МЕХАНИКАЛ ПРОДАКТС

CHIARAVALLI® GROUP SpA

GEAR BOXES AND MOTORS

V. 01.21

CHIARAVALLI® GROUP SpA

МЕХАНИКАЛ ПРОДАКТС



60 YEARS OF HISTORY

The goal pursued by Chiaravalli during more than 60 years of history is to become the Italian and European technological center of excellence in the field of mechanical transmission.

The **MANUFACTURER** distributor

Our Logistic Center in Cantalupa is a coordinated set of informatic functions intended for storage, picking, packaging and delivery of products.

All the functions have been automatized at the highest levels available today.

The Chiaravalli logistic group has established itself over the years becoming an example of excellence for all the European companies working in the same sector.



chiaravalli.com

WE MANUFACTURE

SPECIAL COMPONENTS

Production of special components with high complexity and extremely high precision



MECHANICAL WORM SCREW JACKS

Customized and Standard products as per our catalogue



STANDARD TRANSMISSION

Standard products as per our catalogue

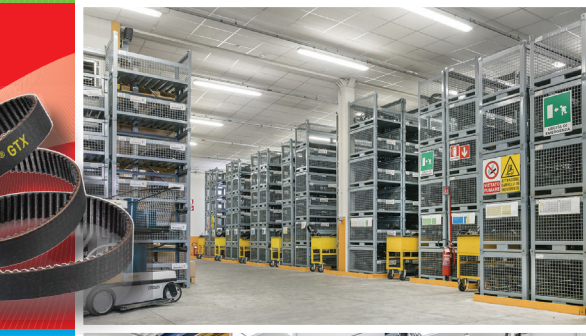


WE DISTRIBUTE

URB BEARINGS



BELTS

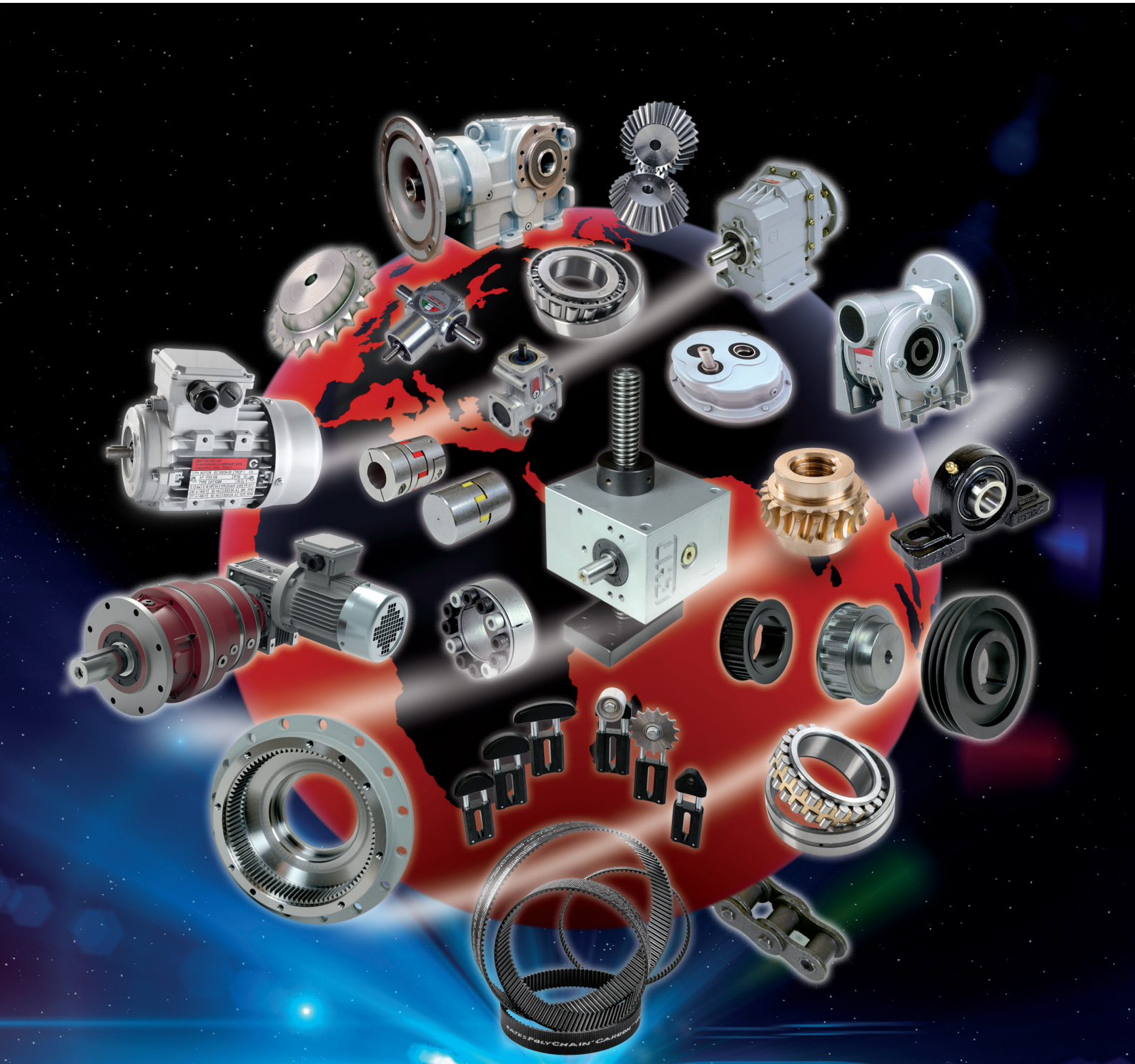


GEAR BOXES & ELECTRIC MOTORS



CHIARAVALLI® GROUP SpA

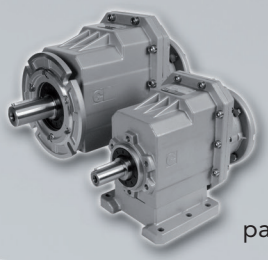
МЕХАНИКАЛ ПРОДАКТС



CHIARAVALLI GROUP world:
much more than a collection of perfects mechanical components

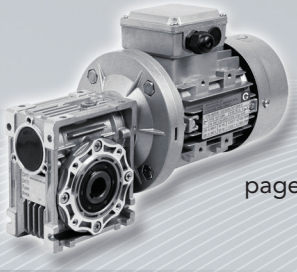
CHIARAVALLI GROUP SpA

CHC



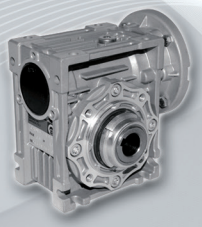
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CHM



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CHML



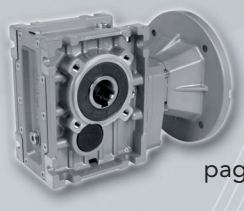
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CH



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CHO



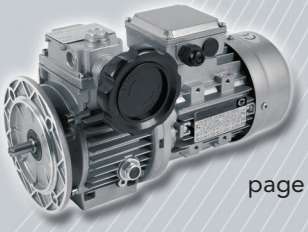
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CHA



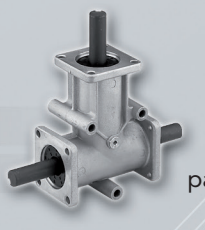
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CHV



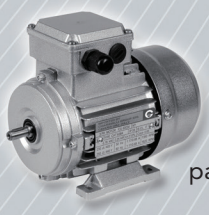
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SYMBOLS

P = Power (Kw)
i = Ratio
T = Torque (Nm)
n = Speed (RPM)
Fr = Radial Load (N)
Fa = Axial Load (N)
f.s. = Service Factor
D = Diameter (mm)

1 Kw = 1,36 HP
9,81 N = 1 Kp

1 Input
2 Output

GENERAL INFORMATION

POWER P

$P_1 * \eta = P_2$
P_1 = Input power
P_2 = Output power
η = Transmission efficiency

VELOCITA' DI ROTAZIONE n

n_1 = Input speed
n_2 = Output speed

An output speed ≤ 1400 rpm is suggested so as to optimize the working condition and extend the service life.

TRANSMISSION RATIO i

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

TORQUE T

$$T_2 = \frac{9550 \cdot P_1 \cdot \eta}{n_2} \left[Nm\right] \qquad T_{2n} \geq T_2 \cdot f_s \left[Nm\right]$$

T_2 = Output torque
T_{2n} = Rated output torque
P_1 = Input power
η = Transmission efficiency
f_s = Service factor

2D and 3D drawings available on the web site ***www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

RADIAL LOADS F_R

The radial loads is proportional to the requested torque and inversely proportional to the transmission member diameter following this formula.

$$F_R = \frac{2000 \cdot T \cdot T.e.f.}{D} \left[N \right]$$

F_R = Radial load
T = Nm (Torque)
T.e.f. = Transmission element factor
T.e.f. = 1,15 gear
= 1,4 chain spocket
= 1,75 v-pulley
= 2,5 flat-pulley
D = Transmission element diameter

When the radial loads is not applied on the centre line of the shaft it is necessary to use the following formula.

$$F_{Rx} \leq \frac{F_R \cdot a}{(b+x)} \left[N \right]$$

F_R = Radial load on the centre line
a,b,x = see tables page 9-46-47-77-78

LUBRICATION

All, gearboxes and variators are supplied, CHA type excluded, complete with lubricant.
The gearboxes maintenance free are lubricated with synthetic oil the others with mineral oil.
It is very important to verify the mounting position because sometimes adding some oil is enough, in other case to lubricate bearings with special grease would be necessary. Use only recommended oils.
Warning in case of heavy work itis better to install, where possible, breather plug.

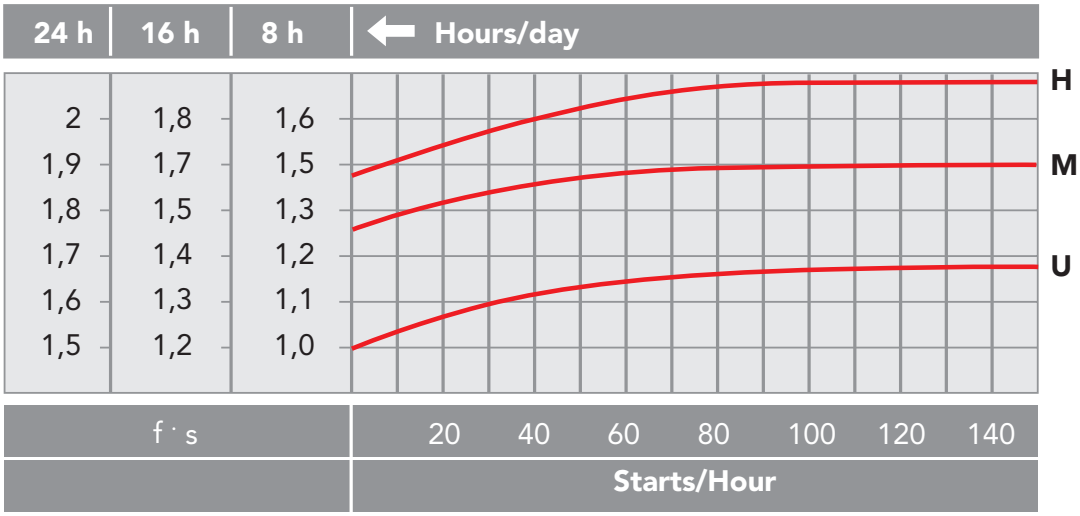
PAINTING

All the gearboxes and electrical motors are painted Grey RAL 9022 with epoxy resins powder.
Big gearboxes and motors are cast iron made, aluminium all the others.

SERVICE FACTOR Fs

The service factor mainly depends on three parameters:
- type to load: U - M - H
- run time: h/day
- start-up frequency: na/h

U = uniform
M = moderate
H = heavy
na/h = starts/hour



LOAD TYPE - APPLICATION

U Conveyor belts for light weights - centrifugal pumps - lifts - bottling machines

M Conveyor belts for heavy weights - packing machines - wood working machines - gear pumps

H Mixers - bucket elevators - tooling machines - machinery for bricks - vibrators

V6/B8 MOUNTING POSITION

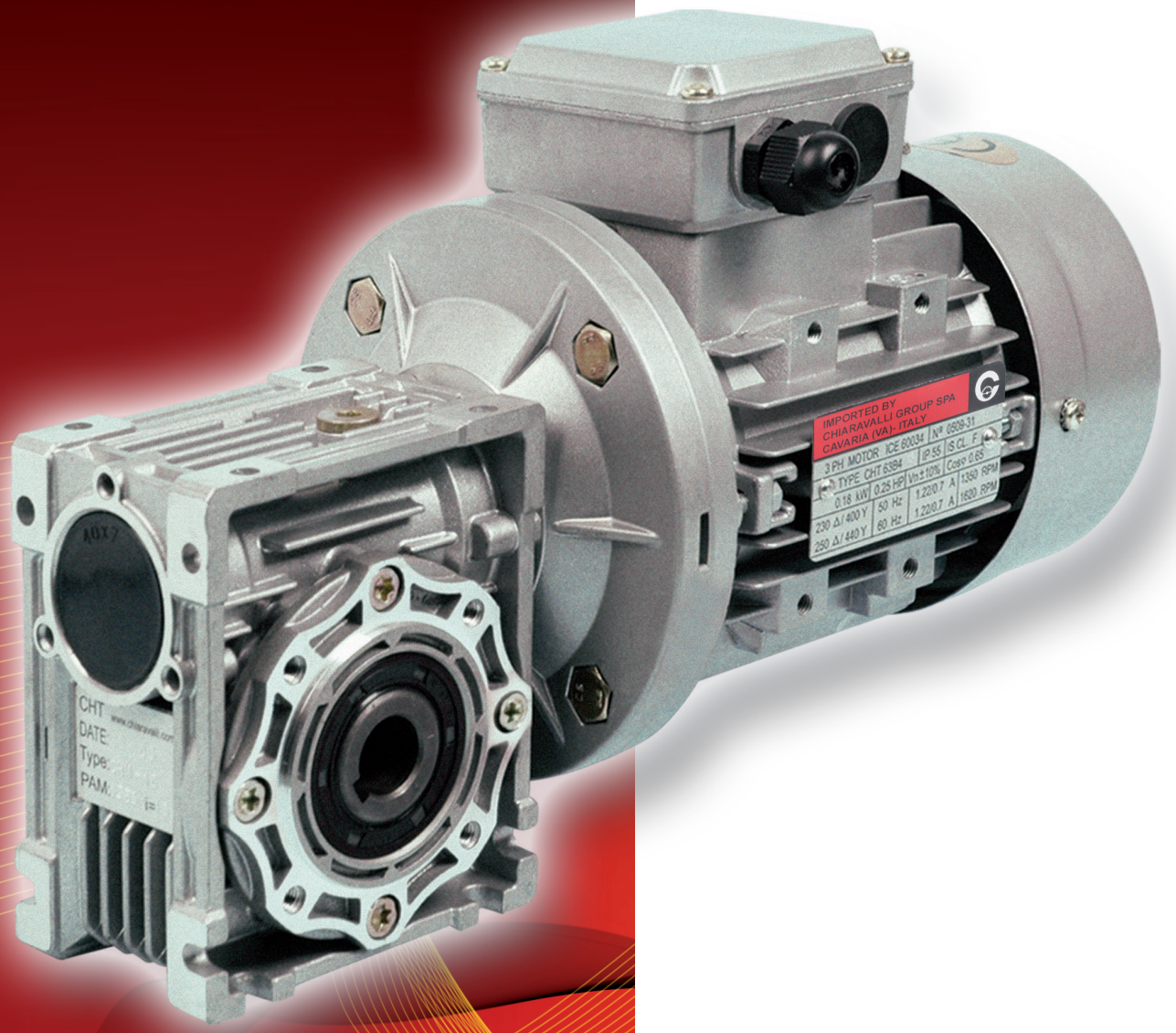
When the worm gearboxes mounting position is V6 or B8, with continuous work or input speed >1400 p.p.m, it is necessary to call our technical service.

*2D and 3D drawings available on the web site **www.chiaravalli.com***
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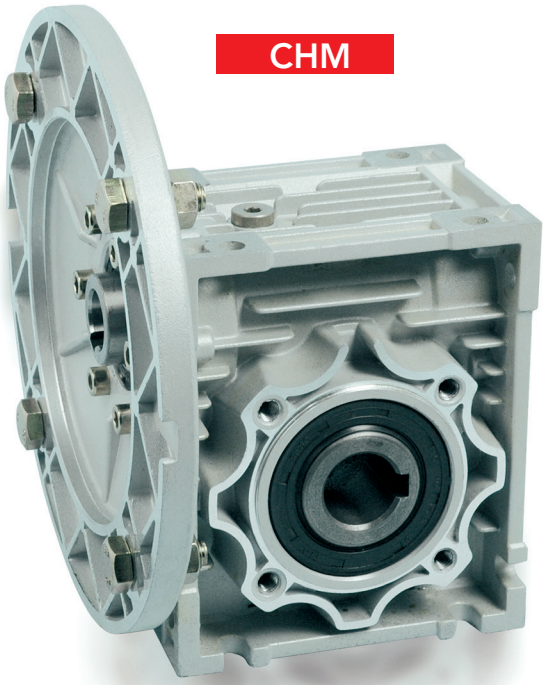
CHM WORM GEARED MOTORS AND WORM GEAR UNITS

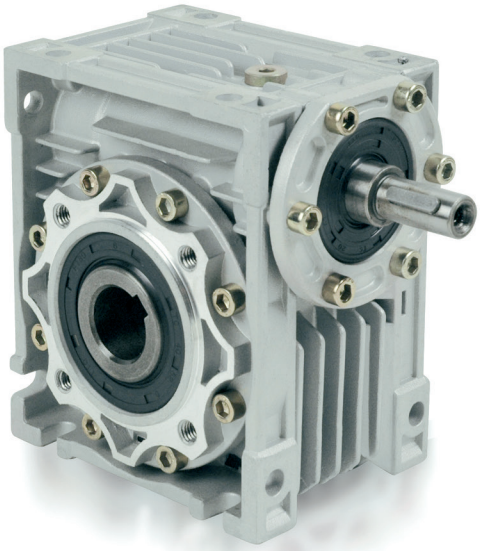
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CHME



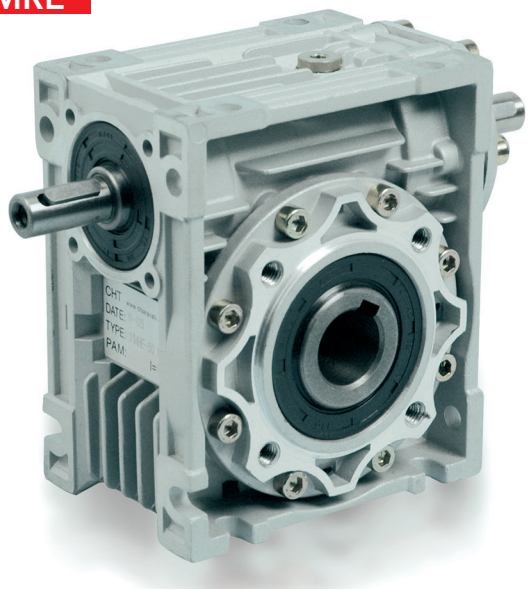
CHM





CHMR

CHMRE



INTRODUCTION

The worm gears made by Chiaravalli Group S.p.A. are square and are considerably versatile for mounting. The machining of the components, carried out using numeric control machines, guarantees maximum precision for the restricted tolerances, producing a product that will remain reliable over time.
The groups are constructed with aluminium casings from sizes 025 to 090, while the sizes 110, 130 and 150 are made from cast iron.
All of the bodies are painted with RAL 9022 aluminium colour to protect the parts from aging and to give better protection against microblowholes that may be present in the aluminium.
The gears are supplied with at least one filling plug that is also used during testing to check for possible leaks.
A connection flange allows two gears to be combined in order to obtain high gear ratios.
Four sizes of CHPC pre-stage gears are available to pair with the gears; these are also constructed in aluminium and are painted like the worm gears.
All of the groups are supplied with a lubricant whose characteristics are described in the following table.

LUBRICATION

	CHM 025/090	CHM 110/150			CHPC
Lubricant	Synthetic	Mineral	Mineral	Mineral	Synthetic
°C ambient	-25°C/+50°C	-25°C/+50°C	-5°C/+40°C	-15°C/+25°C	-25°C/+50°C
ISO	VG320	VG320	VG460	VG220	VG320
AGIP	TELIUM VSF 320	BLASIA 320	BLASIA 460	BLASIA 220	TELIUM VSF 320
SHELL	TIVELA OIL S 320	OMALA OIL 320	OMALA OIL 460	OMALA OIL 220	TIVELA OIL SC 320
IP	TELIUM VSF	MELLANA OIL 320	MELLANA OIL 460	MELLANA OIL 220	TELIUM VSF

LUBRICATION

The size 025 to 090 gears are supplied complete with synthetic oil and therefore do not require any maintenance.
The size 110, 130 and 150 gears are supplied with the quantity of mineral oil foreseen for the B3 assembly position. It is the client's responsibility to adapt the quantity of oil to the assembly position and in addition, to substitute the filling plug, supplied closed for transport reasons, with the one equipped with a hole attached to the gear.
If the breather plug is not installed it may create internal pressure with a consequent leakage of oil from the oil seals.
For the sizes 110, 130 and 150 we recommend that the oil is changed after the running in period, approx. 300 working hours.

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

QUANTITY OF OIL IN LITRES

CHM	025	030	040	050	063	075	090	110	130	150	CHPC	63	71	80	90
B3	0.02	0.04	0.08	0.15	0.30	0.55	1	3	4.5	7		0.05	0.07	0.15	0.16
B8	0.02	0.04	0.08	0.15	0.30	0.55	1	1.4	1.7	5.1		0.05	0.07	0.15	0.16
B6/B7	0.02	0.04	0.08	0.15	0.30	0.55	1	2.2	3.3	5.4		0.05	0.07	0.15	0.16
V5	0.02	0.04	0.08	0.15	0.30	0.55	1	3	4.5	7		0.05	0.07	0.15	0.16
V6	0.02	0.04	0.08	0.15	0.30	0.55	1	2.2	3.3	5.1		0.05	0.07	0.15	0.16

MOTOR MOUNTING FLANGES

Gears that are supplied with mounting flanges must be assembled with motors whose shaft and flange tolerances correspond to a “normal class” of quality in order to avoid vibration and forcing of the input bearing. Motors supplied by Chiaravalli Group S.p.A. guarantee that this requirement is fulfilled.
For ease of consultation, the correspondence of the size of the B5 and B14 motor with the sizes of the shaft and the motor connection flange are shown in the following table.
Remember that, as the motor connection flanges are separate from the body it is also possible to have a shaft / flange combination that does not correspond to the table, e.g. 19/140, thereby offering adaptability for other non-unified models such as the brushless or direct current types.

MMF	056	063	071	080	090	100	112	132
B5	9/120	11/140	14/160	19/200	24/200	28/250	28/250	38/300
B14	9/80	11/90	14/105	19/120	24/140	28/160	28/160	38/200

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

CHM/CHMR/CHME/CHMRE DESIGNATION

TYPE (1)	SIZE (2)	VERSION (3)	FLANGE POS. (4)	i	M.M.F.	MOUNT. POS. (4)
CHM	025	FA	1	7.5		U UNIVERSALE
	030	FB	2	10		B3
CHMR	040	FC		15		B8
	050	FD		20		B6
CHME	063	FE		25	**SEE FROM**	B7
	075			30	**PAGE 31 TO 40**	V5
CHMRE	090			40		V6
	110			50		
	130			60		
	150			80		
				100		

ORDER EXAMPLE

CHM	090	FA (5)	2 (5)	30	90 B14	V5

If the motor is also required, please specify:

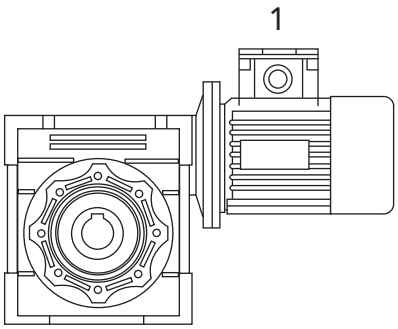
Size	es. 90 L4
Power	es. Kw 1.5
Poles	es. 4
Voltage	es. V230/400
Frequency	es. 50 Hz
Flange	es. B14

N.B. From size 25 to 63 the gears are always supplied in the Universal position and can therefore be mounted in any position, from size 75 to size 130 if the position required differs from B3 it must be specified.
In particular, in the event that a gear in position B3 is to be mounted in positions V5 or V6, the bearing positioned in the upper side must be lubricated using suitable grease that ensures proper lubrication.
We have tested Tecnolubeseal POLYMER 400/2 grease.

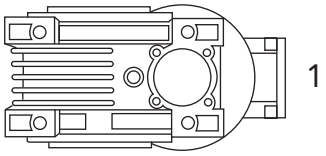
1) see page 26
2) see from page 31 to page 40
3) see from page 31 to page 40
4) see page 30
5) lack of instructions indicates that the gear is not equipped with an output flange.

