

Worm gears reducers

WGMX Series

Powerful, efficient and flexible...

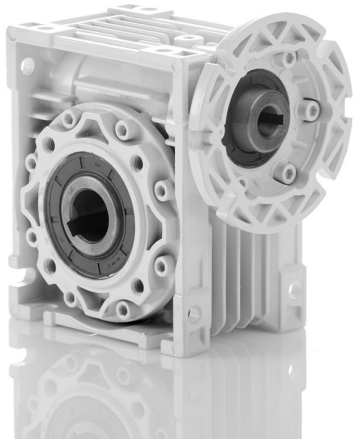
Technical catalogue

VYBO Electric

Quality management and certificates







VYBO Electric is a modern High-tech energy saving company that pays high attention to quality, environment, safety and precision and efficiency of work and energy in production. Therefore, it holds a lot of certificates and quality control systems. **Our priority is quality control.**

Basic certificates include:

ISO9001

The primary task of the ISO 9001 standard is to focus on system management and quality management in the organization. The satisfaction of the customer and the fulfillment of his requirements, which are specified in contracts, orders, or technical drawings, are in the first place. The quality management system is linked to all processes in the company. The standard focuses on the management of human and financial resources, on the stability of infrastructure, including buildings, transport, hardware, software and other communication or information technologies. An important part is also the planning of production and services, the management of the purchasing process, but also the management of non-conforming products.

ISO14001

The main priority of the ISO 14001 standard is to identify and understand the environmental aspects and activities that are related to the entire infrastructure of the company and, based on this, to regulate the environmental impact on the environment.

In its scope, the ISO 14001 standard creates the conditions for determining environmental goals and plans, the fulfillment of which is examined at regular intervals by top management and also by an independent body during internal audits.

This standard is intended for all organizations and companies that consider environmental protection as their primary goal.

The benefit of the standard for society is mainly:

- control over the environmental impact on the environment
- control over produced emissions and waste
- saving material and energy
- prevention of accidents
- compliance of the company's activities with legal requirements
- zero fines for environmental behavior
- creation of a good reputation and prestige of the company

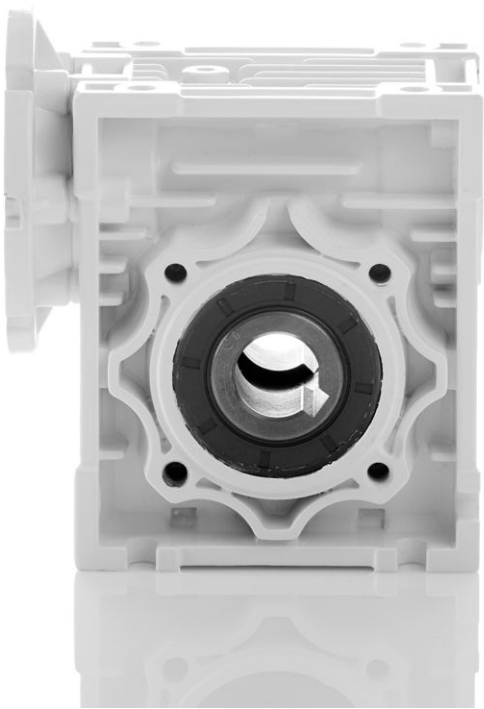
The ISO 45001

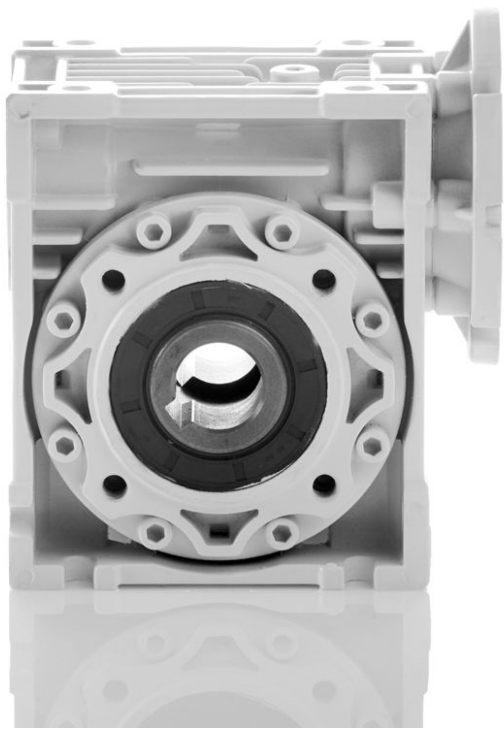
Specification (formerly known as OHSAS 18001) is an internationally recognized standard that declares compliance with the principles of a safe enterprise, managing risks at work and protecting the health of workers during work. It does not only concern danger and accidents, but also emphasizes other aspects such as the good condition and mental well-being of the employee.

The certificate is held in Slovakia as STN ISO 45001:2019 and is under the title Management systems of safety and health protection at work. Requirements with guidance for use. It replaces the STN OHSAS 18001 standard.

ISO50001

Energy management systems Energy efficiency help organizations save money, save energy resources and also help to prevent climate change. ISO 50001 encourages organizations in all sectors to use energy more efficiently through the development of an energy management system. The international standard ISO 50001: 2011 specifies the requirements for building, maintaining and improving the energy system. It aims to enable organizations to implement a systematic approach that will help achieve lasting improvements in energy efficiency, energy use and consumption.





Versions

TYPES

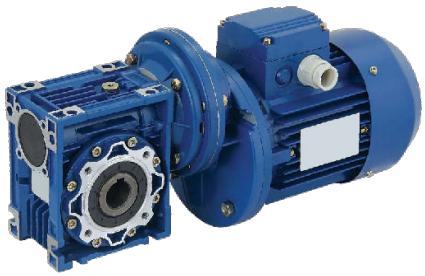
WGMX



NWGMW



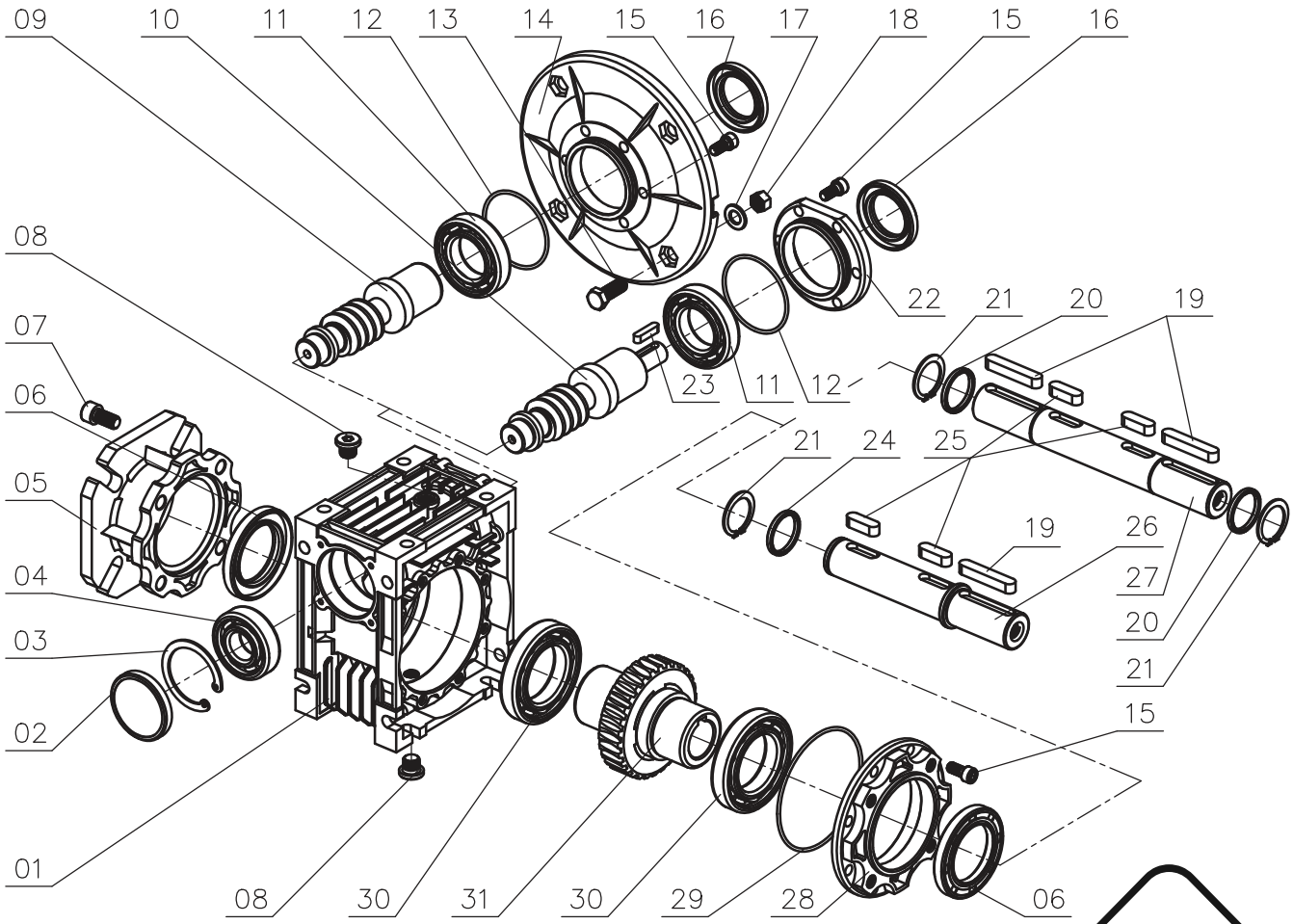
PWGMX



WXR



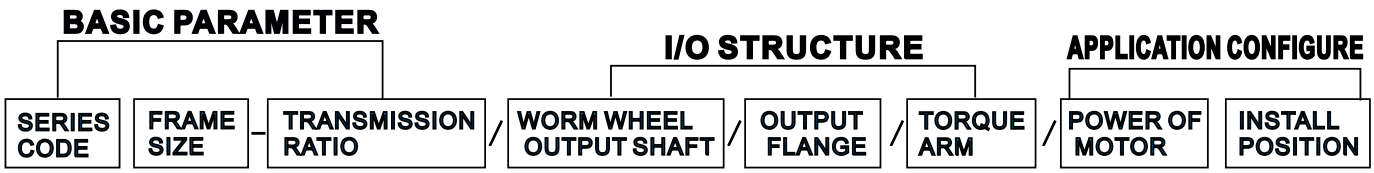
PARTS NOTES



Code

Series Code	WGMX	Worm reducer with input flange
	NWGMX	Worm reducer with input shaft
	PWGMX	Worm reducer with WF
	WXR	Combination of worm reducer
Frame Size	025	Frame size 25
	030	Frame size 30
	040	Frame size 40
	050	Frame size 50
	063	Frame size 63
	075	Frame size 75
	090	Frame size 90
	110	Frame size 110
	130	Frame size 130
	150	Frame size 150
	030/040	WXR combination frame spec.
	030/050	WXR combination frame spec.
	030/063	WXR combination frame spec.
	040/075	WXR combination frame spec.
	040/090	WXR combination frame spec.
	050/110	WXR combination frame spec.
	063/130	WXR combination frame spec.
	063/040	PWGMX frame (WF063+WGMX040)
	063/050	PWGMX frame (WF063+WGMX050)
	063/063	PWGMX frame (WF063+WGMX063)
	071/050	PWGMX frame (WF071+WGMX050)
	071/063	PWGMX frame (WF071+WGMX063)
	071/075	PWGMX frame (WF071+WGMX075)
	071/090	PWGMX frame (WF071+WGMX090)
	080/075	PWGMX frame (WF080+WGMX075)
	080/090	PWGMX frame (WF080+WGMX090)
	080/110	PWGMX frame (WF080+WGMX110)
	080/130	PWGMX frame (WF080+WGMX130)
	090/110	PWGMX frame (WF090+WGMX110)
	090/130	PWGMX frame (WF090+WGMX130)
Speed Ratio	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100	Ratio of WGMX and NWGMW (i = 5~100)
	72.6, 75, 79.3, 90, 95.1, 96.8, 120, 121, 126.8, 145.2, 150, 158.5, 180, 190.2, 193.6, 240, 242, 253.6, 300, 317	Ratio of PWGMX (i = 72.6~317)
	100, 150, 200, 250, 300, 400, 500, 600, 750, 900, 1200, 1500, 1800, 2400, 3000, 3200	Ratio of WXR (i = 100~3200)
Extension Worm Shaft	E	Extension Worm Shaft
Output Shaft	SS	Worm wheel with single output shaft
	DS	Worm wheel with double output shaft
Output Flange	F	Configure short output flange
	FL	Configure long outuput flange
Torque Arm	A	Configure torque arm
Motor	x x B5, x x B14	Frame size & structure of motor
Mounting position	B3, B6, B7, B8	Mounting position in horizon
	V5, V6	Mounting position in vertical

Product notes



E.G. WGMX063-40E/F1/SZ/71B5/B3

WGMX063-30/DZ/A1/B3

PWGMX071/063-126,8/E/SZ/71B14/B3

DWGMX030/063-1200/63B5/B3

NOTE:

1. The basic parameter must be marked.
2. If there is no code for i/o structure, it means that the reducer is without i/o struction.
3. For PCRW and DRW series products, there is a"/" between the fraze size of input stage and, the frame size of output stage.

Design features

GENERAL INTRODUCTION

Structure features

-High quality die casting aluminum alloy housing, suitable for universal mounting.

-Heat sink design for cooling provides great surface area and higher thermal capacity than the casting ironhousings.

-025 to 150, with power scope from 60w to15 kw.

-Larger speed ratio range. each single frame size has 12 ratios from 5:1 to 100:1.

-Hardened worm with fine grinding has the features of higher efficiency and big output torque.

-Low noise and stably running, can adapt long term work condition in terrible environments.

-Light weight, high mechanical strength.

-Modularization combination PWGNX & DWGMX extend the ration of RW reducers from i=5:1 to 3200: 1.

MAIN MATERIALS

-Housing: die-cast aluminum alloy (frame size: 025 up to 90);
cast iron (frame size: 110 to 150)

-Worm: 20Cr steel, carburization and nitriding treatment (the hardness of tooth is HRC60 and the thickness of harden . Layer is over 0.5mm after precise grinding).

-Worm wheel: special wearable nickel bronze alloy

PAINT

-Aluminum alloy housing:
1shot blasting and special antiseptic treatment on the aluminum alloy surface
2 after phosphating, coated with blue RAL5010 baking finished.

-Cast-iron housing: painted with RAL5010 blue baking finished.

EFFICIENCY

Efficiency is a very important parameter that lies on the design and fabrication of the worm and worm wheel s. there a re two different friction features when reducer is running or static, so the efficiency of the reducers have dynamic efficiency and static efficiency.

1. dynamic efficiency ηd the transmission efficiency of reducer under operating (dynamic friction)
2. static efficiency ηs the transmission efficiency of reducer when it is static (static friction).

As the static friction coefficient is bigger than dynamic friction coefficient so that the dynamic efficiency is over the static efficiency, i.e. ηd > ηs

Design features

TRANSMISSION REVERSIBILITY

The process to apply the torque on the output side (worm wheel) of reducer to drive the input side (worm shaft) is reversible transmission of reducer. The characteristic expressed in this reversible transmission process is the transmission reversibility of reducer. We must pay attention to this point during operation.

The transmission reversibility of reducer is relevant to the efficiency of reducer. The transmission reversibility of reducer is described as below:

ηs<0.5: static force irreversibility: when the reducer is standstill, it is impossible to drive the input worm shaft by applying a torque on the output worm wheel. Reversible transmission is self-locked.

ηs =0.5-0.55: weak static force reversibility. When the reducer is standstill, it is possible to drive the input worm shaft by applying a torque on the output worm wheel. But self-locking is weak.

ηs >0.5: static reversibility. when the reducer is standstill, it is possible to drive the in put worm shaft by applying a torque on the output worm wheel . Reversible transmission cannot selflock.

ηd <0.5: dynamic force irreversibility, during the operation of the reducer, if we relieve the force from input shalt, the output shaft will stop right away.

ηd <0.5-0.6: weak dynamic force reversibility. During the operation of the reducer, if we relieve the force from input shaft, the output shaft will stop after a while.

ηd >0.6: dynamic force reversibility: during the operation of the reducer, if we relieve the force from input shaft, the output shaft will not stop by self-locking.

