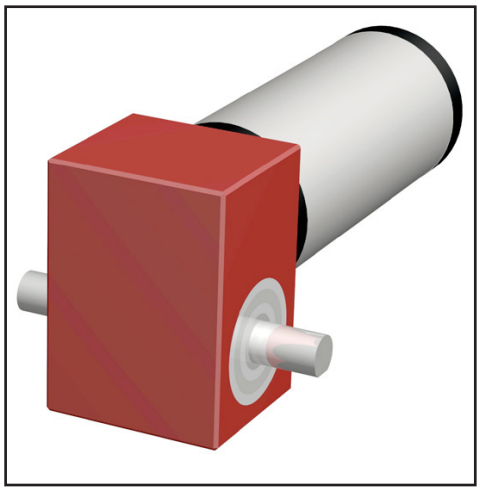
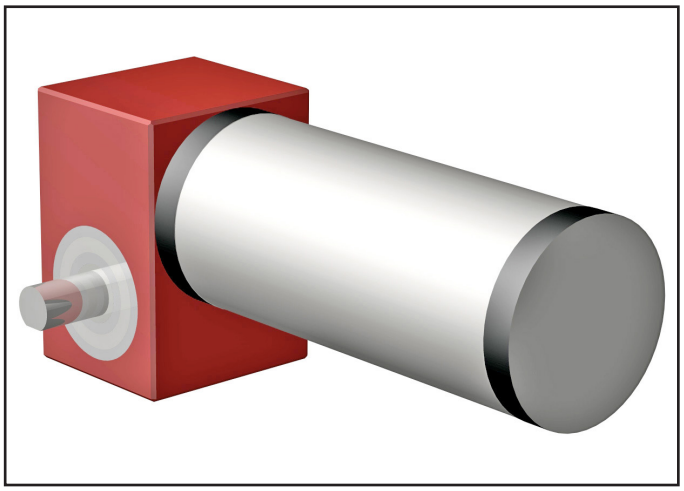
GEARBOXES

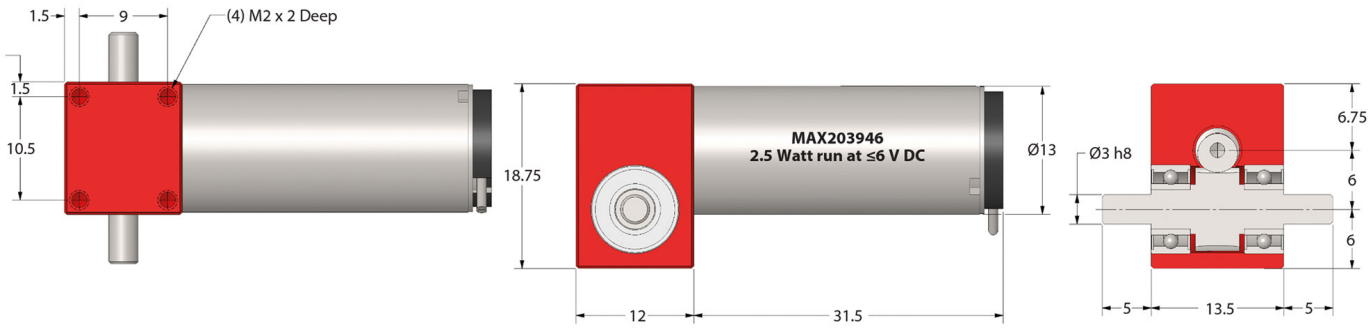
Miniature Precision Worm Gear Reducers

Fitted with Miniature DC Motor 0.036 Nm

PREM6







Part Number	Ratio	Rated Output Torque Nm	Fitted Motor
PREM6-32-13	32:1	0.036	MAX203946

Part Number	Voltage (V)	No Load Speed (Rpm)	No Load Current (mA)	Nominal Current (mA)	Max. Efficiency Nominal Torque (mNm)	Moment of Inertia (gcm^2)	
MAX203946	12	11,100	7	272	84%	2.6	0.507

Gearbox Case: Aluminum 6082 T6.
Gears: Steel 817M40 T condition.

