WORLDWIDE LEADER IN OIL SHEAR TECHNOLOGY

POSIDYNE

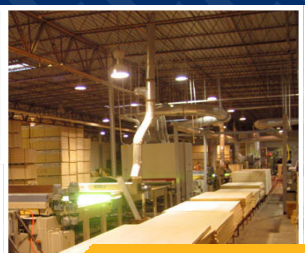
SIZE 1.5-30

CLUTCH BRAKES FEATURING OIL SHEAR TECHNOLOGY

50TH ANNIVERSARY

FORCE CONTROL®

1969 MADE IN USA 2019



HIGH CYCLE—SEVERE DUTY
YEARS OF MAINTENANCE FREE SERVICE

MADE IN THE USA
USED WORLDWIDE

FORCECONTROL.COM

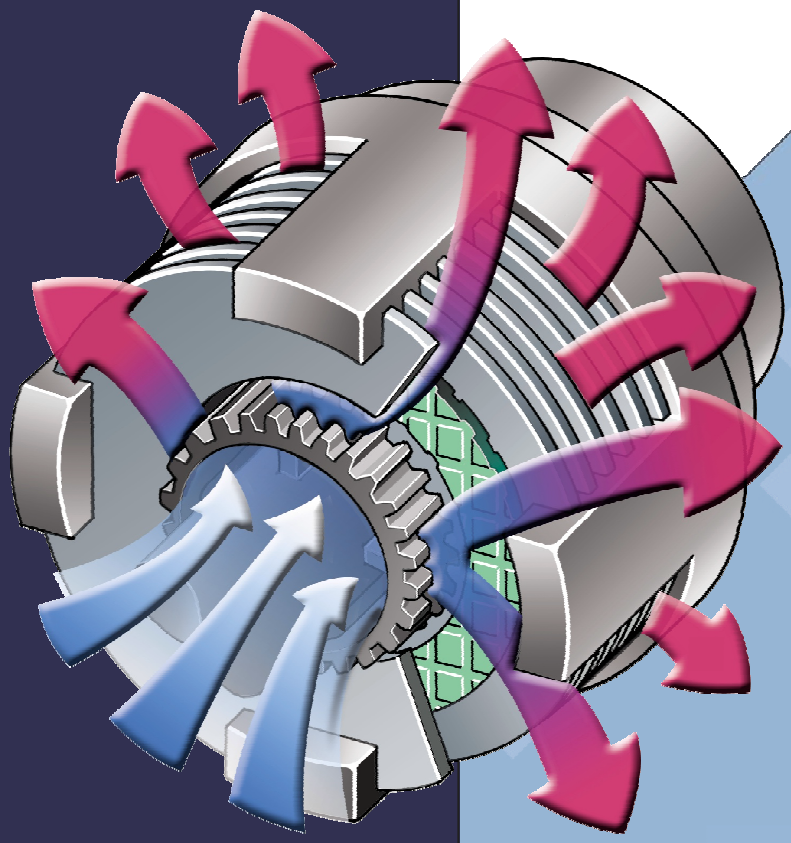
OIL SHEAR TECHNOLOGY

Oil Shear Technology Provides Force Control Clutches and Brakes With Increased Cycle Life, Higher Cycle Rates, and Lower Cost per Cycle.

The MagnaShear motor brakes with Oil Shear Technology are of the wet or hydroviscous type which transmit torque between the drive plates and friction surfaces. Specially formulated transmission fluid is used for cooling and provides a hydroviscous fluid film between the friction disc and the drive plate during the dynamic phase of engagement.

The transmission fluid in shear transmits torque between the two components increasing as the clamping pressure increases until mechanical lock up occurs. By cooling the friction surfaces and reducing the mechanical wear, a significant increase of thermal capacity and total cycle life is possible.

Many competitive clutches and brakes depend on friction between dry surfaces surrounded by air to transmit torque. During engagement of dry surfaces, high heat caused by slipping is difficult to dissipate quickly causing wear, glazing, and friction material degradation. This in turn causes positioning inaccuracy, limited service life, and possible safety issues.



THE ADVANTAGE OF POSIDYNE CLUTCH BRAKES WITH OIL SHEAR TECHNOLOGY

The Posidyne line of clutch brakes includes the basic Posidyne (size 1.5 C Face and sizes 02 through 30 foot mounted units). The value line X Class C Face Clutch Brakes are available in a separate brochure.

The Posidyne Clutch Brake featuring Oil Shear Technology is the oldest, most flexible Clutch Brake in the line. Beginning in 1969 thousands of Posidyne clutch brakes have been producing products around the world. Applications range from mining, lumber, and steel to food processing, packaging, and meat packing.

The Basic Posidyne line of clutch brakes can be air actuated or hydraulically actuated. They are available as Basic (foot mounted shaft in shaft out), C Face (smaller sizes), Long Coupled C face (C Face with coupling), and Piggy Back (motor mounted on top). The Basic Posidyne comes as a clutch brake or clutch only. Various logics, which is the combination of pressure set clutch and spring set brake, spring set brake with pressure assist, or just pressure set brake.

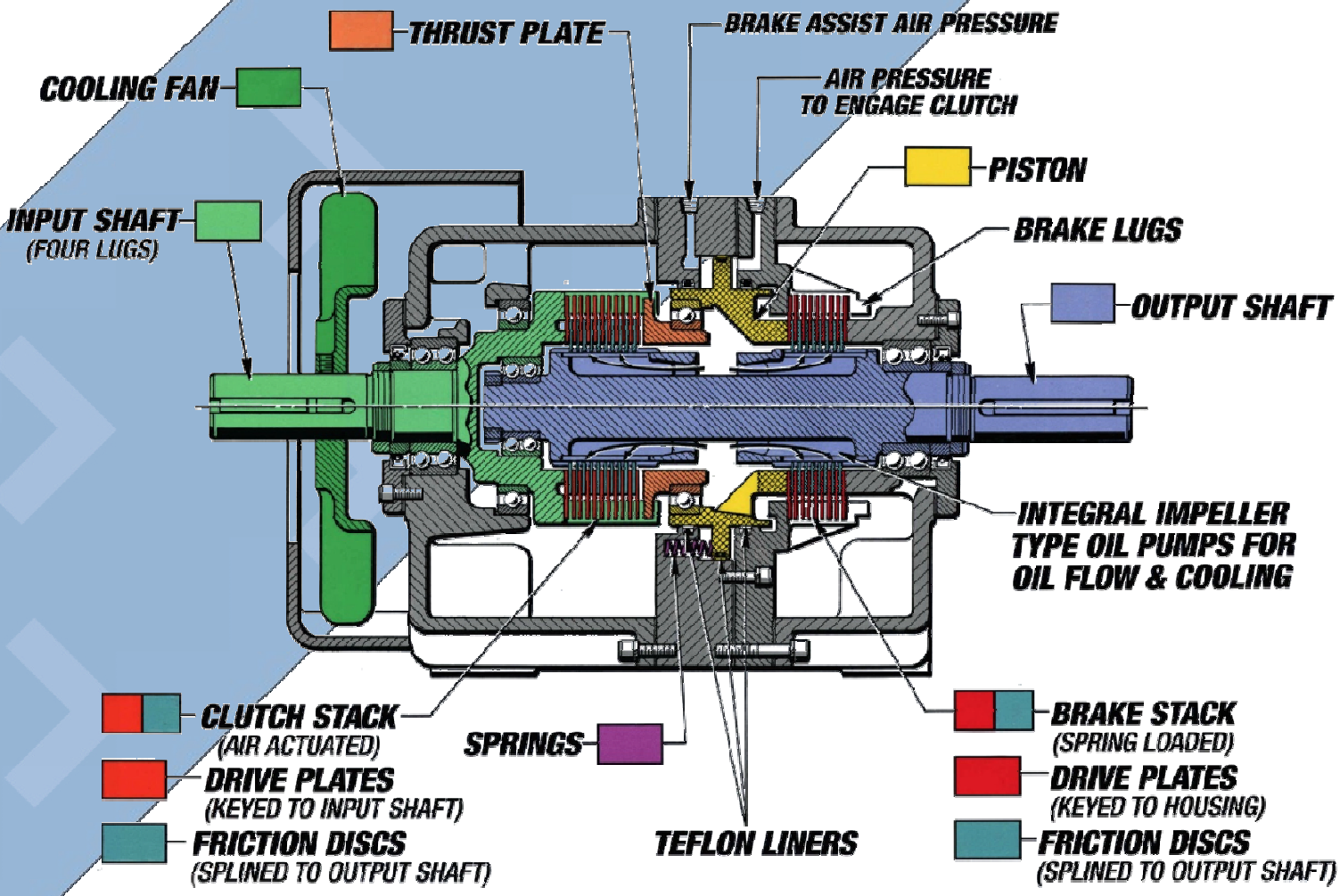
Options include manifold mounted valves, wash down duty (food processing), marine duty (marine and ports), optical encoder, horizontal, vertical or wall mounting, and many custom shaft styles (splined, metric). Cooling options include basic, fan cooled, water cooled, oil to air external cooling, and forced lube cooling.