MOUNTING POSITION

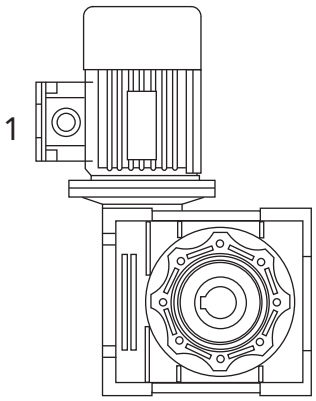
B3



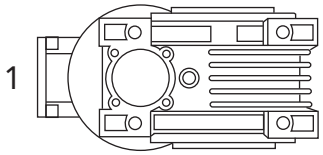
B6



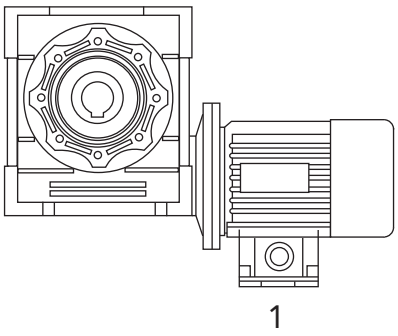
V5



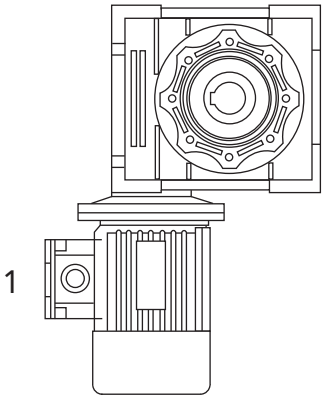
B7



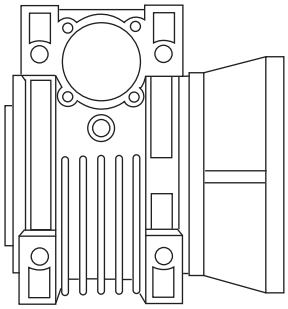
B8



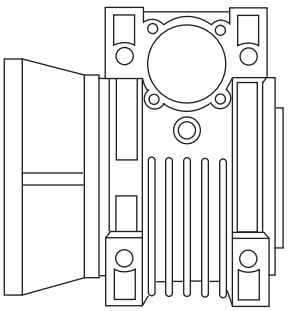
V6



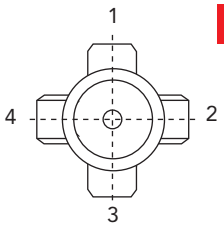
F...1

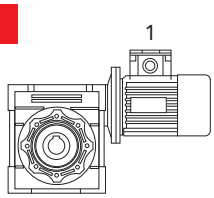


F...2



B3





TERMINAL BOX POSITION

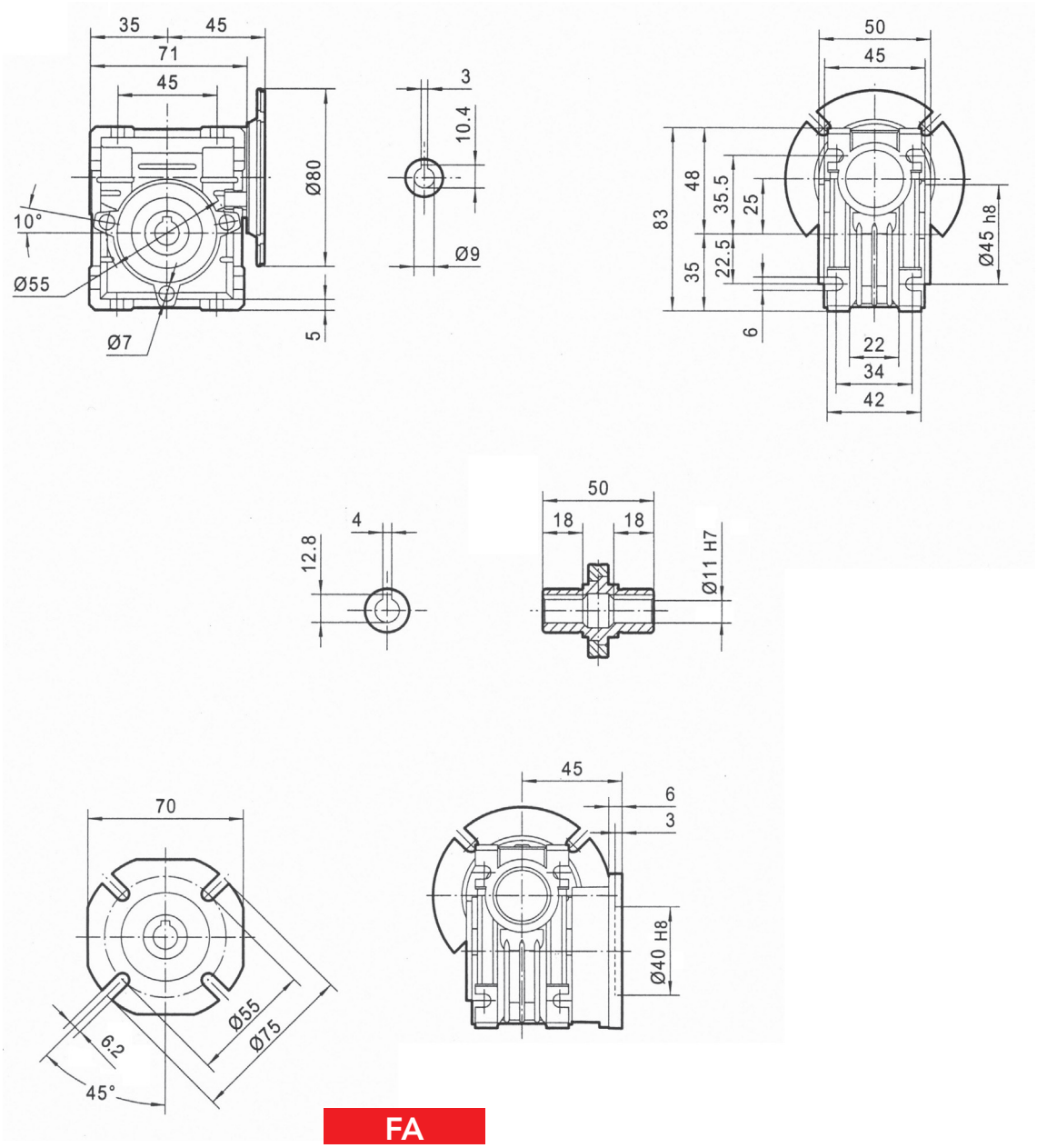
N.B. The position of the terminal box always refers to the B3 position.

CHM 025 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CHM 025	7.5	186.7	0.09	3.8	2.8	56	B14
	10	140.0	0.09	5	2.4	56	B14
	15	93.3	0.09	7.2	1.6	56	B14
	20	70.0	0.09	9	1.3	56	B14
	25	56.0	0.09	10	1.0	56	B14
	30	46.7	0.09	12.3	1.1	56	B14
	40	35.0	0.09	13	1.0	56	B14
	50	28.0	0.09	14	0.7	56	B14
	60	23.3	0.09	14	0.6	56	B14

DIMENSIONS



Weight 0.7 Kg excluding motor

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

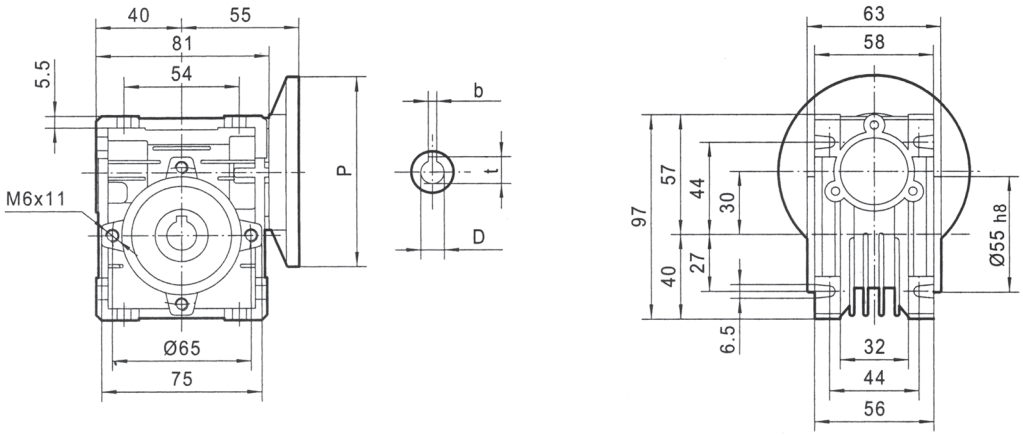
CHM 030 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

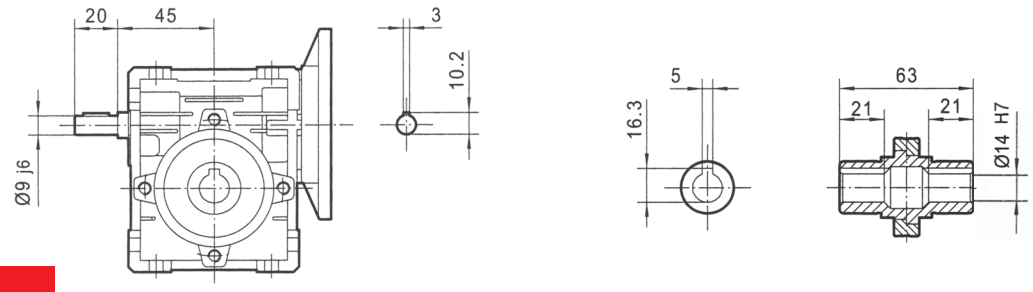
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CHM 030	7.5	186.7	0.22	9	2.1	63/56	B5/B14
	10	140.0	0.22	11	1.6	63/56	B5/B14
	15	93.3	0.22	16	1.0	63/56	B5/B14
	20	70.0	0.22	20	0.9	63/56	B5/B14
	25	56.0	0.18	20	1.0	63/56	B5/B14
	30	46.7	0.18	22	0.9	63/56	B5/B14
	40	35.0	0.18	21	0.8	63/56	B5/B14
	50	28.0	0.18	19	0.8	63/56	B5/B14
	60	23.3	0.09	18	0.9	56	B5/B14
	80	17.5	0.09	13	0.9	56	B5/B14

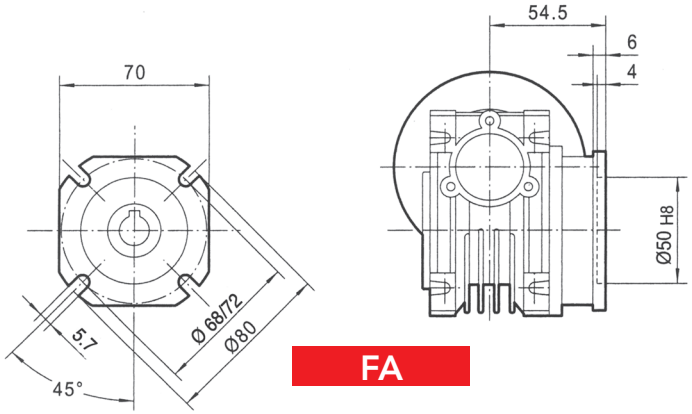
i = 5 ON REQUEST

DIMENSIONS



E





FA

PAM IEC	P	De8	b	t
63B5	140	11	4	12.8
56B5	120	9	3	10.4

PAM IEC	P	De8	b	t
63B14	90	11	4	12.8
56B14	80	9	3	10.4

Weight 1.2 Kg excluding motor

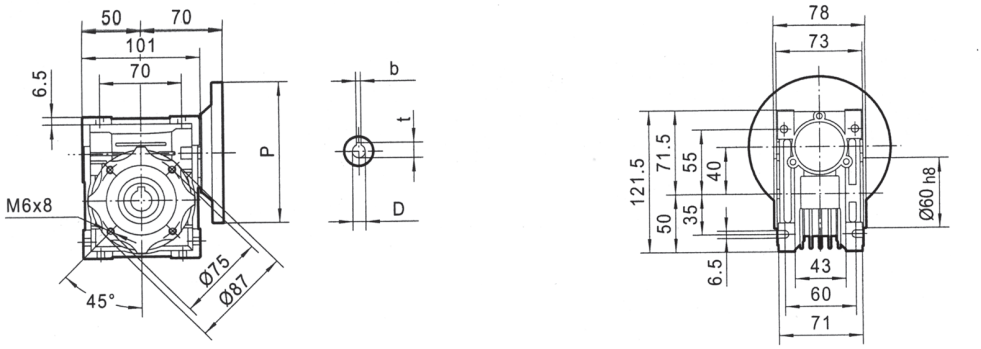
CHM 040 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

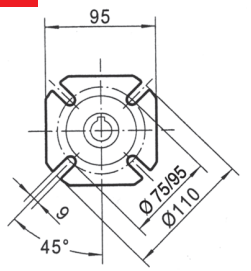
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CHM 040	7.5	186.7	0.55**	22	1.6	71/63	B5/B14
	10	140.0	0.55**	30	1.4	71/63	B5/B14
	15	93.3	0.55**	44	0.9	71/63	B5/B14
	20	70.0	0.55**	38	1.0	71/63	B5/B14
	25	56.0	0.37	45	0.9	71/63	B5/B14
	30	46.7	0.37	52	0.8	71/63	B5/B14
	40	35.0	0.25	43	0.9	71/63	B5/B14
	50	28.0	0.22	44	0.9	63/56	B5/B14*
	60	23.3	0.18	42	0.8	63/56	B5/B14*
	80	17.5	0.18	36	0.8	63/56	B5/B14*
	100	14.0	0.18	35	0.8	63/56	B5/B14*

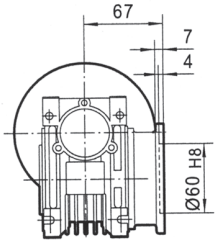
* 56 only B5 ** Size 71 Motors i = 5 ON REQUEST

DIMENSIONS

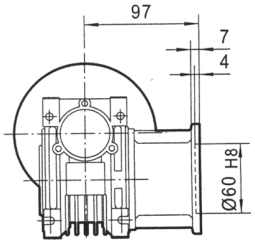


E

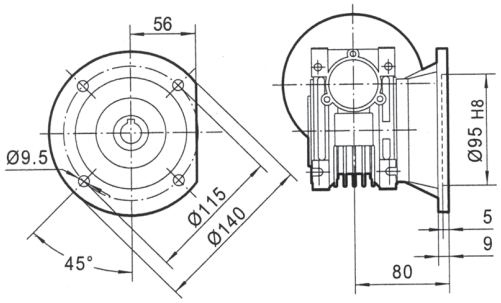




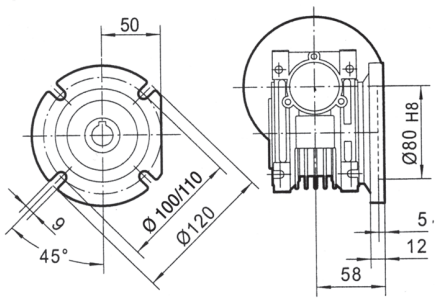
FA



FB



FC



FD

PAM IEC	P	DE8	b	t
71B5	160	14	5	16.3
63B5	140	11	4	12.8
56B5	120	9	3	10.4

PAM IEC	P	DE8	b	t
71B14	105	14	5	16.3
63B14	90	11	4	12.8

Weight 2.3 Kg excluding motor

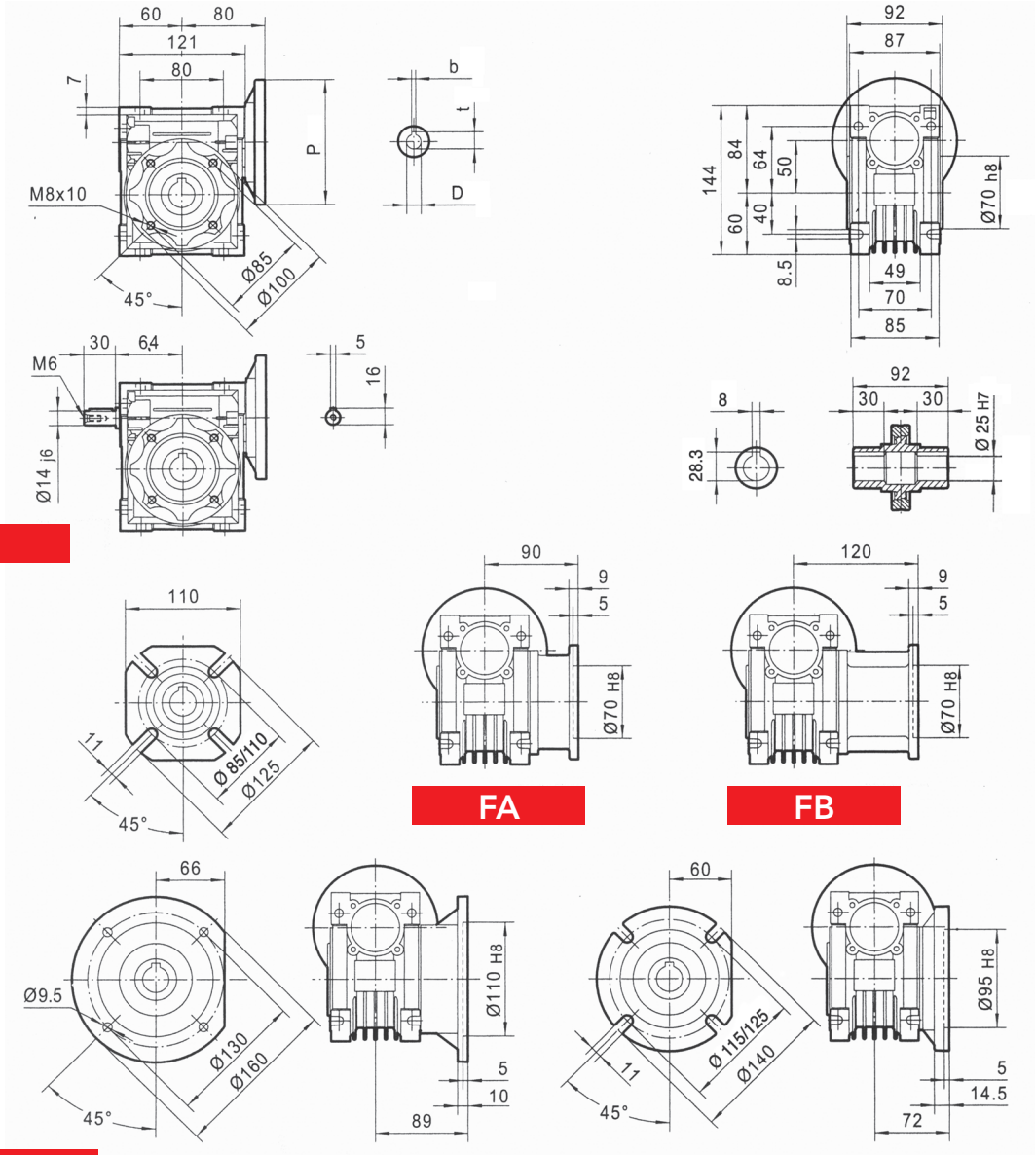
CHM 050 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CHM 050	7.5	186.7	0.75	33.3	2.0	80/71	B5/B14
	10	140.0	0.75	43.9	1.6	80/71	B5/B14
	15	93.3	0.75	62.6	1.2	80/71	B5/B14
	20	70.0	0.75	80	0.9	80/71	B5/B14
	25	56.0	0.55	70	1.0	80/71	B5/B14
	30	46.7	0.55	80	1.0	80/71	B5/B14
	40	35.0	0.37	67	1.1	80/71/63	B5/B14*
	50	28.0	0.37	78	0.9	71/63	B5/B14*
	60	23.3	0.37	87	0.8	71/63	B5/B14*
	80	17.5	0.25	70	0.9	71/63	B5/B14*
	100	14.0	0.18	59	0.9	71/63	B5/B14*

* 63 only B5 i = 5 ON REQUEST

DIMENSIONS



PAM IEC	P	De8	b	t
80B5	200	19	6	21.8
71B5	160	14	5	16.3
63B5	140	11	4	12.8

PAM IEC	P	De8	b	t
80B14	120	19	6	21.8
71B14	105	14	5	16.3

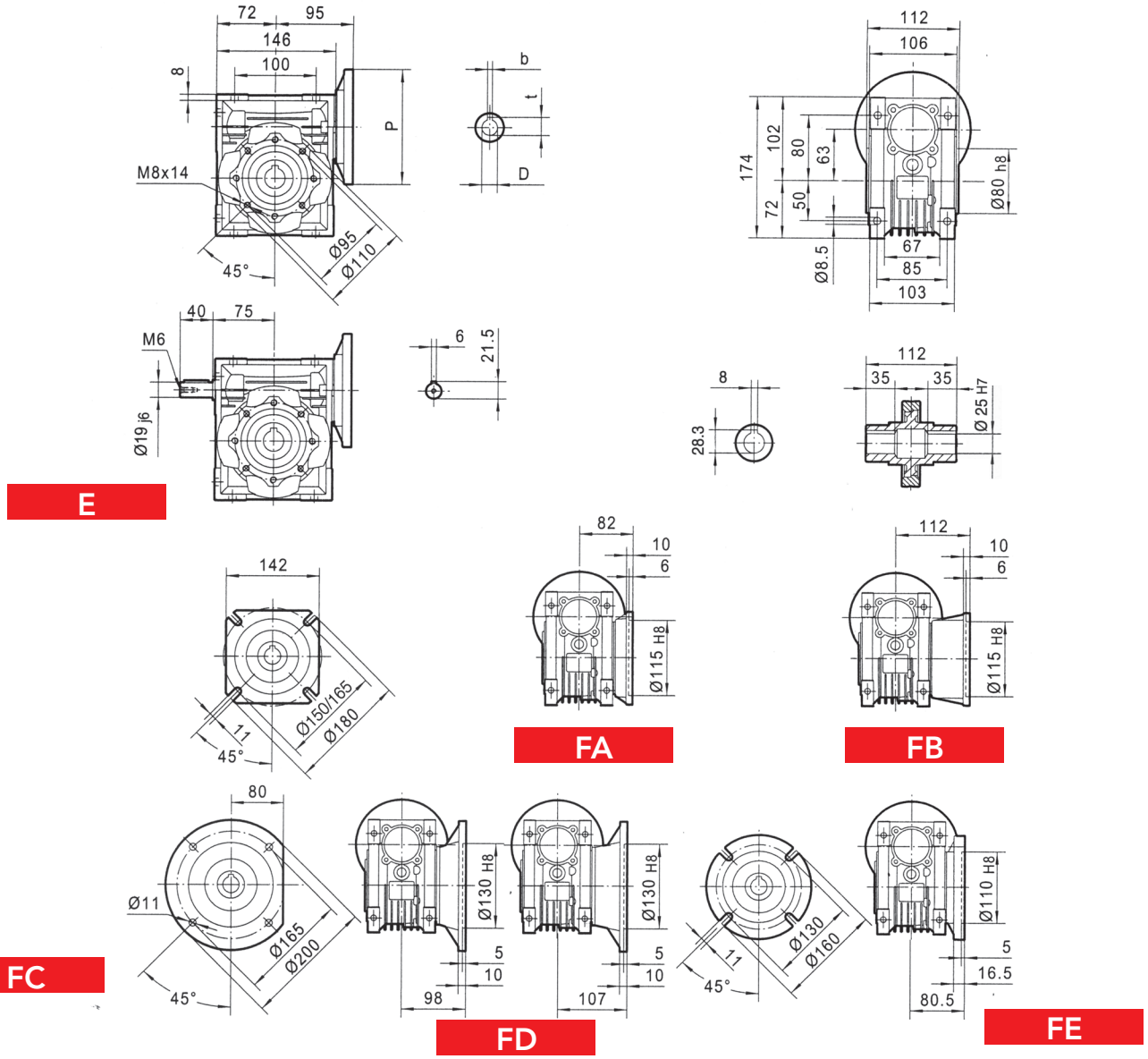
Weight 3.5 Kg excluding motor

CHM 063 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CHM 063	7.5	186.7	1.50	67.4	1.8	90/80	B5/B14
	10	140.0	1.50	88.6	1.4	90/80	B5/B14
	15	93.3	1.50	126	1.19	90/80	B5/B14
	20	70.0	1.50	164	0.8	90/80	B5/B14
	25	56.0	1.10	145	0.9	90/80	B5/B14
	30	46.7	1.10	165	1.0	90/80	B5/B14
	40	35.0	0.75	143	1.0	80/71	B5/B14
	50	28.0	0.55	122	1.1	80/71	B5/B14
	60	23.3	0.55	138	0.9	80/71	B5/B14
	80	17.5	0.37	114	1.1	80/71	B5/B14
	100	14.0	0.37	127	0.9	71	B5/B14

DIMENSIONS



PAM IEC	P	DE8	b	t
90B5	200	24	8	27.3
80B5	200	19	6	21.8
71B5	160	14	5	16.3

PAM IEC	P	DE8	b	t
90B14	140	24	8	27.3
80B14	120	19	6	21.8
71B14	105	14	5	16.3

Weight 6.2 Kg excluding motor

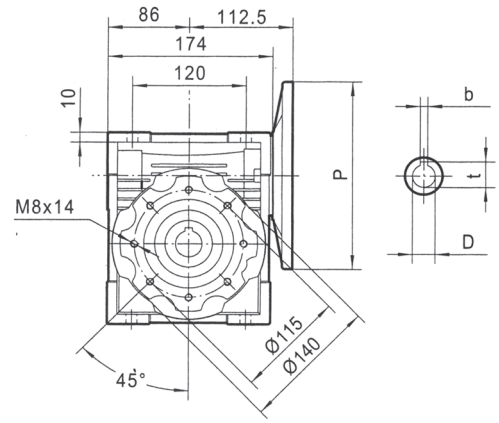
CHM 075 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

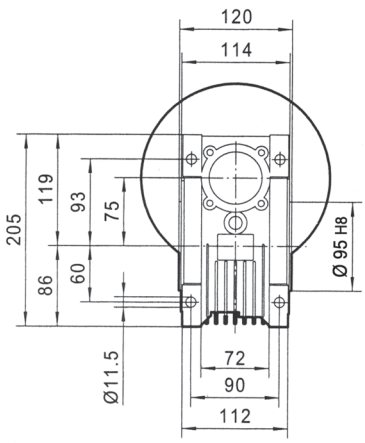
МЕХАНИКАЛ ПРОДАКТС

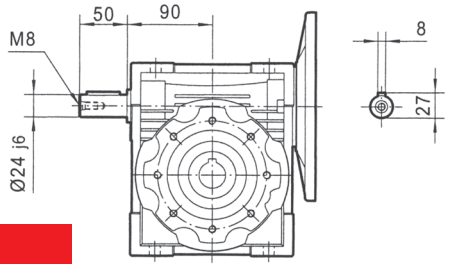
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CHM 075	7.5	186.7	4.00	180	1.0	100/90	B5/B14
	10	140.0	4.00	237	0.8	100/90	B5/B14
	15	93.3	3.00	260	0.8	100/90	B5/B14
	20	70.0	1.50	167	1.2	90/80	B5/B14
	25	56.0	1.50	204	1.0	90/80	B5/B14
	30	46.7	1.50	232	1.0	90/80	B5/B14
	40	35.0	1.10	214	1.0	90/80	B5/B14
	50	28.0	0.75	176	1.2	90/80/71	B5/B14*
	60	23.3	0.75	199	1.0	80/71	B5/B14*
	80	17.5	0.55	178	1.1	80/71	B5/B14*
	100	14.0	0.55	203	0.9	80/71	B5/B14*

* 71 only B5

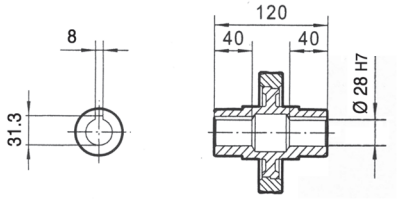
DIMENSIONS

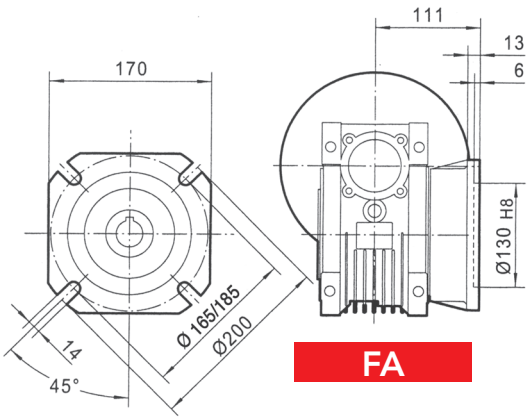




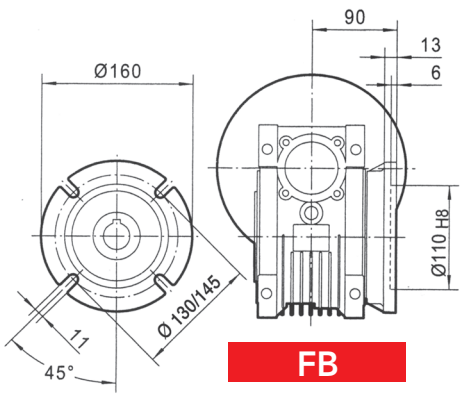


E





FA



FB

PAM IEC	P	De8	b	t
100/112B5	250	28	8	31.3
90B5	200	24	8	27.3
80B5	200	19	6	21.8
71B5	160	14	5	16.3

PAM IEC	P	De8	b	t
100/112B14	160	28	8	31.3
90B14	140	24	8	27.3
80B14	120	19	6	21.8