Motor

2 Pole Permanent Magnet Motor.
Weight: 24 g.
Ambient Temperature Range: -20°C to +65°C (Max. Motor Temperature +85°C).

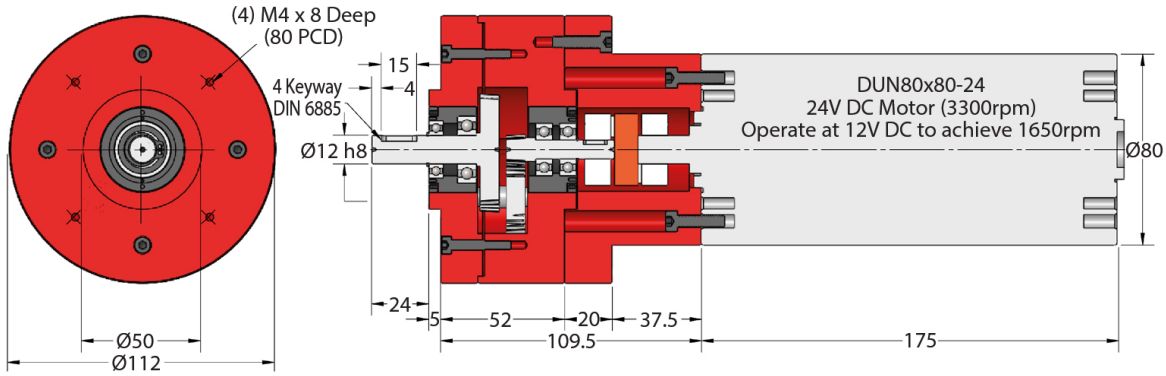
TG112-ADC

GEARBOXES

Motorised Taper Gear Reducer

With DC Motor Fitted, 1.14 – 5 Nm **2:1 - 16:1**

TG112-ADC



Part Number	Ratio	Output Torque at 1650 Rpm Input Nm	L	Direction	DC Motor
TG112-2ADC	2:1	1.14	175	Same	DUN80x80-24
TG112-4ADC	4:1	2.28	175	Same	DUN80x80-24
TG112-5ADC	5:1	2.85	175	Same	DUN80x80-24
TG112-6ADC	6:1	3.42	175	Same	DUN80x80-24
TG112-8ADC	8:1	4.56	175	Same	DUN80x80-24
TG112-10ADC	10:1	5.00	175	Same	DUN80x80-24
TG112-12ADC	12:1	5.00	175	Same	DUN80x80-24
TG112-16ADC	16:1	4.50	175	Same	DUN80x80-24

Weight: 3.5 kg.

Assembly includes:-
1 x Gearhead
1 x DC Motor
1 x Shaft Coupling
1 x Set of fixing screws for motor to plate
1 x Set of fixing screws for plate to gearbox
1 x Adaptor plate

Check motor data and gearbox chart for max. torque figures.
Testing in your applications is necessary.
You will need to assess duty cycles and confirm gearbox suitability with your own calculations. All figures listed are to be used for guidance only.

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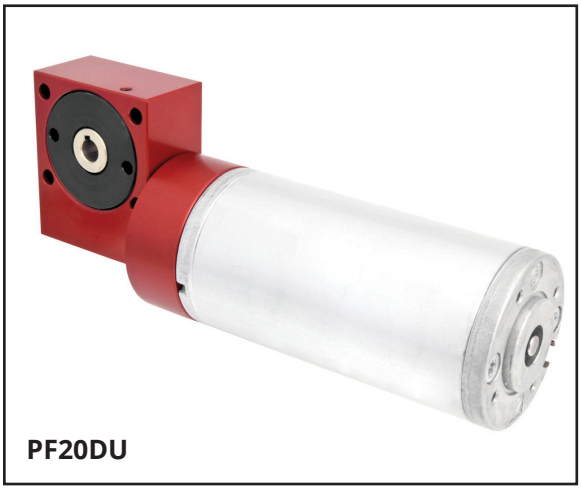
GEARBOXES

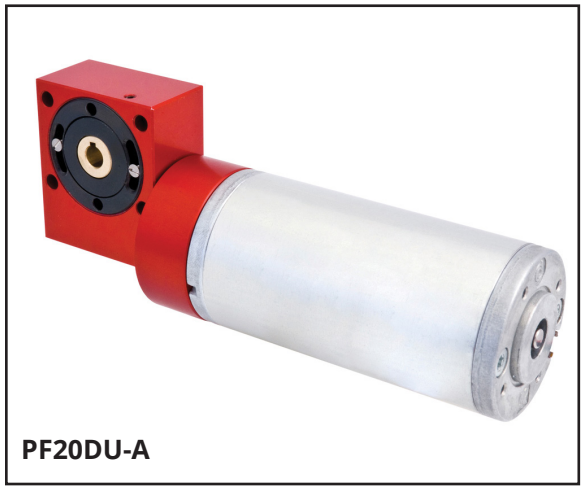
Precision Worm Gear Reducers

Fitted with 24V DC Motor : **0.5 - 2.1 Nm**

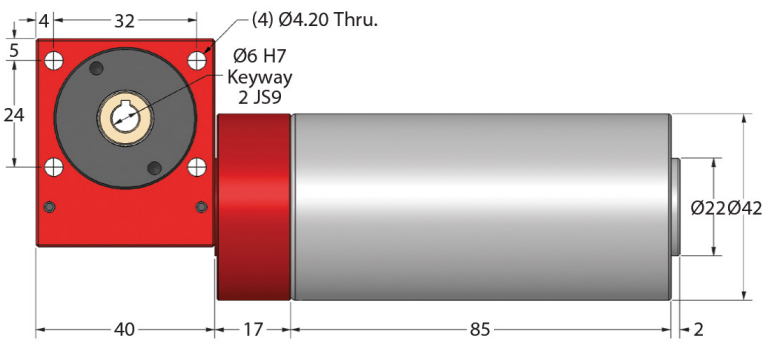
PF20DU

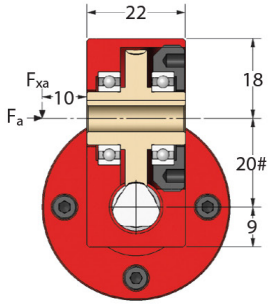


PF20DU



PF20DU-A





PF20DUA version (low backlash) output is on eccentric so centres will vary.