Tooth and modular configuration

RW	i	5	7,5	10	15	20	25	30	40	50	60	80	100
025	m	1,25	1,25	1,25	1,25	1	/	1,25	1	0,8	0,65	/	/
	Z1	6	4	3	2	2	/	1	1	1	1	/	/
	ϒ	30°58'	21°48'	16°42'	11°19'	10°53'	/	5°43'	5°29'	4°34'	3°23'	/	/
	ηd	0,865	0,839	0,815	0,769	0,753	/	0,638	0,624	0,583	0,517	/	/
	ηS	0,716	0,701	0,667	0,594	0,562	/	0,438	0,413	0,362	0,320	/	/
030	m	1,5	1,5	1,5	1,5	1	1,75	1,5	1	0,9	0,75	0,55	/
	Z1	6	4	3	2	2	1	1	1	1	1	1	/
	ϒ	29°3'	20°19'	15°31'	10°29'	5°42'	6°10'5°17'2°52'			3°26'	2°52'	1°58'	/
	ηd	0,874	0,856	0,829	0,782	0,673	0,700	0,667	0,520	0,567	0,520	0,422	/
	ηS	0,723	0,675	0,637	0,559	0,461	0,442	0,400	0,308	0,319	0,275	0,221	/
040	m	2	2	2	2	1,6	1,25	2	1,6	1,25	1	0,8	0,65
	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	ϒ	30°58'	21°48'	16°42'	11°19'	11°19'8°8'5°43'			5°43'4°5'2°52'			2°52'	2°29'
	ηd	0,886	0,862	0,839	0,805	0,792	0,738	0,675	0,668	0,604	0,541	0,513	0,477
	ηS	0,737	0,703	0,661	0,589	0,559	0,502	0,434	0,411	0,351	0,284	0,276	0,243
050	m	2,5	2,5	2,5	2,5	2	1,6	2,5	2	1,6	1,25	1	0,8
	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	ϒ	30°58'	21°48'	16°42'	11°19'	11°19'9°5'5°43'			5°43'	4°21'	2°52'	2°52'2°17'	
	ηd	0,887	0,874	0,852	0,808	0,805	0,771	0,711	0,693	0,634	0,532	0,530	0,483
	ηS	0,737	0,695	0,654	0,581	0,561	0,517	0,434	0,403	0,352	0,289	0,270	0,227
063	m	/	3,25	3,25	3,25	2,5	2	3,25	2,5	2	1,6	1,25	1
	Z1	/	4	3	2	2	2	1	1	1	1	1	1
	ϒ	/	24°31'	18°53'	12°51'	11°19'	8°45'	6°30'	5°43'	4°24'3°3'2°52'			2°12'
	ηd	/	0,880	0,870	0,830	0,820	0,780	0,740	0,716	0,660	0,571	0,562	0,486
	ηS	/	0,710	0,670	0,600	0,557	0,510	0,450	0,409	0,360	0,304	0,276	0,229
075	m	/	4	4	4	3	2,5	4	3	2,5	2	1,6	1,25
	Z1	/	4	3	2	2	2	1	1	1	1	1	1
	ϒ	/	28°4'	21°48'	14°56'	11°19'	11°19'	7°36'	5°43'	5°43'	3°49'	4°21'	2°52'
	ηd	/	0,912	0,904	0,876	0,850	0,848	0,810	0,770	0,769	0,695	0,719	0,626
	ηS	/	0,712	0,683	0,614	0,570	0,542	0,466	0,420	0,395	0,342	0,316	0,267
090	m	/	5	5	5	3,75	3	5	3,75	3	2,5	1,9	1,5
	Z1	/	4	3	2	2	2	1	1	1	1	1	1
	ϒ	/	33°41'	26°34"	18°26'	14°02'	11°19'	9°28'	7°08'	5°43'	4°46'	3°53'	2°52'
	ηd	/	0,905	0,898	0,873	0,849	0,824	0,804	0,765	0,727	0,690	0,638	0,572
	ηS	/	0,734	0,706	0,650	0,606	0,563	0,505	0,459	0,414	0,380	0,342	0,271
110	m	/	5,9	5,9	5,9	4,6	3,75	5,9	4,6	3,75	3,15	2,4	1,9
	Z1	/	4	3	2	2	2	1	1	1	1	1	1
	ϒ	/	28°46'	22°22'	15°21'	14°20'	14°02'	7°49'7°17'7°08'			5°48'	4°54'	3°37'
	ηd	/	0,901	0,891	0,862	0,848	0,851	0,793	0,776	0,768	0,729	0,692	0,628
	ηS	/	0,721	0,691	0,631	0,618	0,598	0,482	0,478	0,451	0,415	0,372	0,319
130	m	/	7	7	7	5,4	4,4	7	5,4	4,4	3,75	2,75	2,25
	Z1	/	4	3	2	2	2	1	1	1	1	1	1
	ϒ	/	29°15'	22°47'	15°39'	13°47'	12°24'	7°58'	7°00'6°17'6°07'			3°56'	3°41'
	ηd	/	0,911	0,891	0,872	0,860	0,845	0,803	0,779	0,758	0,749	0,671	0,657
	ηS	/	0,721	0,691	0,631	0,610	0,583	0,492	0,460	0,435	0,406	0,335	0,308
150	m	/	5,4	6,16	5,4	6,16	5	4,2	6,16	5	4,2	3,15	2,5
	Z1	/	6	4	3	2	2	2	1	1	1	1	1
	ϒ	/	29°37'	24°41'	15°52'	12°56'	11°19'	9°56'	6°34'	5°43'	5°00'	3°45'2°52	
	ηd	/	0,911	0,901	0,881	0,858	0,851	0,832	0,776	0,778	0,738	0,701	0,638
	ηS	/	0,731	0,711	0,661	0,599	0,577	0,542	0,448	0,43	0,394	0,340	0,289

ηd - dynamic efficiency; ηS - static efficiency; m - modulus; Z1 - number of teeth; r -helical angle; i - ratio

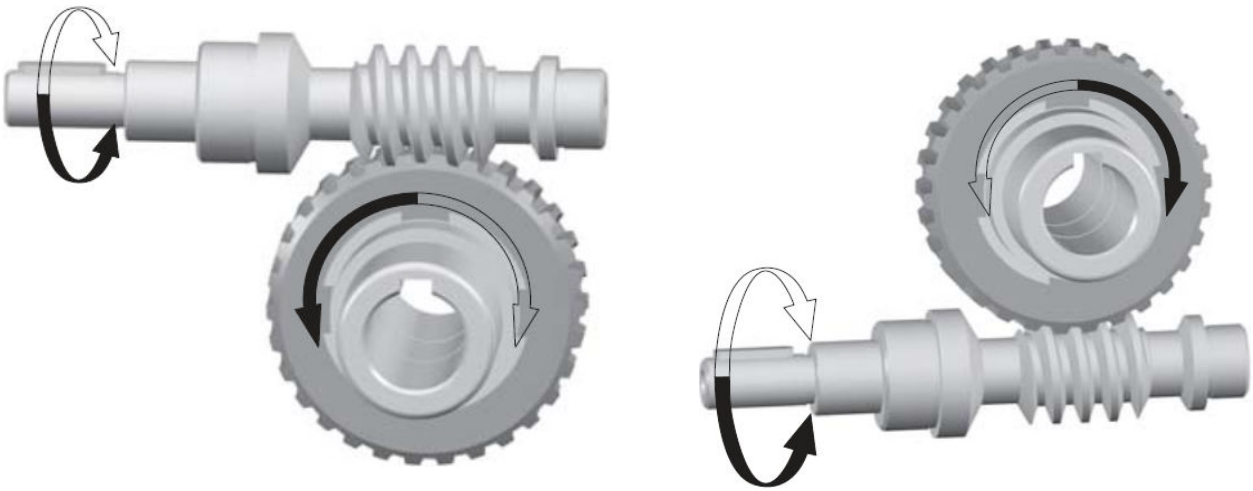
Basic models of WGMX and NWGMX



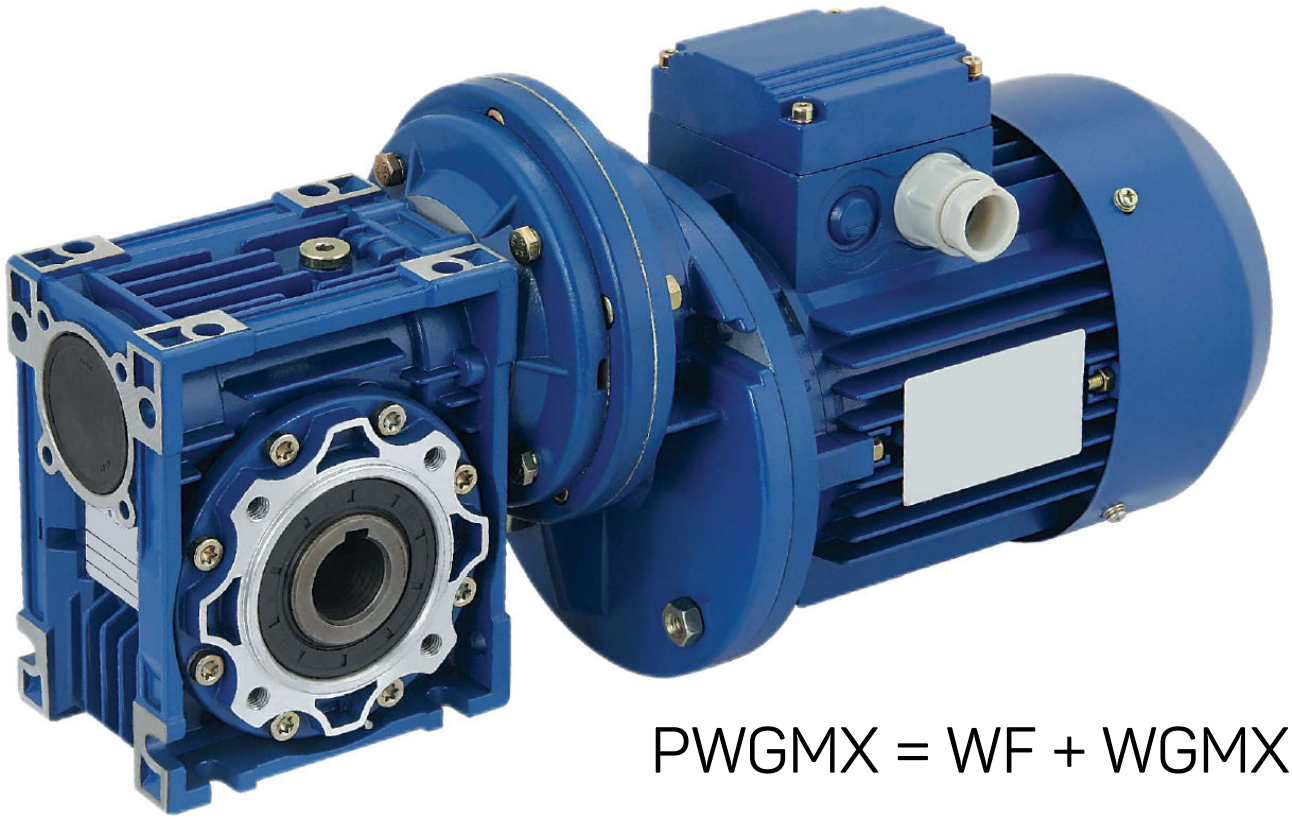
Basic type reducer WGMX: the power was inputted from the worm shaft, then ouput drive from the hole shaft of worm wheel after speed reduction. The input flange of reducer can be matched with the flange of motor. Output flange can be installed for the connection of reducer. The transmission central distance(mm) of worm and worm wheel is just the frame size. Each size of reducer has been precise designed for following rations: i=5,7.5,10,15,20,25,30,40,50,60,80,100.

Basic WGMX series reducer can realize modular combination easily:
1. combined with the pre-stage helical modular as WF and worm gear reducer:
PWGMX (= WF + WGMX)
2. combination of two single WGMX reducers as double worm gear reducer:
WXR (= WGMX + WGMX)

Space relations of basic type WGMX and NWGMX



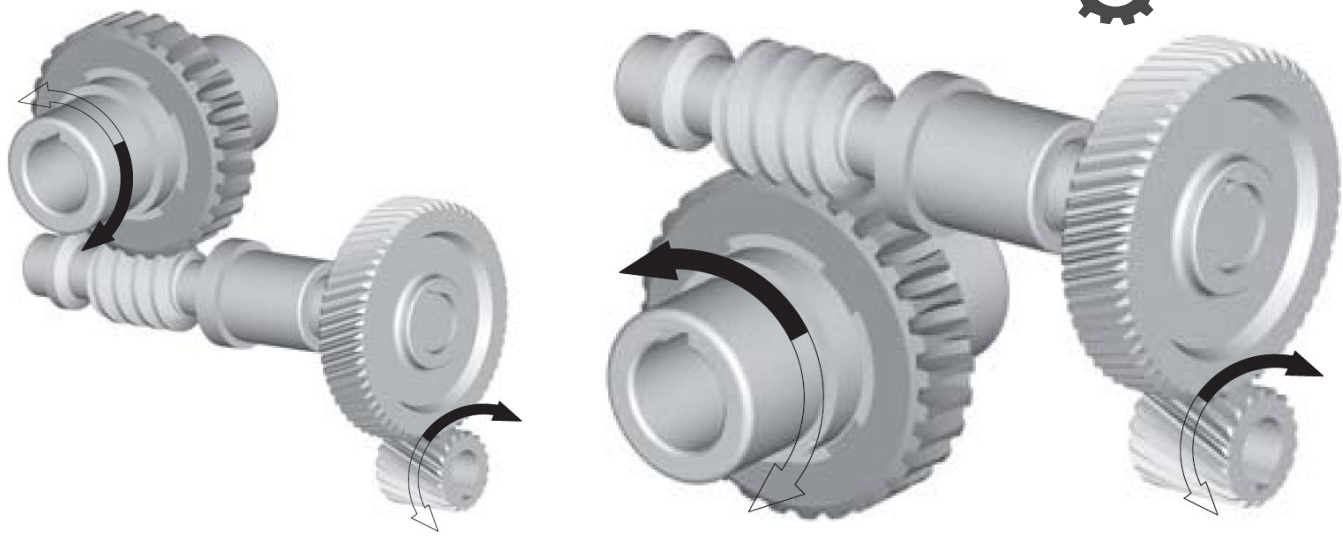
PWGMX - combination of pre-stage helical modular PC and WGMX



PWGMX = WF + WGMX

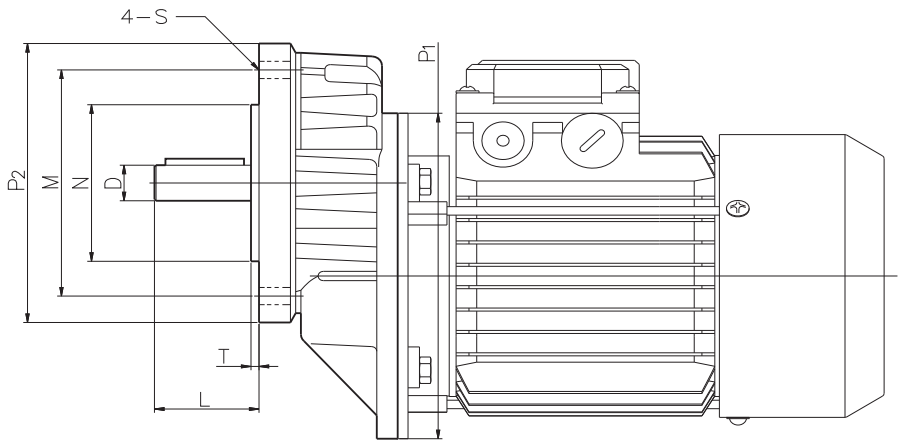
WGMX worm gear reducer can be combined with pre-stage helical modular (WF) as a gear and worm reducer (PWGMX). The ratio of PWGMX is the product of the ratios of WF and WGMX. Through this combination, the ratio scope of WGMX basic types can be extended from i=72.6 to i=317.

Space relations of PWGMX



Pre-stage helical modular WF

The output connection P2 of pre-stage helical gear module is compatible to the input flange of WGMX reducer. Therefore it can be pre-combined with WGMX reducer easily. The input connection P1 is designed to match with flange of B5 type motors. P2 is defigned for B14 type of motor; P1 is designed for B5 type of motor. Nominal frame size of pc is same as motor frame size matched with P1.



