PRODUCT DATASHEET

VSF SERIES



# WORM**GEAR**REDUCER

**DATE** 06.11.2020

MOTOVARIO®
HEART OF MOTION
a TECO Group company

# CONFIGURATION

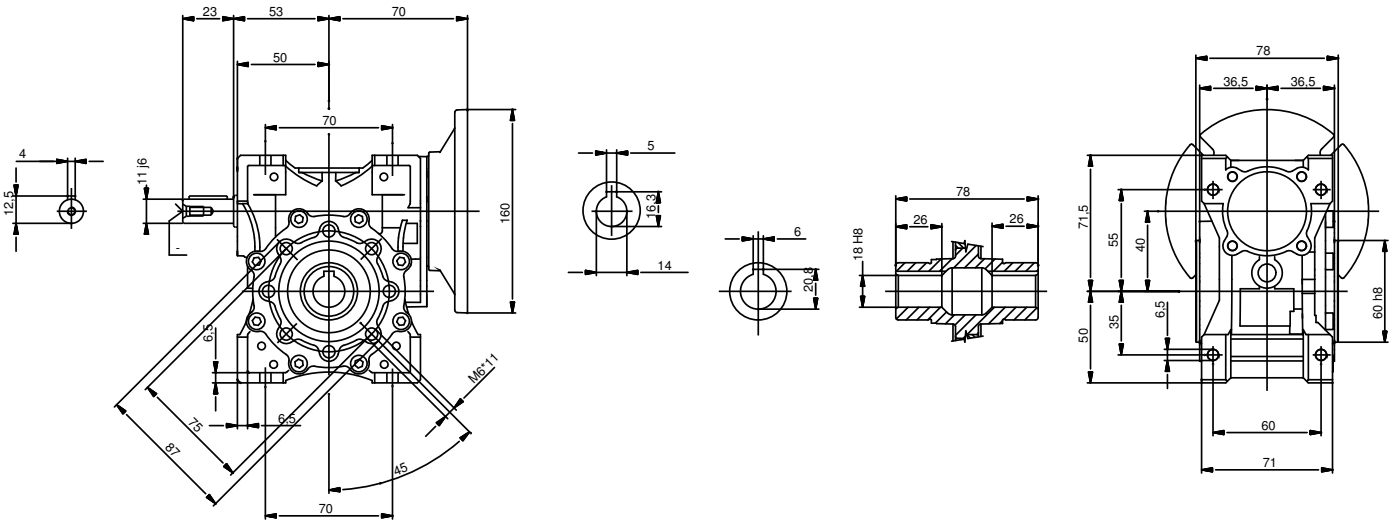


| CHARACTERISTIC | VALUE |
|---|---|
| **Regulations** | No |
| **Worm** | PAM NMRV |
| **Size** | 040 |
| **Ratio (i)** | 15,0 |
| **Input Dim.** | Ø160x14 (IEC71 B5) |
| **Hollow Output Shaft Dim.** | Ø18 |
| **Double-Extended Worm Shaft** | No |
| **Mounting Position** | U |
| **VI-Output Oil Seal** | NBR-Nitrile |
| **VI-Input Oil Seal** | ACM-Polyacrylate |
| **VI-Output Bearings** | Ball Bearings |
| **VI-Lubrication** | Eni Telium VSF 320 |
| **Paint** | Ral 5010 Blue |

# DRAWINGS



Values expressed in [mm]



# PERFORMANCES



## NRV040

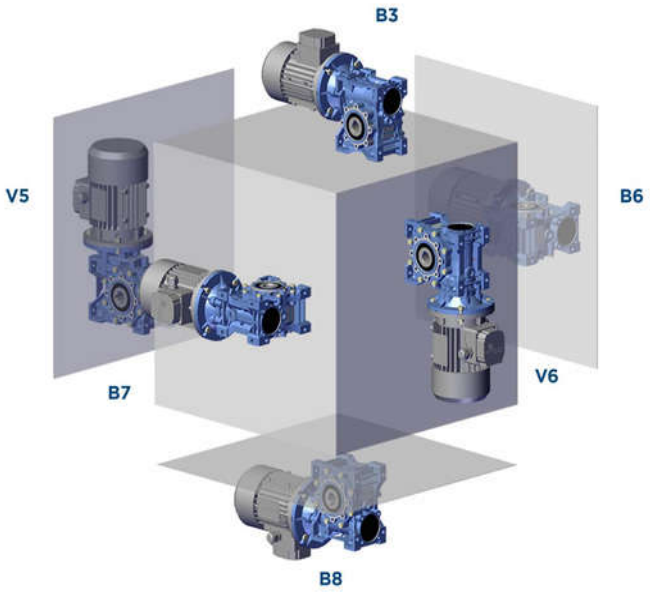
| n1 [rpm] | $Mn_2$ [Nm] | i | $Pn_1$ [kW] | n2 [rpm] | Fr1 [N] | Fr2 [N] |
|---|---|---|---|---|---|---|
| 500 | 61 | 15,00 | 0,28 | 33,0 | 350 | 2335 |
| 900 | 50 | 15,00 | 0,40 | 60,0 | 350 | 1920 |
| 1140 | 47 | 15,00 | 0,46 | 76,0 | 350 | 1774 |
| 1400 | 44 | 15,00 | 0,52 | 93,0 | 344 | 1657 |
| 1750 | 42 | 15,00 | 0,62 | 117,0 | 343 | 1538 |
| 2800 | 31 | 15,00 | 0,71 | 187,0 | 291 | 1315 |

# MOUNTING POSITIONS



The mounting position of the gear unit identifies its space orientation. B3 mounting position, as from a technical point of view, ensures lower oil splash, better lubrication and less heating.