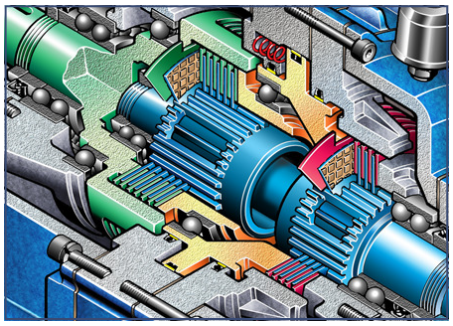
All Posidyne Clutch Brakes feature world renowned Oil Shear Technology to eliminate regular maintenance, reduce operating cost, and increase production.

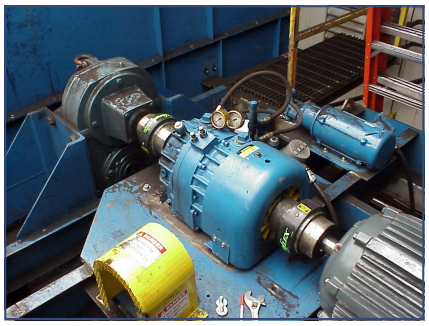
OIL SHEAR TECHNOLOGY

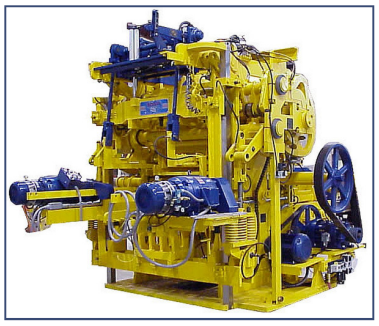
Specially formulated transmission fluid is used for cooling and provides a hydroviscous fluid film between the friction disc and the drive plate during the dynamic phase of engagement.

THE POSIDYNE CLUTCH BRAKE









POSIDYNE FOOT MOUNTED OIL SHEAR CLUTCH BRAKES

The Answer to Severe Heavy Duty Indexing

The Foot Mounted Posidyne Clutch Brake featuring Oil Shear Technology is the oldest and most flexible Clutch Brake in the line. Beginning in 1969 thousands of Posidyne clutch brakes have been producing products around the world. Applications rangie from mining, lumber, and steel to food processing, packaging, and meat packing.

The Posidyne Clutch Brake is available as C Face (smaller sizes), Long Coupled C face (C Face with coupling), Foot Mounted, and Piggy Back (mount the motor on top). The Posidyne comes as a Clutch brake or clutch only. Various logics which is the combination of spring set brake and pressure set brake.

Cooling options include basic, fan cooled, water cooled, oil to air external cooling, and forced lube cooling. Other options include manifold mounted valves, optical encoder, and many custom shaft styles (splined, metric, double keyway).

Other options include Washdown (food processing), Marine Duty (marine and ports), encoders, and vertical or horizontal mounting.

All Posidyne Clutch Brakes feature our world renowned Oil Shear Technology to eliminate regular maintenance, reduce cost, and increase production.

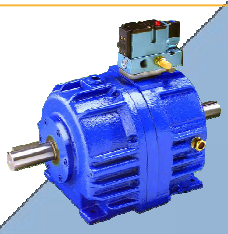
FEATURES

- **Air or Hydraulic Actuation**
- **High Cycle Capability 250+ CPM**
- **Cut-To-Length position accuracy**
- **Totally Enclosed Sealed Housing**
- **Low Maintenance - Reduced Downtime**
- **Severe or Hazardous Duty**
- **Compact Size - High Thermal Capacity**
- **Wash Down and Marine Duty Option**
- **Low Inertia Energy Savings**
- **Cooling - Basic, Fan, Water, Oil-To-Air, and Forced Lube**
- **Oil Shear Technology**

TYPICAL INDUSTRIES

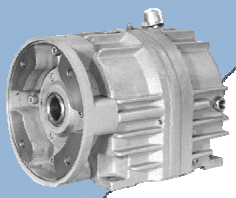
- **Lumber**
- **Steel**
- **Packaging**
- **Food Processing**
- **Fiberglass Insulation**
- **Roofing Shingles**
- **Concrete Blocks**
- **Coal Sampling**
- **Production Machines**
- **Automotive**
- **Marine—Ship & Port**
- **Rail Loading**

POSIDYNE OPTIONS AND ACCESSORIES



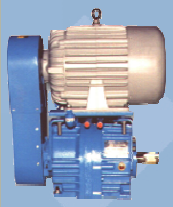
MANIFOLD MOUNTED VALVE

The manifold mounted valve improves response time, positioning accuracy and reduces installation time. Particularly useful for high cycle applications.



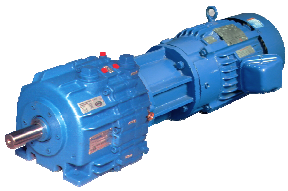
C-FACE MOUNTING

C Face mounting to the motor and gearbox provides a compact package and ease of installation. See the long coupled C Face for higher cycle applications.



PIGGYBACK

Mounting the drive motor on top of the clutch brake reduces overall length for cramped locations. The package includes adjustable motor base, pulleys, guard, and motor (if desired). Piggyback is available for sizes 02 through 20.

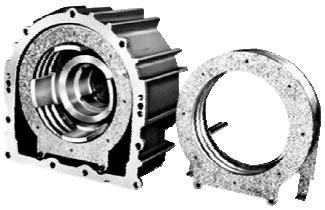


LONG COUPLED C FACE

The long Coupled system uses a coupling, eliminating quill and keyway damage in high cycle, high load applications.

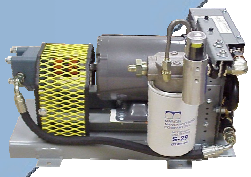
FAN COOLED

The fan option adds additional cooling for high inertia or high cycle applications. The fan blows air across the housing increasing the thermal heat dissipation capability 3 to 5 times.



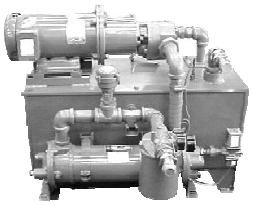
WATER COOLING

Available for those extremely high cycle, or high inertia load applications. Water flows through a copper tube assembly encircling the friction stack cooling the transmission fluid.



OIL-TO-AIR EXTERNAL COOLING

Transmission fluid is circulated through an external oil-to-air heat exchanger (oil-to-water is available), through a filter and back into the unit. This system provides the ultimate life for the clutch brake in addition to handling extremely high thermal loads.

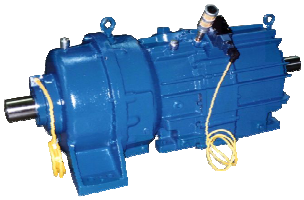


FORCED LUBE COOLING

Hot transmission fluid from the friction stack is circulated through the reservoir, heat exchanger, filter, and back through the output shaft providing cooling for continuous slip applications.

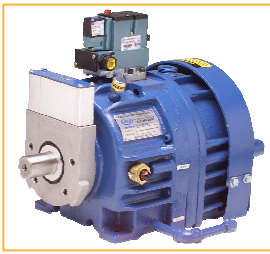
WASHDOWN/MARINE DUTY

Modifications include Steel It epoxy coatings on the housing, stainless steel fittings, nickel plated shafts, and non corrosive breathers and sight gauge.



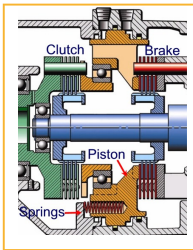
INTEGRAL GEARBOXES

When off the shelf gearboxes will not provide the load capability or reliability required for a high cycle, high load application, Force Control will design and build an integral gearbox as part of the clutch brake.



OPTICAL ENCODER

An Optical Encoder can be furnished for use with the CLPC “Closed Loop Positioning Control”. This is used for high cycle cut-to-length applications where cut length accuracy is critical.

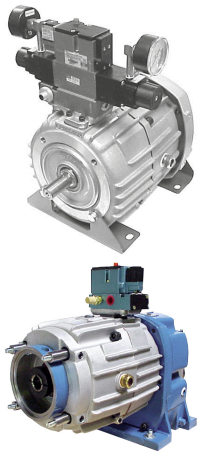


LOGIC TYPES

Various logics are available; ”C” clutch only, “B” brake only, “P” air set clutch air set brake, “S” air set clutch light spring set brake with air assist, “SA” air set clutch heavy spring set brake with air assist, “SCP” self centered piston (neither clutch or brake are engaged), .

POSIDYNE 1.5 SPECIFICATIONS

Size	Logic	Max Clutch Torque (Lb. In.)			Max. Brake Torque (Lb. In.)					Max. RPM	Max. KE per Engmt. (Ft. Lbs.)	Average Thermal HP		Air Vol. per Engmt. (in3)	Oil Cap (Qts)		Inertia of Cyclic Parts (Lb.Ft.2)
					Springs Only		With Max. Air Assist					Cooling					
		Static	Dyn.	Max. Air Press (psi)	Static	Dyn.	Static	Dyn.	Max. Air Press (psi)			Basic	Fan		Horz.	Vert.	
1.5	S	427	367	60	32	27	484	416	60	3600	11,230	Horiz. .25	.55	.50	2.0	2.5	.012
	SA	387	333	70	110	95	492	423	70								
	A	387	333	70	110	95	—	—	—								
	B	240	206	70	220	189	—	—	—			Vert.					
	C	427	367	60	—	—	—	—	—								
	P	464	399	70	—	—	464	399	70			—	—				



NOTES:

Thermal Horsepower ratings based on 1800 RPM, 80° F ambient, 220° F max. oil temperature.