Type	i	D (k6)	N (j6)	M	P2	S	T	L	P1
PC063	3	11 (14)	70	85	105	M6	3	23	63B5
PC071	3	14 (19)	80	100	120	M6	3	30	71B5
PC080	3	19 (24/28)	110	130	160	M8	3	40	80B5
PC090	2.43	24 (19/28)	110	130	160	M8	3	50	90B5

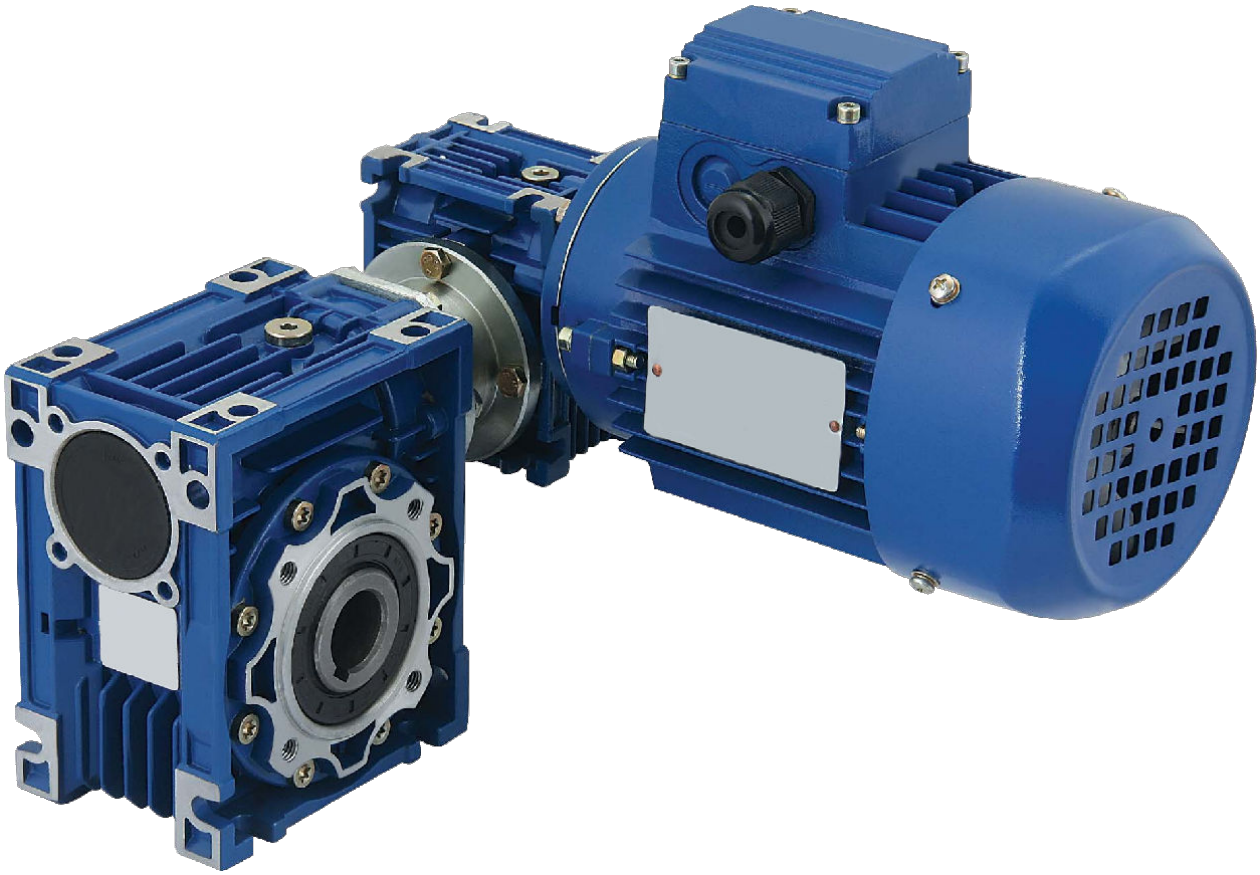
PWGMX = WF + WGMX
Possible connection

WGMX \ WF		PC063 i=3		PC071 i=3		PC080 i=3		PC090 i=2.43	
		63B14	71B14	71B14	80B14	80B14	100B14	80B14	100B14
040	25	•	•						
	30	•	•						
	40	•	•						
	50	•	/						
	60	•	/						
	80	•	/						
	100	•	/						
050	25	/	•	•	•				
	30	/	•	•	•				
	40	/	•	•	/				
	50	/	•	•	/				
	60	/	•	•	/				
	80	/	•	•	/				
	100	•	/	/	/				
063	25	/	/	/	•				
	30	/	/	/	•				
	40	/	•	•	•				
	50	/	•	•	•				
	60	/	•	•	•				
	80	/	•	•	/				
	100	/	•	•	/				
075	25			/	•	•	/		
	30			/	•	•	/		
	40			/	•	•	/		
	50			/	•	•	/		
	60			/	•	•	/		
	80			/	•	•	/		
	100			/	•	•	/		
090	25			/	•	•	/		
	30			/	•	•	/		
	40			/	•	•	/		
	50			/	•	•	/		
	60			/	•	•	/		
	80			/	•	•	/		
	100			/	•	•	/		
110	25					/	•	/	/
	30					/	•	/	•
	40					/	•	/	•
	50					/	•	/	•
	60					/	•	/	•
	80					/	•	/	•
	100					/	•	/	/
130	25							/	•
	30							/	•
	40							/	•
	50							/	•
	60							/	•
	80							/	•
	100							/	•

Note: • means possible combination; / means the combination is unallowed or not recommended

WXR - Double WGMX combination

WXR = WGM + WGM



WGMX reducers can be combined as a double reducers combination (WXR). The ratio of WXR is just the product of the first stage WGMX's ratio and the second stage WGMX's ratio. So the ratio can be extended to i=300-3200.

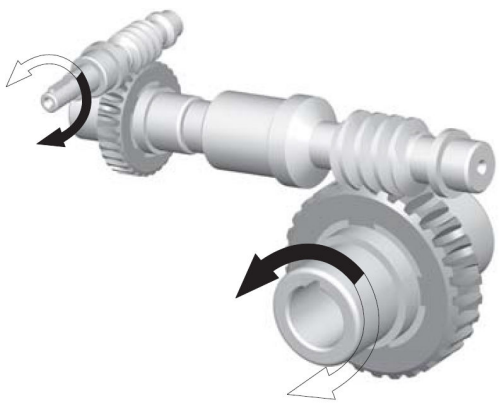
WXR is not only simply combination of two WGMX reducers. The reasonably combination should make two reducers operating at same condition. Therefore the frame size of the second stage reducer should be bigger than the first stage reducer.

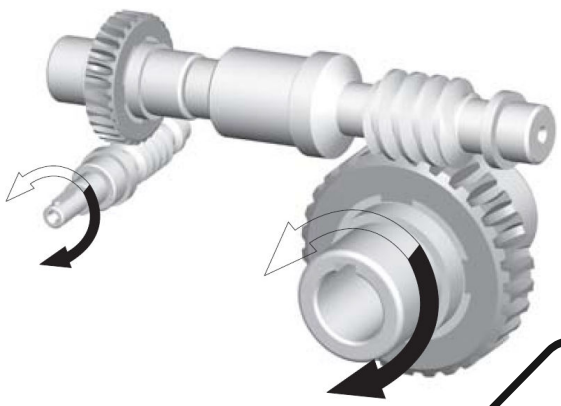
WXR Possible connection

i_1 \ i_2	040			050			063			075			090			110			130		
	25	30	40	30	40	50	40	50	60	30	40	50	40	50	60	30	40	50	30	40	50
030																					
7.5	/	/	/	/	/	/	•	/	/												
10	/	•	•	•	•	•	•	•	/												
15	/	/	/	/	/	/	•	•	•												
20	•	•	/	•	/	/	/	/	/												
25	/	•	/	•	/	/	/	/	/												
30	/	•	•	•	•	/	•	•	•												
50	/	•	/	•	/	/	/	/	/												
60	/	•	•	•	•	•	•	•	/												
80	/	/	•	/	/	/	/	/	/												
040																					
7.5										/	/	/	•	/	/						
10										•	•	•	•	•	/						
15										/	/	/	•	•	•						
20										•	/	/	/	/	/						
25										•	/	/	/	/	/						
30										•	•	/	•	•	•						
50										•	/	/	/	/	/						
60										•	•	•	•	•	/						
050																					
10																•	•	•			
15																/	•	/			
25																•	/	/			
30																•	•	/			
50																•	/	/			
60																•	•	•			
063																					
10																			•	•	•
15																			/	•	/
25																			•	/	/
30																			•	•	/
50																			•	/	/
60																			•	•	•

Note: • means possible combination; / means the combination is unallowed or not recommended

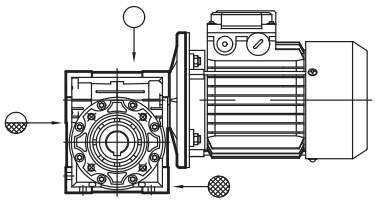
Space relation of WXR



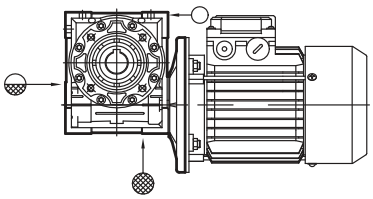


WGMX Mounting positions

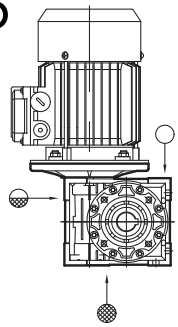
B3



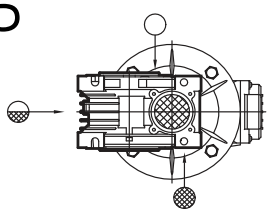
B8



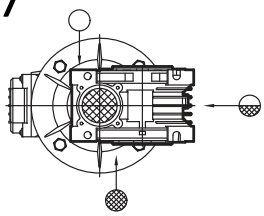
V5



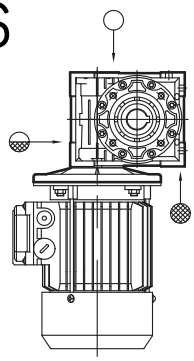
B6



B7

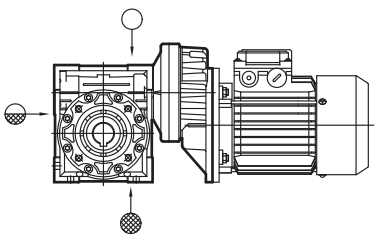


V6

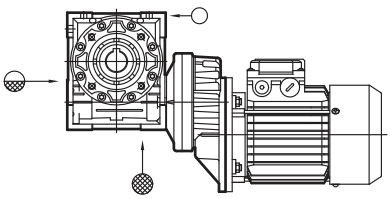


PWGMX Mounting positions

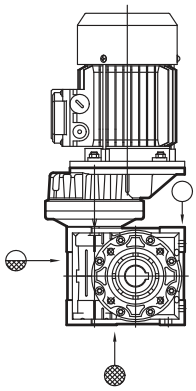
B3



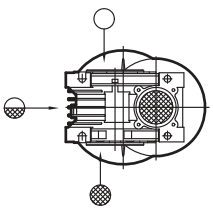
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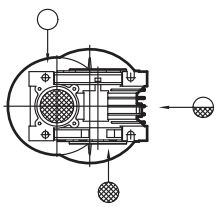
V5



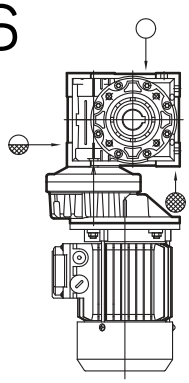
B6



B7

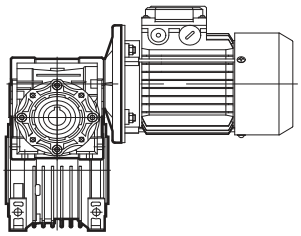


V6

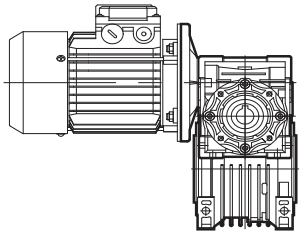


WXR Mounting positions

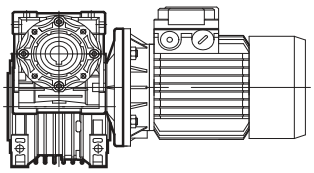
AS1



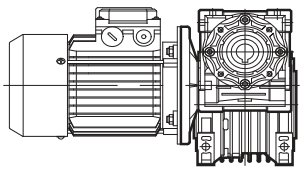
AS2



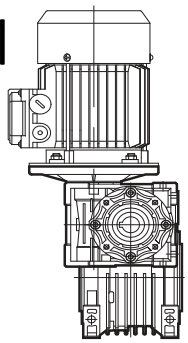
BS1



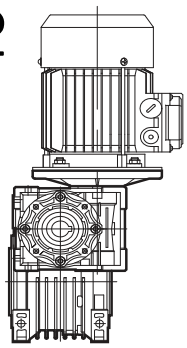
BS2



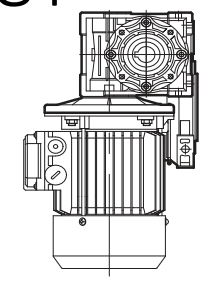
VS1



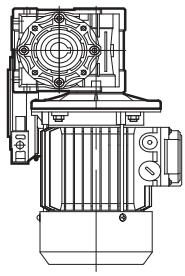
VS2



PS1



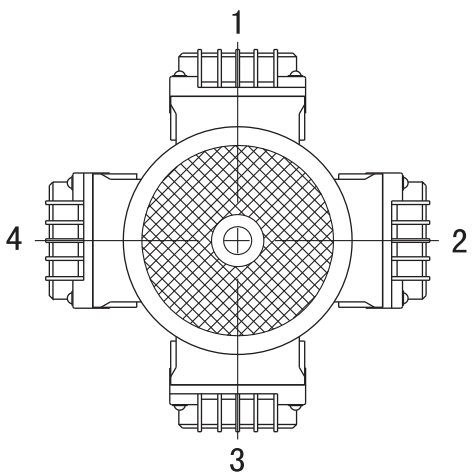
PS2



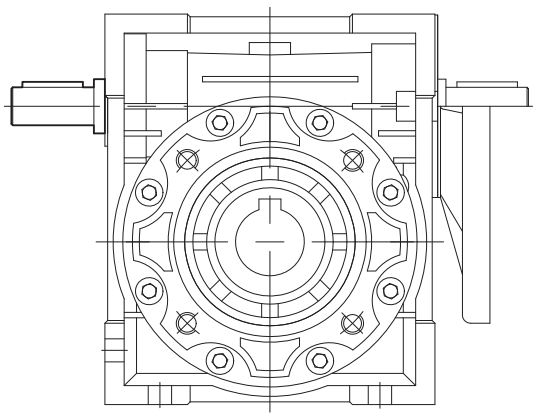
Structure configuration

According to requirement, RW reducers can be with following parts; extension worm shaft (E), output flange (F, FL), torque arm (A), output shaft of worm (SS, DS).
The configuration position and type code number of structure shown as in following charts:

Positions of motor terminal box

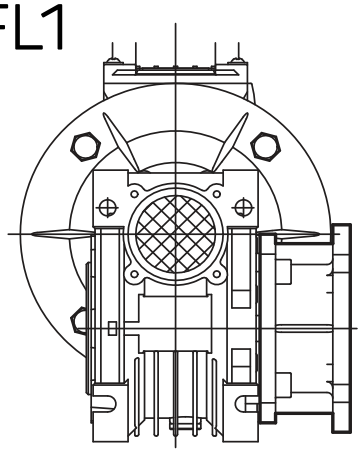


Extension input of worm shaft (E)

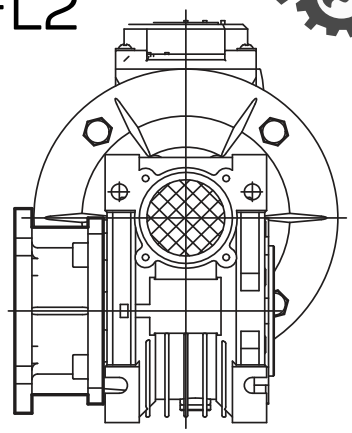


Output flange (F, FL)

F1, FL1

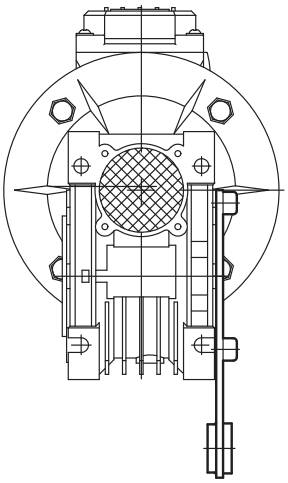


F2, FL2

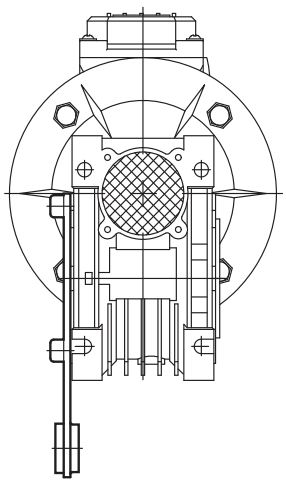


Torque arm (A)

A1

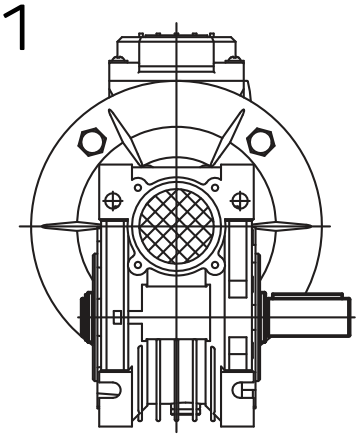


A2

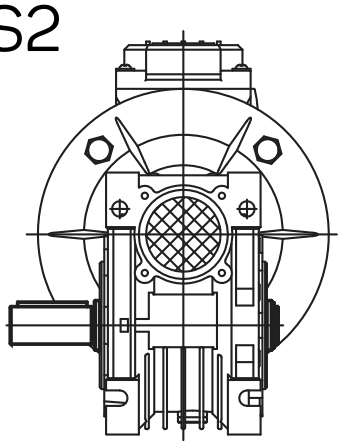


Output shaft of worm (SS, DS)

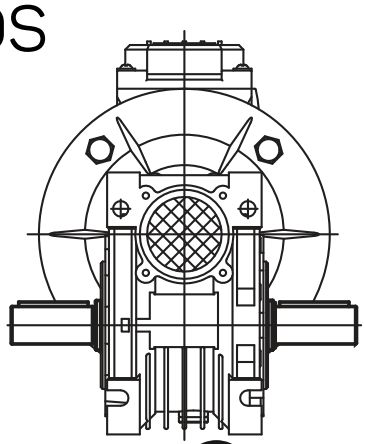
SS1



SS2



DS



Lubrication

Lubrication volume for RW is related with mounting position of reducer.
All stock of RW reducers are filled with WA 320 lubrication according to B3 mounting position. For 110 and 130 reducers. If the mounting position is different from B3, a special indication is required.

