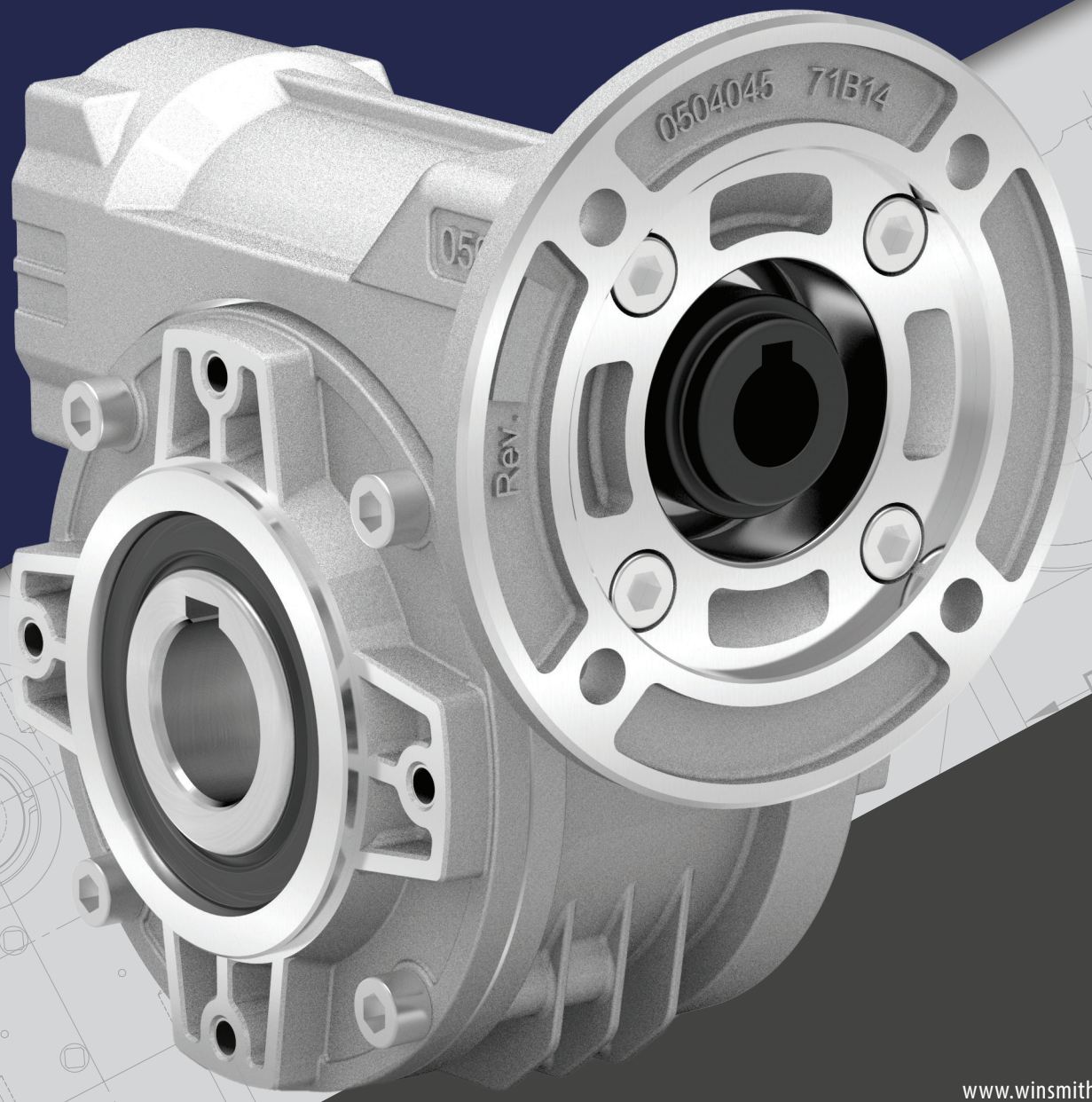
WINSMITH

ALUMINUM ROUND SPEED REDUCER (ALRN)

HIGH EFFICIENCY RIGHT ANGLE GEARING



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ALUMINUM ROUND SPEED REDUCER (ALRN)

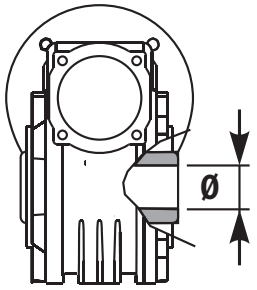
Winsmith Aluminum Round Speed Reducers (ALRN) with their single-piece aluminum housing are dimensionally interchangeable with many global manufacturers of right-angle worm gearboxes. Winsmith stock inventory includes available accessories to allow for precise, quick shipment within 1-3 days from our Asheville, NC gearing facility.

- Modular design allows for precise assembly and quick delivery.
- Dimensionally interchangeable with minimal cost and effort to change from a competitive manufacturer.
- Designed for a wide variety of machine builders who need drives that are optimized with regard to space, noise, torque and weight considerations.
- Efficiency is optimized, reducing energy losses due to the gearing geometry along with precision ground and case-hardened worm.
- Single-piece, precision machined housing ensures alignment of gearing and bearings delivering optimal life and performance.
- Robust, compact, lightweight design minimizes space and weight along with increasing life expectancy of supporting elements as compared to cast iron products.
- Wide variety of add on kits to provide many mounting options.
- Aluminum housing provides corrosion resistance and eliminates risk of paint chips.
- Shipped pre-filled with synthetic oil for universal mounting.

BASE REDUCER SIZES

SIZE	TORQUE	ø BORE SIZE OUTPUT SHAFT
30	21Nm	C=14mm
45	345 lbf-in. 41Nm	U=0.750 C=18mm
50	611 lbf-in. 72Nm	U=1.000 C=25mm
63	1240 lbf-in. 147Nm	U=1.125 C=25mm
85	2921 lbf-in.	U=1.500

"U" (inch) output
"C" (metric) output



AVAILABLE ACCESSORIES

MOUNTING FEET

OUTPUT FLANGE

SINGLE SIDE OUTPUT SHAFT

REACTION (TORQUE) ARM

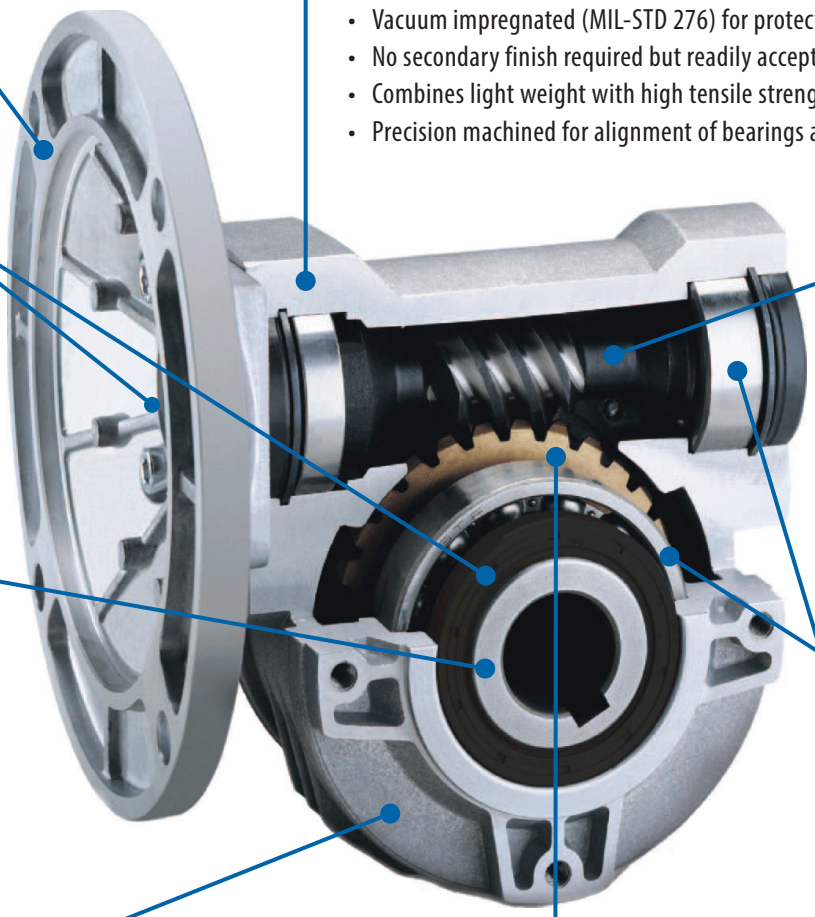
See full list of product Warnings and Cautions on page 24.

