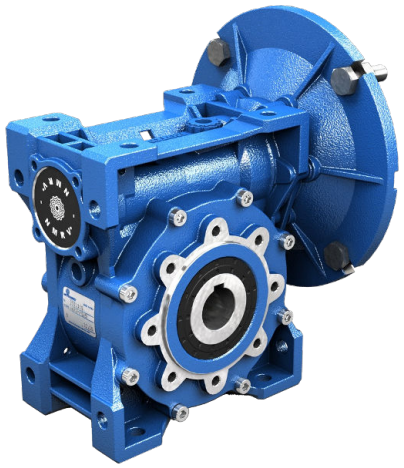
PRODUCT DATASHEET

VSF SERIES



WORM**GEAR**REDUCER

DATE 27.05.2026

MOTOVARIO®
HEART OF MOTION
a TECO Group company

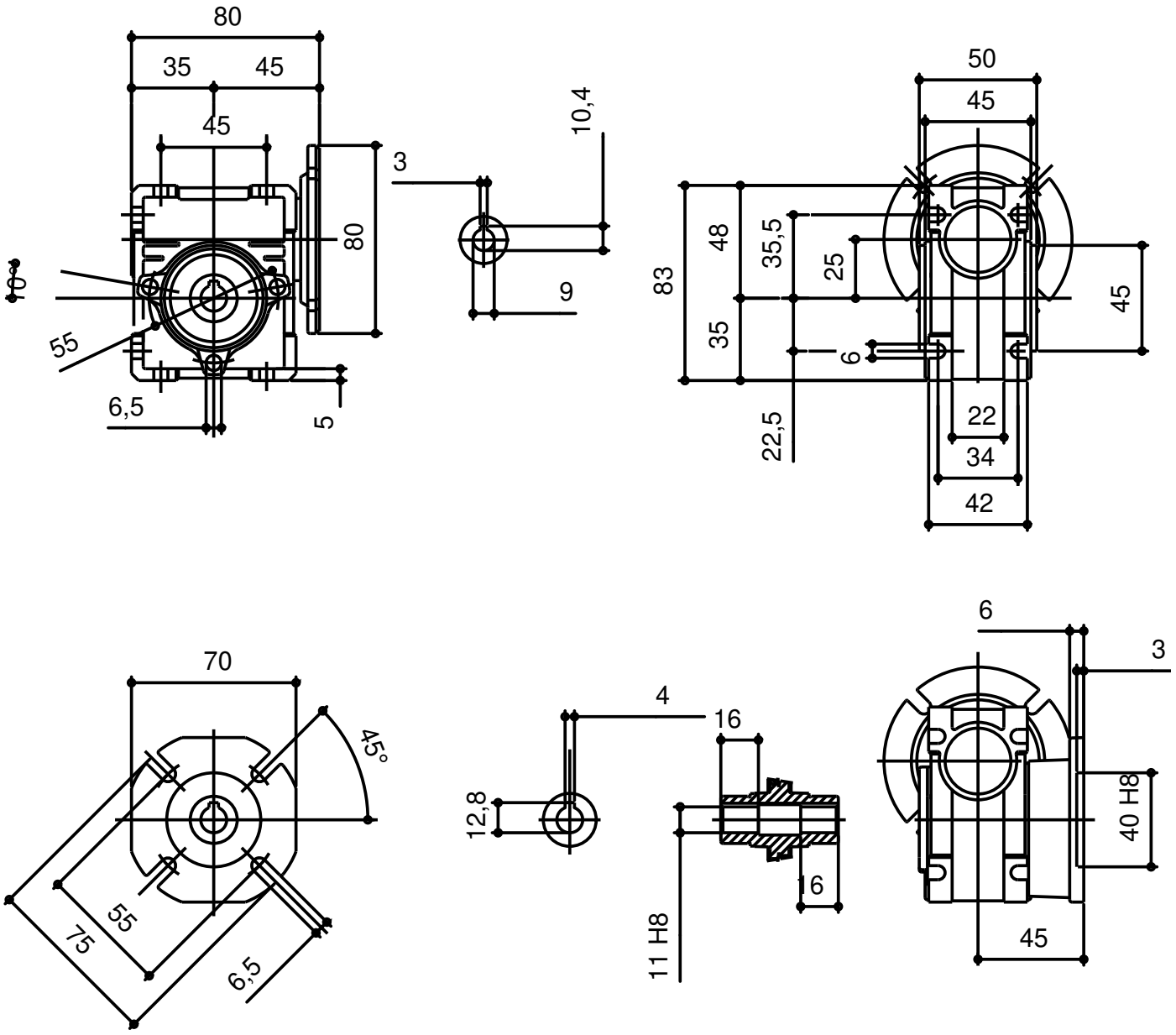
CONFIGURATION

CHARACTERISTIC	VALUE
Regulations	No
Worm	PAM NMRV
Size	025
Ratio (i)	30,0
Input Dim.	Ø80x9 (IEC56 B14)
Hollow Output Shaft Dim.	Ø11
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	Synthetic ISO VG320
Paint	Not Painted

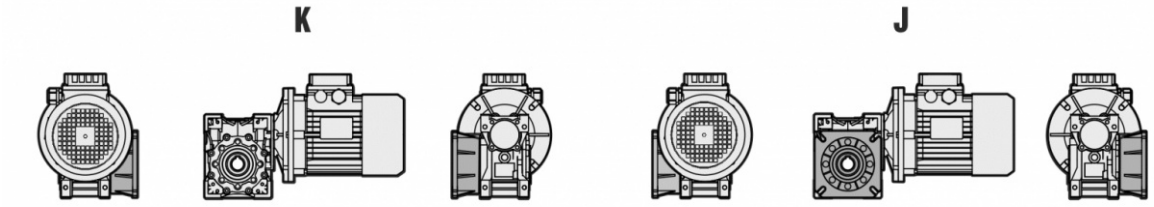
DRAWINGS

PRODUCT DATASHEET

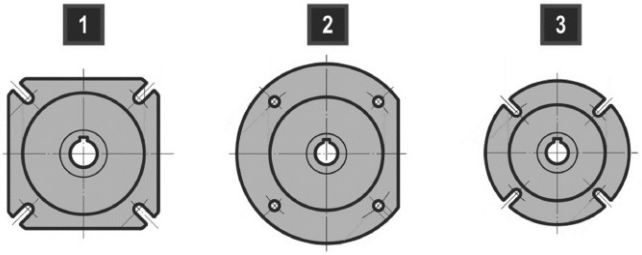
Values expressed in [mm]



DRAWINGS



Unless specified otherwise, the reduction unit is supplied with the flange in pos. J referred to position B3.



	NMRV - SW	NMRV - SW	NMRV - SW	NMRV-P - SW	NMRV-P - SW	NMRV-P - SW	SW	NMRV-P	NMRV	NMRV
	030	040	050	063	075	090	105	110	130	150
FA	1	1	1	1	1	1	1	1	1	1
FB	-	1	1	1	3	2	1	1	-	-
FC	-	2	2	2	-	3	-	-	-	-
FD	-	2	2	2	-	1	-	-	-	-
FE	-	-	-	3	-	-	-	-	-	-

DRAWINGS

The values reported in the tables are referred to the weight of the gearbox with lubricant included.
Weight without motor.

NMRV - NMRV-P (~ kg)									
025	030	040	050	063	075	090	110	130	150
0,7	1,2	2,3	3,5	6,2	9	13	21	43,5	84

NRV - NRV-P (~ kg)									
030	040	050	063	075	090	110	130	150	
1	2	3,3	5,8	8,8	13	21	43,5	77	

	HA31+NMRV040 (~ kg)	HA31+NMRV050 (~ kg)
063	4,2	5,4
071	4,3	5,5
080	4,5	5,7

056/063/071/080		063/071/080/090	
NMRV-P063/HW030 (~ kg)	NMRV-P075/HW030 (~ kg)	NMRV-P090/HW040 (~ kg)	NMRV-P110/HW040 (~ kg)
7,1	10	14,6	24,4