Lubrication volume (liter)

RW	030	040	050	063	075	090	110	130	150
B3 B8 B6, B7 V5, V6	0.05	0.18	0.28	0.36	0.75	1.8	2.5	3.75	6.2

Lubrication volume of WF helical gear modular

Lubrication of WF helical reduction modular is apart from lubrication of reducers. Lubrication and the volume is irrespective with the mounting positions of WF.
WF helical reduction modular is filled with lubrication WA680 before shipment

PC063	PC071	PC080	PC090
0.18	0.28	0.31	0.31

Recommended lubrication

For domestic market		WA320/WA680
For export reducers		TELIUM VSF MELIANA OIL 320/680
	Mobil	MOBILGEAR 320/680 GLYGOYLE

WGMX power configuration (n_1=1400r/min)

WGMX		5	7.5	10	15	20	25	30	40	50	60	80	100
025	60W						NO						
	90W						NO						
030	60W												
	90W												
	120W												
	180W												
040	60W	•	•	•	•	•	•	•	•				
	90W	•	•	•	•	•	•	•	•				
	120W												
	180W												
	250W												
	370W												
	550W												
050	120W	•	•	•	•	•	•	•					
	180W	•	•	•	•	•	•	•					
	250W												
	370W												
	550W												
	750W												
063	250W	X	•	•	•	•	•	•	•	•	•	•	
	370W	X	•	•	•	•	•	•	•				
	550W	X	•	•									
	750W	X											
	1100W	X											
	1500W	X											
075	550W	X	•	•	•	•	•	•					
	750W	X	•	•	•	•	•						
	1100W	X											
	1500W	X											
	2200W	X											
	3000W	X											
	4000W	X											
090	750W	X	•	•	•	•	•	•	•				
	1100W	X	•	•	•	•	•	•					
	1500W	X	•	•	•	•							
	2200W	X											
	3000W	X											
	4000W	X											
110	1100W	X	•	•	•	•	•	•	•	•			
	1500W	X	•	•	•	•	•	•	•				
	2200W	X											
	3000W	X											
	4000W	X											
	5500W	X											
	7500W	X											
130	1500W	X	•	•	•	•	•	•	•	•	•		
	2200W	X	•	•	•	•	•	•	•				
	3000W	X	•	•	•	•	•	•					
	4000W	X											
	5500W	X											
	7500W	X											
150	2200W	X	•	•	•	•	•	•	•				
	3000W	X	•	•	•	•	•	•					
	4000W	X	•	•	•	•							
	5500W	X	•	•	•								
	7500W	X	•	•	•								
	11000W	X											
	15000W	X											

Note: • means allowed but not recommended configurations, space parts means unallowed configurations, X means no this ratio

WGMX performance parameter (n_1=1400r/min)

KW	TYPE	i	n_2(r/min)	M_2(N.M)
0.06KW	WGMX025	5	280	1,77
	WGMX025	7,5	187	2,58
	WGMX025	10	140	3,34
	WGMX025	15	93	4,72
	WGMX025	20	70	6,16
	WGMX025	30	47	7,83
	WGMX025	40	35	10,21
	WGMX025	50	28	11,93
	WGMX025	60	23	12,69
	WGMX030	5	280	1,8
	WGMX030	7,5	186	2,6
	WGMX030	10	140	3,4
	WGMX030	15	94	4,8
	WGMX030	20	70	5,5
	WGMX030	25	56	7,2
	WGMX030	30	47	8,2
	WGMX030	40	35	8,5
	WGMX030	50	28	11,6
	WGMX040			12,4
	WGMX030	60	24	12,8
	WGMX040			12,6
	WGMX030	80	18	13,8
	WGMX040			16,8
	WGMX040	100	14	19,5
0.09KW	WGMX025	5	280	2,65
	WGMX025	7,5	187	3,86
	WGMX025	10	140	5,00
	WGMX025	15	93	7,08
	WGMX025	20	70	9,24
	WGMX025	30	47	11,8
	WGMX025	40	35	15,3
	WGMX030	5	280	2,7
	WGMX030	7,5	186	4,0
	WGMX030	10	140	5,1
	WGMX030	15	94	7,2
	WGMX030	20	70	8,3
	WGMX030	25	56	10,7
	WGMX030	30	47	12,3
	WGMX030	40	35	12,8
	WGMX030	50	28	17,4
	WGMX040			18,6
	WGMX030	60	24	19,2
	WGMX040			19,0
	WGMX040	80	18	25,2
	WGMX040	100	14	29,3
0.12KW	WGMX030	5	280	3,6
	WGMX040			3,5
	WGMX030	7,5	186	5,3
	WGMX040			5,3
	WGMX030	10	140	6,8
	WGMX040			8,9
	WGMX030	15	94	9,6
	WGMX040			9,9
	WGMX030	20	70	11,0
	WGMX040			13,0
	WGMX030	25	56	14,3
	WGMX040			15,1
	WGMX030	30	47	16,4

KW	TYPE	i	n_2(r/min)	M_2(N.M)
0.12KW	WGMX040	30	47	16,6
	WGMX030	40	35	17,0
	WGMX040			21,9
	WGMX050			22,7
	WGMX030	50	28	23,2
	WGMX040			24,7
	WGMX050			26,0
	WGMX040	60	24	25,3
	WGMX050			26,2
	WGMX040	80	18	33,6
	WGMX050			34,7
	WGMX040	100	14	39,0
	WGMX050			39,6
0.18KW	WGMX030	5	280	5,4
	WGMX040			5,4
	WGMX030	7,5	186	7,9
	WGMX040			7,9
	WGMX030	10	140	10,2
	WGMX040			10,3
	WGMX030	15	94	14,4
	WGMX040			14,8
	WGMX030	20	70	16,5
	WGMX040			19,5
	WGMX030	25	56	21,5
	WGMX040			22,7
	WGMX030	30	47	24,6
	WGMX040			24,9
	WGMX040	40	35	32,8
	WGMX050			34,0
	WGMX040	50	28	37,1
	WGMX050			39,0
	WGMX040	60	24	37,9
	WGMX050			39,2
	WGMX050	80	18	52,1
	WGMX050	100	14	59,3
0.25KW	WGMX040	5	280	7,6
	WGMX050			7,6
	WGMX040	7,5	186	11,0
	WGMX050			11,2
	WGMX040	10	140	14,3
	WGMX050			14,5
	WGMX040	15	94	20,6
	WGMX050			20,7
	WGMX040	20	70	27,0
	WGMX050			27,5
	WGMX040	25	56	31,5
	WGMX050			32,8
	WGMX040	30	47	34,6
	WGMX050			36,4
	WGMX040	40	35	45,6
	WGMX050			47,3
	WGMX050	50	28	54,1
	WGMX050	60	24	54,5
	WGMX050	80	18	72,4
	WGMX063			76,7
	WGMX063	100	14	82,8
0.37KW	WGMX040	5	280	11,2
	WGMX050			11,2

WGMX performance parameter (n_1=1400r/min)

KW	TYPE	i	n_2(r/min)	M_2(N.M)
0,37KW	WGMX040	7,5	186	16,30
	WGMX050			16,60
	WGMX040	10	140	21,20
	WGMX050	10	140	21,50
	WGMX040	15	94	30,50
	WGMX050			30,60
	WGMX040	20	70	40,00
	WGMX050			40,70
	WGMX040	25	56	46,60
	WGMX050			48,7
	WGMX040	30	47	51,2
	WGMX050			53,8
	WGMX050	40	35	67,0
	WGMX063			72,3
	WGMX050	50	28	80,1
	WGMX063			83,3
	WGMX050	60	24	80,6
	WGMX063	60	24	86,5
	WGMX063	80	18	113,5
	WGMX063	100	14	122,6
0.55KW	WGMX040	5	280	16,6
	WGMX050			16,7
	WGMX040	7,5	186	24,3
	WGMX050			24,6
	WGMX040	10	140	31,50
	WGMX050			32,00
	WGMX040	15	94	45,30
	WGMX050			45,50
	WGMX063			46,70
	WGMX050	20	70	60,5
	WGMX063			61,6
	WGMX050	25	56	72,3
	WGMX063			73,2
	WGMX050	30	47	80,0
	WGMX063			83,3
	WGMX050	40	35	104,0
	WGMX063			107,5
	WGMX075			115,7
	WGMX050	50	28	123,9
	WGMX063			144,3
	WGMX063	60	24	128,6
	WGMX075			156,5
	WGMX075	80	18	215,8
	WGMX075	100	14	235,0
0,75KW	WGMX050	5	280	22,7
	WGMX050	7,5	186	33,6
	WGMX063			33,8
	WGMX050	10,0	140	43,6
	WGMX063			44,5
	WGMX050	15	94	62,0
	WGMX063			63,7
	WGMX050	20	70	82,4
	WGMX063			84,0
	WGMX063	25	56	99,8
	WGMX063	30	47	113,6
	WGMX075			124,4
	WGMX063	40	35	146,6
	WGMX075			157,8

KW	TYPE	i	n_2(r/min)	M_2(N.M)
0,75KW	WGMX075	50	28	196,8
	WGMX090			186,1
	WGMX075	60	24	213,4
	WGMX090			211,9
	WGMX090	80	18	261,1
	WGMX090	100	14	292,7
1,1KW	WGMX063	7,5	186	49,6
	WGMX075			51,4
	WGMX063	10	140	65,3
	WGMX075			67,8
	WGMX063	15	94	93,5
	WGMX075			98,6
	WGMX063	20	70	123,2
	WGMX075			127,7
	WGMX063	25	56	146,4
	WGMX075			159,2
	WGMX063	30	47	166,7
	WGMX075			182,5
	WGMX075	40	35	231,4
	WGMX090	40	35	229,7
	WGMX090	50	28	272,9
	WGMX090	60	24	310,8
	WGMX110			319,1
	WGMX110	80	18	403,8
	WGMX110	100	14	471,2
1,5KW	WGMX063	7,5	186	67,6
	WGMX075			70,1
	WGMX063	10	140	89,1
	WGMX075			92,5
	WGMX063	15	94	127,5
	WGMX075			134,5
	WGMX063	20	70	167,9
	WGMX075			174,1
	WGMX075	25	56	217,1
	WGMX090			211,0
	WGMX075	30	47	248,9
	WGMX090			247,1
	WGMX090	40	35	313,3
	WGMX090	50	28	372,1
	WGMX110			392,9
	WGMX090	60	24	423,8
	WGMX110			435,1
	WGMX110	80	18	550,7
	WGMX130			534,0
	WGMX130	100	14	672,2
2,2KW	WGMX075	7,5	186	102,8
	WGMX090			101,9
	WGMX110			101,8
	WGMX075	10	140	135,7
	WGMX090			134,8
	WGMX110			133,7
	WGMX075	15	94	197,3
	WGMX090			196,7
	WGMX110			192,7
	WGMX090	20	70	254,9
	WGMX110			254,5
	WGMX090	25	56	309,5
	WGMX110			319,2

WGMX performance parameter (n_1=1400r/min)

KW	TYPE	i	n_2(r/min)	M_2(N.M)
2,2KW	WGMX090	30	47	362,4
	WGMX110			354,5
	WGMX110	40	35	465,8
	WGMX110	50	28	576,2
	WGMX130			568,7
	WGMX150			583,7
	WGMX110	60	24	638,1
	WGMX130			655,6
	WGMX150			664,5
	WGMX130	80	18	783,1
	WGMX150			841,5
	WGMX130	100	14	985,9
	WGMX150			957,4
3,0KW	WGMX075	7,5	186	140,1
	WGMX090			139,0
	WGMX110			138,8
	WGMX075	10	140	185,0
	WGMX090			183,8
	WGMX110			182,3
	WGMX075	15	94	269,0
	WGMX090			268,2
	WGMX110			262,7
	WGMX090	20	70	347,7
	WGMX110			347,0
	WGMX090	25	56	422,0
	WGMX110			435,3
	WGMX090	30	47	494,1
	WGMX110			483,3
	WGMX110	40	35	635,1
	WGMX130			637,6
	WGMX150			635,1
	WGMX110	50	28	785,8
	WGMX130			775,5
	WGMX150			796,0
	WGMX130	60	24	894,0
	WGMX150			906,1
	WGMX150	80	18	1147,5
	WGMX150	100	14	1305,5
4.0KW	WGMX075	7,5	186	186,8
	WGMX090			185,3
	WGMX110			185,0
	WGMX130			187,1
	WGMX090	10	140	245,1
	WGMX110			243,1
	WGMX130			243,1
	WGMX090	15	94	357,7
	WGMX110			350,3
	WGMX130			354,3
	WGMX090	20	70	463,5
	WGMX110			462,7
	WGMX130			469,3

KW	TYPE	i	n_2(r/min)	M_2(N.M)
4,0KW	WGMX110	25	56	580,4
	WGMX130			576,4
	WGMX150			580,4
	WGMX110	30	47	644,5
	WGMX130			652,6
	WGMX150			681,0
	WGMX130	40	35	850,1
	WGMX150			846,9
	WGMX130	50	28	1034,0
	WGMX150			1061,3
	WGMX130	60	24	1192,0
	WGMX150			1208,1
	WGMX150	80	18	1530,0
5,5KW	WGMX110	7,5	186	254,4
	WGMX130			257,2
	WGMX110	10	140	334,3
	WGMX130			334,3
	WGMX110	15	94	481,6
	WGMX130			487,2
	WGMX110	20	70	636,2
	WGMX130			645,2
	WGMX150			643,7
	WGMX130	25	56	792,5
	WGMX150			798,1
	WGMX130	30	47	897,3
	WGMX150			936,4
	WGMX130	40	35	1168,9
	WGMX150			1164,4
	WGMX150	50	28	1459,3
	WGMX150	60	23	1661,7
7,5KW	WGMX110	7,5	186	346,9
	WGMX130			350,8
	WGMX110	10	140	455,8
	WGMX130			455,8
	WGMX130	15	94	664,8
	WGMX130	20	70	879,9
	WGMX150			870,7
	WGMX130	25	56	1080,7
	WGMX150			1064,0
	WGMX150	30	47	1190,9
	WGMX150	40	35	1592,0
11KW	WGMX150	7,5	187	512,6
	WGMX150	10	140	676,0
	WGMX150	15	94	991,5
	WGMX150	20	70	1287,5
	WGMX150	25	56	1596,2
15KW	WGMX150	7,5	187	699,0
	WGMX150	10	140	921,8
	WGMX150	15	94	1352,0
	WGMX150	20	70	1755,7

PWGMX power configuration (n_1=1400r/min)

