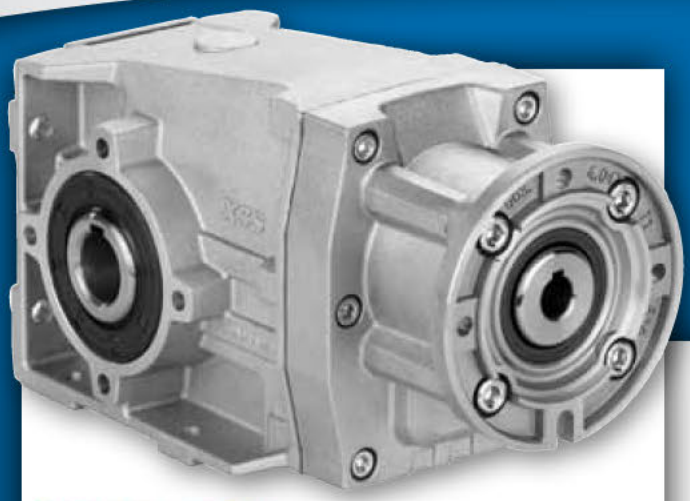
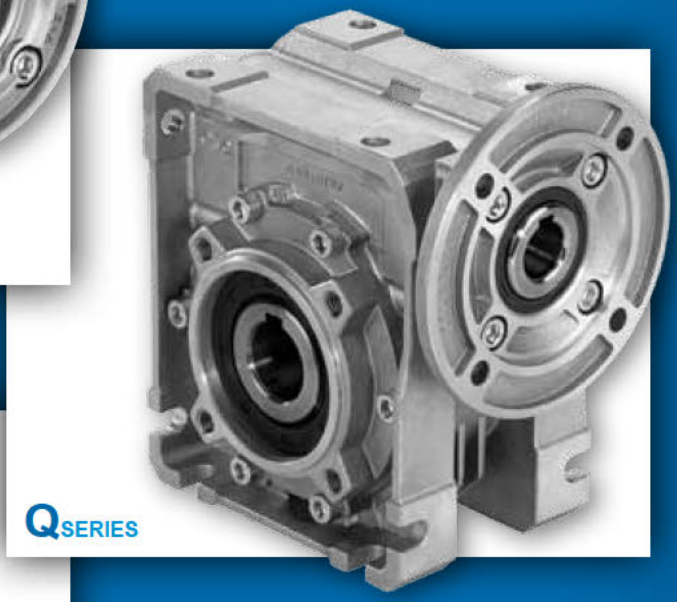
BISON

Gear & Engineering Corp.



PowerSTAR X SERIES



Q SERIES

S SERIES

- More power: from 1/4 to 5HP
- Versatile mounting and configuration options
- Available in worm or high efficiency hypoid gearing
- Custom options available
- Perfect for industrial machinery, conveying and larger format applications

INTEGRAL HORSEPOWER PRODUCT CATALOG

Aluminum and Stainless Steel Gearmotors and Reducers

Rev. 10.17

CONTENTS

PowerSTAR X SERIES

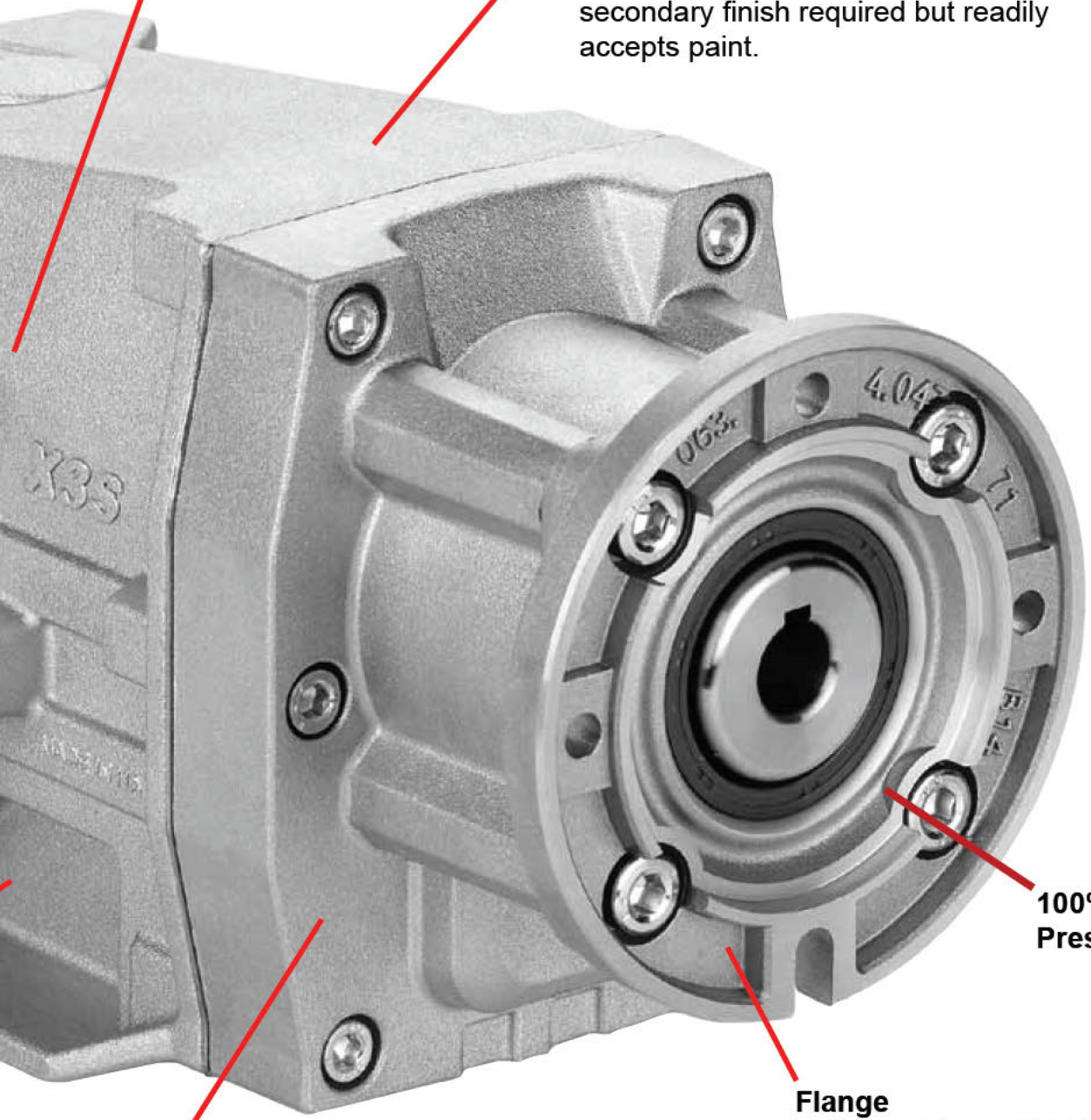
High Efficiency Hypoid Speed Reducer

Removeable Inspection Cover
Allows periodic inspection of gearing during routine maintenance.

Single-Piece Aluminum
Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

Gears
Hardened and ground gears.

Alloy Housing
Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint.



100% Factory Pressure Leak Tested

Flange
Fully modular to NEMA or IEC standard sizes.

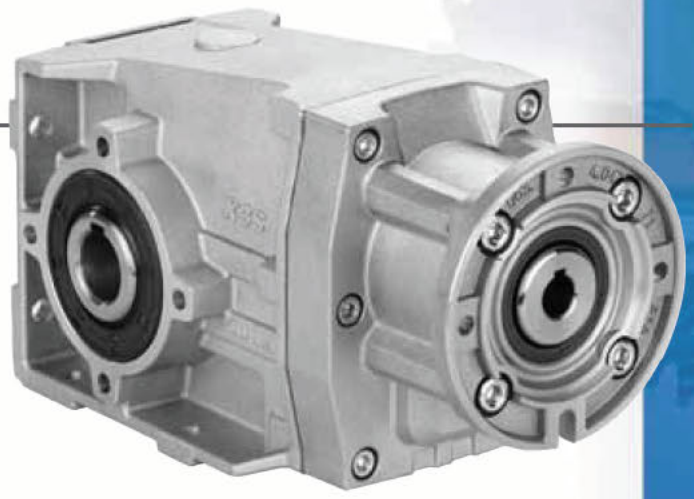
Ratios
Available in 2 stage and 3 stage combinations for a wide range of ratio options

PowerSTAR X42

High Efficiency Hypoid Speed Reducer

0.33 - 2HP, 562 - 1328 in-lbs, 22.6 - 240RPM

- All hardened and ground gears for high efficiency and quiet operation
- Interchangeability with most global manufacturers



TECHNICAL DATA

X42								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number*	Gearmotor Part Number*
240	7.3	2	504	1.7	562	841	RX42-0007-HSB2S-X	GX42-0007-HSB2S-XAG3B
		1	252	3.3				GX42-0007-HSB2S-XAE3B
156	11.2	2	774	1.7	562	1328	RX42-0011-HSB2S-X	GX42-0011-HSB2S-XAG3B
		1	387	3.4				GX42-0011-HSB2S-XAE3B
133	13.2	2	911	1.5	674	1328	RX42-0013-HSB2S-X	GX42-0013-HSB2S-XAG3B
		1	456	2.9				GX42-0013-HSB2S-XAE3B
115	15.3	2	1056	1.3	674	1328	RX42-0015-HSB2S-X	GX42-0015-HSB2S-XAG3B
		1	528	2.5				GX42-0015-HSB2S-XAE3B
98	17.9	2	1240	1.1	786	1328	RX42-0018-HSB2S-X	GX42-0018-HSB2S-XAG3B
		1	620	2.1				GX42-0018-HSB2S-XAE3B
86	20.3	1.5	1050	1.3	786	1328	RX42-0020-HSB2S-X	GX42-0020-HSB2S-XAF3B
		1	700	1.9				GX42-0020-HSB2S-XAE3B
82	21.4	1.5	1110	1.2	786	1328	RX42-0021-HSB2S-X	GX42-0021-HSB2S-XAF3B
		1	740	1.8				GX42-0021-HSB2S-XAE3B
75	23.5	1.5	1217	1.1	899	1328	RX42-0023-HSB2S-X	GX42-0023-HSB2S-XAF3B
		1	812	1.6				GX42-0023-HSB2S-XAE3B
64	27.6	1.5	1429	0.9	899	1328	RX42-0028-HSB2S-X	GX42-0028-HSB2S-XAF3B
		1	953	1.4				GX42-0028-HSB2S-XAE3B
60	29.2	1	1010	1.3	899	1328	RX42-0029-HSB2S-X	GX42-0029-HSB2S-XAE3B
		0.5	505	2.6				GX42-0029-HSB2S-WAC3B
53	32.9	1	1137	1.2	899	1328	RX42-0033-HSB2S-X	GX42-0033-HSB2S-XAE3B
		0.5	569	2.3				GX42-0033-HSB2S-WAC3B
45.9	38.1	1	1318	1	1079	1328	RX42-0038-HSB2S-X	GX42-0038-HSB2S-XAE3B
		0.5	659	2				GX42-0038-HSB2S-WAC3B
39.0	44.9	0.75	1164	1.1	1079	1328	RX42-0045-HSB2S-W	GX42-0045-HSB2S-WAD3B
		0.5	776	1.7				GX42-0045-HSB2S-WAC3B
34.8	50.3	0.75	1305	0.9	1079	1159	RX42-0050-HSB2S-W	GX42-0050-HSB2S-WAD3B
		0.5	870	1.3				GX42-0050-HSB2S-WAC3B
29.9	58.6	0.75	1519	0.9	1079	1328	RX42-0059-HSB2S-W	GX42-0059-HSB2S-WAD3B
		0.5	1013	1.3				GX42-0059-HSB2S-WAC3B
22.6	77.4	0.5	1337	1	1079	1328	RX42-0077-HSB2S-W	GX42-0077-HSB2S-WAC3B
		0.33	883	1.5				GX42-0077-HSB2S-WAB3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

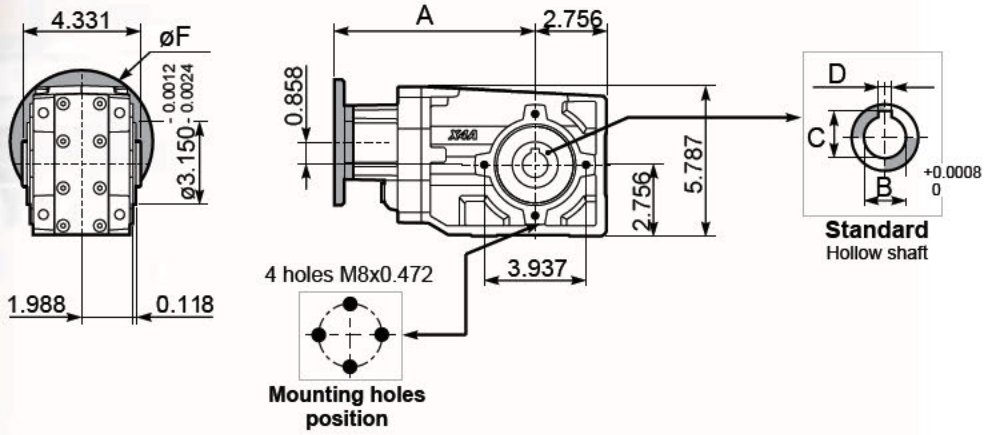
**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

Motors 1HP and greater meet EISA efficiency requirements.

DRAWINGS

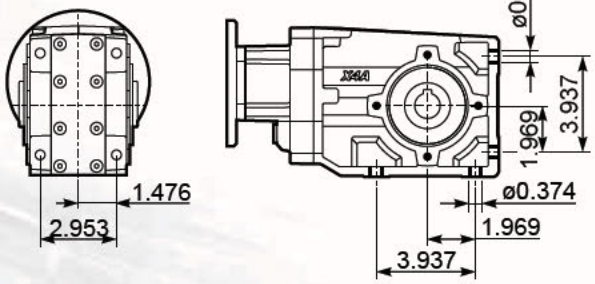
Basic Gearbox



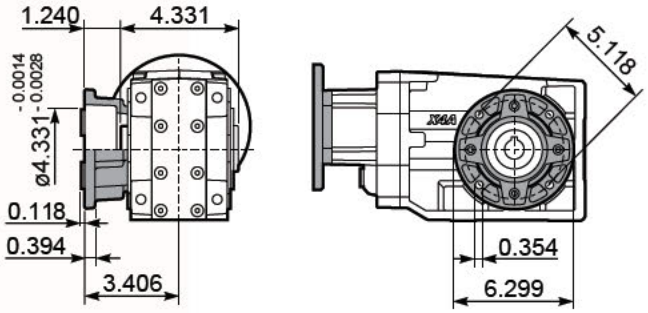
X42	Nema Flanges	øF	A
	56C-143/5TC	6 5"	8.228"
	IEC Flanges	øF (mm)	A (mm)
	71 B5	160	197.5
	80/90 B5	200	199.5
	71 B14	105	197.5
	80 B14	120	199.5
	90 B14	140	199.5

Hollow Shaft	B	C	D
Imperial	1 000"	1.118"	0 250"
Metric (mm)	25	28 3	8

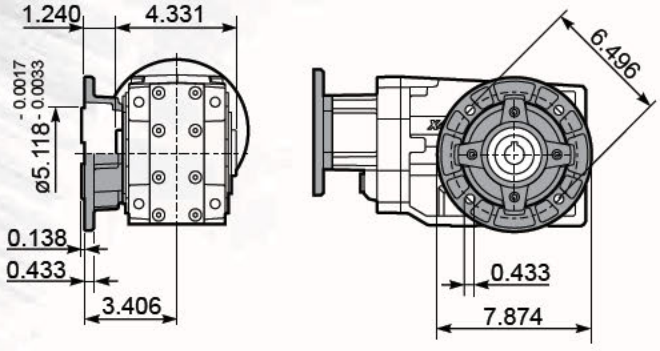
Mounting SB



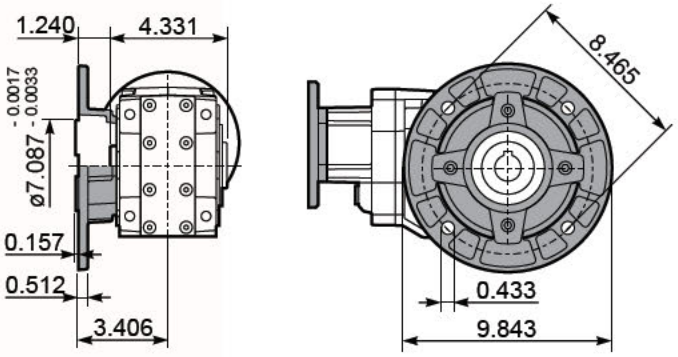
Output Flange F2



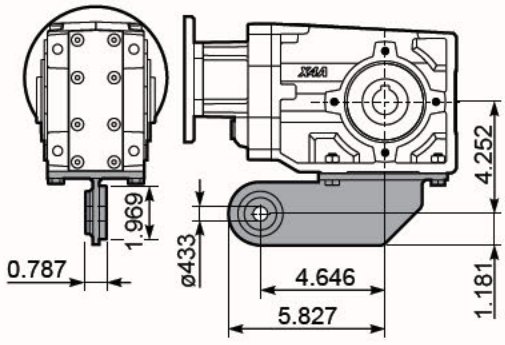
Output Flange F3



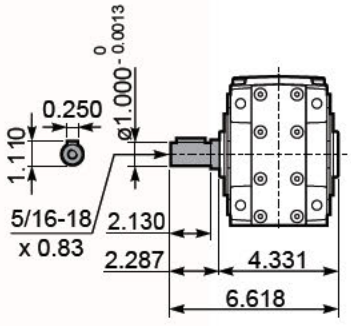
Output Flange F4



Torque Arm TA



Output Shaft Insert R/L



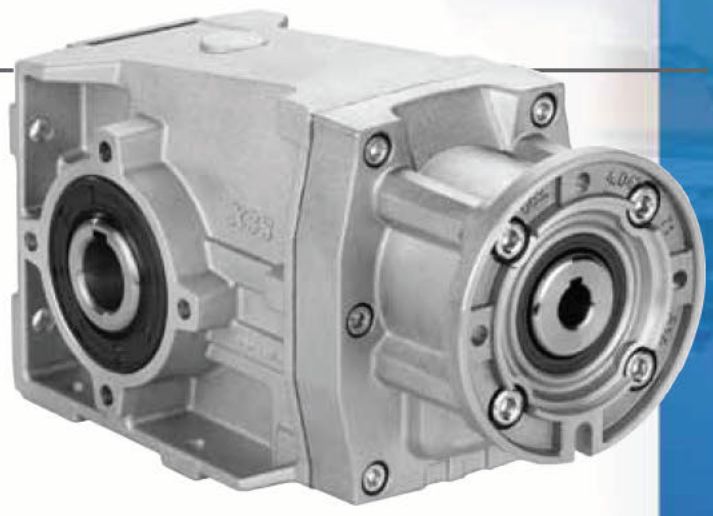
Gearbox Weight	17.2 pounds

PowerSTAR X43

High Efficiency Hypoid Speed Reducer

0.25 - 0.75HP, 1328 - 1416 in-lbs, 5.4 - 34.8RPM

- All hardened and ground gears for high efficiency and quiet operation
- Interchangeability with most global manufacturers



TECHNICAL DATA

X43								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number**	Gearmotor Part Number**
34.8	50.4	0.75	1278	1	1079	1328	RX43-0050-HSB2S-W	GX43-0050-HSB2S-WAD3B
		0.5	852	1.6				GX43-0050-HSB2S-WAC3B
31.7	55.2	0.75	1402	0.9	1079	1328	RX43-0055-HSB2S-W	GX43-0055-HSB2S-WAD3B
		0.5	935	1.4				GX43-0055-HSB2S-WAC3B
29.2	59.9	0.75	1521	0.9	1079	1328	RX43-0060-HSB2S-W	GX43-0060-HSB2S-WAD3B
		0.5	1014	1.3				GX43-0060-HSB2S-WAC3B
26.6	65.7	0.5	1112	1.2	1079	1328	RX43-0066-HSB2S-W	GX43-0066-HSB2S-WAC3B
		0.25	556	2.4				GX43-0066-HSB2S-WAA3B
24.4	71.8	0.5	1215	1.1	1079	1328	RX43-0072-HSB2S-W	GX43-0072-HSB2S-WAC3B
		0.25	608	2.2				GX43-0072-HSB2S-WAA3B
22.0	79.4	0.5	1345	1	1079	1328	RX43-0079-HSB2S-W	GX43-0079-HSB2S-WAC3B
		0.25	672	2				GX43-0079-HSB2S-WAA3B
19.0	92.1	0.33	1029	1.3	1079	1328	RX43-0092-HSB2S-W	GX43-0092-HSB2S-WAB3B
		0.25	779	1.7				GX43-0092-HSB2S-WAA3B
18.4	95.0	0.33	1062	1.3	1079	1328	RX43-0095-HSB2S-W	GX43-0095-HSB2S-WAB3B
		0.25	804	1.7				GX43-0095-HSB2S-WAA3B
13.8	126.6	0.33	1414	1	1079	1416	RX43-0127-HSB2S-W	GX43-0127-HSB2S-WAB3B
		0.25	1071	1.3				GX43-0127-HSB2S-WAA3B
13.1	133.2	0.33	1488	1	1079	1416	RX43-0133-HSB2S-W	GX43-0133-HSB2S-WAB3B
		0.25	1127	1.3				GX43-0133-HSB2S-WAA3B
11.7	150.2	0.33	1678	0.8	1079	1416	RX43-0150-HSB2S-W	GX43-0150-HSB2S-WAB3B
		0.25	1271	1.1				GX43-0150-HSB2S-WAA3B
9.9	177.3	0.25	1501	0.9	1079	1416	RX43-0177-HSB2S-W	GX43-0177-HSB2S-WAA3B
8.3	210.4	0.25*	1781	0.8	1079	1416	RX43-0210-HSB2S-W	GX43-0210-HSB2S-WAA3B
7.6	230.8	0.25*	1953	0.7	1079	1416	RX43-0231-HSB2S-W	GX43-0231-HSB2S-WAA3B
6.4	272.5	0.25*	2306	0.6	1079	1416	RX43-0272-HSB2S-W	GX43-0272-HSB2S-WAA3B
5.4	323.4	0.25*	2737	0.5	1079	1416	RX43-0323-HSB2S-W	GX43-0323-HSB2S-WAA3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

**Power greater than that which can be supported by the gearbox for continuous duty.*

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

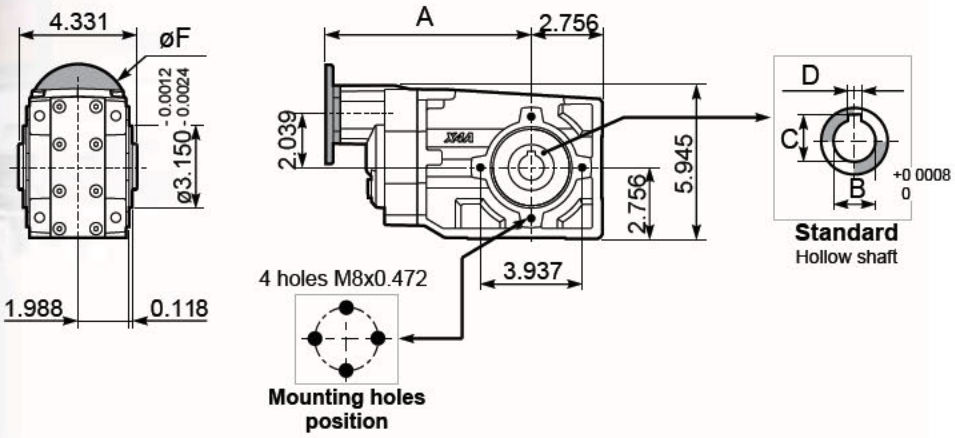
**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

Motors 1HP and greater meet EISA efficiency requirements.

