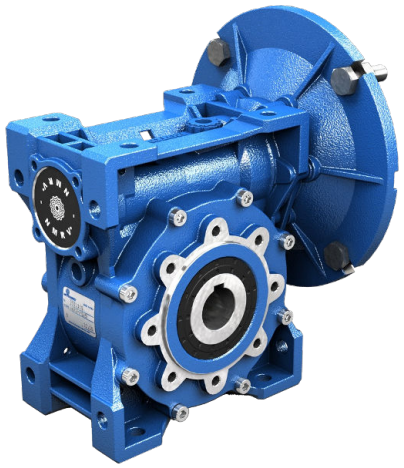
PRODUCT DATASHEET

VSF SERIES



WORM**GEAR**REDUCER

DATE 27.05.2026

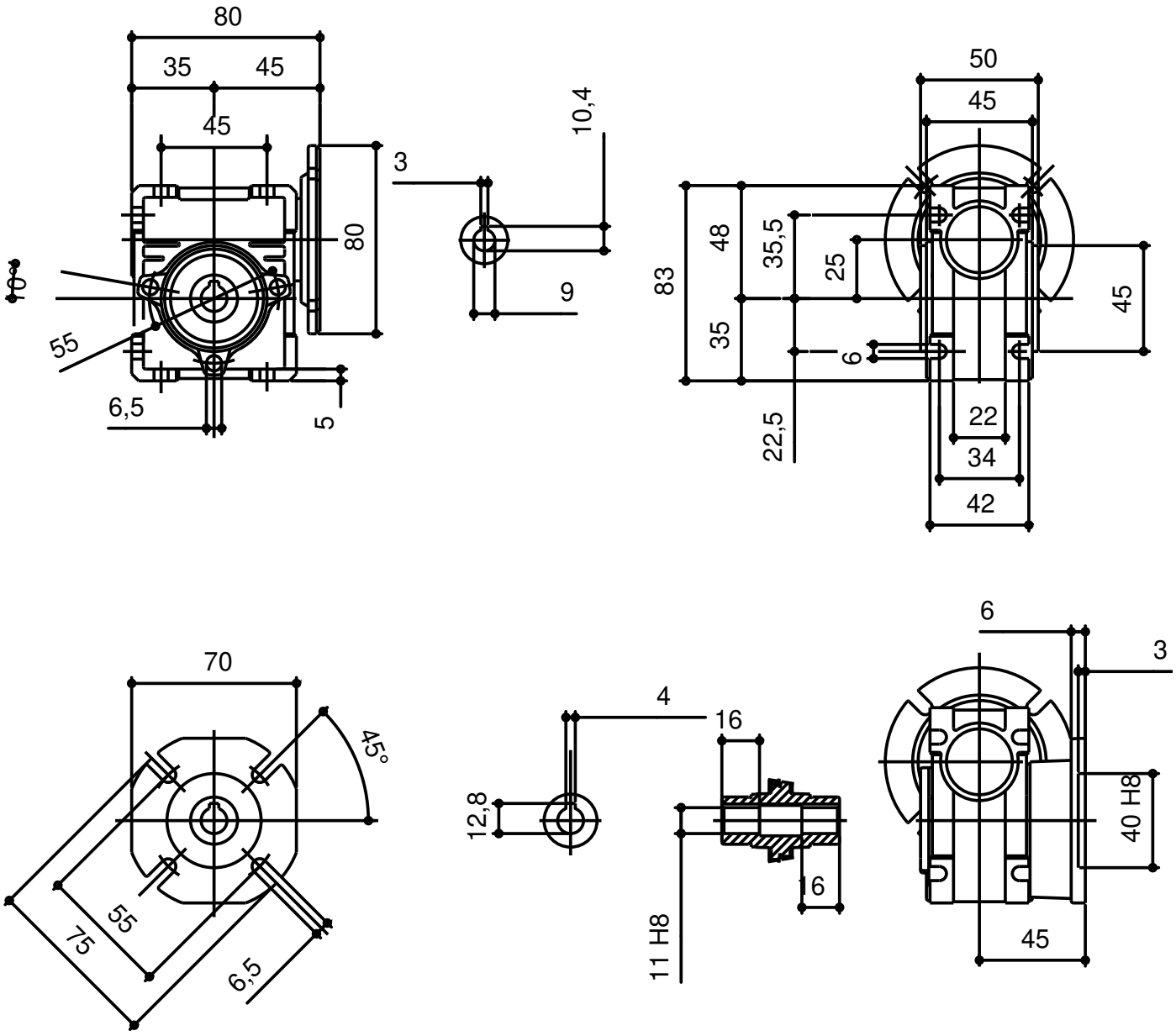
MOTOVARIO®
HEART OF MOTION
a TECO Group company