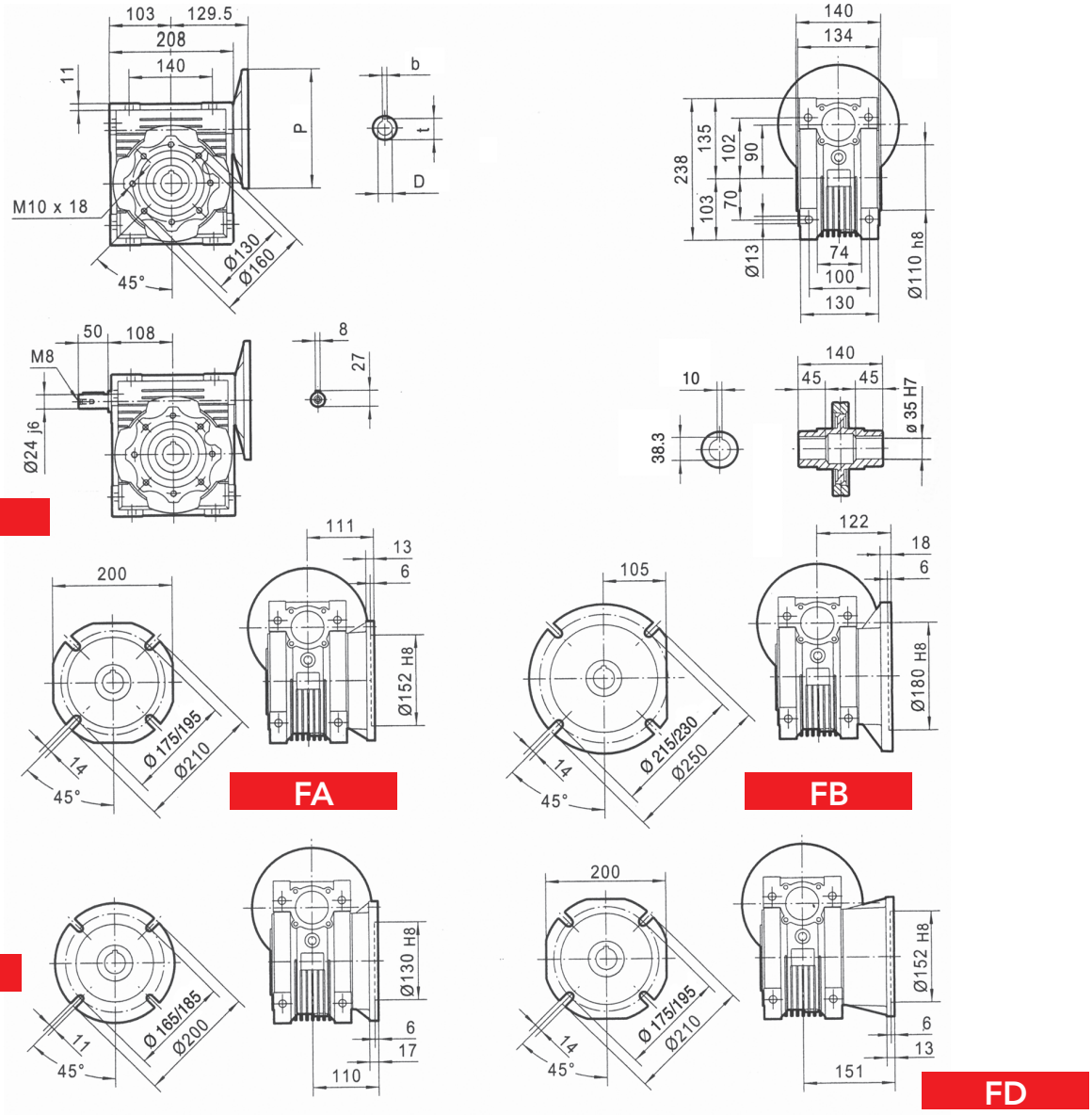
Weight 9 Kg excluding motor

CHM 090 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CHM 090	7.5	186.7	4.00	184	1.5	100/90	B5/B14
	10	140.0	4.00	242	1.3	100/90	B5/B14
	15	93.3	4.00	351	1.1	100/90	B5/B14
	20	70.0	4.00	456	0.8	100/90	B5/B14
	25	56.0	3.00	417	0.8	100/90	B5/B14
	30	46.7	3.00	478	0.9	100/90	B5/B14
	40	35.0	1.50	306	1.2	90/80	B5/B14
	50	28.0	1.50	367	1.0	90/80	B5/B14
	60	23.3	1.50	421	0.8	90/80	B5/B14
	80	17.5	0.75	257	1.1	80	B5/B14
	100	14.0	0.75	300	0.9	80	B5/B14

DIMENSIONS



PAM IEC	P	DE8	b	t
100/112B5	250	28	8	31.3
90B5	200	24	8	27.3
80B5	200	19	6	21.8

PAM IEC	P	DE8	b	t
100/112B14	160	28	8	31.3
90B14	140	24	8	27.3
80B14	120	19	6	21.8

Weight 13 Kg excluding motor

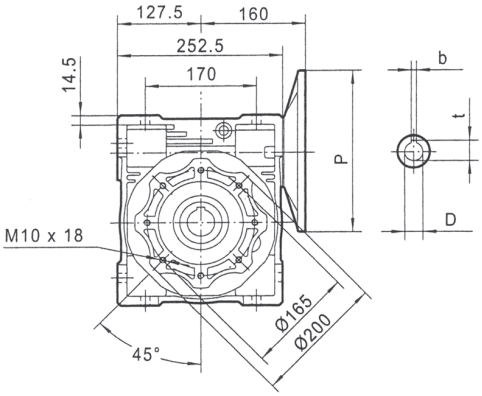
CHM 110 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

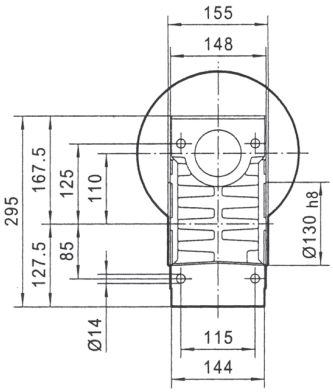
МЕХАНИКАЛ ПРОДАКТС

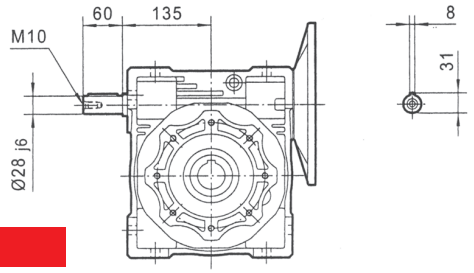
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CHM 110	7.5	186.7	7.50	344	1.6	132/112/100	B5/B14
	10	140.0	7.50	453	1.3	132/112/100	B5/B14
	15	93.3	7.50	659	1.0	132/112/100	B5/B14
	20	70.0	5.50	635	1.0	132/112/100	B5/B14
	25	56.0	4.00	573	1.2	112/100	B5/B14
	30	46.7	4.00	645	1.1	112/100	B5/B14
	40	35.0	3.00	636	1.1	112/100/90	B5/B14*
	50	28.0	3.00	764	0.9	112/100/90	B5/B14*
	60	23.3	2.20	645	1.0	112/100/90	B5/B14*
	80	17.5	1.50	546	0.9	90	B5/B14*
	100	14.0	1.10	470	1.0	90	B5/B14*

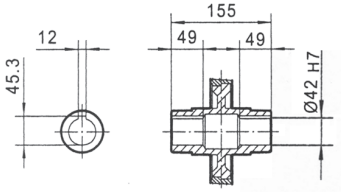
* 90 only B5

DIMENSIONS

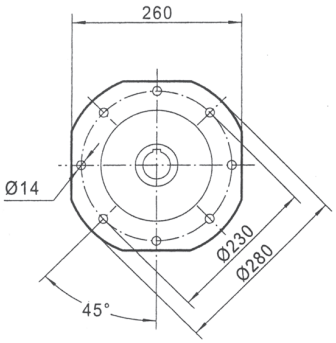


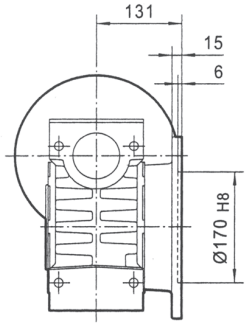


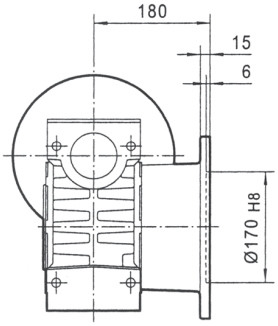




E







FA FB

PAM IEC	P	DE8	b	t
132B5	300	38	10	41.3
112B5	250	28	8	31.3
100B5	250	28	8	31.3
90B5	200	24	8	27.3
80B5	200	19	6	21.8

PAM IEC	P	DE8	b	t
132B14	200	38	10	41.3
112B14	160	28	8	31.3
100B14	160	28	8	31.3

Weight 35 Kg excluding motor

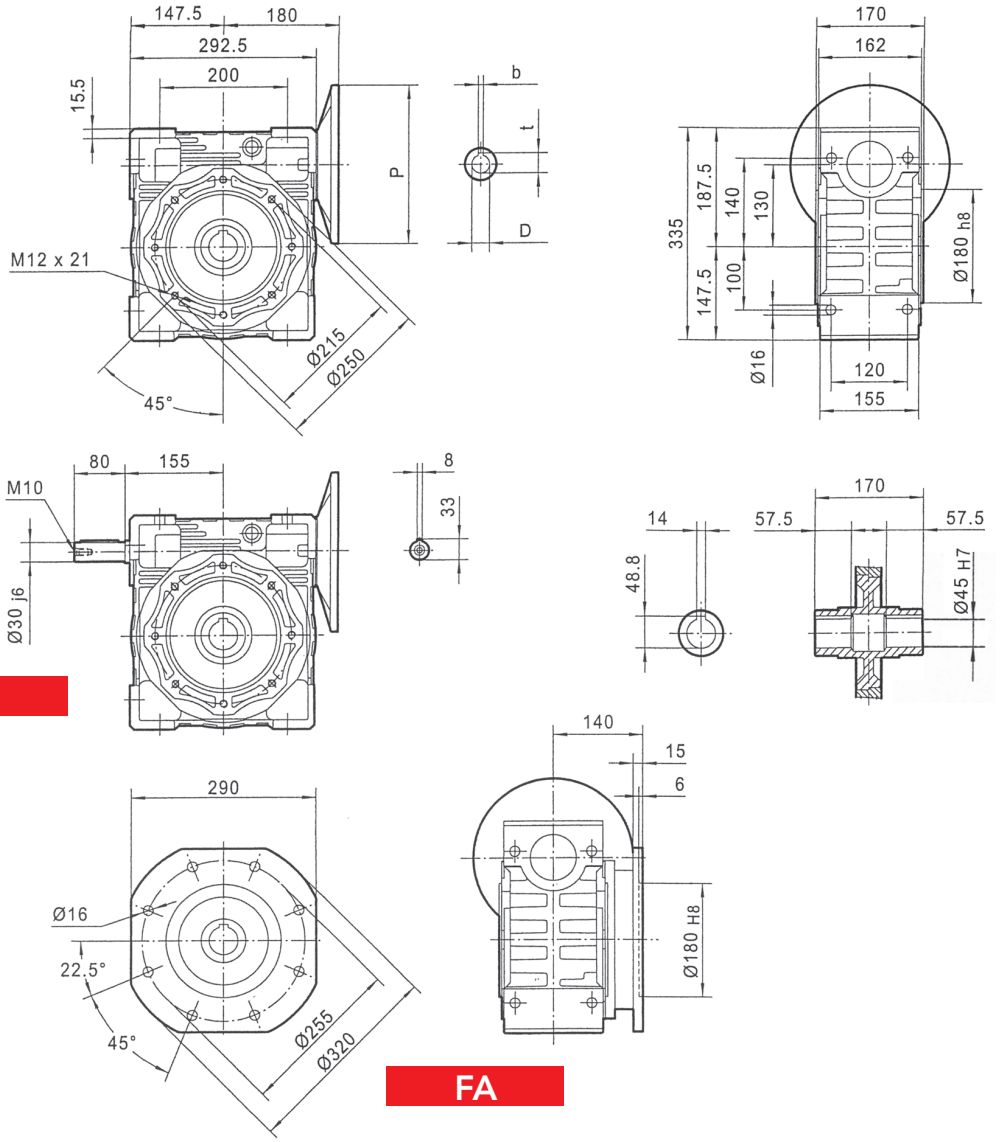
CHM 130 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CHM 130	7.5	186.7	7.50	348	2.2	132	B5/B14
	10	140.0	7.50	455	1.8	132	B5/B14
	15	93.3	7.50	660	1.2	132	B5/B14
	20	70.0	7.50	877	1.0	132	B5/B14
	25	56.0	7.50	1071	0.9	132	B5/B14
	30	46.7	7.50	1225	0.8	132/112/100	B5/B14
	40	35.0	5.50	1173	0.9	132/112/100	B5/B14
	50	28.0	4.00	1023	0.9	100	B5/B14
	60	23.3	3.00	886	1.1	100	B5/B14
	80	17.5	3.00	1112	0.8	100/90	B5/B14*
	100	14.0	1.50	652	1.1	100/90	B5/B14*

* 90 only B5

DIMENSIONS



PAM IEC	P	DE8	b	t
132B5	300	38	10	41.3
112B5	250	28	8	31.3
100B5	250	28	8	31.3
90B5	200	24	8	27.3

PAM IEC	P	DE8	b	t
132B14	200	38	10	41.3
112B14	160	28	8	31.3
100B14	160	28	8	31.3

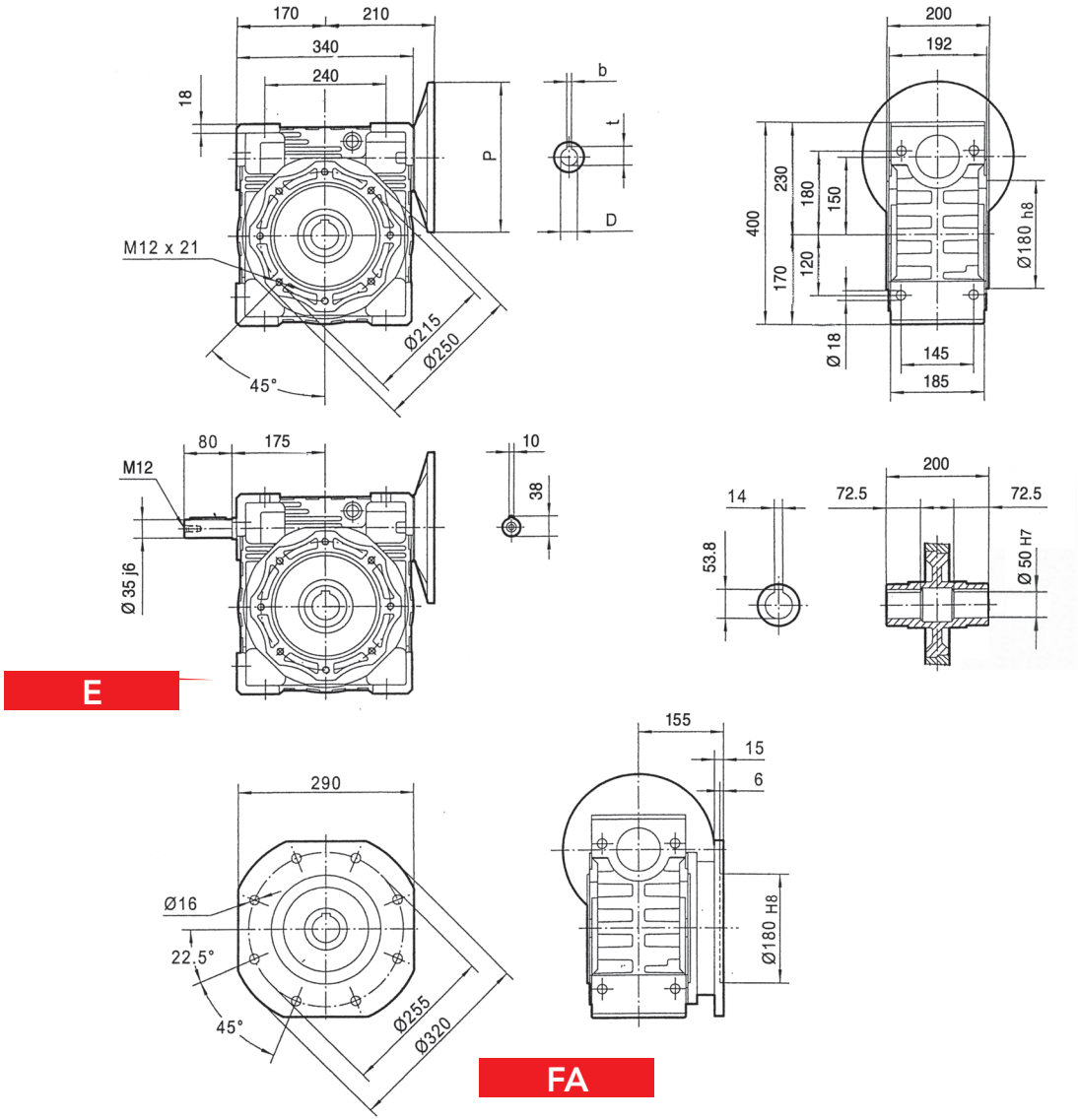
Weight 48 Kg excluding motor

CHM 150 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CHM 150	7.5	186.7	15	680	1.6	160	B5
	10	140.0	15	905	1.2	160	B5
	15	93.3	15	1310	0.9	160	B5
	20	70.0	11	1270	1.0	160	B5
	25	56.0	11	1520	0.8	160	B5
	30	46.7	7.50	1240	0.8	132	B5
	40	35.0	7.50	1560	0.9	132	B5
	50	28.0	5.50	1405	0.9	132	B5
	60	23.3	5.50	1610	0.8	132	B5
	80	17.5	4	1430	0.8	112/100	B5
	100	14.0	3	1300	0.8	112/100	B5

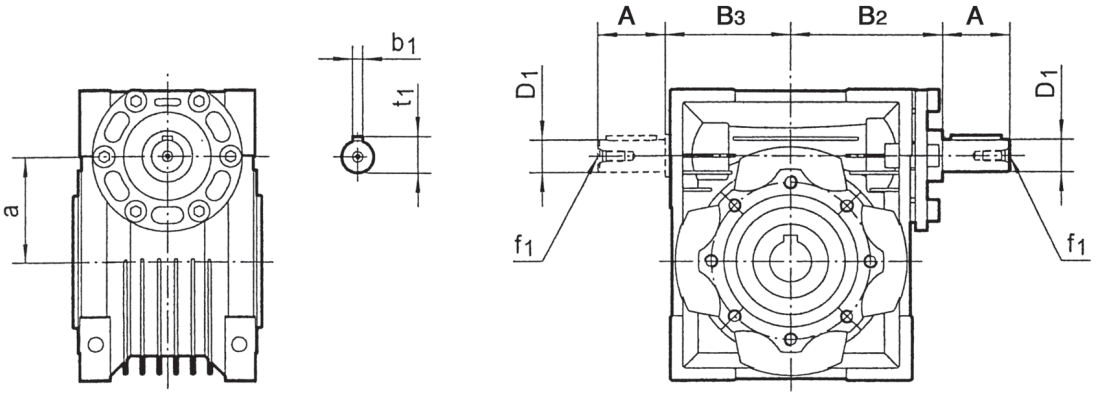
DIMENSIONS



PAM IEC	P	DE8	b	t
160B5	350	42	12	45.3
132B5	300	38	10	41.3
112B5	250	28	8	31.3
100B5	250	28	8	31.3

Weight 84 Kg excluding motor

CHMR	030	040	050	063	075	090	110	130	150
A	20	23	30	40	50	50	60	80	80
D1 j6	9	11	14	19	24	24	28	30	35
B2	51	60	74	90	105	125	142	162	195
B3	45	53	64	75	90	108	135	155	175
a	30	40	50	63	75	90	110	130	150
b1	3	4	5	6	8	8	8	8	10
f1	-	-	M6	M6	M8	M8	M10	M10	M12
t1	10.2	12.5	16	21.5	27	27	31	33	38

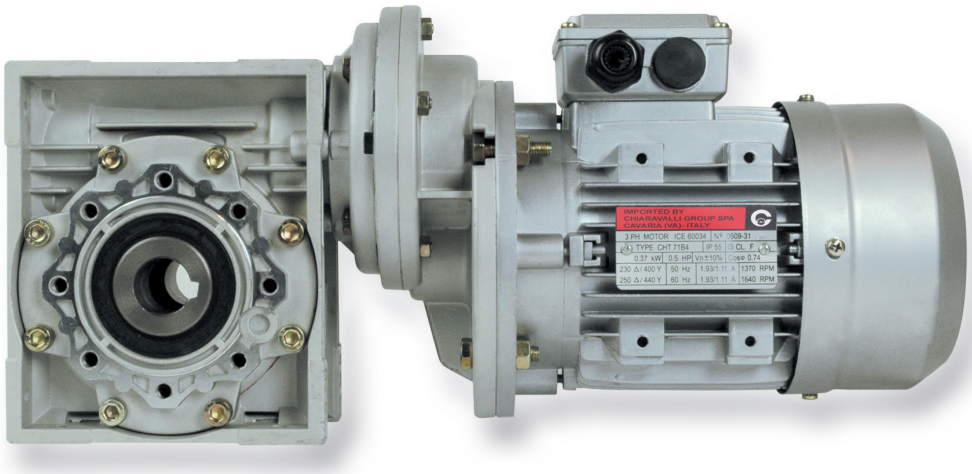


For the missing dimensions, please refer to the CHM correspondent

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

CHPC/CHM - WORM GEAR WITH PRE-STAGE MODULE

МЕХАНИКАЛ ПРОДАКТС



DESIGNATION CHPC/CHM - CHME

TYPE	SIZE	i =	M.M.F.	MOUNT. POS
CHPC	63	3	63B5	If supplied coupled with CHM or CHME types specify
	71	3	71B5	the position of these, when the pre-stage module
	80	3	80B5	is supplied by itself it is prepared for
	90	2.45	90B5	universal assembly.

ORDER EXAMPLE FOR A CHPC COUPLED TO A CHM OR CHME GEAR

CHPC	90	CHM	110	i=245 (2.45x100)	M.M.F.	90B5	POS. B3

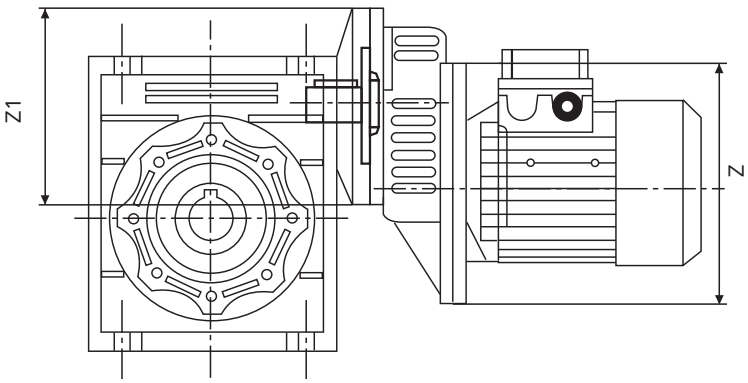
If the motor is also required, please specify:

Size	es. 90 L4
Power	es. Kw 1.5
Poles	es. 4
Voltage	es. V230/400
Frequency	es. 50 Hz
Flange	es. B5

N.B. From size 25 to 63 the gears are always supplied in the Universal position and can therefore be mounted in any position, from size 75 to size 130 if the position required differs from B3 it must be specified.
In particular, in the event that a gear in position B3 is to be mounted in positions V5 or V6, the bearing positioned in the upper side must be lubricated using suitable grease that ensures proper lubrication.
We have tested Tecnolubeseal POLYMER 400/2 grease.

	Z	Z1
CHPC 63	11/140	11/105
CHPC 71	14/160	14/120
CHPC 80	19/200	19/160
CHPC 90	24/200	24/160

ATTENZIONE: The gearbox connected with the pre-stage must have input dimension Z1



CHPC/CHM - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC63 CHM040	90	15.6	0.18	61
	120	11.7	0.18	52
	150	9.3	0.18	46
	180	7.8	0.18	46
	240	5.8	0.18	40
	300	4.7	0.18	36

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC71 CHM075	90	15.6	0.37	153
	120	11.7	0.37	190
	150	9.3	0.37	220
	180	7.8	0.37	236
	180	7.8	0.25	159
	240	5.8	0.25	208
	300	4.7	0.25	210

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC63 CHM050	90	15.6	0.18	69
	120	11.7	0.18	85
	150	9.3	0.18	89
	180	7.8	0.18	88
	240	5.8	0.18	76
	300	4.7	0.18	65

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC80 CHM075	90	15.6	0.75	307
	120	11.7	0.55	278
	150	9.3	0.55	260

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC71 CHM050	90	15.6	0.25	97
	120	11.7	0.25	110
	150	9.3	0.25	112

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC71 CHM090	180	7.8	0.37	260
	240	5.8	0.37	320
	300	4.7	0.37	345

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC63 CHM063	150	9.3	0.18	101
	180	7.8	0.18	115
	240	5.8	0.18	136
	300	4.7	0.18	121

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC80 CHM090	90	15.6	0.75	320
	120	11.7	0.75	397
	150	9.3	0.75	426
	180	7.8	0.75	425
	240	5.8	0.55	374

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC71 CHM063	90	15.6	0.37	145
	90	15.6	0.25	98
	120	11.7	0.37	184
	120	11.7	0.25	124
	150	9.3	0.37	192
	150	9.3	0.25	129
	180	7.8	0.25	164
	240	5.8	0.25	139
	300	4.7	0.25	128

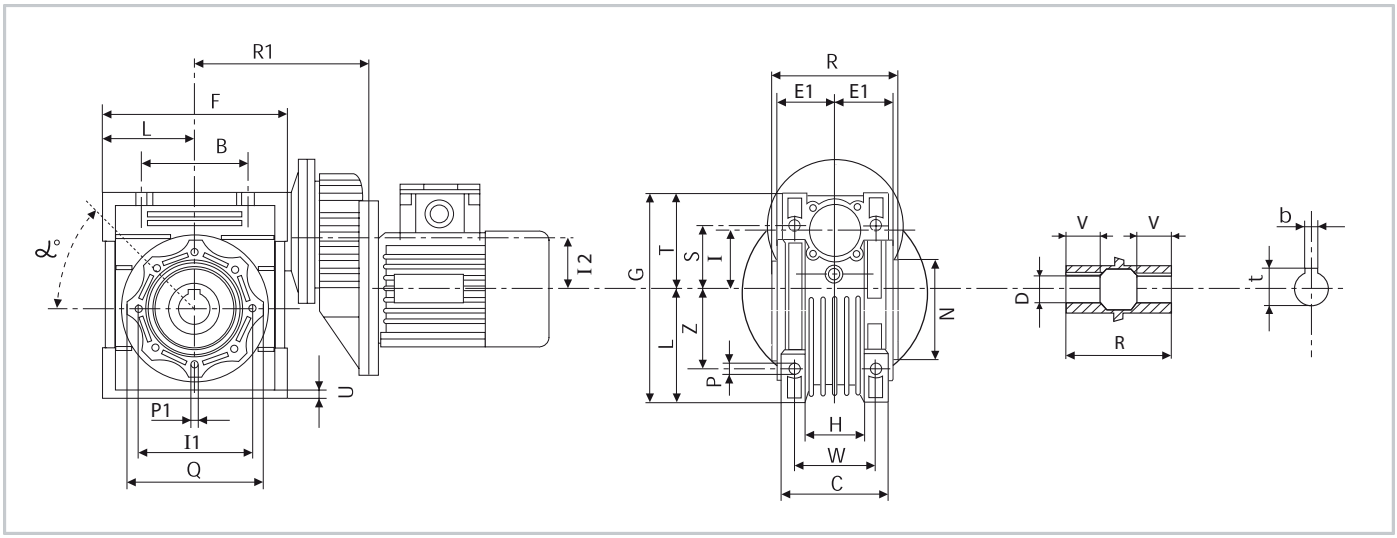
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC80 CHM110	120	11.7	0.75	421
	150	9.3	0.75	496
	180	7.8	0.75	569
	240	5.8	0.75	617
	300	4.7	0.55	585

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC90 CHM110	98	14.3	1.50	679
	122.5	11.4	1.50	801
	147	9.5	1.50	810
	147	9.5	1.10	595
	196	7.1	1.10	660

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC90 CHM130	98	14.3	1.50	679
	122.5	11.4	1.50	813
	147	9.5	1.50	917
	196	7.1	1.50	1013
	245	5.7	1.10	848

The choice of power installed is tied to the unification of the motors, therefore it is sometimes in exuberance compared to the gear; always verify the maximum torque indicated when making the selection and if in doubt please contact our technical office.