DRAWINGS

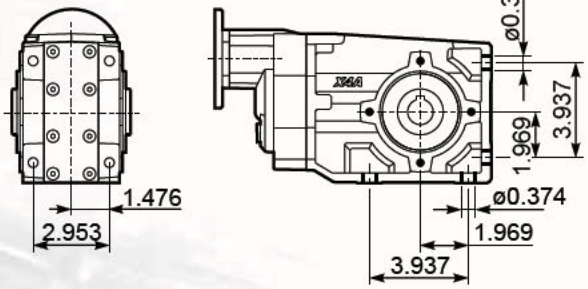
Basic Gearbox



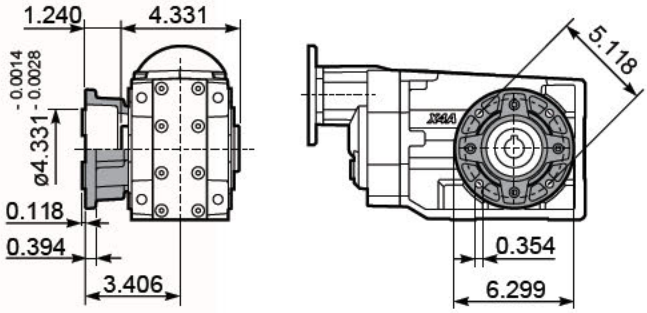
X43	Nema Flanges	øF	A
	56C	6 5"	8.787"
	IEC Flanges	øF (mm)	A (mm)
	63 B5	138	205
	71 B5	160	202.5
	56 B14	80	202.5
	63 B14	90	205
	71 B14	105	202.5

Hollow Shaft	B	C	D
Imperial	1 000"	1.118"	0 250"
Metric (mm)	25	28.3	8

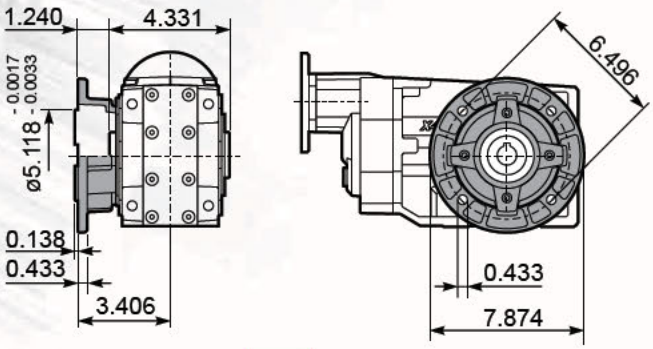
Mounting SB



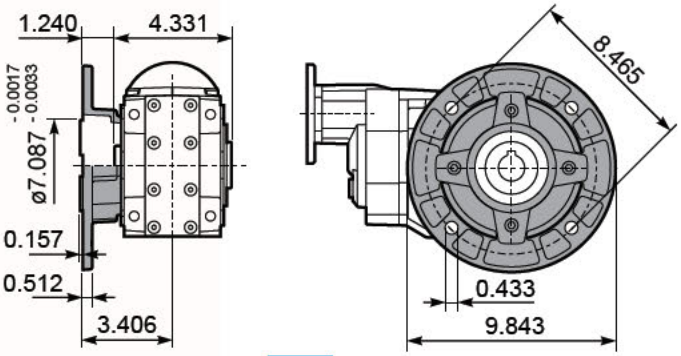
Output Flange F2



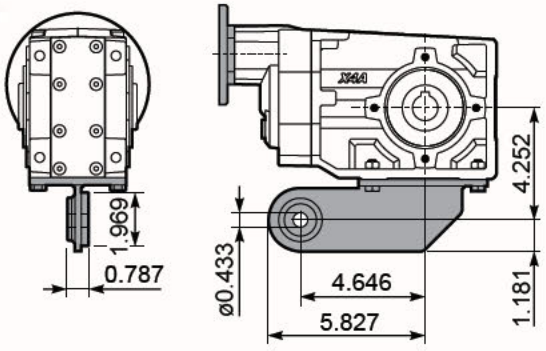
Output Flange F3



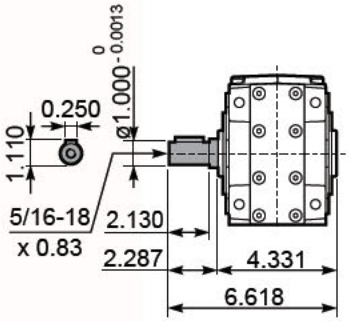
Output Flange F4



Torque Arm TA



Output Shaft Insert R/L



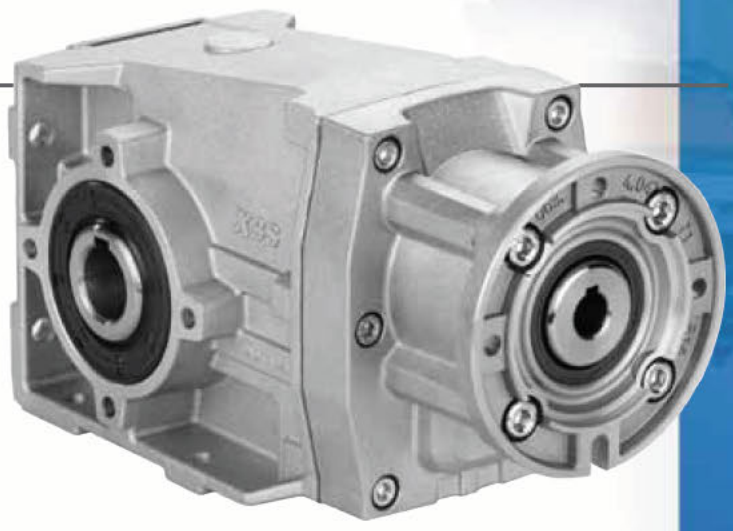
Gearbox Weight	17.5 pounds

PowerSTAR X52

High Efficiency Hypoid Speed Reducer

0.5 - 5HP, 1195 - 2213 in-lbs, 23.4 - 290RPM

- All hardened and ground gears for high efficiency and quiet operation
- Interchangeability with most global manufacturers



TECHNICAL DATA

X52								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number*	Gearmotor Part Number*
290	6.0	5	1042	1.1	609	1195	RX52-0006-HSB2S-Y	GX52-0006-HSB2S-YAJ3B
		3	625	1.9				GX52-0006-HSB2S-YAH3B
189	9.3	5	1601	0.9	674	1372	RX52-0009-HSB2S-Y	GX52-0009-HSB2S-YAJ3B
		3	961	1.4				GX52-0009-HSB2S-YAH3B
154	11.4	5	1964	1	674	2036	RX52-0011-HSB2S-Y	GX52-0011-HSB2S-YAJ3B
		3	1178	1.7				GX52-0011-HSB2S-YAH3B
114	15.4	3	1593	1.4	787	2213	RX52-0015-HSB2S-Y	GX52-0015-HSB2S-YAH3B
		1.5	797	2.8				GX52-0015-HSB2S-XAF3B
100	17.5	3	1811	1.2	899	2213	RX52-0017-HSB2S-Y	GX52-0017-HSB2S-YAH3B
		1.5	905	2.4				GX52-0017-HSB2S-XAF3B
88	20.0	3	2072	1.1	899	2213	RX52-0020-HSB2S-Y	GX52-0020-HSB2S-YAH3B
		1.5	1036	2.1				GX52-0020-HSB2S-XAF3B
74	23.6	3	2448	0.9	921	2213	RX52-0023-HSB2S-Y	GX52-0023-HSB2S-YAH3B
		1.5	1224	1.8				GX52-0023-HSB2S-XAF3B
72	24.5	3	2536	0.9	921	2213	RX52-0024-HSB2S-Y	GX52-0024-HSB2S-YAH3B
		1.5	1268	1.7				GX52-0024-HSB2S-XAF3B
57	30.7	2	2122	1	921	2213	RX52-0031-HSB2S-X	GX52-0031-HSB2S-XAG3B
		1	1061	2.1				GX52-0031-HSB2S-XAE3B
49.5	35.4	1.5	1834	1.2	1079	2213	RX52-0035-HSB2S-X	GX52-0035-HSB2S-XAF3B
		1	1222	1.8				GX52-0035-HSB2S-XAE3B
46.6	37.6	1.5	1948	1.1	1079	2213	RX52-0038-HSB2S-X	GX52-0038-HSB2S-XAF3B
		1	1299	1.7				GX52-0038-HSB2S-XAE3B
35.9	48.7	1	1683	1.3	1079	2213	RX52-0049-HSB2S-X	GX52-0049-HSB2S-XAE3B
		0.5	842	2.6				GX52-0049-HSB2S-WAC3B
32.2	54.3	1	1878	1.2	1079	2213	RX52-0054-HSB2S-X	GX52-0054-HSB2S-XAE3B
		0.5	939	2.4				GX52-0054-HSB2S-WAC3B
23.4	74.8	0.75	1940	1	1517	1859	RX52-0075-HSB2S-W	GX52-0075-HSB2S-WAD3B
		0.5	1293	1.4				GX52-0075-HSB2S-WAC3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

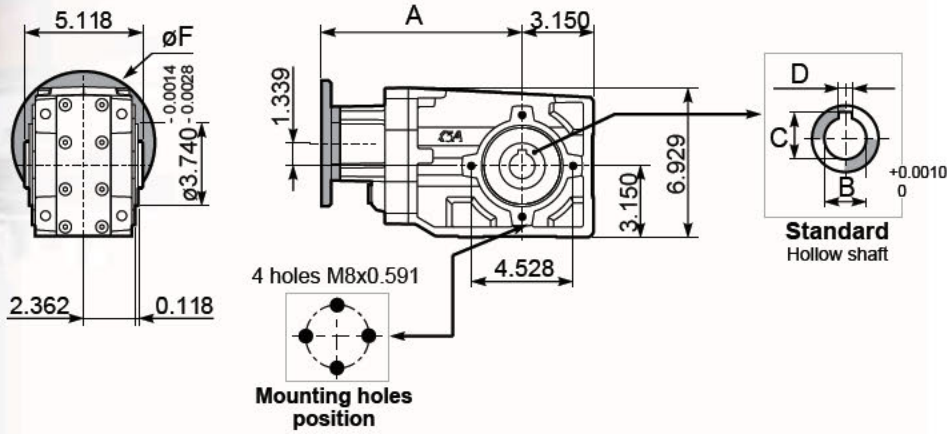
**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

Motors 1HP and greater meet EISA efficiency requirements.

DRAWINGS

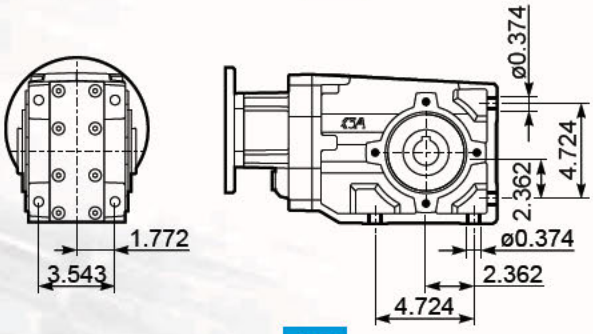
Basic Gearbox



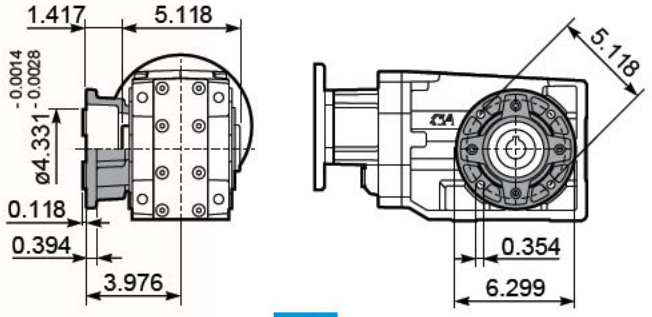
X52	Nema Flanges	øF	A
	56C - 143/5TC	6 5"	9.47"
	182/4TC	8.88"	10.17"
	IEC Flanges	øF (mm)	A (mm)
	80/90 B5	200	236
	100 B5	250	245
	80 B14	120	236
	90 B14	140	236
	100 B14	160	245

Hollow Shaft	B	C	D
Imperial	1 250"	1 370"	0 250"
Metric (mm)	30	33 3	8

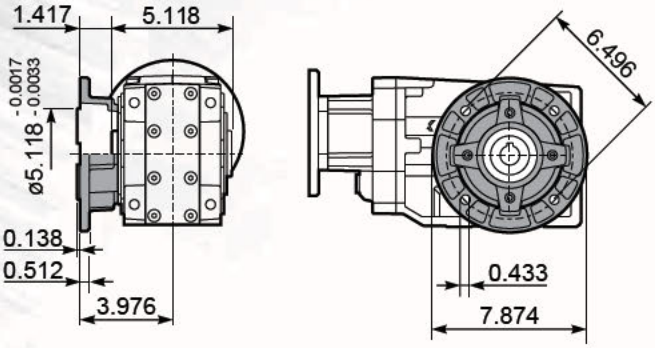
Mount — SB



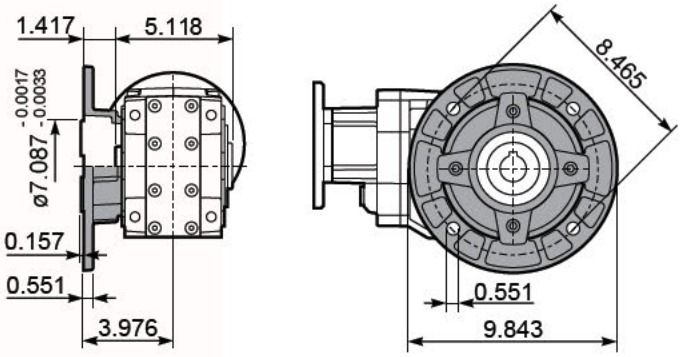
Output Flange — F2



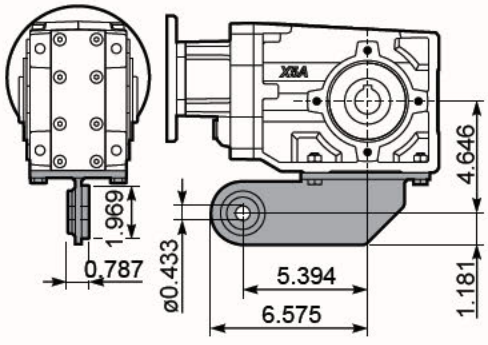
Output Flange — F3



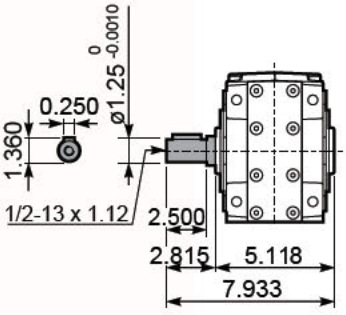
Output Flange — F4



Torque Arm — TA



Output Shaft Insert — R/L



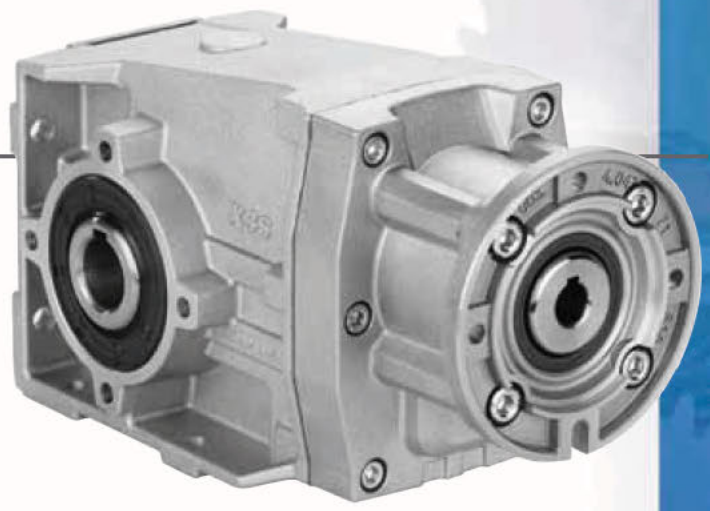
Gearbox Weight	28.2 pounds

PowerSTAR X53

High Efficiency Hypoid Speed Reducer

0.25 - 1HP, 2213 in-lbs, 3.0 - 30.8RPM

- All hardened and ground gears for high efficiency and quiet operation
- Interchangeability with most global manufacturers



TECHNICAL DATA

X53								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number**	Gearmotor Part Number**
30.8	56.8	1	1922	1.2	1079	2213	RX53-0057-HSB2S-X	GX53-0057-HSB2S-XAE3B
		0.5	961	2.3				GX53-0057-HSB2S-WAC3B
26.6	65.8	1	2227	1.0	1079	2213	RX53-0066-HSB2S-X	GX53-0066-HSB2S-XAE3B
		0.5	1114	2.0				GX53-0066-HSB2S-WAC3B
22.7	77.2	0.75	1961	1.1	1517	2213	RX53-0077-HSB2S-W	GX53-0077-HSB2S-WAD3B
		0.5	1307	1.7				GX53-0077-HSB2S-WAC3B
20.1	87.2	0.75	2215	1.0	1517	2213	RX53-0087-HSB2S-W	GX53-0087-HSB2S-WAD3B
		0.5	1477	1.5				GX53-0087-HSB2S-WAC3B
19.0	92.2	0.75	2341	0.9	1517	2213	RX53-0092-HSB2S-W	GX53-0092-HSB2S-WAD3B
		0.5	1560	1.4				GX53-0092-HSB2S-WAC3B
17.4	100.5	0.5	1701	1.3	1517	2213	RX53-0100-HSB2S-W	GX53-0100-HSB2S-WAC3B
		0.25	850	2.6				GX53-0100-HSB2S-WAA3B
15.0	116.5	0.5	1971	1.1	1866	2213	RX53-0116-HSB2S-W	GX53-0116-HSB2S-WAC3B
		0.25	986	2.2				GX53-0116-HSB2S-WAA3B
13.9	125.8	0.5	2130	1.0	1866	2213	RX53-0126-HSB2S-W	GX53-0126-HSB2S-WAC3B
		0.25	1065	2.1				GX53-0126-HSB2S-WAA3B
12.4	141.7	0.5	2398	0.9	1866	2213	RX53-0142-HSB2S-W	GX53-0142-HSB2S-WAC3B
		0.25	1199	1.8				GX53-0142-HSB2S-WAA3B
10.7	163.2	0.33	1823	1.2	1866	2213	RX53-0163-HSB2S-W	GX53-0163-HSB2S-WAB3B
		0.25	1381	1.6				GX53-0163-HSB2S-WAA3B
9.8	179.0	0.33	1999	1.1	1866	2213	RX53-0179-HSB2S-W	GX53-0179-HSB2S-WAB3B
		0.25	1515	1.5				GX53-0179-HSB2S-WAA3B
9.1	193.4	0.33	2160	1.0	1866	2213	RX53-0193-HSB2S-W	GX53-0193-HSB2S-WAB3B
		0.25	1637	1.4				GX53-0193-HSB2S-WAA3B
8.1	216.8	0.33	2423	0.9	1866	2213	RX53-0217-HSB2S-W	GX53-0217-HSB2S-WAB3B
		0.25	1835	1.2				GX53-0217-HSB2S-WAA3B
6.9	252.4	0.25	2136	1.0	1866	2213	RX53-0252-HSB2S-W	GX53-0252-HSB2S-WAA3B
6.0	290.7	0.25	2460	0.9	1866	2213	RX53-0291-HSB2S-W	GX53-0291-HSB2S-WAA3B
5.3	333.2	0.25*	2820	0.8	1866	2213	RX53-0333-HSB2S-W	GX53-0333-HSB2S-WAA3B
4.6	383.8	0.25*	3249	0.7	1866	2213	RX53-0384-HSB2S-W	GX53-0384-HSB2S-WAA3B
3.9	446.7	0.25*	3781	0.6	1866	2213	RX53-0447-HSB2S-W	GX53-0447-HSB2S-WAA3B
3.0	589.9	0.25*	4992	0.4	1866	2213	RX53-0590-HSB2S-W	GX53-0590-HSB2S-WAA3B

*Notes: *Power greater than that which can be supported by the gearbox for continuous duty.*

All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

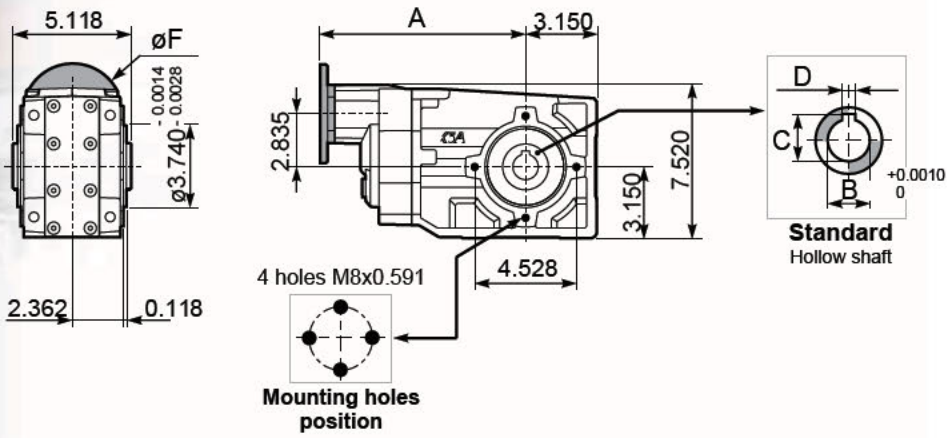
**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

Motors 1HP and greater meet EISA efficiency requirements.