NMRV-P090/IHW040 (~ kg)	NMRV-P110/IHW040 (~ kg)
14,6	38,4

NMRV+NMRV - NMRV+NMRV-P - NMRV-P+NMRV - NMRV-P+NMRV-P (~ kg)													
025-030	025-040	030-040	030-050	030-063	040-050	040-063	040-075	040-090	050-090	050-110	063-110	063-130	063-150
1,9	3	3,5	4,7	7,4	5,8	8,5	11,3	15,3	16,5	38,5	41,2	54,2	90,2

NRV+NMRV - NRV+NMRV-P - NRV-P+NMRV - NRV-P+NMRV-P (~ kg)											
030-040	030-050	030-063	040-050	040-063	040-075	040-090	050-090	050-110	063-110	063-130	063-150
3,5	4,7	7,4	5,8	8,5	11,3	15,3	16,5	38,5	41,2	54,2	90,2

The values reported in the tables are referred to the weight of the gearbox with lubricant included.
Weight without motor.

SW (~ kg)						
030	040	050	063	075	090	105
1,2	2,3	3,5	6,2	9	13	21

ISW (~ kg)						
030	040	050	063	075	090	105
1	2	3,3	5,8	8,8	13	21

	HA31+SW040 (~ kg)	HA31+SW050 (~ kg)	HA31+SW063 (~ kg)	HA31+SW075 (~ kg)	HA31+SW090 (~ kg)
063	4,2	5,4	8,1	10,9	14,9
071	4,3	5,5	8,2	11,0	15,0
080	4,5	5,7	8,4	11,2	15,2

SW+SW (~ kg)					
030-040	030-050	030-063	040-075	040-090	050-105
3,5	4,7	7,4	11,3	15,3	38,5

ISW+SW (~ kg)					
030-040	030-050	030-063	040-075	040-090	050-105
3,5	4,7	7,4	11,3	15,3	38,5

PERFORMANCES

ISW030

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	27	30,00	0,08	17,0	210	1529
900	22	30,00	0,11	30,0	210	1257
1140	21	30,00	0,13	38,0	210	1162
1400	21	30,00	0,16	47,0	210	1085
1750	20	30,00	0,19	58,0	210	1007
2800	15	30,00	0,20	93,0	210	861

ISW040

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	62	30,00	0,17	17,0	350	2942
900	53	30,00	0,25	30,0	350	2419
1140	51	30,00	0,29	38,0	350	2235
1400	48	30,00	0,33	47,0	350	2087
1750	46	30,00	0,39	58,0	350	1938
2800	34	30,00	0,43	93,0	350	1657

ISW050

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	113	30,00	0,30	17,0	490	4038
900	94	30,00	0,43	30,0	490	3320
1140	91	30,00	0,51	38,0	490	3068
1400	88	30,00	0,59	47,0	490	2865
1750	84	30,00	0,70	58,0	490	2660
2800	64	30,00	0,81	93,0	490	2274

ISW063

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	213	30,00	0,56	17,0	700	5279
900	177	30,00	0,78	30,0	700	4339
1140	168	30,00	0,91	38,0	700	4011
1400	160	30,00	1,04	47,0	700	3745
1750	152	30,00	1,22	58,0	700	3477
2800	121	30,00	1,49	93,0	700	2973

PERFORMANCES

ISW075

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	344	30,00	0,87	17,0	980	6231
900	285	30,00	1,21	30,0	980	5122
1140	264	30,00	1,41	38,0	980	4734
1400	247	30,00	1,57	47,0	980	4421
1750	229	30,00	1,80	58,0	980	4104
2800	185	30,00	2,24	93,0	980	3509

ISW090

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	579	30,00	1,40	17,0	1270	6894
900	485	30,00	2,00	30,0	1270	5667
1140	459	30,00	2,35	38,0	1270	5238
1400	432	30,00	2,67	47,0	1270	4891
1750	410	30,00	3,14	58,0	1270	4541
2800	310	30,00	3,65	93,0	1270	3882

