	2,6	90LB-4	1415	**1,82**	21	812	81,9									
		2,2	3	100LA-4	1420	**1,58**	21	940	94,9									
		3	4	100LB-4	1420	**1,16**	21	1282	129,4									
64	64,1	**0,37**	0,5	90S-8	670	**5,65**	10	332	33,5									
		0,55	0,75	90L-8	700	**3,97**	11	449	45,3									
		0,75	1	100LA-8	702	**2,92**	11	612	61,8									
		1,1	1,5	100LB-8	702	**1,99**	11	898	90,6									
		1,5	2	112M-8	710	**1,48**	11	1224	123,5									
		0,75	1	80B-4	1400	**4,85**	22	306	30,9									
		1,1	1,5	80C-4	1400	**3,31**	22	449	45,3									
		1,1	1,5	90S-4	1400	**3,31**	22	449	45,3									
		1,5	2	90L-4	1410	**2,44**	22	612	61,8									
		1,9	2,6	90LB-4	1415	**1,94**	22	775	78,2									
		2,2	3	100LA-4	1420	**1,68**	22	898	90,6									
		3	4	100LB-4	1420	**1,23**	22	1224	123,5									
60	60,4	**0,75**	1	80B-4	1400	**4,61**	23	293	29,5									
		1,1	1,5	80C-4	1400	**3,15**	23	429	43,3									
		1,1	1,5	90S-4	1400	**3,15**	23	429	43,3									
		1,5	2	90L-4	1410	**2,32**	23	585	59,1									
		1,9	2,6	90LB-4	1415	**1,84**	23	742	74,8									
		2,2	3	100LA-4	1420	**1,60**	24	823	83,0									
		3	4	100LB-4	1420	**1,17**	24	1122	113,2									
54	53,7	**0,75**	1	80B-4	1400	**4,93**	26	259	26,1									
		1,1	1,5	80C-4	1400	**3,36**	26	380	38,3									
		1,1	1,5	90S-4	1400	**3,36**	26	380	38,3									
		1,5	2	90L-4	1410	**2,48**	26	518	52,3									
		1,9	2,6	90LB-4	1415	**1,97**	26	656	66,2									
		2,2	3	100LA-4	1420	**1,71**	26	760	76,6									
		3	4	100LB-4	1420	**1,25**	26	1036	104,5									
		4	5,5	112M-4	1420	**0,94**	26	1381	139,3									

PERFORMANCE TABLE

ENDURO 7		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	100/112	132	160	180	200
51	51,3	**0,75**	1	80B-4	1400	**5,16**	27	249	25,2									
		1,1	1,5	80C-4	1400	**3,52**	27	366	36,9									
		1,1	1,5	90S-4	1400	**3,52**	27	366	36,9									
		1,5	2	90L-4	1410	**2,60**	27	499	50,3									
		1,9	2,6	90LB-4	1415	**2,06**	28	609	61,5									
		2,2	3	100LA-4	1420	**1,78**	28	705	71,2									
		3	4	100LB-4	1420	**1,31**	28	962	97,0									
		4	5,5	112M-4	1420	**0,98**	28	1282	129,4									
47	47,1	**1,1**	1,5	90S-4	1400	**4,34**	30	329	33,2									
		1,5	2	90L-4	1410	**3,20**	30	449	45,3									
		1,9	2,6	90LB-4	1415	**2,54**	30	569	57,4									
		2,2	3	100LA-4	1420	**2,20**	30	658	66,4									
		3	4	100LB-4	1420	**1,61**	30	898	90,6									
		4	5,5	112M-4	1420	**1,21**	30	1197	120,8									
		5	6,8	112MB-4	1450	**0,99**	31	1448	146,1									
45	45,0	**1,1**	1,5	90S-4	1400	**4,53**	31	319	32,1									
		1,5	2	90L-4	1410	**3,34**	31	434	43,8									
		1,9	2,6	90LB-4	1415	**2,65**	31	550	55,5									
		2,2	3	100LA-4	1420	**2,30**	32	617	62,3									
		3	4	100LB-4	1420	**1,68**	32	842	84,9									
		4	5,5	112M-4	1420	**1,26**	32	1122	113,2									
		5	6,8	112MB-4	1450	**1,03**	32	1403	141,5									
43	43,2	**1,1**	1,5	90S-4	1400	**4,70**	32	309	31,1									
		1,5	2	90L-4	1410	**3,47**	33	408	41,2									
		1,9	2,6	90LB-4	1415	**2,75**	33	517	52,1									
		2,2	3	100LA-4	1420	**2,38**	33	598	60,4									
		3	4	100LB-4	1420	**1,75**	33	816	82,3									
		4	5,5	112M-4	1420	**1,31**	33	1088	109,8									
		5	6,8	112MB-4	1450	**1,07**	34	1320	133,2									
40	39,8	**1,5**	2	90L-4	1410	**3,76**	35	385	38,8									
		1,9	2,6	90LB-4	1415	**2,98**	36	474	47,8									
		2,2	3	100LA-4	1420	**2,58**	36	549	55,3									
		3	4	100LB-4	1420	**1,89**	36	748	75,5									
		4	5,5	112M-4	1420	**1,42**	36	997	100,6									
		5	6,8	112MB-4	1450	**1,16**	36	1247	125,8									
		5,5	7,5	132S-4	1450	**1,05**	36	1371	138,4									

ENDURO 7		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	100/112	132	160	180	200
37	37,0	**1,5**	2	90L-4	1410	**4,02**	38	354	35,8									
		1,9	2,6	90LB-4	1415	**3,19**	38	449	45,3									
		2,2	3	100LA-4	1420	**2,76**	38	520	52,4									
		3	4	100LB-4	1420	**2,03**	38	709	71,5									
		4	5,5	112M-4	1420	**1,52**	38	945	95,3									
		5	6,8	112MB-4	1450	**1,24**	39	1151	116,1									
		5,5	7,5	132S-4	1450	**1,13**	39	1266	127,7									
36	36,1	**1,5**	2	90L-4	1410	**4,49**	39	345	34,8									
		1,9	2,6	90LB-4	1415	**3,55**	39	437	44,1									
		2,2	3	100LA-4	1420	**3,08**	39	506	51,1									
		3	4	100LB-4	1420	**2,26**	39	691	69,7									
		4	5,5	112M-4	1420	**1,69**	39	921	92,9									
		5	6,8	112MB-4	1450	**1,38**	40	1122	113,2									
		5,5	7,5	132S-4	1450	**1,26**	40	1234	124,5									
35	34,6	**1,5**	2	90L-4	1410	**4,67**	41	328	33,1									
		1,9	2,6	90LB-4	1415	**3,70**	41	416	42,0									
		2,2	3	100LA-4	1420	**3,20**	41	482	48,6									
		3	4	100LB-4	1420	**2,35**	41	657	66,3									
		4	5,5	112M-4	1420	**1,76**	41	876	88,4									
		5	6,8	112MB-4	1450	**1,44**	42	1069	107,8									
		5,5	7,5	132S-4	1450	**1,31**	42	1176	118,6									
33	33,3	**1,5**	2	90L-4	1410	**4,56**	42	321	32,3									
		1,9	2,6	90LB-4	1415	**3,61**	42	406	41,0									
		2,2	3	100LA-4	1420	**3,13**	43	459	46,3									
		3	4	100LB-4	1420	**2,30**	43	626	63,2									
		4	5,5	112M-4	1420	**1,72**	43	835	84,3									
		5	6,8	112MB-4	1450	**1,41**	44	1020	102,9									
		5,5	7,5	132S-4	1450	**1,28**	44	1122	113,2									
32	31,9	**1,9**	2,6	90LB-4	1415	**4,11**	44	388	39,1									
		2,2	3	100LA-4	1420	**3,56**	45	439	44,3									
		3	4	100LB-4	1420	**2,61**	45	598	60,4									
		4	5,5	112M-4	1420	**1,96**	45	798	80,5									
		5	6,8	112MB-4	1450	**1,60**	45	997	100,6									
		5,5	7,5	132S-4	1450	**1,46**	45	1097	110,7									
		7,5	10	132M-4	1450	**1,07**	45	1496	151,0									

PERFORMANCE TABLE



ENDURO 7		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
30	29,7	**1,9**	2,6	90LB-4	1415	**4,42**	48	355	35,9									
		2,2	3	100LA-4	1420	**3,83**	48	411	41,5									
		3	4	100LB-4	1420	**2,81**	48	561	56,6									
		4	5,5	112M-4	1420	**2,10**	48	748	75,5									
		5	6,8	112MB-4	1450	**1,72**	49	916	92,4									
		5,5	7,5	132S-4	1450	**1,56**	49	1008	101,7									
		7,5	10	132M-4	1450	**1,15**	49	1374	138,6									
27	26,8	**2,2**	3	100LA-4	1420	**4,30**	53	373	37,6									
		3	4	100LB-4	1420	**3,15**	53	508	51,3									
		4	5,5	112M-4	1420	**2,36**	53	678	68,4									
25	25,3	**2,2**	3	100LA-4	1420	**4,13**	56	353	35,6									
		3	4	100LB-4	1420	**3,03**	56	481	48,5									
		4	5,5	112M-4	1420	**2,27**	56	641	64,7									
		5	6,8	112MB-4	1450	**1,86**	57	787	79,4									
		5,5	7,5	132S-4	1450	**1,69**	57	866	87,4									
		7,5	10	132M-4	1450	**1,24**	57	1181	119,2									
21	21,3	**2,2**	3	100LA-4	1420	**5,38**	67	295	29,7									
		3	4	100LB-4	1420	**3,94**	67	402	40,6									
		4	5,5	112M-4	1420	**2,96**	67	536	54,1									
		5	6,8	112MB-4	1450	**2,42**	68	660	66,6									
		5,5	7,5	132S-4	1450	**2,20**	68	726	73,3									
		7,5	10	132M-4	1450	**1,61**	68	990	99,9									
		9,2	12,5	132MB-4	1450	**1,31**	68	1215	122,5									
		11	15	132MC-4	1460	**1,11**	69	1431	144,4									
20	20,3	**3**	4	100LB-4	1420	**4,12**	70	385	38,8									
		4	5,5	112M-4	1420	**3,09**	70	513	51,8									
		5	6,8	112MB-4	1450	**2,53**	71	632	63,8									
		5,5	7,5	132S-4	1450	**2,30**	71	695	70,2									
		7,5	10	132M-4	1450	**1,68**	71	948	95,7									
		9,2	12,5	132MB-4	1450	**1,37**	71	1163	117,4									
		11	15	132MC-4	1460	**1,16**	72	1371	138,4									
19	18,6	**3**	4	100LB-4	1420	**4,05**	76	354	35,8									
		4	5,5	112M-4	1420	**3,04**	76	472	47,7									
		5	6,8	112MB-4	1450	**2,48**	78	575	58,1									
		5,5	7,5	132S-4	1450	**2,26**	78	633	63,9									
		7,5	10	132M-4	1450	**1,66**	78	863	87,1									
		9,2	12,5	132MB-4	1450	**1,35**	78	1059	106,8									
		11	15	132MC-4	1460	**1,14**	78	1266	127,7									

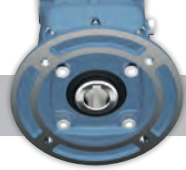
ENDURO 7		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
16	15,7	**3**	4	100LB-4	1420	**4,56**	90	299	30,2									
		4	5,5	112M-4	1420	**3,42**	90	399	40,3									
		5	6,8	112MB-4	1450	**2,79**	92	488	49,2									
		5,5	7,5	132S-4	1450	**2,54**	92	537	54,1									
		7,5	10	132M-4	1450	**1,86**	92	732	73,8									
		9,2	12,5	132MB-4	1450	**1,52**	92	898	90,6									
		11	15	132MC-4	1460	**1,28**	93	1062	107,1									
15	14,9	**4**	5,5	112M-4	1420	**3,97**	95	378	38,1									
		5	6,8	112MB-4	1450	**3,25**	97	463	46,7									
		5,5	7,5	132S-4	1450	**2,95**	97	509	51,4									
		7,5	10	132M-4	1450	**2,16**	97	694	70,0									
		9,2	12,5	132MB-4	1450	**1,76**	97	851	85,9									
		11	15	132MC-4	1460	**1,49**	98	1008	101,7									
13	12,6	**7,5**	10	132SB-2	2900	**4,17**	230	293	29,5									
		9,2	12,5	132MA-2	2900	**3,40**	230	359	36,2									
		11	15	132MB-2	2900	**2,84**	230	429	43,3									
		3	4	100LB-4	1420	**5,67**	113	238	24,0									
		4	5,5	112M-4	1420	**4,25**	113	318	32,1									
		5	6,8	112MB-4	1450	**3,47**	115	390	39,4									
		5,5	7,5	132S-4	1450	**3,16**	115	429	43,3									
		7,5	10	132M-4	1450	**2,32**	115	585	59,1									
		9,2	12,5	132MB-4	1450	**1,89**	115	718	72,5									
		11	15	132MC-4	1460	**1,59**	116	851	85,9									
11	10,6	**7,5**	10	132SB-2	2900	**4,94**	275	245	24,7									
		9,2	12,5	132MA-2	2900	**4,02**	275	300	30,3									
		11	15	132MB-2	2900	**3,37**	275	359	36,2									
		5	6,8	112MB-4	1450	**4,11**	137	328	33,1									
		5,5	7,5	132S-4	1450	**3,74**	137	360	36,4									
		7,5	10	132M-4	1450	**2,74**	137	491	49,6									
		9,2	12,5	132MB-4	1450	**2,24**	137	603	60,8									
		11	15	132MC-4	1460	**1,88**	138	716	72,2									

PERFORMANCE TABLE

ENDURO 7		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
10	10,0	**5,5**	7,5	132SA-2	2900	**4,83**	291	170	17,1									
		7,5	10	132SB-2	2900	**3,54**	291	231	23,3									
		9,2	12,5	132MA-2	2900	**2,89**	291	284	28,6									
		11	15	132MB-2	2900	**2,41**	291	339	34,2									
		3	4	100LB-4	1420	**4,82**	143	188	19,0									
		4	5,5	112M-4	1420	**3,61**	143	251	25,3									
		5	6,8	112MB-4	1450	**2,95**	146	307	31,0									
		5,5	7,5	132S-4	1450	**2,68**	146	338	34,1									
		7,5	10	132M-4	1450	**1,97**	146	461	46,5									
		9,2	12,5	132MB-4	1450	**1,60**	146	566	57,1									
		11	15	132MC-4	1460	**1,35**	147	672	67,8									
8	8,4	**7,5**	10	132SB-2	2900	**4,17**	345	195	19,7									
		9,2	12,5	132MA-2	2900	**3,40**	345	239	24,2									
		11	15	132MB-2	2900	**2,84**	345	286	28,9									
		4	5,5	112M-4	1420	**4,25**	169	212	21,4									
		5	6,8	112MB-4	1450	**3,47**	173	259	26,2									
		5,5	7,5	132S-4	1450	**3,16**	173	285	28,8									
		7,5	10	132M-4	1450	**2,32**	173	389	39,3									
		9,2	12,5	132MB-4	1450	**1,89**	173	477	48,2									
		11	15	132MC-4	1460	**1,59**	174	568	57,3									
7	7,0	**5,5**	7,5	132SA-2	2900	**6,73**	412	120	12,1									
		7,5	10	132SB-2	2900	**4,94**	412	163	16,5									
		9,2	12,5	132MA-2	2900	**4,02**	412	200	20,2									
		11	15	132MB-2	2900	**2,84**	345	286	28,9									
		5	6,8	112MB-4	1450	**3,47**	173	259	26,2									
		5,5	7,5	132S-4	1450	**3,74**	206	240	24,2									
		7,5	10	132M-4	1450	**2,74**	206	327	33									
		9,2	12,5	132MB-4	1450	**2,24**	206	401	40,4									
		11	15	132MC-4	1460	**1,88**	207	477	48,1									