Air pressures are at maximum. Actual operating pressures will typically run much lower.

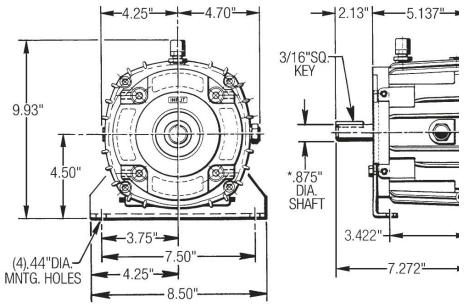
POSIDYNE 1.5 OVERHUNG LOAD CAPACITY (LBS. PULL) *at midpoint of shaft ext.*

Size	Input Shaft				Output Shaft							
					900 RPM		1200 RPM		1800 RPM		3600 RPM	
	300 RPM	1200 RPM	1800 RPM	3600 RPM	Without Encoder	With Encoder	Without Encoder	With Encoder	Without Encoder	With Encoder	Without Encoder	With Encoder
1.5	275	175	150	120	360	245	360	245	335	235	265	186

POSIDYNE 1.5 DIMENSIONS—INPUT MODULE

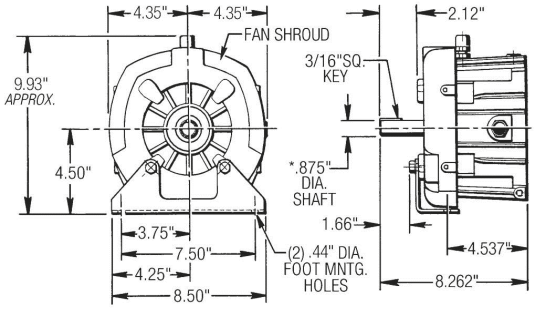
INPUT MODULE #1

7/8" Dia. male extended input shaft and foot mounting



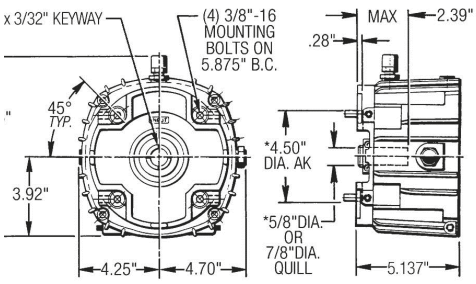
INPUT MODULE #1 with fan cooling

7/8" Dia. male extended input shaft and foot mounting



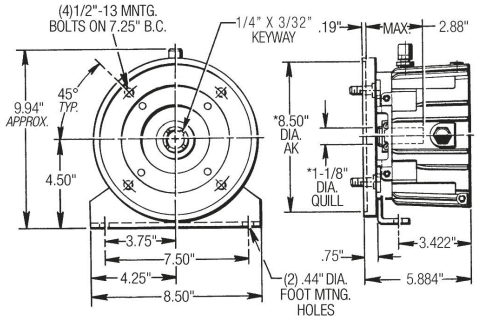
INPUT MODULE #2 & #3 (C Face)

5/8" or 7/8" Dia. FU, 4.50" AK, Split Clamped Quill (56/143TC or 145TC frame)



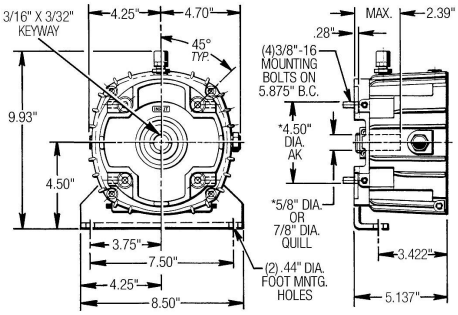
INPUT MODULE #4 (C Face)

1 1/8" Dia. FU, 8.50" AK, Split Clamped Quill (182TC/184TC frame)



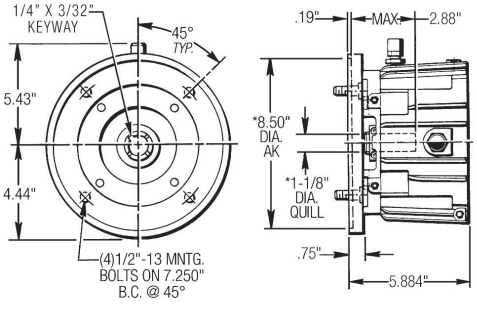
INPUT MODULE "A" & "B" (C Face)

5/8" or 7/8" Dia. FU, 4.50" AK, Split Clamped Quill & foot mounted (56/143TC or 145TC frame)



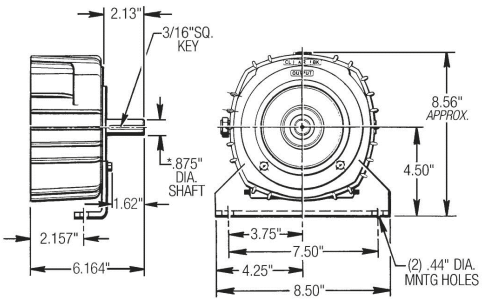
INPUT MODULE "C" (C Face)

1-1/8" Dia. FU, 8.50" AK, Split Clamped Quill & foot mounted (182TC/184TC frame)



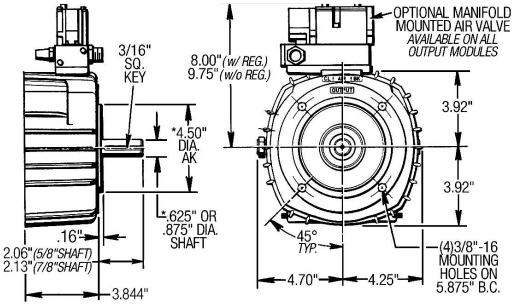
OUTPUT MODULE #1

7/8" Dia. Output shaft and foot mounting



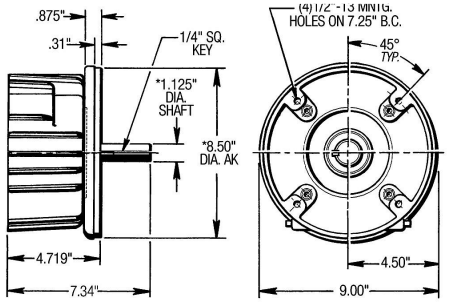
OUTPUT MODULE #2 & #3 (C Face)

5/8" or 7/8" Dia. FU, 4.50" AK, with Manifold Mounted Valve (56/143TC or 145TC frame)



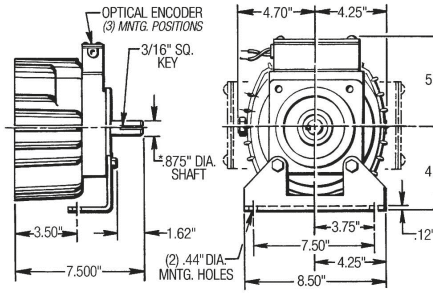
OUTPUT MODULE "4" (C Face)

1-1/8" Dia. FU, 8.50" AK, (182TC/184TC frame)



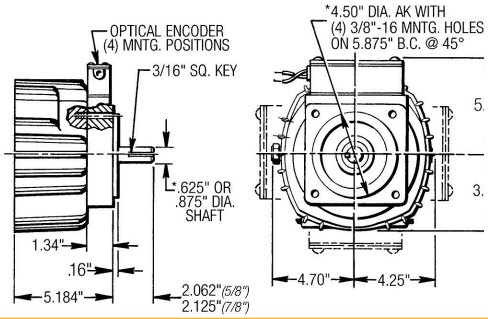
OUTPUT MODULE "D"

7/8" Dia. Output shaft, foot mtd. & Optical Encoder



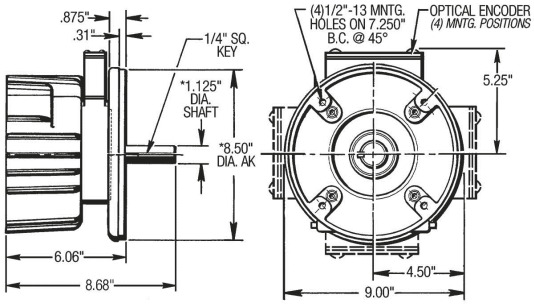
OUTPUT MODULE "A" & "C" (C Face)

5/8" or 7/8" Dia. FU, 4.50" AK, with Optical Encoder (56/143TC or 145TC frame)



OUTPUT MODULE "E" (C Face)

1-1/8" Dia. FU, 8.50" AK, & Optical Encoder (182TC/184TC frame)