Part Number		Ratio	Rpm at 12V DC	Nominal Output Rpm	Efficiency at 1000 Rpm	Nm Output at 1550 Rpm Input	DC Motor
Standard ≤30′	Low Backlash ≤8′						
PF20DU-10	**PF20DU-10A**	10:1	1,550	155.0	86%	0.50	DUN42x40-24
PF20DU-12	**PF20DU-12A**	12:1	1,550	129.0	85%	0.70	DUN42x40-24
PF20DU-15	**PF20DU-15A**	15:1	1,550	103.0	84%	0.80	DUN42x40-24
PF20DU-20	**PF20DU-20A**	20:1	1,550	77.5	78%	1.10	DUN42x40-24
PF20DU-30	**PF20DU-30A**	30:1	1,550	51.0	71%	1.70	DUN42x40-24
PF20DU-60	**PF20DU-60A**	60:1	1,550	25.0	60%	2.10	DUN42x40-24
PF20DU-120	**PF20DU-120A**	120:1	1,550	13.0	32%	1.25	DUN42x40-24
PF20DU-SP	**PF20DU-SPA**	5:1 - 120:1	1,550	Special Ratios: Replace **SP** with required ratio			DUN42x40-24

Motor Part Number	Voltage (V)	No Load Speed (Rpm)	No Load Current (A)	Nominal Current (A)	Max. Efficiency	Nominal Torque (Ncm)	Nominal Speed (Rpm)	Moment of Inertia (gcm^2)
DUN42x40-24	24	3,800	0.175	1.22	63%	5.7	3,100	110

Other input speeds available. For details of PF20 gear reducer or to purchase separately, please contact us.

24V DC Motor

Commutation: Graphite. Number of Sectors: 12. Brushes: Rotary. Magnets: Ferrite.
Axial Backlash: <0.15 mm. Radial Backlash: <0.15 mm.
Max. Axial Load: 30 N Max. Radial Load at 20mm: 60 N
Max. Shaft Push Pressure: 200 N. Operating Temperature Range: -20°C to +85°C.
Max. Housing Temperature: +85°C. Mass: 0.49 kg. Starting Voltage: 1 V.

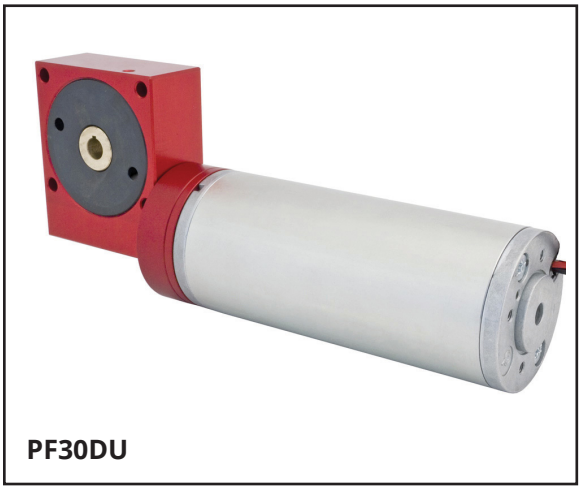
Motor performance data is based upon an operating temperature of +25°C. Testing in your application is necessary. You will need to assess duty cycles and confirm reducer suitability with your own calculations. All figures listed are to be used for guidance only. Tapped holes on input flange are not relative in position to the reducer body and will alter from box to box. This also applies to the motor leads. However, we can machine the tapped holes after assembly so they are relative in position to the reducer body. This will affect delivery.

GEARBOXES

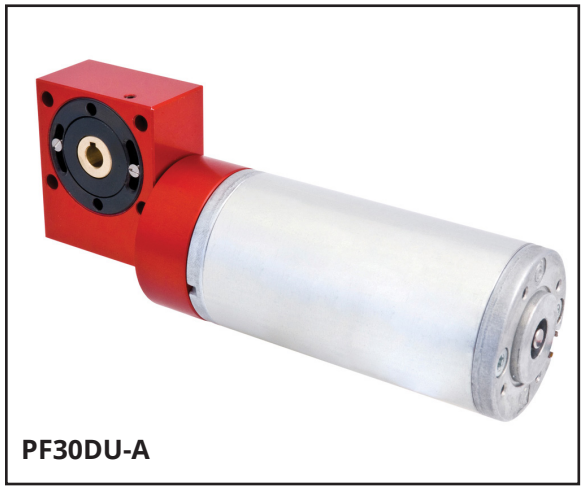
Precision Worm Gear Reducers

Fitted with 24V DC Motor : **1.7 - 4.5 Nm**

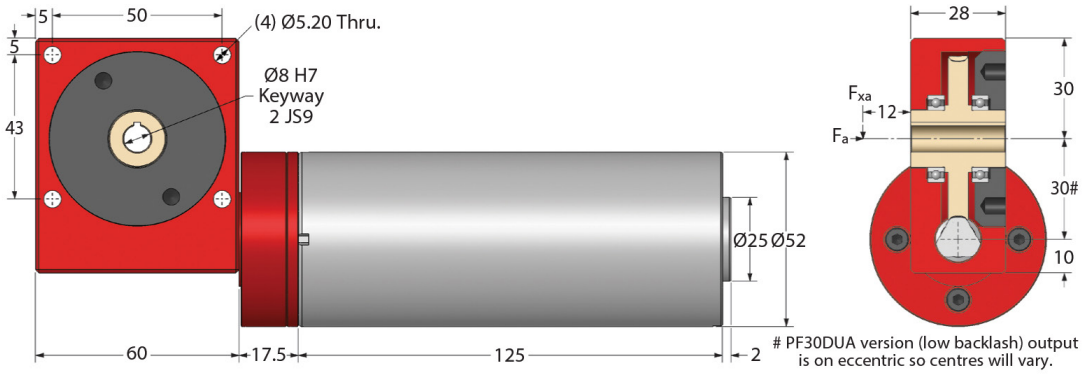
PF30DU



PF30DU



PF30DU-A



PF30DUA version (low backlash) output is on eccentric so centres will vary.