DRAWINGS

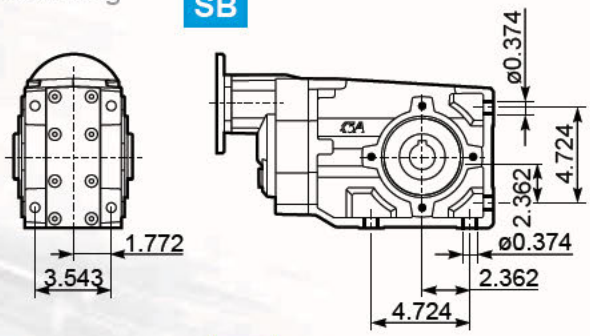
Basic Gearbox



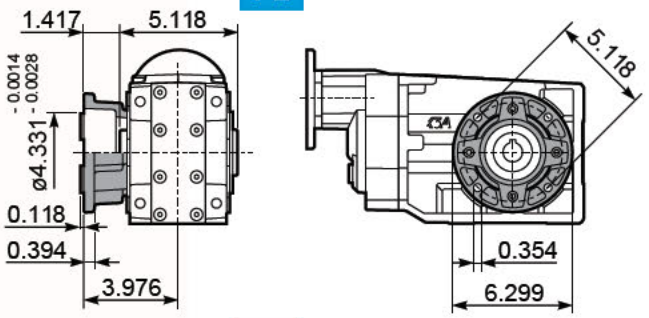
X53	Nema Flanges	øF	A
	56C - 143/5TC	6 5"	9.47"
	IEC Flanges	øF (mm)	A (mm)
	71 B5	160	244
	80/90 B5	200	246
	71 B14	105	244
	80 B14	120	246
	90 B14	140	246

Hollow Shaft	B	C	D
Imperial	1 250"	1 370"	0 250"
Metric (mm)	30	33 3	8

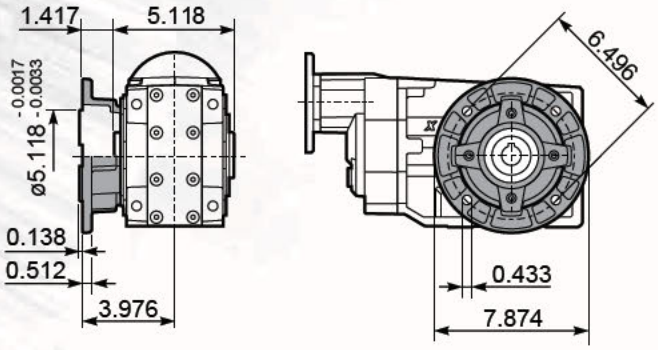
Mounting SB



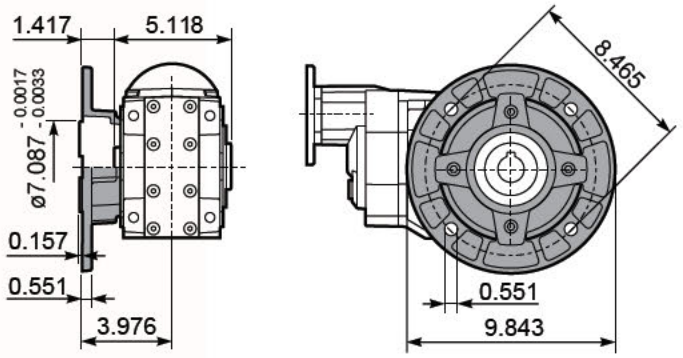
Output Flange F2



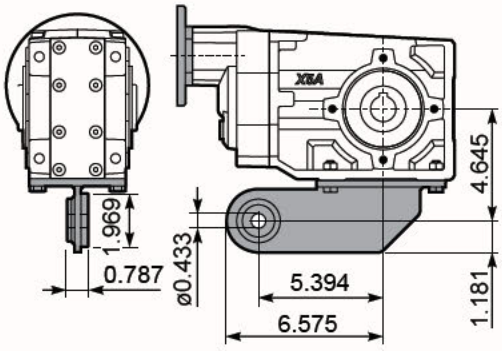
Output Flange F3



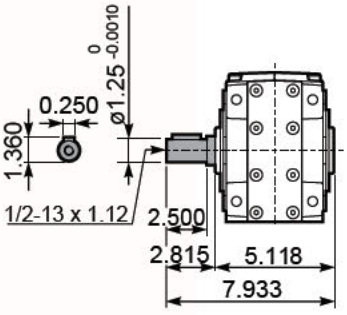
Output Flange F4



Torque Arm TA



Output Shaft Insert R/L



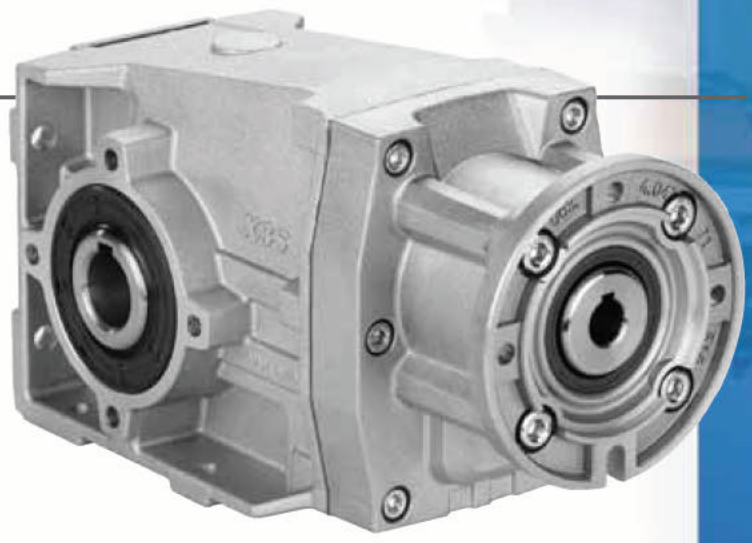
Gearbox Weight	27.9 pounds

PowerSTAR X62

High Efficiency Hypoid Speed Reducer

0.5 - 5HP, 2124 - 3629 in-lbs, 23.4 - 290RPM

- All hardened and ground gears for high efficiency and quiet operation
- Interchangeability with most global manufacturers



TECHNICAL DATA

X62								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs.)	Reducer Part Number*	Gearmotor Part Number*
290	6.0	5	1042	2.0	621	2124	RX62-0006-HSB2S-Y	GX62-0006-HSB2S-YAJ3B
		3	625	3.4				GX62-0006-HSB2S-YAH3B
189	9.3	5	1601	1.5	674	2390	RX62-0009-HSB2S-Y	GX62-0009-HSB2S-YAJ3B
		3	961	2.5				GX62-0009-HSB2S-YAH3B
154	11.4	5	1964	1.6	674	3098	RX62-0011-HSB2S-Y	GX62-0011-HSB2S-YAJ3B
		3	1178	2.6				GX62-0011-HSB2S-YAH3B
114	15.4	5	2655	1.3	787	3408	RX62-0015-HSB2S-Y	GX62-0015-HSB2S-YAJ3B
		3	1593	2.1				GX62-0015-HSB2S-YAH3B
100	17.5	5	3018	1.2	877	3540	RX62-0017-HSB2S-Y	GX62-0017-HSB2S-YAJ3B
		3	1811	2.0				GX62-0017-HSB2S-YAH3B
88	20.0	5	3453	1.1	877	3629	RX62-0020-HSB2S-Y	GX62-0020-HSB2S-YAJ3B
		3	2072	1.8				GX62-0020-HSB2S-YAH3B
74	23.6	5	4080	0.9	1000	3629	RX62-0023-HSB2S-Y	GX62-0023-HSB2S-YAJ3B
		3	2448	1.5				GX62-0023-HSB2S-YAH3B
72	24.5	5	4226	0.9	1000	3629	RX62-0024-HSB2S-Y	GX62-0024-HSB2S-YAJ3B
		3	2536	1.4				GX62-0024-HSB2S-YAH3B
57	30.7	3	3184	1.1	1000	3629	RX62-0031-HSB2S-Y	GX62-0031-HSB2S-YAH3B
		1.5	1592	2.3				GX62-0031-HSB2S-XAF3B
49.5	35.4	3	3667	1.0	1281	3629	RX62-0035-HSB2S-Y	GX62-0035-HSB2S-YAH3B
		1.5	1834	2.0				GX62-0035-HSB2S-XAF3B
46.6	37.6	3	3897	0.9	1281	3629	RX62-0038-HSB2S-Y	GX62-0038-HSB2S-YAH3B
		1.5	1948	1.9				GX62-0038-HSB2S-XAF3B
35.9	48.7	2	3366	1.0	1281	3231	RX62-0049-HSB2S-X	GX62-0049-HSB2S-XAG3B
		1	1683	1.9				GX62-0049-HSB2S-XAE3B
32.2	54.3	2	3757	1.0	1281	3629	RX62-0054-HSB2S-X	GX62-0054-HSB2S-XAG3B
		1	1878	1.9				GX62-0054-HSB2S-XAE3B
23.4	74.8	1	2587	1.2	1495	3186	RX62-0075-HSB2S-X	GX62-0075-HSB2S-XAE3B
		0.5	1293	2.5				GX62-0075-HSB2S-WAC3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

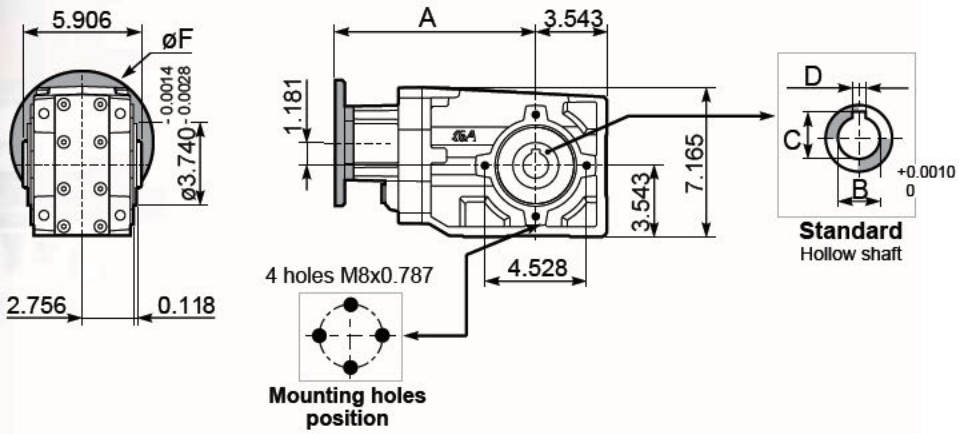
**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

Motors 1HP and greater meet EISA efficiency requirements.

DRAWINGS

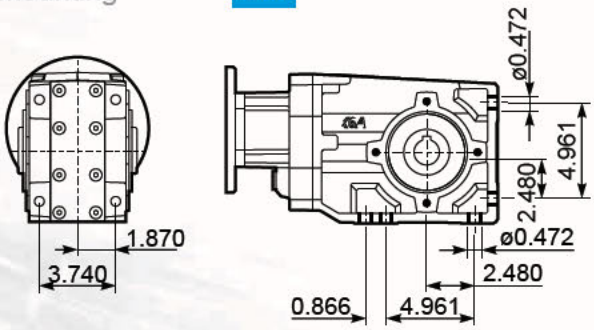
Basic Gearbox



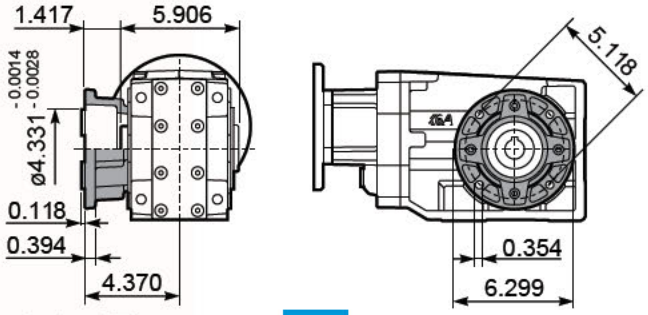
X62	Nema Flanges	øF	A
	56C - 143/5TC	6 5"	10.216"
	182/4TC	8.88"	10.921"
	IEC Flanges	øF (mm)	A (mm)
	80/90 B5	200	255
	100 B5	250	264
	80 B14	120	255
	90 B14	140	255
	100 B14	160	264

Hollow Shaft	B	C	D
Imperial	1 375"	1 520"	0 313"
Metric (mm)	35	38 3	10

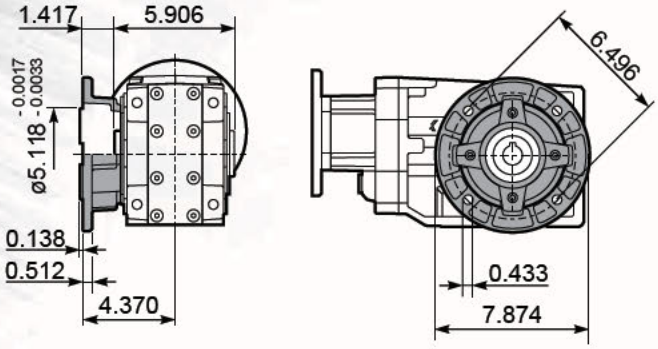
Mounting SB



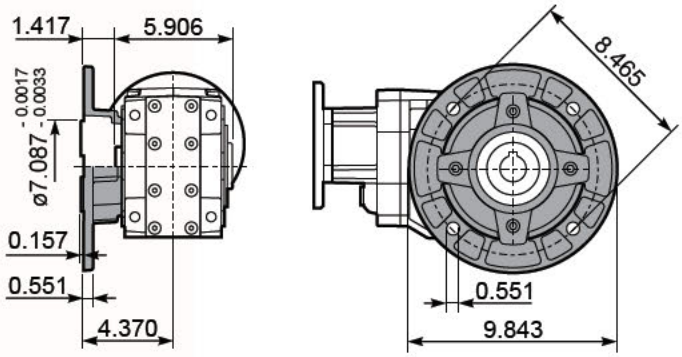
Output Flange F2



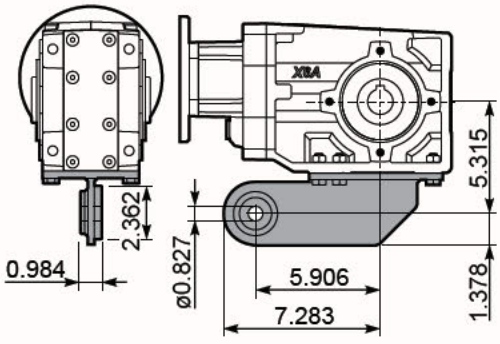
Output Flange F3



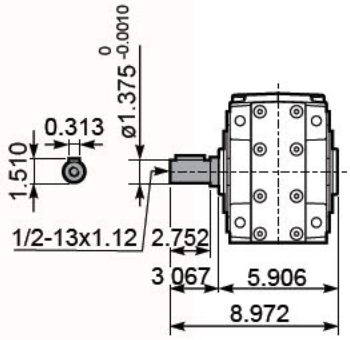
Output Flange F4



Torque Arm TA

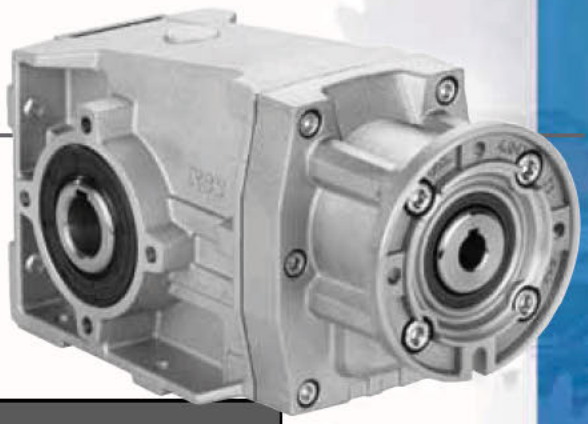


Output Shaft Insert R/L



Gearbox Weight	34.8 pounds

PowerSTAR X63



High Efficiency Hypoid Speed Reducer

0.25 - 1.5HP, 3629 in-lbs, 3.0 - 30.8RPM

- All hardened and ground gears for high efficiency and quiet operation
- Interchangeability with most global manufacturers

TECHNICAL DATA

X63								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number**	Gearmotor Part Number**
30.8	56.8	1.5	2883	1.3	1281	3629	RX63-0057-HSB2S-X	GX63-0057-HSB2S-XAF3B
		1	1922	1.9				GX63-0057-HSB2S-XAE3B
26.6	65.8	1.5	3341	1.1	1281	3629	RX63-0066-HSB2S-X	GX63-0066-HSB2S-XAF3B
		1	2227	1.6				GX63-0066-HSB2S-XAE3B
22.7	77.2	1.5	3922	0.9	1495	3629	RX63-0077-HSB2S-X	GX63-0077-HSB2S-XAF3B
		1	2615	1.4				GX63-0077-HSB2S-XAE3B
20.1	87.2	1	2953	1.2	1495	3629	RX63-0087-HSB2S-X	GX63-0087-HSB2S-XAE3B
		0.5	1477	2.5				GX63-0087-HSB2S-WAC3B
19.0	92.2	1	3121	1.2	1495	3629	RX63-0092-HSB2S-X	GX63-0092-HSB2S-XAE3B
		0.5	1560	2.3				GX63-0092-HSB2S-WAC3B
17.4	100.5	1	3402	1.1	1495	3629	RX63-0100-HSB2S-X	GX63-0100-HSB2S-XAE3B
		0.5	1701	2.1				GX63-0100-HSB2S-WAC3B
15.0	116.5	1	3943	0.9	1866	3629	RX63-0116-HSB2S-X	GX63-0116-HSB2S-XAE3B
		0.5	1971	1.8				GX63-0116-HSB2S-WAC3B
13.9	125.8	0.75	3195	1.1	1866	3629	RX63-0126-HSB2S-W	GX63-0126-HSB2S-WAD3B
		0.5	2130	1.7				GX63-0126-HSB2S-WAC3B
12.4	141.7	0.75	3597	1.0	1866	3629	RX63-0142-HSB2S-W	GX63-0142-HSB2S-WAD3B
		0.5	2398	1.5				GX63-0142-HSB2S-WAC3B
10.7	163.2	0.5	2762	1.3	1866	3629	RX63-0163-HSB2S-W	GX63-0163-HSB2S-WAC3B
		0.25	1381	2.6				GX63-0163-HSB2S-WAA3B
9.8	179.0	0.5	3030	1.2	1866	3629	RX63-0179-HSB2S-W	GX63-0179-HSB2S-WAC3B
		0.25	1515	2.4				GX63-0179-HSB2S-WAA3B
9.1	193.4	0.5	3273	1.1	1866	3629	RX63-0193-HSB2S-W	GX63-0193-HSB2S-WAC3B
		0.25	1637	2.2				GX63-0193-HSB2S-WAA3B
8.1	216.8	0.5	3671	1.0	1866	3629	RX63-0217-HSB2S-W	GX63-0217-HSB2S-WAC3B
		0.25	1835	2.0				GX63-0217-HSB2S-WAA3B
6.9	252.4	0.33	2819	1.3	1866	3629	RX63-0252-HSB2S-W	GX63-0252-HSB2S-WAB3B
		0.25	2136	1.7				GX63-0252-HSB2S-WAA3B
6.0	290.7	0.33	3248	1.1	1866	3629	RX63-0291-HSB2S-W	GX63-0291-HSB2S-WAB3B
		0.25	2460	1.5				GX63-0291-HSB2S-WAA3B
5.3	333.2	0.33	3723	1.0	1866	3629	RX63-0333-HSB2S-W	GX63-0333-HSB2S-WAB3B
		0.25	2820	1.3				GX63-0333-HSB2S-WAA3B
4.6	383.8	0.25	3249	1.1	1866	3629	RX63-0384-HSB2S-W	GX63-0384-HSB2S-WAA3B
3.9	446.7	0.25	3781	1.0	1866	3629	RX63-0447-HSB2S-W	GX63-0447-HSB2S-WAA3B
3.0	589.9	0.25*	4992	0.7	1866	3629	RX63-0590-HSB2S-W	GX63-0590-HSB2S-WAA3B

*Notes: *Power greater than that which can be supported by the gearbox for continuous duty.*

All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

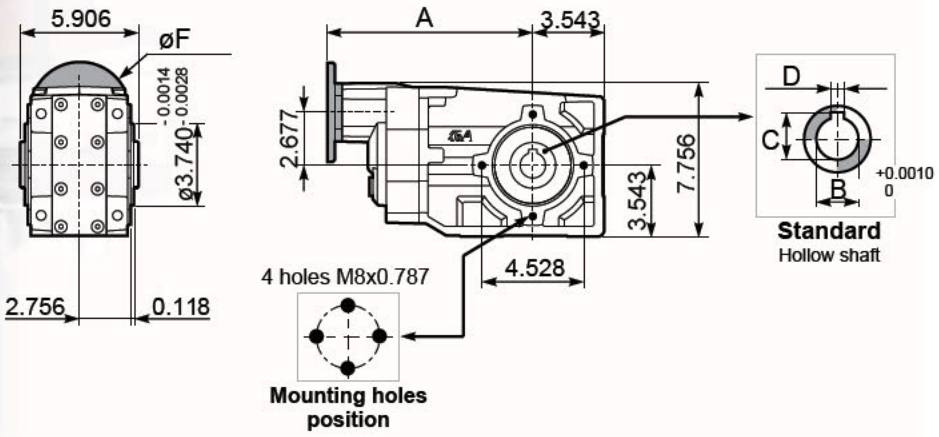
**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

Motors 1HP and greater meet EISA efficiency requirements.

DRAWINGS

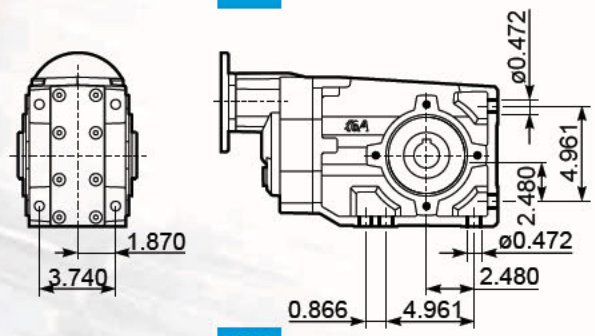
Basic Gearbox



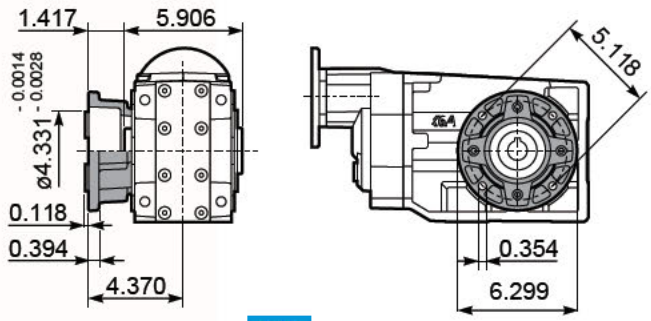
X63	Nema Flanges	øF	A
	56C - 143/5TC	6 5"	10.807"
	IEC Flanges	øF (mm)	A (mm)
	71 B5	160	263
	80/90 B5	200	265
	71 B14	105	263
	80 B14	120	265
	90 B14	140	265

Hollow Shaft	B	C	D
Imperial	1 375"	1 520"	0 313"
Metric (mm)	35	38 3	10

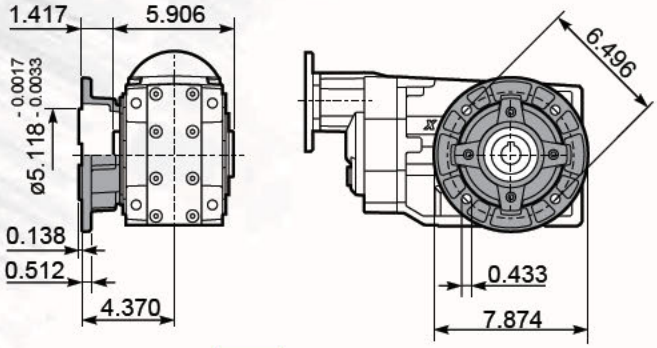
Mounting SB



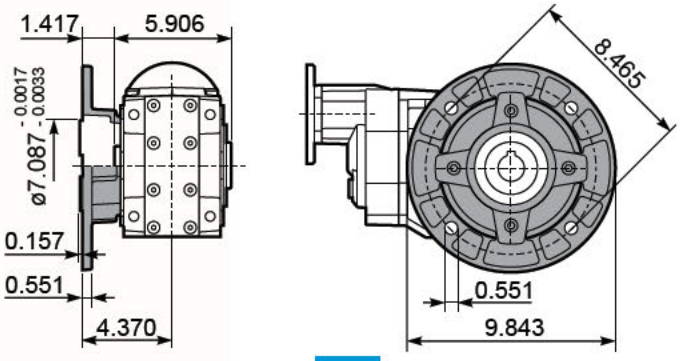
Output Flange F2



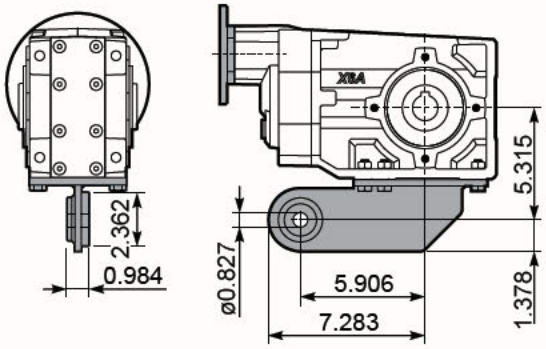
Output Flange F3



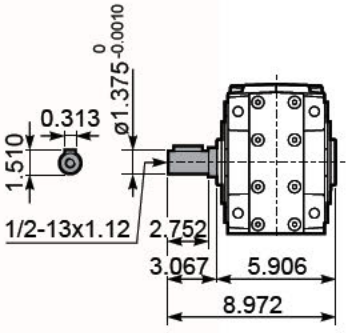
Output Flange F4



Torque Arm TA



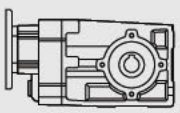
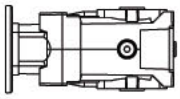
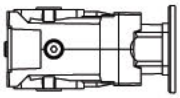
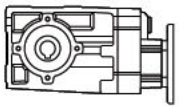
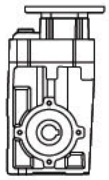
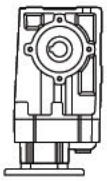
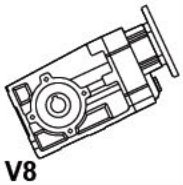
Output Shaft Insert R/L



Gearbox Weight	35.2 pounds

LUBRICATION

- Units X42 - X63 are supplied with synthetic oil for lifetime lubrication, no maintenenace is required.
- The gearboxes are supplied with an oil quantity applicable for mounting positions B3 - V6.
- Special lubrication levels necessary for certain mounting positions. Please specify position when ordering: B6/B7/B8/V5/V6/V8.