CONFIGURATION

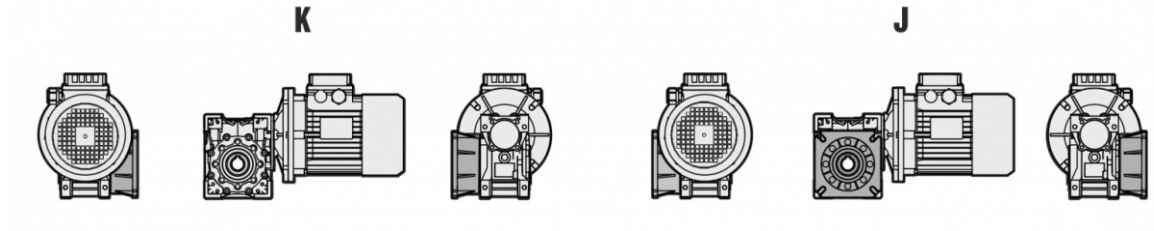
CHARACTERISTIC	VALUE
Regulations	No
Worm	PAM NMRV
Size	025
Ratio (i)	7,5
Input Dim.	Ø80x9 (IEC56 B14)
Hollow Output Shaft Dim.	Ø11
Double-Extended Worm Shaft	No
Mounting Position	U
VI-Output Oil Seal	NBR-Nitrile
VI-Input Oil Seal	ACM-Polyacrylate
VI-Output Bearings	Ball Bearings
VI-Lubrication	Synthetic ISO VG320
Paint	Not Painted

DRAWINGS

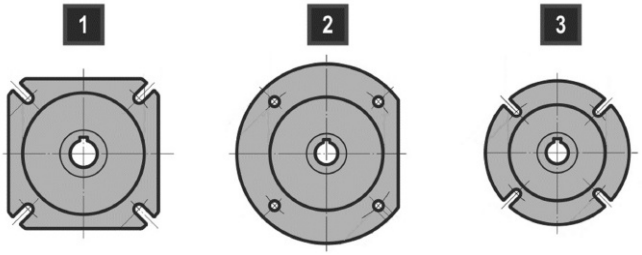
Values expressed in [mm]



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	25	7,50	0,22	67,0	210	963
900	21	7,50	0,32	120,0	175	792
1140	20	7,50	0,38	152,0	175	732
1400	19	7,50	0,44	187,0	150	683
1750	18	7,50	0,52	233,0	150	634
2800	13	7,50	0,58	373,0	125	542

ISW040

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	56	7,50	0,47	67,0	350	1853
900	46	7,50	0,68	120,0	318	1524
1140	44	7,50	0,81	152,0	327	1408
1400	42	7,50	0,94	187,0	292	1315
1750	40	7,50	1,12	233,0	291	1221
2800	28	7,50	1,23	373,0	233	1044

ISW050

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	112	7,50	0,93	67,0	490	2544
900	91	7,50	1,33	120,0	444	2091
1140	84	7,50	1,54	152,0	448	1933
1400	77	7,50	1,71	187,0	396	1805
1750	73	7,50	2,03	233,0	396	1676
2800	52	7,50	2,26	373,0	324	1433

ISW063

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	184	7,50	1,49	67,0	700	3325
900	151	7,50	2,16	120,0	580	2734
1140	139	7,50	2,51	152,0	580	2527
1400	128	7,50	2,81	187,0	500	2359
1750	122	7,50	3,32	233,0	500	2190
2800	94	7,50	4,03	373,0	395	1873

PERFORMANCES

ISW075

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	260	7,50	2,14	67,0	980	3925
900	215	7,50	3,07	120,0	810	3227
1140	200	7,50	3,59	152,0	810	2982
1400	185	7,50	4,06	187,0	700	2785
1750	176	7,50	4,80	233,0	700	2585
2800	131	7,50	5,61	373,0	560	2210