POSIDYNE 1.5—HOW TO ORDER

1	2	3	4	5	6	7	8	9	10
1	5							Encoder	Control Valve

(1, 2) Size

1	5	=1.5

(3) Input Module

1	= 7/8" FU extended shaft (with mounting feet)		
2	= 4-1/2 FAK, 5/8" FU	56C	C-Face Quill
3	= 4-1/2 FAK, 7/8" FU	143TC 145TC	
4	= 8-1/2 FAK, 1-1/8 FU	182TC 184TC	
A	= 4-1/2 FAK, 5/8" FU, with clamped split quill input shaft and Foot Mounting. (56C frame)	56C	
B	= 4-1/2 FAK, 7/8" FU, with clamped split quill input shaft and Foot Mounting	143TC 145TC	
C	= 8-1/2 FAK, 1-1/8" FU, with clamped split quill input shaft and Foot Mounting	182TC 184TC	

(4) Control Logic

S	= **S** - Air set clutch / light spring set brake with Air assist
A	= **A** - Air set clutch / medium spring set brake
B	= **B** - Air set clutch / heavy spring set brake
C	= **C** - Air set clutch / no brake
D	= **SA** - Air set clutch / medium spring set brake with Air assist
P	= **P** - Air set clutch / Air set brake (without springs)

(5) Output Module

1	= 7/8" U extended shaft (with mounting feet)		
2	= 4-1/2 FAK, 5/8 FU	56C	C-Face Quill
3	= 4-1/2 FAK, 7/8 FU	143TC 145TC	
4	= 8-1/2 FAK, 1 1/8 FU	182TC 184TC	
A	= 4-1/2" AK, 5/8" U, with Optical Encoder*	56C	
E	= Optical Encoder 8-1/2" AK, 1-1/8" U *		
C	=4-1/2" AK, 7/8" U, with Optical Encoder *		
D	= Optical Encoder 7/8" U, Foot Mounting*		

**Machined to accept encoder*

(6) Mounting Position

H	= Horizontal
D	= Vertical, Input Down
U	= Vertical, Input Up
L	= Wall on Left (Viewing Input)
R	= Wall on Right (Viewing Input)
Z	= Horizontal, Marine Duty
W	= Vertical, Input Down, Marine Duty
P	= Vertical, Input Up, Marine Duty

(7) Cooling

1	= Basic (Radiant)
5	= Fan Cooled***
6	= Basic (Manifold Mtd. Valve)
7	= Fan Cooled (Manifold Mtd. Valve)

N=No Encoder.

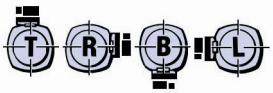
See "How to Order Encoder "for Ordering Number.

N=No Valve.

See "How to Order Valve "for Ordering Number.

(8) Valve Porting Location

T	= Top	B	= Bottom
R	= Right	L	= Left



Assembly Options

Location	Std.	C Face	Foot Mtd.
T	X	X	X
R	X	X	X
B	X	X	---
L	X	X	X

Viewing Input Shaft

POSIDYNE SPECIFICATIONS (MODEL 02-11)

Size	Logic	Max Clutch Torque (Lb. In.)			Max. Brake Torque (Lb. In.)					Max. RPM		Max. KE per Engmt. (Ft. Lbs.)	Average Thermal HP			Air Vol. per Engmt. (in3)	Oil Cap (Qts)	Inertia of Cyclic Parts (Lb.Ft.2)
					Springs Only		With Max. Air Assist											
		Static	Dyn.	Max. Air Press (psi)	Static	Dyn.	Static	Dyn.	Max. Air Press (psi)	Basic & Fan Cooled	Water Cooled		Basic	Fan	Water			
02	S	518	439	60 psi	48	41	553	468	60 psi	1800	3600	11,230				1	Horiz	
	SA	542	458	80 psi	164	139	501	424	40 psi				Horizontal				2	
	A	503	426	80 psi	126	107	----	----	----				0.8	2	4		-----	
	B	336	284	80 psi	252	214	----	----	----				Vertical				Vert.	
	C	335	284	60 psi	----	----	----	----	----				0.40	1.50	6		3	
	P	590	499	60 psi	----	----	505	428	60 psi									
2.5	S	1,331	1,126	60 psi	113	96	1,396	1,181	60 psi	1800	3600	15,865				5		0.20
	SA	1,482	1,227	80 psi	512	433	1,663	1,399	40 psi				Horizontal				Horiz	
	A	1,451	1,254	80 psi	476	403	----	----	----				0.70	2.00	4.00		2.5	
	B	968	819	80 psi	952	806	----	----	----									
	C	1,270	1,074	60 psi	----	----	----	----	----				Vertical				Vert	
	SCP	1,234	1,061	60 psi	----	----	1,051	904	60 psi				0.35	1.00	2.00		4	
	P	1,497	1,267	60 psi	----	----	1,283	1,086	60 psi									
03	S	2,574	2,178	60 psi	144	122	2,049	1,734	60 psi	1800	3600	21,494				8		0.20
	SA	2,790	2,361	80 psi	651	551	2,238	1,894	40 psi				Horizontal				Horiz	
	A	2,852	2,413	80 psi	602	509	----	----	----				0.75	2.80	8.00		3.5	
	B	1,895	1,603	80 psi	1,203	1,018	----	----	----									
	C	2,474	2,093	60 psi	----	----	----	----	----				Vertical				Vert	
	SCP	2,668	2,258	60 psi	----	----	1,833	1,551	60 psi				0.38	1.40	4.00		4.5	
	P	2,857	2,417	60 psi	----	----	1,905	1,612	60 psi									
05	S	4,325	3,659	60 psi	212	179	4,021	3,402	60 psi	1800	3600	42,988				8		0.30
	SA	4,889	4,137	80 psi	789	668	3,645	3,085	40 psi				Horizontal				Horiz	
	A	4,487	3,797	80 psi	1,136	962	----	----	----				1.00	4.50	12.00		8	
	B	2,626	2,222	80 psi	2,273	1,923	----	----	----									
	C	4,017	3,399	60 psi	----	----	----	----	----				Vertical				Vert	
	SCP	4,362	3,691	60 psi	----	----	3,518	2,977	60 psi				0.50	2.25	6.00		10	
	P	4,761	4,029	60 psi	----	----	3,809	3,223	60 psi									
10	S	9,832	8,320	60 psi	691	585	10,489	8,875	60 psi	1800	3600	68,035				12		0.69
	SA	9,471	8,014	80 psi	2,766	2,340	9,297	7,867	40 psi				Horizontal				Horiz	
	A	10,013	8,472	80 psi	2,797	2,366	----	----	----				1.00	6.00	15.00		10	
	B	5,097	4,313	80 psi	5,593	4,733	----	----	----									
	C	9,228	7,808	60 psi	----	----	----	----	----				Vertical				Vert	
	SCP	9,936	8,407	60 psi	----	----	8,612	7,287	60 psi				0.50	3.00	7.50		13	
	P	11,197	9,474	60 psi	----	----	9,797	8,290	60 psi									
11	S	18,045	15,269	80 psi	888	751	14,962	12,630	80 psi	** 1200	N/A	108,105				15		1.60
	SA	13,358	11,303	80 psi	2,961	2,505	9,980	8,445	40 psi				Horizontal				Horiz	
	A	14,036	11,877	80 psi	2,661	2,252	----	----	----				4.00				10	
	B	8,019	6,785	80 psi	5,322	4,504	----	----	----									
	C	18,045	15,269	80 psi	----	----	----	----	----				Vertical				Vert	
	SCP	17,833	15,090	80 psi	----	----	17,833	15,090	80 psi				2.00				13	
	P	20,054	16,969	80 psi	----	----	14,038	11,878	80 psi									

POSIDYNE SPECIFICATIONS (MODEL 14-30)

Size	Logic	Max Clutch Torque (Lb. In.)			Max. Brake Torque (Lb. In.)					Max. RPM		Max. KE per Engmt. (Ft. Lbs.)	Average Thermal HP			Air Vol. per Engmt. (in3)	Oil Cap (Qts)	Inertia of Cyclic Parts (Lb.Ft.2)
					Springs Only		With Max. Air Assist											
		Static	Dyn.	Max. Air Press	Static	Dyn.	Static	Dyn.	Max. Air Press	Basic & Fan Cooled	Water Cooled		Basic	Fan	Water			
14	S	22,989	19,453	80 psi	1,681	1,410	23,737	20,085	80 psi	** 1200	N/A	170,532				15		1.75
	SA	16,484	13,948	80 psi	5,237	4,431	16,264	13,762	40 psi				Horizontal				Horiz	
	A	17,576	14,782	80 psi	4,660	3,962	----	----	----				4.00				10	
	B	10,783	9,124	80 psi	8,352	7,067	----	----	----									
	C	23,453	19,844	80 psi	----	----	----	----	----				Vertical				Vert	
	SCP	23,183	19,617	80 psi	----	----	20,793	17,594	80 psi				2.00				13	
	P	26,066	22,056	80 psi	----	----	22,056	18,662	80 psi									
20	S	31,082	26,300	80 psi	2,018	1,707	32,274	27,308	80 psi	600 (Basic) 1800 (Fan)	1800	137,221				23		4.37
	SA	25,837	21,862	80 psi	5,045	4,269	20,173	17,069	40 psi				Horizontal				Horiz	
	A	26,332	22,281	80 psi	4,759	4,027	----	----	----				1.50	8.00	25.00		25	
	B	18,087	15,304	80 psi	9,518	8,054	----	----	----									
	C	30,455	25,770	80 psi	----	----	----	----	----				Vertical				Vert	
	SCP	32,737	27,700	80 psi	----	----	28,115	23,789	80 psi				0.75	4.00	12.50		30	
	P	34,578	29,258	80 psi	----	----	30,256	25,601	80 psi									
30	S	78,857	67,028	50 psi	8,010	6,808	72,185	61,357	40 psi	1200	1200	322,062	CF			97	CF	61.00
	SA	75,478	64,156	60 psi	20,026	17,200	68,157	57,933	30 psi									
	A	75,478	64,156	60 psi	20,026	17,200	----	----	----									
	C	78,857	67,028	50 psi	----	----	----	----	----									
	SCP	76,600	65,110	45 psi	----	----	65,657	55,808	45 psi									
	P	74,871	63,640	40 psi	----	----	64,175	54,548	40 psi									