Part Number		Ratio	Rpm at 12V DC	Nominal Output Rpm	Efficiency at 1000 Rpm	Nm Output at 1550 Rpm Input	DC Motor
Standard ≤30′	Low Backlash ≤8′						
PF30DU-10	**PF30DU-10A**	10:1	1,500	150	90%	1.7	DUN53x58-24
PF30DU-12	**PF30DU-12A**	12:1	1,500	125	88%	2.0	DUN53x58-24
PF30DU-15	**PF30DU-15A**	15:1	1,500	100	86%	2.5	DUN53x58-24
PF30DU-20	**PF30DU-20A**	20:1	1,500	75	84%	3.4	DUN53x58-24
PF30DU-30	**PF30DU-30A**	30:1	1,500	50	78%	4.0	DUN53x58-24
PF30DU-60	**PF30DU-60A**	60:1	1,500	25	70%	4.5	DUN53x58-24
PF30DU-120	**PF30DU-120A**	120:1	1,500	12	40%	4.0	DUN53x58-24
PF30DU-SP	**PF30DU-SPA**	5:1 - 120:1	1,500	Special Ratios: Replace **SP** with required ratio			DUN53x58-24

Motor Part Number	Voltage (V)	No Load Speed (Rpm)	No Load Current (A)	Nominal Current (A)	Max. Efficiency	Nominal Torque (Ncm)	Nominal Speed (Rpm)	Moment of Inertia (gcm^2)
DUN53x58-24	24	3,250	0.200	2.9	76%	17	3,000	460

Other input speeds available. For details of PF30 gear reducer or to purchase separately, please contact us.

24V DC Motor

Commutation: Graphite. Number of Sectors: 12. Brushes: Rotary. Magnets: Ferrite.
Axial Backlash: <0.15 mm. Radial Backlash: <0.15 mm.
Max. Axial Load: 130 N. Max. Radial Load at 20mm: 90 N.
Max. Shaft Push Pressure: 200 N. Operating Temperature Range: -20°C to +85°C.
Max. Housing Temperature: +85°C. Mass: 1.16 kg. Starting Voltage: 1 V.

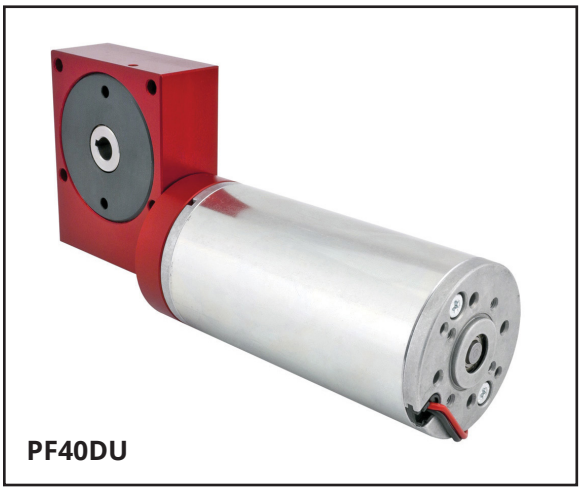
Motor performance data is based upon an operating temperature of +25°C. Testing in your application is necessary. You will need to assess duty cycles and confirm reducer suitability with your own calculations. All figures listed are to be used for guidance only. Tapped holes on input flange are not relative in position to the reducer body and will alter from box to box. This also applies to the motor leads. However, we can machine the tapped holes after assembly so they are relative in position to the reducer body. This will affect delivery.