ENDURO 8		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
121	121,4	**0,37**	0,50	90S-8	670	**4,93**	5,5	554	55,9									
		0,55	0,75	90L-8	700	**3,46**	5,8	823	83,0									
		0,75	1	100LA-8	702	**2,55**	5,8	1122	113,2									
		1,1	1,5	100LB-8	702	**1,74**	5,8	1646	166,0									
		1,5	2	112M-8	710	**1,29**	5,8	2244	226,4									
		0,75	1	90S-6	915	**3,04**	7,5	842	84,9									
		1,1	1,5	90L-6	915	**2,07**	7,5	1234	124,5									
		1,5	2	100L-6	944	**1,57**	7,8	1683	169,8									
		2,2	3	112M-6	950	**1,08**	7,8	2469	249,1									
		1,1	1,5	90S-4	1400	**2,89**	12	823	83,0									
		1,5	2	90L-4	1410	**2,13**	12	1122	113,2									
		1,9	2,6	90LB-4	1415	**1,69**	12	1421	143,4									
		2,2	3	100LA-4	1420	**1,46**	12	1646	166,0									
		3	4	100LB-4	1420	**1,07**	12	2244	226,4									
108	108,0	**0,55**	1	90L-8	700	**4,37**	6,5	823	83,0									
		0,75	1	100LA-8	702	**3,22**	6,5	962	97,0									
		1,1	1,5	100LB-8	702	**2,19**	6,5	1411	142,3									
		1,5	2	112M-8	710	**1,63**	6,6	1924	194,1									
		0,75	1	90S-6	915	**3,84**	8,5	842	84,9									
		1,1	1,5	90L-6	915	**2,62**	8,5	1234	124,5									
		1,5	2	100L-6	944	**1,98**	8,7	1496	151,0									
		2,2	3	112M-6	950	**1,36**	8,8	2194	221,4									
		1,1	1,5	90S-4	1400	**3,65**	13	760	76,6									
		1,5	2	90L-4	1410	**2,69**	13	1036	104,5									
		1,9	2,6	90LB-4	1415	**2,13**	13	1312	132,4									
		2,2	3	100LA-4	1420	**1,85**	13	1519	153,3									
		3	4	100LB-4	1420	**1,36**	13	2072	209,0									
		4	5,5	112M-4	1420	**1,02**	13	2762	278,7									
95	94,8	**0,55**	1	90L-8	700	**4,85**	7,4	705	71,2									
		0,75	1	100LA-8	702	**3,57**	7,4	962	97,0									
		1,1	1,5	100LB-8	702	**2,43**	7,4	1411	142,3									
		1,5	2,0	112M-8	710	**1,81**	7,5	1924	194,1									
		0,75	1	90S-6	915	**4,27**	10	673	67,9									
		1,1	1,5	90L-6	915	**2,91**	10	987	99,6									
		1,5	2	100L-6	944	**2,20**	10	1347	135,9									
		2,2	3	112M-6	950	**1,51**	10	1975	199,3									
		1,1	1,5	90S-4	1400	**4,05**	15	658	66,4									
		1,5	2	90L-4	1410	**2,99**	15	898	90,6									
		1,9	2,6	90LB-4	1415	**2,37**	15	1137	114,7									
		2,2	3	100LA-4	1420	**2,05**	15	1317	132,8									
		3	4	100LB-4	1420	**1,50**	15	1795	181,1									
		4	5,5	112M-4	1420	**1,13**	15	2394	241,5									

PERFORMANCE TABLE



ENDURO 8		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
94	93,8	**0,55**	1	90L-8	700	**4,72**	7,5	705	71,2									
		0,75	1	100LA-8	702	**3,47**	7,5	962	97,0									
		1,1	2	100LB-8	702	**2,37**	7,5	1411	142,3									
		1,5	2	112M-8	710	**1,76**	7,6	1683	169,8									
		0,75	1	90S-6	915	**4,15**	10	673	67,9									
		1,1	1,5	90L-6	915	**2,83**	10	987	99,6									
		1,5	2	100L-6	944	**2,14**	10	1347	135,9									
		2,2	3	112M-6	950	**1,47**	10	1975	199,3									
		1,1	1,5	90S-4	1400	**3,94**	15	658	66,4									
		1,5	2	90L-4	1410	**2,91**	15	898	90,6									
		1,9	2,6	90LB-4	1415	**2,30**	15	1137	114,7									
		2,2	3	100LA-4	1420	**2,00**	15	1317	132,8									
		3	4	100LB-4	1420	**1,46**	15	1795	181,1									
		4	5,5	112M-4	1420	**1,10**	15	2394	241,5									
		5	6,8	112MB-4	1450	**0,90**	15	2992	301,9									
85	84,9	**0,55**	0,75	90L-8	700	**5,19**	8,0	617	62,3									
		0,75	1	100LA-8	702	**3,82**	8,0	842	84,9									
		1,1	1,5	100LB-8	702	**2,60**	8,0	1234	124,5									
		1,5	2	112M-8	710	**1,93**	8,0	1683	169,8									
		0,75	1	90S-6	915	**4,56**	11	612	61,8									
		1,1	1,5	90L-6	915	**3,11**	11	898	90,6									
		1,5	2	100L-6	944	**2,35**	11	1224	123,5									
		2,2	3	112M-6	950	**1,62**	11	1795	181,1									
		1,1	1,5	90S-4	1400	**4,33**	16	617	62,3									
		1,5	2	90L-4	1410	**3,20**	17	792	79,9									
		1,9	2,6	90LB-4	1415	**2,53**	17	1003	101,2									
		2,2	3	100LA-4	1420	**2,19**	17	1162	117,2									
		3	4	100LB-4	1420	**1,61**	17	1584	159,8									
		4	5,5	112M-4	1420	**1,21**	17	2112	213,1									
		5	6,8	112MB-4	1450	**0,99**	17	2640	266,4									
84	84,3	**0,6**	1	90L-8	700	**5,19**	8,3	617	62,3									
		0,8	1	100LA-8	702	**3,82**	8,3	842	84,9									
		1,1	1,5	100LB-8	702	**2,60**	8,3	1234	124,5									
		1,5	2	112M-8	710	**1,93**	8,4	1683	169,8									
		0,75	1	90S-6	915	**4,56**	11	612	61,8									
		1,1	1,5	90L-6	915	**3,11**	11	898	90,6									
		1,5	2	100L-6	944	**2,35**	11	1224	123,5									
		2,2	3	112M-6	950	**1,62**	11	1795	181,1									
		1,1	1,5	90S-4	1400	**4,33**	17	581	58,6									
		1,5	2	90L-4	1410	**3,20**	17	792	79,9									
		1,9	2,6	90LB-4	1415	**2,53**	17	1003	101,2									
		2,2	3	100LA-4	1420	**2,19**	17	1162	117,2									
		3	4	100LB-4	1420	**1,61**	17	1584	159,8									
		4	5,5	112M-4	1420	**1,21**	17	2112	213,1									
		5	6,8	112MB-4	1450	**0,99**	17	2640	266,4									

ENDURO 8		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
73	73,3	**0,75**	1	100LA-8	702	**4,36**	10	673	67,9									
		1,1	1,5	100LB-8	702	**2,98**	10	987	99,6									
		1,5	2	112M-8	710	**2,21**	10	1347	135,9									
		1,1	1,5	90S-4	1400	**4,95**	19	520	52,4									
		1,5	2	90L-4	1410	**3,65**	19	709	71,5									
		1,9	2,6	90LB-4	1415	**2,89**	19	898	90,6									
		2,2	3	100LA-4	1420	**2,51**	19	1039	104,9									
		3	4	100LB-4	1420	**1,84**	19	1417	143,0									
		4	5,5	112M-4	1420	**1,38**	19	1890	190,7									
		5	6,8	112MB-4	1450	**1,13**	20	2244	226,4									
		5,5	7,5	132S-4	1450	**1,02**	20	2469	249,1									
72	72,3	**0,75**	1	100LA-8	702	**4,44**	10	673	67,9									
		1,1	1,5	100LB-8	702	**3,02**	10	987	99,6									
		1,5	2,0	112M-8	710	**2,24**	10	1347	135,9									
		2,2	3	132S-8	710	**1,53**	10	1975	199,3									
		3,0	4	132M-8	720	**1,14**	10	2693	271,7									
		1,1	1,5	90S-4	1400	**5,03**	19	520	52,4									
		1,5	2	90L-4	1410	**3,71**	19	709	71,5									
		1,9	2,6	90LB-4	1415	**2,94**	20	853	86,0									
		2,2	3	100LA-4	1420	**2,55**	20	987	99,6									
		3	4	100LB-4	1420	**1,87**	20	1347	135,9									
		4	5,5	112M-4	1420	**1,40**	20	1795	181,1									
		5	6,8	112MB-4	1450	**1,15**	20	2244	226,4									
		5,5	7,5	132S-4	1450	**1,04**	20	2469	249,1									
66	66,2	**1,1**	2	100LB-8	702	**3,28**	11	898	90,6									
		1,5	2	112M-8	710	**2,43**	11	1224	123,5									
		2,2	3	132S-8	710	**1,66**	11	1795	181,1									
		3,0	4	132M-8	720	**1,23**	11	2448	247,0									
		1,1	1,5	90S-4	1400	**5,45**	21	470	47,4									
		1,5	2	90L-4	1410	**4,02**	21	641	64,7									
		1,9	2,6	90LB-4	1415	**3,19**	21	812	81,9									
		2,2	3	100LA-4	1420	**2,76**	21	940	94,9									
		3	4	100LB-4	1420	**2,03**	21	1282	129,4									
		4	5,5	112M-4	1420	**1,52**	21	1710	172,5									
		5	6,8	112MB-4	1450	**1,24**	22	2040	205,8									
		5,5	7,5	132S-4	1450	**1,13**	22	2244	226,4									
58	57,6	**1,1**	1,5	90S-4	1400	**4,86**	24	411	41,5									
		1,5	2	90L-4	1410	**3,59**	24	561	56,6									
		1,9	2,6	90LB-4	1415	**2,85**	25	682	68,8									
		2,2	3	100LA-4	1420	**2,47**	25	790	79,7									
		3	4	100LB-4	1420	**1,81**	25	1077	108,7									
		4	5,5	112M-4	1420	**1,36**	25	1436	144,9									
		5	6,8	112MB-4	1450	**1,11**	25	1795	181,1									
		5,5	7,5	132S-4	1450	**1,01**	25	1975	199,3									

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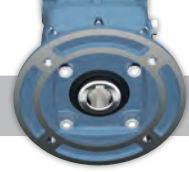
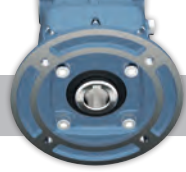


ENDURO 8		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
56	56,5	**1,9**	2,6	90LB-4	1415	**4,05**	25	682	68,8									
		2,2	3	100LA-4	1420	**3,51**	25	790	79,7									
		3	4	100LB-4	1420	**2,58**	25	1077	108,7									
		4	5,5	112M-4	1420	**1,93**	25	1436	144,9									
		5	6,8	112MB-4	1450	**1,58**	26	1726	174,2									
		5,5	7,5	132S-4	1450	**1,43**	26	1899	191,6									
		7,5	10	132M-4	1450	**1,05**	26	2590	261,3									
54	53,6	**1,9**	2,6	90LB-4	1415	**4,26**	26	656	66,2									
		3	4	100LB-4	1420	**2,70**	26	1036	104,5									
		4	5,5	112M-4	1420	**2,03**	26	1381	139,3									
		5	6,8	112MB-4	1450	**1,66**	27	1662	167,7									
		5,5	7,5	132S-4	1450	**1,51**	27	1829	184,5									
		7,5	10	132M-4	1450	**1,10**	27	2494	251,6									
48	48	**2,2**	3	100LA-4	1420	**4,09**	30	658	66,4									
		3	4	100LB-4	1420	**3,00**	30	898	90,6									
		4	5,5	112M-4	1420	**2,25**	30	1197	120,8									
		5	6,8	112MB-4	1450	**1,84**	30	1496	151,0									
		5,5	7,5	132S-4	1450	**1,67**	30	1646	166,0									
		7,5	10	132M-4	1450	**1,23**	30	2244	226,4									
		9,2	12,5	132MB-4	1450	**1,00**	30	2753	277,8									
43	43,3	**2,2**	3	100LA-4	1420	**4,13**	33	598	60,4									
		3	4	100LB-4	1420	**3,03**	33	816	82,3									
		4	5,5	112M-4	1420	**2,27**	33	1088	109,8									
		5	6,8	112MB-4	1450	**1,86**	33	1360	137,2									
		5,5	7,5	132S-4	1450	**1,69**	33	1496	151,0									
		7,5	10	132M-4	1450	**1,24**	33	2040	205,8									
		9,2	12,5	132MB-4	1450	**1,01**	33	2503	252,5									
42	41,9	**2,2**	3	100LA-4	1420	**4,29**	34	581	58,6									
		3	4	100LB-4	1420	**3,15**	34	792	79,9									
		4	5,5	112M-4	1420	**2,36**	34	1056	106,6									
		5	6,8	112MB-4	1450	**1,93**	35	1282	129,4									
		5,5	7,5	132S-4	1450	**1,75**	35	1411	142,3									
		7,5	10	132M-4	1450	**1,28**	35	1924	194,1									
		9,2	12,5	132MB-4	1450	**1,05**	35	2360	238,1									

ENDURO 8		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
37	37,5	**2,2**	3	100LA-4	1420	**5,33**	38	520	52,4									
		3	4	100LB-4	1420	**3,91**	38	709	71,5									
		4	5,5	112M-4	1420	**2,93**	38	945	95,3									
		5	6,8	112MB-4	1450	**2,40**	39	1151	116,1									
		5,5	7,5	132S-4	1450	**2,18**	39	1266	127,7									
		7,5	10	132M-4	1450	**1,60**	39	1726	174,2									
		9,2	12,5	132MB-4	1450	**1,30**	39	2118	213,7									
		11	15	132MC-4	1460	**1,10**	39	2532	255,5									
		11	15	160M-4	1460	**1,1**	39	2532	255,5									
34	33,8	**3**	4	100LB-4	1420	**4,32**	42	641	64,7									
		4	5,5	112M-4	1420	**3,24**	42	855	86,3									
		5	6,8	112MB-4	1450	**2,65**	43	1044	105,3									
		5,5	7,5	132S-4	1450	**2,41**	43	1148	115,8									
		7,5	10	132M-4	1450	**1,77**	43	1566	158,0									
		9,2	12,5	132MB-4	1450	**1,44**	43	1921	193,8									
		11	15	132MC-4	1460	**1,21**	43	2296	231,7									
		11	15	160M-4	1460	**1,21**	43	2296	231,7									
33	33,3	**3**	4	100LB-4	1420	**4,14**	43	626	63,2									
		4	5,5	112M-4	1420	**3,10**	43	835	84,3									
		5	6,8	112MB-4	1450	**2,54**	43	1044	105,3									
		5,5	7,5	132S-4	1450	**2,31**	43	1148	115,8									
		7,5	10	132M-4	1450	**1,69**	43	1566	158,0									
		9,2	12,5	132MB-4	1450	**1,38**	43	1921	193,8									
		11	15	132MC-4	1460	**1,16**	43	2296	231,7									
		11	15	160M-4	1460	**1,16**	44	2244	226,4									
31	31,3	**3**	4	100LB-4	1420	**4,31**	45	598	60,4									
		4	5,5	112M-4	1420	**3,23**	45	798	80,5									
		5	6,8	112MB-4	1450	**2,64**	46	976	98,4									
		5,5	7,5	132S-4	1450	**2,40**	46	1073	108,3									
		7,5	10	132M-4	1450	**1,76**	46	1464	147,7									
		9,2	12,5	132MB-4	1450	**1,43**	46	1795	181,1									
		11	15	132MC-4	1460	**1,21**	47	2101	212,0									
		11	15	160M-4	1460	**1,21**	47	2101	212,0									