ALRN FEATURES

Motor Flange NEMA/IEC
- Coupled motor input for fret free operation and ease of replacement

Single-Piece Aluminum Alloy Housing
- 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

Premium Input/ Output Seals
- High temperature Nitrile output seals
- FKM seals are optional



Single Piece Alloy Steel Input Shaft
- High lead angle worm is case hardened (Rc 58-60)
- Ground worm threads are designed and manufactured for noise reduction and enhanced efficiency

Standard Hollow Output Shaft Mounting
- Multiple hollow shaft dimensions available
- Reduces total drive envelope size, weight and cost

Oversized Bearings
- Positively-retained, high speed shaft increases shock load capacity
- Ideal for frequent starting and reversing applications
- Generous overhung load capability
- Allows maximized hollow output bore

Machined Bearing Caps
- Modular housing readily accepts mounting of accessories
- Extra-deep thread engagement for greater support strength
- Zinc plated hardware offers corrosion resistance

Bronze Alloy Worm Gears
- High quality, centrifugally cast, nickel bronze gear for improved operating life

NOMENCLATURE

P045FC02US-WB3-W-L

P	045	FC	02	U	S	-W	B3	-W	-L

TYPE

P = Motor Flange
R = Input Shaft

SIZE / TORQUE

SIZE	TORQUE
030	21Nm
045	345 lbf-in
	41Nm
050	611 lbf-in
	72Nm
063	1240 lbf-in
	147Nm
085	2921 lbf-in

MOUNTING & FEET

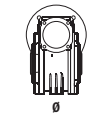
FB = Standard (no feet)
PA = Worm Top (feet)
PB = Worm Bottom (feet)
PV = Worm Up (feet)
FC = Short Output Flange
FL = Long Output Flange
BR = Reaction (Torque) Arm

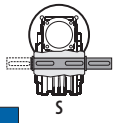
HOLLOW OUTPUT SHAFT BORE DIAMETER

Size	Standard Bore Diameter (in)
030	C = 14mm
045	U = 0.750
	C = 18mm
050	U = 1.000
	C = 25mm
063	U = 1.125
	C = 25mm
085	U = 1.500

SOLID OUTPUT SHAFT

0 = Hollow Output Shaft
S = Single Output Shaft





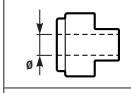
MOTOR FRAME SIZE

With Flange for Type P
W = 56C
X = 143/5TC
Y = 182/4TC
A = 56 B5
B = 63 B5
C = 71 B5
D = 80 B5
E = 90 B5
O = 56 B14
P = 63 B14
Q = 71 B14
R = 80 B14
T = 90 B14
U = 100/112 B14
Z = For Type R

STANDARD MOUNTING POSITION

B3 = Worm Top
B6 = DR Drive Right
B7 = DL Drive Left
B8 = Worm Bottom
V5 = Worm Up (input up)
V6 = Worm Down (input down)

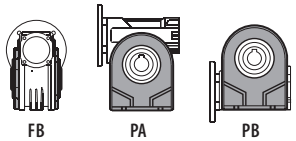
INPUT COUPLING (in)

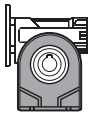
Coupling*

W = ø0.625" Integral Coupling 56C
X = ø0.875" Integral Coupling 140TC
Y = ø1.125" Integral Coupling 180TC
A = IEC56
B = IEC63
C = IEC71
D = IEC80
E = IEC90
F = IEC100/112
ST = Standard Type R

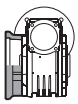
**Quill available upon request*

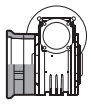
ASSEMBLY OF ACCESSORIES

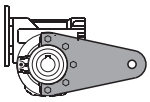
Flange or Torque Arm
-L = Assy Left
-R = Assy Right





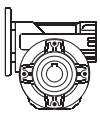


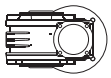


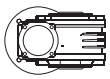


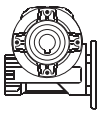
RATIO

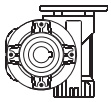
ALRN	SIZE				
	30	45	50	63	85
CODE	RATIO				
09	5:1				
11		5:1			
14			5:1		
01	7:1	7:1	7:1	7:1	7:1
02	10:1	10:1	10:1	10:1	10:1
03	15:1	14:1	14:1	15:1	14:1
04	20:1	21:1	18:1	19:1	20:1
05	30:1	28:1	26:1	24:1	22:1
12			30:1		
06	40:1	37:1	36:1	30:1	28:1
07	61:1	46:1	43:1	36:1	38:1
13			50:1	40:1	
08	80:1	60:1	60:1	45:1	46:1
12				60:1	
09		70:1	68:1	67:1	52:1
10	100:1	102:1	80:1	80:1	67:1
11			100:1	94:1	74:1
12					96:1

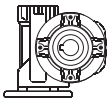








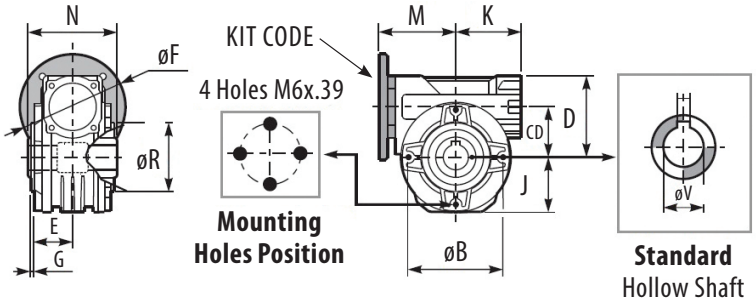




SERVICE FACTOR (S.F.) ASSOCIATED WITH FREQUENT STARTS AND HOURS OF OPERATION

TYPE OF LOAD AND STARTS PER HOUR			HOURS OF OPERATION PER DAY		
			< 2 h	2 - 8 h	8 - 16 h
Continuous or intermittent application with start / hour	≤ 10	Uniform	0.90	1.00	1.25
		Moderate	1.00	1.25	1.50
		Heavy	1.25	1.50	1.75
Intermittent application with start / hour	> 10	Uniform	1.25	1.50	1.75
		Moderate	1.50	1.75	2.00
		Heavy	1.75	2.00	2.25