ISW105

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	919	30,00	2,20	17,0	1270	8711
900	702	30,00	2,86	30,0	1270	7161
1140	654	30,00	3,30	38,0	1270	6619
1400	605	30,00	3,70	47,0	1270	6181
1750	574	30,00	4,34	58,0	1270	5737
2800	437	30,00	5,08	93,0	1270	4905

NRV030

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	27	30,00	0,08	17,0	210	1529
900	22	30,00	0,11	30,0	210	1257
1140	21	30,00	0,13	38,0	210	1162
1400	21	30,00	0,16	47,0	210	1085
1750	20	30,00	0,19	58,0	210	1007
2800	15	30,00	0,20	93,0	210	861

PERFORMANCES

NRV040

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	62	30,00	0,17	17,0	350	2942
900	53	30,00	0,25	30,0	350	2419
1140	51	30,00	0,29	38,0	350	2235
1400	48	30,00	0,33	47,0	350	2087
1750	46	30,00	0,39	58,0	350	1938
2800	34	30,00	0,43	93,0	350	1657

NRV050

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	113	30,00	0,30	17,0	490	4038
900	94	30,00	0,43	30,0	490	3320
1140	91	30,00	0,51	38,0	490	3068
1400	88	30,00	0,59	47,0	490	2865
1750	84	30,00	0,70	58,0	490	2660
2800	64	30,00	0,81	93,0	490	2274

NRV-P063

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	213	30,00	0,56	17,0	700	5279
900	177	30,00	0,78	30,0	700	4339
1140	168	30,00	0,91	38,0	700	4011
1400	160	30,00	1,04	47,0	700	3745
1750	152	30,00	1,22	58,0	700	3477
2800	121	30,00	1,49	93,0	700	2973

NRV-P075

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	344	30,00	0,87	17,0	980	6231
900	285	30,00	1,21	30,0	980	5122
1140	264	30,00	1,41	38,0	980	4734
1400	247	30,00	1,57	47,0	980	4421
1750	229	30,00	1,80	58,0	980	4104
2800	185	30,00	2,24	93,0	980	3509

PERFORMANCES

NRV-P090

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	579	30,00	1,40	17,0	1270	6894
900	485	30,00	2,00	30,0	1270	5667
1140	459	30,00	2,35	38,0	1270	5238
1400	432	30,00	2,67	47,0	1270	4891
1750	410	30,00	3,14	58,0	1270	4541
2800	310	30,00	3,65	93,0	1270	3882

NRV-P110

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	1000	30,00	2,39	17,0	1700	8711
900	840	30,00	3,43	30,0	1700	7161
1140	783	30,00	3,95	38,0	1700	6619
1400	725	30,00	4,43	47,0	1700	6181
1750	689	30,00	5,20	58,0	1700	5737
2800	552	30,00	6,42	93,0	1700	4905

NRV130

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	1400	30,00	3,30	17,0	2100	11394
900	1170	30,00	4,65	30,0	2100	9366
1140	1105	30,00	5,57	38,0	2100	8657
1400	1040	30,00	6,27	47,0	2100	8084
1750	988	30,00	7,45	58,0	2100	7504
2800	770	30,00	8,85	93,0	2100	6416