ISW090

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	451	7,50	3,66	67,0	1270	4343
900	374	7,50	5,28	120,0	1040	3570
1140	347	7,50	6,16	152,0	1040	3300
1400	319	7,50	6,93	187,0	900	3081
1750	303	7,50	8,19	233,0	900	2860
2800	210	7,50	8,92	373,0	715	2446

ISW105

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	762	7,50	6,11	67,0	1270	5488
900	624	7,50	8,81	120,0	1270	4511
1140	576	7,50	10,23	152,0	1270	4169
1400	530	7,50	11,51	187,0	1270	3893
1750	504	7,50	13,62	233,0	1270	3614
2800	340	7,50	14,45	373,0	1270	3090

NRV030

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	25	7,50	0,22	67,0	210	963
900	21	7,50	0,32	120,0	175	792
1140	20	7,50	0,38	152,0	175	732
1400	19	7,50	0,44	187,0	150	683
1750	18	7,50	0,52	233,0	150	634
2800	13	7,50	0,58	373,0	125	542

PERFORMANCES

NRV040

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	56	7,50	0,47	67,0	350	1853
900	46	7,50	0,68	120,0	318	1524
1140	44	7,50	0,81	152,0	327	1408
1400	42	7,50	0,94	187,0	292	1315
1750	40	7,50	1,12	233,0	291	1221
2800	28	7,50	1,23	373,0	233	1044

NRV050

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	112	7,50	0,93	67,0	490	2544
900	91	7,50	1,33	120,0	444	2091
1140	84	7,50	1,54	152,0	448	1933
1400	77	7,50	1,71	187,0	396	1805
1750	73	7,50	2,03	233,0	396	1676
2800	52	7,50	2,26	373,0	324	1433

NRV-P063

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	184	7,50	1,49	67,0	700	3325
900	151	7,50	2,16	120,0	580	2734
1140	139	7,50	2,51	152,0	580	2527
1400	128	7,50	2,81	187,0	500	2359
1750	122	7,50	3,32	233,0	500	2190
2800	94	7,50	4,03	373,0	395	1873

NRV-P075

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	260	7,50	2,14	67,0	980	3925
900	215	7,50	3,07	120,0	810	3227
1140	200	7,50	3,59	152,0	810	2982
1400	185	7,50	4,06	187,0	700	2785
1750	176	7,50	4,80	233,0	700	2585
2800	131	7,50	5,61	373,0	560	2210

PERFORMANCES

NRV-P090

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	451	7,50	3,66	67,0	1270	4343
900	374	7,50	5,28	120,0	1040	3570
1140	347	7,50	6,16	152,0	1040	3300
1400	319	7,50	6,93	187,0	900	3081
1750	303	7,50	8,19	233,0	900	2860
2800	210	7,50	8,92	373,0	715	2446

NRV-P110

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	794	7,50	6,37	67,0	1700	5488
900	650	7,50	9,18	120,0	1390	4511
1140	601	7,50	10,68	152,0	1390	4169
1400	552	7,50	11,99	187,0	1200	3893
1750	524	7,50	14,17	233,0	1200	3614
2800	391	7,50	16,61	373,0	950	3090

NRV130

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	1080	7,50	8,57	67,0	2100	7178
900	880	7,50	12,29	120,0	1740	5901
1140	815	7,50	14,41	152,0	1740	5453
1400	750	7,50	16,11	187,0	1500	5092
1750	712	7,50	19,13	233,0	1500	4727
2800	520	7,50	22,10	373,0	1190	4042