NOTES:

***CF-** Consult Factory*

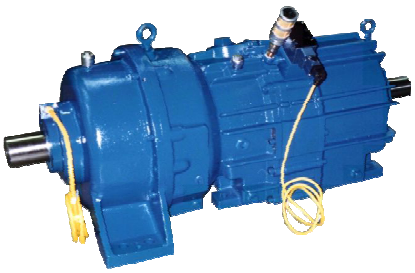
***Thermal HP** ratings based on 1800 RPM and 70° ambient temperature. Higher thermal ratings available with forced lubrication. Consult factory with application details*

***For Water cooled Units**—Cooling water flow requirements in GPM equals .10 x thermal horsepower*

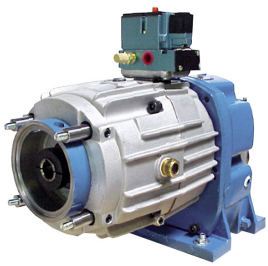
Oil Capacity** is only approximate. **Always fill unit to center of sight gauge.

***Air pressures** are at maximum torque. Operating pressures are generally much lower.*

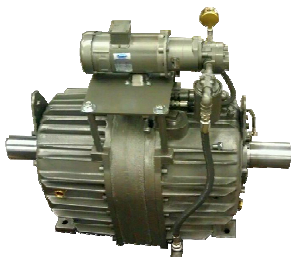
****Size 11 and 14 Posidyne** rated @ 1200 RPM. Fan cooled only. These sizes can run up to 1800 RPM with the External Cooling.*



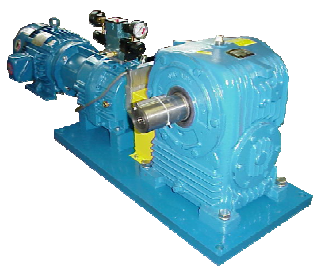
200 HP High Speed Cut to Length drive. Size 20 with integral planetary reducer.



High Speed 200 CPM Diverter Drive Size 1.5 with integral helical gear reducer.

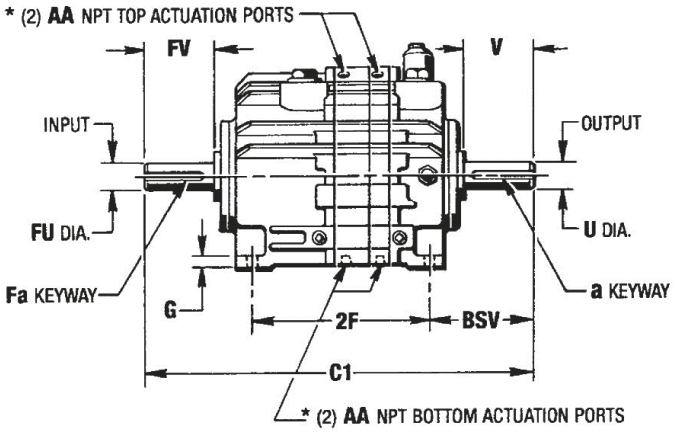


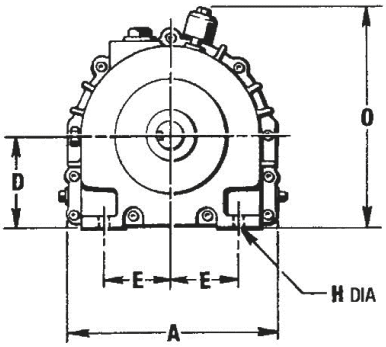
Size 30 hydraulically actuated Posidyne Marine Duty clutch.



Package machine drive including Size 05 Posidyne, encoder, and reducer, mounted on a base.

BASIC POSIDYNE DIMENSIONS





STANDARD SHAFT DIAMETER TOLERANCES
UP TO & INCLUDING 1.500" DIA. ..... +.0000" -.0005"
OVER 1.500" DIA..... +.000" -.001"

Size	Drive Dimensions *(Inches)*									Shaft Dimension *(Inches)*						Porting-AA	
	A	D	E	2F	G	H	O	BSV	C1	a Keyway	Fa Keyway	U	FU	V	FV	(Bot.)	(Top)
02	9.00	4.00	3.50	7.00	0.59	0.44	9.25	3.50	14.62	1/4 x 1/8	1/4 x 1/8	1.125	1.125	2.000	2.000	1/8-27	1/8-27
2.5	9.50	4.37	3.31	8.75	0.50	0.44	10.00	4.62	18.25	5/16 x 5/32	5/16 x 5/32	1.375	1.375	3.000	3.250	1/4-18	1/4-18
03	10.25	4.50	3.31	8.77	0.50	0.44	10.69	5.16	19.25	5/16 x 5/32	5/16 x 5/32	1.375	1.375	3.500	3.500	1/4-18	1/4-18
05	10.25	6.50	3.50	10.25	0.75	0.56	12.69	5.75	22.75	3/8 x 3/16	3/8 x 3/16	1.625	1.625	4.000	4.000	1/4-18	1/4-18
10	12.50	6.50	3.50	15.38	1.00	0.75	14.00	5.61	27.50	3/8 x 3/16	3/8 x 3/16	1.750	1.750	3.750	3.750	1/4-18	1/4-18
11	12.63	6.50	4.75	15.38	1.00	0.75	14.56	6.75	31.56	5/8 x 5/16	5/8 x 5/16	2.375	2.375	5.000	5.620	1/4-18	1/4-18
14	12.63	6.50	4.75	15.38	1.13	0.75	15.21	6.75	32.04	5/8 x 5/16	5/8 x 5/16	2.375	2.375	4.430	5.560	1/4-18	1/4-18
20	17.50	9.00	5.75	19.63	1.25	0.88	19.00	7.38	35.50	5/8 x 5/16	5/8 x 5/16	2.750	2.750	4.750	4.750	3/8-18	1/2-14
30	22.50	13.00	8.00	29.25	1.50	1.06	24.37	9.88	49.00	1 x 1/2	1 x 1/2	4.000	4.000	6.580	6.580	1/2-14	1/2-14

Top porting and bottom porting are both supplied. The use of bottom porting is recommended to purge contaminants out of the piston area when exhausted. The use of top porting does not purge the piston and can become clogged due to the buildup of moisture and lubricating oil.

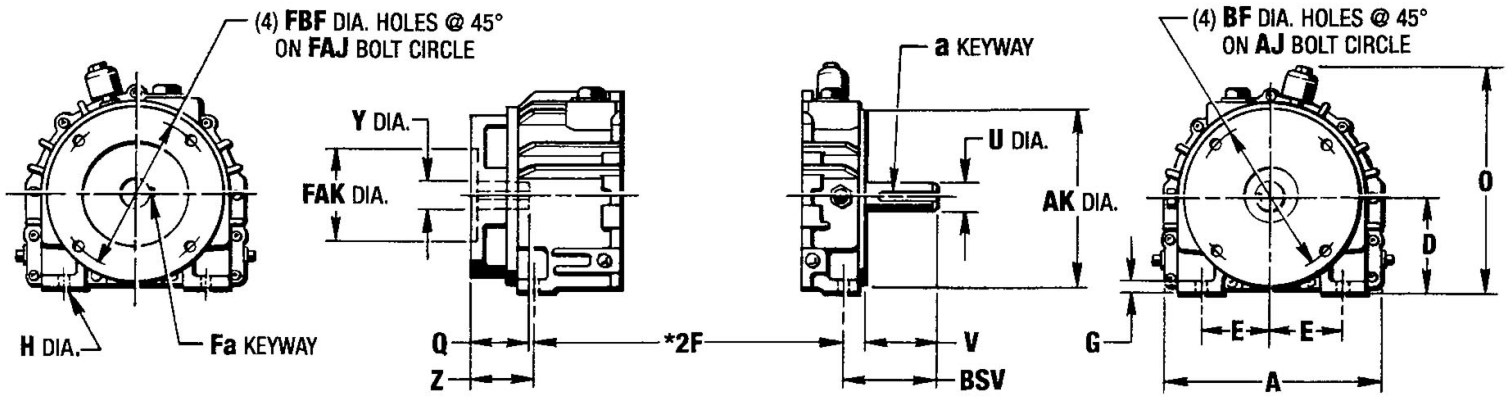
BASIC POSIDYNE OVERHUNG LOAD CAPACITY

Size	Input Shaft			Output Shaft					
				900 RPM		1200 RPM		1800 RPM	
	900 RPM	1200 RPM	1800 RPM	Without	With	Without	With	Without	With
02	700	600	500	765	550	680	490	595	430
2.5	900	800	700	1020	805	935	740	850	670
03	1400	1350	1150	1785	1410	1700	1340	1490	1180
05	1400	1350	1150	1785	1410	1700	1340	1490	1180
10	1800	1700	1500	2550	2140	2380	2000	1960	1650
11	2200	2000	---	3910	3280	3570	3000	---	---
14	2200	2000	---	3910	3280	3570	3000	---	---
20	4100	3000	1800	4500	3780	4080	3430	3530	2970
30	9400	8500	---	11900	---	10900	---	---	---

Overhung Loads are based on Bearing life L10 25,000 hrs. @ 20% duty at midpoint of shaft extension based on standard male shaft diameters. (Not applicable to C-Face.)