WF + WGMX	i_{RW}	25	30	40	50	60	80	100
PWGMX063/040 (i_{PC}=3)	0,12KW	■	■	■	■	■	■	■
	0,18KW	■	■	■				
PWGMX063/050 (i_{PC}=3)	0,12KW				■	■	■	■
	0,18KW	■	■	■	■	■	■	■
PWGMX063/063 (i_{PC}=3)	0,12KW						■	■
	0,18KW				■	■	■	■
PWGMX071/050 (i_{PC}=3)	0.25KW	■	■	■				
PWGMX071/063 (i_{PC}=3)	0.25KW	■	■	■	■	■	■	■
	0.37KW	■	■	■	■			
PWGMX071/075 (i_{PC}=3)	0.25KW				■	■	■	■
	0.37KW	■	■	■	■	■		
PWGMX071/090 (i_{PC}=3)	0.37KW					■	■	■
PWGMX080/075 (i_{PC}=3)	0.55KW	■	■	■	■			
	0.75KW	■	■					
PWGMX080/090 (i_{PC}=3)	0.55KW		■	■	■	■	■	
	0.75KW	■	■	■	■	■		
PWGMX080/110 (i_{PC}=3)	0.55KW					■	■	■
	0.75KW	■	■	■	■	■	■	
PWGMX080/130 (i_{PC}=3)	0.55KW						■	■
	0.75KW					■	■	■
PWGMX090/110 (i_{PC}=3)	1.1KW		■	■	■	■	■	
	1.5KW		■	■	■	■		
PWGMX090/130 (i_{PC}=3)	1.1KW		■	■	■	■	■	■
	1.5KW		■	■	■	■	■	

PWGMX performance parameter (n_1=1400r/min)

KW	WF+WGMX	i	n_2	M_2(N.M)	i_1	i_2
0,12KW	PWGMX063/040	75	18,7	43,0	3	25
	PWGMX063/040	90	15,6	47,2	3	30
	PWGMX063/040	120	11,7	62,3	3	40
	PWGMX063/040	150	9,3	70,4	3	50
	PWGMX063/050			73,9	3	50
	PWGMX063/040	180	7,8	71,9	3	60
	PWGMX063/050			74,5	3	60
	PWGMX063/040	240	5,8	95,7	3	80
	PWGMX063/050			98,9	3	80
	PWGMX063/063			104,9	3	80
	PWGMX063/040	300	4,7	111,3	3	100
	PWGMX063/050			112,7	3	100
	PWGMX063/063			113,4	3	100
0,18KW	PWGMX063/040	75	18,7	64,6	3	25
	PWGMX063/050			67,4	3	25
	PWGMX063/040	90	15,6	70,9	3	30
	PWGMX063/050			74,6	3	30
	PWGMX063/040	120	11,7	93,5	3	40
	PWGMX063/050			97,0	3	40
	PWGMX063/050	150	9,3	110,9	3	50
	PWGMX063/063			115,5	3	50
	PWGMX063/050	180	7,8	111,7	3	60
	PWGMX063/063			119,9	3	60
	PWGMX063/050	240	5,8	148,4	3	80
	PWGMX063/063			157,3	3	80
	PWGMX063/050	300	4,7	169,0	3	100
	PWGMX063/063			170,1	3	100
0,25KW	PWGMX071/050	75	18,7	99,0	3	25
	PWGMX071/063			100,2	3	25
	PWGMX071/050	90	15,6	109,5	3	30
	PWGMX071/063			114,0	3	30
	PWGMX071/050	120	11,7	142,3	3	40
	PWGMX071/063			147,1	3	40
	PWGMX071/063	150	9,3	169,5	3	50
	PWGMX071/075			197,4	3	50
	PWGMX071/063	180	7,8	175,9	3	60
	PWGMX071/075			214,1	3	60
	PWGMX071/063	240	5,8	230,9	3	80
	PWGMX071/075			295,4	3	80
	PWGMX071/063	300	4,7	249,6	3	100
	PWGMX071/075			321,5	3	100
0,37KW	PWGMX071/063	75	18,7	148,3	3	25
	PWGMX071/075			161,2	3	25
	PWGMX071/063	90	15,6	168,7	3	30
	PWGMX071/075			184,7	3	30
	PWGMX071/063	120	11,7	217,7	3	40
	PWGMX071/075			234,1	3	40
	PWGMX071/063	150	9,3	250,8	3	50
	PWGMX071/075			292,2	3	50
	PWGMX071/075	180	7,8	316,9	3	60
	PWGMX071/090			314,6	3	60
	PWGMX071/090	240	5,8	387,9	3	80
	PWGMX071/090	300	4,7	434,7	3	100
0.55KW	PWGMX080/075	75	18,7	226,7	3	25
	PWGMX080/075	90	15,6	259,8	3	30

KW	WF+WGMX	i	n_2	M_2(N.M)	i_1	i_2
0,55KW	PWGMX080/090	90	15,6	257,9	3	30
	PWGMX080/075	120	11,7	329,3	3	40
	PWGMX080/090	120	11,7	327,2	3	40
	PWGMX080/075	150	9,3	411,1	3	50
	PWGMX080/090			388,6	3	50
	PWGMX080/090	180	7,8	442,6	3	60
	PWGMX080/110			467,6	3	60
	PWGMX080/090	240	5,8	545,7	3	80
	PWGMX080/110			591,9	3	80
	PWGMX080/110	300	4,7	671,4	3	100
	PWGMX080/130			702,4	3	100
0,75KW	PWGMX080/075	75	18,7	309,1	3	25
	PWGMX080/090			300,3	3	25
	PWGMX080/110			310,2	3	25
	PWGMX080/075	90	15,6	354,3	3	30
	PWGMX080/090			351,7	3	30
	PWGMX080/110			346,8	3	30
	PWGMX080/090	120	11,7	446,1	3	40
	PWGMX080/110			452,5	3	40
	PWGMX080/090	150	9,3	530,0	3	50
	PWGMX080/110			559,8	3	50
	PWGMX080/090	180	7,8	603,6	3	60
	PWGMX080/110			637,7	3	60
	PWGMX080/110	240	5,8	807,1	3	80
	PWGMX080/130			782,6	3	80
	PWGMX080/130	300	4,7	957,9	3	100
1,1KW	PWGMX090/110	72,9	19,2	410,4	2,43	30
	PWGMX090/130			415,5	2,43	30
	PWGMX090/110	97,2	14,4	535,4	2,43	40
	PWGMX090/130			537,5	2,43	40
	PWGMX090/110	121,5	11,5	662,4	2,43	50
	PWGMX090/130			653,7	2,43	50
	PWGMX090/110	145,8	9,6	754,5	2,43	60
	PWGMX090/130			775,2	2,43	60
	PWGMX090/110	194,4	7,2	954,9	2,43	80
	PWGMX090/130			925,9	2,43	80
	PWGMX090/130	243	5,8	1133,3	2,43	100
1.5KW	PWGMX090/110	72,9	19,2	559,6	2,43	30
	PWGMX090/130			566,6	2,43	30
	PWGMX090/110	97,2	14,4	730,1	2,43	40
	PWGMX090/130			732,9	2,43	40
	PWGMX090/110	121,5	11,5	903,2	2,43	50
	PWGMX090/130			891,5	2,43	50
	PWGMX090/110	145,8	9,6	1028,8	2,43	60
	PWGMX090/130			1057,0	2,43	60
	PWGMX090/130	194,4	7,2	1262,6	2,43	80

WXR power configuration (n_1=1400r/min)

WGMX + WGMX	$i=i_1xi_2$	300	400	500	600	750	900	1200	1500	1800	2400	3000	3200
WXR030/040	0,06KW	■	■	■	■	■	■	■	■	■	■	■	■
	0,09KW	■											
WXR030/050	0,06KW						■	■	■	■	■	■	
	0,09KW		■	■	■	■							
	0,12KW	■	■										
	0,18KW	■											
WXR030/063	0,06KW								■	■	■	■	
	0,09KW						■	■					
	0,12KW			■	■	■							
	0,18KW	■	■	■									
WXR040/075	0,06KW										■	■	
	0,09KW								■	■			
	0,12KW						■	■					
	0,18KW				■	■							
	0.25KW	■	■	■									
	0.37KW	■											
WXR040/090	0.09KW										■	■	
	0,12KW								■	■	■		
	0,18KW						■	■	■				
	0.25KW				■	■	■						
	0.37KW	■	■	■	■								
WXR050/110	0,12KW											■	
	0,18KW									■	■		
	0.25KW							■	■	■			
	0.37KW					■	■						
	0.55KW	■	■	■	■	■							
	0.75KW	■	■										
WXR063/130	0.25KW										■	■	
	0.37KW							■	■	■			
	0.55KW							■					
	0.75KW			■	■	■	■						
	1.1KW	■	■										
	1.5KW	■											

Note: Space parts means unallowed configurations

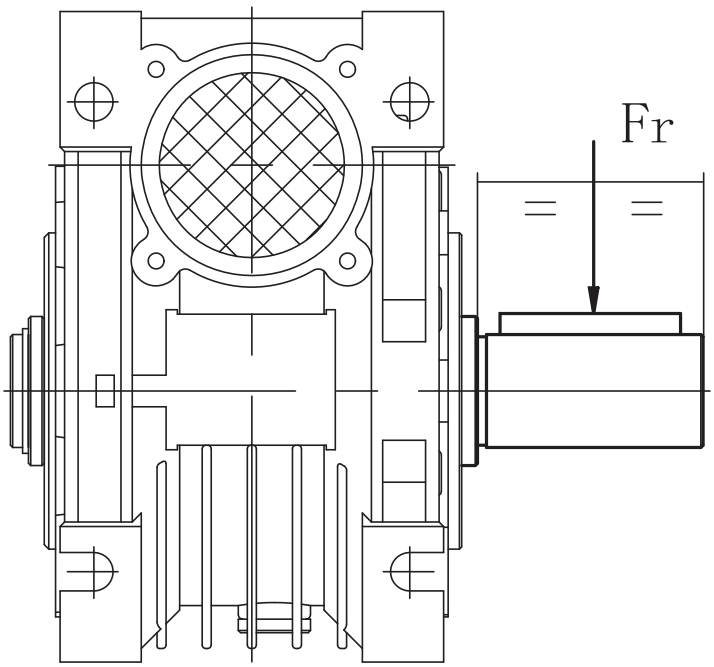
WXR performance parameter (n_1=1400r/min)

KW	WGMX+WGMX	i	$n_{2(r/min)}$	M_2(N.M)	i_1	i_2
0,12KW	WXR030/040	300	4,7	68,7	10	30
	WXR030/040	400	3,5	90,7	10	40
	WXR030/040	500	2,8	101,6	20	25
	WXR030/040	600	2,3	111,5	20	30
	WXR030/040	750	1,9	145,0	25	30
	WXR030/040	900	1,6	165,8	30	30
	WXR030/050			174,7	30	30
	WXR030/040	1200	1,2	218,8	30	40
	WXR030/050			227,0	30	40
	WXR030/040	1500	0,9	234,9	50	30
	WXR030/050			247,5	50	30
	WXR030/063			270,2	30	50
	WXR030/040	1800	0,8	258,6	60	30
	WXR030/050			272,3	60	30
	WXR030/063			280,6	30	60
	WXR030/040	2400	0,6	341,2	60	40
	WXR030/050			353,9	60	40
	WXR030/063			365,7	60	40
	WXR040/075			388,7	60	40
	WXR030/040	3000	0,5	385,6	60	50
	WXR030/050			404,8	60	50
	WXR030/063			421,4	60	50
	WXR040/075			485,3	60	50
	WXR030/040	3200	0,4	369,2	80	40
0,09KW	WXR030/040	300	4,7	103,1	10	30
	WXR030/050	400	3,5	141,1	10	40
	WXR030/050	500	2,8	161,3	10	50
	WXR030/050	600	2,3	176,2	20	30
	WXR030/050	750	1,9	229,1	25	30
	WXR030/063	900	1,6	272,7	30	30
	WXR030/063	1200	1,2	351,8	30	40
	WXR040/075	1500	0,9	450,5	50	30
	WXR040/075	1800	0,8	460,0	60	30
	WXR040/090	2400	0,6	579,3	60	40
	WXR040/090	3000	0,5	688,2	60	50
0,12KW	WXR030/050	300	4,7	144,7	10	30
	WXR030/050	400	3,5	188,1	10	40
	WXR030/063	500	2,8	223,9	10	50
	WXR030/063	600	2,3	275,0	15	40
	WXR030/063	750	1,9	316,8	15	50
	WXR040/075	900	1,6	402,8	30	30
	WXR030/063	1200	1,2	469,1	30	40
	WXR040/075			510,5	30	40
	WXR040/090	1500	0,9	602,5	30	50
	WXR040/090	1800	0,8	686,2	30	60
	WXR040/090	2400	0,6	772,4	60	40
	WXR050/110	3000	0,5	1003,2	60	50
0,18KW	WXR030/050	300	4,7	217,1	10	30
	WXR030/063	400	3,5	291,5	10	40
	WXR030/063	500	2,8	335,9	10	50
	WXR040/075	600	2,3	472,6	20	30

KW	WGMX+WGMX	i	$n_{2(r/min)}$	M_2(N.M)	i_1	i_2
0,18KW	WXR040/075	750	1,9	550,4	25	30
	WXR040/090	900	1,6	599,7	30	30
	WXR040/090	1200	1,2	760,8	30	40
	WXR040/090	1500	0,9	903,7	30	50
	WXR050/110	1800	0,8	932,3	60	30
	WXR050/110	2400	0,6	1216,4	60	40
0,25KW	WXR040/075	300	4,7	347,6	10	30
	WXR040/075	400	3,5	440,6	10	40
	WXR040/075	500	2,8	550,1	10	50
	WXR040/090	600	2,3	639,1	15	40
	WXR040/090	750	1,9	790,7	15	50
	WXR040/090	900	1,6	900,6	15	60
	WXR050/110	1200	1,2	1129,0	30	40
	WXR050/110	1500	0,9	1285,9	50	30
	WXR050/110	1800	0,8	1294,9	60	30
	WXR063/130	2400	0,6	1820,3	60	40
	WXR063/130	3000	0,5	2214,1	60	50
0,37KW	WXR040/075	300	4,7	514,5	10	30
	WXR040/090			499,3	7,5	40
	WXR040/090	400	3,5	647,9	10	40
	WXR040/090	500	2,8	769,7	10	50
	WXR040/090	600	2,3	932,5	15	40
	WXR050/110	750	1,9	1157,2	25	30
	WXR050/110	900	1,6	1280,6	30	30
	WXR063/130	1200	1,2	1741,2	40	30
	WXR063/130	1500	0,9	2006,2	50	30
	WXR063/130	1800	0,8	2082,8	60	30
0,55KW	WXR050/110	300	4,7	760,4	10	30
	WXR050/110	400	3,5	992,1	10	40
	WXR050/110	500	2,8	1227,3	10	50
	WXR050/110	600	2,3	1411,3	15	40
	WXR050/110	750	1,9	1720,2	25	30
	WXR063/130	1200	1,6	2595,0	30	40
0,75KW	WXR050/110	300	4,7	1036,9	10	30
	WXR050/110	400	3,5	1352,9	10	40
	WXR063/130	500	2,8	1686,7	10	50
	WXR063/130	600	2,3	1984,5	15	40
	WXR063/130	750	1,9	2403,0	25	30
	WXR063/130	900	1,6	2735,8	30	30
1,1KW	WXR063/130	300	4,7	1572,5	10	30
	WXR063/130	400	3,5	2033,9	10	40
1,5KW	WXR063/130	300	4,7	2144,3	10	30

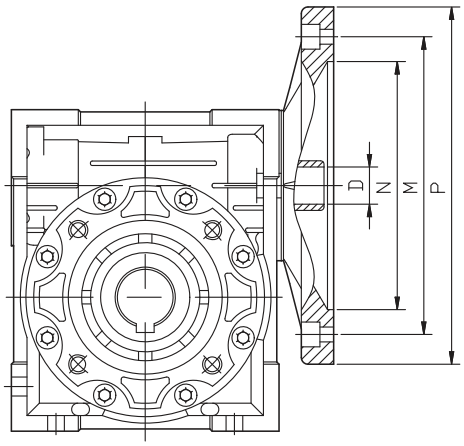
Allowed radial loading force on output shaft of reducer (N)

i	n_2	RW030	RW040	RW050	RW063	RW075	RW090	RW110	RW130	RW150
5	280	599	1149	1586	2062	2428	2687	3389	4433	–
7,5	186	691	1325	1829	2378	2799	3098	3908	5112	6962
10	140	758	1454	2007	2609	3072	3400	4288	5610	7663
15	94	868	1665	2298	2988	3518	3893	4910	6424	8777
20	70	954	1829	2525	3283	3865	4277	5395	7057	9654
25	56	1033	1981	2735	3556	4187	4633	5844	7645	10400
30	47	1088	2087	2881	3745	4410	4880	6155	8052	11051
40	35	1204	2309	3188	4145	4880	5401	6812	8912	12163
50	28	1296	2485	3431	4461	5252	5812	7331	9590	13103
60	24	1381	2649	3658	4756	5599	6196	7815	10224	13924
80	18	1516	2907	4014	5218	6144	6799	8576	11219	15325
100	14	1638	3142	4338	5639	6639	7348	9268	12124	16508



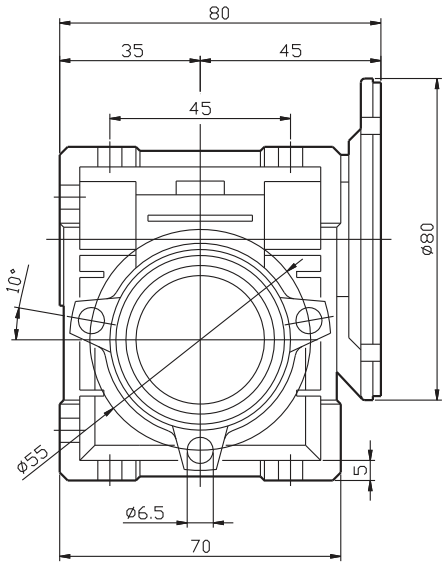
-Above table is the allowed loading force on the midpoint of output shaft.
-When the reducer is with double output shafts, the resultant radial power at the edge of shaft should not exceed the values specified as in above table.
-The max allowed axial thrust is 1/5 of radial force while the radial force and axial force effected together.