PERFORMANCE TABLE



ENDURO 8		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
28	29,0	**3**	4	100LB-4	1420	**4,99**	49	550	55,5									
		4	5,5	112M-4	1420	**3,74**	49	733	73,9									
		5	6,8	112MB-4	1450	**3,06**	50	898	90,6									
		5,5	7,5	132S-4	1450	**2,78**	50	987	99,6									
		7,5	10	132M-4	1450	**2,04**	50	1347	135,9									
		9,2	12,5	132MB-4	1450	**1,66**	50	1652	166,7									
		11	15	132MC-4	1460	**1,40**	50	1975	199,3									
		11	15	160M-4	1460	**1,40**	50	1975	199,3									
		15	20	160L-4	1460	**1,03**	50	2693	271,7									
26	26,2	**3**	4	100LB-4	1420	**5,49**	54	499	50,3									
		4	5,5	112M-4	1420	**4,12**	54	665	67,1									
		5	6,8	112MB-4	1450	**3,36**	55	816	82,3									
		5,5	7,5	132S-4	1450	**3,06**	55	898	90,6									
		7,5	10	132M-4	1450	**2,24**	55	1224	123,5									
		9,2	12,5	132MB-4	1450	**1,83**	55	1502	151,5									
		11	15	132MC-4	1460	**1,54**	56	1763	177,9									
		11,0	15,0	160M-4	1460	**1,54**	56	1763	177,9									
		15	20	160L-4	1460	**1,13**	56	2405	242,6									
24	24,4	**3**	4	100LB-4	1420	**5,52**	58	464	46,8									
		4	5,5	112M-4	1420	**4,14**	58	619	62,5									
		5	6,8	112MB-4	1450	**3,38**	59	761	76,8									
		5,5	7,5	132S-4	1450	**3,07**	59	837	84,4									
		7,5	10	132M-4	1450	**2,25**	59	1141	115,1									
		9,2	12,5	132MB-4	1450	**1,84**	59	1400	141,2									
		11	15	132MC-4	1460	**1,55**	60	1646	166,0									
		11	15	160M-4	1460	**1,55**	60	1646	166,0									
		15	20	160L-4	1460	**1,13**	60	2244	226,4									
22	22,3	**4**	5,5	112M-4	1420	**4,79**	64	561	56,6									
		5	6,8	112MB-4	1450	**3,91**	65	691	69,7									
		5,5	7,5	132S-4	1450	**3,56**	65	760	76,6									
		7,5	10	132M-4	1450	**2,61**	65	1036	104,5									
		9,2	12,5	132MB-4	1450	**2,13**	65	1271	128,2									
		11	15	132MC-4	1460	**1,79**	65	1519	153,3									
		11,0	15,0	160M-4	1460	**1,79**	65	1519	153,3									
		15	20	160L-4	1460	**1,31**	65	2072	209,0									
		18,5	25	180M-4	1470	**1,07**	66	2516	253,9									

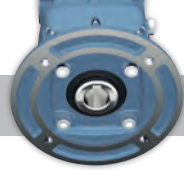
ENDURO 8		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
18	17,7	**4**	5,5	112M-4	1420	**4,76**	82	438	44,2									
		5	6,8	112MB-4	1450	**3,89**	82	547	55,2									
		5,5	7,5	132S-4	1450	**3,53**	82	602	60,7									
		7,5	10	132M-4	1450	**2,59**	82	821	82,8									
		9,2	12,5	132MB-4	1450	**2,11**	82	1007	101,6									
		11	15	132MC-4	1460	**1,78**	82	1204	121,5									
		11,0	15,0	160M-4	1460	**1,78**	82	1204	121,5									
		15	20	160L-4	1460	**1,30**	82	1642	165,7									
		18,5	25	180M-4	1470	**1,06**	83	2001	201,9									
17	16,6	**5,5**	7,5	132S-4	1450	**4,73**	88	561	56,6									
		7,5	10	132M-4	1450	**3,47**	88	765	77,2									
		9,2	12,5	132MB-4	1450	**2,83**	88	939	94,7									
		11	15	132MC-4	1460	**2,38**	88	1122	113,2									
		11,0	15,0	160M-4	1460	**2,38**	88	1122	113,2									
		15	20	160L-4	1460	**1,75**	88	1530	154,4									
		18,5	25	180M-4	1470	**1,43**	89	1866	188,3									
		22	30	180L-4	1470	**1,20**	89	2219	223,9									
15	15,1	**4**	5,5	112M-4	1420	**5,80**	94	382	38,5									
		5	6,8	112MB-4	1450	**4,74**	96	468	47,2									
		5,5	7,5	132S-4	1450	**4,31**	96	514	51,9									
		7,5	10	132M-4	1450	**3,16**	96	701	70,8									
		9,2	12,5	132MB-4	1450	**2,58**	96	860	86,8									
		11	15	132MC-4	1460	**2,17**	97	1018	102,7									
		11,0	15,0	160M-4	1460	**2,17**	97	1018	102,7									
		15	20	160L-4	1460	**1,59**	97	1388	140,1									
		18,5	25	180M-4	1470	**1,30**	97	1712	172,7									
13	13,4	**7,5**	10	132M-4	1450	**4,68**	108	623	62,9									
		9,2	12,5	132MB-4	1450	**3,81**	108	765	77,2									
		11	15	132MC-4	1460	**3,21**	109	906	91,4									
		11	15	160M-4	1460	**3,21**	109	906	91,4									
		15	20	160L-4	1460	**2,36**	109	1235	124,6									
		18,5	25	180M-4	1470	**1,92**	110	1510	152,3									
		22	30	180L-4	1470	**1,62**	110	1795	181,1									
		18,5	25	160L-2	2950	**3,5**	221	751	75,8									
		22	30	180M-2	2950	**2,9**	221	894	90,2									

PERFORMANCE TABLE

ENDURO 8		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
12	12,4	**5,5**	7,5	132S-4	1450	**5,55**	117	422	42,6									
		7,5	10	132M-4	1450	**4,07**	117	575	58,1									
		9,2	12,5	132MB-4	1450	**3,32**	117	706	71,2									
		11	15	132MC-4	1460	**2,79**	118	837	84,4									
		11	15	160M-4	1460	**2,79**	118	837	84,4									
		15	20	160L-4	1460	**2,05**	118	1141	115,1									
		18,5	25	180M-4	1470	**1,67**	119	1396	140,8									
		22	30	180L-4	1470	**1,41**	119	1660	167,4									
		18,5	25	160L-2	2950	**3,0**	238	698	70,4									
		22	30	180M-2	2950	**2,5**	238	830	83,7									
11	11,2	**5,5**	7,5	132S-4	1450	**5,50**	130	380	38,3									
		7,5	10	132M-4	1450	**4,03**	130	518	52,3									
		9,2	12,5	132MB-4	1450	**3,29**	130	635	64,1									
		11	15	132MC-4	1460	**2,77**	130	760	76,6									
		11	15	160M-4	1460	**2,77**	130	760	76,6									
		15	20	160L-4	1460	**2,03**	130	1036	104,5									
		18,5	25,0	180M-4	1470	**1,66**	131	1268	127,9									
		22	30	180L-4	1470	**1,39**	131	1508	152,1									
		18,5	25	160L-2	2950	**3,0**	264	629	63,5									
		22	30	180M-2	2950	**2,5**	264	748	75,5									
10	9,7	**9,2**	12,5	132MB-4	1450	**4,73**	150	551	55,6									
		11	15	132MC-4	1460	**3,98**	151	654	66,0									
		11	15	160M-4	1460	**3,98**	151	654	66,0									
		15	20	160L-4	1460	**2,92**	151	892	90,0									
		18,5	25	180M-4	1470	**2,39**	152	1093	110,2									
		22	30	180L-4	1470	**2,01**	152	1299	131,1									
		18,5	25	160L-2	2950	**4,3**	305	545	54,9									
		22	30	180M-2	2950	**3,6**	305	648	65,3									
7	6,5	**9,2**	12,5	132MB-4	1450	**4,99**	222	372	37,5									
		11	15	132MC-4	1460	**4,21**	223	443	44,7									
		11	15	160M-4	1460	**4,21**	223	443	44,7									
		15	20	160L-4	1460	**3,08**	223	604	60,9									
		18,5	25	180M-4	1470	**2,52**	225	738	74,5									
		22	30	180L-4	1470	**2,12**	225	878	88,6									
		18,5	25	160L-2	2950	**4,5**	451	368	37,2									
		22	30	180M-2	2950	**3,8**	451	438	44,2									

ENDURO 9		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
118	117,7	**1,1**	1,5	100LB-8	702	**3,46**	6,0	1646	166,0									
		1,5	2	112M-8	710	**2,57**	6,0	2244	226,4									
		2,2	3	132S-8	710	**1,75**	6,0	3292	332,1									
		3	4	132M-8	720	**1,30**	6,1	4489	452,9									
		1,5	2	100L-6	944	**3,13**	8,0	1683	169,8									
		2,2	3	112M-6	950	**2,15**	8,1	2469	249,1									
		3,0	4	132S-6	970	**1,61**	8,2	3366	339,6									
		4	5,5	132MA-6	970	**1,21**	8,2	4489	452,9									
		2,2	3	100LA-4	1420	**2,92**	12	1646	166,0									
		3	4	100LB-4	1420	**2,14**	12	2244	226,4									
		4	5,5	112M-4	1420	**1,60**	12	2992	301,9									
		5	6,8	112MB-4	1450	**1,31**	12	3740	377,4									
		5,5	7,5	132S-4	1450	**1,19**	12	4114	415,1									
110	110,4	**1,1**	1,5	100LB-8	702	**3,64**	6,4	1646	166,0									
		1,5	2	112M-8	710	**2,70**	6,4	2244	226,4									
		2,2	3	132S-8	710	**1,84**	6,4	3292	332,1									
		3	4	132M-8	720	**1,37**	6,5	3847	388,2									
		1,5	2	100L-6	944	**3,29**	8,6	1496	151,0									
		2,2	3	112M-6	950	**2,26**	8,6	2194	221,4									
		3,0	4	132S-6	970	**1,69**	8,8	2992	301,9									
		4	5,5	132MA-6	970	**1,27**	8,8	3990	402,5									
		2,2	3	100LA-4	1420	**3,07**	13	1519	153,3									
		3	4	100LB-4	1420	**2,25**	13	2072	209,0									
		4	5,5	112M-4	1420	**1,69**	13	2762	278,7									
		5	6,8	112MB-4	1450	**1,38**	13	3453	348,4									
		5,5	7,5	132S-4	1450	**1,25**	13	3798	383,2									
104	103,8	**1,1**	1,5	100LB-8	702	**3,83**	6,8	1411	142,3									
		1,5	2	112M-8	710	**2,84**	6,8	1924	194,1									
		2,2	3	132S-8	710	**1,94**	6,8	2821	284,7									
		3	4	132M-8	720	**1,44**	6,9	3847	388,2									
		1,5	2	100L-6	944	**3,46**	9,1	1496	151,0									
		2,2	3	112M-6	950	**2,38**	9,2	2194	221,4									
		3,0	4	132S-6	970	**1,78**	9,3	2992	301,9									
		4	5,5	132MA-6	970	**1,33**	9,3	3990	402,5									
		2,2	3	100LA-4	1420	**3,23**	14	1411	142,3									
		3	4	100LB-4	1420	**2,37**	14	1924	194,1									
		4	5,5	112M-4	1420	**1,78**	14	2565	258,8									
		5	6,8	112MB-4	1450	**1,45**	14	3206	323,5									
		5,5	7,5	132S-4	1450	**1,32**	14	3527	355,8									
		7,5	10	132M-4	1450	**0,97**	14	4809	485,2									

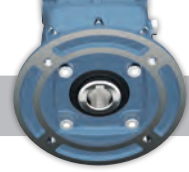
PERFORMANCE TABLE



ENDURO 9		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
96	95,5	**1,1**	1,5	100LB-8	702	**3,94**	7,3	1411	142,3									
		1,5	2	112M-8	710	**2,92**	7,4	1924	194,1									
		2,2	3	132S-8	710	**1,99**	7,4	2821	284,7									
		3	4	132M-8	720	**1,48**	7,5	3366	339,6									
		1,5	2	100L-6	944	**3,56**	10	1347	135,9									
		2,2	3	112M-6	950	**2,44**	10	1975	199,3									
		3,0	4	132S-6	970	**1,83**	10	2693	271,7									
		4	5,5	132MA-6	970	**1,37**	10	3591	362,3									
		2,2	3	100LA-4	1420	**3,32**	15	1317	132,8									
		3	4	100LB-4	1420	**2,44**	15	1795	181,1									
		4	5,5	112M-4	1420	**1,83**	15	2394	241,5									
		5	6,8	112MB-4	1450	**1,49**	15	2992	301,9									
		5,5	7,5	132S-4	1450	**1,36**	15	3292	332,1									
91	90,6	**1,1**	1,5	100LB-8	702	**4,28**	7,7	1234	124,5									
		1,5	2	112M-8	710	**3,17**	7,8	1683	169,8									
		2,2	3	132S-8	710	**2,16**	7,8	2469	249,1									
		3	4	132M-8	720	**1,61**	7,9	3366	339,6									
		1,5	2	100L-6	944	**3,86**	10	1347	135,9									
		2,2	3	112M-6	950	**2,65**	10	1975	199,3									
		3,0	4	132S-6	970	**1,99**	11	2448	247,0									
		4	5,5	132MA-6	970	**1,49**	11	3264	329,3									
		2,2	3	100LA-4	1420	**3,60**	16	1234	124,5									
		3	4	100LB-4	1420	**2,64**	16	1683	169,8									
		4	5,5	112M-4	1420	**1,98**	16	2244	226,4									
		5	6,8	112MB-4	1450	**1,62**	16	2805	283,0									
		5,5	7,5	132S-4	1450	**1,47**	16	3086	311,3									
		7,5	10	132M-4	1450	**1,08**	16	4208	424,6									
90	89,6	**1,1**	1,5	100LB-8	702	**4,19**	7,8	1234	124,5									
		1,5	2	112M-8	710	**3,11**	7,9	1683	169,8									
		2,2	3	132S-8	710	**2,12**	7,9	2469	249,1									
		3	4	132M-8	720	**1,58**	8,0	3366	339,6									
		1,5	2	100L-6	944	**3,79**	11	1224	123,5									
		2,2	3	112M-6	950	**2,60**	11	1795	181,1									
		3,0	4	132S-6	970	**1,95**	11	2448	247,0									
		4	5,5	132MA-6	970	**1,46**	11	3264	329,3									
		2,2	3	100LA-4	1420	**3,53**	16	1234	124,5									
		3	4	100LB-4	1420	**2,59**	16	1683	169,8									
		4	5,5	112M-4	1420	**1,94**	16	2244	226,4									
		5	6,8	112MB-4	1450	**1,59**	16	2805	283,0									
		5,5	7,5	132S-4	1450	**1,44**	16	3086	311,3									
		7,5	10	132M-4	1450	**1,06**	16	4208	424,6									