FB Basic Gearbox



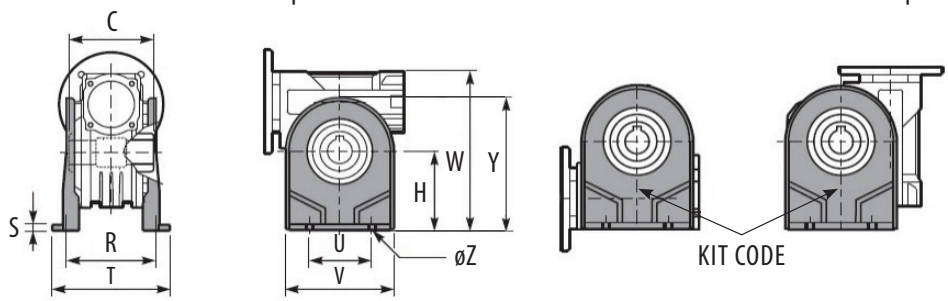
M FLANGES	øF	M	øB	CD	D	E	G	J	K	N	øR	øV	KEYWAY	KIT CODE
56B5	4.72	2.42	2.56	1.18	2.05	1.18	0.08	1.54	1.57	2.17	1.97	.551 (14mm)	2.3mm x 5mm	K0304041
63B5	5.51	2.46												K0304042
56B14	3.15	2.42												K0304046
56B14	3.54	2.46												K0304045

PA Worm Top, **PB** Worm Bottom , **PV** Worm Up

PA Worm Top

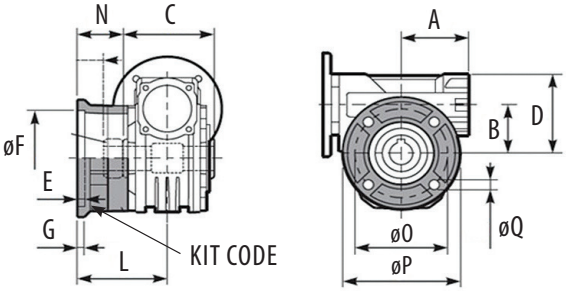
PB Worm Bottom

PV Worm Up



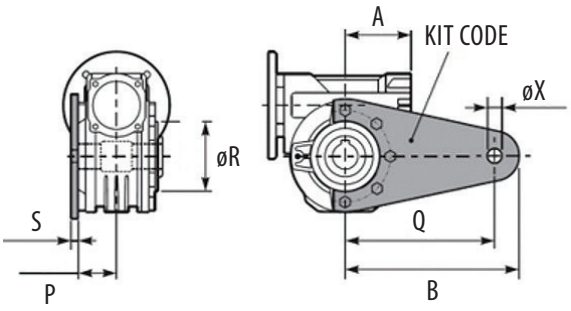
C	H	R	S	T	U	V	Y	W	øZ	KIT CODE
2.17	2.17	2.60	0.12	3.43	1.97	3.54	3.70	4.21	0.256	K0309022

FC Short Output Flange and **FL** Long Output Flange



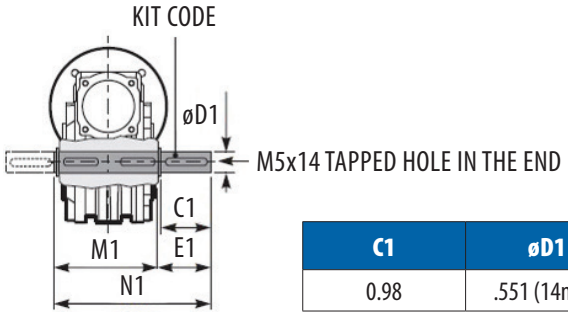
	A	B	C	D	E	øF		G	L	N	øO	øP	øQ	KIT CODE
FC	1.57	1.18	2.17	2.05	0.24	1.972	±.002	0.24	1.99	0.91	2.68	3.15	0.28	K0309010
FL						2.366			2.19	1.10	3.43	4.33	0.33	K0459010

BR Reaction (Torque) Arm



A	B	P	Q	øR	S	øX	KIT CODE
1.57	4.65	1.18	3.94	1.97	0.16	0.323	K0459027

S Single Side (Solid) Output Shaft



C1	øD1	KEYWAY	E1	M1	N1	KIT CODE
0.98	.551 (14mm)	2mm x 5mm	1.40	2.32	3.72	K0305028

LUBRICATION

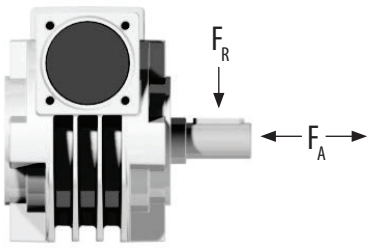
Unit supplied with long life synthetic oil.

030 OIL QUANTITY 1.0 (oz)	
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

RADIAL AND AXIAL LOADS

Output Shaft

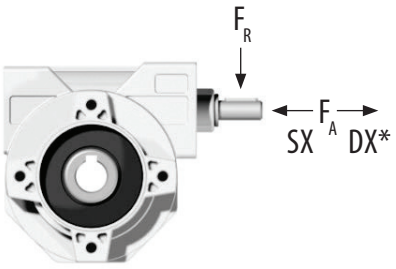
RPM	F_A (lb)	F_R (lb)
200	27	135
150	31	157
100	36	180
75	40	202
50	50	225
25	56	281
15	63	315



Input Shaft

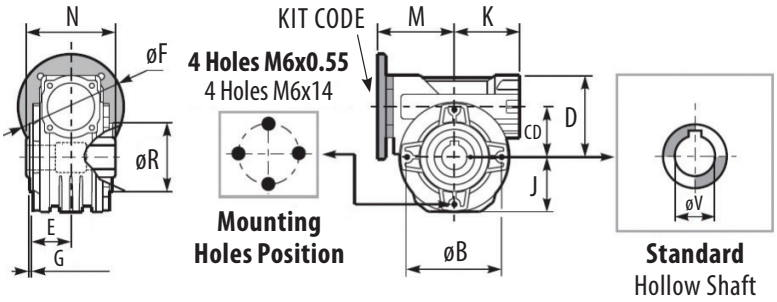
RPM	F_A (lb)	F_R (lb)
1750	5	22

**Not intended for high axial loads in the SX and DX direction.*



045 (345 lbf-in) ALRN

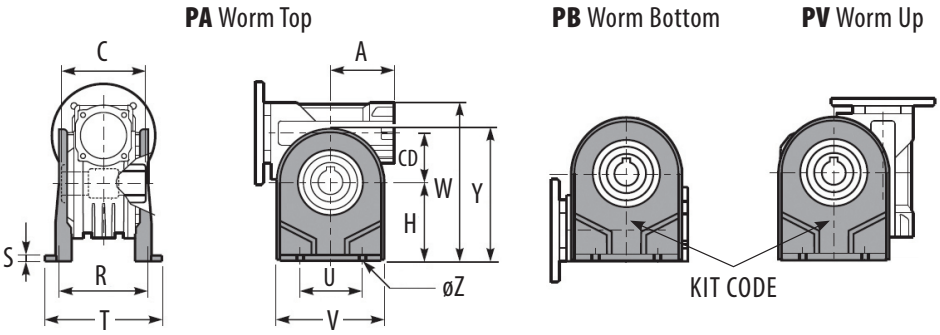
FB Basic Gearbox



M FLANGES	øB	CD	D	E	øF	G	J	K	M	N	øR	øV	KEYWAY	KIT CODE
56C	**2.559** *65*	**1.772** *45*	**2.834** *72*	**1.378** *35*	**6.50**	**0.079** *2*	**1.9291** *49*	**2.165** *55*	**3.709**	**2.559** *65*	**1.969** *50h8*	**0.750*** *18mm***	**3/16 X 3/32** *6 X 2.8*	KU0504041
63B5					**5.43** *138*				**2.913** *74*					K0504041
71B5					**6.29** *160*				**2.814** *71.5*					K0504042
56B14					**3.15** *80*				**2.814** *71.5*					KC404049
63B14					**3.54** *90*				**2.913** *74*					K0504047
71B14					**4.13** *105*				**2.814** *71.5*					K0504045