GEARBOXES

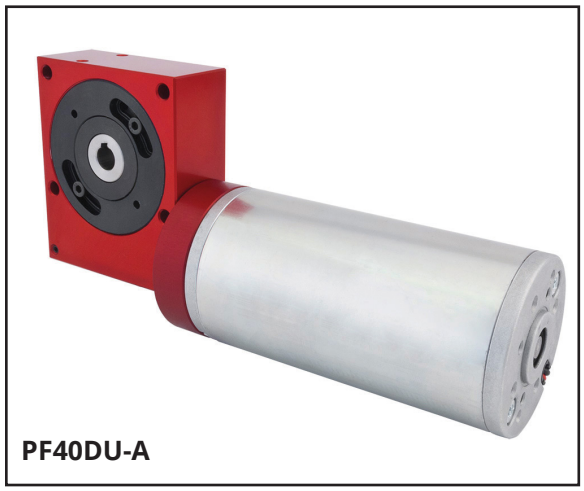
Precision Worm Gear Reducers

Fitted with 24V DC Motor : **2.7 - 8.5 Nm**

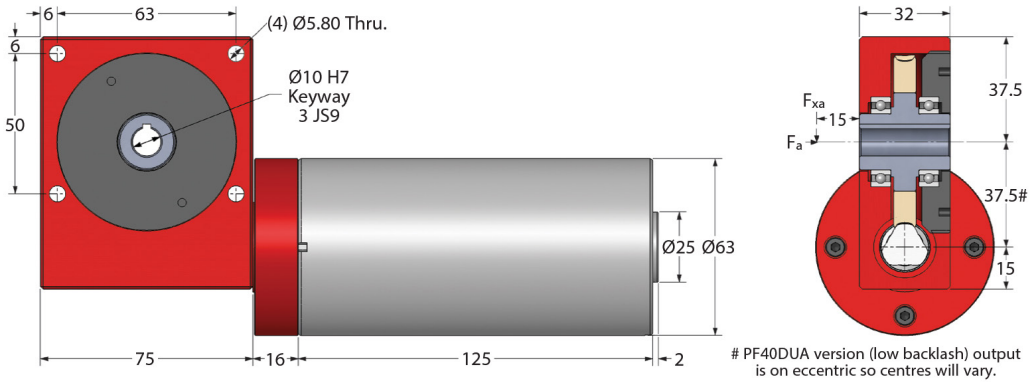
PF40DU



PF40DU



PF40DU-A



PF40DUA version (low backlash) output is on eccentric so centres will vary.

Part Number		Ratio	Rpm at 12V DC	Nominal Output Rpm	Efficiency at 1000 Rpm	Nm Output at 1550 Rpm Input	DC Motor
Standard ≤30′	Low Backlash ≤8′						
PF40DU-10	**PF40DU-10A**	10:1	1,675	167	89%	2.7	DUN63x55-24
PF40DU-12	**PF40DU-12A**	12:1	1,675	140	87%	3.2	DUN63x55-24
PF40DU-15	**PF40DU-15A**	15:1	1,675	112	85%	4.0	DUN63x55-24
PF40DU-20	**PF40DU-20A**	20:1	1,675	83	83%	5.4	DUN63x55-24
PF40DU-30	**PF40DU-30A**	30:1	1,675	55	76%	8.0	DUN63x55-24
PF40DU-60	**PF40DU-60A**	60:1	1,675	28	65%	8.5	DUN63x55-24
PF40DU-120	**PF40DU-120A**	120:1	1,675	14	41%	7.5	DUN63x55-24
PF40DU-SP	**PF40DU-SPA**	5:1 - 120:1	1,675	Special Ratios: Replace **SP** with required ratio			DUN63x55-24

Motor Part Number	Voltage (V)	No Load Speed (Rpm)	No Load Current (A)	Nominal Current (A)	Max. Efficiency	Nominal Torque (Ncm)	Nominal Speed (Rpm)	Moment of Inertia (gcm^2)
DUN63x55-24	24	3,650	0.400	4.90	80%	27	3,350	750

Other input speeds available. For details of PF40 gear reducer or to purchase separately, please contact us.

24V DC Motor

Commutation: Graphite. Number of Sectors: 12. Brushes: Rotary. Magnets: Ferrite.
Axial Backlash: <0.15 mm. Radial Backlash: <0.15 mm.
Max. Axial Load: 150 N. Max. Radial Load at 20mm: 150 N.
Max. Shaft Push Pressure: 200 N. Operating Temperature Range: -20°C to +85°C.
Max. Housing Temperature: +85°C. Mass: 1.7 kg. Starting Voltage: 1 V.

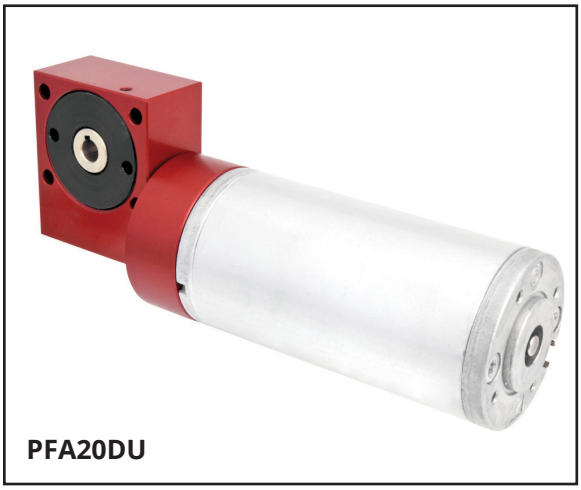
Motor performance data is based upon an operating temperature of +25°C. Testing in your application is necessary. You will need to assess duty cycles and confirm reducer suitability with your own calculations. All figures listed are to be used for guidance only. Tapped holes on input flange are not relative in position to the reducer body and will alter from box to box. This also applies to the motor leads. However, we can machine the tapped holes after assembly so they are relative in position to the reducer body. This will affect delivery.