ENDURO 9		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
84	84,2	**1,1**	1,5	100LB-8	702	**4,44**	8,3	1234	124,5									
		1,5	2	112M-8	710	**3,29**	8,4	1683	169,8									
		2,2	3	132S-8	710	**2,25**	8,4	2469	249,1									
		3	4	132M-8	720	**1,67**	8,5	2992	301,9									
		1,5	2	100L-6	944	**4,01**	11	1224	123,5									
		2,2	3	112M-6	950	**2,75**	11	1795	181,1									
		3,0	4	132S-6	970	**2,06**	12	2244	226,4									
		4	5,5	132MA-6	970	**1,55**	12	2992	301,9									
		2,2	3	100LA-4	1420	**3,74**	17	1162	117,2									
		3	4	100LB-4	1420	**2,75**	17	1584	159,8									
		4	5,5	112M-4	1420	**2,06**	17	2112	213,1									
		5	6,8	112MB-4	1450	**1,68**	17	2640	266,4									
		5,5	7,5	132S-4	1450	**1,53**	17	2904	293,0									
		7,5	10	132M-4	1450	**1,12**	17	3960	399,6									
78	78,0	**1,1**	1,5	100LB-8	702	**4,90**	9,0	1097	110,7									
		1,5	2	112M-8	710	**3,63**	9,1	1496	151,0									
		2,2	3	132S-8	710	**2,48**	9,1	2194	221,4									
		3	4	132M-8	720	**1,84**	9,2	2992	301,9									
		2,2	3	100LA-4	1420	**4,13**	18	1097	110,7									
		3	4	100LB-4	1420	**3,03**	18	1496	151,0									
		4	5,5	112M-4	1420	**2,27**	18	1995	201,3									
		5	6,8	112MB-4	1450	**1,86**	19	2362	238,3									
		5,5	7,5	132S-4	1450	**1,69**	19	2599	262,2									
		7,5	10	132M-4	1450	**1,24**	19	3544	357,5									
		9,2	12,5	132MB-4	1450	**1,01**	19	4347	438,6									
76	75,7	**1,1**	1,5	100LB-8	702	**5,04**	9,3	1097	110,7									
		1,5	2	112M-8	710	**3,74**	9,4	1496	151,0									
		2,2	3	132S-8	710	**2,55**	9,4	2194	221,4									
		3	4	132M-8	720	**1,90**	9,5	2693	271,7									
		2,2	3	100LA-4	1420	**4,25**	19	1039	104,9									
		3	4	100LB-4	1420	**3,11**	19	1417	143,0									
		4	5,5	112M-4	1420	**2,34**	19	1890	190,7									
		5	6,8	112MB-4	1450	**1,91**	19	2362	238,3									
		5,5	7,5	132S-4	1450	**1,73**	19	2599	262,2									
		7,5	10	132M-4	1450	**1,27**	19	3544	357,5									
		9,2	12,5	132MB-4	1450	**1,04**	19	4347	438,6									

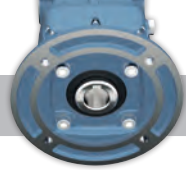
PERFORMANCE TABLE



ENDURO 9		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
75	74,9	**1,1**	1,5	100LB-8	702	**5,09**	9,4	1097	110,7									
		1,5	2	112M-8	710	**3,78**	9,5	1496	151,0									
		2,2	3	132S-8	710	**2,57**	9,5	2194	221,4									
		3	4	132M-8	720	**1,91**	10	2693	271,7									
		2,2	3	100LA-4	1420	**4,29**	19	1039	104,9									
		3	4	100LB-4	1420	**3,15**	19	1417	143,0									
		4	5,5	112M-4	1420	**2,36**	19	1890	190,7									
		5	6,8	112MB-4	1450	**1,93**	19	2362	238,3									
		5,5	7,5	132S-4	1450	**1,75**	19	2599	262,2									
		7,5	10	132M-4	1450	**1,29**	19	3544	357,5									
		9,2	12,5	132MB-4	1450	**1,05**	19	4347	438,6									
74	73,6	**1,1**	1,5	100LB-8	702	**5,05**	10	987	99,6									
		1,5	2	112M-8	710	**3,75**	10	1347	135,9									
		2,2	3	132S-8	710	**2,55**	10	1975	199,3									
		3	4	132M-8	720	**1,90**	10	2693	271,7									
		2,2	3	100LA-4	1420	**4,26**	19	1039	104,9									
		3	4	100LB-4	1420	**3,12**	19	1417	143,0									
		4	5,5	112M-4	1420	**2,34**	19	1890	190,7									
		5	6,8	112MB-4	1450	**1,91**	20	2244	226,4									
		5,5	7,5	132S-4	1450	**1,74**	20	2469	249,1									
		7,5	10	132M-4	1450	**1,28**	20	3366	339,6									
		9,2	12,5	132MB-4	1450	**1,04**	20	4129	416,6									
69	69,3	**1,1**	1,5	100LB-8	702	**3,94**	10	987	99,6									
		1,5	2	112M-8	710	**2,92**	10	1347	135,9									
		2,2	3	132S-8	710	**1,99**	10	1975	199,3									
		3	4	132M-8	720	**1,48**	10	2693	271,7									
		2,2	3	100LA-4	1420	**3,32**	20	987	99,6									
		3	4	100LB-4	1420	**2,44**	20	1347	135,9									
		4	5,5	112M-4	1420	**1,83**	20	1795	181,1									
		5	6,8	112MB-4	1450	**1,49**	21	2137	215,6									
		5,5	7,5	132S-4	1450	**1,36**	21	2351	237,2									
		7,5	10	132M-4	1450	**1,00**	21	3206	323,5									
65	65,0	**1,5**	2	112M-8	710	**3,11**	11	1224	123,5									
		2,2	3	132S-8	710	**2,12**	11	1795	181,1									
		3	4	132M-8	720	**1,58**	11	2448	247,0									
		2,2	3	100LA-4	1420	**3,53**	22	898	90,6									
		3	4	100LB-4	1420	**2,59**	22	1224	123,5									
		4	5,5	112M-4	1420	**1,94**	22	1632	164,7									
		5	6,8	112MB-4	1450	**1,59**	22	2040	205,8									
		5,5	7,5	132S-4	1450	**1,44**	22	2244	226,4									
		7,5	10	132M-4	1450	**1,06**	22	3060	308,8									

ENDURO 9		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
63	63,3	**1,5**	2	112M-8	710	**4,32**	11	1224	123,5									
		2,2	3	132S-8	710	**2,95**	11	1795	181,1									
		3	4	132M-8	720	**2,19**	11	2448	247,0									
		2,2	3	100LA-4	1420	**4,91**	22	898	90,6									
		3	4	100LB-4	1420	**3,60**	22	1224	123,5									
		4	5,5	112M-4	1420	**2,70**	22	1632	164,7									
		5	6,8	112MB-4	1450	**2,21**	23	1952	196,9									
		5,5	7,5	132S-4	1450	**2,01**	23	2147	216,6									
		7,5	10	132M-4	1450	**1,47**	23	2927	295,3									
		9,2	12,5	132MB-4	1450	**1,20**	23	3591	362,3									
		11	15	132MC-4	1460	**1,01**	23	4293	433,2									
61	60,8	**2,2**	3	100LA-4	1420	**5,11**	23	859	86,6									
		3	4	100LB-4	1420	**3,74**	23	1171	118,1									
		4	5,5	112M-4	1420	**2,81**	23	1561	157,5									
		5	6,8	112MB-4	1450	**2,29**	24	1870	188,7									
		5,5	7,5	132S-4	1450	**2,09**	24	2057	207,6									
		7,5	10	132M-4	1450	**1,53**	24	2805	283,0									
		9,2	12,5	132MB-4	1450	**1,25**	24	3441	347,2									
		11	15	132MC-4	1460	**1,05**	24	4114	415,1									
60	60,5	**2,2**	3	100LA-4	1420	**5,25**	23	859	86,6									
		3	4	100LB-4	1420	**3,85**	23	1171	118,1									
		4	5,5	112M-4	1420	**2,89**	23	1561	157,5									
		5	6,8	112MB-4	1450	**2,36**	24	1870	188,7									
		5,5	7,5	132S-4	1450	**2,15**	24	2057	207,6									
		7,5	10	132M-4	1450	**1,57**	24	2805	283,0									
		9,2	12,5	132MB-4	1450	**1,28**	24	3441	347,2									
		11	15	132MC-4	1460	**1,08**	24	4114	415,1									
53	53,4	**2,2**	3	100LA-4	1420	**4,26**	27	731	73,8									
		3	4	100LB-4	1420	**3,12**	27	997	100,6									
		4	5,5	112M-4	1420	**2,34**	27	1330	134,2									
		5	6,8	112MB-4	1450	**1,91**	27	1662	167,7									
		5,5	7,5	132S-4	1450	**1,74**	27	1829	184,5									
		7,5	10	132M-4	1450	**1,28**	27	2494	251,6									
		9,2	12,5	132MB-4	1450	**1,04**	27	3059	308,6									
49	49,1	**3**	4	100LB-4	1420	**4,59**	29	929	93,7									
		4	5,5	112M-4	1420	**3,44**	29	1238	124,9									
		5	6,8	112MB-4	1450	**2,81**	30	1496	151,0									
		5,5	7,5	132S-4	1450	**2,56**	30	1646	166,0									
		7,5	10	132M-4	1450	**1,88**	30	2244	226,4									
		9,2	12,5	132MB-4	1450	**1,53**	30	2753	277,8									
		11	15	132MC-4	1460	**1,29**	30	3292	332,1									
		11	15	160M-4	1460	**1,29**	30	3292	332,1									

PERFORMANCE TABLE



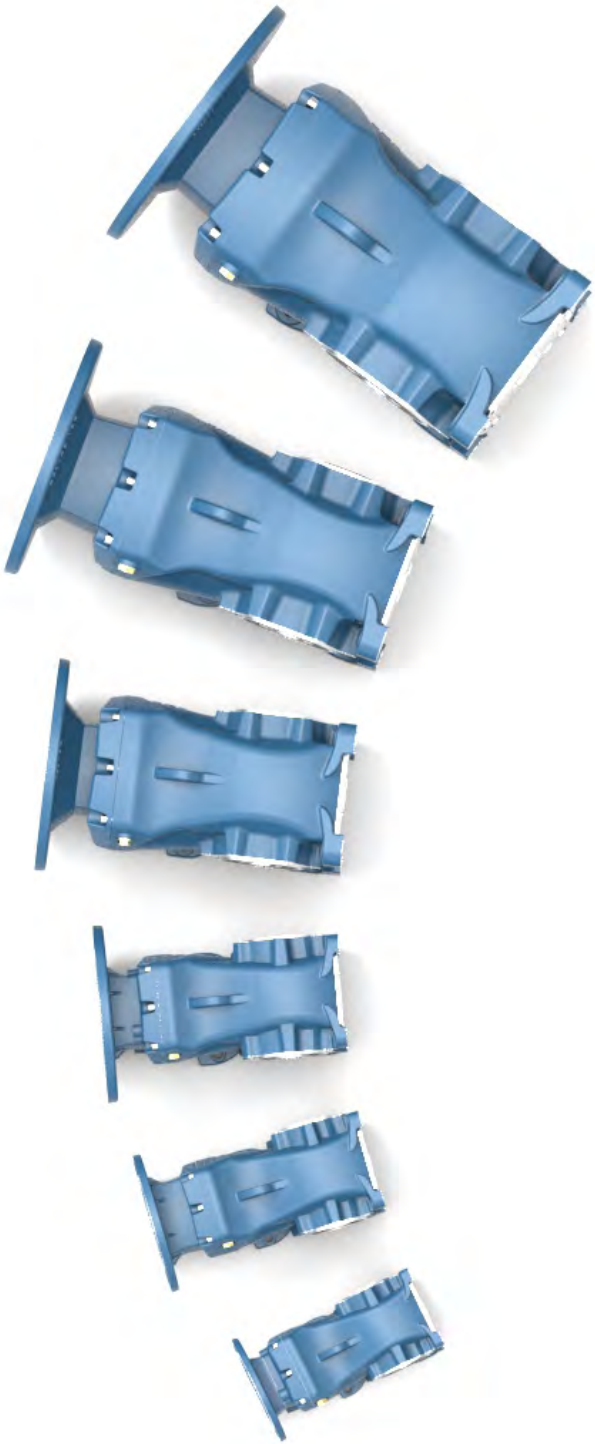
ENDURO 9		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
48	48,3	**3**	4	100LB-4	1420	**4,76**	29	929	93,7									
		4	5,5	112M-4	1420	**3,57**	29	1238	124,9									
		5	6,8	112MB-4	1450	**2,92**	30	1496	151,0									
		5,5	7,5	132S-4	1450	**2,65**	30	1646	166,0									
		7,5	10	132M-4	1450	**1,94**	30	2244	226,4									
		9,2	12,5	132MB-4	1450	**1,59**	30	2753	277,8									
		11	15	132MC-4	1460	**1,33**	30	3292	332,1									
		11	15	160M-4	1460	**1,33**	30	3292	332,1									
		15	20	160L-4	1460	**0,98**	30	4489	452,9									
47	46,6	**3**	4	100LB-4	1420	**4,68**	31	869	87,6									
		4	5,5	112M-4	1420	**3,51**	31	1158	116,9									
		5	6,8	112MB-4	1450	**2,86**	31	1448	146,1									
		5,5	7,5	132S-4	1450	**2,60**	31	1593	160,7									
		7,5	10	132M-4	1450	**1,91**	31	2172	219,1									
		9,2	12,5	132MB-4	1450	**1,56**	31	2664	268,8									
		11	15	132MC-4	1460	**1,31**	31	3185	321,4									
		11	15	160M-4	1460	**1,31**	31	3185	321,4									
		15	20	160L-4	1460	**0,96**	31	4344	438,2									
44	43,7	**4**	5,5	112M-4	1420	**3,93**	33	1088	109,8									
		5	6,8	112MB-4	1450	**3,21**	33	1360	137,2									
		5,5	7,5	132S-4	1450	**2,92**	33	1496	151,0									
		7,5	10	132M-4	1450	**2,14**	33	2040	205,8									
		9,2	12,5	132MB-4	1450	**1,75**	33	2503	252,5									
		11	15	132MC-4	1460	**1,47**	33	2992	301,9									
		11	15	160M-4	1460	**1,47**	33	2992	301,9									
		15	20	160L-4	1460	**1,08**	33	4080	411,7									
41	41,0	**4**	5,5	112M-4	1420	**4,17**	35	1026	103,5									
		5	6,8	112MB-4	1450	**3,41**	35	1282	129,4									
		5,5	7,5	132S-4	1450	**3,10**	35	1411	142,3									
		7,5	10	132M-4	1450	**2,27**	35	1924	194,1									
		9,2	12,5	132MB-4	1450	**1,85**	35	2360	238,1									
		11	15	132MC-4	1460	**1,56**	36	2743	276,7									
		11	15	160M-4	1460	**1,56**	36	2743	276,7									
		15	20	160L-4	1460	**1,14**	36	3740	377,4									
39	39,2	**5,5**	7,5	132S-4	1450	**3,48**	37	1334	134,6									
		7,5	10	132M-4	1450	**2,55**	37	1820	183,6									
		9,2	12,5	132MB-4	1450	**2,08**	37	2232	225,2									
		11	15	132MC-4	1460	**1,75**	37	2669	269,3									
		11	15	160M-4	1460	**1,75**	37	2669	269,3									
		15	20	160L-4	1460	**1,29**	37	3639	367,2									
		18,5	25	180M-4	1470	**1,05**	37	4489	452,9									