**Standard on "U" (inch) output.*
***Standard on "C" (metric) output.*

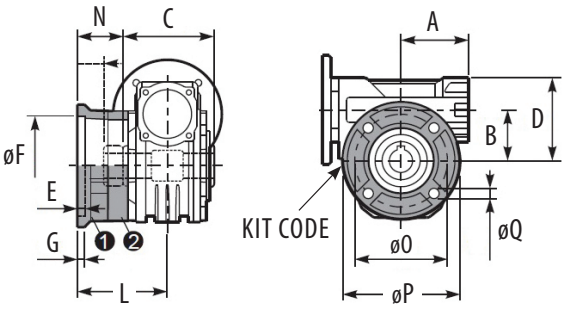
PA Worm Top, **PB** Worm Bottom, **PV** Worm Up



A	CD	C	H	R	S	T	U	V	Y	W	øZ	KIT CODE
2.165 *55*	**1.772** *45*	**2.559** *65*	**2.835** *72*	**3.189** *81*	**0.118** *3*	**3.937** *100*	**2.047** *52*	**3.858** *98*	**4.764** *121*	**5.669** *144*	**0.41** *10.5*	K0459022

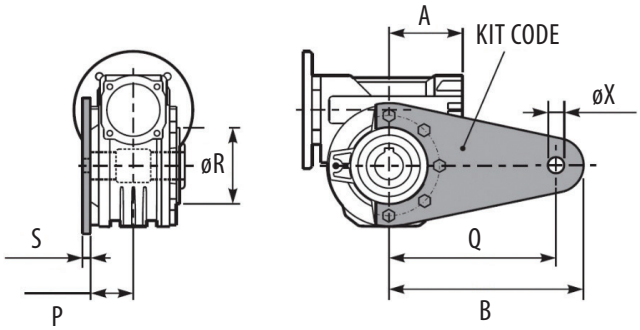
045 (345 lbf-in) ALRN

FC Short Output Flange and **FL** Long Output Flange



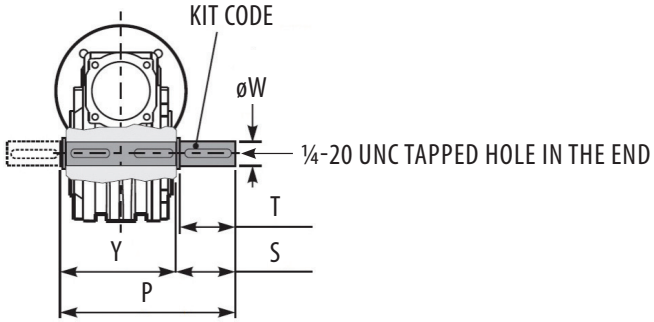
	A	B	C	D	E	øF		G	L	N	øO	øP	øQ	KIT CODE
FC	**2.165** *55*	**1.772** *45*	**2.559** *65*	**2.835** *72*	**0.35** *9*	**2.366** *60*	**±0.002** *±0.10*	**0.35** *9*	**2.382** *60.5*	**1.102** *28*	**3.425** *87*	**4.331** *110*	**0.33** *8.5*	❶ K0459010
														–
FL									**3.563** *90.5*	**2.283** *58*				❶ K0459010
														❷ K0450200

BR Reaction (Torque) Arm



A	B	P	Q	øR	S	øX	KIT CODE
2.165 *55*	**4.646** *118*	**1.378** *35*	**3.937** *100*	**1.969** *50h8*	**0.16** *4*	**0.32** *8.2*	K0459027

S Single Side (Solid) Output Shaft



P	S	T	øW	KEYWAY	Y	KIT CODE
4.803 *113*	**2.047** *43*	**1.929** *32*	**0.75** *18*	**3⁄16 X 3⁄32** *6 X 2 ½*	**2.756** *70*	KU0455028 *K0455028*

LUBRICATION

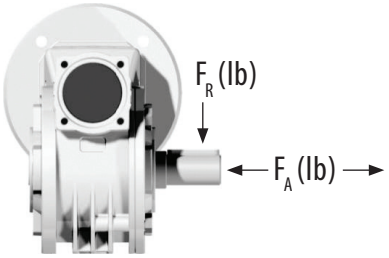
Unit supplied with long life synthetic oil.

045 OIL QUANTITY 3.2 (oz)	
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

RADIAL AND AXIAL LOADS

Output Shaft

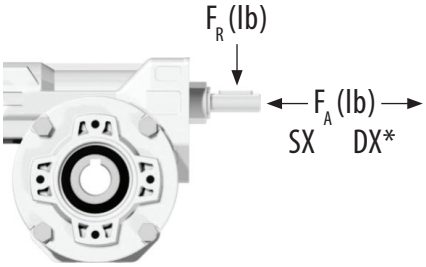
RPM	F_A (lb)	F_R (lb)
200	40	202
150	45	225
100	49	247
75	54	270
50	58	315
25	67	405
15	90	450



Input Shaft

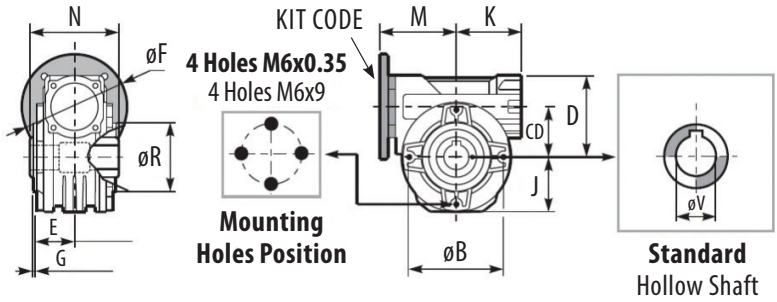
RPM	F_A (lb)	F_R (lb)
1750	9	47

**Not intended for high axial loads in the SX and DX direction.*



050 (611 lbf-in) ALRN

FB Basic Gearbox

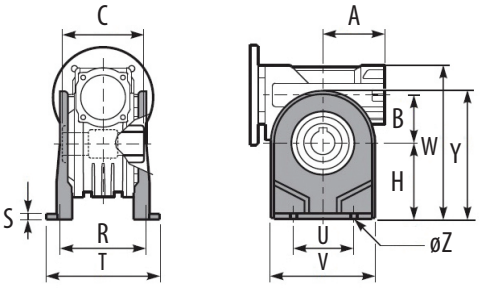


M FLANGES	øB	CD	D	E	øF	G	J	K	M	N	øR	øV	KEYWAY	KIT CODE
56C					**6.50**				**3.886**					KU0504041
63B5					**5.43** *138*				**3.090** *78.5*					K0504041
71B5					**6.29** *160*				**2.992** *76*					K0504042
80B5					**7.87** *200*				**3.011** *76.5*					K0504043
56B14	**3.701** *94*	**1.969** *50*	**3.189** *81*	**1.496** *38*	**3.14** *80*	**0.118** *3*	**2.145** *54.5*	**2.559** *65*	**2.992** *76*	**3.189** *81*	**2.677** *68h8*	**1.000*** *25H8***	**⅛ X ¼** *8 X 3.3*	KC404049
63B14					**3.54** *90*				**3.090** *78.5*					K0504047
71B14					**4.13** *105*				**2.992** *76*					K0504045
80B14					**4.72** *120*				**3.011** *76.5*					K0504046