GEARBOXES

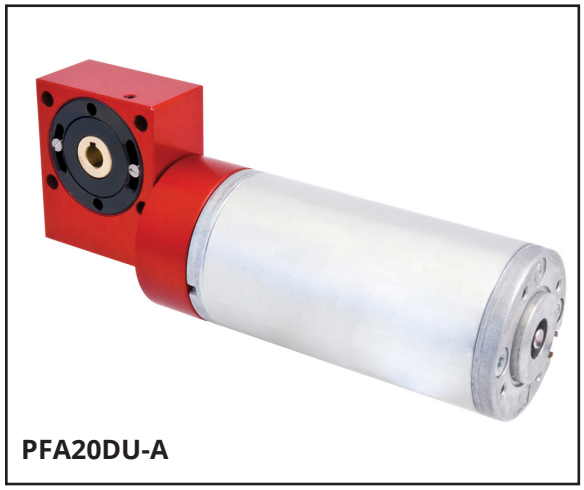
Precision Worm Gear Reducers

Fitted with 24V DC Motor : **4.43 - 18.59 lbf.in**

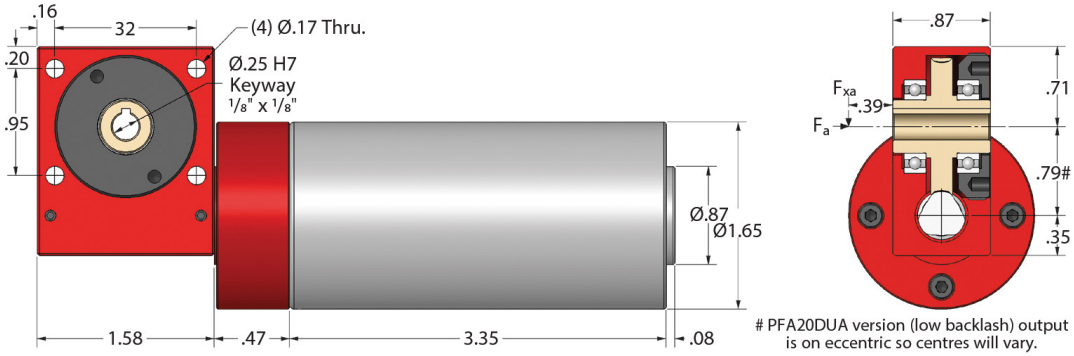
PFA20DU



PFA20DU



PFA20DU-A



PFA20DUA version (low backlash) output is on eccentric so centres will vary.

Part Number		Ratio	Rpm at 12V DC	Nominal Output Rpm	Efficiency at 1000 Rpm	lbf.in Output at 1550 Rpm Input	DC Motor
Standard ≤30′	Low Backlash ≤8′						
PFA20DU-10	**PFA20DU-10A**	10:1	1,550	155.0	86%	4.43	DUN42x40-24
PFA20DU-12	**PFA20DU-12A**	12:1	1,550	129.0	85%	6.20	DUN42x40-24
PFA20DU-15	**PFA20DU-15A**	15:1	1,550	103.0	84%	7.08	DUN42x40-24
PFA20DU-20	**PFA20DU-20A**	20:1	1,550	77.5	78%	9.74	DUN42x40-24
PFA20DU-30	**PFA20DU-30A**	30:1	1,550	51.0	71%	15.05	DUN42x40-24
PFA20DU-60	**PFA20DU-60A**	60:1	1,550	25.0	60%	18.59	DUN42x40-24
PFA20DU-120	**PFA20DU-120A**	120:1	1,550	13.0	32%	11.06	DUN42x40-24
PFA20DU-SP	**PFA20DU-SPA**	5:1 - 120:1	1,550	Special Ratios: Replace **SP** with required ratio			DUN42x40-24

Motor Part Number	Voltage (V)	No Load Speed (Rpm)	No Load Current (A)	Nominal Current (A)	Max. Efficiency	Nominal Torque (lbf.in)	Nominal Speed (Rpm)	Moment of Inertia (lb.in^2)
DUN42x40-24	24	3,800	0.175	1.22	63%	0.5	3,100	0.038

Other input speeds available. For details of PFA20 gear reducer or to purchase separately, please contact us.

24V DC Motor

Commutation: Graphite. Number of Sectors: 12. Brushes: Rotary. Magnets: Ferrite. Axial Backlash: <0.0059". Radial Backlash: <0.0059".
Max. Axial Load: 6.69 lbf. Max. Radial Load at .87" : 13.39 lbf.
Max. Shaft Push Pressure: 44.62 lbf. Operating Temperature Range: -4°F to +185°F.
Max. Housing Temperature: +185°F. Mass: 1.08 lb. Starting Voltage: 1 V.

Motor performance data is based upon an operating temperature of +77°F. Testing in your application is necessary. You will need to assess duty cycles and confirm reducer suitability with your own calculations. All figures listed are to be used for guidance only. Tapped holes on input flange are not relative in position to the reducer body and will alter from box to box. This also applies to the motor leads. However, we can machine the tapped holes after assembly so they are relative in position to the reducer body. This will affect delivery.

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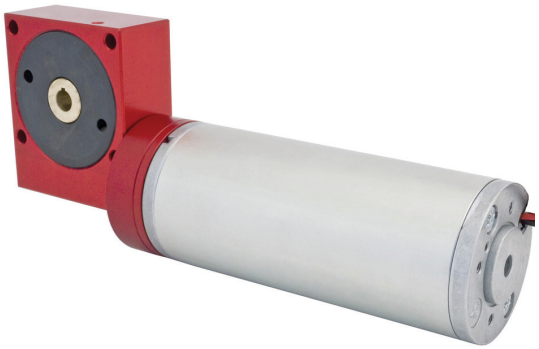
GEARBOXES