ENDURO 9		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
36	35,7	**5,5**	7,5	132S-4	1450	**3,89**	41	1204	121,5									
		7,5	10	132M-4	1450	**2,85**	41	1642	165,7									
		9,2	12,5	132MB-4	1450	**2,33**	41	2014	203,2									
		11	15	132MC-4	1460	**1,96**	41	2408	243,0									
		11	15	160M-4	1460	**1,96**	41	2408	243,0									
		15	20	160L-4	1460	**1,44**	41	3284	331,4									
		18,5	25	180M-4	1470	**1,17**	41	4051	408,7									
33	33,3	**5,5**	7,5	132S-4	1450	**3,49**	44	1122	113,2									
		7,5	10	132M-4	1450	**2,56**	44	1530	154,4									
		9,2	12,5	132MB-4	1450	**2,09**	44	1877	189,4									
		11	15	132MC-4	1460	**1,76**	44	2244	226,4									
		11	15	160M-4	1460	**1,76**	44	2244	226,4									
		15	20	160L-4	1460	**1,29**	44	3060	308,8									
		18,5	25	180M-4	1470	**1,05**	44	3774	380,8									
31	30,9	**5,5**	7,5	132S-4	1450	**4,47**	47	1051	106,0									
		7,5	10	132M-4	1450	**3,28**	47	1433	144,5									
		9,2	12,5	132MB-4	1450	**2,67**	47	1757	177,3									
		11	15	132MC-4	1460	**2,25**	47	2101	212,0									
		11	15	160M-4	1460	**2,25**	47	2101	212,0									
		15	20	160L-4	1460	**1,65**	47	2865	289,1									
		18,5	25	180M-4	1470	**1,35**	48	3460	349,1									
		22	30	180L-4	1470	**1,13**	48	4114	415,1									
30	29,6	**5,5**	7,5	132S-4	1450	**4,64**	49	1008	101,7									
		7,5	10	132M-4	1450	**3,40**	49	1374	138,6									
		9,2	12,5	132MB-4	1450	**2,78**	49	1685	170,1									
		11	15	132MC-4	1460	**2,34**	49	2015	203,3									
		11	15	160M-4	1460	**2,34**	49	2015	203,3									
		15	20	160L-4	1460	**1,71**	49	2748	277,3									
		18,5	25	180M-4	1470	**1,40**	50	3321	335,1									
		22	30	180L-4	1470	**1,18**	50	3950	398,5									
29	28,9	**5,5**	7,5	132S-4	1450	**4,66**	50	987	99,6									
		7,5	10	132M-4	1450	**3,42**	50	1347	135,9									
		9,2	12,5	132MB-4	1450	**2,79**	50	1652	166,7									
		11	15	132MC-4	1460	**2,35**	50	1975	199,3									
		11	15	160M-4	1460	**2,35**	50	1975	199,3									
		15	20	160L-4	1460	**1,72**	50	2693	271,7									
		18,5	25	180M-4	1470	**1,41**	51	3256	328,5									
		22	30	180L-4	1470	**1,18**	51	3872	390,7									

PERFORMANCE TABLE

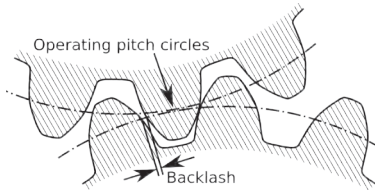
ENDURO 9		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
25	25,0	**5,5**	7,5	132S-4	1450	**4,69**	58	851	85,9									
		7,5	10	132M-4	1450	**3,44**	58	1161	117,1									
		9,2	12,5	132MB-4	1450	**2,81**	58	1424	143,7									
		11	15	132MC-4	1460	**2,36**	58	1703	171,8									
		11	15	160M-4	1460	**2,36**	58	1703	171,8									
		15	20	160L-4	1460	**1,73**	58	2322	234,2									
		18,5	25	180M-4	1470	**1,41**	59	2815	284,0									
		22	30	180L-4	1470	**1,19**	59	3347	337,7									
24	24,3	**7,5**	10	132M-4	1450	**3,97**	60	1122	113,2									
		9,2	12,5	132MB-4	1450	**3,23**	60	1376	138,9									
		11	15	132MC-4	1460	**2,72**	60	1646	166,0									
		11	15	160M-4	1460	**2,72**	60	1646	166,0									
		15	20	160L-4	1460	**2,00**	60	2244	226,4									
		18,5	25	180M-4	1470	**1,63**	60	2768	279,3									
		22	30	180L-4	1470	**1,37**	60	3292	332,1									
		30	40	200L-4	1480	**1,01**	61	4415	445,4									
22	22,4	**7,5**	10	132M-4	1450	**4,04**	65	1036	104,5									
		9,2	12,5	132MB-4	1450	**3,29**	65	1271	128,2									
		11	15	132MC-4	1460	**2,77**	65	1519	153,3									
		11	15	160M-4	1460	**2,77**	65	1519	153,3									
		15	20	160L-4	1460	**2,03**	65	2072	209,0									
		18,5	25	180M-4	1470	**1,66**	66	2516	253,9									
		22	30	180L-4	1470	**1,40**	66	2992	301,9									
		30	40	200L-4	1480	**1,03**	66	4080	411,7									
19	19,4	**7,5**	10	132M-4	1450	**4,93**	75	898	90,6									
		9,2	12,5	132MB-4	1450	**4,02**	75	1101	111,1									
		11	15	132MC-4	1460	**3,38**	75	1317	132,8									
		11	15	160M-4	1460	**3,38**	75	1317	132,8									
		15	20	160L-4	1460	**2,48**	75	1795	181,1									
		18,5	25	180M-4	1470	**2,03**	76	2185	220,5									
		22	30	180L-4	1470	**1,70**	76	2599	262,2									
		30	40	200L-4	1480	**1,26**	76	3544	357,5									
18	18,2	**7,5**	10	132M-4	1450	**4,87**	80	842	84,9									
		9,2	12,5	132MB-4	1450	**3,97**	80	1032	104,2									
		11	15	132MC-4	1460	**3,34**	80	1234	124,5									
		11	15	160M-4	1460	**3,34**	80	1234	124,5									
		15	20	160L-4	1460	**2,45**	80	1683	169,8									
		18,5	25	180M-4	1470	**2,00**	81	2050	206,9									
		22	30	180L-4	1470	**1,68**	81	2438	246,0									
		30	40	200L-4	1480	**1,24**	81	3325	335,4									

ENDURO 9		input				output				INPUT B5 IEC 72-1								
ratio i: rated	ratio i: real	kW	Hp	motor	n_1 [rpm]	fs	n_2 [rpm]	M_2 [Nm]	M_2 [Kgm]	63	71	80	90	110/112	132	160	180	200
16	15,5	**11**	15	160M-4	1460	**4,20**	94	1051	106,0									
		15	20	160L-4	1460	**3,08**	94	1433	144,5									
		18,5	25	180M-4	1470	**2,51**	95	1748	176,4									
		22	30	180L-4	1470	**2,11**	95	2079	209,7									
		30	40	200L-4	1480	**1,56**	95	2835	286,0									
14	14,1	**11**	15	160M-4	1460	**4,31**	103	959	96,7									
		15	20	160L-4	1460	**3,16**	103	1307	131,9									
		18,5	25	180M-4	1470	**2,58**	104	1597	161,1									
		22	30	180L-4	1470	**2,17**	104	1899	191,6									
		30	40	200L-4	1480	**1,60**	105	2565	258,8									
11	11,4	**15**	20	160L-4	1460	**4,12**	128	1052	106,1									
		18,5	25	180M-4	1470	**3,36**	128	1297	130,9									
		22	30	180L-4	1470	**2,83**	128	1543	155,7									
		30	40	200L-4	1480	**2,09**	129	2088	210,6									
9	8,9	**22**	30	180M-2	2950	**6,13**	333	593	59,8									
		30	40	200LA-2	2950	**4,50**	333	809	81,6									
		37	50	200LB-2	2950	**3,65**	333	997	100,6									
		18,5	25	180M-4	1470	**4,04**	166	1000	100,9									
		22	30	180L-4	1470	**3,39**	166	1190	120,0									
		30	40	200L-4	1480	**2,51**	167	1613	162,7									
8	8,3	**22**	30	180M-2	2950	**5,11**	355	556	56,1									
		30	40,0	200LA-2	2950	**3,75**	355	759	76,5									
		37	50	200LB-2	2950	**3,04**	355	936	94,4									
		18,5	25	180M-4	1470	**3,36**	177	938	94,7									
		22	30	180L-4	1470	**2,83**	177	1116	112,6									
		30	40	200L-4	1480	**2,09**	178	1513	152,6									
7	7,2	**22,0**	30,0	180M-2	2950	**7,95**	410	482	48,6									
		30	40,0	200LA-2	2950	**5,83**	410	657	66,3									
		37,0	50,0	200LB-2	2950	**4,73**	410	810	81,7									
		18,5	25	180M-4	1470	**5,24**	204	814	82,1									
		22	30	180L-4	1470	**4,40**	204	968	97,7									
		30	40	200L-4	1480	**3,25**	206	1307	131,9									
5	5,2	**22**	30	180M-2	2950	**7,95**	565	350	35,3									
		30	40	200LA-2	2950	**5,83**	565	477	48,1									
		37	50	200LB-2	2950	**4,73**	565	588	59,3									
		18,5	25	180M-4	1470	**5,24**	282	589	59,4									
		22	30	180L-4	1470	**4,40**	282	700	70,7									
		30	40	200L-4	1480	**3,25**	284	948	95,7									



BACKLASH MAX [DEG]

i:	EN3	EN4	EN5	EN7	EN8	EN9
4			1,3			
5	2,2	2,5	1,3			0,8
6	2,2	1,6				
7		1,6		0,8	0,6	0,7
8			1,2	0,8		0,8
9	2,5	2,3	1,4			0,7
10				0,8	0,6	
11	2,5	1,8	1,4	0,6	0,6	0,7
12					0,6	
13		1,8	1,2	0,6	0,6	
14	2,4	1,6				0,7
15				0,6	0,6	
16		1,7	1,3	0,7		0,7
17	2,5		1,4		0,6	
18		1,8			0,7	0,4
19	2,4		1,3	0,7		0,7
20		2,3		0,7		
21	2,5			0,7		
22		1,7	1,3		0,6	0,4
23						
24					0,6	0,7
25		1,8		0,7		0,7
26	2,6	1,8	1,4		0,6	
27			1,3	0,7		
28						
29					0,6	0,4
30		1,8		0,7		0,7
31					0,6	0,7
32	2,6			0,7		
33	2,6	1,8	1,4	0,6	0,6	0,7
34					0,6	
35				0,7		
36				0,7		0,4
37	2,6			0,7	0,6	
38		2,2	1,4			
39						0,4
40	2,7	1,8		0,6		
41						0,7
42					0,6	
43			1,3	0,7	0,6	



i:	EN3	EN4	EN5	EN7	EN8	EN9
44						0,7
45				0,7		
46						
47		1,3	1,7	0,6		0,7
48					0,7	0,4
49						0,4
50	2,3					
51				0,6		
52						
53		1,6				0,3
54				0,6	0,6	
55	2,0					
56			1,3		0,6	
57						
58					0,6	
59		1,6				
60	2,3			0,6		0,4
61						0,4
62						
63		1,3				0,4
64				0,6		
65			1,3			0,3
66					0,6	
67				0,6		
68				0,6		
69						0,3
70						
71						
72		1,6			0,6	
73					0,6	
74						0,4
75				0,6		0,4
76	2,3	1,6				0,4
77						
78						0,4
79						
80						
81				0,6		
82						

i:	EN3	EN4	EN5	EN7	EN8	EN9
83						
84			1,3		0,6	0,4
85				0,6	0,6	
86						
87		1,6				
88				0,6		
89						
90						0,4
91				0,6		0,4
92						
93	2,4					
94				0,6	0,6	
95					0,6	
96	2,3		1,3			0,4
97		1,6				
98						
99						
100						
101				0,6		
102						
103						
104						0,4
105						
106	2,3					
107						
108			1,3		0,6	
109		1,8		0,6		
110						0,4
111						
112						
113						
114				0,6		
115	2,4					
116						
117		1,7				
118			1,4			0,4
119						
120						
121					0,6	

Backlash, sometimes called lash or play, is a clearance between mating gear teeth. Reasons for the presence of backlash include provide space for a film of lubricating oil between the teeth, deflection under load, thermal expansion, and machining tolerances
It can be seen when the direction of movement is reversed and the slack or lost motion is taken up before the reversal of motion is complete
In certain applications, backlash is an undesirable characteristic and should be known, ratio by ratio, and eventually minimized.
With precise gears having a ground profile like in Motive helical gearboxes, the backlash is optimized to be suitable for most of applications while preserving at the same time the lubrication, efficiency, heating, gears life and reliability of the gearbox.

MOMENT OF INERTIA

i:	EN3	EN4	EN5	EN7	EN8	EN9
4			0,0023341555	0,00263125	0,0059425 01	0,021226666
5	0,001167568	0,001537703	0,0017220 36	0,0021027 85		0,011363451
6	0,0009170 59	0,001178225				0,020003053
7		0,000961813		0,001734425	0,005298726	
8			0,000990838	0,002386739	0,002604852	0,010647204
9	0,0008384 75	0,001173003	0,0017458 03		0,004975887	
10				0,001931064	0,003228693	
11	0,000695809	0,000940096	0,001336018			0,010164774
12				0,001612155	0,001734809	
13		0,000380061	0,000692418	0,001810047		0,007266251
14	0,0004868 52	0,000582406			0,002385506	
15					0,001428973	0,009128039
16		0,000551744	0,000596582	0,001525988		0,00571671
17	0,0004528 69		0,00084005	0,001231537		
18		0,000638141		0,001192952		
19	0,0004370 51		0,000564025		0,001614296	0,008936608
20		0,000511903				
21	0,00048139			0,001103659	0,002714964	0,004646366
22		0,000502128	0,001079333	0,001184914		0,004532071
23					0,001341377	
24						
25		0,000556074		0,001081351		
26	0,0004467 07	0,000542239	0,000628108		0,00120694	0,005877113
27			0,000898747	0,000976236		0,004560819
28					0,002664457	0,004431216
29				0,000942065		
30		0,000520742		0,001424138	0,001042583	0,00368998
31					0,001034454	
32	0,0004262 63			0,000910655		
33	0,0004231 15	0,000506124	0,000558202	0,000896428		0,005801638
34				0,000954379	0,000938855	
35						
36						0,004670327
37	0,0004167 22			0,001255023		
38		0,000492154	0,00053424			0,00363301
39					0,001505173	
40	0,0004117 56	0,000484976		0,00089464	0,001852868	
41						
42						0,023043318
43			0,000669241			

i:	EN3	EN4	EN5	EN7	EN8	EN9
44						0,003511751
45				0,000881652		
46						
47		0,00049518	0,000503154	0,00111308		0,003383882
48					0,00091739	0,004629253
49						0,004057684
50	0,0004569 97					
51				0,000978382		
52						
53		0,000560401				0,003320097
54				0,00096196	0,001487964	
55	0,0004048 67					
56			0,000586313		0,001130624	
57						
58					0,000830156	
59		0,00047587				
60	0,0004361 86			0,000920651		0,004031434
61						0,00358856
62						
63		0,000470833				0,003534852
64				0,000971088		
65			0,00055526			0,003075765
66					0,000989812	
67				0,000955305		
68				0,00093606		
69						0,003000447
70						
71						
72		0,000513225			0,001121169	
73					0,000919484	
74						0,003302745
75				0,000915378		0,003571445
76	0,0004185 33	0,000504353				0,003571355
77						
78						0,003519073
79						
80						
81				0,000839547		
82						

i:	EN3	EN4	EN5	EN7	EN8	EN9
83						
84			0,000514727		0,000825545	0,003126679
85				0,000931874	0,00098294	
86						
87		0,00049150 1				
88				0,000823698		
89						
90						0,003064065
91				0,000816197		0,003291057
92						
93	0,0004075 92					
94				0,000854139	0,000913865	
95					0,000767066	
96	0,0004057 71		0,0005005			0,002990157
97		0,00048261 3				
98						
99						
100						
101				0,000836594		
102						
103						
104						0,003117766
105						
106	0,0004024 54					
107						
108			0,000489082		0,000821303	
109		0,00047352 6		0,000821193		
110						0,003056185
111						
112						
113						
114				0,000813885		
115	0,0003996 01					
116						
117		0,00046879 8				
118			0,000481122			0,002983226
119						
120						
121					0,000763708	

The **moment of inertia J_R**, expressed in Kgm^2, represents the measure of the opposition that the gearbox exhibits to its rotation, and is referred to the input shaft. Though a gearbox has, for the mass and geometry of its moved parts, a moment of inertia, adding a gearbox to a motor-driven system reduces the driven load **inertia** a lot, by the inverse square of the gear ratio (i^2).