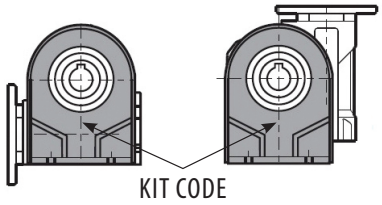
**Standard on "U" (inch) output.*
***Standard on "C" (metric) output.*

PA Worm Top, **PB** Worm Bottom, **PV** Worm Up

PA Worm Top



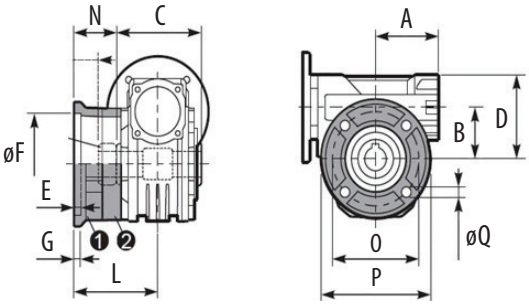
PB Worm Bottom **PV** Worm Up



A	B	C	H	R	S	T	U	V	Y	W	øZ	KIT CODE
2.559 *65*	**1.969** *50*	**3.189** *81*	**3.228** *82*	**3.878** *98.5*	**0.138** *3.5*	**4.843** *123*	**2.48** *63*	**4.449** *113*	**5.453** *138.5*	**6.417** *163*	**0.41** *10.5*	K0509022

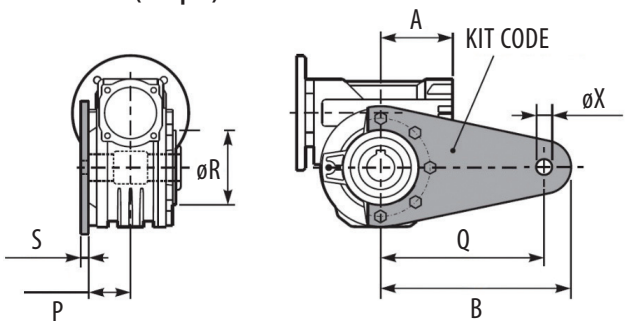
050 (611 lbf-in) ALRN

FC Short Output Flange and **FL** Long Output Flange



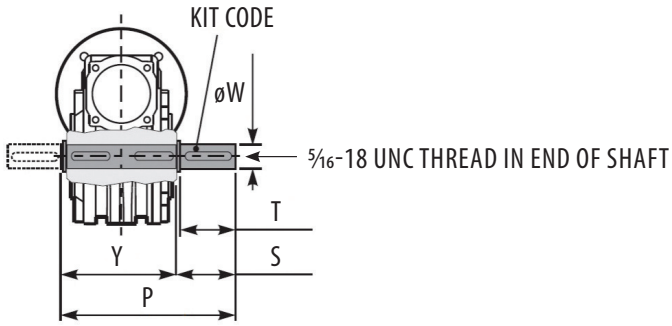
	A	B	D	C	E	øF		G	L	N	O	P	øQ	KIT CODE
FC	**2.559** *65*	**1.969** *50*	**3.189** *81*	**3.189** *81*	**0.35** *9*	**2.7628** *70*	**±0.001** *-.001*	**0.47** *12*	**3.346** *85*	**1.752** *44.5*	**3.543** *90*	**4.843** *123*	**0.41** *10.5*	❶ K0509010
														–
FL									**4.508** *114.5*	**2.913** *74*				❶ K0509010
														❷ K0500200

BR Reaction (Torque) Arm



A	B	P	Q	øR	S	øX	KIT CODE
2.559 *65*	**4.646** *118*	**1.496** *38*	**3.937** *100*	**2.677** *68h8*	**0.16** *4*	**0.32** *8.2*	K0509027

S Single Side (Solid) Output Shaft



P	S	T	øW	KEYWAY	Y	KIT CODE
5.693 *146*	**2.287** *59.5*	**2.13** *52*	**1** *25*	**⅛ X ¼** *3 X 8*	**3.405** *86.5*	KU0505028 *K0505028*

LUBRICATION

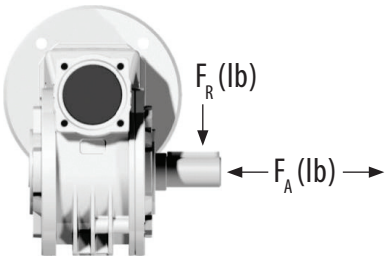
Unit supplied with long life synthetic oil.

050 OIL QUANTITY 4.9 (oz)	
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

RADIAL AND AXIAL LOADS

Output Shaft

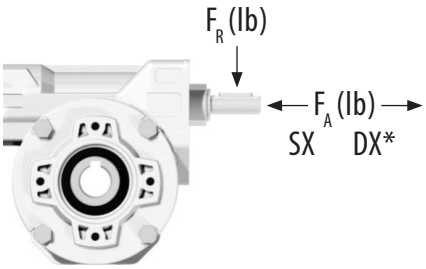
RPM	F_A (lb)	F_R (lb)
200	54	270
150	63	315
100	67	337
75	76	382
50	85	427
25	108	562
15	126	629



Input Shaft

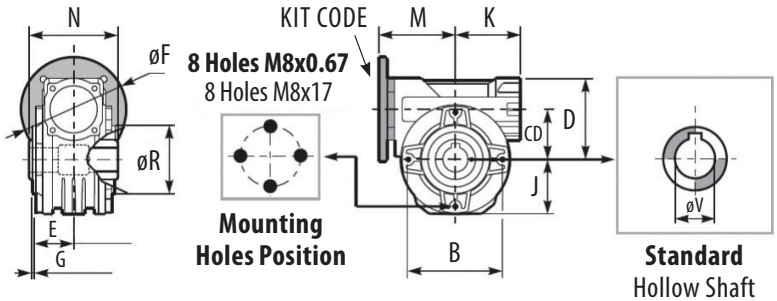
RPM	F_A (lb)	F_R (lb)
1750	17	85

**Not intended for high axial loads in the SX and DX direction.*



063 (1240 lbf-in) ALRN

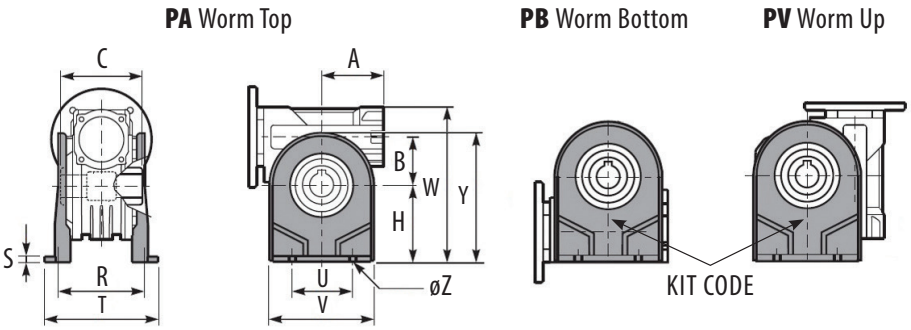
FB Basic Gearbox



M FLANGES	B	CD	D	E	øF	G	J	K	M	N	øR	øV	KEYWAY	KIT CODE
56C-140TC					**6.50**				**4.409**					KU0634041
63B5					**5.51** *140*				**3.917** *97.5*					K0634041
71B5					**6.29** *160*				**3.838** *97.5*					K0634042
80/90B5	**3.543** *90*	**2.48** *63*	**3.937** *100*	**1.772** *45*	**7.87** *200*	**0.197** *5*	**2.755** *70*	**3.11** *79*	**3.917** *99.5*	**4.724** *120*	**2.953** *75h8*	**1.125*** *25mm***	**⅛ X ¼** *8 X 3.3*	K0634043
71B14					**4.13** *105*				**3.838** *97.5*					K0634047
80B14					**4.72** *120*				**3.917** *99.5*					K0634046
90B14					**5.51** *140*				**3.917** *99.5*					K0634041