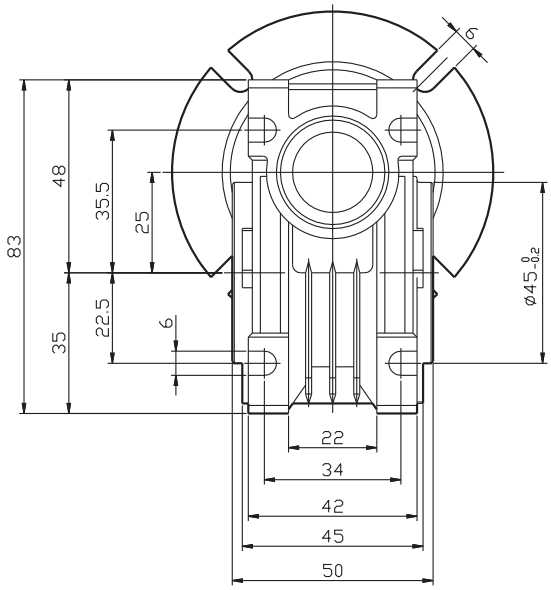
Motor connection for WGMX reducer

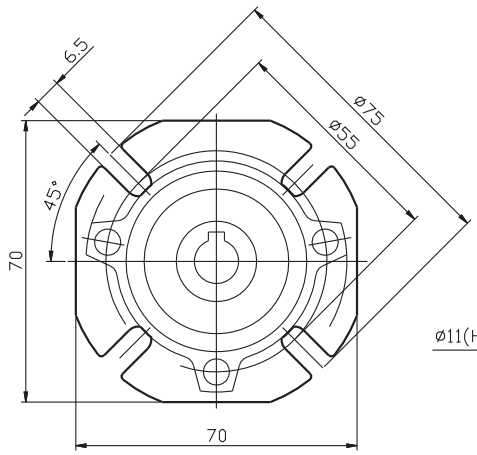


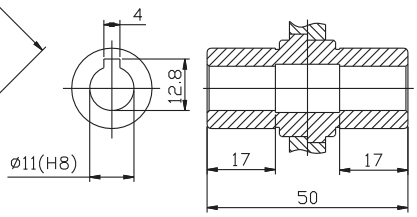
WGMX	PAM IEC	N		M		P		5	7,5	10	15	20	25	30	40	50	60	80	100
		B5	B14	B5	B14	B5	B14	D											
025	56B14	-	50	-	65	-	80	9	9	9	9	9	-	9	9	9	9	-	-
030	56B5/B14	80	50	100	65	120	80	9	9	9	9	9	9	9	9	9	9	9	-
	63B5/B14	95	60	115	75	140	90	11	11	11	11	11	11	11	11	11	-	-	-
040	56B5/B14	80	50	100	65	120	80	-	-	-	-	-	-	-	-	9	9	9	9
	63B5/B14	95	60	115	75	140	90	11	11	11	11	11	11	11	11	11	11	11	11
	71B5/B14	110	70	130	85	160	105	14	14	14	14	14	14	14	14	-	-	-	-
050	63B5/B14	95	60	115	75	140	90	-	-	-	-	-	-	-	11	11	11	11	11
	71B5/B14	110	70	130	85	160	105	14	14	14	14	14	14	14	14	14	14	14	-
	80B5/B14	130	80	165	100	200	120	19	19	19	19	19	19	19	19	-	-	-	-
063	71B5/B14	110	70	130	85	160	105	-	-	-	-	-	-	-	14	14	14	14	14
	80B5/B14	130	80	165	100	200	120	-	19	19	19	19	19	19	19	19	19	19	19
	90B5/B14	130	95	165	115	200	138	-	24	24	24	24	24	-	-	-	-	-	-
075	71B5	110	-	130	-	160	-	-	-	-	-	-	-	-	-	14	14	14	14
	80B5/B14	130	80	165	100	200	120	-	-	-	-	-	-	19	19	19	19	19	19
	90B5/B14	130	95	165	115	200	138	-	24	24	24	24	24	24	24	-	-	-	-
	100B5/B14	180	110	215	130	250	160	-	28	28	28	-	-	-	-	-	-	-	-
	112B5/B14	180	110	215	130	250	160	-	28	-	-	-	-	-	-	-	-	-	-
090	80B5/B14	130	80	165	100	200	120	-	-	-	-	-	-	-	-	19	19	19	19
	90B5/B14	130	95	165	115	200	138	-	-	-	-	-	24	24	24	24	24	-	-
	100B5/B14	180	110	215	130	250	160	-	28	28	28	28	28	28	-	-	-	-	-
	112B5/B14	180	110	215	130	250	160	-	28	28	28	28	-	-	-	-	-	-	-
110	90B5/B14	130	-	165	-	200	-	-	-	-	-	-	-	-	-	24	24	24	24
	100B5	180	-	215	-	250	-	-	28	28	28	28	28	28	28	28	28	-	-
	112B5	180	-	215	-	250	-	-	28	28	28	28	28	28	-	-	-	-	-
	132B5	230	-	265	-	300	-	-	38	38	38	38	-	-	-	-	-	-	-
130	90B5	130	-	165	-	200	-	-	-	-	-	-	-	-	-	-	-	24	24
	100B5	180	-	215	-	250	-	-	-	-	-	-	-	-	28	28	28	28	28
	112B5	180	-	215	-	250	-	-	28	28	28	28	28	28	28	28	28	-	-
	132B5	230	-	265	-	300	-	-	38	38	38	38	38	38	38	-	-	-	-
150	100/112B5	180	-	215	-	250	-	-								28	28	28	28
	132B5	230	-	265	-	300	-	-	-	-	-	38	38	38	38	38	38	-	-
	160B5	250	-	300	-	350	-	-	42	42	42	42	42	-	-	-	-	-	-

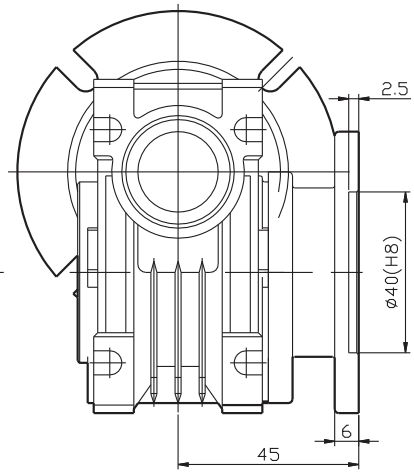
WGMX025 dimensions



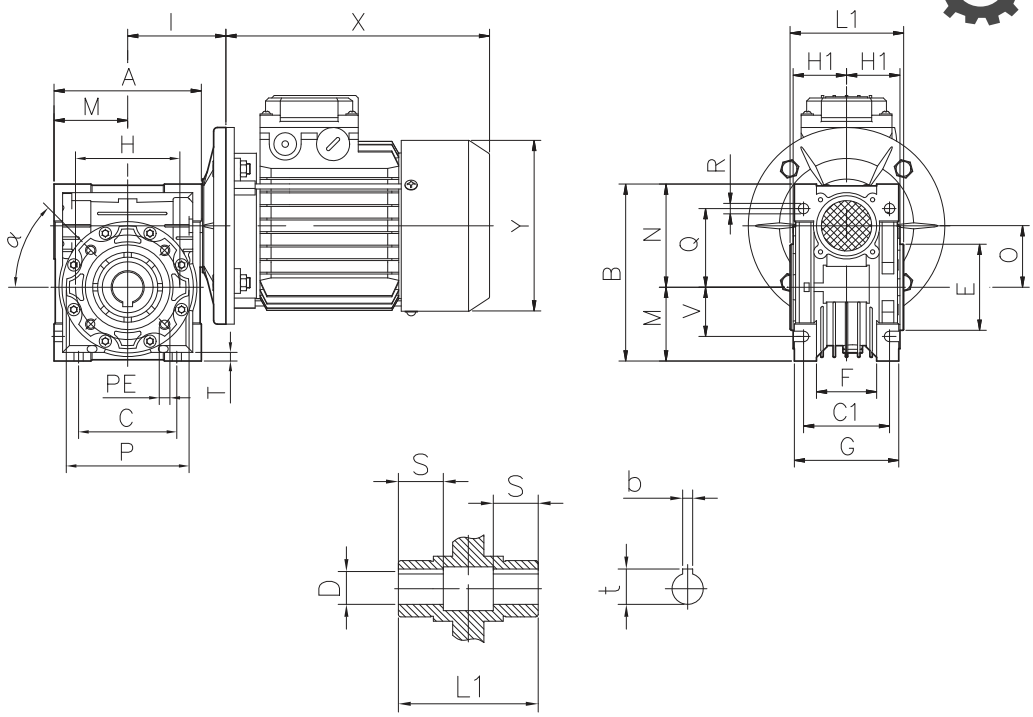








WGMX dimensions

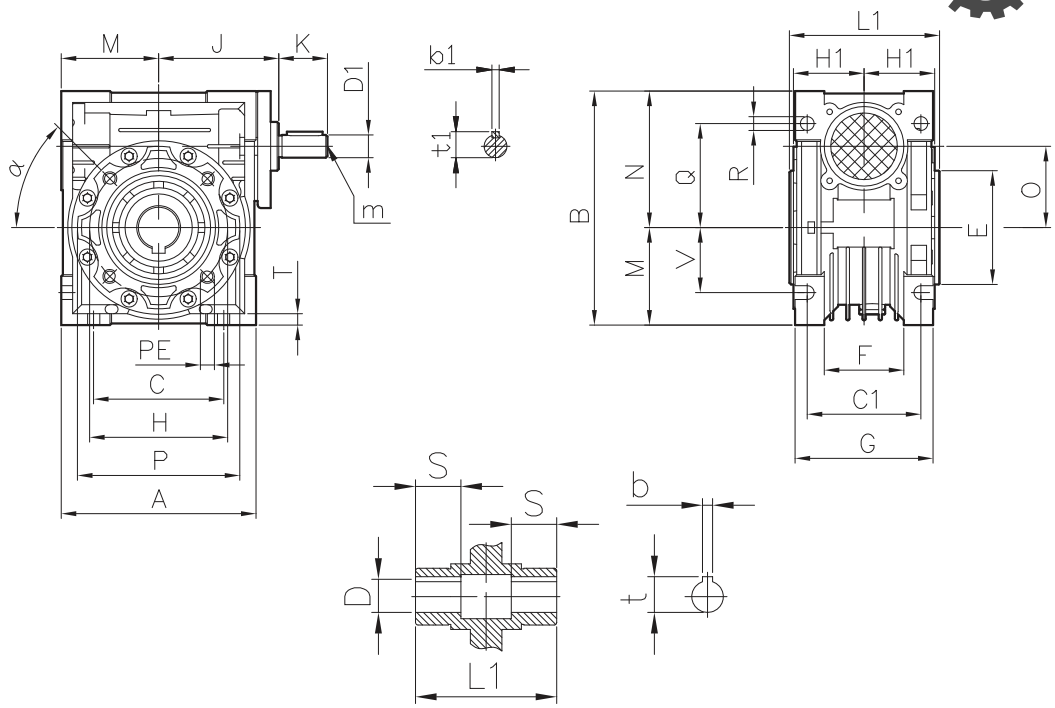


WGMX	A	B	C	C1	D(H7)	E(h8)	G	H	H1	I	L1	M	N	O
030	80	97	54	44	14	55	56	65	29	55	63	40	57	30
040	100	121,5	70	60	18(19)	60	71	75	36.5	70	78	50	71.5	40
063	120	144	80	70	25/24	70	85	85	43,5	80	92	60	84	50
075	144	174	100	85	25(28)	80	103	95	53	95	112	72	102	63
090	172	205	120	90	28(35)	95	112	115	57	112.5	120	86	119	75
110	206	238	140	100	35(38)	110	130	130	67	129.5	140	103	135	90
130	255	295	170	115	42	130	144	165	74	160	155	127.5	167.5	110
130	293	335	200	120	45	180	155	215	81	179	170	146.5	187.5	130
150	340	400	240	145	50	180	185	215	96	210	200	170	230	150

WGMX	P	Q	R	S	T	V	PE	b	t	α	Kg.
030	75	44	6.5	21	5.5	27	M6x11(n=4)	5	16.3	0°	1.2
040	87	55	6.5	26	6.5	35	M6x8(n=4)	6	20.8(21.8)	45°	2.3
050	100	64	8.5	30	7	40	M8x10(n=4)	8	28.3(27.3)	45°	3.8
063	110	80	8.5	36	8	50	M8x14(n=8)	8	28.3(31.3)	45°	6.2
075	140	93	11	40	10	60	M8x14(n=8)	8(10)	31.3(38.3)	45°	9
090	160	102	13	45	11	70	M10x18(n=8)	10	38.3(41.3)	45°	13
110	200	125	14	50	14	85	M10x18(n=8)	12	45.3	45°	42.5
130	250	140	16	60	15	100	M12x21(n=8)	14	48.8	45°	59
150	250	180	18	72.5	18	120	M12x21(n=8)	14	53.8	45°	87

NOTE: Weight (Kg): without the weight of motor

NWGMX dimensions

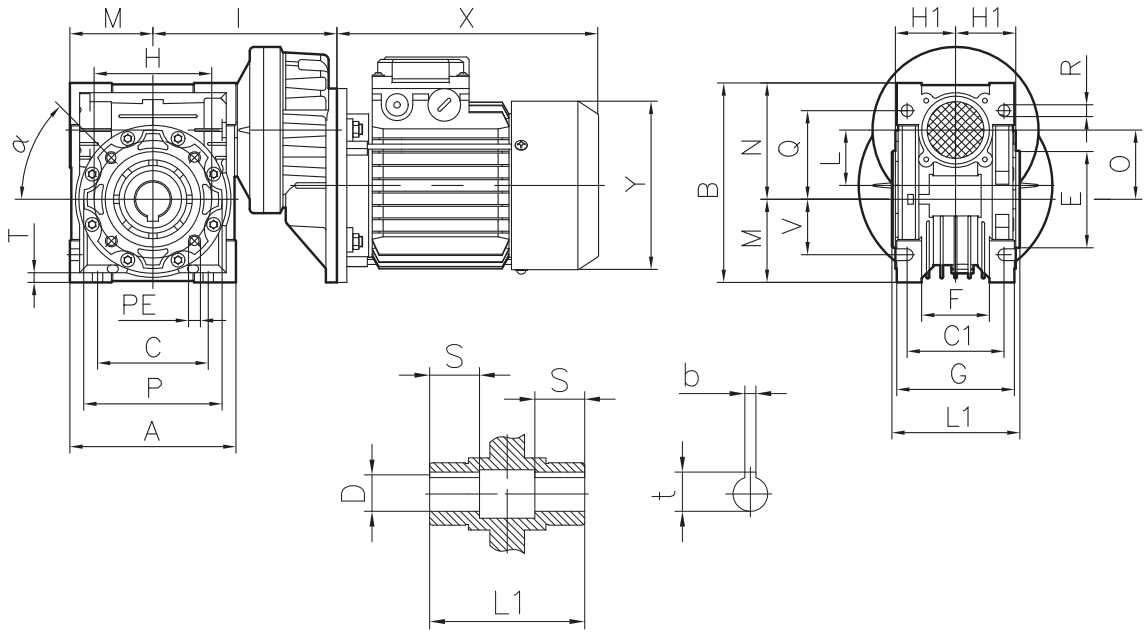


NWGMX	A	B	C	C1	D(H7)	E(H8)	F	G	H	H1	J	K	L1	M	N	O	P
030	80	97	54	44	14	55	32	56	65	29	51	20	63	40	57	30	75
040	100	121,5	70	60	18(19)	60	43	71	75	36,5	60	23	78	50	71,5	40	87
063	120	144	80	70	25(24)	70	49	85	85	43,5	74	30	92	60	84	50	100
075	144	174	100	85	25(28)	80	67	103	95	53	90	40	112	72	102	63	110
090	172	205	120	90	28(35)	95	72	112	115	57	105	50	120	86	119	75	140
110	206	238	140	100	35(38)	110	74	130	130	67	125	50	140	103	135	90	160
130	255	295	170	115	42	130	-	144	165	74	142	60	155	127.5	167,5	110	200
130	293	335	200	120	45	180	-	155	215	81	162	80	170	146.5	187,5	130	250
150	340	400	240	145	50	180	-	185	215	96	195	80	200	170	230	150	250