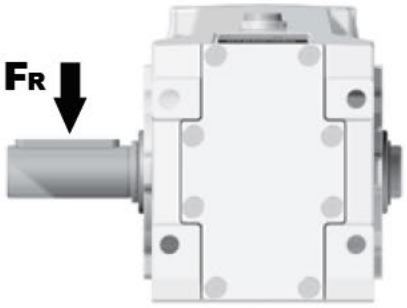
Standard	On request /					
 B3	 B6	 B7	 B8	 V5	 V6	 V8

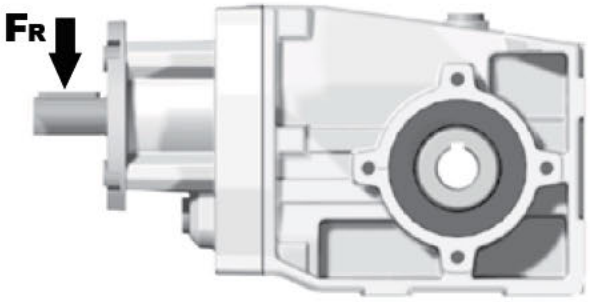
Oil Quantity (oz.) Per Mounting Position							
	B3	B6	B7	B8	V5	V6	V8
X42	21.12	26.40	17.60	24.64	36.71	21.12	Consult Factory
X43	28.16	28.16	21.12	28.16	42.23	24.64	
X52	31.68	52.79	26.40	49.27	68.63	40.47	
X53	45.75	54.55	29.92	51.03	73.91	43.99	
X62	43.99	59.83	33.44	56.31	86.23	52.79	
X63	63.35	63.35	36.95	59.83	91.51	58.07	

Standard		Synthetic Oil
ISO VG		220 320
Ambient temperatures		-30°C - 80° C
	SHELL	OmalaS4 WF 320
	FG MOBIL	Glygoyle 320
Oil Plugs		Closed

OVERHUNG LOAD

- Overhung load generated by external transmissions keyed onto input and/or output shafts





$F_R\,[N] = \frac{M\,[Nm] \cdot 2000}{d\,[mm]} \cdot f_K$	$F_R\,[N] = \frac{M\,[lb\ in] \cdot 8.9}{d\,[in]} \cdot f_K$
M	Output Torque
d	diameter of driving element
F_K	Coefficient Factor 1.15 Gearwheels 1.25 Chain sprockets 1.75 narrow v-belt pulley 2.50 Flat-belt pulley

If your application requires higher radial loads, contact our technical office (1.800.282.4766). Higher load may be possible.

See data sheets for rated OHL.

PowerSTAR X SERIES

High Efficiency Hypoid Speed Reducer

TYPE | SIZE | HOLLOW OP | RATIO - OUTPUT SHAFT | MOUNTING | MOUNTING POSITION

TYPE

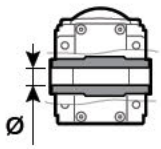
R
R- Reducer
G- Gearmotor

SIZE

X42
2 Stages
X42
X52
X62
3 Stages
X43
X53
X63

HOLLOW OP

-	
-	Inch (Standard)
A	Metric



INCH (STANDARD)

X42/43	
→	Ø1.00
X52/53	
→	Ø1.25
X62/63	
→	Ø1.375

Metric

X42/43	
→	Ø25
X52/53	
→	Ø30
X62/63	
→	Ø35

RATIO - OUTPUT SHAFT

0018

See Ratio Table for Selection

X42	X43	X52	X53	X62	X63
7.29	50.35	6.03	56.76	6.03	56.76
11.2	55.22	9.26	65.79	9.26	65.79
13.2	59.92	11.36	77.23	11.36	77.23
15.27	65.72	15.36	87.23	15.36	87.23
17.93	71.78	17.46	92.18	17.46	92.18
20.25	79.44	19.97	100.47	19.97	100.47
21.4	92.08	23.6	116.45	23.6	116.45
23.47	95.03	24.45	125.82	24.45	125.82
27.55	126.55	30.69	141.66	30.69	141.66
29.21	133.15	35.35	163.16	35.35	163.16
32.88	150.18	37.57	178.96	37.57	178.96
38.12	177.3	48.68	193.36	48.68	193.36
44.89	210.42	54.33	216.84	54.33	216.84
50.34	230.79	74.81	252.36	74.81	252.36
58.58	272.47		290.67		290.67
77.36	323.37		333.23		333.23
			383.82		383.82
			446.7		446.7
			589.85		589.85

EXAMPLE:

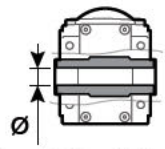
17.93 = 0018 589.85 = 0590 100.47 = 0100

MOUNTING

H

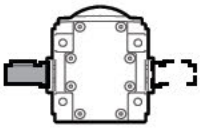
H	Hollow
R	Right Ext.
L	Left Ext.

H



Hollow Output Shaft

R



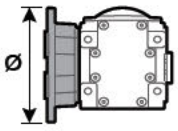
Single Output Shaft

SB

SB	Standard Base
F2	OP Flange 2
F3	OP Flange 3
F4	OP Flange 4
TA	Torque Arm

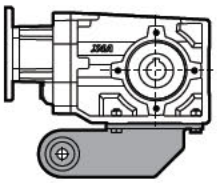
SB

F2



Output Flanges	
F2	Ø6.299
F3	Ø7.874
F4	Ø9.843

TA

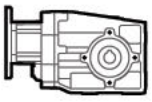


MOUNTING ACCESSORIES SHIPPED LOOSE WITH UNIT

MOUNTING POSITION

2

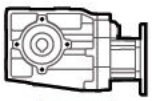
2	B3
3	B6
4	B7
5	B8
6	V5
7	V6



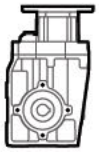
B3

B6

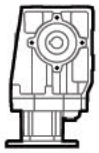
B7



B8



V5



V6

LUBRICATION - MOTOR MOUNT STYLE | MOTOR/POWER TYPE | NOM. MOTOR RPM | MOTOR POSITION

S

S	Standard
F	Food Grade

Standard
Shell Omala S4 WE 320

Food Grade
Mobile Glygoyle 320

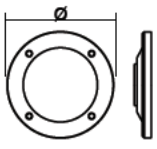
ALL OPTIONS ARE HIGH GRADE SYNTHETIC OIL

W

Nema	
W	56C (Ø = 6.5")
X	143/5TC (Ø = 6.5")
Y	182/4TC (Ø = 8.875")

IEC - B5	
A	56 (Ø = 120)
B	63 (Ø = 140)
C	71 (Ø = 160)
D	80 (Ø = 200)
E	90 (Ø = 200)
F	100/112 (Ø = 250)

IEC - B14	
O	56 (Ø = 80)
P	63 (Ø = 90)
Q	71 (Ø = 105)
R	80 (Ø = 120)
T	90 (Ø = 140)
U	100/112 (Ø = 160)



Flange

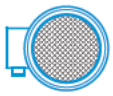
AD

3PH AC Inverter Duty Motors (C-Face, Footless)	
AA	INV.DUTY, 0.25HP (.18KW), 230/460V
AB	INV.DUTY, 0.33HP (.25KW), 230/460V
AC	INV.DUTY, 0.5HP (.37KW), 230/460V
AD	INV.DUTY, 0.75HP (.55KW), 230/460V
AE	INV.DUTY, 1.0HP (.75KW), 230/460V
AF	INV.DUTY,1.5HP (1.1KW), 230/460V
AG	INV.DUTY, 2HP (1.5KW), 230/460V
AH	INV.DUTY, 3HP (2.2KW), 230/460V
AJ	INV.DUTY, 5HP, 230/460V
Brake Motors (3PH, C-Face, Removable Base)	
BA	BRAKE MOTOR, 0.5HP (.37KW), 230/460V
BB	BRAKE MOTOR, 0.75HP (.55KW), 230/460V
BC	BRAKE MOTOR, 1.0HP (.75KW), 230/460V
BD	BRAKE MOTOR, 1.5HP (1.1KW), 230/460V
BE	BRAKE MOTOR, 2HP (1.5KW), 230/460V
BF	BRAKE MOTOR, 3HP (2.2KW), 230/460V
BG	BRAKE MOTOR, 5HP, 230/460V, 3PH
Single Phase AC Motors (C-Face, Footless)	
CA	SINGLE PHASE, 0.25HP, 115/230VAC
CB	SINGLE PHASE, 0.33HP, 115/230VAC
CC	SINGLE PHASE, 0.5HP, 115/230VAC
CD	SINGLE PHASE, 0.75HP, 115/230VAC
CE	SINGLE PHASE, 1.0HP, 115/230VAC
CF	SINGLE PHASE, 1.5HP, 115/230VAC

SEE PAGE 49 FOR MORE MOTOR OPTIONS

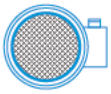
B

A	270°
B	0°
C	90°
D	180°

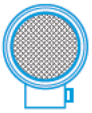


A

B (STANDARD)



C



D

3

2	1200
3	1800
4	3600

SAMPLE PART NUMBERS: RX42-0018-HSB2S-W, GX63-0100-HF32S-XAE3B

QSERIES

Aluminum Integral HP Worm Speed Reducer

Oversized Bearings
Support positively-retained, high speed shaft for higher shock load capacity - ideal for frequent starting and reversing application. Premium, Nitrile® high temperature seals each end.

Premium, High Temperature Nitrile® Output Seals. (Viton® Seals available)

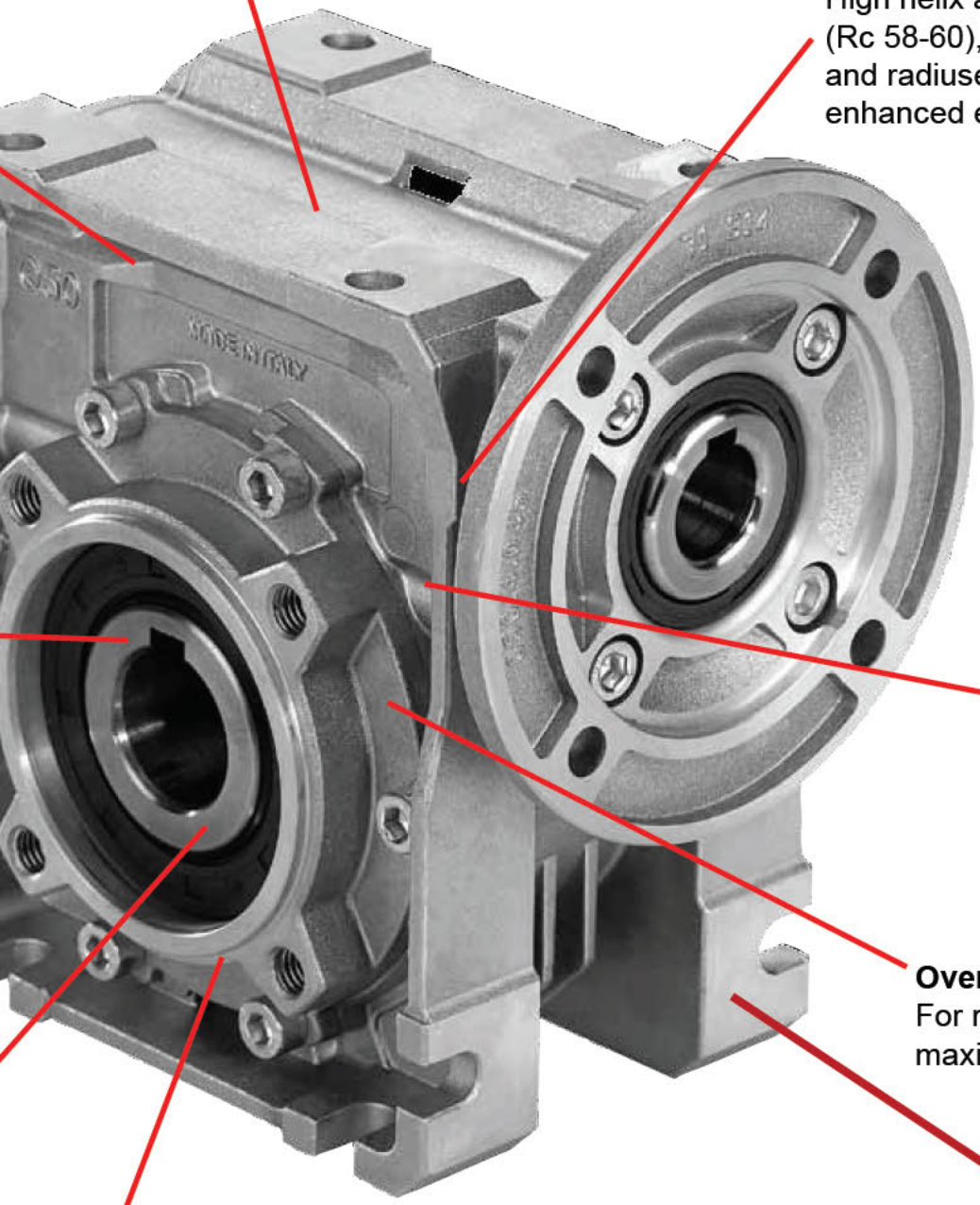
Standard Hollow Output Shaft Mounting
Reduces total drive envelope size, weight and cost. Single output shaft is available.

Vent Free Design.

No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15ºC to 130ºC.

Single-Piece Aluminum Alloy Housing
Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

Single Piece Alloy Steel Input Shaft and Worm Shaft
High helix angle worm is case-hardened (Rc 58-60), ground, teeth are profiled and radiused, for noise reduction and enhanced efficiency.



Bronze Alloy Worm Gears
Is centrifugally cast onto an iron hub for maximum strength and superior life.

Oversize Bearing
For radial load capability and maximum hollow shaft diameter.

100% Factory Pressure Leak Tested

Machined Bearing Caps
With exterior machined surfaces enable a variety of mounting accessories. Extra-deep thread engagement provided for greater support strength. Zinc plated hardware.

Q45

Integral HP Worm Speed Reducer

0.25 - 1HP, 257 - 345 in-lbs, 17.2 - 250RPM

- Precision machined single-piece aluminum housing combines light weight with long product life
- Interchangeability with most global manufacturers

TECHNICAL DATA

Q45								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number*	Gearmotor Part Number*
250	7	1	202	1.3	187	257	RQ45-0007-HSB2S-W	GQ45-0007-HSB2S-WAE3B
		0.5	101	2.5				GQ45-0007-HSB2S-WAC3B
175	10	0.75	213	1.2	202	257	RQ45-0010-HSB2S-W	GQ45-0010-HSB2S-WAD3B
		0.5	142	1.8				GQ45-0010-HSB2S-WAC3B
125	14	0.5	194	1.3	225	257	RQ45-0014-HSB2S-W	GQ45-0014-HSB2S-WAC3B
		0.25	97	2.6				GQ45-0014-HSB2S-WAA3B
83.3	21	0.5	253	1.4	247	345	RQ45-0021-HSB2S-W	GQ45-0021-HSB2S-WAC3B
		0.25	127	2.7				GQ45-0021-HSB2S-WAA3B
62.5	28	0.5	328	1.1	270	345	RQ45-0028-HSB2S-W	GQ45-0028-HSB2S-WAC3B
		0.25	164	2.1				GQ45-0028-HSB2S-WAA3B
47.3	37	0.33	277	1.2	315	345	RQ45-0037-HSB2S-W	GQ45-0037-HSB2S-WAB3B
		0.25	210	1.6				GQ45-0037-HSB2S-WAA3B
38.0	46	0.33	323	1.1	315	345	RQ45-0046-HSB2S-W	GQ45-0046-HSB2S-WAB3B
		0.25	244	1.4				GQ45-0046-HSB2S-WAA3B
29.2	60	0.25	303	1.1	315	345	RQ45-0060-HSB2S-W	GQ45-0060-HSB2S-WAA3B
25.0	70	0.25	340	0.8	405	257	RQ45-0070-HSB2S-W	GQ45-0070-HSB2S-WAA3B
17.2	102	0.25	450	<0.8	405	248	RQ45-0102-HSB2S-W	GQ45-0102-HSB2S-WAA3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

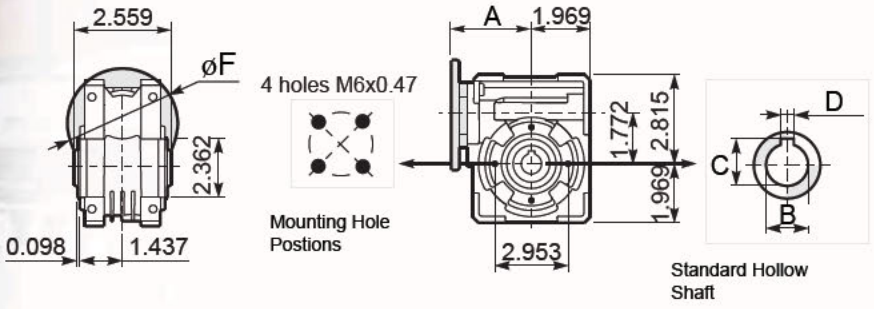
Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

DRAWINGS

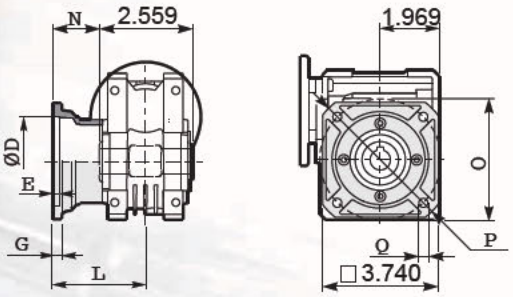
Basic Gearbox



Q45	Nema Flanges	øF	A
	56C	6 5"	3.846"
	IEC Flanges	øF (mm)	A (mm)
	63 B5	140	80
	71 B5	160	77.5
	63 B14	90	80
	71 B14	105	77.5

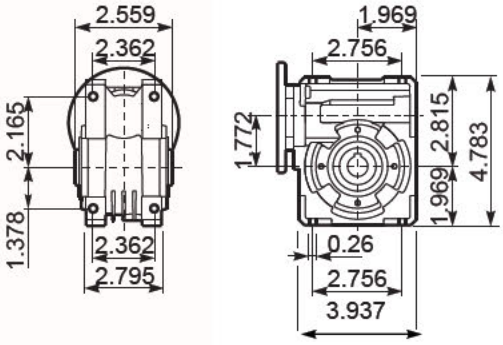
Hollow Shaft	B	C	D
Imperial	0.750"	0 841"	0.1875"
Metric (mm)	18	20 8	6

Square Flange F2

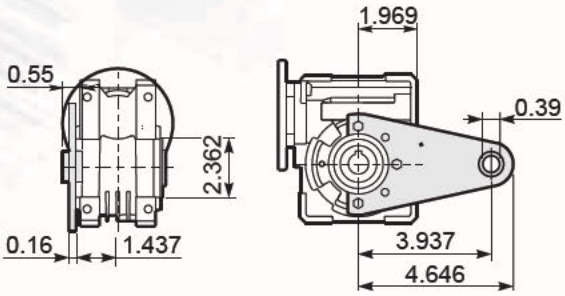


type B	ØD	E	G	L	N	O	P	Q
F2	2 3640 2 3622	0.16	0.28	2 638	1.358	2 953	4.331	0.35

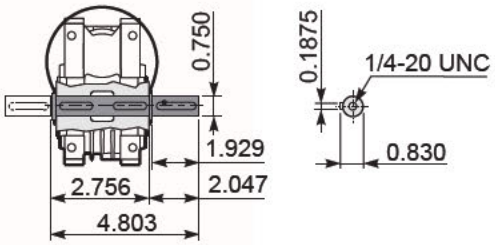
Mounting SB



Torque Arm TA



Output Shaft Insert R/L



Gearbox Weight	5.1 pounds

Q50

Integral HP Worm Speed Reducer

0.25 - 2HP, 434 - 611 in-lbs, 17.5 - 250RPM

- Precision machined single-piece aluminum housing combines light weight with long product life
- Interchangeability with most global manufacturers

TECHNICAL DATA

Q50								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number*	Gearmotor Part Number*
250	7	2	413	1.2	256	478	RQ50-0007-HSB2S-W	GQ50-0007-HSB2S-WAG3B
		1	207	2.3				GQ50-0007-HSB2S-WAE3B
175	10	1.5	432	1.2	270	522	RQ50-0010-HSB2S-W	GQ50-0010-HSB2S-WAF3B
		1	288	1.8				GQ50-0010-HSB2S-WAE3B
125	14	1	398	1.4	315	575	RQ50-0014-HSB2S-W	GQ50-0014-HSB2S-WAE3B
		0.5	199	2.9				GQ50-0014-HSB2S-WAC3B
97.2	18	1	486	1.1	337	522	RQ50-0018-HSB2S-W	GQ50-0018-HSB2S-WAE3B
		0.5	243	2.1				GQ50-0018-HSB2S-WAC3B
67.3	26	0.75	485	1.2	382	558	RQ50-0026-HSB2S-W	GQ50-0026-HSB2S-WAD3B
		0.5	323	1.7				GQ50-0026-HSB2S-WAC3B
58.3	30	0.75	567	1.1	382	611	RQ50-0030-HSB2S-W	GQ50-0030-HSB2S-WAD3B
		0.5	378	1.6				GQ50-0030-HSB2S-WAC3B
40.7	43	0.5	511	1.1	427	575	RQ50-0043-HSB2S-W	GQ50-0043-HSB2S-WAC3B
		0.25	256	2.3				GQ50-0043-HSB2S-WAA3B
29.2	60	0.33	414	1.3	427	522	RQ50-0060-HSB2S-W	GQ50-0060-HSB2S-WAB3B
		0.25	313	1.7				GQ50-0060-HSB2S-WAA3B
25.7	68	0.33	461	1.1	427	487	RQ50-0068-HSB2S-W	GQ50-0068-HSB2S-WAB3B
		0.25	349	1.4				GQ50-0068-HSB2S-WAA3B
21.9	80	0.25	389	1.2	562	478	RQ50-0080-HSB2S-W	GQ50-0080-HSB2S-WAA3B
17.5	100	0.25	450	1.0	562	434	RQ50-0100-HSB2S-W	GQ50-0100-HSB2S-WAA3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