**Standard on "U" (inch) output.*
***Standard on "C" (metric) output.*

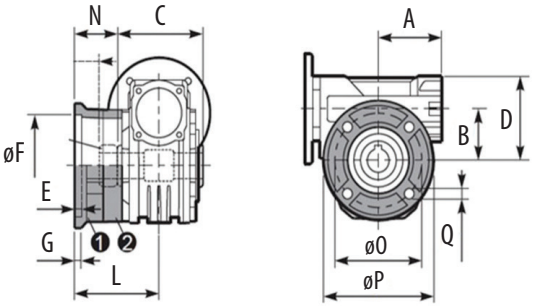
PA Worm Top, **PB** Worm Bottom, **PV** Worm Up



A	B	C	H	R	S	T	U	V	Y	W	øZ	KIT CODE
3.11 *79*	**2.48** *63*	**4.724** *120*	**3.937** *100*	**4.37** *111*	**0.157** *4*	**5.669** *144*	**3.74** *95*	**5.236** *133*	**6.693** *170*	**7.874** *200*	**0.41** *10.5*	K0639022

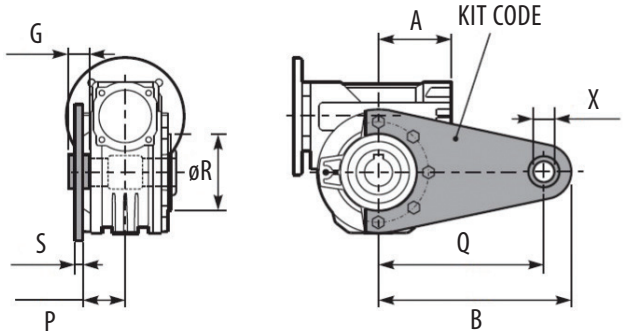
063 (1240 lbf-in) ALRN

FC Short Output Flange and **FL** Long Output Flange



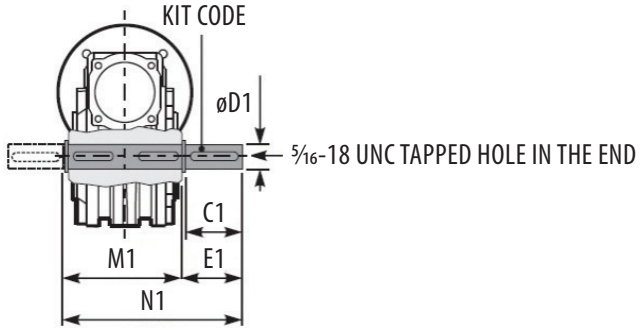
	A	B	C	D	E	øF		G	L	N	øO	øP	Q	KIT CODE
FC	**3.11** *79*	**2.48** *63*	**4.724** *120*	**3.937** *100*	**0.28** *7*	**4.5345** *115*	±0.0009	**0.51** *13*	**3.386** *86*	**1.024** *26*	**5.906** *150*	**6.89** *175*	**0.43** *11*	❶ K0639010
														–
FL									**4.567** *116*	**2.205** *56*				❶ K0639010
														❷ K0630200

BR Reaction (Torque) Arm



A	B	G	P	Q	øR	S	X	KIT CODE
3.11 *79*	**7.087** *180*	**0.79** *20*	**1.772** *45*	**5.906** *150*	**2.953** *78h8*	**0.24** *6*	**0.43** *11*	K0639027

S Single Side (Solid) Output Shaft



C1	øD1	E1	M1	N1	KEYWAY	KIT CODE
2.24 *60*	**1.125** *25*	**2.437** *63.2*	**4.992** *126.8*	**7.429** *190*	**7⁄64 X 1⁄4** *3 x 8*	KU0635028 *K0635028*

LUBRICATION

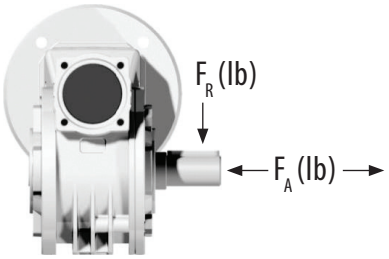
Unit supplied with long life synthetic oil.

063 OIL QUANTITY 14.0 (oz)	
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

RADIAL AND AXIAL LOADS

Output Shaft

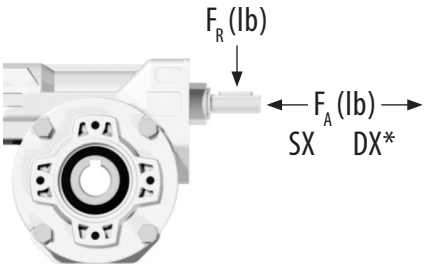
RPM	F_A (lb)	F_R (lb)
200	81.0	404.5
150	90.0	450.0
100	103.5	517.0
75	112.5	562.0
50	135.0	674.5
25	157.0	854.0
15	180.0	899.0



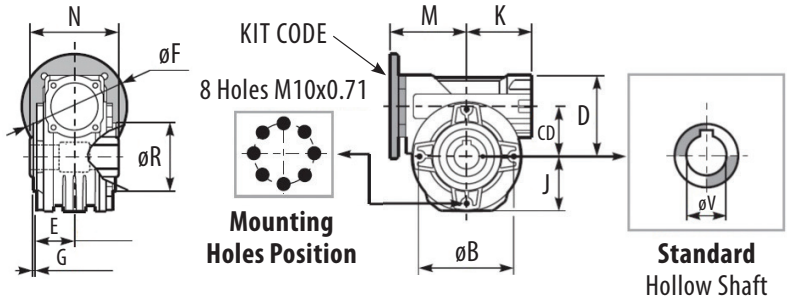
Input Shaft

RPM	F_A (lb)	F_R (lb)
1750	20	101

**Not intended for high axial loads in the SX and DX direction.*



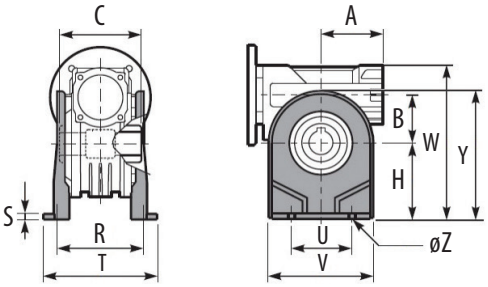
FB Basic Gearbox



M FLANGES	øB	CD	D	E	øF	G	J	K	M	N	øR	øV	KEYWAY	KIT CODE
56C-140TC	5.118	3.346	5.433	2.520	6.50	0.138	3.720	3.937	4.823	5.315	4.331	1.500	3⁄16 X 3⁄8	KU0854041
180TC					8.88				5.527					KU0854042
71B5					6.29				4.586					K0234041
80/90B5					7.87				4.665					K0234042
100B5					9.84				5.019					K0234043
80B14					4.72				4.665					K0854046
90B14					5.51				4.665					K0854045
100B14					6.29				5.019					K0854047