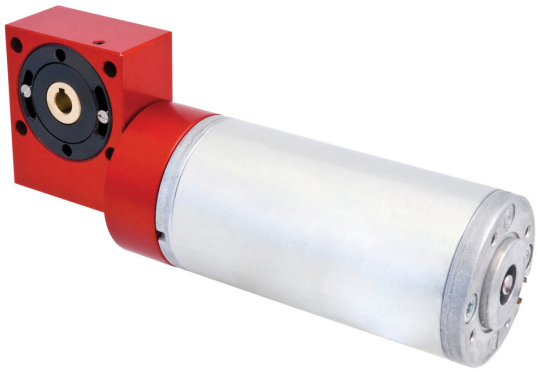
Precision Worm Gear Reducers

Fitted with 24V DC Motor : **15.05 - 39.83 lbf.in**

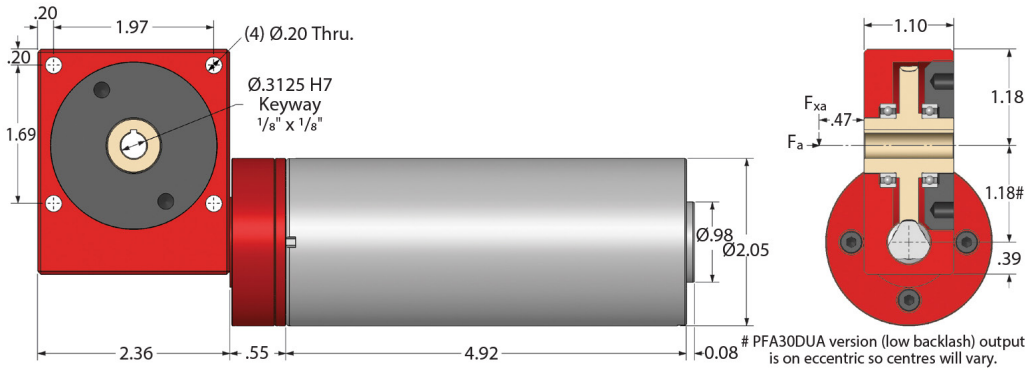
PFA30DU



PFA30DU



PFA30DU-A



Part Number		Ratio	Rpm at 12V DC	Nominal Output Rpm	Efficiency at 1000 Rpm	lbf.in Output at 1550 Rpm Input	DC Motor
Standard ≤30′	Low Backlash ≤8′						
PFA30DU-10	**PFA30DU-10A**	10:1	1,500	150	90%	15.05	DUN53x58-24
PFA30DU-12	**PFA30DU-12A**	12:1	1,500	125	88%	17.70	DUN53x58-24
PFA30DU-15	**PFA30DU-15A**	15:1	1,500	100	86%	22.13	DUN53x58-24
PFA30DU-20	**PFA30DU-20A**	20:1	1,500	75	84%	30.09	DUN53x58-24
PFA30DU-30	**PFA30DU-30A**	30:1	1,500	50	78%	35.40	DUN53x58-24
PFA30DU-60	**PFA30DU-60A**	60:1	1,500	25	70%	39.83	DUN53x58-24
PFA30DU-120	**PFA30DU-120A**	120:1	1,500	12	40%	35.40	DUN53x58-24
PFA30DU-SP	**PFA30DU-SPA**	5:1 - 120:1	1,500	Special Ratios: Replace **SP** with required ratio			DUN53x58-24

Motor Part Number	Voltage (V)	No Load Speed (Rpm)	No Load Current (A)	Nominal Current (A)	Max. Efficiency	Nominal Torque (lbf.in)	Nominal Speed (Rpm)	Moment of Inertia (lb.in^2)
DUN53x58-24	24	3,250	0.200	2.9	76%	1.5	3,000	0.157

Other input speeds available. For details of PFA30 gear reducer or to purchase separately, please contact us.

24V DC Motor

Commutation: Graphite. Number of Sectors: 12. Brushes: Rotary. Magnets: Ferrite.
Axial Backlash: <0.0059". Radial Backlash: <0.0059".
Max. Axial Load: 29 lbf. Max. Radial Load at .87" : 20 lbf.
Max. Shaft Push Pressure: 44.62 lbf. Operating Temperature Range: -4°F to +185°F.
Max. Housing Temperature: +185°F. Mass: 2.56 lb. Starting Voltage: 1 V.

Motor performance data is based upon an operating temperature of +77°F. Testing in your application is necessary. You will need to assess duty cycles and confirm reducer suitability with your own calculations. All figures listed are to be used for guidance only. Tapped holes on input flange are not relative in position to the reducer body and will alter from box to box. This also applies to the motor leads. However, we can machine the tapped holes after assembly so they are relative in position to the reducer body. This will affect delivery.