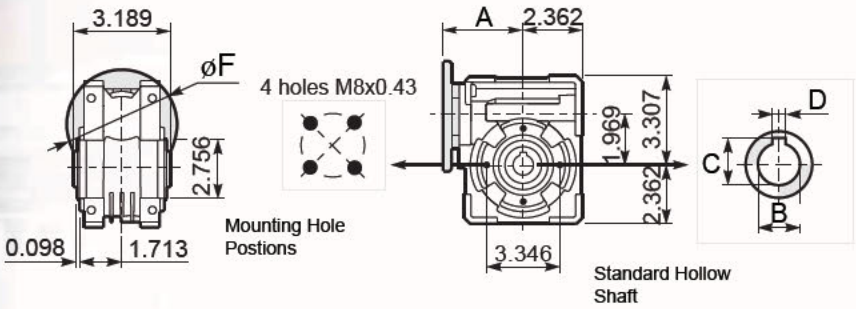
Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

DRAWINGS

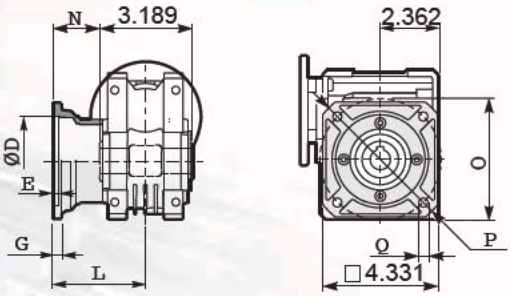
Basic Gearbox



Q50	Nema Flanges	øF	A
	56C	6 5"	4.004"
	IEC Flanges	øF (mm)	A (mm)
All Ratios	71 B5	160	81
7:1 to 30:1	80 B5	200	81.5
All Ratios	71 B14	105	81
7:1 to 30:1	80 B14	120	81.5

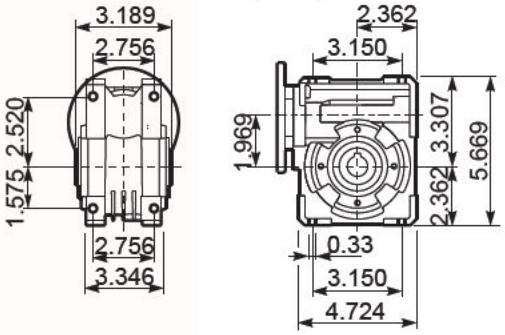
Hollow Shaft	B	C	D
Imperial	1 000"	1.114"	0.25"
Metric (mm)	25	28 3	8

Square Flange F2

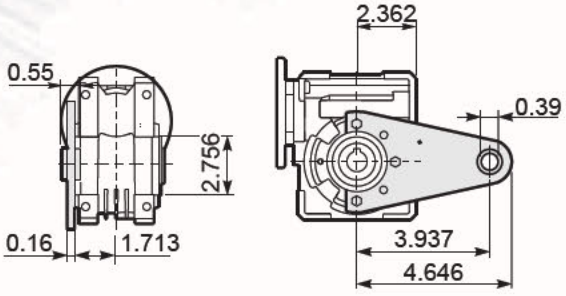


type B	ØD	E	G	L	N	O	P	Q
F2	2.7577 2.7559	0.20	0.35	3.543	1.949	3.346	4.921	0.43

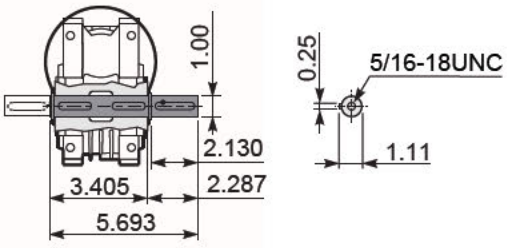
Mounting SB



Torque Arm TA



Output Shaft Insert R/L



Gearbox Weight	7.2 pounds

Q63

Integral HP Worm Speed Reducer

0.25 - 2HP, 1000 - 1230 in-lbs, 18.6 - 250RPM

- Precision machined single-piece aluminum housing combines light weight with long product life
- Interchangeability with most global manufacturers

TECHNICAL DATA

Q63								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number*	Gearmotor Part Number*
250	7	2	419	2.5	385	1053	RQ63-0007-HSB2S-X	GQ63-0007-HSB2S-XAG3B
		1	209	5				GQ63-0007-HSB2S-XAE3B
175	10	2	583	1.9	404	1133	RQ63-0010-HSB2S-X	GQ63-0010-HSB2S-XAG3B
		1	292	3.9				GQ63-0010-HSB2S-XAE3B
116.7	15	2	854	1.4	450	1159	RQ63-0015-HSB2S-X	GQ63-0015-HSB2S-XAG3B
		1	427	2.7				GQ63-0015-HSB2S-XAE3B
92.1	19	2	1068	1.1	517	1159	RQ63-0019-HSB2S-X	GQ63-0019-HSB2S-XAG3B
		1	534	2.2				GQ63-0019-HSB2S-XAE3B
72.9	24	1.5	972	1.2	562	1195	RQ63-0024-HSB2S-X	GQ63-0024-HSB2S-XAF3B
		1	648	1.8				GQ63-0024-HSB2S-XAE3B
58.3	30	1.5	1199	1	562	1230	RQ63-0030-HSB2S-X	GQ63-0030-HSB2S-XAF3B
		1	800	1.5				GQ63-0030-HSB2S-XAE3B
38.9	45	1	1070	1.1	674	1142	RQ63-0045-HSB2S-X	GQ63-0045-HSB2S-XAE3B
		0.5	535	2.1				GQ63-0045-HSB2S-WAC3B
26.1	67	0.5	724	1.4	674	1044	RQ63-0067-HSB2S-W	GQ63-0067-HSB2S-WAC3B
		0.25	362	2.9				GQ63-0067-HSB2S-WAA3B
21.9	80	0.5	821	1.2	854	1000	RQ63-0080-HSB2S-W	GQ63-0080-HSB2S-WAC3B
		0.25	411	2.4				GQ63-0080-HSB2S-WAA3B
18.6	94	0.5	880	1.1	854	1000	RQ63-0094-HSB2S-W	GQ63-0094-HSB2S-WAC3B
		0.25	440	2.3				GQ63-0094-HSB2S-WAA3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

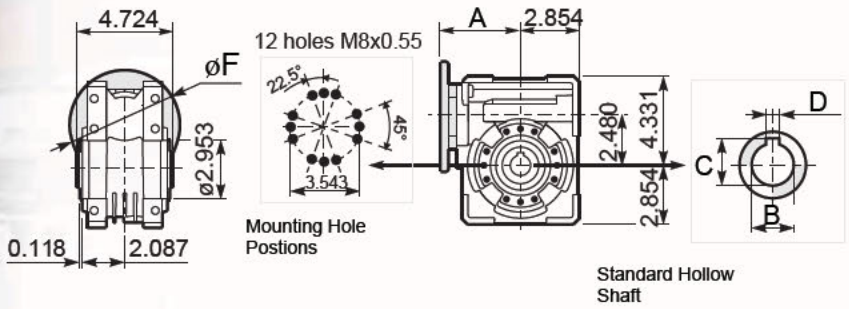
**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

Motors 1HP and greater meet EISA efficiency requirements.

DRAWINGS

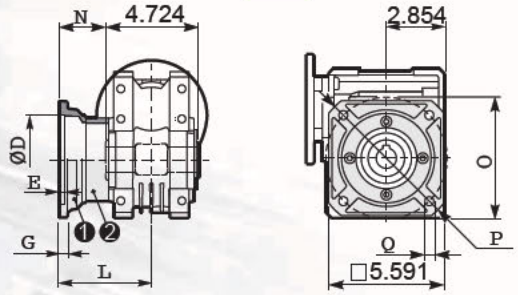
Basic Gearbox



Q63	Nema Flanges	øF	A
	56C - 143/5TC	6 5"	4.291"
	IEC Flanges	øF (mm)	A (mm)
All Ratios	80 B5	200	99.5
7:1 to 30:1	90 B5	200	99.5
All Ratios	80 B14	120	99.5
7:1 to 30:1	90 B14	140	99.5

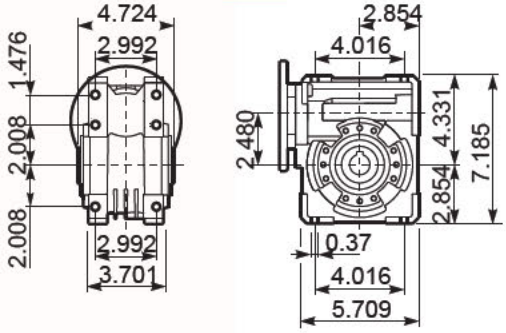
Hollow Shaft	B	C	D
Imperial	1.125"	1 245"	0.25"
Metric (mm)	25	28 3	8

Square Flange F2

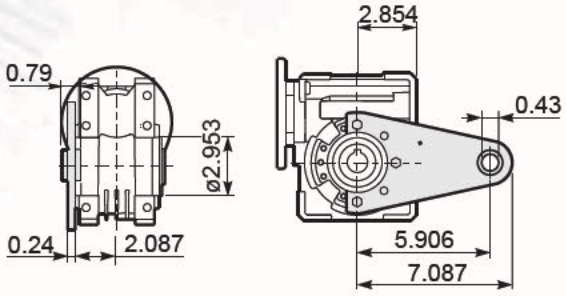


type B	ØD	E	G	L	N	O	P	Q
F2	4.5354 4.5335	0.24	0.47	3.386	1 024	5.906	7.087	0.43

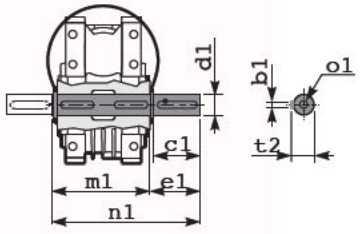
Mounting SB



Torque Arm TA



Output Shaft Insert R/L



	b1	c1	d1	e1	m1	n1	t2	o1
Standard	0.25	2 240	1.125	2.437	4 992	7.429	1.23	5/16-18

Gearbox Weight	13.2 pounds

Q85

Integral HP Worm Speed Reducer

0.5 - 5HP, 2036 - 2921 in-lbs, 18.2 - 250RPM

- Precision machined single-piece aluminum housing combines light weight with long product life
- Interchangeability with most global manufacturers

TECHNICAL DATA

Q85								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number*	Gearmotor Part Number*
250	7	5	1109	2.0	529	2168	RQ85-0007-HSB2S-Y	GQ85-0007-HSB2S-YAJ3B
		3	666	3.3				GQ85-0007-HSB2S-YAH3B
175	10	5	1441	1.7	562	2390	RQ85-0010-HSB2S-Y	GQ85-0010-HSB2S-YAJ3B
		3	864	2.8				GQ85-0010-HSB2S-YAH3B
125	14	5	1967	1.3	652	2567	RQ85-0014-HSB2S-Y	GQ85-0014-HSB2S-YAJ3B
		3	1180	2.2				GQ85-0014-HSB2S-YAH3B
87.5	20	3	1707	1.5	674	2478	RQ85-0020-HSB2S-Y	GQ85-0020-HSB2S-YAH3B
		1.5	854	2.9				GQ85-0020-HSB2S-XAF3B
62.5	28	3	2269	1.3	787	2921	RQ85-0028-HSB2S-Y	GQ85-0028-HSB2S-YAH3B
		1.5	1135	2.6				GQ85-0028-HSB2S-XAF3B
46.1	38	3	2915	1.0	899	2832	RQ85-0038-HSB2S-Y	GQ85-0038-HSB2S-YAH3B
		1.5	1458	1.9				GQ85-0038-HSB2S-XAF3B
33.7	52	2	2472	1.0	899	2434	RQ85-0052-HSB2S-Y	GQ85-0052-HSB2S-XAG3B
		1	1236	2.0				GQ85-0052-HSB2S-XAE3B
26.1	67	1.5	2353	1.0	899	2434	RQ85-0067-HSB2S-X	GQ85-0067-HSB2S-XAF3B
		1	1569	1.6				GQ85-0067-HSB2S-XAE3B
23.7	74	1.5	2319	1.0	1124	2257	RQ85-0074-HSB2S-X	GQ85-0074-HSB2S-XAF3B
		1	1546	1.5				GQ85-0074-HSB2S-XAE3B
18.2	96	1	1833	1.1	1124	2036	RQ85-0096-HSB2S-X	GQ85-0096-HSB2S-XAE3B
		0.5	916	2.2				GQ85-0096-HSB2S-WAC3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

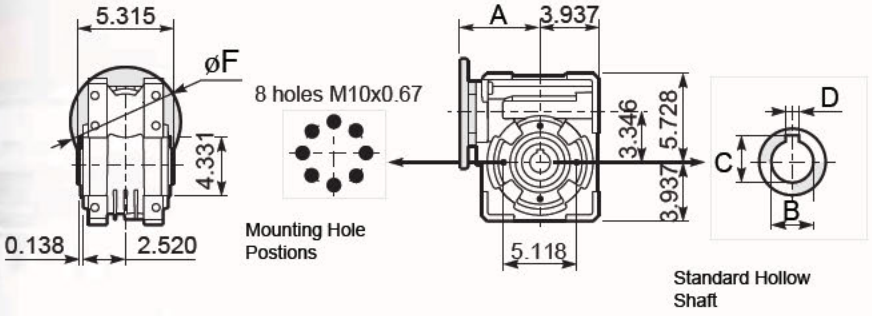
**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

Motors 1HP and greater meet EISA efficiency requirements.

DRAWINGS

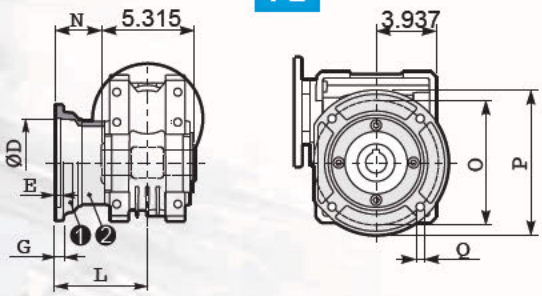
Basic Gearbox



Q85	Nema Flanges	øF	A
	56C - 143/5TC	6 5"	4.823"
	182/4TC	8.88"	5.528"
	IEC Flanges	øF (mm)	A (mm)
	80/90 B5	200	118
	80 B14	120	118
	90 B14	140	118

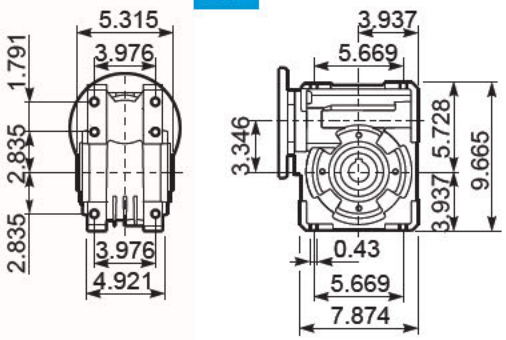
Hollow Shaft	B	C	D
Imperial	1 500"	1 670"	0 375"
Metric (mm)	35	38 3	10

Square Flange F2

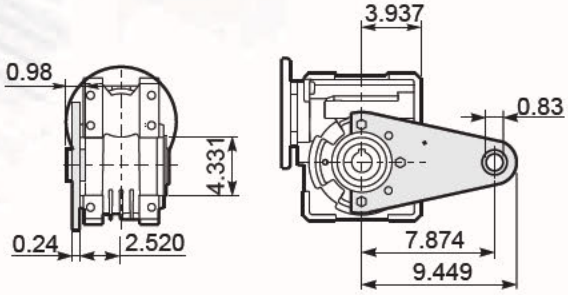


type B	ØD	E	G	L	N	O	P	Q
F2	5.9867 5.9843	0.20	0 63	4.252	1 594	6.929	8.071	0.51

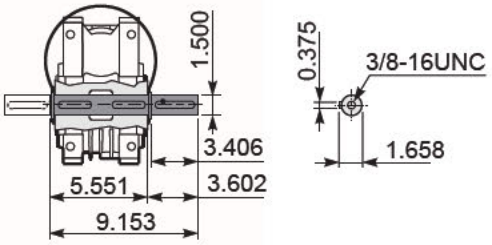
Mounting SB



Torque Arm TA



Output Shaft Insert R/L

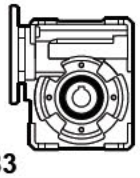
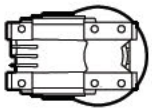
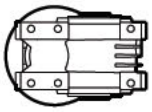
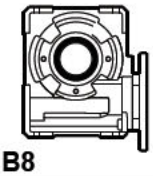
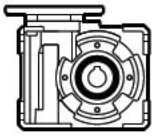
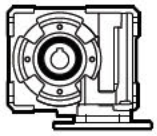


Gearbox Weight **41.2** pounds

Worm Reducers Q SERIES

Integral HP Worm Speed Reducer

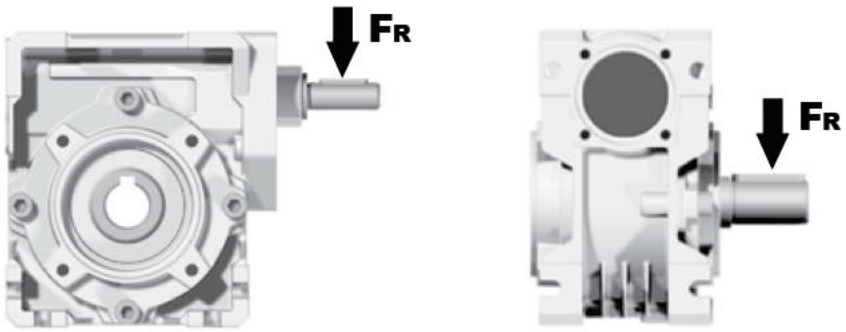
LUBRICATION

Oil Quantity (oz.) Per Mounting Position					
 B3	 B6	 B7	 B8	 V5	 V6

Oil Quantity (oz.) Per Mounting Position						
	B3	B6	B7	B8	V5	V6
Q45	3.17	3.17	3.17	3.17	3.17	3.17
Q50	4.93	4.93	4.93	4.93	4.93	4.93
Q63	10.56	10.56	10.56	10.56	10.56	10.56
Q85	42.23	42.23	42.23	42.23	42.23	42.23

OVERHUNG LOAD

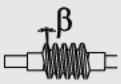
· Overhung load generated by external transmissions keyed onto input and/or output shafts



F_R [N] = $\frac{M\ [Nm] \cdot 2000}{d\ [mm]} \cdot f_K$	F_R [N] = $\frac{M\ [lb\ in] \cdot 8.9}{d\ [in]} \cdot f_K$
M	Output Torque
d	diameter of driving element
F_K	Coefficient Factor 1.15 Gearwheels 1.25 Chain sprockets 1.75 Narrow v-belt pulley 2.50 Flat-belt pulley

BACK DRIVE

· With worm gearboxes it is important to consider the several levels of reversibility of the worm gear set, in order to guarantee the correct selection in applications where these requirements are essential for the operation of the machine. The table belows shows the different levels of back drive for worm gearboxes according to helix angle ß and reduction ratio i.

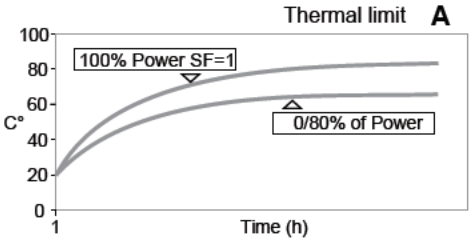
	Q/S45	Q/S50	Q/S63	Q/S85
>25°	7		7	7
12° - 25°	10/14	7/10	10/15	10/14/20/22
8° - 12°	21	14/18	19/24	
5° - 8°	28	26/36	30/36	28/38/46/52
3° - 5°	37/46/68	43/60/68	45/60/67/80	67/74/96
1° - 3°	70/102	80/100	94	

>25°	· Totally reversible
12° - 25°	· Statically reversible · Quick return · Dynamically reversible
8° - 12°	· Variable static non-reversing quick return in case of vibrations · Dynamically reversible
5° - 8°	· Static non-reversing return in case of vibrations · bad dynamic reversing
3° - 5°	· Statically non-reversing return in case of vibrations · Low dynamic reversing*
1° - 3°	· Statically non-reversing no return · Low dynamic reversing*

**Elimination of backdrive not guaranteed. Where required, an external break is recommended.*

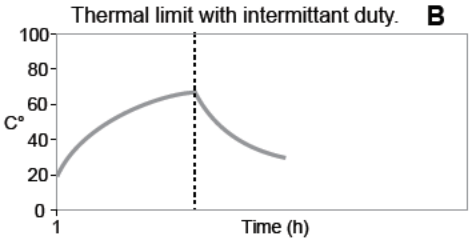
THERMAL LIMIT

· Due to the internal design, worm gearboxes transform their installed power into heat which is dissipated through the housing. Typical safety temperature ranges are between 80° - 100°C. See graphs below:



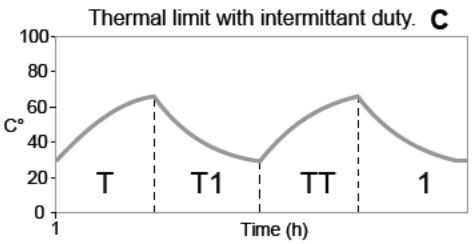
A - Temperature Increase depending on operating time. Final temperature is based on these variables:

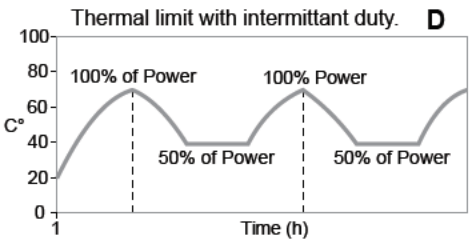
- Installed power and percentage of use
- Ambient temperature
- Lubrication
- Cooling Method
- Input speed



B - The temperature increase curve is similar to continuous duty. Peak is reached in 20/30 minutes using 100% of the power.

The gearbox can be stopped at any point on this curve. Follow cooling curve (graph B) where shape depends on ambient operating temperature.





· C & D - Should gearbox have several start/stop cycles, final temperature will depend on start/stop times and frequency. Service factors given in this catalog are based on intermittent duty.

· Gearmotors with 2800 min-1 input speed are tolerated at intermittent duty only, due to temperature rise from input rotation speed.

Worm Reducers Q SERIES

Integral HP Worm Speed Reducer

TYPE | SIZE | HOLLOW OP | RATIO - OUTPUT SHAFT | MOUNTING | MOUNTING POSITION

R

R- Reducer

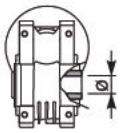
G- Gearmotor

Q45

Aluminum
Q45
Q50
Q63
Q85

-

-	Inch (Standard)
A	Metric (Steel)
B	Inch (SS)
C	Metric (SS)



Inch (Standard)

Q45	
→	Ø0.75
Q50	
→	Ø1.00
Q63	
→	Ø1.125
Q85	
→	Ø1.500

Metric

Q45	
→	Ø18
Q50	
→	Ø25
Q63	
→	Ø25
Q85	
→	Ø35

0018

See Ratio Table for Selection

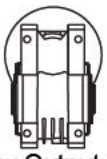
Q45	Q50	Q63	Q85
7	7	7	7
10	10	10	10
14	14	15	14
21	18	19	20
28	26	24	28
37	30	30	38
46	43	45	52
60	60	-	67
70	68	67	74
102	80	80	96
	100	94	

7:1 = 0007 18:1 = 0018 96:1 = 0096

H

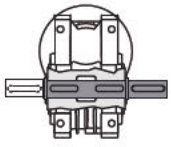
H	Hollow
R	Right Ext.
L	Left Ext.