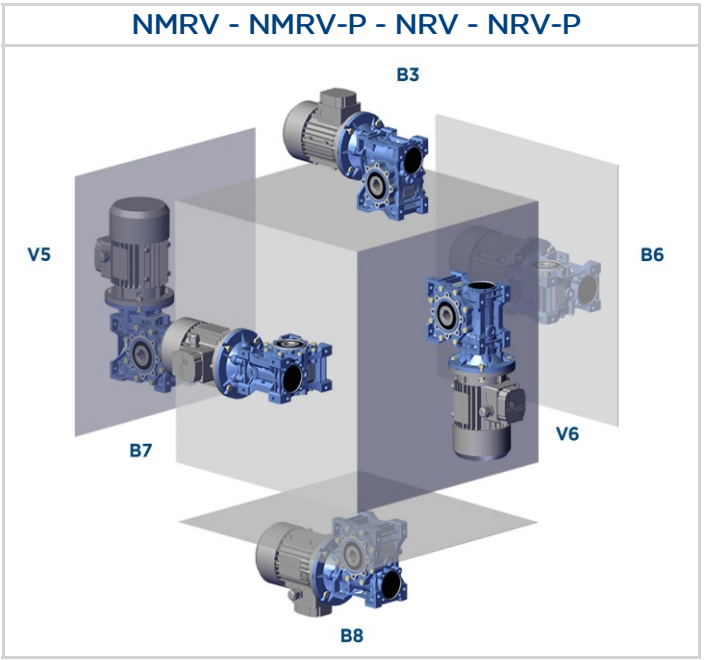
NRV150

n_1 [rpm]	Mn_2 [Nm]	i	Pn_1 [kW]	n_2 [rpm]	Fr_1 [N]	Fr_2 [N]
500	1700	7,50	13,49	67,0	2800	9812
900	1400	7,50	19,55	120,0	2270	8067
1140	1400	7,50	24,76	152,0	2270	7455
1400	1200	7,50	25,78	187,0	1950	6962
1750	1140	7,50	30,61	233,0	1950	6463
2800	840	7,50	35,69	373,0	1550	5526

MOUNTING POSITIONS

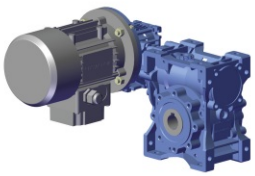
The mounting position of the gear unit identifies its space orientation. B3 mounting position, as from a technical point of view, ensures lower oil splash, better lubrication and less heating.

NMRV - NMRV-P - NRV - NRV-P



Execution

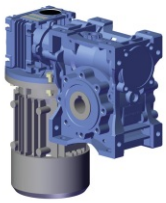
NMRV/NMRV-P+NMRV/NMRV-P - NRV/NRV-P+NMRV/NMRV-P


AS1

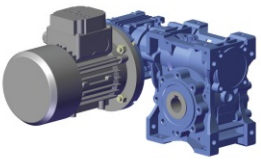

AS2

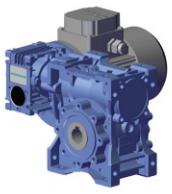

VS1


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

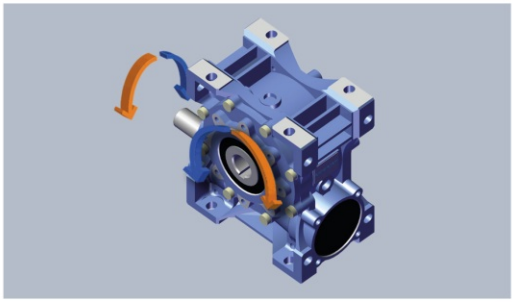
DIRECTION OF ROTATION

The worm screw rotation is right-handed.

DIRECTION OF ROTATION - HIGH SPEED SHAFT

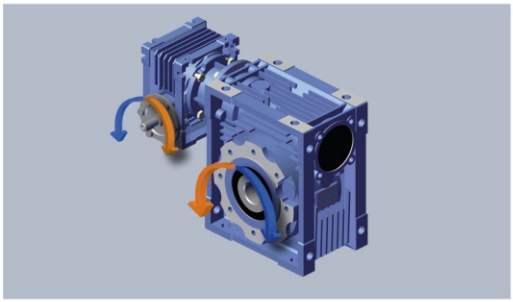
NMRV - NRV - SW - ISW

MOUNTING POSITION **B3**

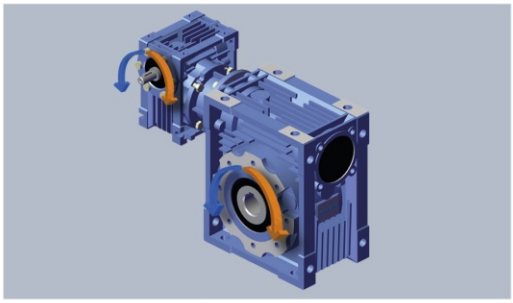


MOUNTING POSITION **B8**

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



MOUNTING POSITION **BS1**



MOUNTING POSITION **AS1**