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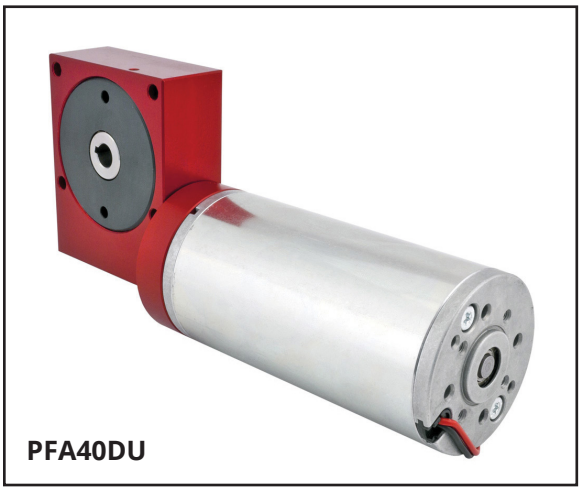
GEARBOXES

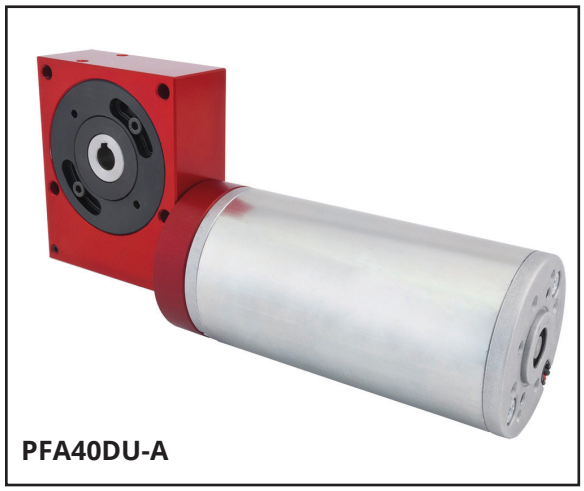
Precision Worm Gear Reducers

Fitted with 24V DC Motor : **23.90 - 75.23 lbf.in**

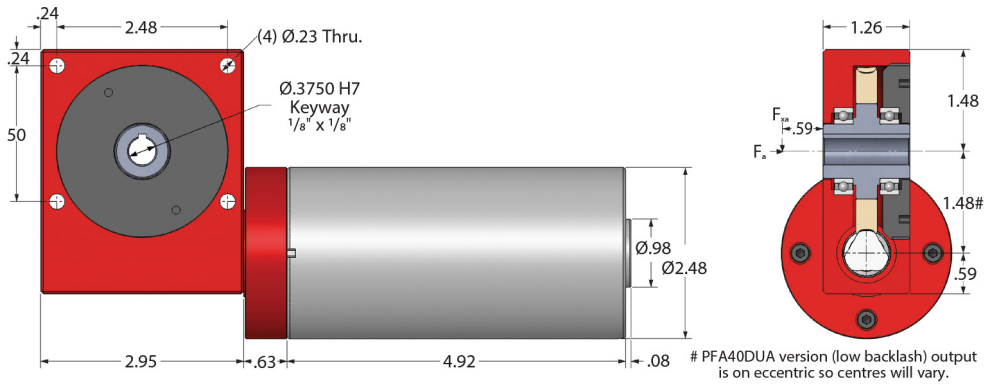
PFA40DU



PFA40DU



PFA40DU-A



PFA40DUA version (low backlash) output is on eccentric so centres will vary.

Part Number		Ratio	Rpm at 12V DC	Nominal Output Rpm	Efficiency at 1000 Rpm	lbf.in Output at 1550 Rpm Input	DC Motor
Standard ≤30′	Low Backlash ≤8′						
PFA40DU-10	**PFA40DU-10A**	10:1	1,675	167	89%	23.90	DUN63x55-24
PFA40DU-12	**PFA40DU-12A**	12:1	1,675	140	87%	28.32	DUN63x55-24
PFA40DU-15	**PFA40DU-15A**	15:1	1,675	112	85%	35.40	DUN63x55-24
PFA40DU-20	**PFA40DU-20A**	20:1	1,675	83	83%	47.79	DUN63x55-24
PFA40DU-30	**PFA40DU-30A**	30:1	1,675	55	76%	70.81	DUN63x55-24
PFA40DU-60	**PFA40DU-60A**	60:1	1,675	28	65%	75.23	DUN63x55-24
PFA40DU-120	**PFA40DU-120A**	120:1	1,675	14	41%	66.38	DUN63x55-24
PFA40DU-SP	**PFA40DU-SPA**	5:1 - 120:1	1,675	Special Ratios: Replace **SP** with required ratio			DUN63x55-24

Motor Part Number	Voltage (V)	No Load Speed (Rpm)	No Load Current (A)	Nominal Current (A)	Max. Efficiency	Nominal Torque (lbf.in)	Nominal Speed (Rpm)	Moment of Inertia (lb.in^2)
DUN63x55-24	24	3,650	0.400	4.90	80%	2.39	3,350	0.256

Other input speeds available. For details of PFA40 gear reducer or to purchase separately, please contact us.

24V DC Motor

Commutation: Graphite. Number of Sectors: 12. Brushes: Rotary. Magnets: Ferrite. Axial Backlash: <0.0059″. Radial Backlash: <0.0059″.
Max. Axial Load: 33.47 lbf. Max. Radial Load at .87″: 33.47 lbf.
Max. Shaft Push Pressure: 44.62 lbf. Operating Temperature Range: -4°F to +185°F.
Max. Housing Temperature: +185°F. Mass: 3.75 lb. Starting Voltage: 1 V.

Motor performance data is based upon an operating temperature of +77°F. Testing in your application is necessary. You will need to assess duty cycles and confirm reducer suitability with your own calculations. All figures listed are to be used for guidance only. Tapped holes on input flange are not relative in position to the reducer body and will alter from box to box. This also applies to the motor leads. However, we can machine the tapped holes after assembly so they are relative in position to the reducer body. This will affect delivery.