MAX AXIAL AND RADIAL LOADS ON OUTPUT SHAFT

Max axial load F_A [kg] (with radial load F_R=0), with standard output shaft bearings

i:	EN3	EN4	EN5	EN7	EN8	EN9
4			473			
5	174	279	495			1911
6	176	276				
7		268		694	636	2201
8			537	682		2081
9	206	238	487			2331
10				661	588	
11	293	206	519	725	500	2419
12					634	
13		164	585	700	459	
14	305	381				2534
15				663	413	
16		372	678	616		2515
17	342		607		551	
18		345			449	2539
19	318		684	552		2543
20		548		554		
21	349			533		
22		551	589		491	2602
23						
24					577	2514
25		538		751		3086
26	393	534	710		527	
27			708	587		
28						
29					603	3093
30		522		531		3149
31					1055	3148
32	406			701		
33	408	508	838	912	838	3369
34					831	
35				938		
36				927		3431
37	455			881	758	
38		488	834			
39						3371
40	462	473		855		
41						3776
42					988	
43			901	911	1178	
44						3792
45				1066		
46						
47		849	897	1044		3803
48					1690	3809
49						4234
50	481					

i:	EN3	EN4	EN5	EN7	EN8	EN9
51				1299		
52						
53		710				4144
54				1285	2020	
55	538					
56			881		1670	
57						
58					2209	
59		956				
60	569			1528		4382
61						4326
62						
63		967				4338
64				1475		
65			1011			4545
66					2213	
67				1463		
68				1765		
69						4573
70						
71						
72		866			2452	
73					2145	
74						4699
75				1728		4765
76	602	867				4771
77						
78						4786
79						
80						
81				1762		
82						
83						
84			1184		2252	5104
85				1159	2564	
86						
87		864				
88				1474		
89						
90						5144
91				1470		5210
92						
93	631					
94				1427	2507	
95					2666	
96	636		1383			5655
97		1004				

i:	EN3	EN4	EN5	EN7	EN8	EN9
98						
99						
100						
101				1413		
102						
103						
104						5288
105						
106	649					
107						
108			1403		2910	
109		1010		1529		
110						5847
111						
112						
113						
114				1522		
115	741					
116						
117		1012				
118			1415			5910
119						
120						
121					3430	

The maximum external loads F_R and F_A represent the total load that can be supported by the components of the gearbox minus the internal thrusts given by the gears. F_R and F_A are therefore calculated by difference, in this case considering the combination of each gearbox with a motor having the speed and the power of the PMAX table, the most unfavorable direction of rotation, and an external thrust coming from the most unfavorable tangential direction.

MAX AXIAL AND RADIAL LOADS ON OUTPUT SHAFT

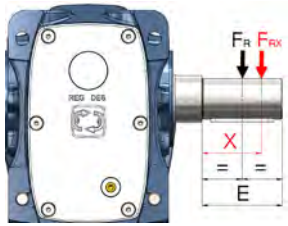
Max radial load F_R [kg] (with axial load F_A=0), with standard output shaft bearings

i:	EN3	EN4	EN5	EN7	EN8	EN9
4			270			
5	142	156	278			1254
6	139	151				
7		141		655	618	1340
8			285	663		1322
9	141	148	302			1386
10				666	581	
11	216	131	317	691	453	1380
12					519	
13		107	291	690	443	
14	228	188				1398
15				682	261	
16		178	329	691		1353
17	258		354		300	
18		193			366	1313
19	232		323	674		1290
20		253		644		
21	247			635		
22		251	347		292	1276
23						
24					516	1176
25		268		819		1576
26	285	266	409		464	
27			409	690		
28						
29					378	1533
30		259		667		1573
31					800	1558
32	289			777		
33	289	251	477	942	715	1712
34					709	
35				928		
36				926		1740
37	335			939	633	
38		240	478			
39						1652
40	339	232		935		
41						1974
42					809	
43			513	977	840	
44						1963
45				975		
46						
47		404	514	972		1947
48					767	1936
49						2278
50	347					

i:	EN3	EN4	EN5	EN7	EN8	EN9
51				1065		
52						
53		354				2397
54				1064	991	
55	413					
56			512		901	
57						
58					1202	
59		459				
60	431			1200		2315
61						2266
62						
63		463				2258
64				1217		
65			579			2639
66					1242	
67				1220		
68				1334		
69						2650
70						
71						
72		433			1254	
73					1193	
74						2487
75				1360		2536
76	452	433				2536
77						
78						2533
79						
80						
81				1357		
82						
83						
84			670		1252	2758
85				1220	1307	
86						
87		431				
88				1365		
89						
90						2760
91				1368		2809
92						
93	432					
94				1385	1247	
95					1510	
96	435		769			3144
97		502				

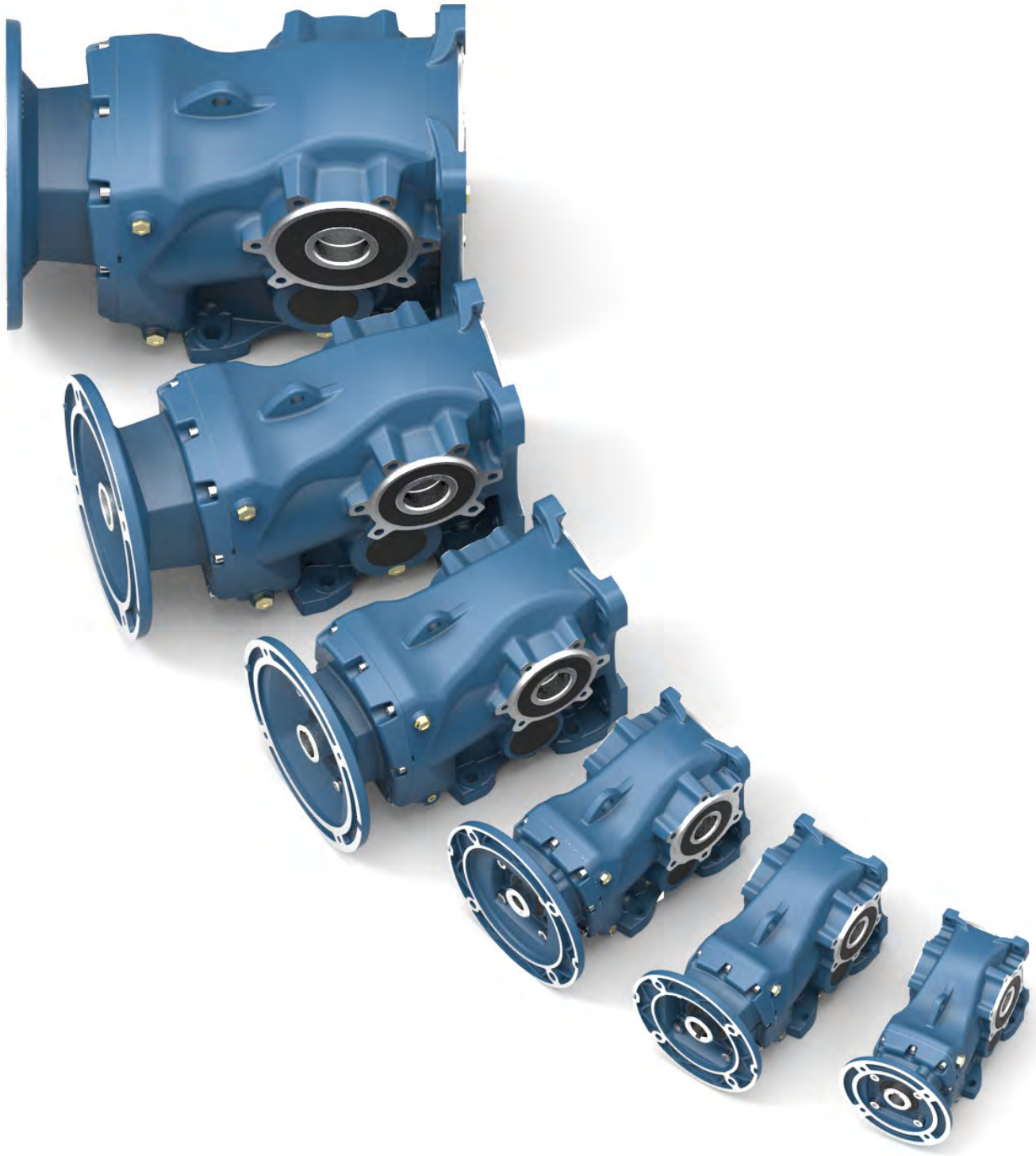
i:	EN3	EN4	EN5	EN7	EN8	EN9
98						
99						
100						
101				1391		
102						
103						
104						2807
105						
106	441					
107						
108			784		1511	
109		505		1470		
110						3231
111						
112						
113						
114				1474		
115	446					
116						
117		506				
118			793			3249
119						
120						
121					1858	

When transmission parts such as pinions, pulleys, etc. are keyed onto the output shafts of the gearboxes, the resulting radial loads (F_R) must not exceed the maximum values indicated here in order to protect the bearings and other internal parts of the gearbox. It is always advisable to fit pinions or pulleys as close as possible to the shaft stop and, when the radial load exceeds the permitted values, provide an external support.
The maximum external loads F_R and F_A represent the total load that can be supported by the components of the gearbox minus the internal thrusts given by the gears. F_R and F_A are therefore calculated by difference, in this case considering the combination of each gearbox with a motor having the speed and the power of the PMAX table, the most unfavorable direction of rotation, and an external thrust coming from the most unfavorable tangential direction.



F_R = Radial Load in the middle of the shaft
F_{RX} = Radial Load at a generic point X
E = Output Shaft Extension

$$F_{RX} = \frac{F_R \cdot E}{2 \cdot X}$$

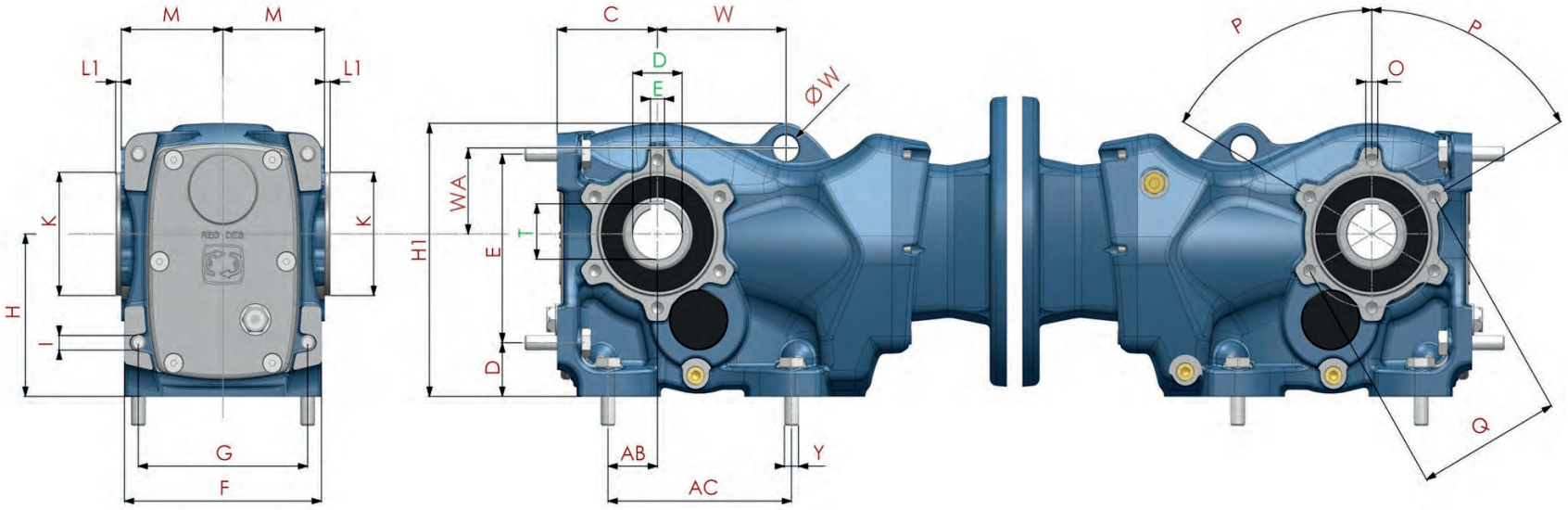


WEIGHTS

without oil, in Kg

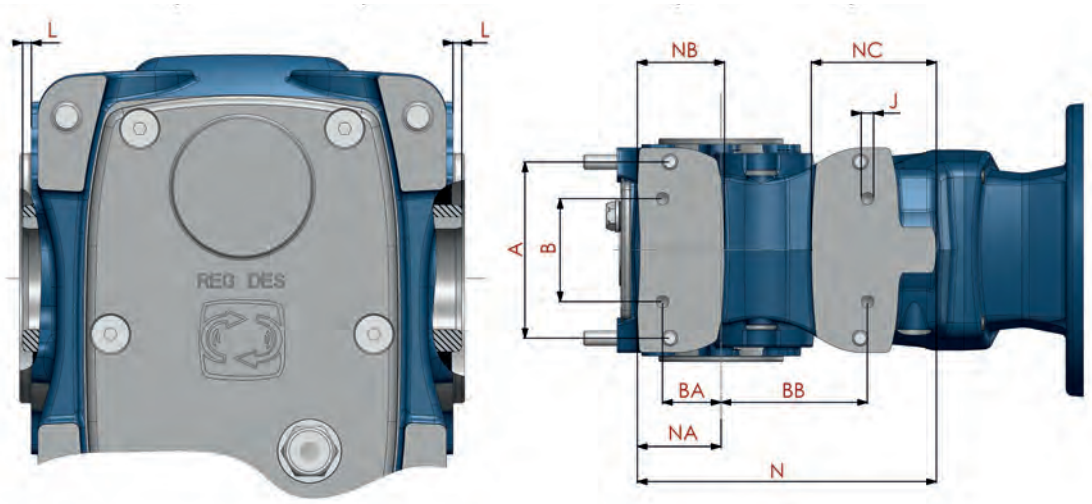
		ENDURO 3	ENDURO 4	ENDURO 5	ENDURO 7	ENDURO 8	ENDURO 9
63B5	without accessories	15,3	21,5	28			
71B5	**ENDURO**						
80B5		15,8	22	28,5	60,2	88,1	
90B5							
100/112B5			23,7	30,8	61,7	89,5	156,5
132B5					63,4	97,7	157
160B5						99,8	158,9
180B5							
200B5							159,6
Ø 160	output flange	1,28					
Ø 200	**OFL**		2,22				
Ø 250				3,6			
Ø 300					7,66		
Ø 350						8,41	
Ø 450							17,3
	shrink disc	+ 0,3	+ 1,1	+ 1,44	+ 2.32	+ 3.39	+ 4.5
	SHD 						
Ø 25	single output shaft	1,05					
Ø 30	**SOS**	1,08	1,63				
Ø 35			1,81	2,4			
Ø 40				2,5			
Ø 50					5,1		
Ø 60						7,74	
Ø 70							9,97
Ø 25	double output shaft	1,15					
Ø 30	**DOS**	1,28	1,9				
Ø 35			2,1	2,8			
Ø 40				3,1			
Ø 50					5,97		
Ø 60						9,97	
Ø 70							13,85
	torque arm	1,5	2,1	3,1	4,17	8,57	10,28
	TA 						