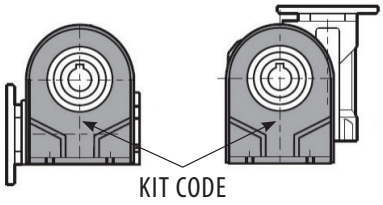
PA Worm Top, **PB** Worm Bottom, **PV** Worm Up

PA Worm Top



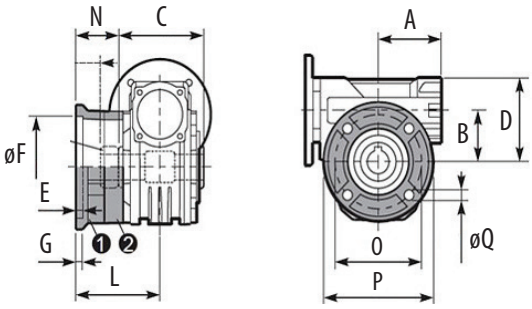
PB Worm Bottom

PV Worm Up



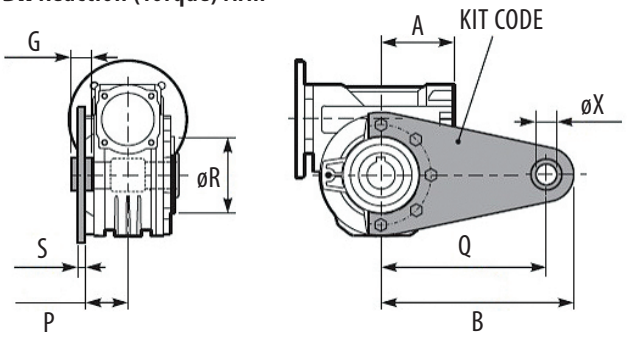
A	B	C	H	R	S	T	U	V	Y	W	øZ	KIT CODE
3.937	3.346	5.315	5.591	5.709	0.197	7.165	5.512	7.087	9.311	11.024	0.41	K0859022

FC Short Output Flange and **FL** Long Output Flange



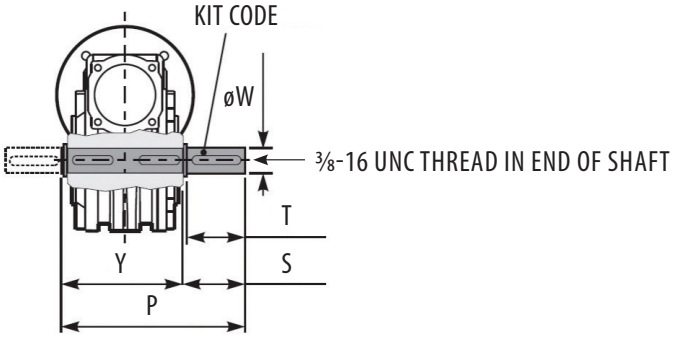
	A	B	C	D	E	øF		L	N	O	P	øQ	KIT CODE
FC	3.937	3.346	5.315	5.433	0.20	5.9855	±0.0012	4.252	1.594	6.929	8.071	0.51	❶ K0859010
													–
FL								5.846	3.189				❶ K0859010
													❷ K0850201

BR Reaction (Torque) Arm



A	B	G	P	Q	øR	S	øX	KIT CODE
3.937	9.449	0.98	2.520	7.874	4.331	0.24	0.83	K0859027

S Single Side (Solid) Output Shaft



P	S	T	øW	KEYWAY	Y	KIT CODE
9.153	3.602	3.406	1.500	5⁄32 X 3⁄8	5.551	KU0855028

LUBRICATION

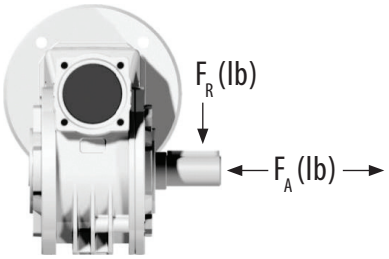
Unit supplied with long life synthetic oil.

085 OIL QUANTITY 42.2 (oz)	
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

RADIAL AND AXIAL LOADS

Output Shaft

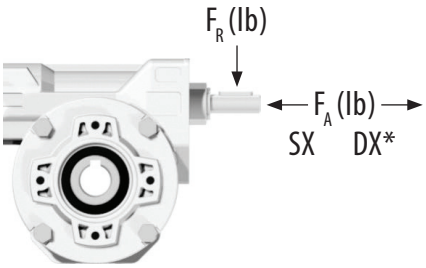
RPM	F_A (lb)	F_R (lb)
200	112	562
150	130	652
100	135	674
75	157	787
50	180	899
25	225	1124
15	261	1304



Input Shaft

RPM	F_A (lb)	F_R (lb)
1750	29	146

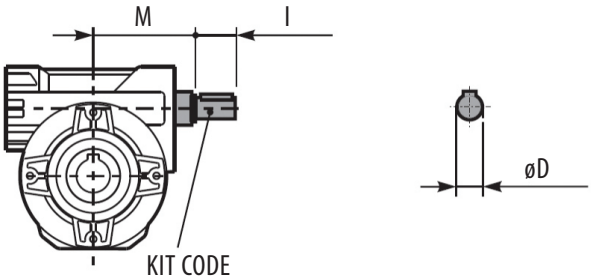
**Not intended for high axial loads in the SX and DX direction.*



INPUT SHAFTS

Dimensions in **Inch**
mm

S INPUT SHAFTS



SIZE	øD	I	M	KEYWAY	KIT CODE
030	**0.354** *9*	**0.787** *20*	**2.283** *58*	**.12 X .06** *3 X 1 ½*	K0305006
045	**0.625** *11h6*	**1.181** *30*	**2.673** *68*	**3⁄16 X 3⁄32** *4 X 1 ½*	KU045506 *K0455006*
050	**0.625** *16h6*	**1.181** *30*	**2.923** *74.5*	**3⁄16 X 3⁄32** *5 X 2*	KU045506 *K0505006*
063	**0.75** *18h6*	**1.752** *45*	**3.681** *93*	**3⁄16 X 3⁄32** *6 X 2 ½*	KU0635006 *K0635006*
085	**0.875**	**1.752**	**4.626**	**3⁄16 X 3⁄32**	KU0855006

RATINGS

030 RATINGS INPUT SPEED = 1750 RPM

OUTPUT SPEED	RATIO CODE	RATIO	MOTOR POWER	TRANSMITTED OR OUTPUT TORQUE	SERVICE FACTOR	NOMINAL POWER	NOMINAL TORQUE	AVAILABLE B5 MOTOR FLANGES*		AVAILABLE B14 MOTOR FLANGES		DYNAMIC EFFICIENCY
RPM		i	HP	(lbf-in)	S.F.	HP	(lbf-in)	-A 56	-B 63	-O 56	-P 63	%
350	09	5	0.24	35	4	0.97	142	B		B-C		82
250	01	7	0.24	48	2.9	0.71	142	B		B-C		80
175	02	10	0.24	67	2.1	0.51	142	B		B-C		78
117	03	15	0.24	95	1.7	0.41	159	B		B-C		73
88	04	20	0.24	121	1.3	0.32	159	B		B-C		70
58	05	30	0.16	161	1.1	0.27	177	B		B-C		62
43.8	06	40	0.16	131	1.3	0.21	168	B		B-C		57
28.7	07	61	0.12	132	1.3	0.16	168	B		B-C		50
21.9	08	80	0.08	111	1.2	0.1	133	B		B-C		48
17.5	10	100	0.08*	115	0.6	0.05	71	B		B-C		40