CAUTION - Excessive overhung load will shorten bearing life and may exceed the capacity of the shaft to the point of failure

POSIDYNE C-FACE MOUNTING OPTION DIMENSIONS

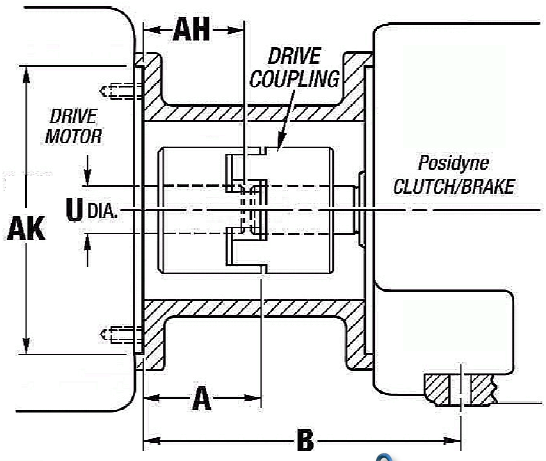


Size	Input Module	Input Dimensions *(Inches)*							Output Module	Output Dimensions *(Inches)*							Foot Mounting Dimensions *(Inches)*					
		FAJ	FAK	Fa	FBF	Q	Y	Z		AJ	AK	a	BF	BSV	U	V	A	D	E	G	H	O
02	3	5.88	4.5	3/16 x 3/32	0.41	2.62	7/8	3.44	3**	5.88	4.5	3/16 x 3/32	3/8-16 x .75	2.94	7/8	2.06	9.00	4.00	3.50	0.59	0.44	9.25
	4	7.25	8.5	1/4 x 1/8	0.53	2.75	1 1/8	3.25	4	7.25	8.5	1/4 x 1/8	1/2-13 x 1	4.56	1 1/8	2.69						
2.5	3	5.88	4.5	3/16 x 3/32	0.41	3.50	7/8	2.56	3	5.88	4.5	3/16 x 3/32	3/8-16 x .75	4.62	7/8	2.12	9.50	4.37	3.31	0.50	0.44	10.00
	4	7.25	8.5	1/4 x 1/8	0.53	3.50	1 1/8	2.81	4	7.25	8.5	1/4 x 1/8	1/2-13 x 1	4.13	1 1/8	2.62						
	5	7.25	8.5	5/16 x 5/32	0.53	3.50	1 3/8	2.81	5	7.25	8.5	5/16 x 5/32	1/2-13 x 1	4.62	1 3/8	3.00						
03	4	7.25	8.5	1/4 x 1/8	0.53	3.50	1 1/8	2.91	4	7.25	8.5	1/4 x 1/8	1/2-13 x 1	4.22	1 1/8	2.62	10.25	4.50	3.31	0.50	0.44	10.50
	5	7.25	8.5	5/16 x 5/32	0.53	3.50	1 3/8	2.91	5	7.25	8.5	5/16 x 5/32	1/2-13 x 1	5.16	1 3/8	3.50						

See Basic Posidyne Dimensions.

** Spacer may be required to keep Output Housing from interfering with mating C-Face

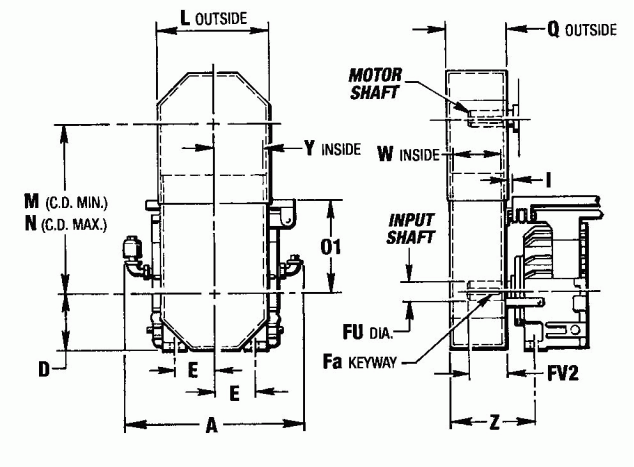
POSIDYNE LONG COUPLED C-FACE INPUT OPTION DIMENSIONS



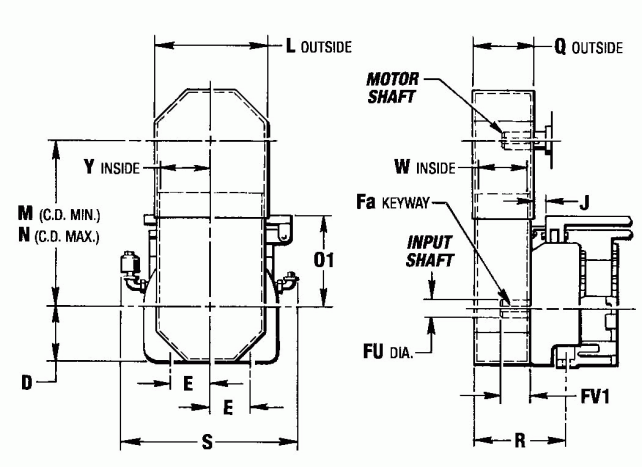
Posidyne Size	Motor Frame	Dimensions *(Inches)*				
		AH	AK *Dia*	U *Dia*	A	B
02	143T, 145T	2.290	4.500	0.875	2.630	6.620
	182, 184	2.290				
	182T, 184T	2.630	8.500	1.125	3.170	7.370
	213, 215	2.750			3.230	
2.5	182T, 184T	2.630	8.500	1.125	3.460	8.690
	213, 215	2.750			3.520	
	213T, 215T	3.130		1.375	3.710	
	254, 256	3.500			3.890	
	254T, 256T	3.750		1.625	4.600	
03	182T, 184T	2.630	8.500	1.125	3.500	8.780
	213, 215	2.750			3.510	
	213T, 215T	3.130		1.375	3.760	
	254, 256	3.500			4.220	9.470
	254T, 256T	3.750		1.625	4.520	

POSIDYNE PIGGYBACK OPTION DIMENSIONS

Basic Cooled Input



Fan Cooled Input

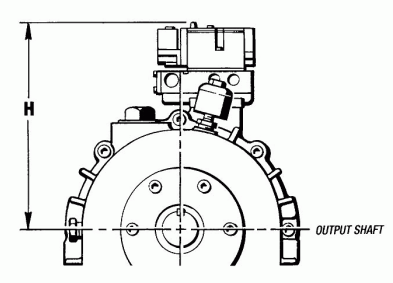


** This dimension changes to 8.44 with 254 thru 286 Frame Motors. Manifold Mounted Valve not available with Piggyback Mounting.*

	Drive Dimensions *(Inches)*								Piggyback Dimensions *(Inches)*											Max Pulley Size	
Size	A	D	E	Fa	FU	FV1	FV2	S	I	J	L	M	N	O1	Q	R	W	Y	Z	Dia	Width
02	---	4	3.50	1/4 x 1/8	1 1/8	1.00	1.00	----	----	----	7.31	12.31	13.31	7.12	3.16	5.38	2.50	3.12	5.38	6.00	2.00
2.5		4.37	3.31	5/16 x 5/32	1 3/8	2.13	2.13	----	1.25	1.25	7.62	11.50	15.19	8.44	4.31	4.75	4.19	3.69	4.75	5.39	3.00
03	11.5	4.5	3.31	5/16 x 5/32	1 3/8	2.38	3.50	11.50	0.38	1.50	9.12	12.50	16.50	7.94	4.68	6.62	4.38	4.44	5.50	6.84	3.25
05	11.5	6.5	3.50	3/8 x 3/16	1 5/8	2.94	4.00	11.50	1.50	2.56	9.12	12.50	16.50	7.94	4.68	8.38	4.38	4.44	7.31	6.84	3.25
10	----	6.5	3.50	3/8 x 3/16	1 3/4	2.62	3.75	----	1.56	2.94	12.12	16.12	19.12	9.62	5.18	8.88	4.88	5.94	7.50	9.00	3.75

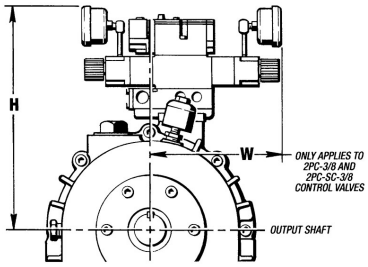
POSIDYNE MANIFOLD MOUNTED VALVE DIMENSIONS