H



Hollow Output Shaft

L

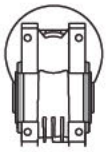


Single Output Shaft

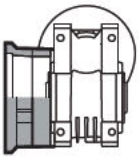
SB

SB	Standard Base
F2	OP Flange 2
TA	Torque Arm

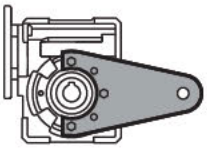
SB



F2



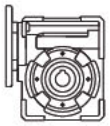
TA



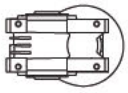
MOUNTING ACCESSORIES SHIPPED LOOSE WITH UNIT

2

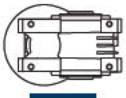
2	B3
3	B6
4	B7
5	B8
6	V5
7	V6



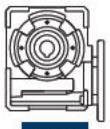
B3



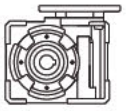
B6



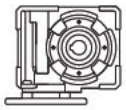
B7



B8



V5



V6

LUBRICATION - MOTOR MOUNT STYLE | MOTOR/POWER TYPE | NOM. MOTOR RPM | MOTOR POSITION

S

S	Standard
F	Food Grade

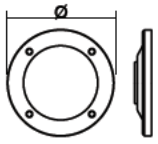
Standard
Shell Omala S4 WE 320

Food Grade
Mobile Glygoyle 320

ALL OPTIONS ARE HIGH GRADE SYNTHETIC OIL

W

Nema	
W	56C (Ø = 6.5")
X	143/5TC (Ø = 6.5")
Y	182/4TC (Ø = 8.875")
IEC - B5	
A	56 (Ø = 120)
B	63 (Ø = 140)
C	71 (Ø = 160)
D	80 (Ø = 200)
E	90 (Ø = 200)
F	100/112 (Ø = 250)
IEC - B14	
O	56 (Ø = 80)
P	63 (Ø = 90)
Q	71 (Ø = 105)
R	80 (Ø = 120)
T	90 (Ø = 140)
U	100/112 (Ø = 160)



Flange

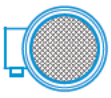
AD

3PH AC Inverter Duty Motors (C-Face, Footless)	
AA	INV.DUTY, 0.25HP (.18KW), 230/460V
AB	INV.DUTY, 0.33HP (.25KW), 230/460V
AC	INV.DUTY, 0.5HP (.37KW), 230/460V
AD	INV.DUTY, 0.75HP (.55KW), 230/460V
AE	INV.DUTY, 1.0HP (.75KW), 230/460V
AF	INV.DUTY,1.5HP (1.1KW), 230/460V
AG	INV.DUTY, 2HP (1.5KW), 230/460V
AH	INV.DUTY, 3HP (2.2KW), 230/460V
AJ	INV.DUTY, 5HP, 230/460V
Brake Motors (3PH, C-Face, Removable Base)	
BA	BRAKE MOTOR, 0.5HP (.37KW), 230/460V
BB	BRAKE MOTOR, 0.75HP (.55KW), 230/460V
BC	BRAKE MOTOR, 1.0HP (.75KW), 230/460V
BD	BRAKE MOTOR, 1.5HP (1.1KW), 230/460V
BE	BRAKE MOTOR, 2HP (1.5KW), 230/460V
BF	BRAKE MOTOR, 3HP (2.2KW), 230/460V
BG	BRAKE MOTOR, 5HP, 230/460V, 3PH
Single Phase AC Motors (C-Face, Footless)	
CA	SINGLE PHASE, 0.25HP, 115/230VAC
CB	SINGLE PHASE, 0.33HP, 115/230VAC
CC	SINGLE PHASE, 0.5HP, 115/230VAC
CD	SINGLE PHASE, 0.75HP, 115/230VAC
CE	SINGLE PHASE, 1.0HP, 115/230VAC
CF	SINGLE PHASE, 1.5HP, 115/230VAC

SEE PAGE 49 FOR MORE MOTOR OPTIONS

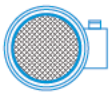
B

A	270°
B	0°
C	90°
D	180°



A

B (STANDARD)



C

D

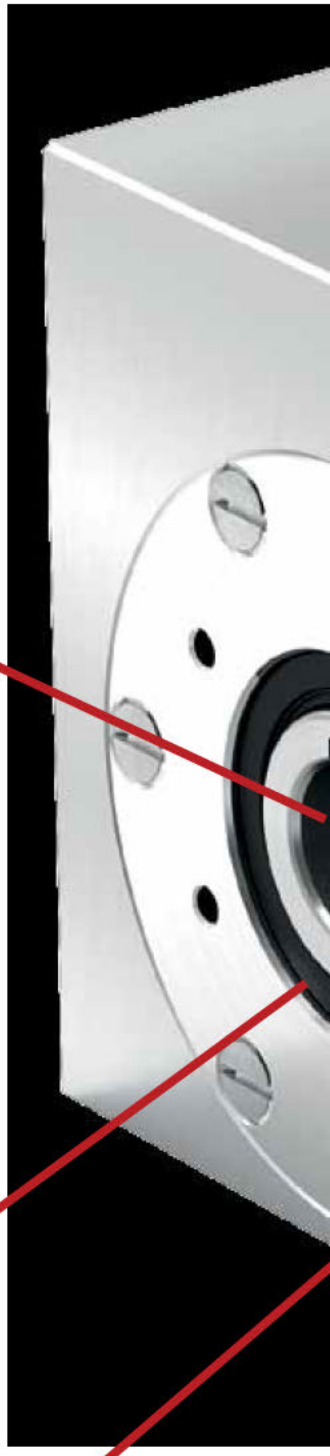
3

2	1200
3	1800
4	3600

SAMPLE PART NUMBERS: RQ50-0018-HSB2S-W, GQ85-0010-HF23S-YAJ3B

S SERIES

Stainless Steel Integral HP Worm Speed Reducer



Options
Protective seals cup to withstand high pressure cleaning for hollow or extended shaft version.

Output shaft
Interchangeable right or left hand output shafts available.

Stainless Steel Hollow Shaft

O-Rings On All Closing Covers

Vent Free Design.

No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15ºC to 130ºC.

Single-Piece Stainless Steel Alloy Housing
Special housing designed to keep adequate lubrication with low oil quantity to avoid

Flange
Fully modular to NEMA C Flange or IEC B14.

Second Bearing
Standard second bearing on motor flange side.

Viton ® Output Seals
With external dust protection lips standard.

Factory Pressure Leak Tested

S45

Stainless Steel Integral HP Worm Speed Reducer

0.25 - 1HP, 248 - 345 in-lbs, 17.2 - 250RPM

- Stainless steel housing for food processing, medical and pharmaceutical applications
- Interchangeability with most global manufacturers

TECHNICAL DATA

S45								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number*	Gearmotor Part Number*
250	7	1	202	1.3	187	257	RS45-0007-HSB2S-W	GS45-0007-HSB2S-WAE3B
		0.5	101	2.5				GS45-0007-HSB2S-WAC3B
175	10	0.75	213	1.2	202	257	RS45-0010-HSB2S-W	GS45-0010-HSB2S-WAE3B
		0.5	142	1.8				GS45-0010-HSB2S-WAC3B
125	14	0.5	194	1.3	225	257	RS45-0014-HSB2S-W	GS45-0014-HSB2S-WAC3B
		0.25	97	2.6				GS45-0014-HSB2S-WAA3B
83.3	21	0.5	253	1.4	247	345	RS45-0021-HSB2S-W	GS45-0021-HSB2S-WAC3B
		0.25	127	2.7				GS45-0021-HSB2S-WAA3B
62.5	28	0.5	328	1.1	270	345	RS45-0028-HSB2S-W	GS45-0028-HSB2S-WAC3B
		0.25	164	2.1				GS45-0028-HSB2S-WAA3B
47.3	37	0.33	277	1.2	315	345	RS45-0037-HSB2S-W	GS45-0037-HSB2S-WAB3B
		0.25	210	1.6				GS45-0037-HSB2S-WAA3B
38.0	46	0.33	323	1.1	315	345	RS45-0046-HSB2S-W	GS45-0046-HSB2S-WAB3B
		0.25	244	1.4				GS45-0046-HSB2S-WAA3B
29.2	60	0.25	303	1.1	315	345	RS45-0060-HSB2S-W	GS45-0060-HSB2S-WAA3B
25.0	70	0.25	340	0.8	405	257	RS45-0070-HSB2S-W	GS45-0070-HSB2S-WAA3B
17.2	102	0.25	405	<0.8	450	248	RS45-0102-HSB2S-W	GS45-0102-HSB2S-WAA3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

**NEMA Input Sizes:*

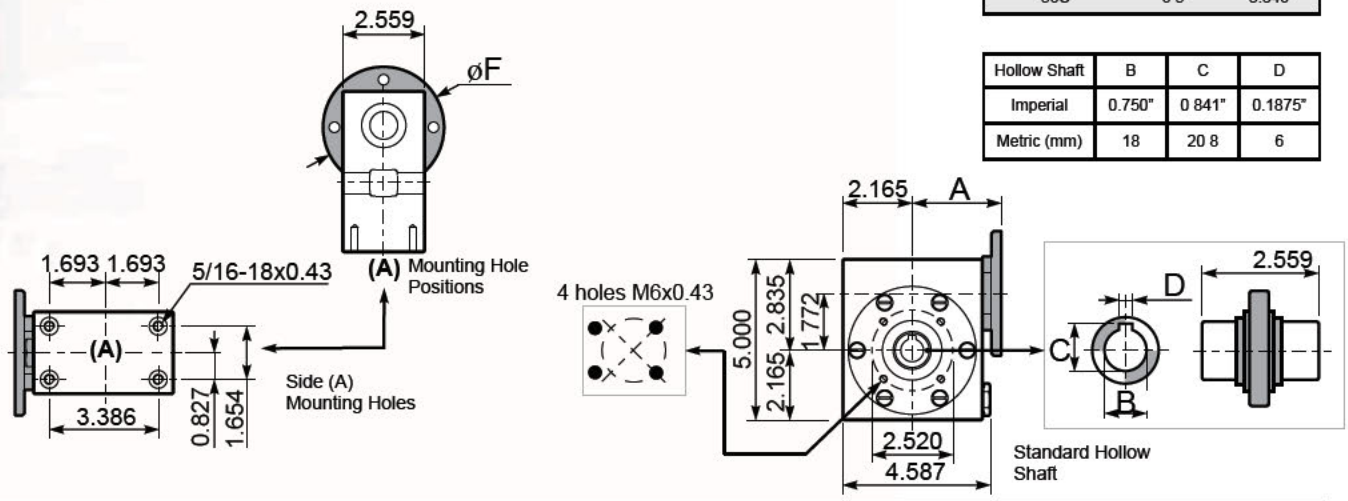
W = 56C
X = 143/5TC
Y = 182/4TC

DRAWINGS

Basic Gearbox

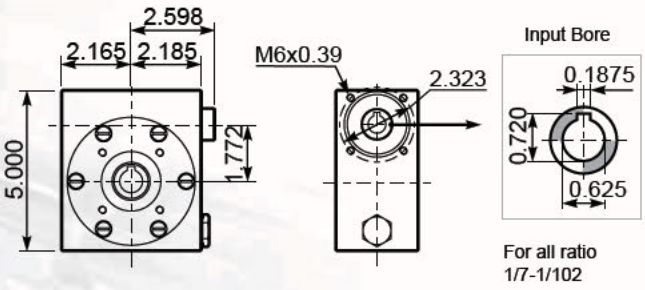
S45	Nema Flanges	øF	A
	56C	6 5"	3.846"

Hollow Shaft	B	C	D
Imperial	0.750"	0 841"	0.1875"
Metric (mm)	18	20 8	6

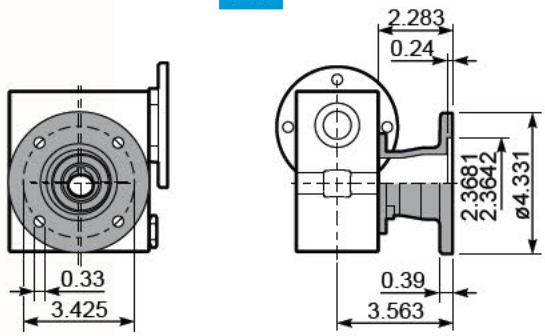


Modular Base

SB

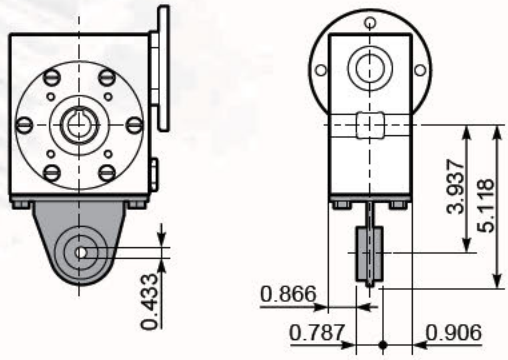


F2



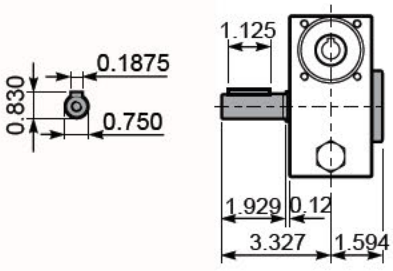
Torque Arm

TA



Output Shaft Insert

R/L



Gearbox Weight	11.0 pounds

S50

Stainless Steel Integral HP Worm Speed Reducer

0.25 - 2HP, 434 - 611 in-lbs, 17.5 - 250RPM

- Stainless steel housing for food processing, medical and pharmaceutical applications
- Interchangeability with most global manufacturers

TECHNICAL DATA

S50								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number*	Gearmotor Part Number*
250	7	2	413	1.2	256	478	RS50-0007-HSB2S-W	GS50-0007-HSB2S-WAG3B
		1	207	2.3				GS50-0007-HSB2S-WAE3B
175	10	1.5	432	1.2	270	522	RS50-0010-HSB2S-W	GS50-0010-HSB2S-WAE3B
		1	288	1.8				GS50-0010-HSB2S-WAE3B
125	14	1	398	1.4	315	575	RS50-0014-HSB2S-W	GS50-0014-HSB2S-WAE3B
		0.5	199	2.9				GS50-0014-HSB2S-WAC3B
97.2	18	1	486	1.1	337	522	RS50-0018-HSB2S-W	GS50-0018-HSB2S-WAE3B
		0.5	243	2.1				GS50-0018-HSB2S-WAC3B
67.3	26	0.75	485	1.2	382	558	RS50-0026-HSB2S-W	GS50-0026-HSB2S-WAD3B
		0.5	323	1.7				GS50-0026-HSB2S-WAC3B
58.3	30	0.75	567	1.1	382	611	RS50-0030-HSB2S-W	GS50-0030-HSB2S-WAD3B
		0.5	378	1.6				GS50-0030-HSB2S-WAC3B
40.7	43	0.5	511	1.1	427	575	RS50-0043-HSB2S-W	GS50-0043-HSB2S-WAC3B
		0.25	256	2.3				GS50-0043-HSB2S-WAA3B
29.2	60	0.33	414	1.3	427	522	RS50-0060-HSB2S-W	GS50-0060-HSB2S-WAB3B
		0.25	313	1.7				GS50-0060-HSB2S-WAA3B
25.7	68	0.33	461	1.1	427	487	RS50-0068-HSB2S-W	GS50-0068-HSB2S-WAB3B
		0.25	349	1.4				GS50-0068-HSB2S-WAA3B
21.9	80	0.25	389	1.2	562	478	RS50-0080-HSB2S-W	GS50-0080-HSB2S-WAA3B
17.5	100	0.25	450	1.0	562	434	RS50-0100-HSB2S-W	GS50-0100-HSB2S-WAA3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

**NEMA Input Sizes:*

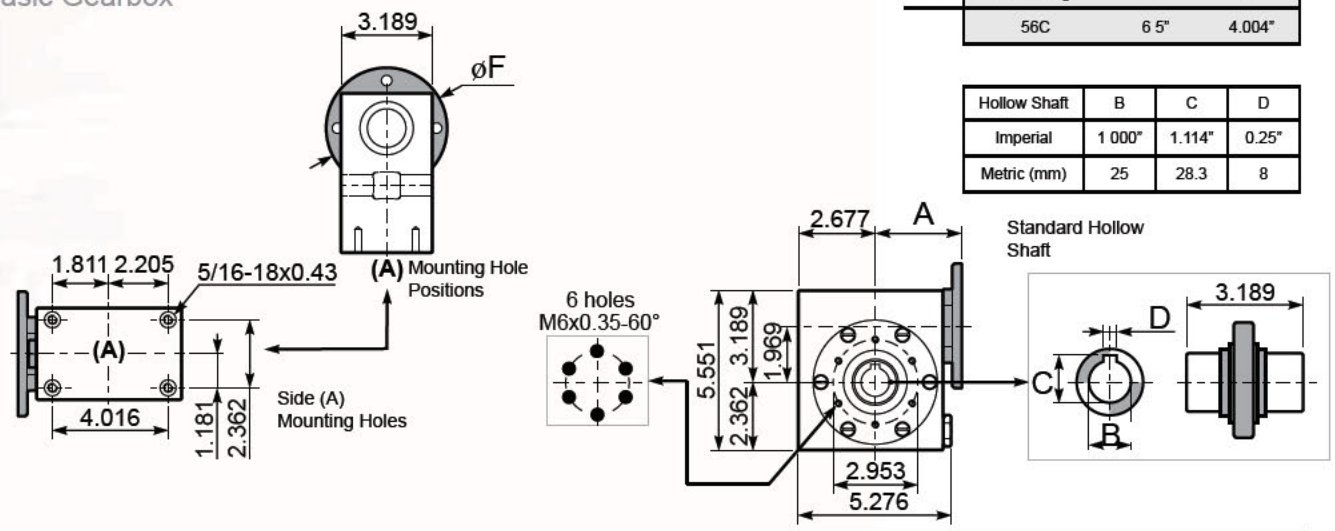
W = 56C
X = 143/5TC
Y = 182/4TC

DRAWINGS

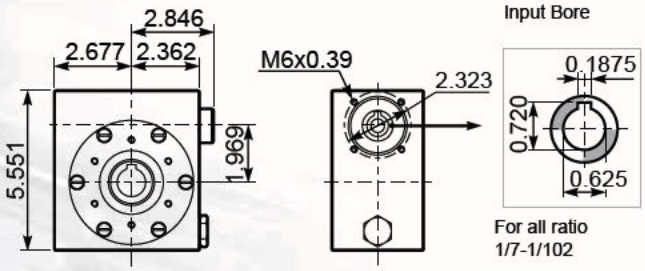
Basic Gearbox

S50	Nema Flanges	øF	A
	56C	6 5"	4.004"

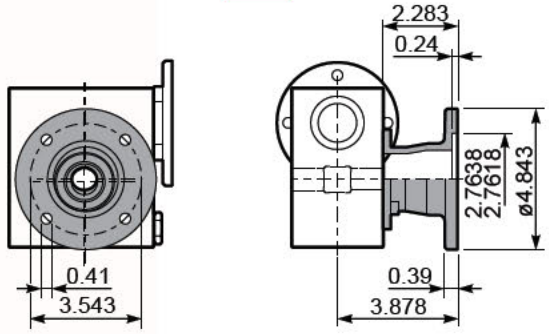
Hollow Shaft	B	C	D
Imperial	1 000"	1.114"	0.25"
Metric (mm)	25	28.3	8



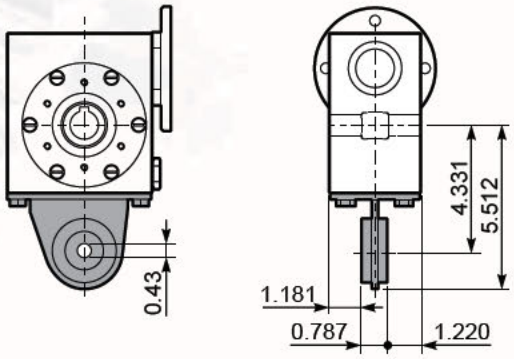
Modular Base SB



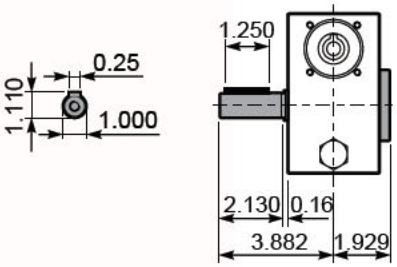
Output Flange F2



Torque Arm TA



Output Shaft Insert R/L



Gearbox Weight	16.1 pounds

S63

Stainless Steel Integral HP Worm Speed Reducer

0.25 - 2HP, 1000 - 1230 in-lbs, 18.6 - 250RPM

- Stainless steel housing for food processing, medical and pharmaceutical applications
- Interchangeability with most global manufacturers

TECHNICAL DATA

S63								
Output Speed (RPM)	Ratio	Motor Power (HP)	Output Torque (in-lbs)	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number*	Gearmotor Part Number*
250	7	2	419	2.5	385	1053	RS63-0007-HSB2S-X	GS63-0007-HSB2S-XAG3B
		1	209	5				GS63-0007-HSB2S-XAE3B
175	10	2	583	1.9	404	1133	RS63-0010-HSB2S-X	GS63-0010-HSB2S-XAG3B
		1	292	3.9				GS63-0010-HSB2S-XAE3B
116.7	15	2	854	1.4	450	1159	RS63-0015-HSB2S-X	GS63-0015-HSB2S-XAG3B
		1	427	2.7				GS63-0015-HSB2S-XAE3B
92.1	19	2	1068	1.1	517	1159	RS63-0019-HSB2S-X	GS63-0019-HSB2S-XAG3B
		1	534	2.2				GS63-0019-HSB2S-XAE3B
72.9	24	1.5	972	1.2	562	1195	RS63-0024-HSB2S-X	GS63-0024-HSB2S-XAE3B
		1	648	1.8				GS63-0024-HSB2S-XAE3B
58.3	30	1.5	1199	1	562	1230	RS63-0030-HSB2S-X	GS63-0030-HSB2S-XAE3B
		1	800	1.5				GS63-0030-HSB2S-XAE3B
48.6	36	1	882	1.4	674	1239	RS63-0036-HSB2S-X	GS63-0036-HSB2S-XAE3B
		0.5	441	2.8				GS63-0036-HSB2S-WAC3B
38.9	45	1	1070	1.1	674	1142	RS63-0045-HSB2S-X	GS63-0045-HSB2S-XAE3B
		0.5	535	2.1				GS63-0045-HSB2S-WAC3B
26.1	67	0.5	724	1.4	674	1044	RS63-0067-HSB2S-W	GS63-0067-HSB2S-WAC3B
		0.25	362	2.9				GS63-0067-HSB2S-WAA3B
21.9	80	0.5	821	1.2	854	1000	RS63-0080-HSB2S-W	GS63-0080-HSB2S-WAC3B
		0.25	411	2.4				GS63-0080-HSB2S-WAA3B
18.6	94	0.5	880	1.1	854	1000	RS63-0094-HSB2S-W	GS63-0094-HSB2S-WAC3B
		0.25	440	2.3				GS63-0094-HSB2S-WAA3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

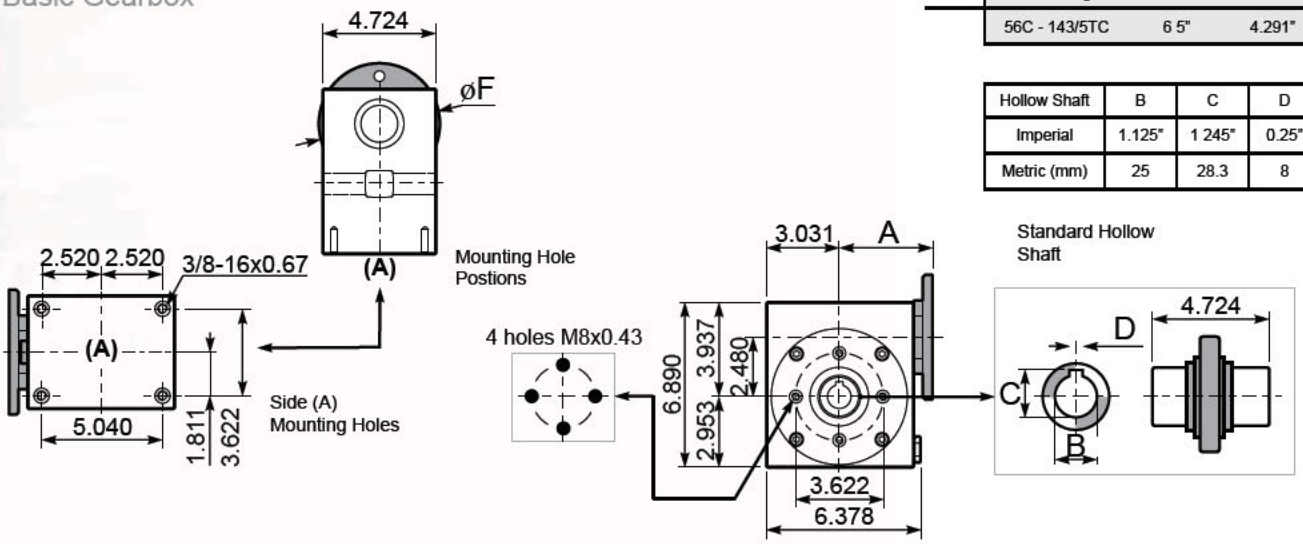
Motors 1HP and greater meet EISA efficiency requirements.