NWGMX	Q	R	S	T	V	PE	b	b1	t	t_1	m	α	Kg
030	44	6,5	21	5,5	27	M6x11(n=4)	5	3	16,3	10,2	-	0°	1,2
040	55	6,5	26	6,5	35	M6x8(n=4)	6	4	20,8(21,8)	12,5	-	45°	2,3
050	64	8,5	30	7	40	M8x10(n=4)	8	5	28,3(27,3)	16,0	M6	45°	3,8
063	80	8,5	36	8	50	M8x14(n=8)	8	6	28,3(31,3)	21,5	M6	45°	6,2
075	93	11	40	10	60	M8x14(n=8)	8(10)	8	31,1(38,3)	27,0	M8	45°	9
090	102	13	45	11	70	M10x18(n=8)	10	8	38,3(41,3)	27,0	M8	45°	13
110	125	14	50	14	85	M10x18(n=8)	12	8	45,3	31,0	M10	45°	42,5
130	140	16	60	15	100	M12x21(n=8)	14	8	48,8	33,0	M10	45°	59
150	180	18	72,5	18	120	M12x21(n=8)	14	10	53,8	38,0	M12	45°	87

NOTE: Weight (Kg): without the weight of motor

PWGMX dimensions

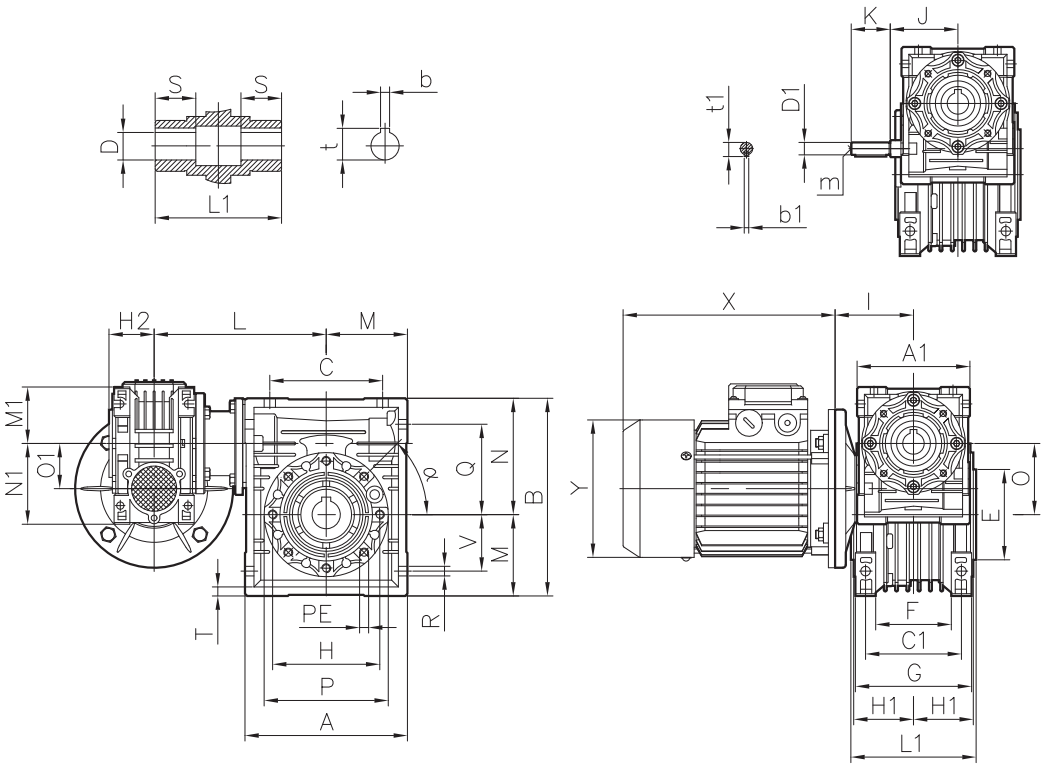


PWGMX	A	B	C	C1	D(H7)	E(H8)	F	G	H	H1	I	L	L1	M	N	O	P
063/040	100	121,5	70	60	18(19)	60	43	71	75	36,5	123	40	78	50	71,5	40	87
063/050	120	144	80	70	25(24)	70	49	85	85	43,5	133	40	92	60	84	50	100
071/050	120	144	80	70	25(24)	70	49	85	85	43,5	143	50	92	60	84	50	100
063/063	144	174	100	85	25(28)	80	67	103	95	53	148	40	112	72	102	63	110
071/063	144	174	100	85	25(28)	80	67	103	95	53	158	50	112	72	102	63	110
071/075	172	205	120	90	28(35)	95	72	112	115	57	176	50	120	86	119	75	140
080/075	172	205	120	90	28(35)	95	72	112	115	57	186	63	120	86	119	75	140
071/090	206	238	140	100	35(38)	110	74	130	130	67	193	50	140	103	135	90	160
080/090	206	238	140	100	35(38)	110	74	130	130	67	203	63	140	103	135	90	160
080(090)/110	255	295	170	115	42	130	-	144	165	74	233	63	155	127,5	167,5	110	200
080(090)/130	293	335	200	120	45	180	-	155	215	81	253	63	170	147,5	187,5	130	250

PWGMX	Q	R	S	T	V	PE	b	t	α	Kg
063/040	55	6,5	26	6,5	35	M6x8(n=4)	6	20,8(21,8)	45°	3,9
063/050	64	8,5	30	7	40	M8x10(n=4)	8	28,3(27,3)	45°	5,2
071/050	64	8,5	30	7	40	M8x10(n=4)	8	28,3(27,3)	45°	5,8
063/063	80	8,5	36	8	50	M8x14(n=8)	8	28,3(31,3)	45°	7,9
071/063	80	8,5	36	8	50	M8x14(n=8)	8	28,3(31,3)	45°	8,5
071/075	93	11	40	10	60	M8x14(n=8)	8	31,3(38,3)	45°	11,3
080/075	93	11	40	10	60	M8x14(n=8)	8(10)	31,3(38,3)	45°	13,1
071/090	102	13	45	11	70	M10x18(n=8)	10	38,3(41,3)	45°	15,3
080/090	102	13	45	11	70	M10x18(n=8)	10	38,3(41,3)	45°	17,2
080(090)/110	125	14	50	14	85	M10x18(n=8)	12	45,3	45°	39,0
080(090)/130	140	16	60	15	100	M12x21(n=8)	14	48,8	45°	52,2

NOTE: Weight (Kg): without the weight of motor

WXR dimensions

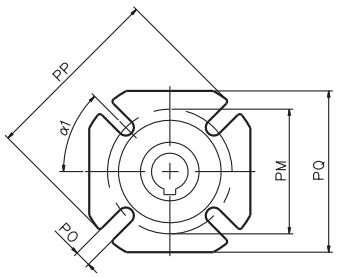


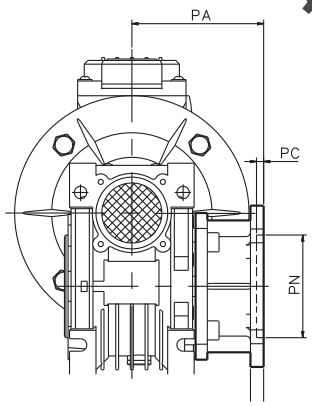
WXR	A	A1	B	C	C1	D1(H7)	D1(j6)	E(H8)	F	G	H	H1	H2	I	J	K	L	L1	M	M1	N
030/040	100	80	121,5	70	60	18(19)	9	60	43	71	75	36,5	29	123	51	20	120	78	50	40	71,5
030/050	120	80	144	80	70	25(24)	9	70	49	85	85	43,5	29	133	51	20	130	92	60	40	84
030/063	144	80	174	100	85	25(28)	9	80	67	103	95	53	29	148	51	20	145	112	72	40	102
040/075	172	100	205	120	90	28(35)	11	95	72	112	115	57	36,5	176	60	23	165	120	86	50	119
040/090	206	100	238	140	100	35(38)	11	110	74	130	130	67	36,5	193	60	23	182	140	103	50	135
050/110	255	120	295	170	115	42	14	130	-	144	165	74	43,5	233	74	30	225	155	127,5	60	167,5
063/130	293	144	335	200	120	45	19	180	-	155	215	81	53	253	90	40	245	170	146,5	72	187,5

WXR	N1	O	O1	P	Q	R	S	T	V	PE	α	b	b1	t	t1	m	Kg
030/040	57	40	30	87	55	6,5	26	6,5	35	M6x8(n=4)	45°	6(6)	3	20,8(21,8)	10,2	-	3,9
030/050	57	50	30	100	64	8,5	30	7	40	M8x10(n=4)	45°	8(8)	3	28,3(27,3)	10,2	-	5,0
030/063	57	63	30	110	80	8,5	36	8	50	M8x14(n=8)	45°	8(8)	3	28,3(31,3)	10,2	-	7,8
040/075	71,5	75	40	140	93	11	40	10	60	M8x14(n=8)	45°	8(10)	4	31,3(38,3)	12,5	-	12,0
040/090	71,5	90	40	160	102	13	45	11	70	M10x18(n=8)	45°	10	4	38,3(41,3)	12,5	-	16,0
050/110	84	110	50	200	125	14	50	14	85	M10x18(n=8)	45°	12	5	45,3	16,0	M6	39,2
063/130	102	130	63	250	140	16	60	15	100	M12x21(n=8)	45°	14	6	48,3	21,5	M6	55,0

NOTE: Weight (Kg): without the weight of motor

Output flange dimensions



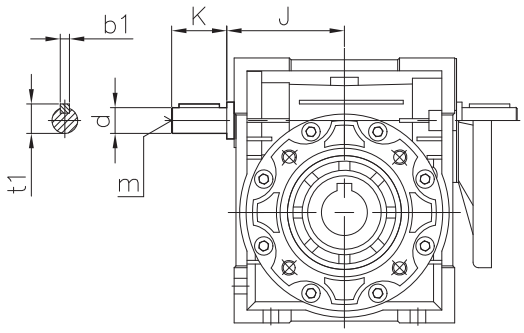


		030	040	050	063	075	090	110	130	150
FA	PA	54.5	67	90	82	111	111	139	140	155
	PB	6	7	9	10	13	13	15	15	15
	PC	4	4	5	6	6	6	6	6	6
	PN	50	60	70	115	130	152	170	180	180
	PM	68	75	85	150	165	175	230	255	255
	PO	6.5(n=4)	9(n=4)	11(n=4)	11(n=4)	14(n=4)	14(n=4)	14(n=8)	16(n=8)	16(n=8)
	PP	80	110	125	180	200	210	280	320	320
	PQ	70	95	110	142	170	200	260	290	290
	α1	45°	45°	45°	45°	45°	45°	45°	45°	22,5°
FB	PA	-	97	120	112	-	122	-	-	-
	PB	-	7	9	10	-	18	-	-	-
	PC	-	4	5	6	-	6	-	-	-
	PN	-	60	70	115	-	180	-	-	-
	PM	-	75	85	150	-	215	-	-	-
	PO	-	9(n=4)	11(n=4)	11(n=4)	-	14(n=4)	-	-	-
	PP	-	110	125	180	-	250	-	-	-
	PQ	-	95	110	142	-	-	-	-	-
	α1	-	45°	45°	45°	-	45°	-	-	-
FC	PA	-	80	89	98	-	110	-	-	-
	PB	-	9	10	10	-	17	-	-	-
	PC	-	5	5	5	-	6	-	-	-
	PN	-	95	110	130	-	130	-	-	-
	PM	-	115	130	165	-	165	-	-	-
	PO	-	9.5(n=4)	9.5(n=4)	11 (n=4)	-	11(n=4)	-	-	-
	PP	-	140	160	200	-	200	-	-	-
	α1	-	45°	45°	45°	-	45°	-	-	-
FD	PA	-	58	72	-	-	151	-	-	-
	PB	-	12	14,5	-	-	13	-	-	-
	PC	-	5	5	-	-	6	-	-	-
	PN	-	80	95	-	-	152	-	-	-
	PM	-	100	115	-	-	175	-	-	-
	PO	-	9(n=4)	11(n=4)	-	-	14(n=4)	-	-	-
	PP	-	120	140	-	-	210	-	-	-
	α1	-	45°	45°	-	-	45°	-	-	-
FE	PA	-	-	-	80,5	-	-	-	-	-
	PB	-	-	-	16,5	-	-	-	-	-
	PC	-	-	-	5	-	-	-	-	-
	PN	-	-	-	110	-	-	-	-	-
	PM	-	-	-	130	-	-	-	-	-
	PO	-	-	-	11(n=4)	-	-	-	-	-
	PP	-	-	-	160	-	-	-	-	-
	α1	-	-	-	45°	-	-	-	-	-

NOTE: Weight (Kg): without the weight of motor

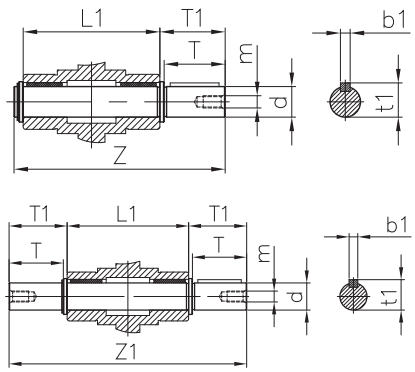
Dimensions

Extension worm shaft (E) dimensions



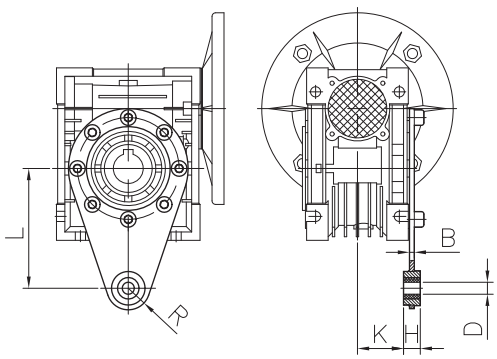
	J	d (j6)	K	m	b1	t1
030	45	9	20	-	3	10,2
040	53	11	23	-	4	12,5
050	64	14	30	M6	5	16
063	75	19	40	M6	6	21,5
075	90	24	50	M8	8	27
090	108	24	50	M8	8	27
110	135	28	60	M10	8	31
130	155	30	80	M10	8	33
150	175	35	80	M12	10	38

Output shaft (SS, DS) dimensions



	d (h6)	T	T1	L1	Z	Z1	m	b1	t1
025	11	23	25,5	50	81	101	-	4	12,5
030	14	30	32,5	63	102	128	M6	5	16
040	18	40	43	78	128	164	M6	6	20,5
050	25	50	53,5	92	153	199	M10	8	28
063	25	50	53,5	112	173	219	M10	8	28
075	28	60	63,5	120	192	247	M10	8	31
090	35	80	84,5	140	234	309	M12	10	38
110	42	80	84,5	155	249	324	M16	12	45
130	45	80	85	170	265	340	M16	14	48,5
150	50	82	87	200	297	374	M16	14	53,5

Torque arm (A) dimensions

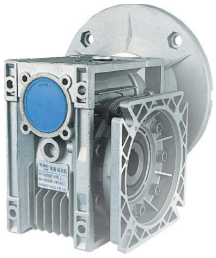


	L	H	K	D	R	B
025	70	14	17,5	8	15	4
030	85	14	24	8	15	4
040	100	14	31,5	10	18	4
050	100	14	38,5	10	18	4
063	150	14	49	10	18	6
075	200	25	47,5	20	30	6
090	200	25	57,5	20	30	6
110	250	30	62	25	35	6
130	250	30	69	25	35	6
150	250	30	84	25	35	8

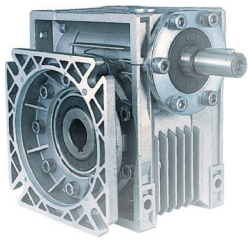
Part photos

Output flange (F)

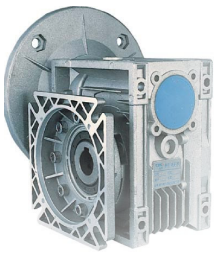
WGMX...-F1



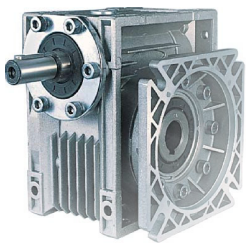
NWGMX...-F1



WGMX...-F2

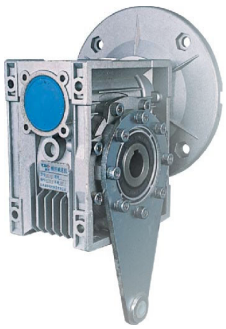


NWGMX...-F2

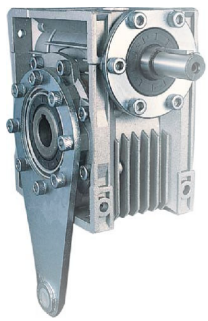


Torque arm (A)