CHPC/CHM - DIMENSIONS



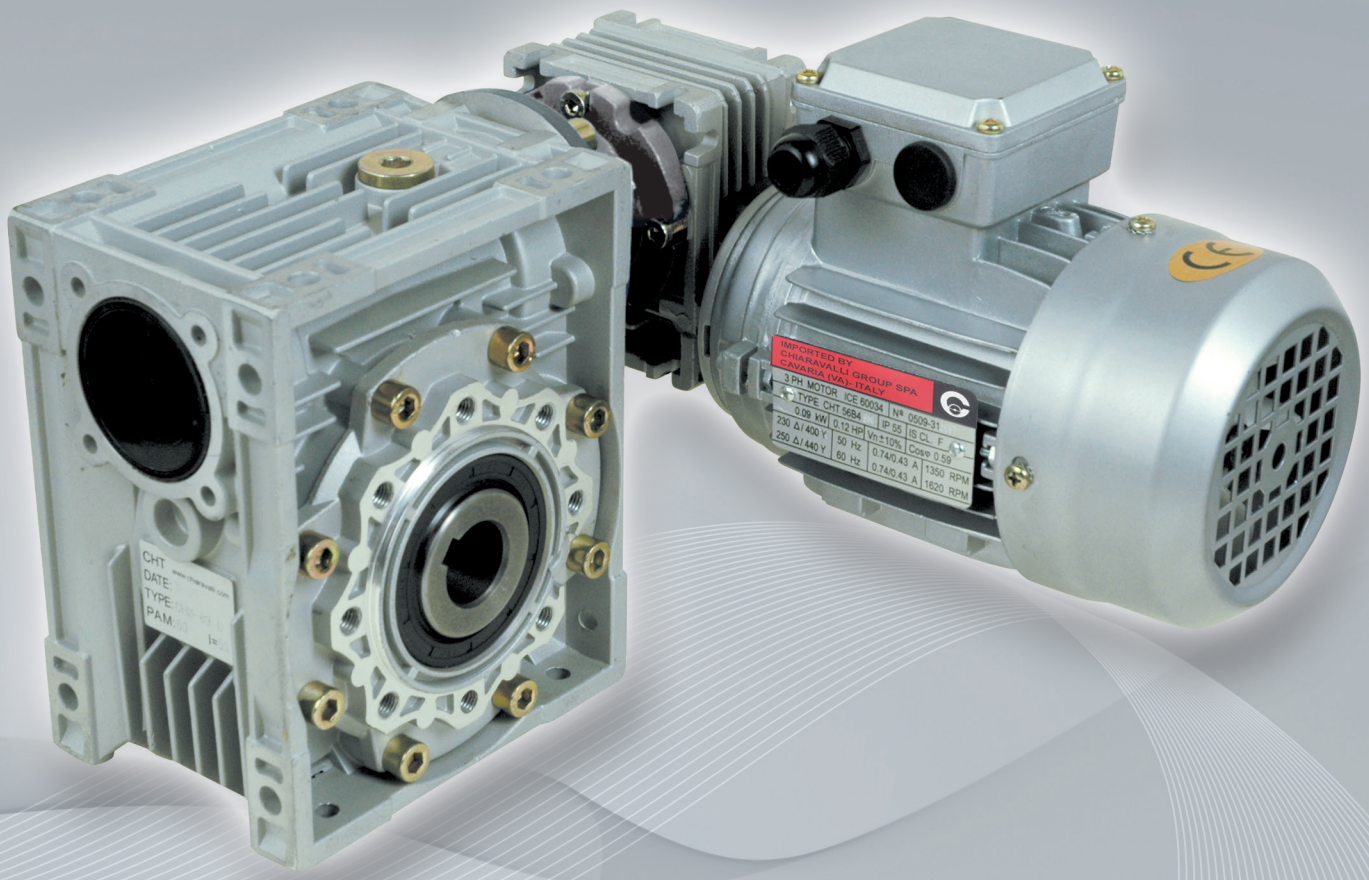
CHPC CHM	B	F	D(H7)	G	H	R1	R	L	I	I2	C	I1	N(h8)	E1	P	Q	S	T
63+040	70	100	18	121.5	43	117	78	50	40	40	71	75	60	36.5	6.5	87	55	71.5
63+050	80	120	25	144	49	127	92	60	50	40	85	85	70	43.5	8.5	100	64	84
71+050	80	120	25	144	49	135	92	60	50	50	85	85	70	43.5	8.5	100	64	84
63+063	100	144	25	174	67	142	112	72	63	40	103	95	80	53	8.5	110	80	102
71+063	100	144	25	174	67	150	112	72	63	50	103	95	80	53	8.5	110	80	102
71+075	120	172	28	205	72	167,5	120	86	75	50	112	115	95	57	11	140	93	119
80+075	120	172	28	205	72	187,5	120	86	75	63	112	115	95	57	11	140	93	119
71+090	140	208	35	238	74	184,5	140	103	90	50	130	130	110	67	13	160	102	135
80+090	140	208	35	238	74	204,5	140	103	90	63	130	130	110	67	13	160	102	135
80(90)+110	170	252.5	42	295	-	235	155	127.5	110	63	144	165	130	74	14	200	125	167.5
80(90)+130	200	292.5	45	335	-	255	170	147.5	130	63	155	215	180	81	16	250	140	187.5

CHPC CHM	U	V	Z	W	P1	α	b	t	Weight in kg. excluding motor
63+040	6.5	26	35	60	M6x8n.4	45°	6	20.8	3.9
63+050	7	30	40	70	M8x10n.4	45°	8	28.3	5.2
71+050	7	30	40	70	M8x10n.4	45°	8	28.3	5.8
63+063	8	36	50	85	M8x14n.8	45°	8	28.3	7.9
71+063	8	36	50	85	M8x14n.8	45°	8	28.3	8.5
71+075	10	40	60	90	M8x14n.8	45°	8	31.3	11
80+075	10	40	60	90	M8x14n.8	45°	8	31.3	12.6
71+090	11	45	70	100	M10x18n.8	45°	10	38.3	14.3
80+090	11	45	70	100	M10x18n.8	45°	10	38.3	16.2
80(90)+110	14	50	85	115	M10x18n.8	45°	12	45.3	39
80(90)+130	15	60	100	120	M12x21n.8	45°	14	48.8	67.2

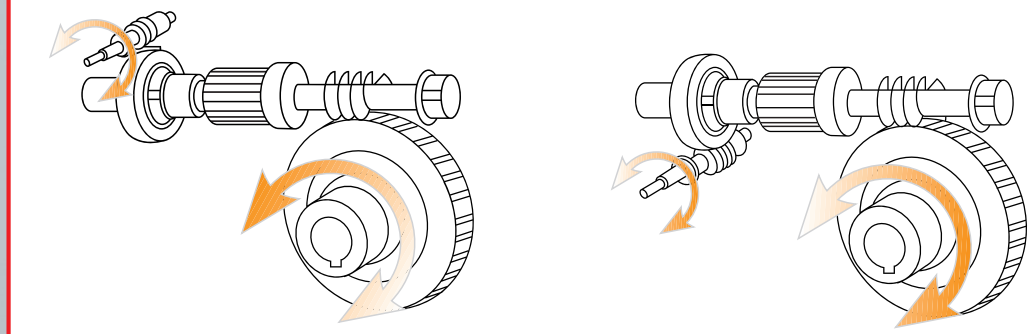
N.B. For the side flange and double extended input worm dimensions see the corresponding size of the CHM series. See pages 34 and 35.

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

CHM/CHM-CHME - CHMR/CHM-CHME
DOUBLE WORM GEAR



DIRECTION OF ROTATION



CHM/CHMR/CHME/CHMRE DESIGNATION

TYPE	SIZE (1)	VERSION (2)	FLANGE POS. (3)	i	EXEC. (4)	M.M.F.	MOUNT. POS. (3)
CHM/CHM	025/030	FA	1	300	OAD		U
CHM/CHME	030/040	FB	2	400	OAS		B3
CHMR/CHM	030/050	FC		500	OBD		B8
CHMR/CHME	030/063	FD		600	OBS		B6
	040/075	FE		750	VAD	**SEE FROM PAGE 31 TO PAGE 35**	B7
	040/090			900	VAS		V5
	050/110			1200	VBD		V6
	063/130			1500	VBS		
				1800			
				2400			

For the motor mounting flanges (M.M.F.) see the table showing the types available. For the executions see the table with drawings, if not specified OBS would be supplied. The mounting position refers to the second gear.

ORDER EXAMPLE

CHM/CHM	**040/090**	**FA(5)**	**2(5)**	**500**	**OAD**	**63 B14**	**V5**

If the motor is also required, please specify:

Size	es. 63 B4
Power	es. Kw 0.18
Poles	es. 4
Voltage	es. V230/400
Frequency	es. 50 Hz
Flange	es. B14

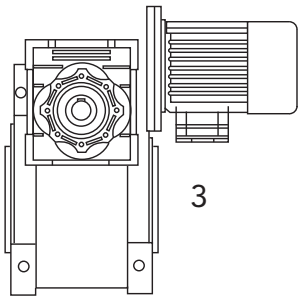
N.B. From size 25 to 63 the gears are always supplied in the Universal position and can therefore be mounted in any position, from
size 75 to size 130 if the position required differs from B3 it must be specified.
In particular, in the event that a gear in position B3 is to be mounted in positions V5 or V6, the bearing positioned in the upper side
must be lubricated using suitable grease that ensures proper lubrication.
We have tested Tecnolubeseal POLYMER 400/2 grease.

1) see page 48
2) see from page 31 to page 40
3) see page 30
4) see page 47
5) lack of instructions indicates that the gear is not equipped with an output flange.

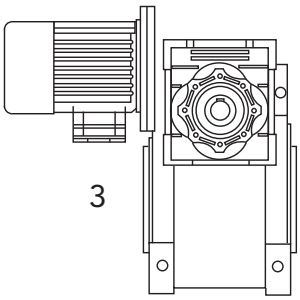
*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

EXECUTION

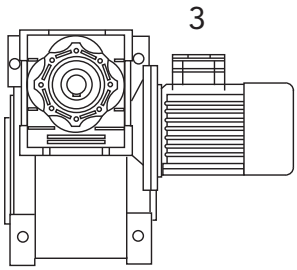
OAD



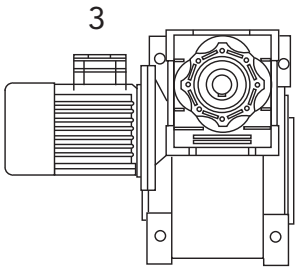
OAS



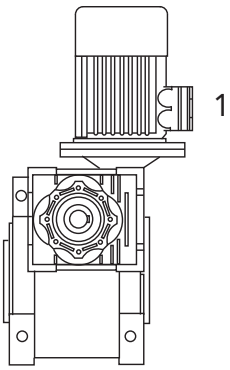
OBD



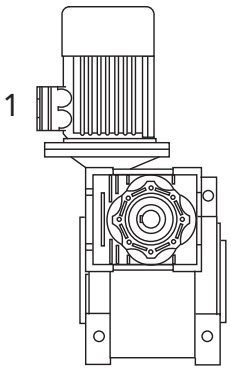
OBS



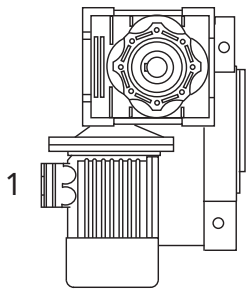
VAD



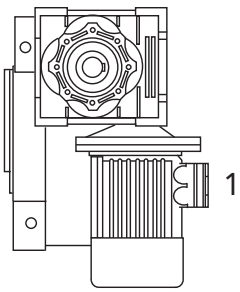
VAS



VBS



VBD



The execution determines the mounting position of the first gear in relation to the second gear. If not otherwise specified at the time of order, the group will be supplied in the OBS execution. The placing position refers to the second gear.

CHM/CHM - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHM 025/030	300	4.7	0.09*	31
	400	3.5	0.09*	28
	500	2.8	0.09*	34
	600	2.3	0.09*	31
	750	1.9	0.09*	34
	900	1.6	0.09*	31
	1200	1.2	0.09*	31
	1500	0.9	0.09*	26
	1800	0.8	0.09*	23
	2400	0.6	0.09*	23

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHM 040/075	300	4.7	0.37	405
	400	3.5	0.25	336
	500	2.8	0.25	307
	600	2.3	0.18	362
	750	1.9	0.18	391
	900	1.6	0.18*	325
	1200	1.2	0.18*	359
	1500	0.9	0.09	360
	1800	0.8	0.09	404
	2400	0.6	0.09*	330

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHM 030/040	300	4.7	0.09*	70
	400	3.5	0.09*	63
	500	2.8	0.09*	57
	600	2.3	0.09*	72
	750	1.9	0.09*	72
	900	1.6	0.09*	73
	1200	1.2	0.09*	65
	1500	0.9	0.09*	73
	1800	0.8	0.09*	73
	2400	0.6	0.09*	65

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHM 040/090	300	4.7	0.37	405
	400	3.5	0.37	523
	500	2.8	0.37	550
	600	2.3	0.37	605
	750	1.9	0.25	538
	900	1.6	0.25	533
	1200	1.2	0.18	629
	1500	0.9	0.18	588
	1800	0.8	0.18*	492
	2400	0.6	0.18*	625

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHM 030/050	300	4.7	0.18	142
	400	3.5	0.18	127
	500	2.8	0.09	123
	600	2.3	0.09	143
	750	1.9	0.09	148
	900	1.6	0.09*	141
	1200	1.2	0.09*	118
	1500	0.9	0.09*	139
	1800	0.8	0.09*	155
	2400	0.6	0.09*	124

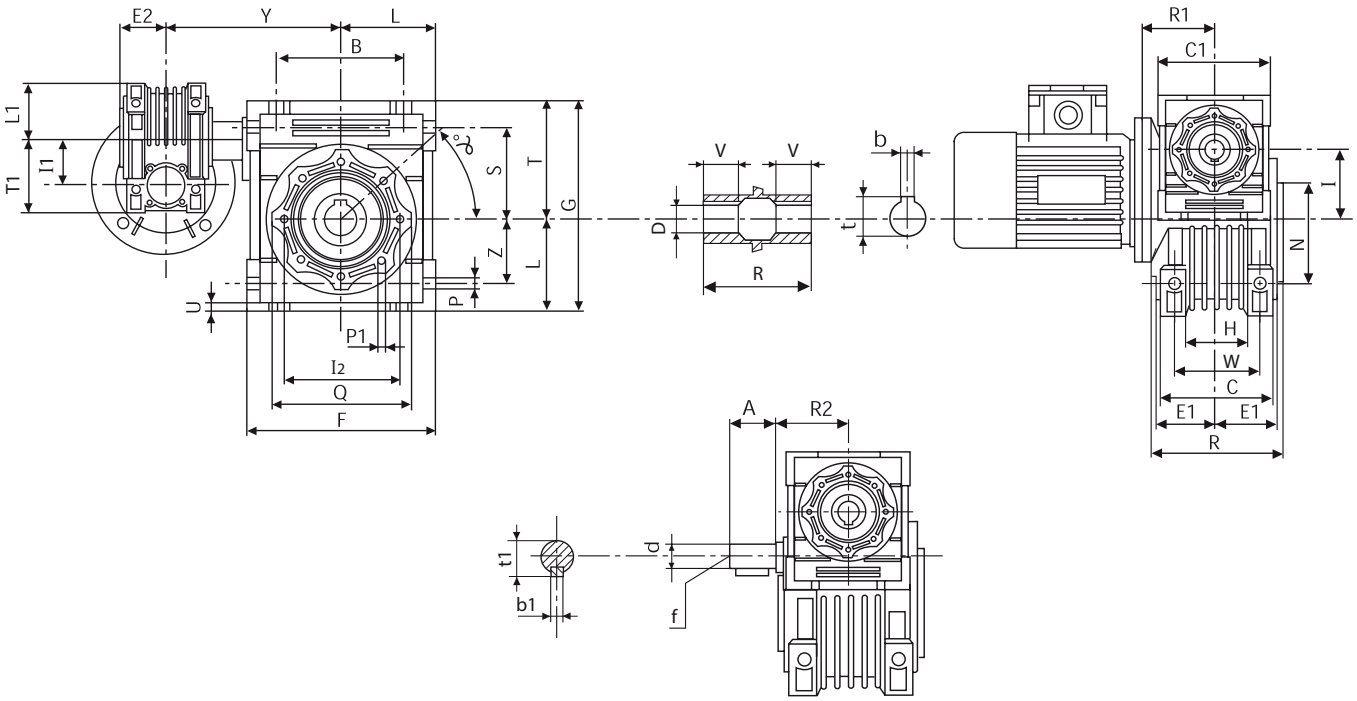
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHM 050/110	300	4.7	0.75	871
	400	3.5	0.75	1013
	500	2.8	0.55	984
	600	2.3	0.55	1062
	750	1.9	0.55	1128
	900	1.6	0.37	1079
	1200	1.2	0.25	943
	1500	0.9	0.25	1064
	1800	0.8	0.25	1075
	2400	0.6	0.18	1001

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHM 030/063	300	4.7	0.22	210
	400	3.5	0.18	222
	500	2.8	0.18	205
	600	2.3	0.18*	208
	750	1.9	0.18*	216
	900	1.6	0.09	200
	1200	1.2	0.09	236
	1500	0.9	0.09*	204
	1800	0.8	0.09*	202
	2400	0.6	0.09*	220

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHM 063/130	300	4.7	1.50	1789
	400	3.5	1.10	1519
	500	2.8	1.10	1629
	600	2.3	0.75	1631
	750	1.9	0.75	1804
	900	1.6	0.75	1826
	1200	1.2	0.55	1705
	1500	0.9	0.37	1674
	1800	0.8	0.37	1698
	2400	0.6	0.25	1624

N.B. The powers marked with an asterisk are higher than those that the gear allows, therefore the applicative choice must be made in accordance with the torque and not the power.
The gear ratios are those most frequently requested. It is possible to obtain multiple combinations using the various ratios of the two single gears.
CHM 63/150 on request

CHM-CHM/CHMR-CHM - DIMENSIONS OF COMPONENTS



CHM-CHM	B	A	F	C1	D(H7)	d(j6)	G	H	R1	R	R2	L	L1	I	I1	C	I2	N(h8)	E1	E2	P
025/030	54	-	80	70	14	-	97	32	45	63	-	40	35	30	25	56	65	55	29	22.5	6
030/040	70	20	100	80	18	9	121.5	43	55	78	51	50	40	40	30	71	75	60	36.5	29	6.5
030/050	80	20	120	80	25	9	144	49	55	92	51	60	40	50	30	85	85	70	43.5	29	8.5
030/063	100	20	144	80	25	9	174	67	55	112	51	72	40	63	30	103	95	80	53	29	8.5
040/075	120	23	172	100	28	11	205	72	70	120	60	86	50	75	40	112	115	95	57	36.5	11
040/090	140	23	208	100	35	11	238	74	70	140	60	103	50	90	40	130	130	110	67	36.5	13
050/110	170	30	252.5	120	42	14	295	-	80	155	74	127.5	60	110	50	144	165	130	74	43.5	14
063/130	200	40	292.5	144	45	19	335	-	95	170	90	147.5	72	130	63	155	215	180	81	53	16
063/150	240	40	340	144	50	19	400	-	95	200	90	170	72	150	63	185	215	180	96	53	18

CHM-CHM	Q	S	T	T1	U	V	Z	Y	W	P1	ə	b	b1	f	t	t1	Weight in Kg. excluding motor
025/030	75	44	57	48	5	18	27	100	44	M6x11(n.4)	90°	5	-	-	-	-	2.5
030/040	87	55	71.5	57	6.5	26	35	120	60	M6x8(n.4)	45°	6	3	-	20.8	10.2	3.9
030/050	100	64	84	57	7	30	40	130	70	M8x10(n.4)	45°	8	3	-	28.3	10.2	5.0
030/063	110	80	102	57	8	36	50	145	85	M8x14(n.8)	45°	8	3	-	28.3	10.2	7.8
040/075	140	93	119	71.5	10	40	60	165	90	M8x14(n.8)	45°	8	4	-	31.3	12.5	11.5
040/090	160	102	135	71.5	11	45	70	182	100	M10x18(n.8)	45°	10	4	-	38.3	12.5	15
050/110	200	125	167.5	84	14	50	85	225	115	M10x18(n.8)	45°	12	5	M6	45.3	16.0	39.2
063/130	250	140	187.5	102	15	60	100	245	120	M12x21(n.8)	45°	14	6	M6	48.8	21.5	70
063/150	250	180	230	102	18	72	120	275	145	M12x21(n.8)	45°	14	6	M6	53.8	21.5	100

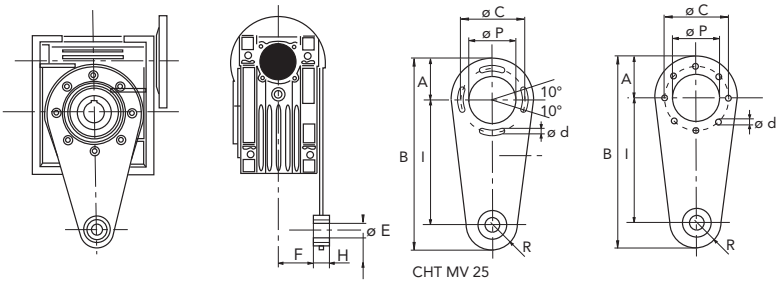
N.B. For the side flange and double extended input worm dimensions see the corresponding size of the CHM models.

TORQUE ARM

TYPE	I	R	F	H	Ø E	A	B	Ø C	Ø d	Ø P	N°	Weight for kit kg
CHT MV 25*	70	15	17.5	14	8	33.5	118.5	55	7	45	4	0.17
CHT MV 30*	85	15	24	14	8	38	138	65	7	55	8	0.18
CHT MV 40	100	18	31.5	14	10	44	162	75	7	60	8	0.24
CHT MV 50	100	18	38.5	14	10	50	168	85	9	70	8	0.27
CHT MV 63	150	18	49	14	10	55	223	95	9	80	8	0.57
CHT MV 75	200	30	47.5	25	20	70	300	115	9	95	8	1.10
CHT MV 90	200	30	57.5	25	20	80	310	130	11	110	8	1.26
CHT MV 110	250	35	62	30	25	100	385	165	11	130	8	1.92
CHT MV 130	250	35	69	30	25	125	410	215	14	180	8	2.23
CHT MV 150	250	35	84	30	25	125	410	215	14	180	8	2.23

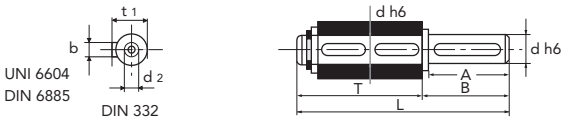
* Without vibration resistant bushing

The anchoring point of the torque arm is equipped with a vibration resistant bushing.



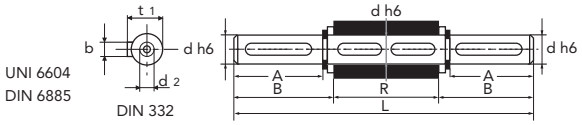
SINGLE OUTPUT SHAFT KIT

TYPE	A	Ø d	B	b	t 1	T	L	d 2	Weight for kit kg
CHT MVS 25	23	11	25.5	4	12.5	55.5	81	-	0.07
CHT MVS 30	30	14	32.5	5	16	69.5	102	M6x16	0.14
CHT MVS 40	40	18	43	6	20.5	85	128	M6x16	0.27
CHT MVS 50	50	25	53.5	8	28	99.5	153	M10x22	0.60
CHT MVS 63	50	25	53.5	8	28	119.5	173	M10x22	0.67
CHT MVS 75	60	28	63.5	8	31	128.5	192	M10x22	0.94
CHT MVS 90	80	35	84.5	10	38	149.5	234	M12x28	1.79
CHT MVS 110	80	42	84.5	12	45	164.5	249	M16x35	2.70
CHT MVS 130	80	45	85	14	48.5	180	265	M16x35	3.60
CHT MVS 150	82	50	87	14	53.5	210	297	M16x35	5.00

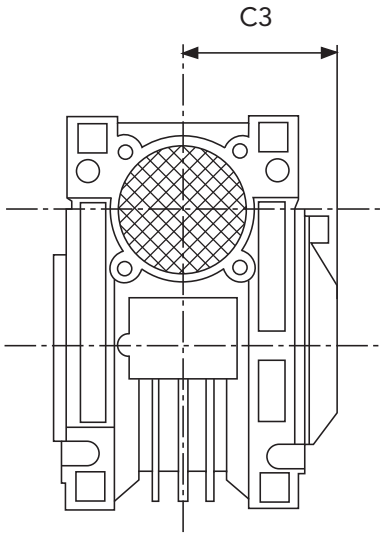


DOUBLE OUTPUT SHAFT KIT

TYPE	A	Ø d	B	R	b	t 1	L	d 2	Weight for kit kg
CHT MVD 25	23	11	25.5	50	4	12.5	101	-	0.11
CHT MVD 30	30	14	32.5	63	5	16	128	M6x16	0.16
CHT MVD 40	40	18	43	78	6	20.5	164	M6x16	0.34
CHT MVD 50	50	25	53.5	92	8	28	199	M10x22	0.75
CHT MVD 63	50	25	53.5	112	8	28	219	M10x22	0.84
CHT MVD 75	60	28	63.5	120	8	31	247	M10x22	1.20
CHT MVD 90	80	35	84.5	140	10	38	309	M12x28	2.50
CHT MVD 110	80	42	84.5	155	12	45	324	M16x35	3.44
CHT MVD 130	80	45	85	170	14	48.5	340	M16x35	4.25



COVER



TYPE	C3
030	43
040	50
050	59
063	70
075	75
090	87
110	95
130	103
150	117

REDUCTION BUSHINGS KIT

SINGLE

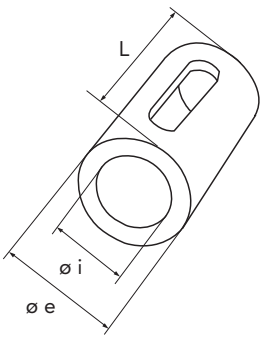
TYPE	ø i/ø e	L	Key	Weight for kit kg
CHT BRM-S	9/11	20	4/3x4x11 RB*	0.006
CHT BRM-S	11/14	30	5/4x6x10 RB*	0.015
CHT BRM-S	14/19	40	6x5x30 *	0.045
CHT BRM-S	19/24	50	6x5.5x20 * 8x5.5x40 *	0.07
CHT BRM-S	24/28	60	8x9x40 *	0.08
CHT BRM-S	28/38	80	10x7x60 *	0.33
CHT BRM-S	38/42	110	12/10x10x48 RB*	0.22

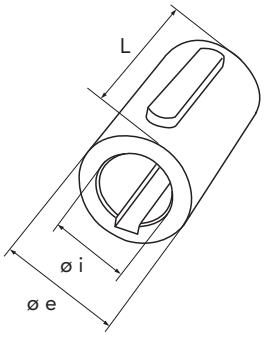
DOUBLE

TYPE	ø i/ø e	L	Key	Weight for kit kg
CHT BRM-D	11/19	40	6x6x30 *	0.06
CHT BRM-D	14/24	50	8x7x40 A	0.12
CHT BRM-D	19/28	60	8x7x50 A	0.16
CHT BRM-D	24/38	80	10x8x60 A	0.44

* to drawing

Tongue acc. to UNI 6604 - DIN 6885
Quenched



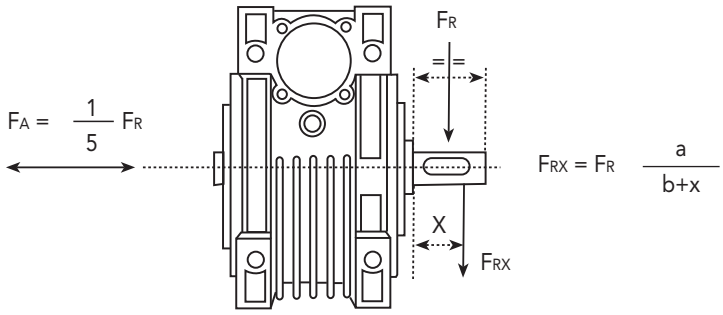


2D and 3D drawings available on the web site ***www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

RADIAL LOADS ON THE OUTPUT SHAFT

The loads indicated are valid for all application directions.
The maximum allowable axial loads are equal to 1/5 of the radial load value shown in the table when applied with the same radial load; if this is not the case, please contact our technical office. If double output shafts are used, the sum of radial loads applicable to the centre lines of the two ends of the shaft must not exceed the value shown in the table below.
The radial loads related to the output speed (n2)=10 are the maximum loads supported by the gear.