DIMENSIONS

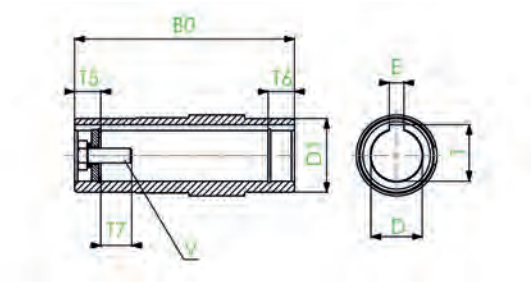


foot mounting

	A	AB	AC	B	BA	BB	C	D	E	F	G	H	H1	I	J	K (Ø h8)	L	L1	M	N	NA	NB	NC	O	P	Q	Y	ØW	W	WA
EN3	100	28	110	60	35	82	63	32	115	119	100	100	164,5	M10x30	M10	80	2	2,6	58	149	50,5	49	41	M8	60°	94	M10x35	15	75	50
EN4	120	35	130	70	40	100	71	37	130	139,5	120	112	188	M10x40	M10	85	3	4	72	204	57	59,5	85,5	M10	60°	102	M10x40	18	91	59
EN5	130	30	130	88	47	105	80	45	150	157,5	130	132	218	M12x40	M12	105	3	3	80	200	65	66	65	M12	60°	125	M12x45	20	100	65
EN7	165	40	150	102	48	122	112	55	200	200	165	180	295	M16x50	M16	120 (g7)	4	4,5	101	236	80	86	73	M12	30°	142	M16x50	18	120	108
EN8	180	55	180	118	65	160	132	70	233	232	180	212	348	M20x60	M16	140 (g7)	4	4	116	293	87	93	94	M16	30°	178	M20x60	20	140	134
EN9	240	75	240	160	83	165	160	75	295	290	240	265	418	M24x70	M20	185 (g7)	5	5	145	355	110	125	111	M16	30°	220	M24x70	25	153,5	128,2

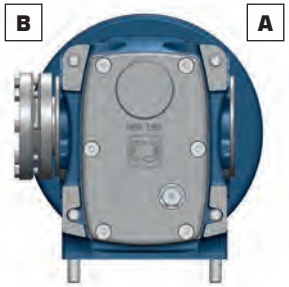


DIMENSIONS

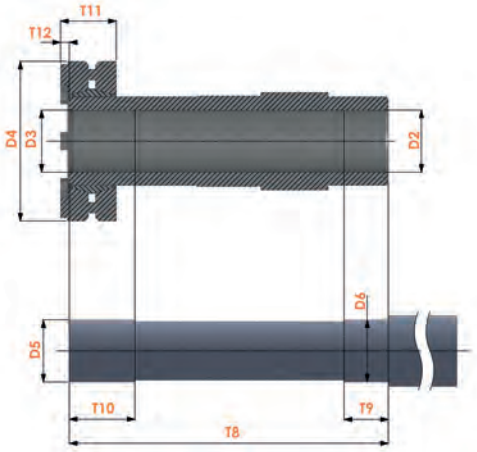


standard output shaft

ENDURO	ØD1 (c8)	ØD (H7)	B0 (+0,2;0)	Z5	Z6	V	T (+0,2;0)	Ek (E9)
EN3	45	30	120	15	15	ISO 4017 M10x25 - 8.8	33,3	8
EN4	50	35	150	18	18	ISO 4017 M12x30 - 8.8	38,3	10
EN5	55	40	166	24	24	ISO 4017 M16x40 - 8.8	43,3	12
EN7	70	50	210	27	27	ISO 4017 M16x45	53,8	14
EN8	85	60	240	30	30	ISO 4017 M20x50	64,4	18
EN9	95	70	300	30	30	ISO 4017 M20x50	74,9	20



In standard configuration, the shrink disc is mounted on B side



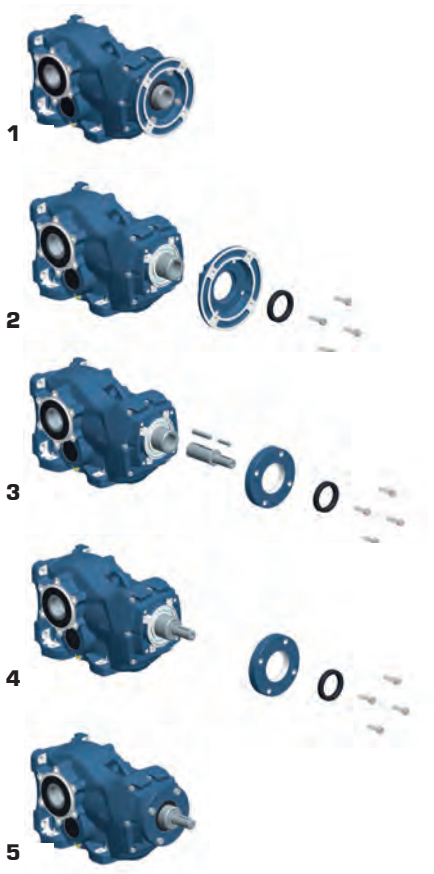
shrink disc shaft

ENDURO	D2 (ØH7)	D3 (ØH7)	D4 (Ø)	D5 (Øh6)	ØD6 (h6)	T8 (±0,1)	T9	T10	T11	T12
EN3	30	30	80	30	30	150	20	31	24,2	5,3
EN4	35	35	90	35	35	180	20	32	26,1	5,3
EN5	40	40	100	40	40	200	20	26	29	5,3
EN7	50	50	138	50	50	241	30	36	37,3	5,3
EN8	65	65	155	65	65	281	40	41	44,3	5,3
EN9	75	75	170	75	75	345	50	55	49,3	5,3

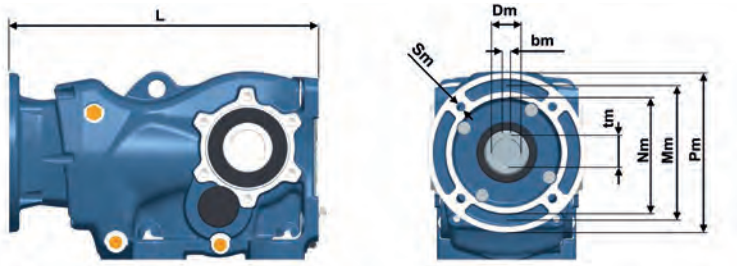
DIMENSIONS

	motor IEC flange															
ENDURO	size	type	Nm	Mm	Pm	Sm	Dm	tm	bm	L (PAM)	B	D1	f	b1	t1	M2	L_MF
EN3	63	B5	95	115	140	10	11	12,8	4	264,5	40	19	M6x16	6	21,5	50	310,0
	71		110	130	160	M8	14	16,3	5	264,5							
	80		130	165	200	M10	19	21,8	6	265,5							
	90		130	165	200	M10	24	27,3	8	265,5							
	100/112	B5	180	215	250	M12	28	31,3	8	271,5							
EN4	71	B5	110	130	160	M8	14	16,3	5	310,5	40	19	M6x16	6	21,5	50	363,5
	80		130	165	200	M10	19	21,8	6	319,5							
	90		130	165	200	M10	24	27,3	8	319,5							
	100/112		180	215	250	M12	28	31,3	8	320,5							
EN5	71	B5	110	130	160	M8	14	16,3	5	330,0	50	24	M8x25	8	27	60	393,0
	80		130	165	200	M10	19	21,8	6	339,0							
	90		130	165	200	M10	24	27,3	8	339,0							
	100/112		180	215	250	M12	28	31,3	8	340,0							
EN7	80	B5	130	165	200	M10	19	21,8	6	410,0	40	19	M6x16	6	21,5	50	454,0
	90		130	165	200	M10	24	27,3	8	410,0							
	100/112		180	215	250	M12	28	31,3	8	412,0	50	24	M8x25	8	27	60	464,0
	132		230	265	300	M12	38	41,3	12	424,0							
EN8	90	B5	130	165	200	M10	24	27,3	8	460,5	40	19	M6x16	6	21,5	50	582,5
	100/112		180	215	250	M12	28	31,3	8	464,0							
	132		230	265	300	M12	38	41,3	12	538,5	60	28	M10x25	8	31	70	602,5
	160		250	300	350	M16	42	45,3	12	538,5							
	180		250	300	350	M16	48	51,8	14	538,5							
EN9	100/112	B5	180	215	250	M12	28	31,3	8	589,5	50	24	M8x25	8	27	60	642,5
	132		230	265	300	M12	38	41,3	12	589,5							
	160		250	300	350	M16	42	45,3	12	589,5	60	28	M10x25	8	31	70	652,5
	180		250	300	350	M16	48	51,8	14	589,5							
	200		300	350	400	M16	55	59,3	16	589,5							

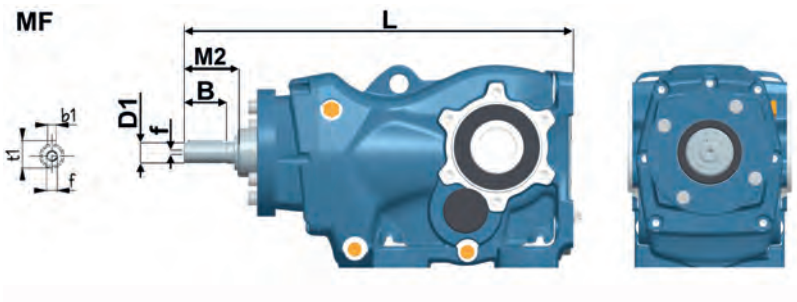
MF kit



PAM

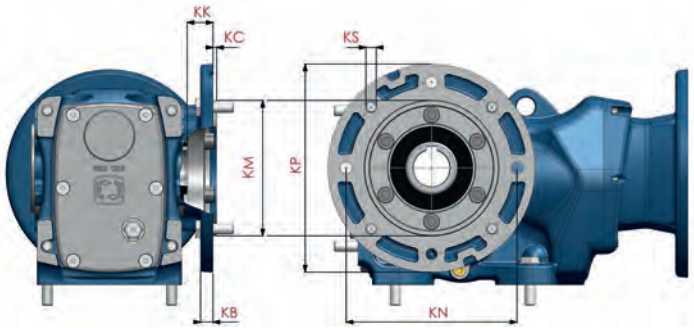


MF



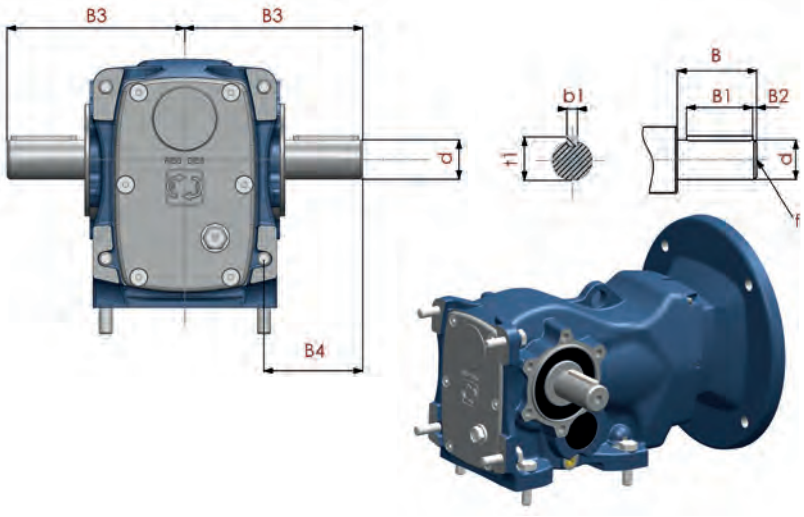
You can download 2D and 3D drawings from www.motive.it

DIMENSIONS



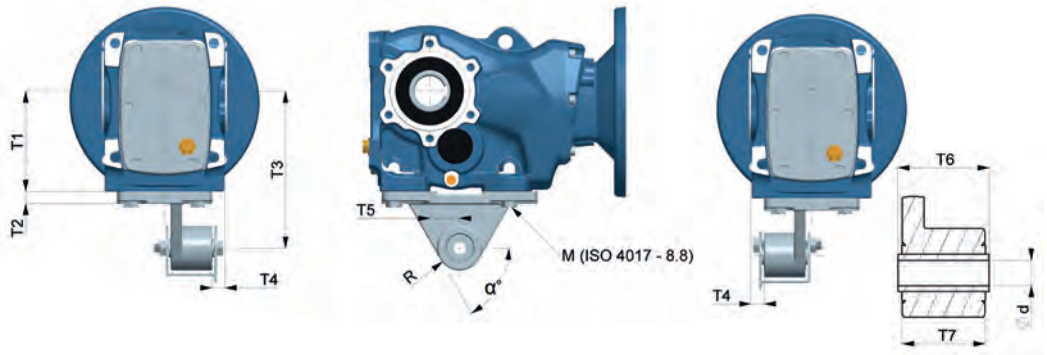
flange mounting

	OFL	IEC	KP	KM (j6)	KN	KS	KK	KB	KC (0; -0,5)
EN3	OFL160	71B5	160	110	130	M8x30	24	10	3,5
EN4	OFL200	80/90B5	200	130	165	M10x30	25	12	3,5
EN5	OFL250	100/112B5	250	180	215	M12x40	23,5	12,5	4
EN7	OFL300	132B5	300	230	265	M12x50	41	18	4
EN8	OFL350	160/180B5	350	250	300	M18x70	34	18	4
EN9	OFL450	225B5	450	350	400	M18x70	47	23	5