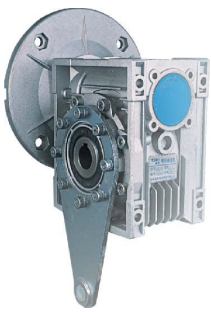
WGMX...-A1



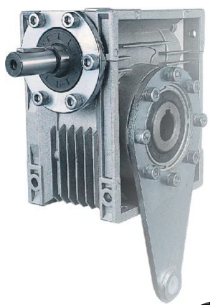
NWGMX...-A1



WGMX...-A2



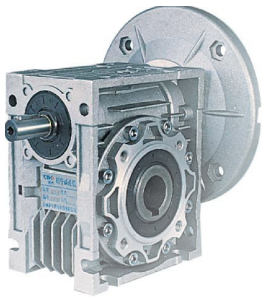
NWGMX...-A2



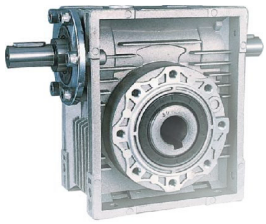
Part photos

Extension worm shaft (E)

WGMX...-E

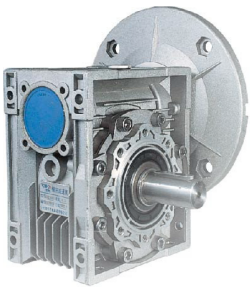


NWGMX...-E

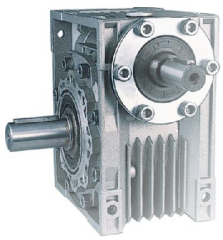


Extension worm shaft (SS, DS)

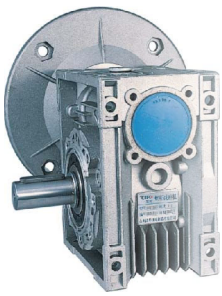
WGMX...-SS1



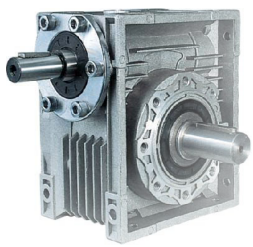
NWGMX...-SS1



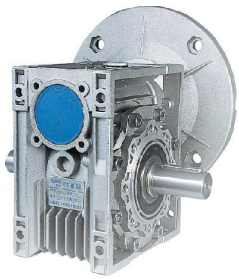
WGMX...-SS2



NWGMX...-SS2



WGMX...-DS



NWGMX...-DS



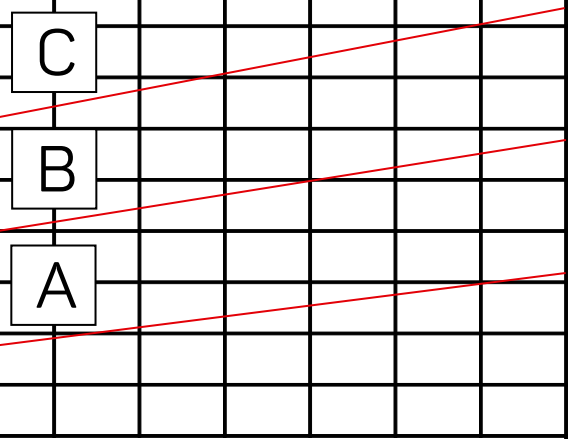
Reducer selection

Service coefficient (K) of reducer

To select reducer, we must consider the practical working conditions of reducer. Influence factors like load types of reducer (A, B, C), dailyworking hours and startup frequency (time/hour) will all influence the working of reducer. We synthe size those factors into a calculation coefficient for model selection-service coefficient (K), in order to make a correct selection of reducer.

Service coefficient (K) selecting chart:

Daily work time (h)				K curve for different load type
24	16	8	2	
2,3	2,0	1,8	1,6	
2,2	1,9	1,7	1,5	
2,1	1,8	1,6	1,4	
2,0	1,7	1,5	1,3	
1,9	1,6	1,4	1,2	
1,8	1,5	1,3	1,1	
1,7	1,4	1,2	1	
1,6	1,3	1,1	0,9	
1,5	1,2	1	0,8	
K (service coefficient)				5 10 20 30 40 50 60 70 80 90 100 Start up frequency (times/h)

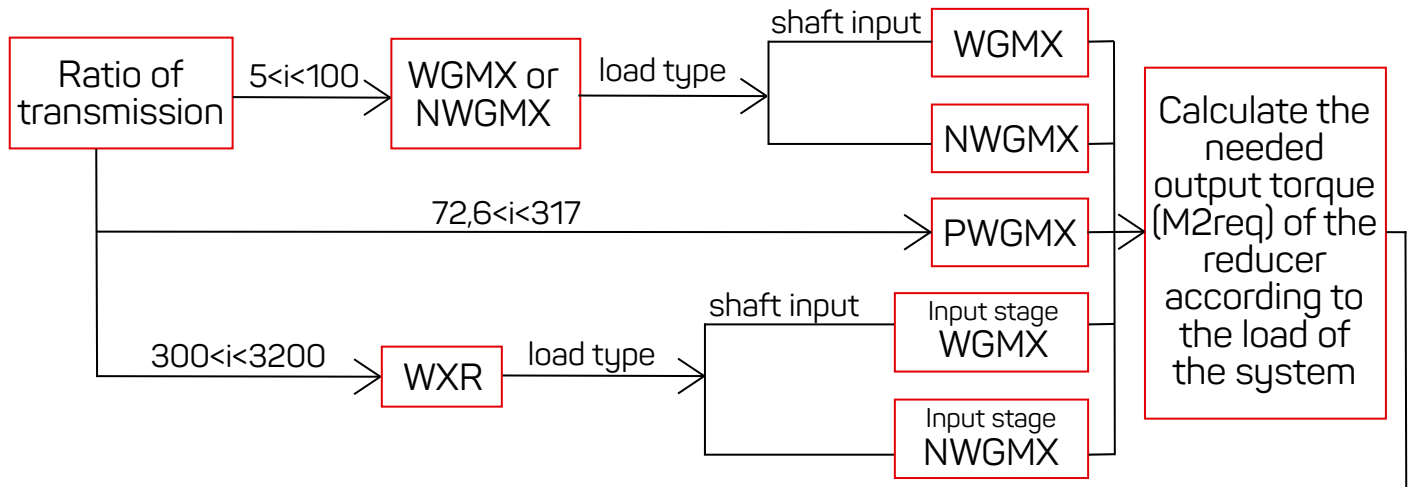


A, B, C are load types.
--A is proportion load.
--B is medium impact load (M max. <=1,5 times of rated torque);
--C is heavy impact load (M max> 1,5 times of rated torque) also the ambient temperature should be taken into consideration properly. If the ambient temperature changes, the selected service coefficient (k) should be adjusted as followings:
--Ambient temperature is 30/40°C: K x 1,1~1,2
--Ambient temperature is 40/50°C: K x 1,3~1,4
--Ambient temperature is 50/60°C: K x 1,5~1,6
--If the ambient temperature >60°C; please contact our technical service team.

Model Configuration Table

RV	KW/4P	5	7,5	10	15	20	25	30	40	50	60	80	100
025	0,06	6,2	4,2	3,5	2,5	2	NO	1,6	1,3	0,9	0,7		
	0,09	4,1	2,8	2,4	1,6	1,3	NO	1,1	0,9				
030	0,06	10,2	6,8	5,4	3,8	3	3	2,6	1,8	1,6	1,3	0,9	
	0,09	6,8	4,6	3,6	2,6	2	2	1,6	1,2	1	0,9		
	0,12	5,1	3,4	2,7	1,9	1,5	1,5	1,3	0,9	0,8			
	0,18	3,4	2,3	1,8	1,3	1	1	0,8					
040	0,06									3	2,6	1,8	1,6
	0,09									2	1,7	1,3	1
	0,12	9,2	7,3	5,5	3,7	2,8	2,5	2,6	1,9	1,5	1,3	0,9	0,8
	0,18	6,2	4,9	3,7	2,5	2	1,7	1,7	1,3	1	0,8		
	0,25	4,5	3,6	2,8	1,9	1,5	1,2	1,3	0,9				
	0,37	3	2,4	1,9	1,3	0,9	0,8	0,8					
	0,55	2	1,6	1,2	0,8								
050	0,12								3,5	2,8	2,3	1,9	1,4
	0,18								2,3	1,9	1,6	1,2	0,9
	0,25	8,1	6,3	4,8	3,6	2,7	2,2	2,3	1,7	1,4	1,1	0,9	
	0,37	5,5	4,3	3,3	2,5	1,8	1,5	1,5	1,1	0,9	0,8		
	0,55	3,7	2,9	2,2	1,6	1,2	1	1	0,8				
	0,75	2,7	2,1	1,6	1,2	0,9							
063	0,25									2,4	2	1,6	1,4
	0,37								2,1	1,6	1,4	1,1	0,9
	0,55				3	2,2	1,8	1,9	1,4	1,1	0,9		
	0,75		3,8	3	2,2	1,6	1,3	1,4	1				
	1,1		2,6	2	1,5	1,1	0,9	0,9					
	1,5		1,9	1,5	1,1	0,8							
075	0,55								2	1,6	1,4	1,1	0,9
	0,75						2	2	1,5	1,2	1		
	1,1		3,6	3	2,1	1,7	1,3	1,3	1				
	1,5		2,8	2,2	1,5	1,3	1	1					
	2,2		1,8	1,5	1								
	3		1,4	1,1	0,8								
	4		1										
090	0,75									1,8	1,5	1,1	0,9
	1,1								1,6	1,3	1		
	1,5					2,1	1,6	1,7	1,2	0,9	0,8		
	2,2		2,9	2,3	1,9	1,4	1,1	1,2					
	3		2,1	1,7	1,4	1	0,8	0,9					
	4		1,6	1,3	1	0,8							
110	1,1									2,1	1,7	1,2	1
	1,5								1,9	1,6	1,3	0,9	
	2,2		4,8	3,8	3	2,2	1,9	1,8	1,3	1,1	0,9		
	3		3,5	2,8	2,2	1,6	1,4	1,3	1	0,8			
	4		2,6	2,1	1,6	1,2	1	1					
	5,5		1,9	1,6	1,2	0,9							
	7,5		1,4	1,1	0,9								
130	1,5											1,5	1,1
	2,2								2,2	1,7	1,4	1	0,8
	3						2,2	2,1	1,6	1,3	1		
	4		3,9	3,4	2,6	1,9	1,6	1,6	1,2	1	0,8		
	5,5		2,8	2,5	1,9	1,4	1,2	1,2	0,9				
	7,5		2,1	1,8	1,4	1	0,9	0,8					
150	2,2									2,5	1,9	1,4	1
	3								2,5	1,8	1,4	1	0,8
	4						2,2	1,8	1,8	1,4	1,1	0,8	
	5,5					2	1,5	1,3	1,3	1	0,8		
	7,5					1,5	1,1	1	1				
	11		2,3	1,8	1,3	1	0,8						
	15		1,7	1,3	0,9	0,7							

Gear Reducer Selection Method



Decide K according to the K curve and adjust it as per ambient temperature

Adjust the output torque M2=M2req×K

Initially selection of the reducer type by referring to the parameter in the sheet on pages 21-26 and the value of M2

Calculate the input power (mating motor power) P1=M2xoutput rotation speed n2

Select the type of the reducer and its mounting from: according to P1, i and M2, reffering to the performance parameter on 21-26 and pages 15-16.

Check the load of the output shaft. If the radial load is needed on the output shaft of the reducer, should check the force applied on the output shaft according to the radial force in the catalog on page 26.

Notice for order

The purchaser should provide us the following information when he want to order our VYBO Electric reducers:

1. Basic parameters of reducer (including series codes, frame sizes and ratios);
2. Types and mounting positions of matched motors (B5 or B14);
3. Mounting position of reducer;
4. Input/output structure configuration (extension worm shaft, output shaft of worm wheel, output flange and torquearm). If there is no indication of I/O components, means that it is not required.
5. Painting on outside shell: we paint size under 090 frame sizes of WGMX series reducers with silver color. Reducers size over 090 painted with blue color as well as motors. Also we will paint according to customer's request.
6. To select VYBO electric motors, we refer the motor specifications notice to our catalogue of general purpose motor.



Address

VYBO ELECTRIC a. s.
Radlinského 18
052 01 Spišská Nová Ves
Slovenská republika

tel: +421 944 105 361
e-mail: mv@vyboelectric.eu

www.vyboelectric.com

SOLUTIONS FOR INDUSTRY

BUREAU VERITAS Certification

VYBO Electric a.s.
Radlinského 18, 052 01 Spišská Nová Ves
Slovak Republic

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 14001: 2015

Scope of certification

MANUFACTURE AND SALE OF ELECTRIC MOTORS. SALES AND DEVELOPMENT OF VARIABLE FREQUENCY DRIVES.

Original cycle start date:	**18.05.2022**
Expiry date of previous cycle:	**N/A**
Certification Audit date:	**31.03.2022**
Certification cycle start date:	**18.05.2022**

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **17.05.2025**

Certificate No. ***SK-U22 055E*** *Version: 1* *Issue date: 18.05.2022*

Certification body address: 5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom
Local office: Plynárenská 7/B, BRATISLAVA 821 09, Slovak Republic

UKAS MANAGEMENT SYSTEMS 0008

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call: + 421 2 5341 4185

Page 1 of 1

BUREAU VERITAS

Bureau Veritas Certification

Certificate

Awarded to

VYBO Electric a.s.
Radlinského 18, 052 01 Spišská Nová Ves
Slovak Republic

BUREAU VERITAS CERTIFICATION CZ, s.r.o. certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standard detailed below.

Standard

ISO 45001:2018

Scope of supply

MANUFACTURE AND SALE OF ELECTRIC MOTORS. SALES AND DEVELOPMENT OF VARIABLE FREQUENCY DRIVES.

Original Approval Date:	18-05-2022
Expiry date of previous cycle:	N/A
Certification Cycle Start Date:	18-05-2022
Certification Cycle End Date:	17-05-2025

Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until: 17-05-2025

To check this certificate validity please call: +420 210 088 215

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.

S 3100

Version 1 Issue Date: 18-05-2022

Certificate Number: CZE - 2200117

MANAGING OFFICE: BUREAU VERITAS CERTIFICATION CZ, s.r.o., Olbrachtova 1, 140 00 Praha 4, Czech Republic

ISSUING OFFICE ADDRESS: BUREAU VERITAS CERTIFICATION CZ, s.r.o., Olbrachtova 1, 140 00 Praha 4, Czech Republic

1/1

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

IAF MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT

SNAS Reg. No. 153/Q-011

TÜV SÜD Slovakia

CERTIFICATE

TÜV SÜD Slovakia s.r.o.
Certification Body for Management Systems
Accredited by SNAS
Certificate on accreditation No. Q-011
certifies that

VYBO Electric a.s.
Radlinského 18
SK – 052 01 Spišská Nová Ves
IČO: 45 537 143

has established and applies
a Quality Management System for

Manufacture and sale of electric motors.
Sales and development of variable frequency drives.

An audit was performed, Report No. **2264/40/22/Q/AS/C**
Proof has been furnished that the requirements
according to

STN EN ISO 9001:2016

are fulfilled. The certificate is valid from **2022-04-14** until **2025-04-13**
Certificate Registration No. **Q 2264-1**

Bratislava, 2022-04-14

TÜV SÜD Slovakia s.r.o.
Certification Body for Management Systems
Member of Group TÜV SÜD
Jašíkova 6, 821 03 Bratislava

F-Q-019/2/6

Certificate SK22/3701

The management system of

VYBO Electric a.s.
Radlinského 18
052 01 Spišská Nová Ves, Slovakia

has been assessed and certified as meeting the requirements of

EN ISO 50001:2018

For the following activities

Production & sales of electric motors.
Sales & development of variable frequency drives.

Further classifications regarding the scope of this certificate and the applicability of EN ISO 50001:2018 requirements may be obtained by consulting the organisation.

This certificate is valid from 7 April 2022 until 6 April 2025
and remains valid subject to satisfactory surveillance audits.
Recertification audit due a minimum of 60 days
before the expiration date.
Issue 1. Certified with SGS since 7 April 2022

SYSTEM CERTIFICATION ISO 50001 SGS

SNAS Reg. No. 158/R-099

Authorised by

Ing. Róbert Bodnár
Director
SGS Slovakia spol. s r. o.
Kysucká 14, 040 11 Košice, Slovakia
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