Without Regulators and Gauges



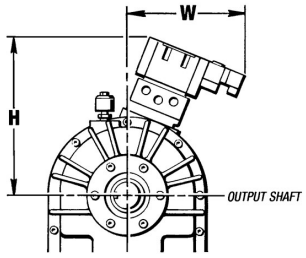
02, 2.5, 03, 05 and 10 Posidyne Clutch/Brakes (2 Pr. Inlet-3/8 Manifold Mounted Control Valve)

With Regulators and Gauges



02, 2.5, 03, 05 and 10 Posidyne Clutch/Brakes (1PC-3/8, PC-3/8 and 2PC-SC-3/8 Manifold Mntd. Control Valves)

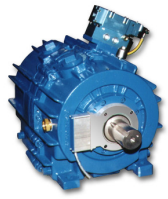
Without Regulators and Gauges



11 and 14 Posidyne Clutch/Brake (2PI-5/8 Manifold Mntd. Control Valve) 20 and 30 Posidyne Clutch/Brake (2PI-3/4 Manifold Mntd. Control Valve)

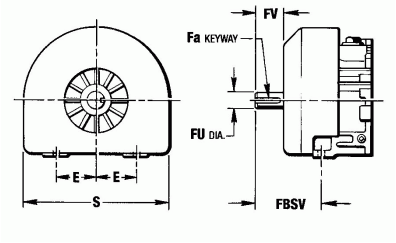
	Without Regulators		With Regulators	
Size	H	W	H	W
02	8.16	----	10.47	6.13
2.5	8.82	----	10.47	6.7
03	9.44	----	10.92	6.7
05	9.32	----	11.75	6.7
10	10.57	----	11.63	6.7
11	12.77	9.63	12.89	6.7
14	12.77	9.63	----	----
20	14.05	11.75	----	----
30	18.05	11.75	----	----

NOTES: All valves Cv = 1.0 Min.; All solenoids are std. 120 VAC continuous duty rated for 60 Hz operation.
Inrush Current (amps) ..... .11
Holding Current (amps) ..... .08
Time to Energize (sec.)..... .011
Time to de-energize (sec.)..... .016
DC and hazardous location solenoids are available. Consult factory.

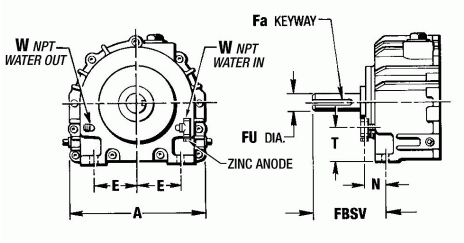


POSIDYNE COOLING OPTION DIMENSIONS

Size	Dimensions *(Inches)*									
	A	E	Fa	FBSV	FU	FV	N	S	T	W
2	9.00	3.50	1/4 x 1/8	4.12	1.13	1.38	----	9.0	----	----
2.5	9.50	3.31	5/16 x 5/32	4.88	1.38	2.25	2.0	10.5	2.50	0.38
3	10.25	3.31	5/16 x 5/32	5.31	1.38	2.31	2.0	11.5	2.50	0.38
5	10.25	3.50	3/8 x 3/16	6.75	1.63	2.72	1.5	11.5	4.75	0.38
10	12.50	3.50	3/8 x 3/16	6.62	1.75	2.88	2.0	14.0	4.00	0.38
11	12.63	4.75	5/8 x 5/16	9.43	2.38	5.50	----	14.0	----	----
14	12.63	4.75	5/8 x 5/16	9.43	2.38	5.50	----	14.0	----	----
20	17.50	5.75	5/8 x 5/16	8.50	2.75	3.75	4.0	19.0	7.25	0.50



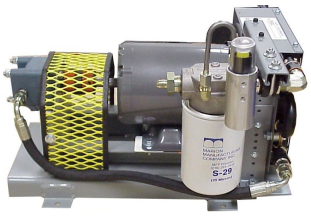
Fan Cooled Input



Water Cooled Input

EXTERNAL "OIL TO AIR" COOLING SYSTEM
This External Cooling System is available for all sizes of Posidyne Clutch/Brakes. The typical cooling configuration is "Oil to Air" as shown, but "Oil to Water" is also available.

The External Cooling System also filters the oil increasing the life of the Clutch/Brake.

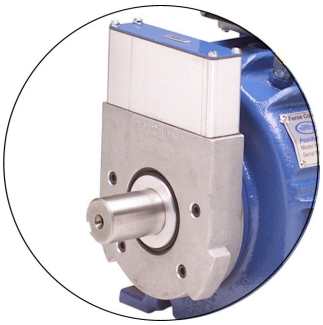


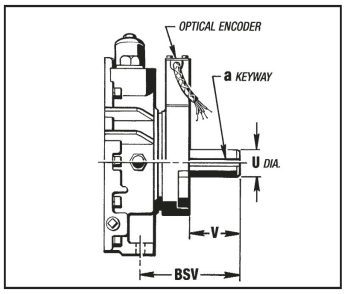
The Thermal Capacity is increased allowing higher RPM, cycle rates, and inertia loads.

Consult the Force Control Factory for additional information

**Fan cooling not available with C-Face input.*

POSIDYNE ENCODER OPTION DIMENSIONS





Size	Output Module	U	V	BSV	a
02	C	1.125	2.17	4.57	3/16 x 3/32
2.5	C	1.375	1.79	4.62	5/16 x 5/32
03	C		2.50	5.16	
05	C	1.625	3.00	5.75	3/8 x 3/16
10	C	1.750	2.81	5.50	
11	C	2.375	3.91	6.75	5/8 x 5/16
14	C	2.375	3.34	6.75	
20	C	2.750	4.37	8.19	
30	---	---	---	---	---

POSIDYNE AVAILABLE OPTIONS

(3) INPUT MODULE

	02	2.5	03	05	10	11	14	20	30
1	x	x	x	x	x	x	x	x	x
3	x	x	x	x	---	---	---	---	---
4	x	x	x	x	---	---	---	---	---
5	---	x	x	x	---	---	---	---	---
7	x	x	x	x	x	---	---	---	---
9	x	x	x	---	---	---	---	---	---
A	x	x	x	---	---	---	---	---	---
B	---	x	x	---	---	---	---	---	---
C	---	---	x	---	---	---	---	---	---

(4) CONTROL LOGIC

	02	2.5	03	05	10	11	14	20	30
S	X	X	X	X	X	X	X	X	X
A	X	X	X	X	X	X	X	X	X
B	X	X	X	X	X	X	X	X	---
C	X	X	X	X	X	X	X	X	X
D	X	X	X	X	X	X	X	X	X
E	---	X	X	X	X	X	X	X	X
F	---	X	X	X	---	---	---	---	---
G	---	X	X	X	---	---	---	---	---
P	X	X	X	X	X	X	X	X	X
J	---	X	X	X	---	---	---	---	---

(5) OUTPUT MODULE

	02	2.5	03	05	10	11	14	20	30
1	X	X	X	X	X	X	X	X	X
3	X	X	---	---	---	---	---	---	---
4	X	X	X	---	---	---	---	---	---
5	---	X	X	---	---	---	---	---	---
7	X	X	X	X	X	---	---	---	---
C	X	X	X	X	X	X	X	X	X
E	X	---	---	---	---	---	---	---	---

(6) MOUNTING POSITIONS

All options available in all sizes.

(7) *COOLING

	02	2.5	03	05	10	11	14	20	30
1	X	X	X	X	X	---	---	X	X
2	---	X	X	X	X	---	---	X	---
5	---	X	X	X	X	X	X	X	X
7	X	X	X	X	X	X	X	X	X

OPTICAL ENCODER HOW TO ORDER

E	1	2	3	4	5	6

(1,2) Encoder Type

P	M	=Posidyne Mounted (Standard)
C	4	= Double C Face 4 1/2" AK

(3) Mounting Position

T	R	B	L	N
				Does Not Apply
Top	Right	Bottom	Left	

Mounting Position only applies when encoder is Posidyne mounted

(4,5) Resolution

6	0	=60 PPR *(Pulses per revolution)* (5/8" to 1 3/4" Shaft Diameter)
9	0	=60 PPR *(Pulses per revolution)* (2 3/8" to 2 3/4" Shaft Diameter)

OPTICAL ENCODER

An Optical Encoder can be furnished for improved positioning, when used with one of the CLPC Series Closed Loop Positioning Controls. This provides accurate positioning for high cycle applications.

(6) Shaft Size

A	=5/8" Dia.*
C	=7/8" Dia.*
D	1 1/8" Dia.
E	1 3/8" Dia.
F	1 5/8" Dia.
G	1 3/4" Dia.
H	2 3/8" Dia.
J	2 3/4" Dia.