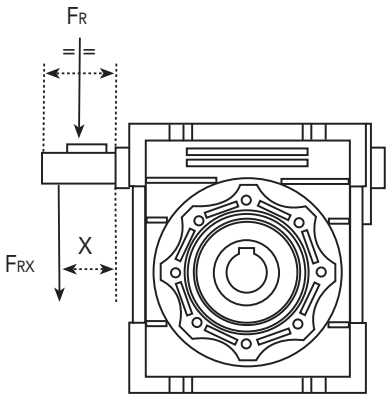
a	GEAR CONSTANT
b	GEAR CONSTANT
x	LOAD DISTANCE FROM SHAFT SHOULDER IN MM.
F_{RX}	RADIAL LOAD IN POSITION X (IN N)
F_R	RADIAL LOAD (N)
F_A	AXIAL LOAD (N)



	SIZES									
Output speed (n2)	**025**	**030**	**040**	**050**	**063**	**075**	**090**	**110**	**130**	**150**
400	390	530	1020	1400	1830	2160	2390	3530	3950	5290
250	460	620	1200	1650	2150	2520	2800	4130	4610	6140
150	550	740	1420	1960	2540	2990	3310	4890	5470	7300
100	630	850	1620	2250	2910	3430	3800	5600	6260	8330
60	740	1000	1920	2660	3450	4060	4500	6640	7420	9800
40	850	1150	2200	3050	3950	4650	5150	7600	8500	11330
25	990	1350	2570	3570	4620	5440	6020	8890	9940	13250
10	1350	1830	3490	4840	6270	7380	8180	12000	13500	18000
	CONSTANTS' VALUES									
a	50	65	84	101	120	131	162	176	188	215
b	38	50	64	76	95	101	122	136	148	174

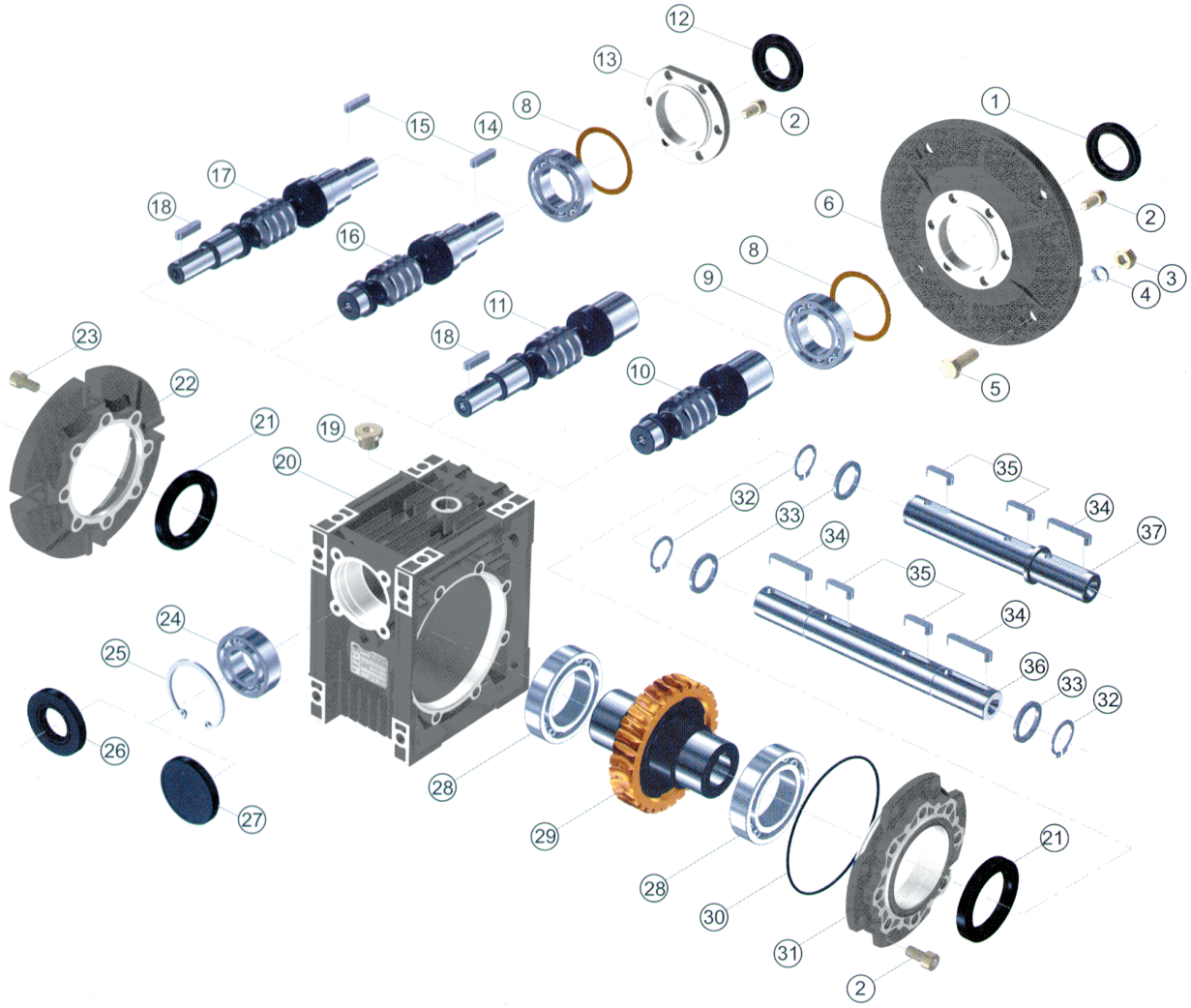
RADIAL LOADS ON THE CENTRE LINE OF THE INPUT SHAFT

$$F_{RX} = F_R \frac{a}{b+x}$$



	SIZES								
	030	**040**	**050**	**063**	**075**	**090**	**110**	**130**	**150**
CONSTANTS' VALUES									
a	86	106	129	159	192	227	266	314	350
b	76	94	114	139	167	202	236	274	310
FR max	210	350	490	700	980	1270	1700	2100	2800

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1	OIL SEAL	20	CASING
2	TORX SCREW	21	OIL SEAL
3	NUT	22	OUTPUT FLANGE
4	WASHER	23	EMBEDDED HEXAGONAL-HEAD SCREW
5	HEXAGONAL-HEAD SCREW	24	BEARING
6	MOTOR CONNECTION FLANGE	25	SEEGER
8	ADJUST SPACER	26	OIL SEAL
9	BEARING	27	CAP
10	HOLE INPUT WORM	28	BEARING
11	HOLE INPUT AND SHAFT OUTPUT WORM	29	WORM WHEEL
12	OIL SEAL	30	O-RING
13	INPUT COVER	31	OUTPUT COVER
14	BEARING	32	SEEGER
15	KEY	33	SPACER
16	SHAFT INPUT WORM	34	KEY
17	DOUBLE EXTENDED INPUT SHAFT WORM	35	KEY
18	KEY	36	DOUBLE OUTPUT SHAFT
19	OIL PLUG	37	SINGLE OUTPUT SHAFT

2D and 3D drawings available on the web site ***www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

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INSTALLATION

· The data shown on the identification name plate must correspond to the gear ordered.
· The oil level, for the sizes 110 and 130 equipped with filling, draining and level plug, must correspond to the quantity foreseen for the assembly position requested (see catalogue), in addition, always for the sizes indicated, it will be the client's responsibility to substitute the blind plug, supplied for transport, with the corresponding plug equipped with a bleed hole included in the supply with the gear.
· All of the other gears are supplied complete with permanent synthetic oil in a quantity that is sufficient for any assembly position.
· The gear must be fixed on a flat surface that is sufficiently rigid in order to avoid any vibration.
· The gear and the axis of the machine to be driven must be perfectly aligned.
· In the event that knocks, overloading or blockage of the machine are foreseen, the client must install a limiting device, joints, overload cut-out etc.
· Coupling with pinions, joints, pulleys and other parts must be done after the parts have been cleaned and knocks should be avoided while assembling as they could damage the bearings and other internal parts.
· In the event that the motor is supplied by the client, he must check that the flange and shaft tolerances correspond to a "normal" class; our motors satisfy this requirement.
· Check that the fixing screws for the gear and the related accessories are correctly tightened.
· Take suitable measures to protect the groups from any aggressive atmospheric agents.
· Where foreseen, protect rotating parts from any possible contact with the operators.
· If the gears are painted, protect the oil seals and the machined surfaces.
· All of the gears are painted RAL 9022 grey.

OPERATION AND RUNNING-IN

· To obtain the best performance the gears must first be runin by gradually increasing the power in the first few hours of operation, in this phase an increase in temperature is considered normal.
· In the event of defective operation, noise, oil leakage, etc. stop the gear immediately and, when possible, remove the cause. Alternatively, send the piece to our factory to be controlled.

MAINTENANCE

· The worm gears from size 25 to size 90 and the pre-stage modules are lubricated with permanent synthetic oil and therefore do not require any maintenance.
· The gears size 110 and 130 are lubricated with mineral oil and are equipped with a breather plug, therefore the oil level must be checked periodically and if necessary topped up with the same oil or one that is compatible with those indicated in our catalogue.
· For the gears size 110 and 130 proceed with the substitution of the oil after the first 300 working hours, replacing it with the correct quantity in accordance with the assembly position, as detailed in our catalogue, after the inside of the gear has been thoroughly washed.

WAREHOUSE STORAGE

· If the warehouse storage will be for a long time, more than 3 months, the shafts and machined surfaces should be protected using antioxidants and the oil seals should be greased.

HANDLING

· Care must be taken not to damage the oil seals and the machined surfaces when handling the groups.

DISPOSAL OF PACKAGING

· The packaging in which our gears are delivered should be sent to specialised companies for recycling if possible.

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CHIARAVALLI GROUP SpA

МЕХАНИКАЛ ПРОДАКТС

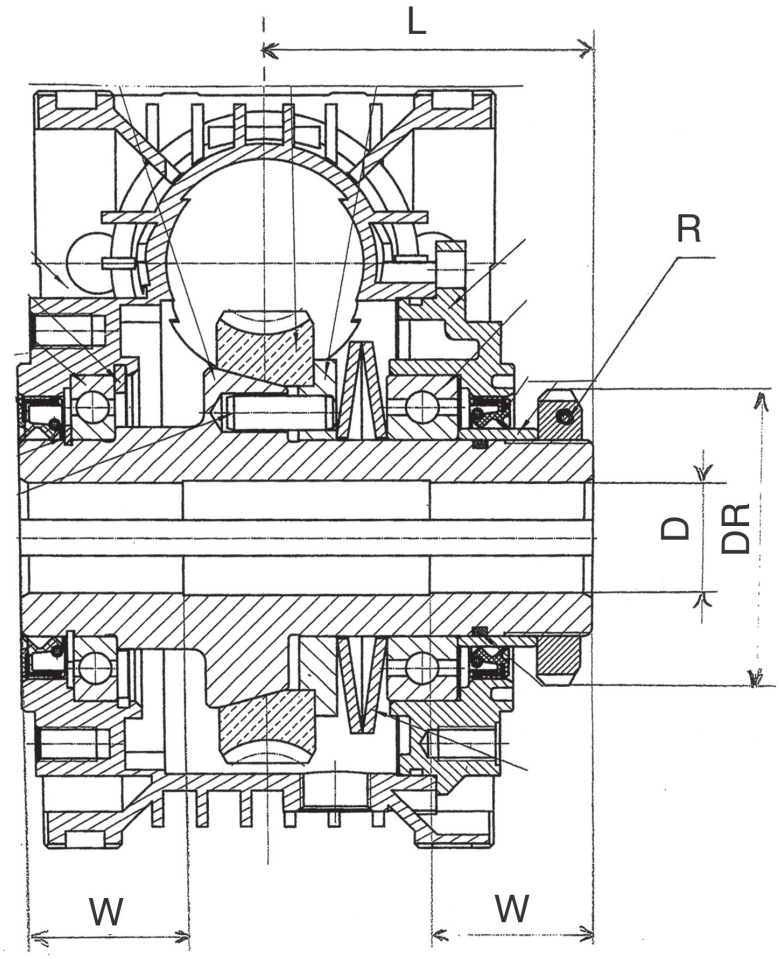


CHML WORM GEARBOXES WITH TORQUE LIMITER

DESIGN FEATURES

CHML worm gearboxes are manufactured in three sizes 40-50-63.
The torque limiter assures protection of the gearbox from overloads.
The torque limiter, in oil bath, is maintenance free.
The hollow output shaft diameter is the same of standard gearboxes.
Gearbox dimensions, external ring nut excluded, are unchanged.
Adjusted the torque limiter with the ring nut in accordance to application request.

DIMENSIONS



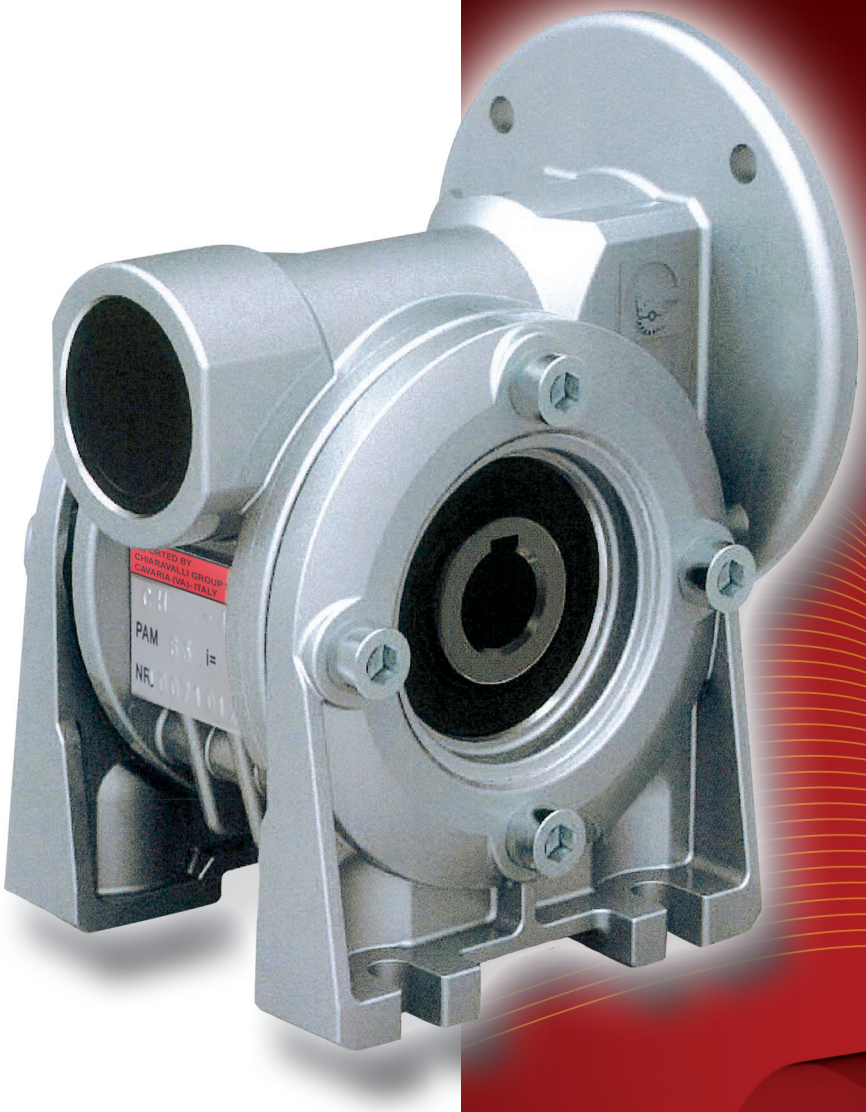
	040	050	063
L	55	63,5	74
DR	45	56	62
R	M30x1,5	M40x1,5	M45x1,5
D	18	25	25
W	26	33	37

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

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CHIARAVALLI GROUP SpA

МЕХАНИКАЛ ПРОДАКТС



CH WORM GEARED MOTORS AND WORM GEAR UNITS

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INTRODUCTION

The new CH worm gearboxes of Chiaravalli Group S.p.A. have been produced to satisfy the market that require a product in dimensions and construction without changing the existing drawings and to guarantee non stop of their spare parts.
Chiaravalli Group S.p.A. designed this new product by improving and introducing better technical modifications to offer easier application of the groups to the different assembling configurations so that by offering a better service in flexibility and delivery time.
Starting from these considerations, we have a gearbox with a motor mounting flange that is separable from the housing which incorporate the oil seal; in this way we avoid any risk of damaging the oil seal in case of replacement of the input flange and the O-Ring can be eliminated.
All the aside covers, swinging and with feet, have O-Rings instead of traditional flat gaskets.
The sizes 03-04-05 allow the rotation of the feet without disassembling them; furthermore the versions with swinging aside covers allow the lateral flanges to be fitted on both sides with simple fixing screws.
The worm screw has a ZI involute profile: with this worm-wheel coupling we shall get a better performance with a temperature reduction.
The gearboxes and motors are painted with RAL 9022 aluminium colour epoxy powder to protect the parts from oxidation and against micro-blowholes that can come during the pressure of die-castings.
The CHPC pre-stage gears (already present in the catalogue of CHM) can also be mounted with this range, obtaining a gear ratio up to 1:300.
For bigger reductions is possible to have two gears together using an appropriate kit.

LUBRICATION

All of the groups are supplied with a synthetic lubricant maintenance free and can be mounted in any position. The types of lubricants
are described in the table here below.

Lubricant	Ambient	ISO	AGIP	SHELL	IP
°C ambient	-25°C/+50°C	VG 320	Telium VSF 320	Tivela oil S 320	Telium VSF

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

QUANTITY OF OIL IN LITRES

CH	03	04	05	06	07	08
	0.040	0.060	0.10	0.38	0.52	0.73

MOTOR MOUNTING FLANGES

Gears supplied with mounting flanges must be assembled with motors whose shaft and flange tolerances correspond to a "normal" class of quality in order to avoid vibration and forcing of the input bearing. Motors supplied by Chiaravalli Group S.p.A. guarantee this requirement fulfilled.
For ease of consultation, the correspondence of the size of the B5 and B14 motor with the sizes of the shaft and the motor connection flange are shown in the following table.
Remember that, as the motor connection flanges are separate from the body it is also possible to have a shaft / flange combination that does not correspond to the table, e.g. 19/140, thereby offering adaptability for other non-unified models such as the brushless or direct current types.

MMF	056	063	071	080	090	100	112
B5	9/120	11/140	14/160	19/200	24/200	28/250	28/250
B14	9/80	11/90	14/105	19/120	24/140	28/160	28/160

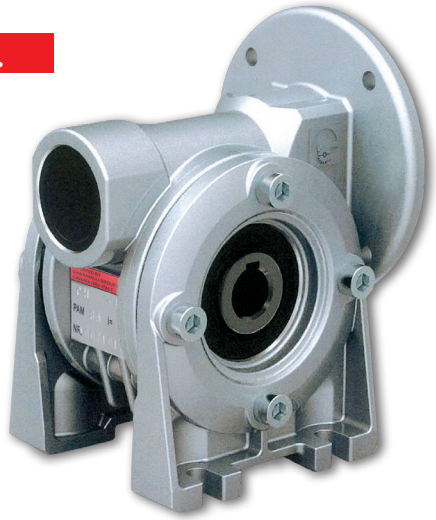
NEW MODEL



CH 03/04/05 WORM GEARED MOTORS AND WORM GEAR UNITS

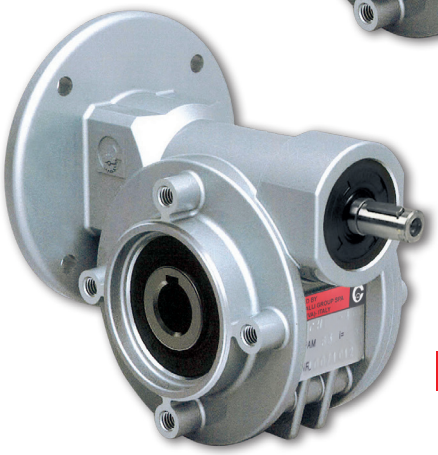
МЕХАНИКАЛ ПРОДАКТС

CH...

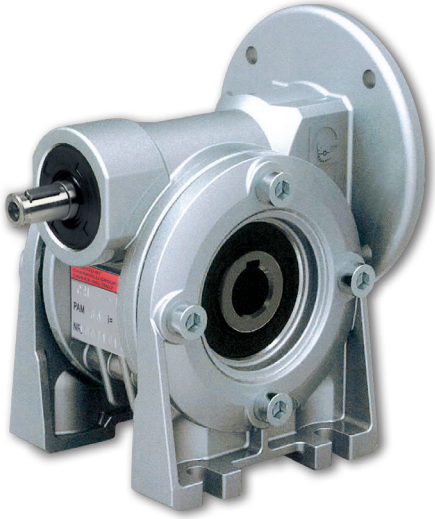


CH...P

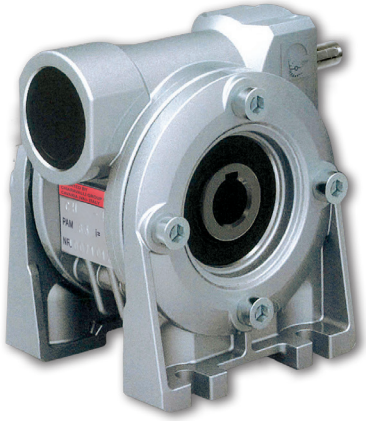




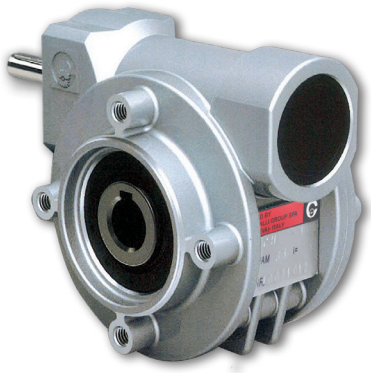
CHE...P



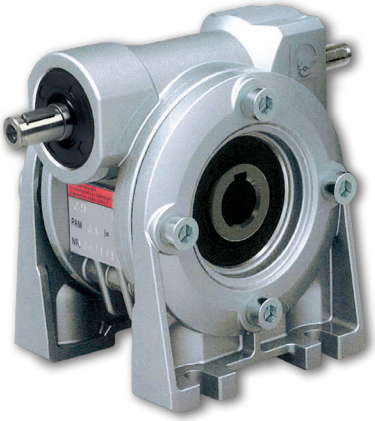
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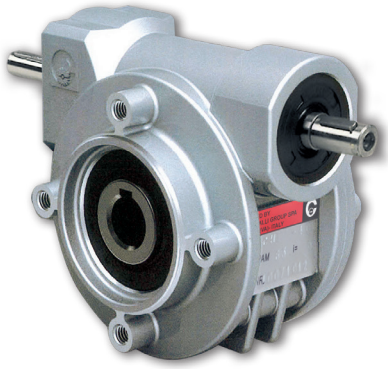
CHR...



CHR...P



CHRE...



CHRE...P

CH - CH...P 03/04/05 DESIGNATION

TYPE (1)	SIZE	VERSION	FLANGE POS. (2)	i	M.M.F.	MOUNT. POS.
CH **CH..P** **CHR** **CHR..P** **CHE** **CHE..P** **CHRE** **CHRE..P**	03	A P PF N V	1 2	**RATIO SEE PAGE 64**	63B5 63B14 56B5 56B14	UNIVERSALE

TYPE (1)	SIZE	VERSION	FLANGE POS. (2)	i	M.M.F.	MOUNT. POS.
CH **CH..P** **CHR** **CHR..P** **CHE** **CHE..P** **CHRE** **CHRE..P**	04	A P PF PFA N V	1 2	**RATIO SEE PAGE 65**	71B5 71B14 63B5 63B14	UNIVERSALE

TYPE (1)	SIZE	VERSION	FLANGE POS. (2)	i	M.M.F.	MOUNT. POS.
CH **CH..P** **CHR** **CHR..P** **CHE** **CHE..P** **CHRE** **CHRE..P**	05	A P PF PFA N V	1 2	**RATIO SEE PAGE 66**	80B5 80B14 71B5 71B14 63B5 63B14	UNIVERSALE

ORDER EXAMPLE

CH	**04P**	**FA**	**2**	**35**	**63 B14**
CH	**04**			**10**	**71 B5**

If the motor is also required, please specify:

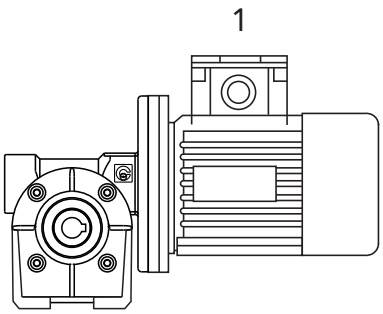
Size	es. 63 C4
Power	es. Kw 0.22
Poles	es. 4
Voltage	es. V230/400
Frequency	es. 50 Hz
Flange	es. B14

N.B. Gear box required with output flanges F or FA must be ordered PF or PFA version.

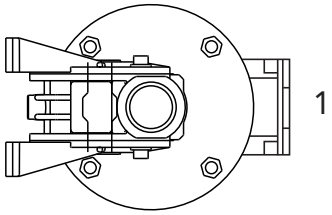
1) see page 61
2) see page 63

CH 03/04/05 MOUNTING POSITION

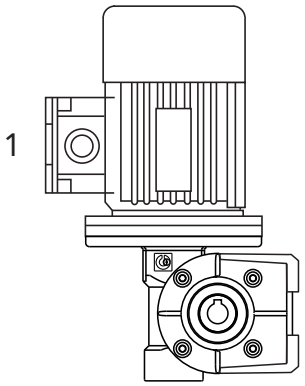
B3



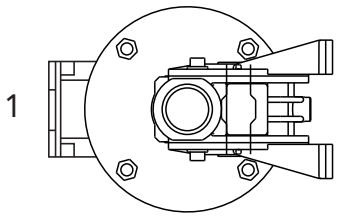
B6



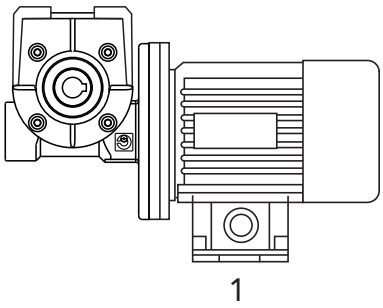
V5



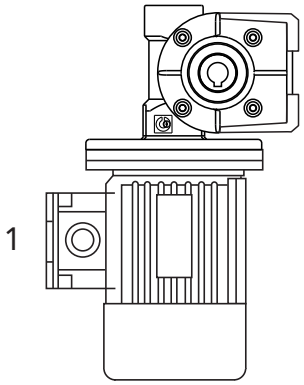
B7



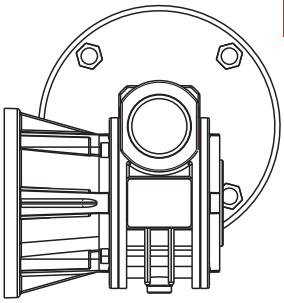
B8



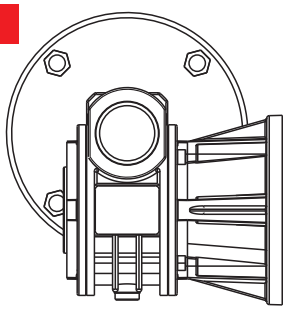
V6

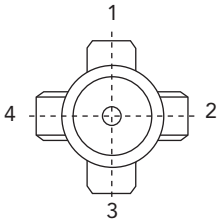


PF1

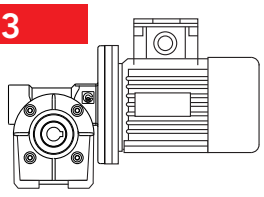


PF2





B3



TERMINAL BOX POSITION

N.B. The position of the terminal box always refers to the B3 position.