DRAWINGS

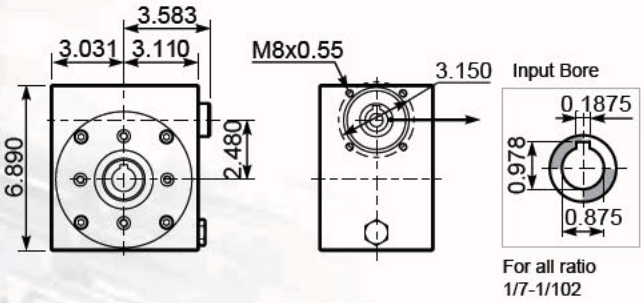
Basic Gearbox

S63	Nema Flanges	øF	A
	56C - 143/5TC	6 5"	4.291"

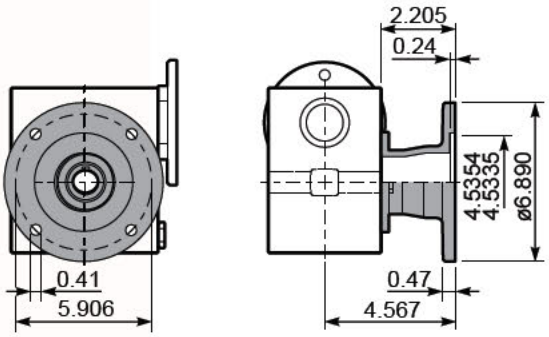
Hollow Shaft	B	C	D
Imperial	1.125"	1 245"	0.25"
Metric (mm)	25	28.3	8



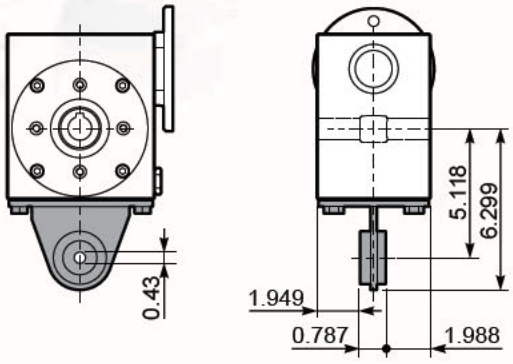
Modular Base SB



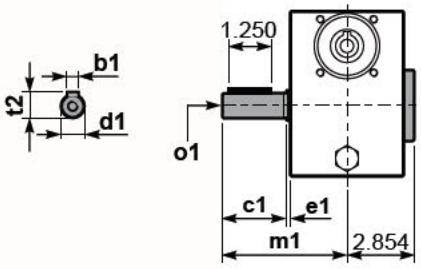
Output Flange F2



Torque Arm TA



Output Shaft Insert R/L



	b1	c1	d1	e1	m1	t2	o1
Standard	0.25	2 240	1.125	0.197	4.799	1.23	5/16-18

Gearbox Weight	32.2 pounds

S85

Stainless Steel Integral HP Worm Speed Reducer

0.5 - 5HP, 2036 - 2921 in-lbs, 18.2 - 250RPM

- Stainless steel housing for food processing, medical and pharmaceutical applications
- Interchangeability with most global manufacturers

TECHNICAL DATA

S85								
Output Speed	Ratio	Motor Power (HP)	Output Torque	Service Factor	OHL	Nom. Torque (in-lbs)	Reducer Part Number*	Gearmotor Part Number*
250	7	5	1109	2.0	529	2168	RS85-0007-HSB2S-Y	GS85-0007-HSB2S-YAJ3B
		3	666	3.3				GS85-0007-HSB2S-YAH3B
175	10	5	1441	1.7	562	2390	RS85-0010-HSB2S-Y	GS85-0010-HSB2S-YAJ3B
		3	864	2.8				GS85-0010-HSB2S-YAH3B
125	14	5	1967	1.3	652	2567	RS85-0014-HSB2S-Y	GS85-0014-HSB2S-YAJ3B
		3	1180	2.2				GS85-0014-HSB2S-YAH3B
87.5	20	3	1707	1.5	674	2478	RS85-0020-HSB2S-Y	GS85-0020-HSB2S-YAH3B
		1.5	854	2.9				GS85-0020-HSB2S-XAE3B
62.5	28	3	2269	1.3	787	2921	RS85-0028-HSB2S-Y	GS85-0028-HSB2S-YAH3B
		1.5	1135	2.6				GS85-0028-HSB2S-XAE3B
46.1	38	3	2915	1.0	899	2832	RS85-0038-HSB2S-Y	GS85-0038-HSB2S-YAH3B
		1.5	1458	1.9				GS85-0038-HSB2S-XAE3B
33.7	52	2	2472	1.0	899	2434	RS85-0052-HSB2S-X	GS85-0052-HSB2S-XAG3B
		1	1236	2.0				GS85-0052-HSB2S-XAD3B
26.1	67	1.5	2353	1.0	899	2434	RS85-0067-HSB2S-X	GS85-0067-HSB2S-XAE3B
		1	1569	1.6				GS85-0067-HSB2S-XAD3B
23.7	74	1.5	2319	1.0	1124	2257	RS85-0074-HSB2S-X	GS85-0074-HSB2S-XAE3B
		1	1546	1.5				GS85-0074-HSB2S-XAD3B
18.2	96	1	1833	1.1	1124	2036	RS85-0096-HSB2S-X	GS85-0096-HSB2S-XAD3B
		0.5	916	2.2				GS85-0096-HSB2S-WAC3B

Notes: All units shown are standard configuration. Input motor, output shaft and mounting options are available.

Motor Specification: 230/460 VAC 60/50Hz, 3PH 1800 RPM Nom. - inverter duty

**NEMA Input Sizes:*

W = 56C
X = 143/5TC
Y = 182/4TC

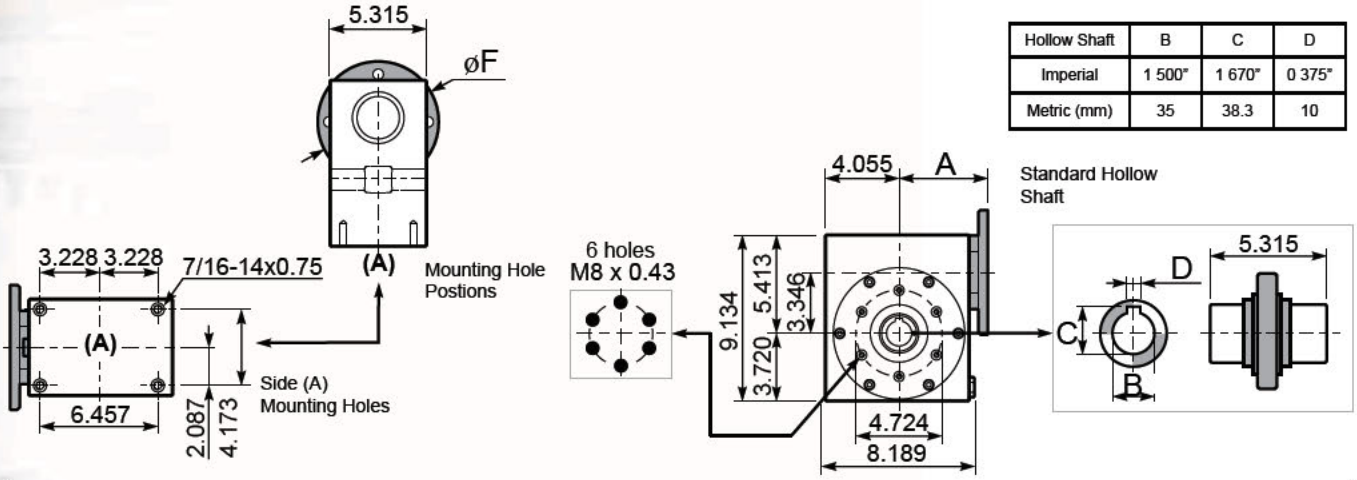
Motors 1HP and greater meet EISA efficiency requirements.

DRAWINGS

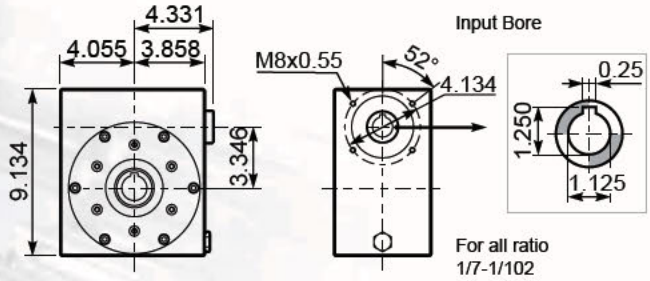
Basic Gearbox

S85	Nema Flanges	øF	A
	56C - 143/5TC	6 5"	4.823"
	182/4TC	8.88"	5.528"

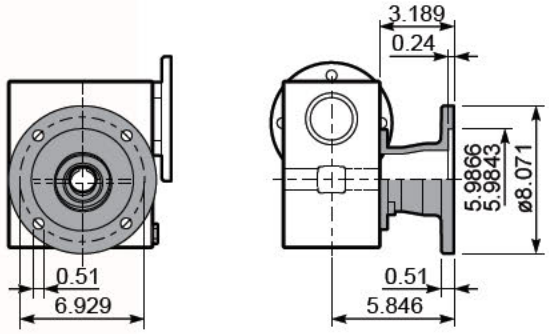
Hollow Shaft	B	C	D
Imperial	1 500"	1 670"	0 375"
Metric (mm)	35	38.3	10



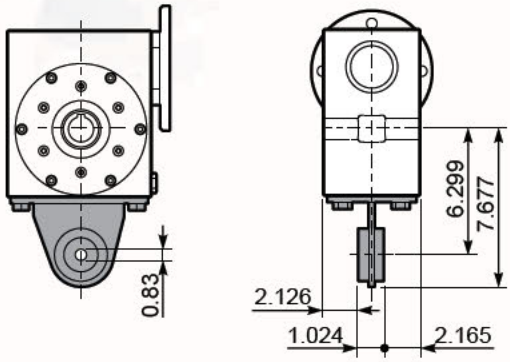
Modular Base SB



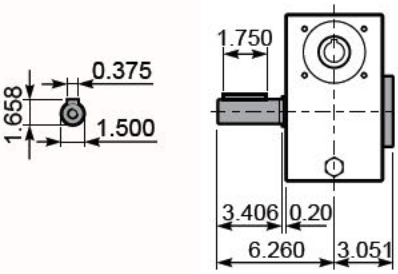
Output Flange F2



Torque Arm TA



Output Shaft Insert R/L

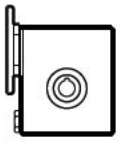
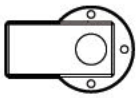
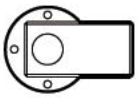
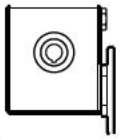
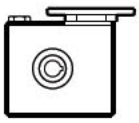


Gearbox Weight	51.4 pounds

Worm Reducer S SERIES

Integral HP Worm Speed Reducer

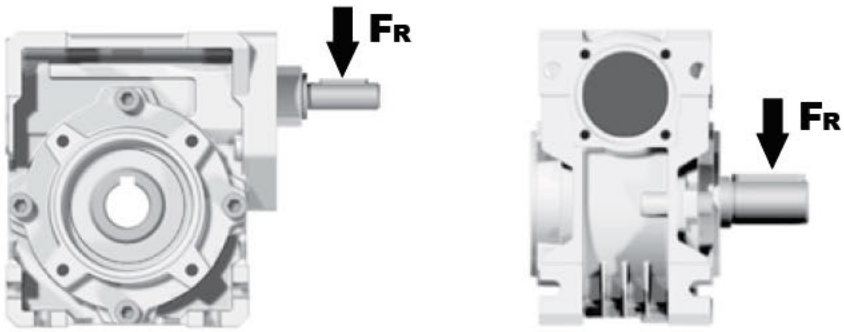
LUBRICATION

Oil Quantity (oz.) Per Mounting Position					
 B3	 B6	 B7	 B8	 V5	 V6

Oil Quantity (oz.) Per Mounting Position						
	B3	B6	B7	B8	V5	V6
S45	5.28	5.28	7.04	5.28	5.28	5.28
S50	7.74	7.74	9.85	7.74	7.74	7.74
S63	21.1	21.1	28.9	21.1	21.1	21.1
S85	49.3	49.3	59.8	49.3	49.3	49.3

OVERHUNG LOAD

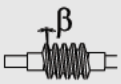
· Overhung load generated by external transmissions keyed onto input and/or output shafts



F_R [N] = $\frac{M\ [Nm] \cdot 2000}{d\ [mm]} \cdot f_K$	F_R [N] = $\frac{M\ [lb\ in] \cdot 8.9}{d\ [in]} \cdot f_K$
M	Output Torque
d	diameter of driving element
F_K	Coefficient Factor 1.15 Gearwheels 1.25 Chain sprockets 1.75 Narrow v-belt pulley 2.50 Flat-belt pulley

BACK DRIVE

· With worm gearboxes it is important to consider the several levels of reversibility of the worm gear set, in order to guarantee the correct selection in applications where these requirements are essential for the operation of the machine. The table belows shows the different levels of back drive for worm gearboxes according to helix angle ß and reduction ratio i.

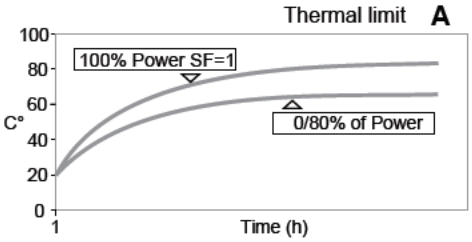
	Q/S45	Q/S50	Q/S63	Q/S85
>25°	7		7	7
12° - 25°	10/14	7/10	10/15	10/14/20/22
8° - 12°	21	14/18	19/24	
5° - 8°	28	26/36	30/36	28/38/46/52
3° - 5°	37/46/68	43/60/68	45/60/67/80	67/74/96
1° - 3°	70/102	80/100	94	

>25°	· Totally reversible
12° - 25°	· Statically reversible · Quick return · Dynamically reversible
8° - 12°	· Variable static non-reversing quick return in case of vibrations · Dynamically reversible
5° - 8°	· Static non-reversing return in case of vibrations · bad dynamic reversing
3° - 5°	· Statically non-reversing return in case of vibrations · Low dynamic reversing*
1° - 3°	· Statically non-reversing no return · Low dynamic reversing*

**Elimination of backdrive not guaranteed. Where required, an external break is recommended.*

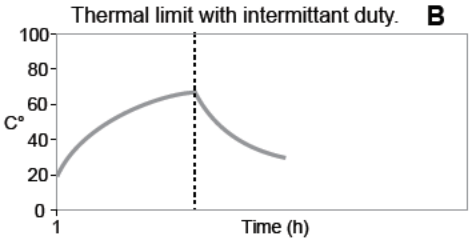
THERMAL LIMIT

· Due to the internal design, worm gearboxes transform their installed power into heat which is dissipated through the housing. Typical safety temperature ranges are between 80° - 100°C. See graphs below:



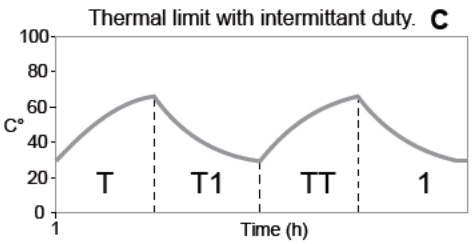
A - Temperature Increase depending on operating time. Final temperature is based on these variables:

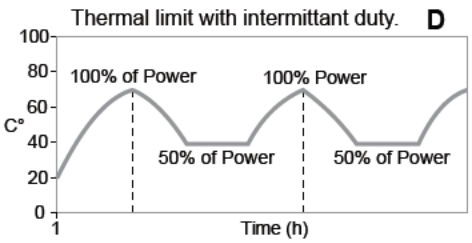
- Installed power and percentage of use
- Ambient temperature
- Lubrication
- Cooling Method
- Input speed



B - The temperature increase curve is similar to continuous duty. Peak is reached in 20/30 minutes using 100% of the power.

The gearbox can be stopped at any point on this curve. Follow cooling curve (graph B) where shape depends on ambient operating temperature.





· C & D - Should gearbox have several start/stop cycles, final temperature will depend on start/stop times and frequency. Service factors given in this catalog are based on intermittent duty.

· Gearmotors with 2800 min-1 input speed are tolerated at intermittent duty only, due to temperature rise from input rotation speed.

Worm Reducers S SERIES

Integral HP Worm Speed Reducer

TYPE | SIZE | HOLLOW OP | RATIO - OUTPUT SHAFT | MOUNTING | MOUNTING POSITION

R

R- Reducer

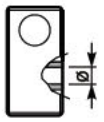
G- Gearmotor

S45

Stainless
S45
S50
S63
S85

-

-	Inch (Standard)
A	Metric



Inch (Standard)

S45	
→	Ø0.75
S50	
→	Ø1.00
S63	
→	Ø1.125
S85	
→	Ø1.500

Metric

S45	
→	Ø18
S50	
→	Ø25
S63	
→	Ø25
S85	
→	Ø35

0018

See Ratio Table for Selection

S45	S50	S63	S85
7	7	7	7
10	10	10	10
14	14	15	14
21	18	19	20
28	26	24	28
37	30	30	38
46	43	45	52
60	60	-	67
70	68	67	74
102	80	80	96
	100	94	

7:1 = 0007 18:1 = 0018 96:1 = 0096

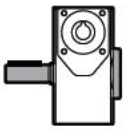
H

H	Hollow
R	Right Ext.
L	Left Ext.

H

Hollow Output Shaft

L



Single Output Shaft

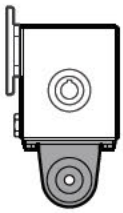
SB

SB	Standard Base
F2	OP Flange 2
TA	Torque Arm

SB

F2

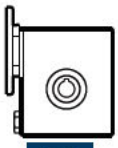
TA



MOUNTING ACCESSORIES SHIPPED LOOSE WITH UNIT

2

2	B3
3	B6
4	B7
5	B8
6	V5
7	V6

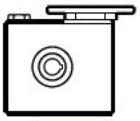


B3

B6

B7

B8



V5

V6

LUBRICATION - MOTOR MOUNT STYLE | MOTOR/POWER TYPE | NOM. MOTOR RPM | MOTOR POSITION

S

S	Standard
F	Food Grade

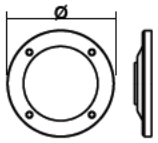
Standard
Shell Omala S4 WE 320

Food Grade
Mobile Glygoyle 320

ALL OPTIONS ARE HIGH GRADE SYNTHETIC OIL

W

Nema	
W	56C (Ø = 6.5")
X	143/5TC (Ø = 6.5")
Y	182/4TC (Ø = 8.875")



Flange

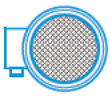
AD

PowerWash XT Washdown (3PH, C-Face, Footless)	
SA	White Epoxy (IP55) 0.25HP, 208-230/460V
SB	White Epoxy (IP55) 0.33HP, 208-230/460V
SC	White Epoxy (IP55) 0.5HP, 208-230/460V
SD	White Epoxy (IP55) 0.75HP, 208-230/460V
SE	White Epoxy (IP55) 1HP, 208-230/460V
SF	White Epoxy (IP55) 1.5HP, 208-230/460V
SG	White Epoxy (IP55) 2HP, 208-230/460V
SH	White Epoxy (IP55) 3HP, 208-230/460V
SJ	White Epoxy (IP55) 5HP, 208-230/460V
PowerWash SXT Washdown (3PH, C-Face, Footless)	
SK	Stainless Steel (IP55) 0.33HP, 208-230/460V
SL	Stainless Steel (IP55) 0.5HP, 208-230/460V
SM	Stainless Steel (IP55) 0.75HP, 208-230/460V
SN	Stainless Steel (IP55) 1HP, 208-230/460V
SP	Stainless Steel (IP55) 1.5HP, 208-230/460V
SQ	Stainless Steel (IP55) 2HP, 208-230/460V
PowerWash Extreme Washdown (3PH, C-Face, Footless)	
ST	Stainless Steel (BISSC, IP66) 0.5HP, 208-230/460V
SU	Stainless Steel (BISSC, IP66) 0.75HP, 208-230/460V
SV	Stainless Steel (BISSC, IP66) 1HP, 208-230/460V
SW	Stainless Steel (BISSC, IP66) 1.5HP, 208-230/460V
SX	Stainless Steel (BISSC, IP66) 2HP, 208-230/460V

SEE PAGE 49 FOR MORE MOTOR OPTIONS

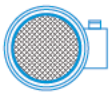
B

A	270°
B	0°
C	90°
D	180°



A

B (STANDARD)



C

D

3

2	1200
3	1800
4	3600

SAMPLE PART NUMBERS: RS50-0018-HSB2F-W, GS63-0010-HF23F-XSQ3C

General Purpose, Three Phase

- Rated 60/50 hertz, 190/380 or 380 volt, at next lower horsepower (as noted)
- 1.15 Service Factor (except as noted)
- Rolled steel 56-145T frame motors accept brake kits
- UL Recognized and CSA Certified
- Inverter Duty Rated