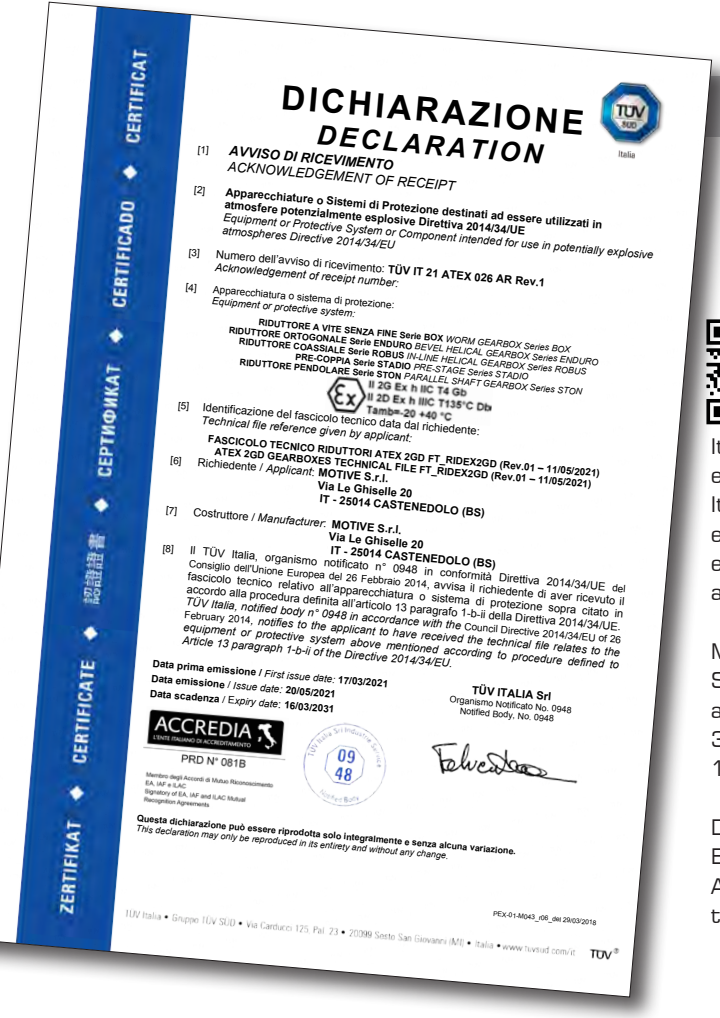
single and double output shaft

	d (h6)	B	B1	B2	B3	B4	B5	b1	t1	f	peso SOS	peso DOS
EN3	25	50	40	5	110	60	134	8	28	M10x16	1,05	1,15
	30	60	50	5	123,4	43,4	144	8	33	M10x16	1,08	1,28
EN4	30	60	50	3,5	135	75	160	8	33	M10x16	1,63	1,90
	35	70	60	5	148,8	88,8	170	10	38	M12X18	1,81	2,1
EN5	35	70	56	7	153	88	176,5	10	38	M12x24	2,40	2,80
	40	80	70	5	167,9	102,9	186,5	12	43	M14X21	2,5	3,1
EN7	50	100	80	10	206	123,5	242	14	53,5	M16x32	5,10	5,97
EN8	60	120	100	5	240	150	270	18	64	M20x40	8,06	9,97
EN9	70	140	125	7,5	291	171	332	20	74,5	M20x40	13,8	16,64



torque arm

	T1	T2	T3	T4	T5	R	α	M	T6	T7	d ± 0.08	PESO
EN3	100	10	140	20	23,5	22,5	60	n°4 M10	36	31	Ø10,4	1,50
EN4	112	12	160	20	30	22,5	55	n°4 M10	36	31	Ø10,4	2,10
EN5	132	13	192	18	40	29	55	n°4 M12	60	54	Ø16,4	3,10
EN7	180	20	250	25	52,5	29	60	n°4 M16	60	54	Ø16,4	4,20
EN8	212	25	300	30	60	41	60	n°4 M16	80	72	Ø25	8,60
EN9	265	25	350	40	70	41	50	n°4 M20	100	92	Ø25	10,30



DICHIARAZIONE
DECLARATION

[1] AVVISO DI RICEVIMENTO
ACKNOWLEDGEMENT OF RECEIPT

[2] Apparecchiature o Sistemi di Protezione destinati ad essere utilizzati in atmosfere potenzialmente esplosive Direttiva 2014/34/UE
Equipment or Protective System or Component intended for use in potentially explosive atmospheres Directive 2014/34/EU

[3] Numero dell'avviso di ricevimento: TÜV IT 21 ATEX 026 AR Rev.1
Acknowledgement of receipt number:

[4] Apparecchiatura o sistema di protezione:
Equipment or protective system:
RIDUTTORE A VITE SENZA FINE Serie BOX WORM GEARBOX Series BOX
RIDUTTORE ORTOGONALE Serie ENDURO BEVEL HELICAL GEARBOX Series ENDURO
RIDUTTORE COASSIALE Serie ROBUS IN-LINE HELICAL GEARBOX Series ROBUS
PRE-COPPIA Serie STADIO PRE-STAGE Series STADIO
RIDUTTORE PENDOLARE Serie STON PARALLEL SHAFT GEARBOX Series STON
II 2G Ex h IIC T4 Gb
II 2D Ex h IIIC T135°C Db
Tamb=-20 +40 °C

[5] Identificazione del fascicolo tecnico data dal richiedente:
Technical file reference given by applicant:
FASCICOLO TECNICO RIDUTTORI ATEX 2GD FT_RIDEX2GD (Rev.01 – 11/05/2021)
ATEX 2GD GEARBOXES TECHNICAL FILE FT_RIDEX2GD (Rev.01 – 11/05/2021)

[6] Richiedente / Applicant: MOTIVE S.r.l.
Via Le Ghiselle 20
IT - 25014 CASTENEDOLO (BS)

[7] Costruttore / Manufacturer: MOTIVE S.r.l.
Via Le Ghiselle 20
IT - 25014 CASTENEDOLO (BS)

[8] Il TÜV Italia, organismo notificato n° 0948 in conformità Direttiva 2014/34/UE del Consiglio dell'Unione Europea del 26 Febbraio 2014, avvisa il richiedente di aver ricevuto il fascicolo tecnico relativo all'apparecchiatura o sistema di protezione sopra citato in accordo alla procedura definita all'articolo 13 paragrafo 1-b-ii della Direttiva 2014/34/UE.
TÜV Italia, notified body n° 0948 in accordance with the Council Directive 2014/34/EU of 26 February 2014, notifies to the applicant to have received the technical file relates to the equipment or protective system above mentioned according to procedure defined to Article 13 paragraph 1-b-ii of the Directive 2014/34/EU.

Data prima emissione / First issue date: 17/03/2021
Data emissione / Issue date: 20/05/2021
Data scadenza / Expiry date: 16/03/2031

TÜV ITALIA Srl
Organismo Notificato No. 0948
Notified Body, No. 0948

ACCREDIA
PRD N° 081B

Questa dichiarazione può essere riprodotta solo integralmente e senza alcuna variazione.
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PEX-01-M043_r06_del 29/03/2018

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SERIE ENDURO EX

II 2G Ex h IIC T4 Gb
II 2D Ex h IIIC T135°C Db
Tamb= -20 +40°C

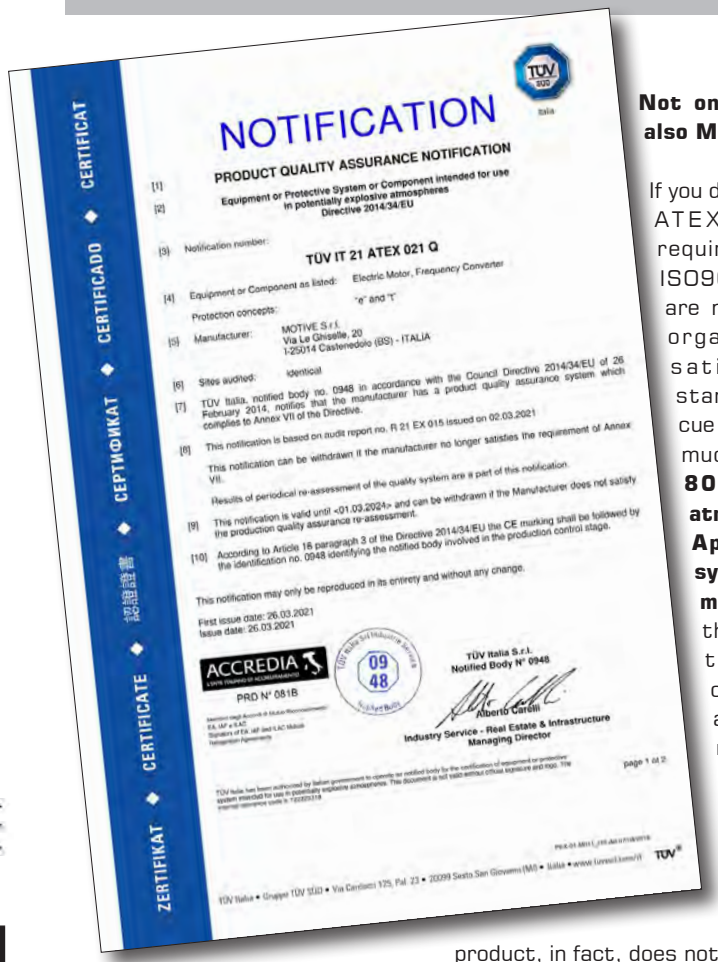
ATEX is the conventional name of the Directive 14/34/EC for the equipment intended for use in potentially explosive atmospheres.
It imposes the evaluation of the risk for all the equipment operating in such environments.
It classifies several levels of "danger" (zones): to every zone it corresponds a different typology of explosive atmosphere, according to its composition and to its probability and time of appearance.

Motive gearboxes series BOX Ex, STADIO Ex, STON Ex, ROBUS Ex and ENDURO Ex are certified according to the norms EN ISO/IEC 80079-36:2016, EN ISO/IEC 80079-37:2016, EN 1127-1:2019 for the zones 1, 21, 2 and 22

DELPHI-Ex three-phase ATEX motors and STON-Ex, ROBUS-Ex, ENDURO-Ex, BOX-Ex, STADIO-Ex ATEX gearboxes also certified in Ukraine, and in the EAC Countries

Cat	DUST	GAS	Zone	description	motive gearboxes
2			1	A place in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapor or mist is likely to occur in normal operation occasionally.	✓
3			2	A place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapor or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.	✓
2			21	A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally.	✓
3			22	A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.	✓

ALSO MOTIVE ITSELF IS ATEX



NOTIFICATION

PRODUCT QUALITY ASSURANCE NOTIFICATION

Equipment or Protective System or Component intended for use in potentially explosive atmospheres Directive 2014/34/EU

[3] Notification number: TÜV IT 21 ATEX 021 Q

[4] Equipment or Component as listed: Electric Motor, Frequency Converter
Protection concepts: "e" and "t"

[5] Manufacturer: MOTIVE S.r.l.
Via Le Ghiselle, 20
I-25014 Castenedolo (BS) - ITALIA

[6] Sites audited: identical

[7] TÜV Italia, notified body no. 0948 in accordance with the Council Directive 2014/34/EU of 26 February 2014, notifies that the manufacturer has a product quality assurance system which complies to Annex VII of the Directive.

[8] This notification is based on audit report no. It 21 Ex 015 issued on 02.03.2021

This notification can be withdrawn if the manufacturer no longer satisfies the requirement of Annex VII.

Results of periodical re-assessment of the quality system are a part of this notification.

[9] This notification is valid until <01.03.2024> and can be withdrawn if the Manufacturer does not satisfy the production quality assurance re-assessment.

[10] According to Article 18 paragraph 3 of the Directive 2014/34/EU the CE marking shall be followed by the identification no. 0948 identifying the notified body involved in the production control stage.

This notification may only be reproduced in its entirety and without any change.

First issue date: 26.03.2021
Issue date: 26.03.2021

TÜV Italia S.r.l.
Notified Body N° 0948
Alberto Carelli
Industry Service - Real Estate & Infrastructure
Managing Director

ACCREDIA
PRD N° 081B

page 1 of 2

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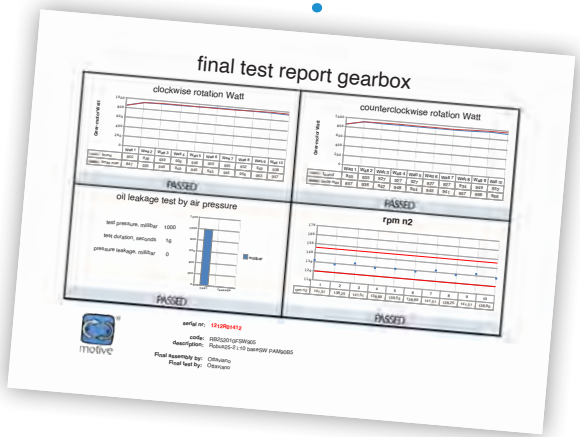
Not only its products, but also Motive itself is ATEX

If you design and manufacture ATEX products, the requirements of a normal ISO9001 Quality System are not sufficient for your organization. You must satisfy also another standard that takes its cue from ISO9001 to add much more, the **ISO/IEC 80079-34 "Explosive atmospheres - Part 34: Application of quality systems for Ex product manufacture"**. It is on the basis of this norm that an accredited certification body (such as the TÜV in our case) must verify whether the manufacturer's quality assurance system complies with Annex VII of the ATEX Directive. Receiving an ATEX certified product, in fact, does not in itself mean that the manufacturer's organization has done everything to always ensure product and service compliance, even in after-sales. Just to give an example, from a serial number of an Ex motor the manufacturer should be able to trace the batch of each component that is critical for Ex safety (like winding, terminal block, castings of shields, housing, and terminal box, etc.) and, then, the chemical composition of the aluminum or iron castings with which they were made, the mechanical properties of the batch of the terminal block, and so on. Serial number by serial number. Lot by lot. It is a commitment that Motive has managed to standardize on all its products, ATEX and not, through the digitization of all internal processes, and which also adds value to standard products. A guarantee, therefore, that goes well beyond the ISO9001 that Motive already boasted since it was born in 2000, and which demonstrates the excellence of a company set up to give certainty and serenity to the customer.

You can download each motor or gearbox final test report from www.motive.it, starting from its serial number



TERMS OF SALE AND GUARANTEE

ARTICLE 1 - **GUARANTEE**

1.1 Barring written agreements, entered into between the parties hereto each time, Motive hereby guarantees compliance with specific agreements.
The guarantee for defects shall be restricted to product defects following design, materials or manufacturing defects leading back to Motive.
The guarantee shall not include:

* Faults or damages ensuing from transport. Faults or damages ensuing from installation defects; incompetent use of the product, or any other unsuitable use.
* Tampering or damages ensuing from use by non-authorised staff and/or use of non-original parts and/or spare parts;
* Defects and/or damages ensuing from chemical agents and/or atmospheric phenomena (e.g. burnt out material, etc.); routine maintenance and required action or checks;
* Products lacking a plate or having a tempered plate.

1.2 Returns to credit or replace will be accepted only in exceptional cases; however returns of goods already used to credit or replace won't be accepted in any case.The guarantee shall be effective for all Motive products, with a term of validity of 12 months, starting from the date of shipment.
The guarantee shall be subject to specific written request for Motive to take action, according to statements, as described at the paragraphs herein below. By virtue of aforesaid approval, and as regards the claim, Motive shall be bound at its discretion, and within a reasonable time-limit, to alternatively take the following actions:
a) To supply the Buyer with products of the same type and quality as those having proven defective and not complying with agreements, free ex-works; in aforesaid case, Motive shall have the right to request, at Buyer's charge, early return of defective goods, which shall become Motive's property;
b) To repair, at its charge , the defective product or to modify the product which does not comply with agreements, by performing aforesaid action at its facilities; in aforesaid cases, all costs regarding product transport shall be sustained by the Buyer.
c) To send spare parts free of charge: all costs regarding product transport shall be sustained by the Buyer.

1.3. The guarantee herein shall assimilate and replace legal guarantees for defects and discrepancies, and shall exclude any other eventual Motive liability, however caused by supplied products; in particular, the Buyer shall have no right to submit any further claims.
Motive shall not be liable for the enforcement of any further claims, as of the date the guarantee's term of validity expires.

ARTICLE 2 - **CLAIMS**

2.1. Claims, regarding quantity, weight, gross weight and colour, or claims regarding faults and defects in quality or compliance, and which the Buyer may discover on goods delivery, shall be submitted by a max. 7 days of aforesaid discovery, under penalty of nullity.

ARTICLE 3 - **DELIVERY**

3.1. Any liability for damages ensuing from total or partial delayed or failed delivery, shall be excluded.
3.2. Unless differently communicated by written to the Client, the transport terms have to be intended ex-works.

ARTICLE 4 - **PAYMENT**

4.1. Any delayed or irregular payments shall entitle Motive to cancel ongoing agreement, including agreements which do not regard the payments at issue, as well as entitling Motive to claim damages, if any.

4.2. The Buyer shall be bound to complete payment, including cases whereby claims or disputes are underway.

DOWNLOAD THE TECHNICAL MANUAL FROM WWW.MOTIVE.IT

ASK OUR FURTHER CATALOGUES:

Motive s.r.l.

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Tel.: +39.030.2677087 - Fax: +39.030.2677125

web site: www.motive.it

e-mail: motive@motive.it

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