CH 03 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

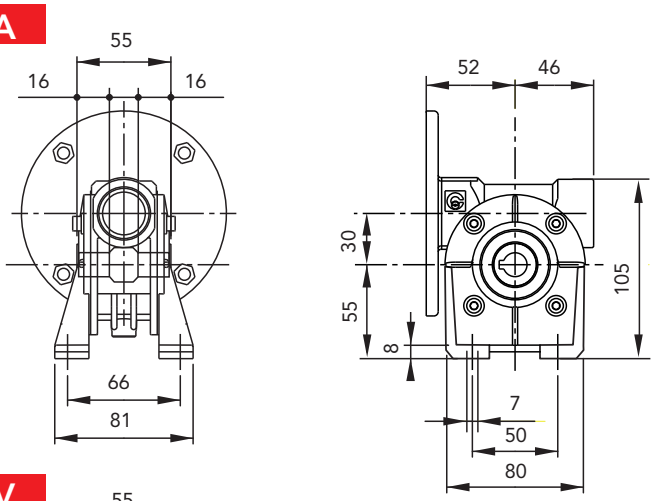
МЕХАНИКАЛ ПРОДАКТС

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CH 03	7	200	0.22	8	1.8	63/56	B5/B14
	10	140	0.22	11	1.4	63/56	B5/B14
	15	93	0.22	16	1.0	63/56	B5/B14
	20	70	0.22	20	0.9	63/56	B5/B14
	30	47	0.18	22	0.8	63/56	B5/B14
	40	35	0.12	18	1.0	63/56	B5/B14
	60	23	0.09	18	1.0	63/56	B5/B14
	70	20	0.09	15	0.9	56	B5/B14

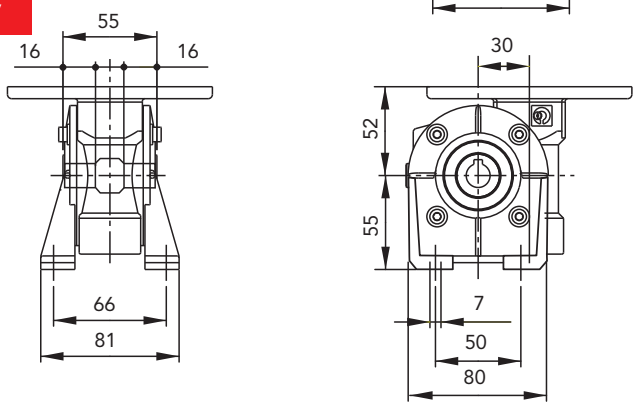
Weight Kg 1

DIMENSIONS

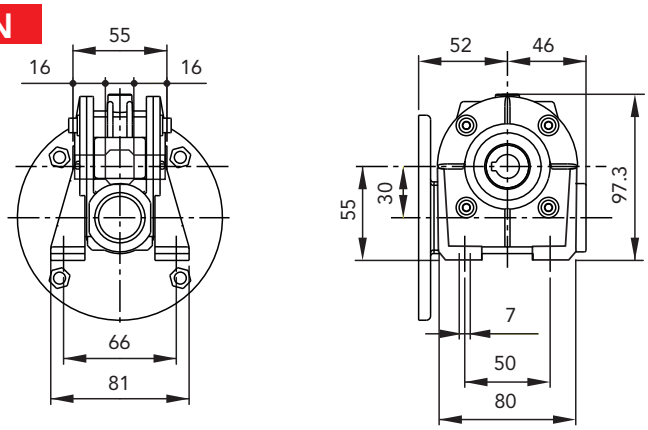
A



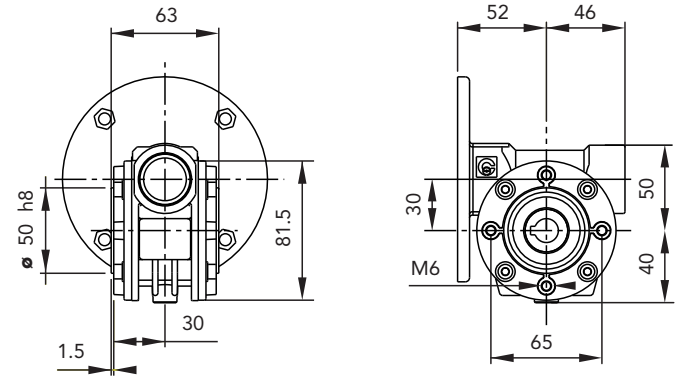
V



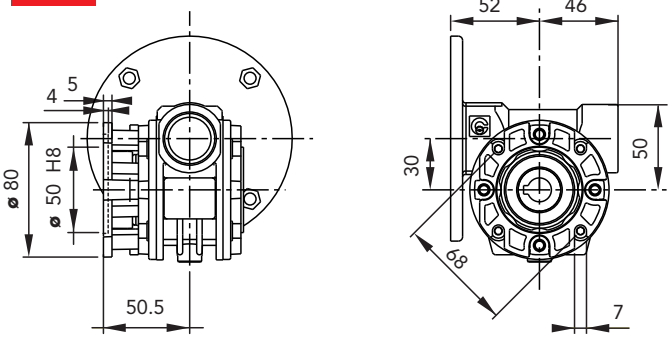
N



P



PF1



CH 04 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

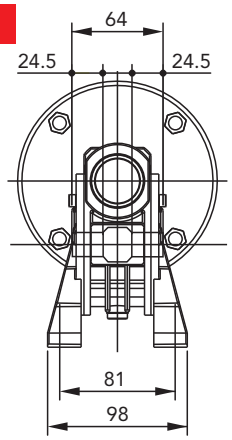
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CH 04	7	200	0.55*	22	1.4	71/63	B5/B14
	10	140	0.55*	30	1.0	71/63	B5/B14
	14	100	0.37	29	1.0	71/63	B5/B14
	20	70	0.37	38	1.0	71/63	B5/B14
	28	50	0.37	40	0.9	71/63	B5/B14
	35	40	0.25	41	0.9	71/63	B5/B14
	46	30	0.18	37	1.0	63	B5/B14
	60	23	0.18	37	0.9	63	B5/B14
	70	20	0.12	33	0.9	63	B5/B14
	100	14	0.12	30	0.9	63	B5/B14

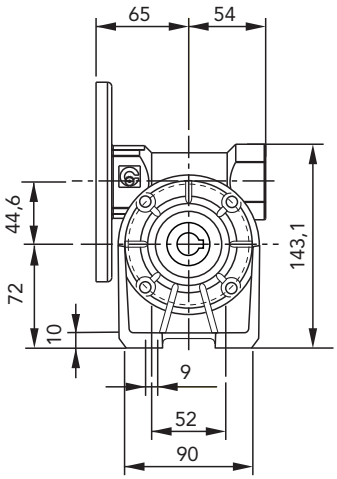
* Motors 71 gr.

Weight Kg 2,1

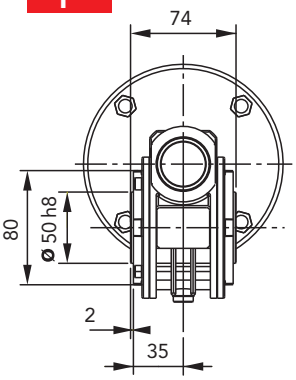
DIMENSIONS

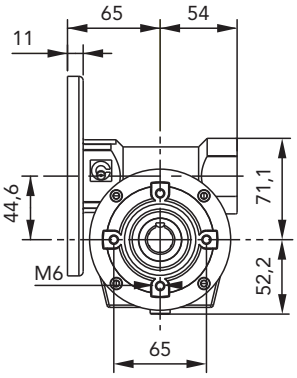
A



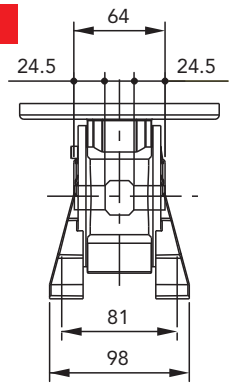


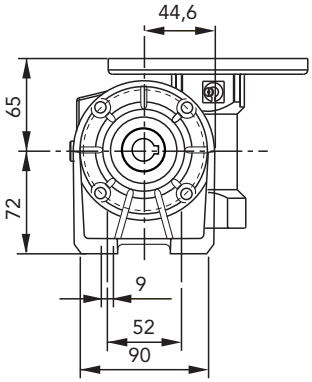
P



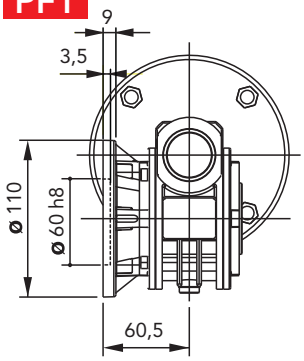


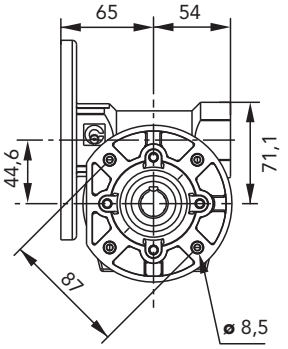
V



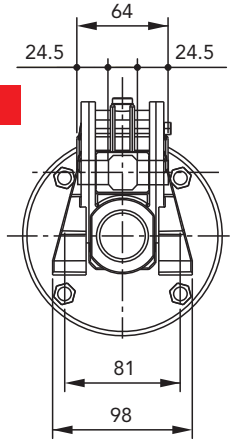


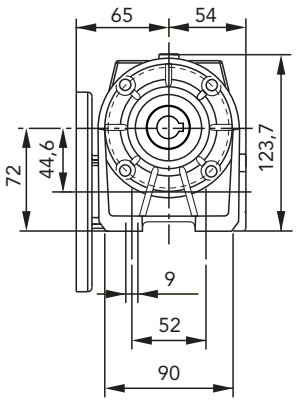
PF1



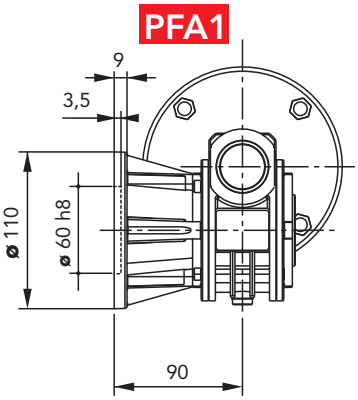


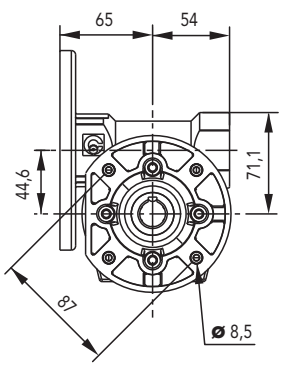
N





PFA1





CH 05 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

CH 05

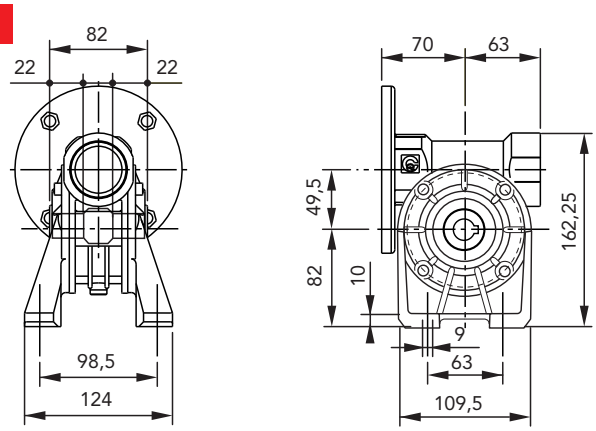
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
	7	200	1.1*	40	1.4	80/71	B5/B14
	10	140	1.1*	49	1.2	80/71	B5/B14
	14	100	0.75	57	1.1	80/71	B5/B14
	18	78	0.55	52	1.1	80/71	B5/B14
	24	58	0.55	67	0.9	80/71	B5/B14
	28	50	0.55	73	1.0	80/71	B5/B14
	36	39	0.37	61	1.1	71	B5/B14
	45	31	0.37	65	0.9	71/63	B5/B14
	60	23	0.25	60	1.0	71/63	B5/B14
	70	20	0.22	55	0.9	63	B5/B14
	80	17	0.18	54	1.0	63	B5/B14
	100	14	0.18	50	0.9	63	B5/B14

* Motors 80 gr.

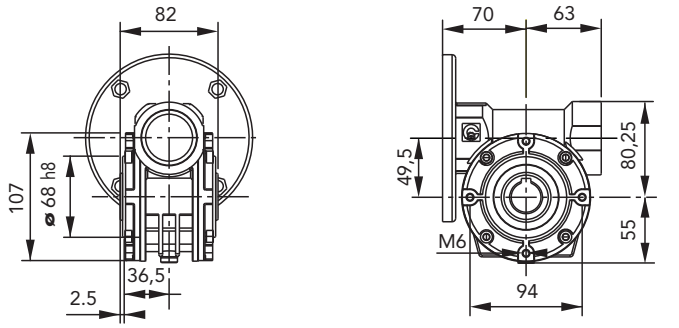
Weight Kg 3

DIMENSIONS

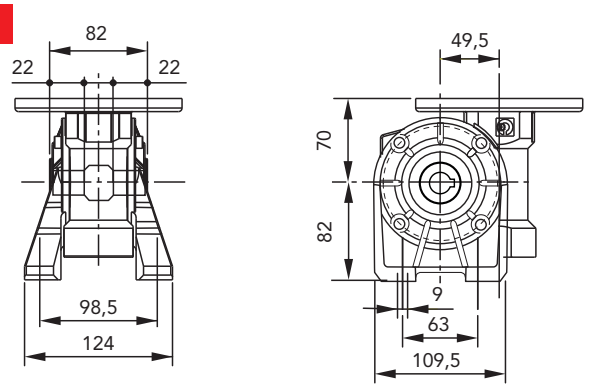
A



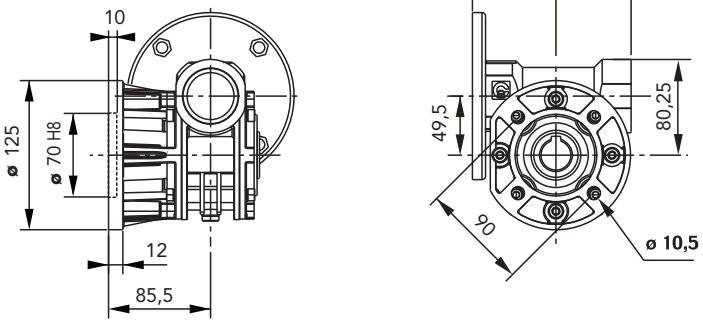
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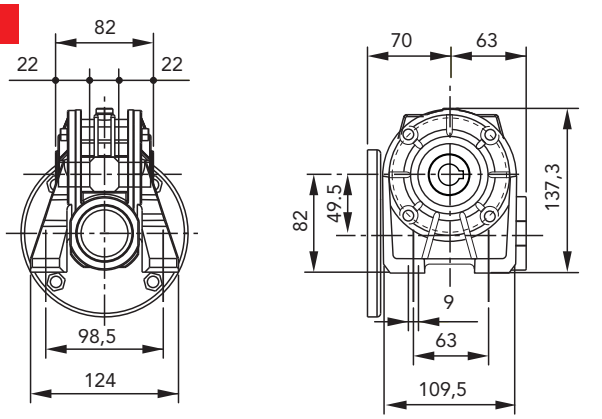
V



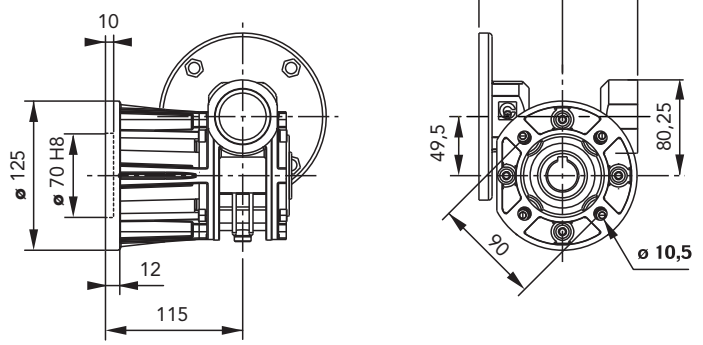
PF1



N

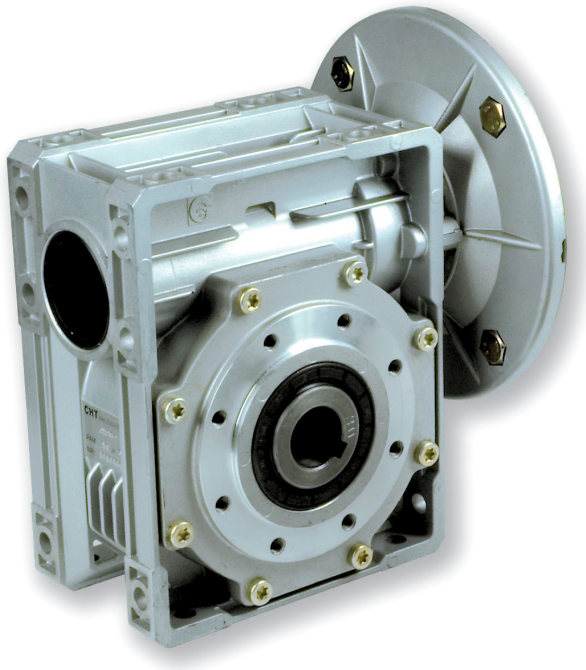


PFA1

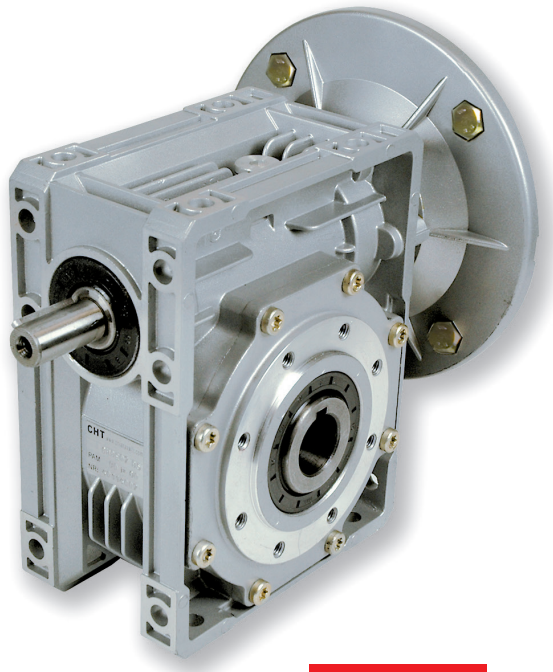


CH 06/07/08 WORM GEARED MOTORS AND WORM GEAR UNITS

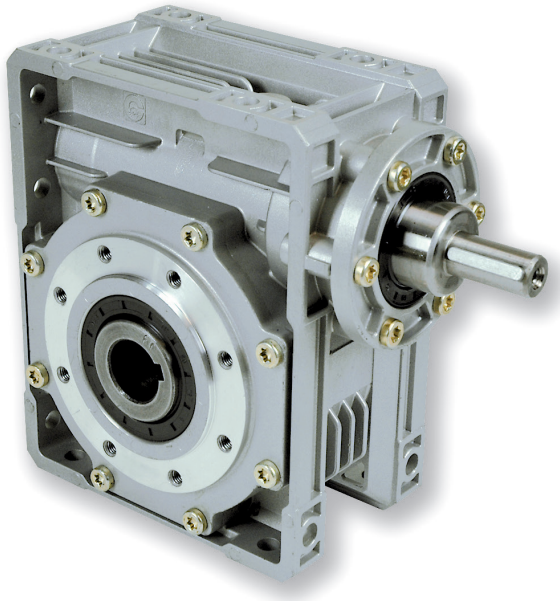
МЕХАНИКАЛ ПРОДАКТС



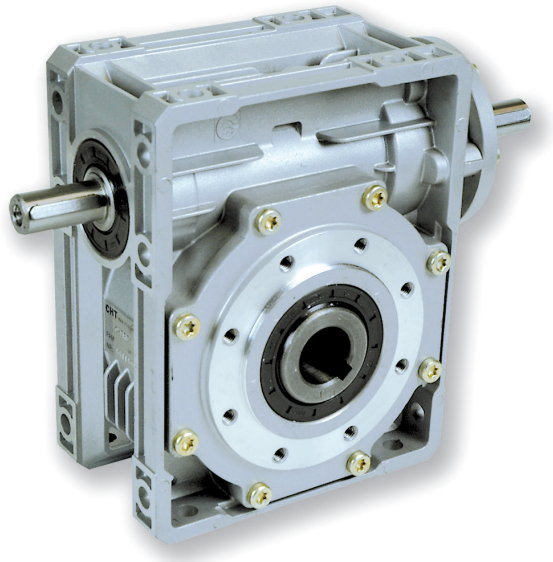
CH..



CHE..



CHR..



CHRE..

CH 06/07/08 DESIGNATION

TYPE (1)	SIZE	VERSION	FLANGE POS. (2)	i	M.M.F.	MOUNT. POS.
CH **CHR** **CHE** **CHRE**	06 07 08	FC F (3)	1 2	**RATIO SEE PAGE 70-71-72**	100B5 100B14 90B5 90B14 80B5 80B14 71B5 71B14	UNIVERSALE

ORDER EXAMPLE

CH	06	FC	1	19	90 B5

If the motor is also required, please specify:

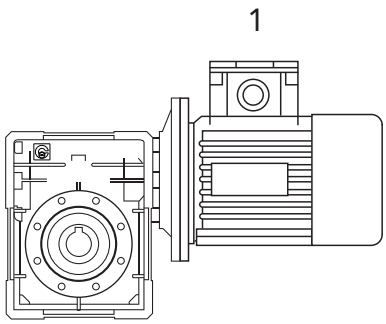
Size	es. 90 L4
Power	es. Kw 1.5
Poles	es. 4
Voltage	es. V230/400
Frequency	es. 50 Hz
Flange	es. B5

1) see page 67
2) see page 69
3) lack of instructions indicates that the gear is not equipped with an output flange

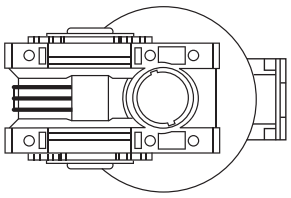
*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

MOUNTING POSITION

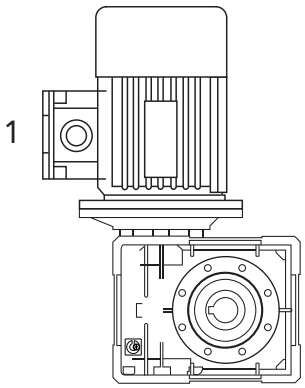
B3



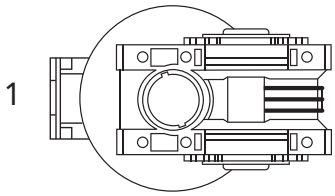
B6



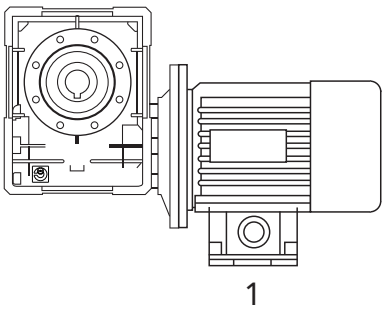
V5



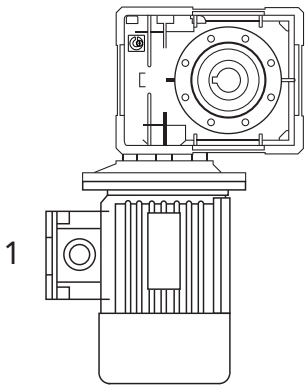
B7



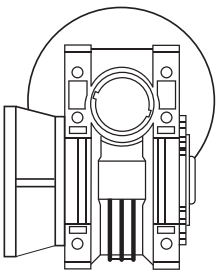
B8



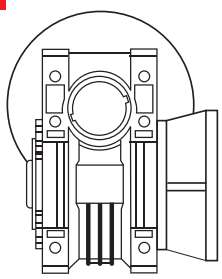
V6

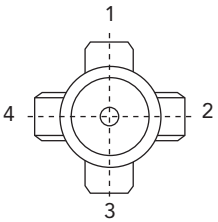


F1

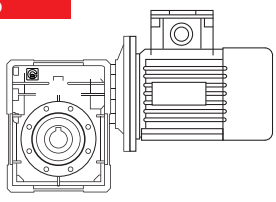


F2





B3



TERMINAL BOX POSITION

N.B. The position of the terminal box always refers to the B3 position.