TECHNICAL DATA

C-Face Footless									
HP	RPM	VOLTS	FRAME	MODEL NO.	NOM. EFF.	F.L. AMPS	WEIGHT	DIM. "C"	DIM. "P"
1/4	1800	208-230/460	56C	150-503-7004	67.4	1.1-1.2/0.6	16	10.33	6.4
1/3	1800	208-230/460	56C	150-503-7014	68.8	1.5-1.6/0.8	16	10.60	5.6
1/2	1800	208-230/460	56C	150-503-7024	76.1	2.1-2.2/1.1	17	10.93	5.6
3/4	1800	208-230/460	56C	150-503-7034	78.9	2.8-2.8/1.4	20	11.36	5.6
1	1800	208-230/460	56C	150-503-7044	79.2	3.6-3.8/1.9	46	14.15	6.6
1 1/2	1800	208-230/460	56C	150-503-7054	81.7	4.7-4.4/2.2	47	14.65	6.6
2	1800	208-230/460	56C	150-503-7064	83.6	6.2-5.8/2.9	50	15.15	6.6
3	1800	208-230/460	182TC	150-503-6024*	87.5	8.8-8.4/4.2	76	14.47	8.4
5	1800	208-230/460	184TC	150-503-6034*	88.5	13.8-12.6/6.3	80	14.97	8.4

**Nema Premium Efficiency Rated*

General Purpose, Single Phase

- Heavy gauge steel constructions
- Suitable for horizontal or vertical mounting
- Economical split phase or capacitor start designs, as noted
- UL Recognized and CSA Certified

TECHNICAL DATA

C-Face Footless									
HP	RPM	VOLTS	FRAME	OVER LOAD	MODEL NO.	F.L. AMPS	WEIGHT	DIM. "C"	DIM. "P"
1/4	1800	115/230	56C	NONE	150-505-6004	5.4/2.7	16	10.30	5.6
1/3	1800	115/230	56C	NONE	150-505-6014	6.0/3.0	19	10.93	5.6
1/2	1800	115/230	56C	NONE	150-505-6034	8.6/4.3	21	11.01	6.4
3/4	1800	115/230	56C	NONE	150-505-6054	11.0/5.5	31	11.84	6.4
1	1800	115/230	56C	NONE	150-505-6074	13.2/6.6	36	12.97	6.4
1 1/2	1800	115/208-230	56C	NONE	150-505-6094	14.5/7.1-7.3	44	13.69	6.4

Brake Motors, Three Phase

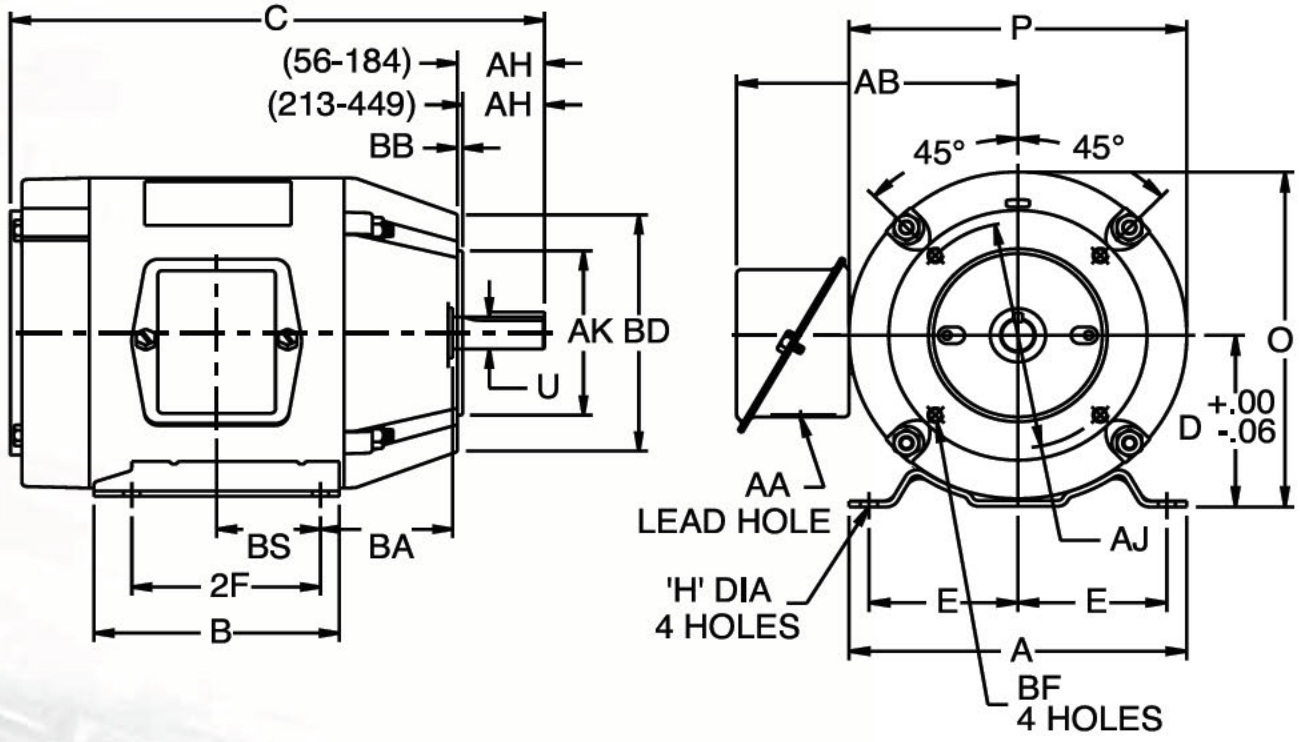
- Brake has manual wear adjustment up to 25 lb-ft. for longer pad life
- Stearns brakes, 56 series through 25 lb-ft., 87 series above 35 lb-ft. and larger
- Brake leads routed through motor conduit box (TENV only)
- Universal mounting up to 15 lb-ft.
- Motor can be operated 10:1 variable torque
- 1.15 Service Factor, 1.0 Service Factor where footnoted
- Inverter Duty Rated

TECHNICAL DATA

C-Face Footed									
HP	RPM	VOLTS	FRAME	MODEL NO.	F.L. AMPS	BRAKE RATING (lb-ft)	WEIGHT	DIM. "C"	DIM. "P"
1/2	1800	208-230/460	56C	150-503-8004	2.3-2.4/1.2	3	32	16.23	6.5
3/4	1800	208-230/460	56C	150-503-8014	2.9-3.0/1.5	6	33	16.23	6.5
1	1800	208-230/460	56C	150-503-8024	3.5-3.6/1.8	6	40	18.81	6.5
1 1/2	1800	208-230/460	145HC	150-503-8044	4.8-4.8/2.4	10	45	18.76	6.5
2	1800	208-230/460	145TC	150-503-8054	6.0-5.8/2.9	10	63	20.32	6.5
3	1800	230/460	182TC	150-503-8064	8.0/4.0	15	100	19.68	9.75
5	1800	208-230/460	184TC	150-503-8074	13.8-12.4/6.2	25	115	20.68	9.75

DRAWINGS

Typical C-Face Motor



Frame	D	E	2F	H	U	AA	AH	AJ	AK	BA	BB (MIN)	BD (MAX)	BF
48	3.00	2.12	2.75	.34 SLOT	.5000	1/2	1.69	3.750	3.000	2.50	.13	5.62	1/4-20
56	3.50	2.44	3.00	.34 SLOT	.6250	1/2	2.06	5.875	4.500	2.75	.13	6.50	3/8-16
56H	3 50	2.44	5.00	.34 S OT	.6250	1/	2.06	5.875	4.500	2.75	.13	6.50	3/8-16
143T	3 50	2.75	4.00	34	.8750	3/4	2.12	5.875	4.500	2.25	.13	6.50	3/8-16
145T	3 50	2.75	5.00	.34	.8750	3/4	2.12	5.875	4.500	2.25	.13	6.50	3/8-16
182	4.5	3.75	4.50	.41	.8750	3/4	2.12	5.875	4.500	2 75	.13	6.50	3/8-16
184	4.5	3.75	5.50	.41	.8750	3/4	2.12	5.875	4.500	2.75	.13	6.50	3/8-16
182T	4.5	3.75	4.50	.41	1.125	3/4	2.62	7.250	8.500	2.75	.25	9.00	1/2-13
184T	4.5	3.75	5.50	.41	1.125	3/4	2.62	7.250	8.500	2.75	.25	9.00	1/2-13
213	5.25	4.25	5.50	41	1.125	1	2.75	7.250	8.500	3.50	25	9.00	1/2-13
215	5.25	4.25	7.00	41	1.125	1	2.75	7.250	8.500	3.50	25	9.00	1/2-13
213T	5.25	4.25	5.50	.41	1.125	1	3.12	7.250	8.500	3.50	25	9.00	1/2-13
215T	5.25	4 25	7.00	41	1.125	1	3.12	7.250	8.500	3.50	25	9.00	1/2-13

See motor data tables for "C" and "P" dimensions.

IEC AC Motors, Three Phase

The IEC motor is not only designed to international standards but meets NEMA performance and efficiency standards making it suitable for requirements worldwide.

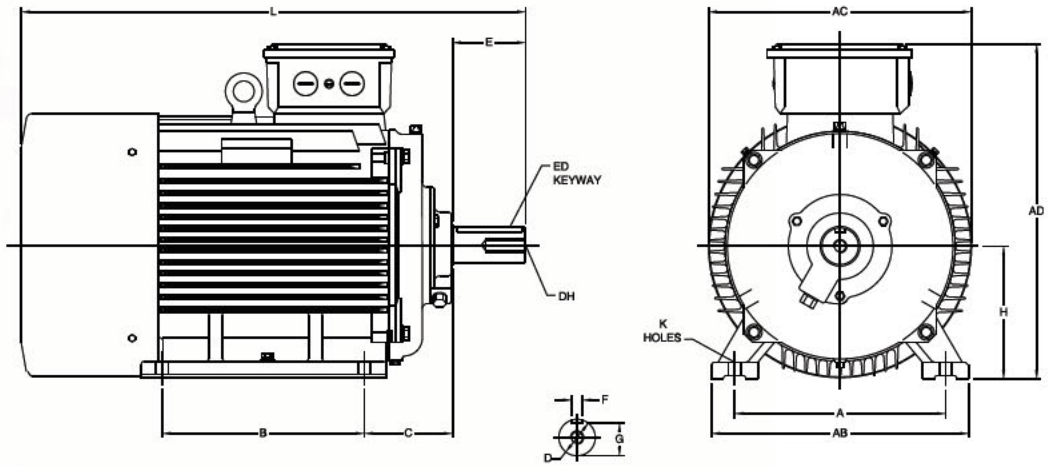
- Meets IE3 European and NEMA Premium® effeciencies
- Aluminum (63-90 frame) or Cast Iron (100-250 frame) construction
- Nameplated 60/50 hertz at same HP (except as noted)
- Class F Insulation, Class B rise @ rated KW
- IP55 weatherproof enclosure
- Rotateable/Removable Base (63 - 90 frame)
- 10:1 Variable Torque, Constant Torque speed range as noted
- Top Mounted/Oversized gasketed terminal box
- Meets IEEE45, IEC60092 & USCG CFR46 Marine Duty
- 1.15 Service Factor on 60 Hz sine wave, 1.0 SF on VFD
- IEC Design "N" with NEMA "B" Torques
- Inverter Duty Rated
- Terminal Blocks, Stud Type, Zero Creepage
- Meets IEC 34 electrical standards
- Meets IEC 72 dimensions and tolerances
- CE Marked
- 1 year warranty

TECHNICAL DATA

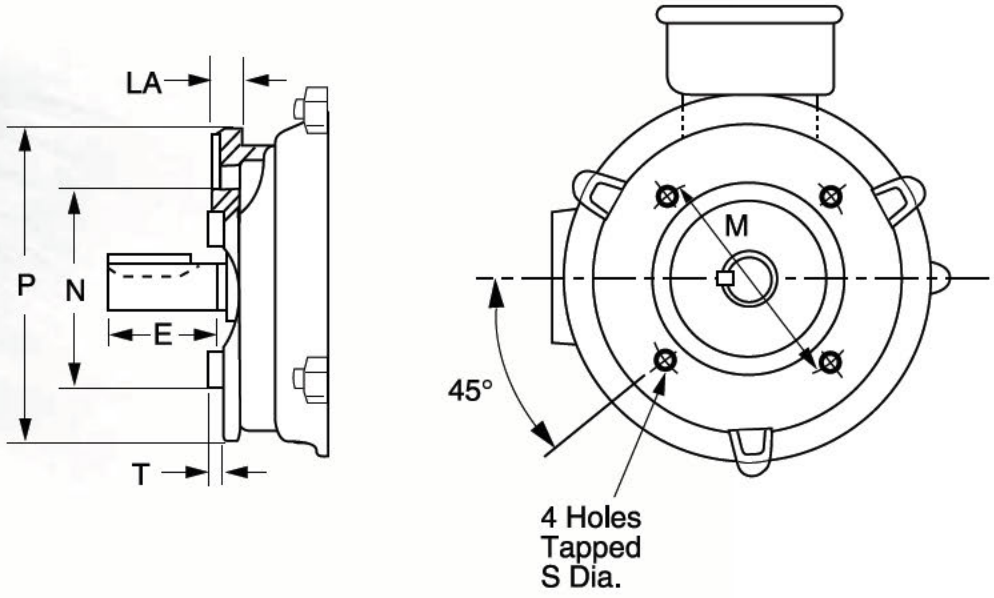
B14 (C-Face)											
HP	kW	RPM 60/50 HZ	60 HZ VOLTS	50 HZ VOLTS	IEC FRAME	MODEL NO.	C.T. SPEED RANGE*	NOM. EFF.	60 HZ F.L. AMPS	WEIGHT	IEC "L" DIM. (MM)
1/4	.18	1800/1500	230/460	200/400	63C	150-504-2004	20:1	68.0	1.0/0.5	11	217
1/2	.37	1800/1500	230/460	200/400	71C	150-504-2024	20:1	74.0	1.8/.9	14	282
3/4	.55	1800/1500	230/460	200/400	80C	150-504-2034	20:1	74.0	2.5/1.25	18	282
1	.75	1800/1500	230/460	200/400	80C	150-504-2044	20:1	85.5	3.0/1.5	30	302
1 1/2	1.1	1800/1500	230/460	200/400	90SC	150-504-2054	20:1	86.5	4.6/2.3	37	320
2	1.5	1800/1500	230/460	200/400	90LC	150-504-2064	20:1	86.5	5.8/2.9	38	320
3	2.2	1800/1500	230/460	200/400	100L	P150-125-2074	20:1	89.5	3.6	84	415
5 1/2	4	1800/1500	230/460	200/400	112M	P150-125-2084	20:1	89.5	14.0/7.0	104	410

DRAWINGS

B3 Foot-Mounted (Ridge Base)



FT Face B14 Mount



Frame	Mounting						Shaft						Gene al			B5 (FF) Flange						B14 (FT) Face					
	A	B	C	H	AB	K	D	E	F	G	ED	DH	AC	AD	HD	M	N	P	S	T	LA	M	N	P	S	T	LA
63	100	80	40	63	119	7	11	23	4	8.5	10	M4 x 10	126	-	169	115	95	140	10	3.0	7	75	60	90	M5	2 5	7
71	112	90	45	71	131	7	14	30	5	11 0	20	M5 x 12.5	140	-	186	130	110	160	10	3.5	7	85	70	105	M6	2 5	9
80	125	100	50	80	157	10	19	40	6	15.5	25	M6 x 16	158	132	212	165	130	200	12	3.5	12	100	80	120	M6	3 0	9
90S	140	100	56	90	174	10	24	50	8	20.0	32	M8 x 19	178	140	230	165	130	200	12	3.5	12	115	95	140	M8	3 0	9
90L	140	125	56	90	174	10	24	50	8	20.0	32	M8 x 19	178	140	230	165	130	200	12	3.5	12	115	95	140	M8	3 0	9
100L	160	140	63	100	205	12	28	60	8	24.0	40	M10 x 22	215	178	278	215	180	250	15	4.0	11	130	110	160	M8	3 5	14
112M	190	140	70	112	245	12	28	60	8	24.0	40	M10 x 22	215	190	302	215	180	250	15	4.0	12	130	110	160	M8	3 5	11

Additional Motor Options for Product Selection Table

See pages 17 - 18 and 41 - 42

MOTOR/POWER TYPE

AD

3PH AC Inverter Duty Motors (C-Face, Footless)	
AA	INV.DUTY, 0.25HP (.18KW), 230/460V
AB	INV.DUTY, 0.33HP (.25KW), 230/460V
AC	INV.DUTY, 0.5HP (.37KW), 230/460V
AD	INV.DUTY, 0.75HP (.55KW), 230/460V
AE	INV.DUTY, 1.0HP (.75KW), 230/460V
AF	INV.DUTY,1.5HP (1.1KW), 230/460V
AG	INV.DUTY, 2.0HP (1.5KW), 230/460V
AH	INV.DUTY, 3.0HP (2.2KW), 230/460V
AJ	INV.DUTY, 5.0HP, 230/460V
Brake Motors (3PH, C-Face, Removable Base)	
BA	BRAKE MOTOR, 0.5HP (.37KW), 230/460V
BB	BRAKE MOTOR, 0.75HP (.55KW), 230/460V
BC	BRAKE MOTOR, 1.0HP (.75KW), 230/460V
BD	BRAKE MOTOR, 1.5HP (1.1KW), 230/460V
BE	BRAKE MOTOR, 2.0HP (1.5KW), 230/460V
BF	BRAKE MOTOR, 3.0HP (2.2KW), 230/460V
BG	BRAKE MOTOR, 5.0HP, 230/460V, 3PH
Single Phase AC Motors (C-Face, Footless)	
CA	SINGLE PHASE, 0.25HP, 115/230VAC
CB	SINGLE PHASE, 0.33HP, 115/230VAC
CC	SINGLE PHASE, 0.5HP, 115/230VAC
CD	SINGLE PHASE, 0.75HP, 115/230VAC
CE	SINGLE PHASE, 1.0HP, 115/230VAC
CF	SINGLE PHASE, 1.5HP, 115/230VAC

CONSULT FACTORY FOR OTHER OPTIONS

AD

PMDC Motors-Low Volt (C-Face, Removable Base)	
DA	PMDC, 0.25HP, 12V
DB	PMDC, 0.33HP, 12V
DC	PMDC, 0.33HP, 24V
DD	PMDC, 0.5HP, 12V
DE	PMDC, 0.5HP, 24V
DF	PMDC, 0.75HP, 12V
DG	PMDC, 0.75HP, 24V
DH	PMDC, 1.0HP, 12V
DJ	PMDC, 1.0HP, 24V
DK	PMDC, 1.5HP, 24V
DL	PMDC, 2.0HP, 24V
PMDC Motors-High Volt (C-Face, Removable Base)	
EA	PMDC, 0.25HP, 90V
EB	PMDC, 0.25HP, 180V
EC	PMDC, 0.33HP, 90V
ED	PMDC, 0.33HP, 180V
EE	PMDC, 0.5HP, 90V
EF	PMDC, 0.5HP, 180V
EG	PMDC, 0.75HP, 90V
EH	PMDC, 0.75HP, 180V
EJ	PMDC, 1.0HP, 90V
EK	PMDC, 1.0HP, 180V
EL	PMDC, 1.5HP, 180V
EM	PMDC, 2.0HP, 180V

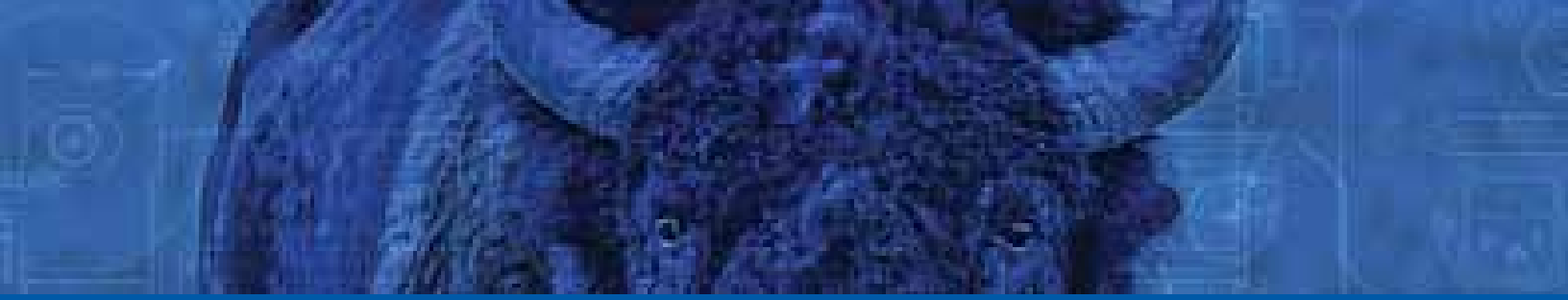
CONSULT FACTORY FOR OTHER OPTIONS

AD

PowerWash XT Washdown (3PH, C-Face, Footless)	
SA	White Epoxy (IP55) 0.25HP, 208-230/460V
SB	White Epoxy (IP55) 0.33HP, 208-230/460V
SC	White Epoxy (IP55) 0.5HP, 208-230/460V
SD	White Epoxy (IP55) 0.75HP, 208-230/460V
SE	White Epoxy (IP55) 1HP, 208-230/460V
SF	White Epoxy (IP55) 1.5HP, 208-230/460V
SG	White Epoxy (IP55) 2HP, 208-230/460V
SH	White Epoxy (IP55) 3HP, 208-230/460V
SJ	White Epoxy (IP55) 5HP, 208-230/460V
PowerWash SXT Washdown (3PH, C-Face, Footless)	
SK	Stainless Steel (IP55) 0.33HP, 208-230/460V
SL	Stainless Steel (IP55) 0.5HP, 208-230/460V
SM	Stainless Steel (IP55) 0.75HP, 208-230/460V
SN	Stainless Steel (IP55) 1HP, 208-230/460V
SP	Stainless Steel (IP55) 1.5HP, 208-230/460V
SQ	Stainless Steel (IP55) 2HP, 208-230/460V
PowerWash Extreme Washdown (3PH, C-Face, Footless)	
ST	Stainless Steel (BISSC, IP66) 0.5HP, 208-230/460V
SU	Stainless Steel (BISSC, IP66) 0.75HP, 208-230/460V
SV	Stainless Steel (BISSC, IP66) 1HP, 208-230/460V
SW	Stainless Steel (BISSC, IP66) 1.5HP, 208-230/460V
SX	Stainless Steel (BISSC, IP66) 2HP, 208-230/460V

CONSULT FACTORY FOR OTHER OPTIONS

NOTES



THE BISON VALUE

BQS
BISON QUICK SHIP

SNS
Standard Non Stock

SNS signifies model number availability. Lead time required with minimum order quantity.

ROBUSTICITY®

There's a simple philosophy behind the design of every Bison product: start with the highest quality components and then, through better design and manufacturing techniques, maximize the throughput those components can produce. Higher quality components means more dependable performance, fewer field failures, up to 200% more torque than typical - leading to a lower cost per inch-pound of torque, a more compact product and longer service life.

ENGINEERING EXCELLENCE

We take pride that we are Bison Gear & Engineering. With more than 35% of our staff being an accredited engineer, we are committed to maintaining the engineering excellence needed to meet and exceed our customers' expectations. So whether you need a standard unit or custom design, Bison has the engineering capability to provide optimized designs for your application needs.

CUSTOMER SERVICE

Our dedicated staff of inside sales specialists and outside technical sales team means that Bison is always available to assist our customers with quick response to their immediate needs.

FLEXIBLE MANUFACTURING

Whether the need is a lot or just a few at a time, Bison's lean optimized manufacturing floor is able to rapidly respond to the needs of our customers. Our factory is equipped with state-of-the-art manufacturing equipment, allowing us to get the products out the door and into the hands of the customer faster.

CORPORATE RESPONSIBILITY

At Bison, we uphold our responsibility to our associates and our community. With our continued education programs (G.E.A.R.) and our MSSC training center, we provide our associates with a pathway for advancement and a long-lasting career in manufacturing. Through BisonCares, our 501c3 organization, we contribute to a number of local and national charities and manage several programs to give back to the community.

BISON
Gear & Engineering Corp.