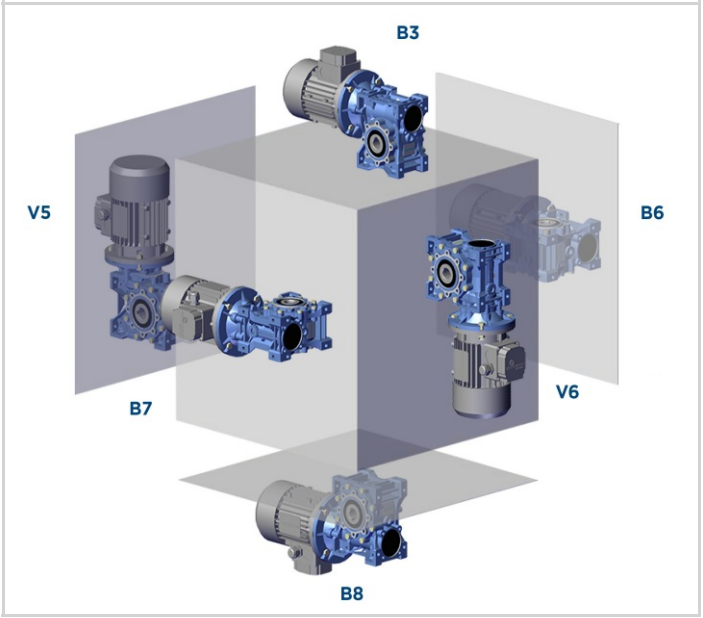
NRV150

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	1670	30,00	3,74	17,0	2800	15576
900	1400	30,00	5,36	30,0	2800	12805
1140	1400	30,00	6,79	38,0	2800	11835
1400	1200	30,00	6,98	47,0	2800	11051
1750	1140	30,00	8,29	58,0	2800	10259
2800	920	30,00	10,33	93,0	2800	8771

MOUNTING POSITIONS

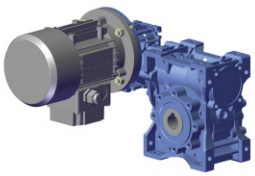
The mounting position of the gear unit identifies its space orientation. B3 mounting position, as from a technical point of view, ensures lower oil splash, better lubrication and less heating.

NMRV - NMRV-P - NRV - NRV-P



Execution

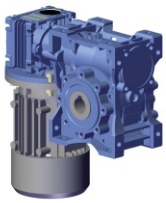
NMRV/NMRV-P+NMRV/NMRV-P - NRV/NRV-P+NMRV/NMRV-P


AS1

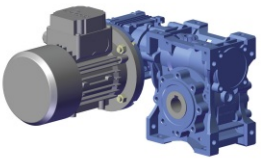

AS2

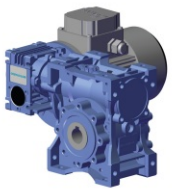

VS1


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, LAND OIL GEAR SINT. They can be mounted in any position envisaged in the catalogue, except for NMRV-P/SW 090 - 110 and NRV-P/ISW 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, LAND OIL GEAR SINT. 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

LUBRICANT

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

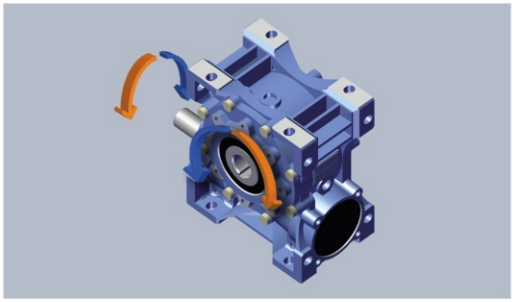
DIRECTION OF ROTATION

The worm screw rotation is right-handed.

DIRECTION OF ROTATION - HIGH SPEED SHAFT

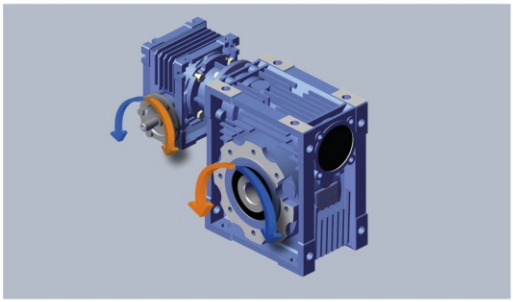
NMRV - NRV - SW - ISW

MOUNTING POSITION **B3**

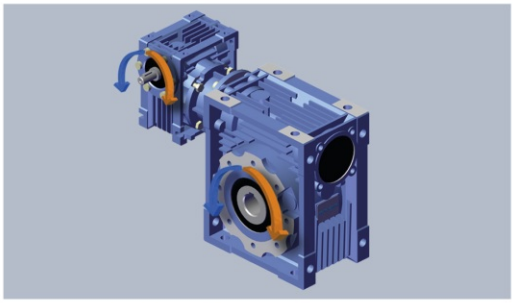


MOUNTING POSITION **B8**

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



MOUNTING POSITION **BS1**



MOUNTING POSITION **AS1**