Note: B - Available on request without Reduction Bushing C - Motor Flange Holes Position

**Power is higher than the maximum allowed for this ratio. Select according to the nominal torque required.*

045 RATINGS INPUT SPEED = 1750 RPM

OUTPUT SPEED	RATIO CODE	RATIO	MOTOR POWER	TRANSMITTED OR OUTPUT TORQUE	SERVICE FACTOR	NOMINAL POWER	NOMINAL TORQUE	AVAILABLE NEMA MOTOR FLANGES	DYNAMIC EFFICIENCY
RPM		i	HP	(lbf-in)	S.F.	HP	(lbf-in)	-W 56C	%
250.0	01	7	1.00	202	1.3	1.29	257		80
175.0	02	10	0.75	213	1.2	0.91	257		79
125.0	03	14	0.50	194	1.3	0.67	257		77
83.3	04	21	0.50	253	1.4	0.69	345		67
62.5	05	28	0.50	328	1.1	0.53	345		65
47.3	06	37	0.33	277	1.2	0.42	345		63
38.0	07	46	0.33	323	1.1	0.36	345		59
29.2	08	60	0.25	303	1.1	0.29	345		56
25.0	09	70	0.25	340	0.8	0.19	257		54
17.2	10	102	0.25*	450	<0.8	0.14	248		49

**Power is higher than the maximum allowed for this ratio. Select according to the nominal torque required.*

050 RATINGS INPUT SPEED = 1750 RPM

OUTPUT SPEED	RATIO CODE	RATIO	MOTOR POWER	TRANSMITTED OR OUTPUT TORQUE	SERVICE FACTOR	NOMINAL POWER	NOMINAL TORQUE	AVAILABLE NEMA MOTOR FLANGES	DYNAMIC EFFICIENCY
RPM		i	HP	(lbf-in)	S.F.	HP	(lbf-in)	-W 56C	%
250.0	01	7	2.00	413	1.2	2.34	478		82
175.0	02	10	1.50	432	1.2	1.84	522		80
125.0	03	14	1.00	398	1.4	1.46	575		79
97.2	04	18	1.00	486	1.1	1.09	522		75
67.3	05	26	0.75	485	1.2	0.87	558		69
58.3	12	30	0.75	567	1.1	0.82	611		70
48.6	06	36	0.50	447	1.4	0.69	611		69
40.7	07	43	0.50	511	1.1	0.57	575		66
35.0	13	50	0.50	558	1.0	0.51	558		62
29.2	08	60	0.33	414	1.3	0.42	522		58
25.7	09	68	0.33	461	1.1	0.35	487		57
21.9	10	80	0.25	389	1.2	0.31	478		54
17.5	11	100	0.25	450	1.0	0.24	434		50

063 RATINGS INPUT SPEED = 1750 RPM

OUTPUT SPEED	RATIO CODE	RATIO	MOTOR POWER	TRANSMITTED OR OUTPUT TORQUE	SERVICE FACTOR	NOMINAL POWER	NOMINAL TORQUE	AVAILABLE NEMA MOTOR FLANGES		DYNAMIC EFFICIENCY
RPM		i	HP	(lbf-in)	S.F.	HP	(lbf-in)	-W 56C	-X 143-5TC	%
250.0	01	7	2.0	419	2.5	5.10	1053	B		83
175.0	02	10	2.0	583	1.9	3.93	1133	B		81
116.7	03	15	2.0	854	1.4	2.75	1159	B		79
92.1	04	19	2.0	1068	1.1	2.20	1159	B		78
72.9	05	24	1.5	972	1.2	1.87	1195	B		75
58.3	06	30	1.5	1199	1.0	1.56	1230	B		74
48.6	07	36	1.0	882	1.4	1.42	1239	B		68
43.8	13	40	1.0	951	1.2	1.25	1177	B		66
38.9	08	45	1.0	1070	1.1	1.08	1142	B		66
29.2	12	60	0.8	1005	1.1	0.83	1097	B		62
26.1	09	67	0.5	724	1.4	0.73	1044	B		60
21.9	10	80	0.5	821	1.2	0.62	1000	B		57
18.6	11	94	0.5	880	1.1	0.58	1000	B		52

Note: B - Supplied with Reduction Bushing

085 RATINGS INPUT SPEED = 1750 RPM

OUTPUT SPEED	RATIO CODE	RATIO	MOTOR POWER	TRANSMITTED OR OUTPUT TORQUE	SERVICE FACTOR	NOMINAL POWER	NOMINAL TORQUE	AVAILABLE NEMA MOTOR FLANGES			DYNAMIC EFFICIENCY
RPM		i	HP	(lbf-in)	S.F.	HP	(lbf-in)	-W 56C	-X 143-5TC	-Y 182-4TC	%
250.0	01	7	5.0	1109	2.0	9.90	2168	B	B		88
175.0	02	10	5.0	1441	1.7	8.40	2390	B	B		80
125.0	03	14	5.0	1967	1.3	6.61	2567	B	B		78
87.5	04	20	3.0	1707	1.5	4.41	2478	B	B		79
79.5	05	22	3.0	1854	1.3	4.06	2478	B	B		78
62.5	06	28	3.0	2269	1.3	3.91	2921	B	B		75
46.1	07	38	3.0	2915	1.0	2.95	2832	B	B		71
38.0	08	46	2.0	2253	1.2	2.47	2744	B	B		68
33.7	09	52	2.0	2472	1.0	1.99	2434	B	B		66
26.1	10	67	1.5	2353	1.0	1.57	2434	B	B		65
23.6	11	74	1.5	2319	1.0	1.48	2257	B	B		58
18.2	12	96	1.0	1833	1.1	1.13	2036	B	B		53

Note: B - Supplied with Reduction Bushing

WARNINGS AND CAUTIONS

⚠ WARNING

Failure to observe the following warnings could create a risk of death or serious injury.

For safety, Buyer or User should provide protective guards over all shaft extensions and any moving apparatus mounted thereon. The User is responsible for checking all applicable safety codes in their area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.

Gearboxes operating in high position should have a protective shield for any possible parts falling down for casual accidents where people are moving under them.

Hot oil and reducers can cause severe burns. Use extreme care when removing lubrication plugs and vents.

Use of an oil with an EP additive on units with backstops may prevent proper operation of the backstop. Injury to personnel, damage to the reducer or other equipment may result.

CAUTION:

Failure to observe the following warnings could create a risk of serious injury.

This product is not recommended for use in reducers in man lift or people moving devices.

Make sure that certain applications do not exceed the allowable load capacities published in the current catalog.

Make certain that the power supply is disconnected before attempting to service or remove any components. Lock out the power supply and tag it to prevent unexpected application power.

Mounting bolts should be routinely checked to ensure that the unit is firmly anchored for proper operation.

NOTES

- Buyer shall be solely responsible for determining the adequacy of the product for all uses to which Buyer shall apply the product. The application by Buyer shall not be subject to any implied warranty of fitness for a particular purpose.
- Reducers are not to be considered fail safe or self-locking devices. If these features are required, a properly sized, independent holding device should be utilized.
- Reducers should not be used as a brake.
- Any brakes that are used in conjunction with a reducer must be sized or positioned in such a way to not subject the reducer to loads beyond the catalog rating.
- Lifting supports including eyebolts are to be used for vertically lifting the gearbox only and no other associated attachments or motors.
- Overhung loads subject shaft bearings and shafts to stress which may cause premature bearing failure and or shaft breakage from bending fatigue, if not sized properly.

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