*Available Shaft Sizes for Double C Face Encoders

POSIDYNE VALVE HOW TO ORDER

V	1	2	3	4	5	6	7	8

(1) Number of Pressures

1	=1 Pressure Single Clutch or Brake
2	=2 Pressure Clutch Brake

(2) Valve Type

PC	=Sandwich Regulators (Single Clutch)
PC-SC	=Sandwich Regulators (Single Clutch SCP Logic Only)
PI	=No Regulators, Single Valve
PI-2V	=No Regulators, Dual Valves
PI-Br	=No Regulators (Motor Brake Only)

(3) Port Size

A	= 1/8" NPT
B	= 3/8" NPT
C	= 5/8" NPT
D	= 3/4" NPT

(4, 5) Voltage

1	A	= 115 VAC
2	A	= 220 VAC
4	A	= 460 VAC
1	D	= 12 VDC
2	D	= 24 VDC

(6) Mounting

L	= Shipped Loose. (Mounted and Plumbed by Customer)
M	= Manifold Mounted on Posidyne.
PR	= Pre-Plumbed and Brkt. Mntd.(Right Side Viewing Output Shaft)
PL	= Pre-Plumbed and Brkt. Mntd. (Left Side Viewing Output Shaft)

(7) Wire Connector

3BH	=3 Pin BH Mini-Change Connector
4BH	=4 Pin BH Mini-Change Connector
5BH	=5 Pin BH Mini-Change Connector
DIN	=DIN Connector (#11 & #20 Posidyne Only) (Includes 6 Ft. Long Cable.)
MS	=Mil Specifications
N	= None

(8) Gauges

G	Glycerin
D	Dry Type
N	None

POSIDYNE HOW TO ORDER

1	2	3	4	5	6	7	Encoder 8	—	Control Valve 9

N=No Encoder.

See How to Order Encoder for Ordering Number.

N=No Valve

See How to Order Valve for Ordering Number

(1, 2) Size

0	2	=02
2	5	=2.5
0	3	=03
0	5	=05
1	0	=10
1	1	=11
1	4	=14
2	0	=20
3	0	=30

(7) Cooling

1	= Basic (Radiant)
2	= Water Cooled
5	= Fan Cooled***
7	= Fan Cooled, Split Shroud***
9	= Force Lube

(3) Input Module

1	= Basic		
3	= 4 1/2 FAK, 7/8 FU	143TC 145TC	C-Face Quill
4	= 8 1/2 FAK, 1 1/8 FU	182TC 184TC	C-Face Quill
5	= 8 1/2 FAK, 1 3/8 FU	213TC 215TC	C-Face Quill
7	=Piggyback & Ceiling Mount*		
9	= 4 1/2 FAK, 7/8 FU	143TC 145TC	C-Face Coupled
A	= 8 1/2 FAK, 1 1/8 FU	182TC 184TC	C-Face Coupled
B	= 8 1/2 FAK, 1 3/8 FU	213TC 215TC	C-Face Coupled
C	= 8 1/2 FAK, 1 5/8 FU	254TC 256TC	C-Face Coupled

(5) Output Module

1	= Basic	T Frame	
3	= 4 1/2 FAK, 7/8 FU	143TC 145TC	C-Face Quill
4	= 8 1/2 FAK, 1 1/8 FU	182TC 184TC	C-Face Quill
5	= 8 1/2 FAK, 1 3/8 FU	213TC 215TC	C-Face Quill
7	=Piggyback & Ceiling Mount*		
C	= Optical Encoder (02-20) Sizes** *Not available on C Face Output*		
D	=Optical Encoder 4 1/2" AK, 5/8" U ** (02 only)**		
E	= Optical Encoder 4 1/2" AK, 7/8" U ** (02 only)**		

(6) Mounting Position

H	= Horizontal
D	= Vertical, Input Down
U	= Vertical, Input Up
L	= Wall on Left (Viewing Input)
R	= Wall on Right (Viewing Input)
Z	= Horizontal, Marine Duty
W	= Vertical, Input Down, Marine Duty
P	= Vertical, Input Up, Marine Duty

(4) Control Logic

S	**=S** - Air set clutch / light spring set brake with Air assist
A	**=A** - Air set clutch / medium spring set brake
B	**=B** - Air set clutch / heavy spring set brake
C	**=C** - Air set clutch / no brake
D	**=SA** - Air set clutch / medium spring set brake with Air assist
E	**=SCP** - Self centered piston / Air set clutch / Air set brake
F	**=SA/ACP** - Air centered piston/Air set clutch / medium spring set brake with Air assist
G	**=B/ACP** - Air centered piston / Air set clutch / heavy spring set brake
P	**=P** - Air set clutch / Air set brake (without springs)
J	**=A/ACP** - Air centered piston / Air set clutch / medium spring set brake

Example

To order a size 2.5 Posidyne, C Face input for 184TC frame motor, with "S" Control Logic, output housing to accept encoder, horizontal mounting, basic cooling, with manifold mounted control valve.

Ordering Number 25-4SC-H-1/___/___

NOTES

** When Piggyback Mounting is required both input and output modules must be specified Piggyback. The motor frame size must also be specified to predrill and tap the motor mounting base.*

*** The Output Housing is machined to accept an encoder.*

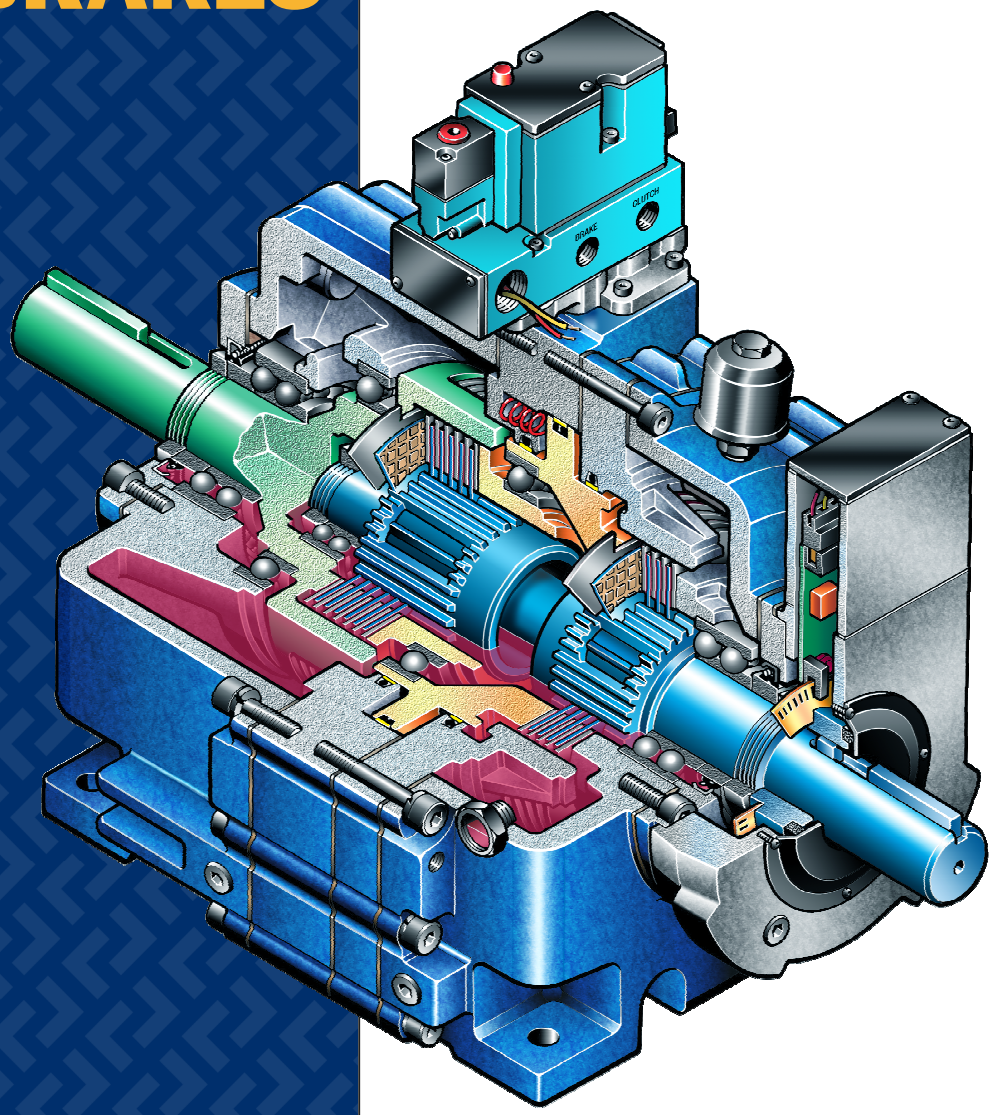
**** Not available on C Face input.*

To limit the torque delivered to a drive and the physical size of the motor mounted on our piggyback drives, please use the Piggyback Motor Options chart.

POSIDYNE PIGGYBACK MOTOR OPTION AVAILABLE

Motor Frame	02	2.5	03	05	10
143T	X				
145T	X				
182T	X	X	X		
184T	X	X	X		
213T		X	X	X	
215T		X	X	X	
254T			X	X	
256T			X	X	
284T				X	X
286T				X	X
324T				X	X
326T					X
364T					X
365T					X

POSIDYNE OIL SHEAR CLUTCH BRAKES



WORLD WIDE LEADER IN OIL SHEAR TECHNOLOGY

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