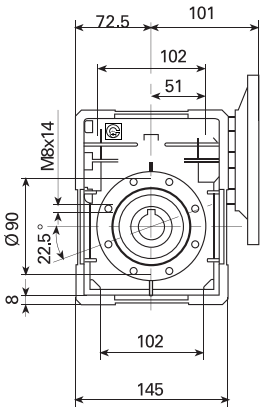
CH 06 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

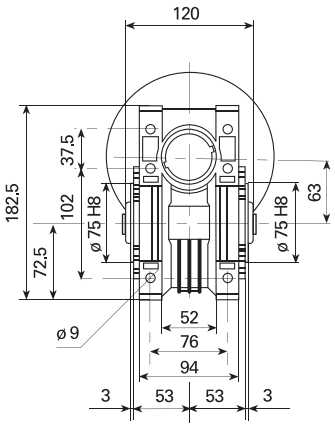
МЕХАНИКАЛ ПРОДАКТС

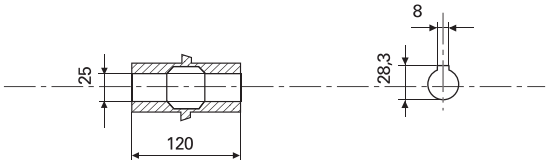
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CH 06	7	200	1.85	75	1.5	90/80	B5/B14
	10	140	1.85	105	1.3	90/80	B5/B14
	12	117	1.85	129	1.1	90/80	B5/B14
	15	93	1.85	146	1.0	90/80	B5/B14
	19	74	1.50	150	1.0	90/80	B5/B14
	24	58	1.10	138	1.1	90/80	B5/B14
	30	47	1.10	155	1.0	90/80	B5/B14
	38	37	0.75	133	1.1	90/80	B5/B14
	45	31	0.75	152	0.9	80/71	B5/B14
	64	22	0.37	101	1.2	80/71	B5/B14
	80	17	0.37	112	1.0	71	B5/B14
	100	14	0.37	110	1.0	71	B5/B14

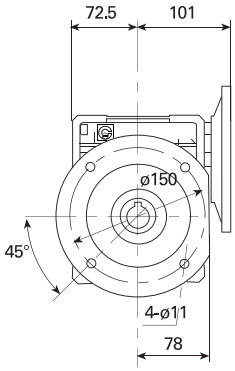
Weight Kg 5,2

DIMENSIONS

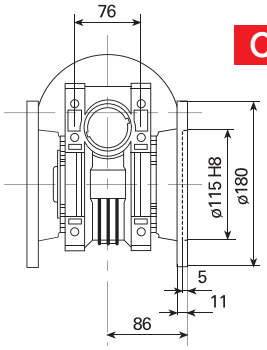




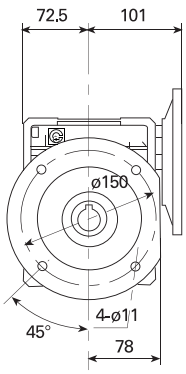




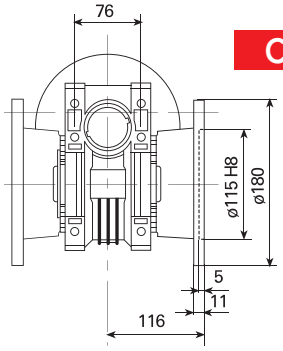
CH06FC 1



CH06FC 2



CH06F1



CH06F2

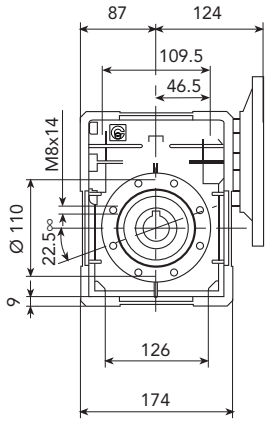
CH 07 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

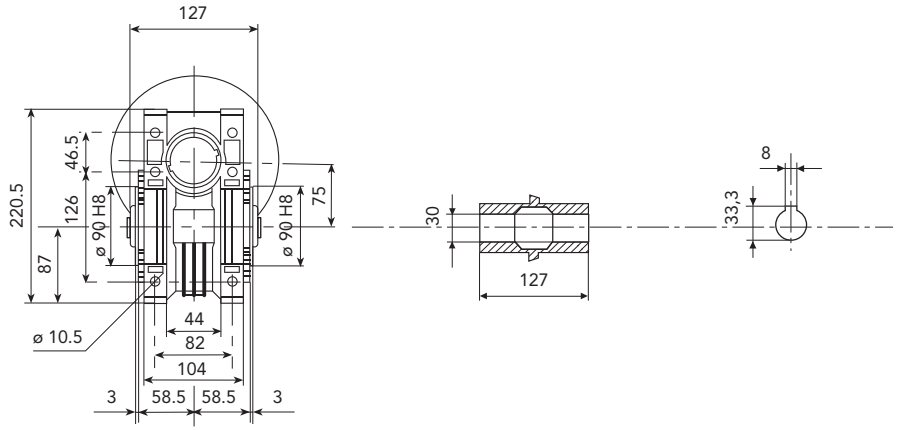
МЕХАНИКАЛ ПРОДАКТС

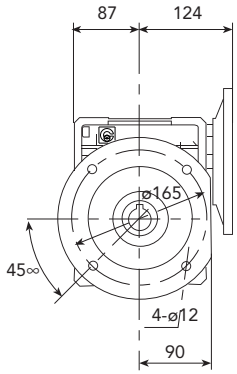
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CH 07	7	200	4	170	1.1	100/90	B5/B14
	10	140	3	175	1.3	100/90	B5/B14
	15	93	3	250	1.0	100/90	B5/B14
	20	70	2.20	240	1.0	100/90	B5/B14
	25	56	1.85	250	1.0	90/80	B5/B14
	30	47	1.50	230	1.2	90/80	B5/B14
	40	35	1.1	215	1.2	90/80	B5/B14
	50	28	1.1	220	0.9	90/80	B5/B14
	60	23	0.75	200	1.0	90/80	B5/B14
	80	17	0.55	180	1.0	80/71	B5/B14 *
	100	14	0.37	140	1.1	80/71	B5/B14 *
						*71 solo B5	

Weight Kg 9,2

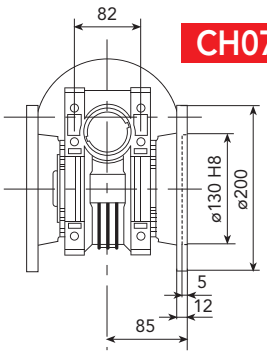
DIMENSIONS



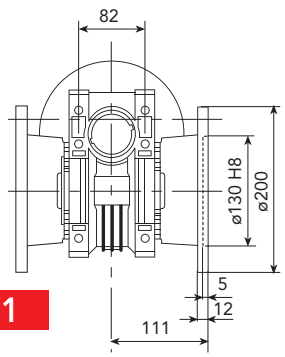




CH07FC 1

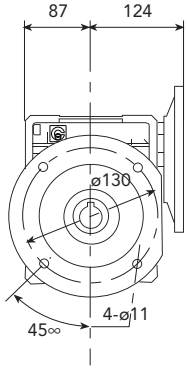


CH07FC 2

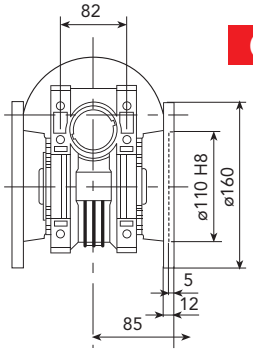


CH07F1

CH07F2



CH07FE1



CH07FE2

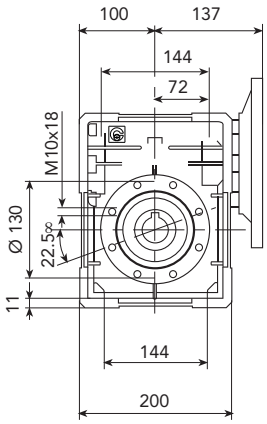
CH 08 - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

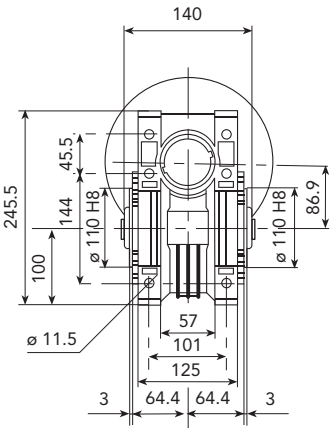
МЕХАНИКАЛ ПРОДАКТС

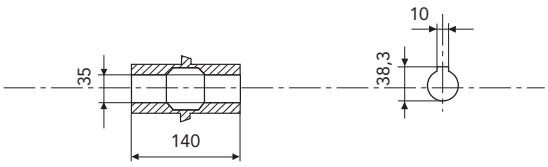
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2	f.s.	Possible types of motor connections	
CH 08	7	200	4	170	1.5	112/100/90	B5/B14
	10	140	4	240	1.2	112/100/90	B5/B14
	15	93	4	350	0.9	112/100/90	B5/B14
	20	70	3.00	340	0.9	100/90	B5/B14
	23	61	2.20	280	1.1	100/90	B5/B14
	30	47	2.20	340	1.1	100/90	B5/B14
	40	35	1.85	340	0.9	90/80	B5/B14
	46	30	1.5	340	1.0	90/80	B5/B14
	56	25	1.1	290	1.0	90/80	B5/B14
	64	22	1.1	290	0.9	90/80	B5/B14
	80	17	0.75	260	1.0	90/80	B5/B14
	100	14	0.55	220	1.0	80	B5/B14

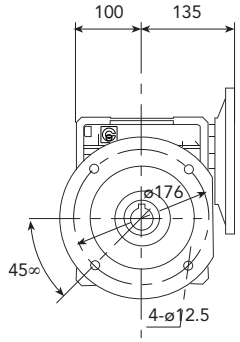
Weight Kg 12,2

DIMENSIONS

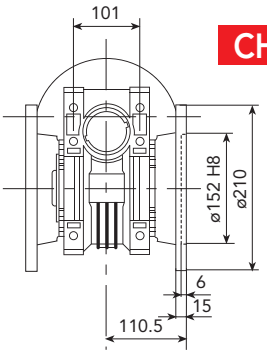




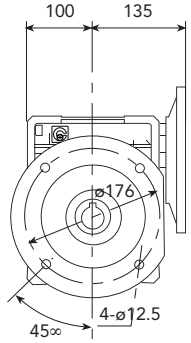




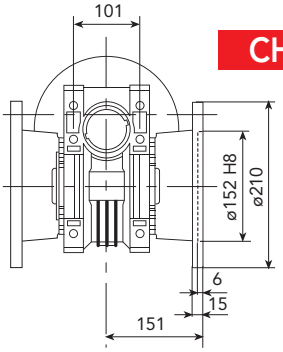
CH08FC 1



CH08FC 2

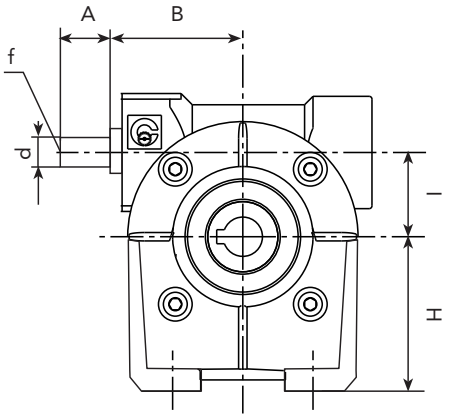


CH08F1

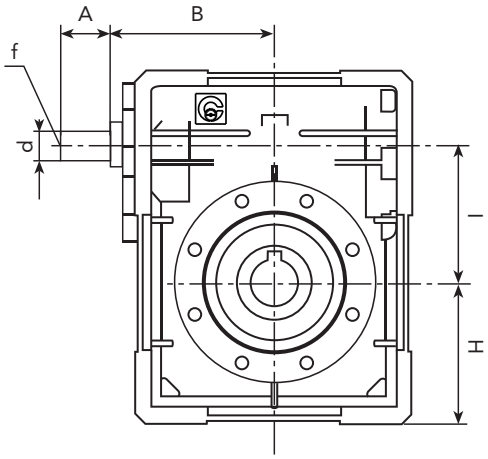


CH08F2

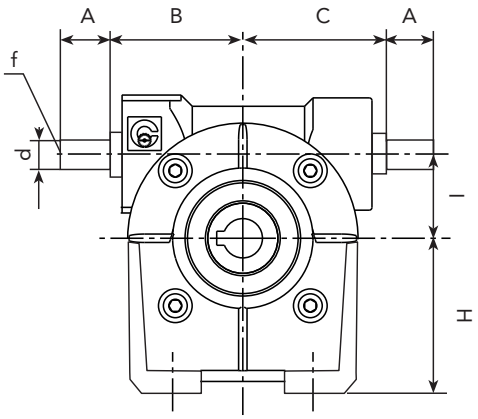
CHR 03-04-05



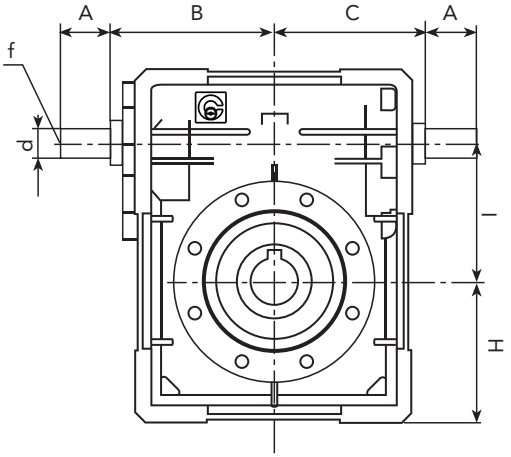
CHR 06-07-08



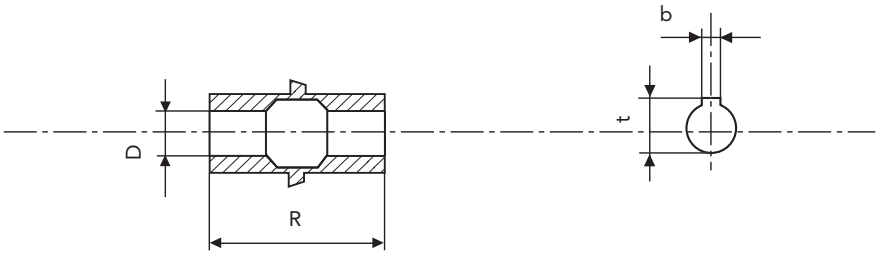
CHRE 03-04-05



CHRE 06-07-08

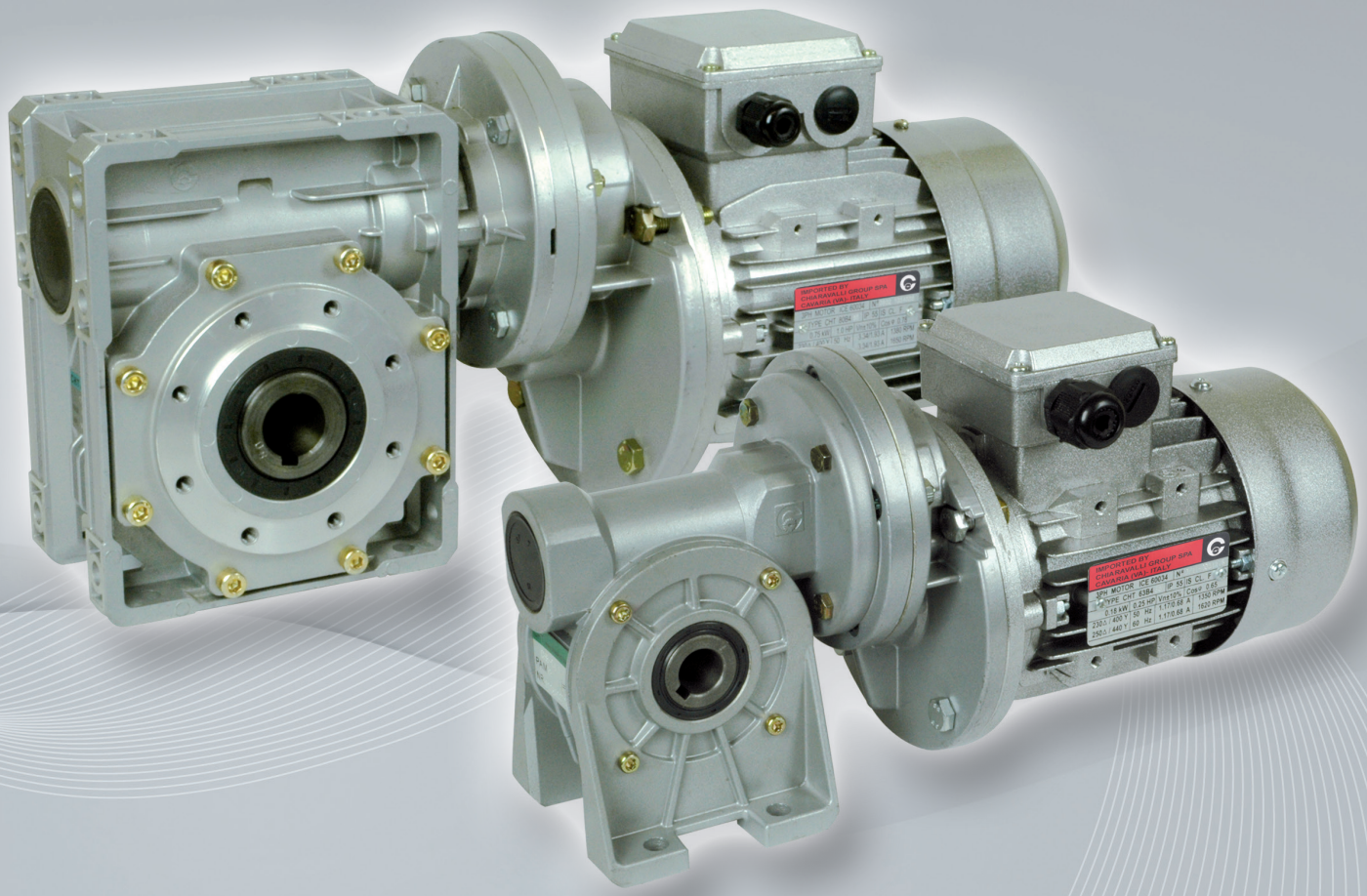


OUTPUT SHAFT DIMENSIONS

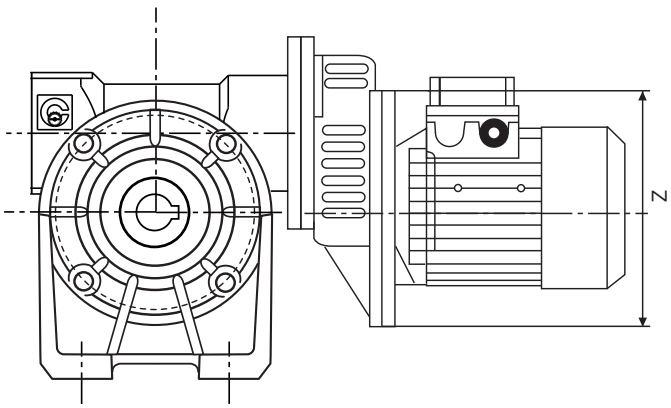


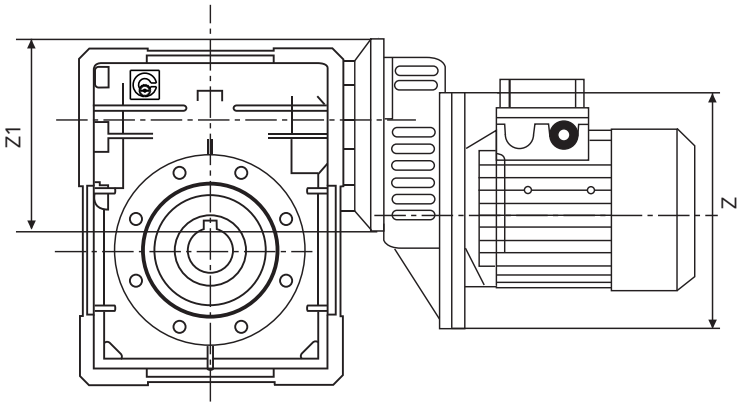
TYPE	A	B	C	D(H7)	d(h6)	f	H	I	R	b	t
CHR 03	20	50	/	14	9	/	55	30	55	5	16.3
CHR 04	30	54	/	18	11	/	72	44.6	64	6	20.8
CHR 05	40	65	/	25	16	M6	82	49.5	82	8	28.3
CHR 06	40	110.5	/	25	18	M6	72.5	62.17	120	8	28.3
CHR 07	40	128	/	30	19	M6	87	75	127	8	33.3
CHR 08	50	144	/	35	25	M8	100	86.9	140	10	38.8
CHRE 03	20	50	50	14	9	/	55	30	55	5	16.3
CHRE 04	30	54	56	18	11	/	72	44.6	64	6	20.8
CHRE 05	40	65	65	25	16	M6	82	49.5	82	8	28.3
CHRE 06	40	110.5	74	25	18	M6	72.5	62.17	120	8	28.3
CHRE 07	40	128	88.5	30	19	M6	87	75	127	8	33.3
CHRE 08	50	144	101.5	35	25	M8	100	86.9	140	10	38.3

CHPC/CH - WORM GEAR WITH PRE-STAGE MODULE



WORM GEAR WITH PRE-STAGE MODULE





	Z	Z1
CHPC 63	11/140	11/105
CHPC 71	14/160	14/120
CHPC 80	19/200	19/160

WARNING: The gearbox connected with the pre-stage must have input dimension Z1

DESIGNATION CHPC / CH - CH..P		CHPC / CHE - CH..P	
TYPE	**SIZE**	**i =**	**M.M.F.**
CHPC	63	3	63B5
	71	3	71B5
	80	3	80B5

ORDER EXAMPLE

CHPC	**71**	**CH 05**	**i= 108(3x36)**	**M.M.F. 71**

If the motor is also required, please specify:

Size	es. 71 B4
Power	es. Kw 0.37
Poles	es. 4
Voltage	es. V230/400
Frequency	es. 50 Hz

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

CHPC/CH - PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

МЕХАНИКАЛ ПРОДАКТС

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC63 CH 04	105	13.3	0.12	42
	138	10.1	0.12	42
	180	7.8	0.12	46
	210	6.7	0.12	40
	300	4.7	0.12	36

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC71 CH 05	84	16.7	0.25	80
	108	12.9	0.25	90
	135	10.4	0.25	90

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC71 CH 07	120	11.7	0.55	280
	150	9.3	0.37	215
	180	7.8	0.37	235
	240	5.8	0.37	210
	300	4.7	0.25	275

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC71 CH 08	168	8.3	0.55	350
	192	7.3	0.37	280
	240	5.8	0.37	290
	300	4.7	0.37	275

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC63 CH 05	108	12.9	0.18	72
	135	10.4	0.18	85
	180	7.8	0.12	65
	210	6.7	0.12	67
	240	5.8	0.12	58
	300	4.7	0.12	56

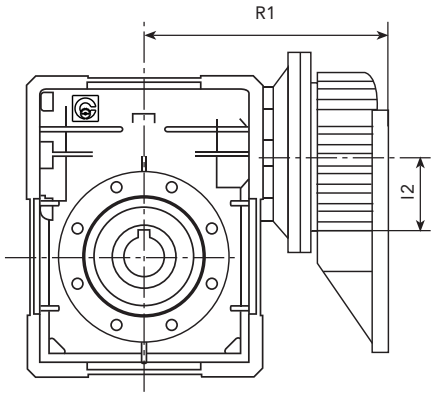
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC71 CH 06	114	12.3	0.37	170
	135	10.4	0.37	176
	192	7.3	0.25	149
	240	5.8	0.25	130
	300	4.7	0.25	120

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC80 CH 07	90	15.6	0.75	310
	120	11.7	0.75	300
	150	9.3	0.55	260

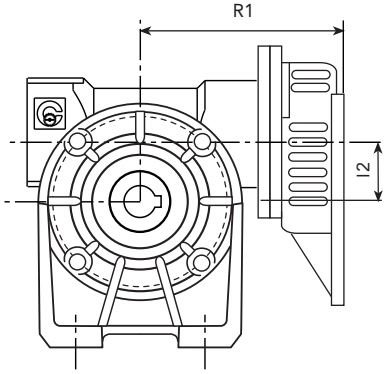
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CHPC80 CH 08	120	11.7	0.75	390
	138	10.1	0.75	360
	168	8.3	0.55	350
	192	7.3	0.55	330
	240	5.8	0.55	305

DIMENSIONS

CHPC.. /CH 06-07-08



CHPC.. /CH 04-05



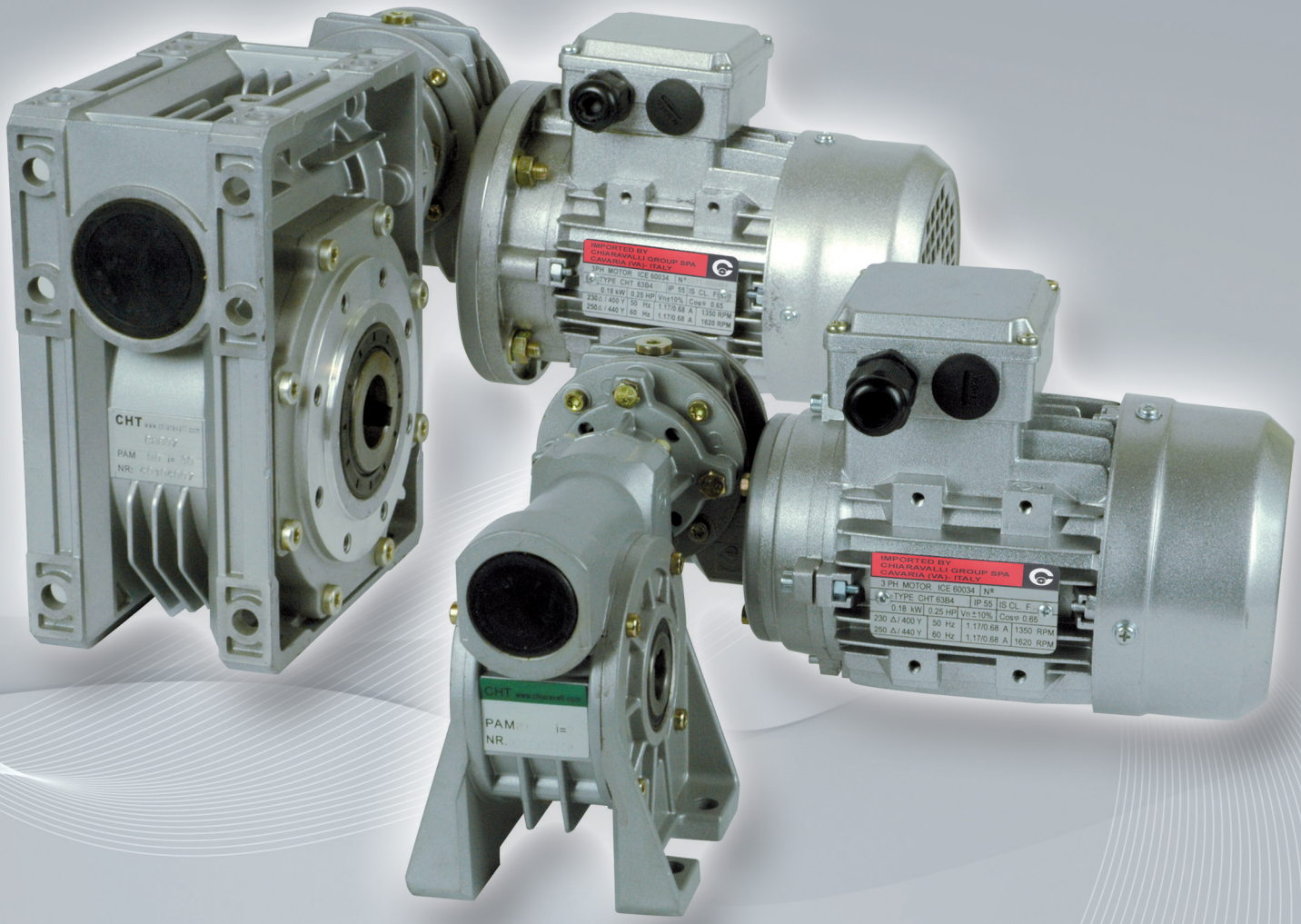
For other dimensions see pages 65 - 66 - 70 - 71 and 72 of the catalogue.

CHPC - CH	R1	I2
63 + 04	110	40
63 + 05	115	40
71 + 05	123	50
71 + 06	154	50
71 + 07	176	50
80 + 07	197	63
71 + 08	189	50
80 + 08	210	63

The choice of power installed is tied to the unification of the motors, therefore it is sometimes in exuberance compared to the gear; always verify the maximum torque indicated when making the selection and if in doubt please contact our technical office.

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

www.mp-chiaravalli.ru +7-812-643-28-73 info@mechanicalproducts.ru



CH - CH DOUBLE WORM GEARS

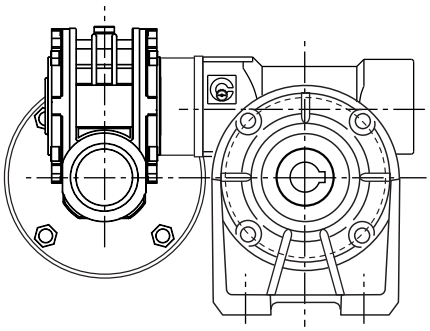
DESIGNATION CH(R)/CH - CH(R)/CH..P

TYPE	SIZE	VERSION	FLANGE POS. (1)	i	EXEC.	M.M.F.
CH/CH CH/CH..P CHR/CH CHR/CH..P	03/04 03/05	F FA (2)	1 2	RATIO SEE PAGE 80	OAD OAS OBD OBS VAD VAS VBD VBS	63B5 63B14 56B5 56B14

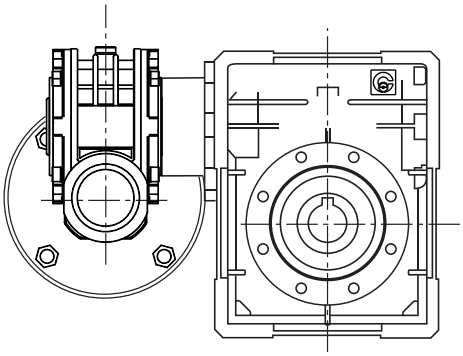
TYPE	SIZE	VERSION	FLANGE POS. (1)	i	EXEC.	M.M.F.
CH/CH CH/CH..P CHR/CH CHR/CH..P	03/06 04/07 04/08	FC F (3)	1 2	RATIO SEE PAGE 80	OAD OAS OBD OBS VAD VAS VBD VBS	71B5 71B14 63B5 63B14 56B5 56B14

DIMENSIONS OF CH/CH COMBINED GEARS

CH 03/CH 04-05



CH 03/CH 06



CH 04/CH 07-08

For the executions see the table with drawings on page 73, if not specified OBS would be supplied.

ORDER EXAMPLE

CH/CH	03/05P	FA	2	315	OBS	56B14

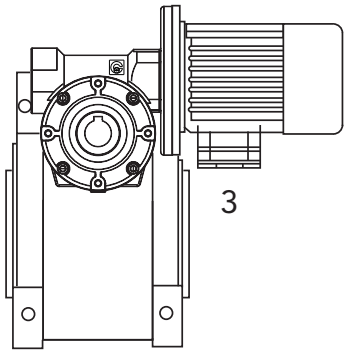
If the motor is also required, please specify:

Size	es. 56 C4
Power	es. Kw 0.09
Poles	es. 4
Voltage	es. V230/400
Frequency	es. 50 Hz
Flange	es. B14

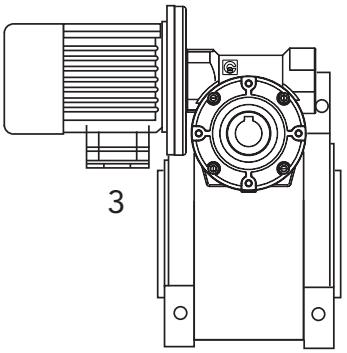
1) see page 63 and 69
2) lack of instructions indicates that the gear is not equipped with an output flange. In this case the group can be fixed on feet CH/CH or be swinging CH/CH..P
3) lack of instructions indicates that the gear is not equipped with an output flange.