## NMRV - NMRV-P - NRV - NRV-P




## Execution

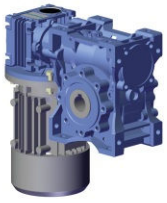
### NMRV/NMRV-P+NMRV/NMRV-P - NRV/NRV-P+NMRV/NMRV-P


AS1


AS2

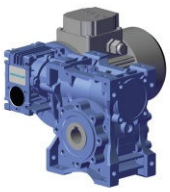

VS1


VS2


PS1


PS2


BS1


BS2

# LUBRICANT



- The gear reducers size 025 - 030 - 040 - 050 - 063 - 075 - 090 - 105 - 110 - 130 - 150 are supplied complete with lubricant for life, synthetic oil, ENI TELIUM VSF. They can be mounted in any position envisaged in the catalogue, except for NMRV 090 - 110 and NRV 075-090-110 for which you must to specify the mounting position.
- For sizes 130 and 150 it is necessary to specify the position, otherwise the gear reducers are supplied with the quantity of oil relating to pos. B3.
- Only reduction units 130 and 150 are fitted with breather, level and oil drainage plugs.
- The pre-stage helical modules are supplied complete with life-long lubricant, synthetic oil, ENI TELIUM VSF. Lubrication is separated from that of the worm gear reducers.

It is recommended, after installation, to replace the closed plug used for transportation with the supplied breather plug.

Quantity of oil in litres ~

| NMRV | 025 | 030 | 040 | 050 | 130 | 150 |
|---|---|---|---|---|---|---|
| B3 | 0,02 | 0,04 | 0,08 | 0,15 | 4,5 | 7 |
| B8 | | | | | 3,3 | 5,1 |
| B6-B7 | | | | | 3,5 | 5,4 |
| V5 | | | | | 4,5 | 7 |
| V6 | | | | | 3,3 | 5,1 |

| NMRV-P | 063 | 075 | 090 | 110 |
|---|---|---|---|---|
| B3 | 0,33 | 0,55 | 1,15 | 1,6 |
| B8 | | | | |
| B6-B7 | | | | |
| V5 | | | | |
| V6 | | | | |

| SW | 030 | 040 | 050 | 063 | 075 | 090 | 105 |
|---|---|---|---|---|---|---|---|
| B3 | 0,04 | 0,08 | 0,15 | 0,3 | 0,55 | 1 | 1,6 |
| B8 | | | | | | | |
| B6-B7 | | | | | | | |
| V5 | | | | | | | |
| V6 | | | | | | | |

| HW | HW030 | | HW040 | |
|---|---|---|---|---|
| | NMRV-P063 | NMRV-P075 | NMRV-P090 | NMRV-P110 |
| B3-B6-B7-B8-V5-V6 | 0,06 | 0,09 | 0,11 | 0,12 |

| H | A31 |
|---|---|
| B3-B5 | 0,07 |

| NMRV | 063 | 075 | 090 | 105 | 110 |
|---|---|---|---|---|---|
| B3 | 0,3 | 0,55 | 1 | 1,6 | 3 |
| B8 | | | | | 2,2 |
| B6-B7 | | | | | 2,5 |
| V5 | | | | | 3 |
| V6 | | | | | 2,2 |

# DIRECTION OF ROTATION



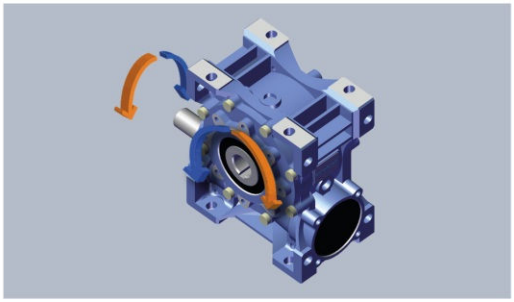
The worm screw rotation is right-handed.

## DIRECTION OF ROTATION - HIGH SPEED SHAFT

**NMRV - NRV - SW - ISW**

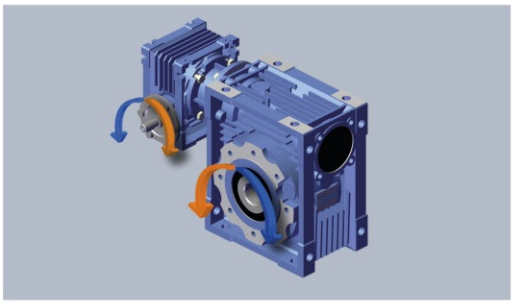


MOUNTING POSITION **B3**

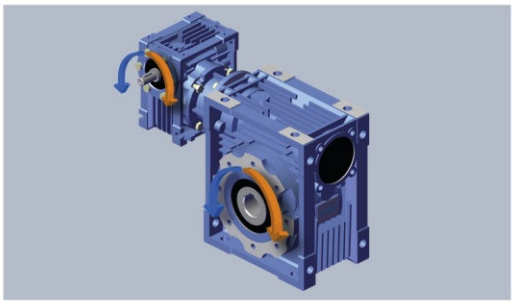


MOUNTING POSITION **B8**

**NMRV + NMRV – SW + SW - NRV + NMRV – ISW + SW**



MOUNTING POSITION **AS1**



MOUNTING POSITION **BS1**