EXECUTION

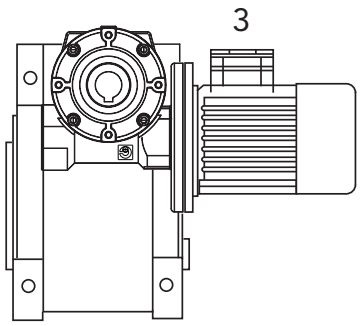
OAD



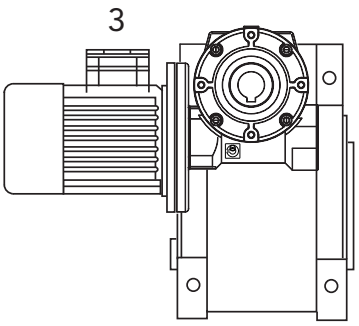
OAS



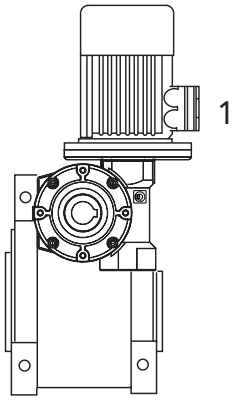
OBD



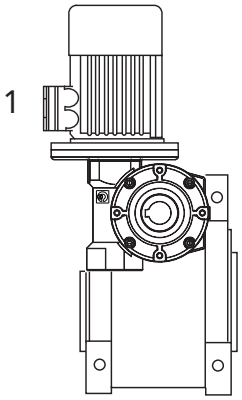
OBS



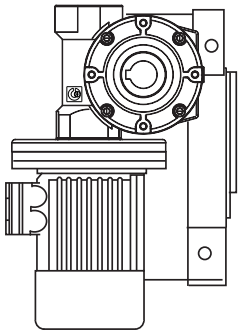
VAD



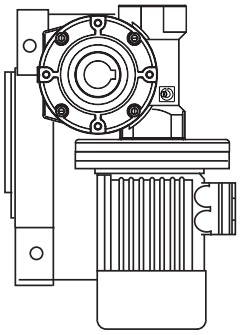
VAS



VBS



VBD



The execution determines the mounting position of the first gear in relation to the second gear. If not otherwise specified at the time of order, the group will be supplied in the OBS execution. The placing position refers to the second gear.

CH - CH PERFORMANCE WITH 4-POLE MOTORS 1400 REVS. INPUT

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CH 03/04	245	5.7	0.09	58
	350	4.0	0.09*	58
	420	3.3	0.09*	58
	560	2.5	0.09*	58
	700	2.0	0.09*	58
	840	1.7	0.09*	58
	1120	1.3	0.09*	58
	1680	0.8	0.09*	58
	2100	0.7	0.09*	58
	2760	0.5	0.09*	50

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CH 03/05	240	5.8	0.12	77
	315	4.4	0.12	90
	420	3.3	0.09	90
	540	2.6	0.09	90
	720	1.9	0.09*	90
	900	1.6	0.09*	90
	1120	1.3	0.09*	90
	1440	0.9	0.09*	90
	2160	0.6	0.09*	90
	2700	0.5	0.09*	90

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CH 03/06	240	5.8	0.22	160
	315	4.4	0.22	180
	450	3.1	0.18	200
	570	2.5	0.12	180
	720	1.9	0.12	200
	900	1.6	0.12	200
	1200	1.2	0.12	200
	1520	0.9	0.09*	200
	2280	0.6	0.09*	200
	2700	0.5	0.09*	200

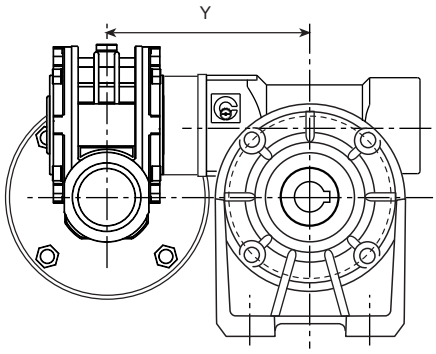
TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CH 04/07	250	5.6	0.37	360
	300	4.7	0.37	360
	400	3.5	0.25	315
	525	2.7	0.25	360
	700	2.0	0.18	360
	920	1.5	0.18	360
	1200	1.2	0.12	360
	1500	0.93	0.12*	360
	2100	0.67	0.12*	360
	2800	0.5	0.12*	360

TYPE	i=ratio	n2 r/min	Kw=P1	Nm=T2
CH 04/08	230	5.6	0.55	460
	300	4.7	0.55	490
	400	3.5	0.55	490
	525	2.7	0.37	490
	700	2.0	0.37	490
	920	1.5	0.25	490
	1380	1.2	0.18	490
	1840	0.93	0.18	490
	2116	0.67	0.12	490
	2760	0.5	0.12	490

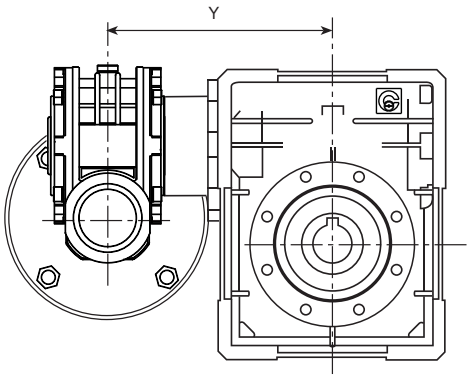
* The powers marked with an asterisk are higher than those that the gear allows, therefore the applicative choice must be made in accordance with the torque and not with the power.

DIMENSIONS OF CH/CH COMBINED GEARS

CH 03/CH 04-05



CH 03/CH 06 CH 04/CH 07-08



	Y
CH 03/04	120.5
CH 03/05	125.5
CH 03/06	165
CH 04/07	192
CH 04/08	204.5

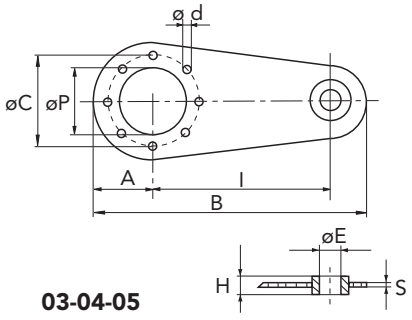
For other dimensions see pages 65 - 66 - 70 - 71 and 72 of the catalogue.

The gear ratios are those most frequently requested. It is possible to obtain multiple combinations using the various ratios of the two single gears.

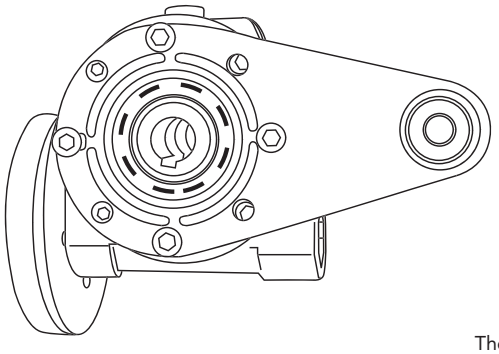
*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

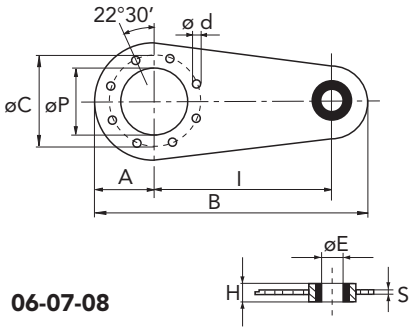
TORQUE ARM

TYPE	I	A	B	Ø P	Ø C	Ø d	H	øE	S
CH 03	100	40	157.5	50	65	7	14	8	4
CH 04	100	40	157.5	50	65	7	14	8	4
CH 05	100	55	172.5	68	94	7	14	8	4
CH 06	150	52.5	232.5	75	90	9	20	10	6
CH 07	200	62.5	300	90	110	9	25	20	6
CH 08	200	75	312.5	110	130	11	25	20	6



03-04-05





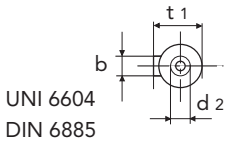
06-07-08

* Without anti vibrationbush

The anchoring point of the torque arm is equipped with a vibration resistant bushing.

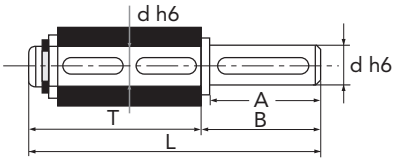
SINGLE OUTPUT SHAFT KIT

TYPE	A	Ø d	B	b	t1	T	L	d2	ød1
CH 03	30	14	35	5	16	61	96	M5x13	14
CH 04	40	18	45	6	20.5	70	115	M6x16	18
CH 05	60	25	65	8	28	89	154	M8x20	25
CH 06	60	25	65	8	28	127	192	M8x20	25
CH 07	60	30	65	8	33	134	199	M10x22	30
CH 08	60	35	65	10	38	149	214	M10x25	35



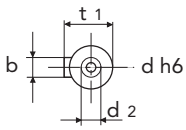
UNI 6604
DIN 6885

DIN 332



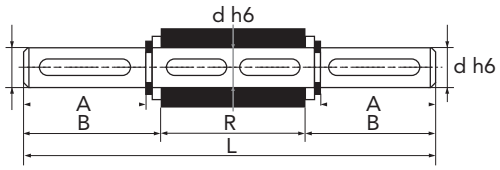
DOUBLE OUTPUT SHAFT KIT

TYPE	A	Ø d	B	R	b	t1	L	d2	ød1
CH 03	30	14	32.5	55	5	16	120	M5x13	14
CH 04	40	18	42.7	64	6	20.5	149.4	M6x16	18
CH 05	60	25	63.2	82	8	28	208.4	M8x20	25
CH 06	60	25	63.2	120	8	28	246.4	M8x20	25
CH 07	60	30	64	127	8	33	255	M10x22	30
CH 08	60	35	64	140	10	38	268	M10x25	35



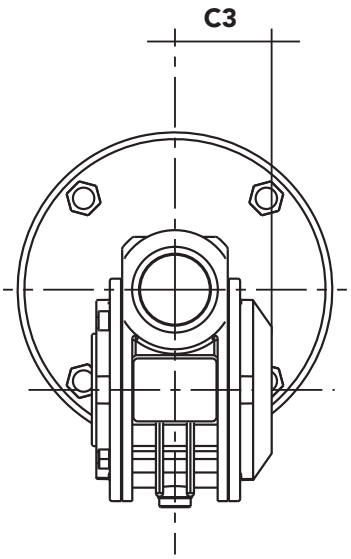
UNI 6604
DIN 6885

DIN 332

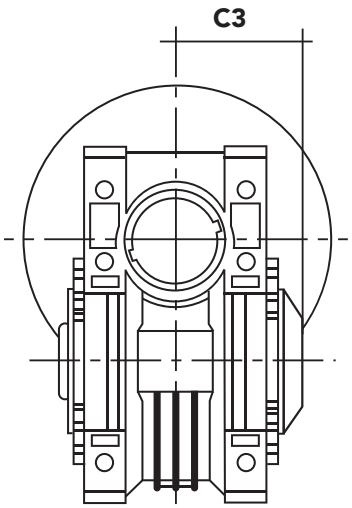


COVER

CH 03-04-05



CH 06-07-08



TYPE	C3
03	37
04	42
05	55
06	70
07	85,5
08	93,5

REDUCTION BUSHINGS KIT

SINGLE

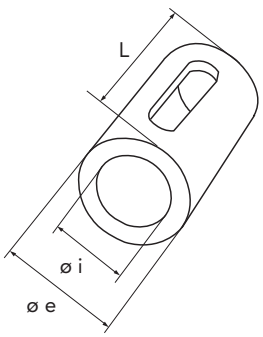
TYPE	ø i/ø e	L	tongues	Weight for kit kg
CHT BRM-S	9/11	20	4/3 x 4 x 11 RB*	0.006
CHT BRM-S	11/14	30	5/4 x 6 x 10 RB*	0.015
CHT BRM-S	14/19	40	6 x 5 x 30 *	0.045
CHT BRM-S	19/24	50	6 x 5.5 x 20 * 8 x 5.5 x 40 *	0.07
CHT BRM-S	24/28	60	8 x 9 x 40 *	0.08
CHT BRM-S	28/38	80	10 x 7 x 60 *	0.33
CHT BRM-S	38/42	110	12/10 x 10 x 48 RB*	0.22

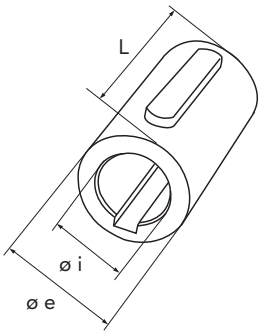
DOUBLE

TYPE	ø i/ø e	L	tongues	Weight for kit kg
CHT BRM-D	11/19	40	6 x 6 x 30 *	0.06
CHT BRM-D	14/24	50	8 x 7 x 40 A	0.12
CHT BRM-D	19/28	60	8 x 7 x 50 A	0.16
CHT BRM-D	24/38	80	10 x 8 x 60 A	0.44

* to drawing

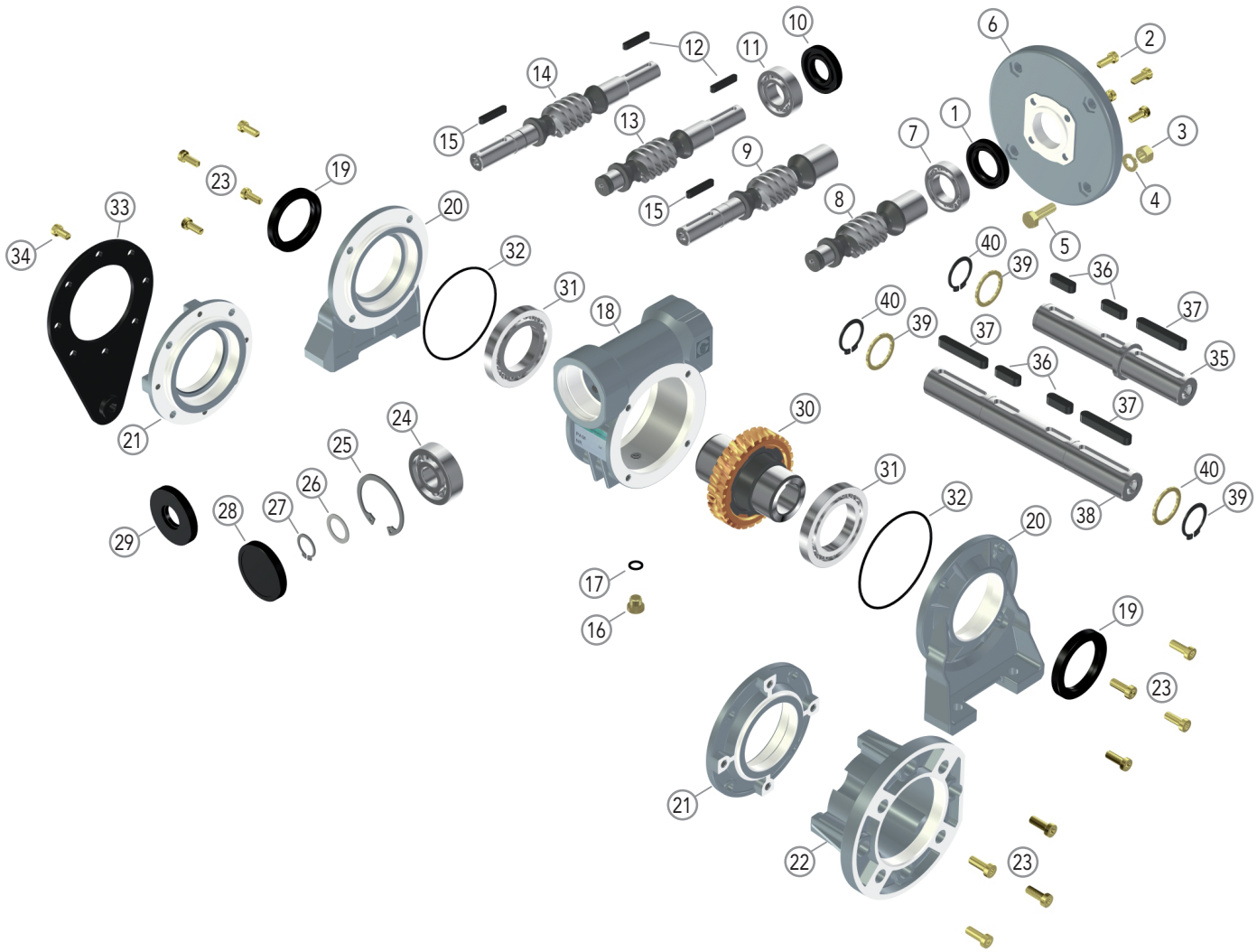
Tongue acc. to UNI 6604 - DIN 6885
Quenched





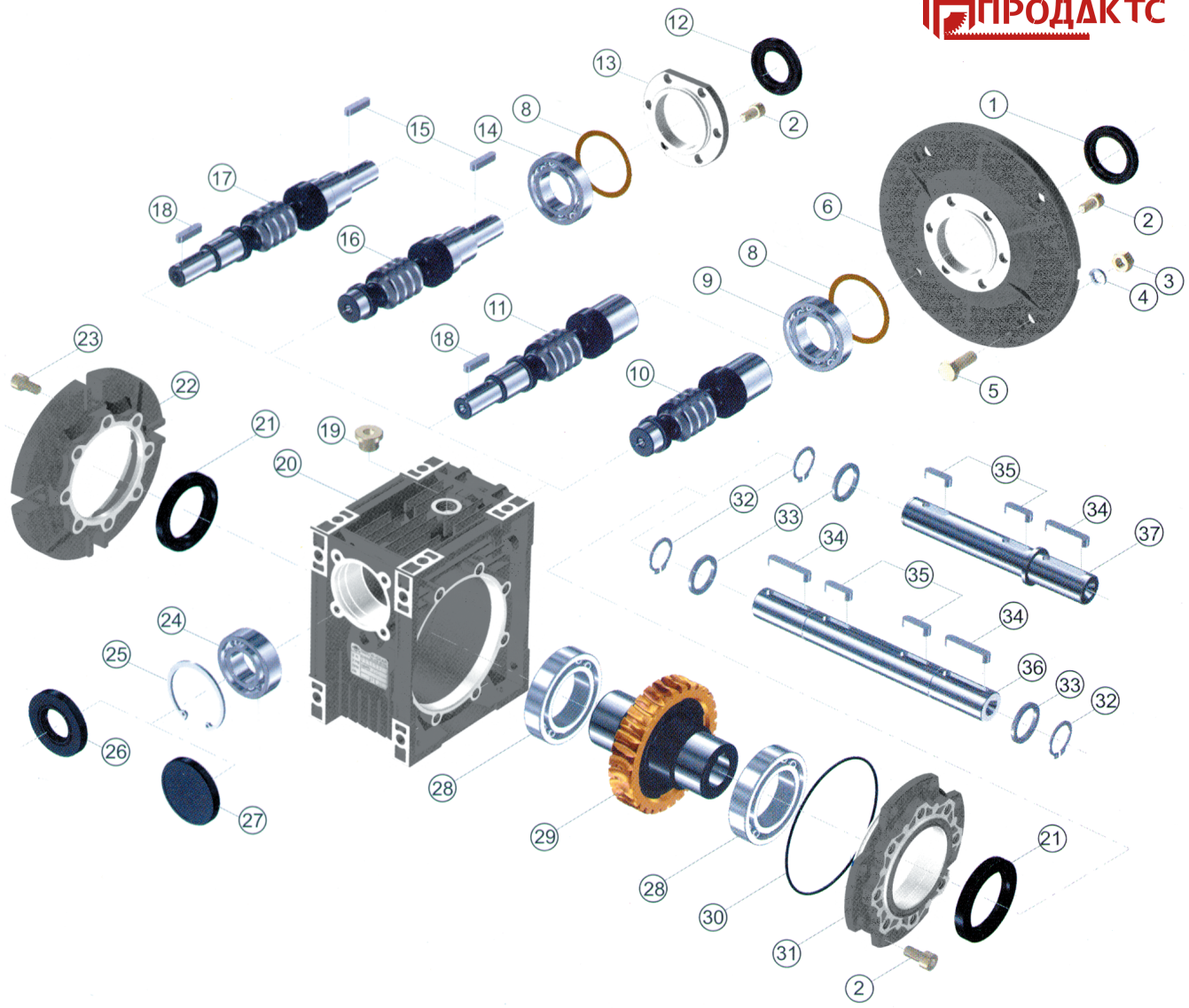
2D and 3D drawings available on the web site ***www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

CH 03/04/05 EXPLODED DRAWING AND SPARE



1	OIL SEAL	21	SIDE COVER
2	SCREW	22	OUTPUT FLANGE
3	NUT	23	SCREW
4	WASHER	24	BEARING
5	SCREW	25	SEEGER
6	MOTOR CONNECTION FLANGE	26	SPACER
7	BEARING	27	SEEGER
8	HOLE INPUT WORM	28	CAP
9	HOLE INPUT AND SHAFT OUTPUT WORM	29	OIL SEAL
10	OIL SEAL	30	WORM WHEEL
11	BEARING	31	BEARING
12	KEY	32	O-RING
13	SHAFT INPUT WORM	33	BRACCIO DI REAZIONE
14	DOUBLE EXTENDED INPUT SHAFT WORM	34	SCREW
15	KEY	35	SINGLE OUTPUT SHAFT
16	OIL PLUG	36	KEY
17	GASKET	37	KEY
18	CASING	38	DOUBLE OUTPUT SHAFT
19	OIL SEAL	39	SPACER
20	FOOT COVER	40	SEEGER

CH 06/07/08 EXPLODED DRAWING AND SPARE PARTS LIST

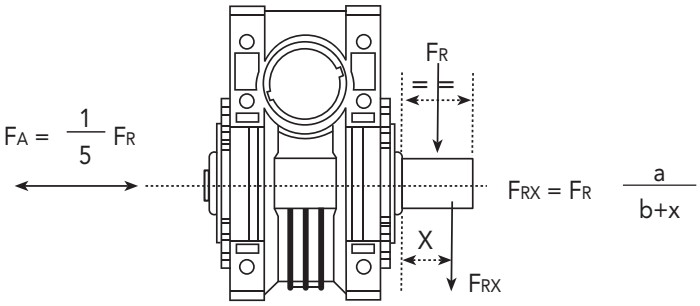


1	OIL SEAL	20	CASING
2	TORX SCREW	21	OIL SEAL
3	NUT	22	OUTPUT FLANGE
4	WASHER	23	EMBEDDED HEXAGONAL-HEAD SCREW
5	HEXAGONAL-HEAD SCREW	24	BEARING
6	MOTOR CONNECTION FLANGE	25	SEEGER
8	ADJUST SPACER	26	OIL SEAL
9	BEARING	27	CAP
10	HOLE INPUT WORM	28	BEARING
11	HOLE INPUT AND SHAFT OUTPUT WORM	29	WORM WHEEL
12	OIL SEAL	30	O-RING
13	INPUT COVER	31	OUTPUT COVER
14	BEARING	32	SEEGER
15	KEY	33	SPACER
16	SHAFT INPUT WORM	34	KEY
17	DOUBLE EXTENDED INPUT SHAFT WORM	35	KEY
18	KEY	36	DOUBLE OUTPUT SHAFT
19	OIL PLUG	37	SINGLE OUTPUT SHAFT

CH RADIAL LOADS ON THE OUTPUT SHAFT

The loads indicated are valid for all application directions.
The maximum allowable axial loads are equal to 1/5 of the radial load value shown in the table when applied with the same radial load; if this is not the case, please contact our technical office. If double output shafts are used, the sum of radial loads applicable to the centre lines of the two ends of the shaft must not exceed the value shown in the table below.
The radial loads related to the output speed (n2)=10 are the maximum loads supported by the gear.

a	GEAR CONSTANT
b	GEAR CONSTANT
x	LOAD DISTANCE FROM SHAFT SHOULDER IN mm.
F_{RX}	RADIAL LOAD IN POSITION X (IN N)
F_R	RADIAL LOAD (N)
F_A	AXIAL LOAD (N)

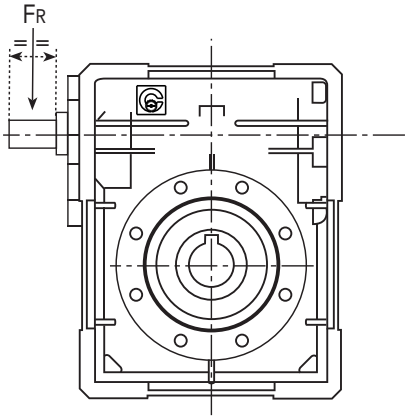


	SIZES					
Output speed	**03**	**04**	**05**	**06**	**07**	**08**
400	490	720	1000	1450	1800	2020
250	580	860	1190	1720	2140	2420
150	690	1010	1400	2020	2510	2840
100	790	1160	1600	2330	2880	3260
60	940	1380	1910	2770	3440	3880
40	1070	1570	2160	3130	3890	4380
25	1260	1850	2550	3700	4590	5180
10	1700	2500	3450	5000	6200	7000
	CONSTANTS' VALUES					
a	60	71	99	130	136	146
b	45	51	69	102	108	118

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

RADIAL LOADS ON THE CENTRE LINE OF THE INPUT SHAFT

МЕХАНИКАЛ ПРОДАКТС



	SIZES					
	03	**04**	**05**	**06**	**07**	**08**
FR max	100	150	220	700	975	1150

Notes: value of tables are in N

*2D and 3D drawings available on the web site **www.chiaravalli.com***
Quantity, availability and prices with Chiaravalli B2B

INSTALLATION

· The data shown on the identification name plate must correspond to the gear ordered.
· All the gears are supplied complete with permanent synthetic oil in a quantity that is sufficient for any assembly position.
· The gear must be fixed on a flat surface that is sufficiently rigid in order to avoid any vibration.
· The gear and the axis of the machine to be driven must be perfectly aligned.
· In the event that knocks, overloading or blockage of the machine are foreseen, the client must install a limiting device, joints, overload cut-out etc.
· Coupling with pinions, joints, pulleys and other parts must be done after the parts have been cleaned and knocks should be avoided whilst assembling as they could damage the bearings and other internal parts.
· In the event that the motor is supplied by the client, he must check that the flange and shaft tolerances correspond to a "normal" class; our motors satisfy this requirement.
· Check that the fixing screws for the gear and the related accessories are correctly tightened.
· Take suitable measures to protect the groups from any aggressive atmospheric agents.
· Where foreseen, protect rotating parts from any possible contact with the operators.
· If the gears are painted, protect the oil seals and the machined surfaces.
· All of the gears are painted RAL 9022 grey.

OPERATION AND RUNNING-IN

· To obtain the best performance the gears must first be runin by gradually increasing the power in the first few hours of operation, in this phase an increase in temperature is considered normal.
· In the event of defective operation, noise, oil leakage, etc. stop the gear immediately and, when possible, remove the cause. Alternatively, send the piece to our factory to be controlled.

MAINTENANCE

· The worm gears from size 03 to size 08 and the pre-stage modules are lubricated with permanent synthetic oil and therefore do not require any maintenance.

WAREHOUSE STORAGE

· If the warehouse storage will be for a long time, more than 3 months, the shafts and machined surfaces should be protected using antioxidants and the oil seals should be greased.

HANDLING

· Care must be taken not to damage the oil seals and the machined surfaces when handling the groups.

DISPOSAL OF PACKAGING

· The packaging in which our gears are delivered should be sent to specialised companies for recycling if possible.