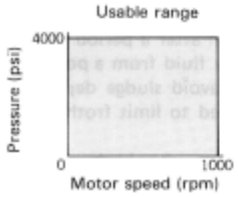
Dimensions & Performances

DOWMAX ME100



Displacement	: 6.04 in³/rev.
Rated Pressure	: 4000 psi
Peak Pressure	: 4700 psi
Rated Torque	: 320 lbf ft
Rated Speed	: 1000 rpm
Max. Speed	: 1000 rpm
Max. Horse Power	: 61 hp
Weight	: 49 lbf

The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig.1 Output torque vs speed

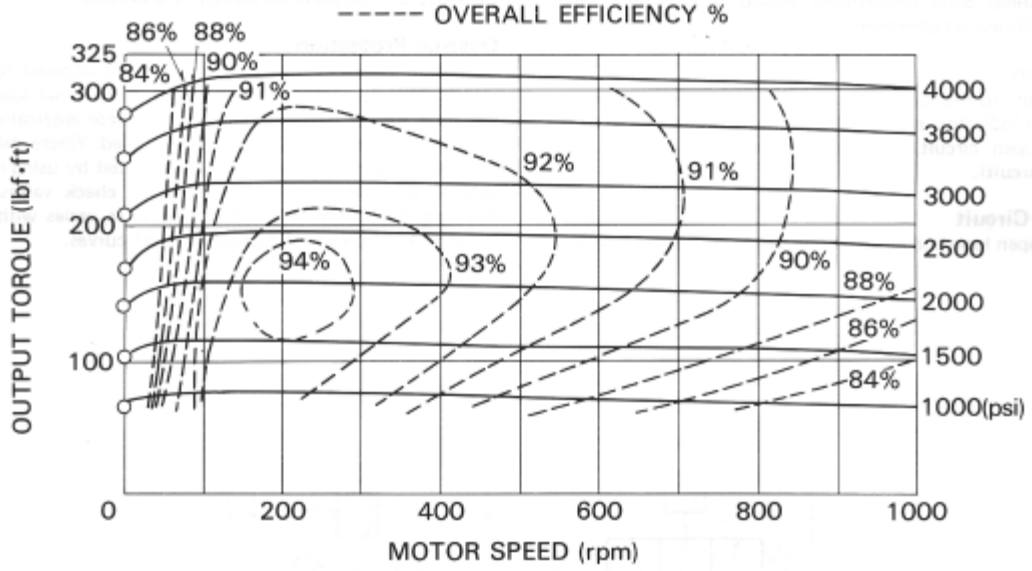
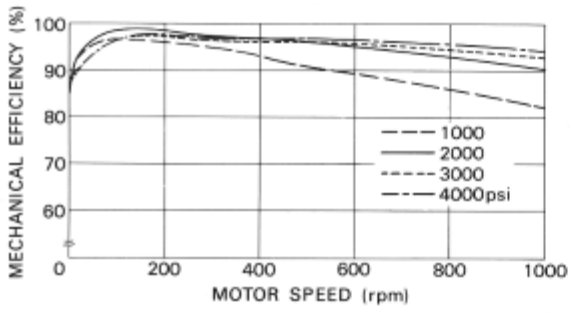
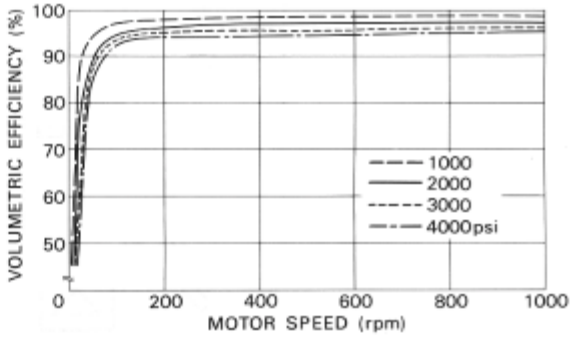


Fig.2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig.3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig. 4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

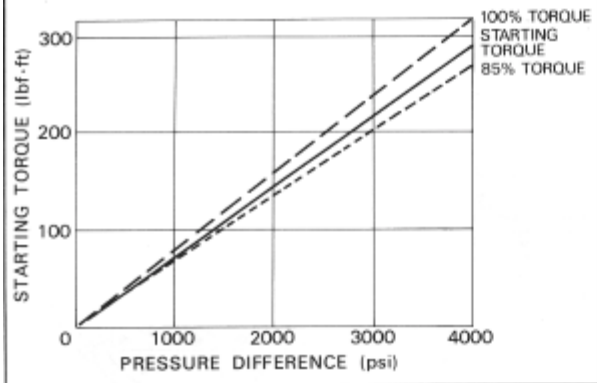


Fig. 5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

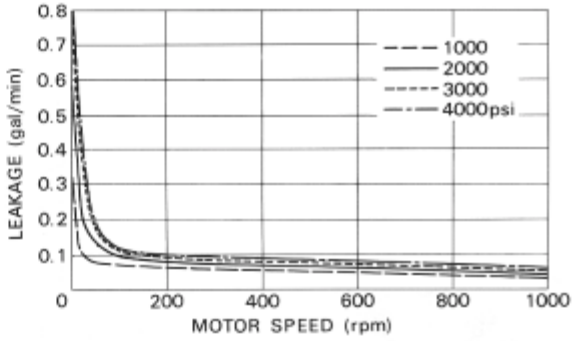


Fig. 6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

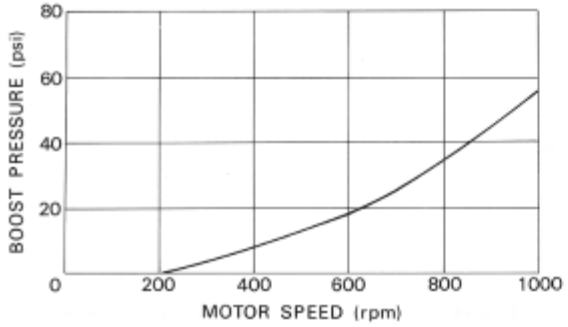


Fig. 7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

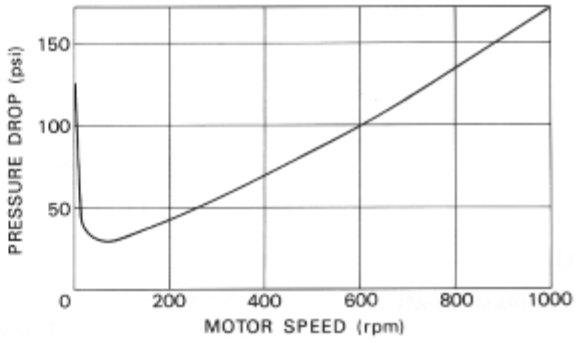


Fig. 8 Bearing Life and Motor Shaft Radial Load

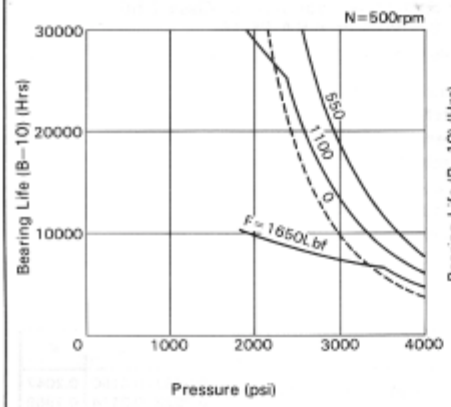


Fig. 8-1

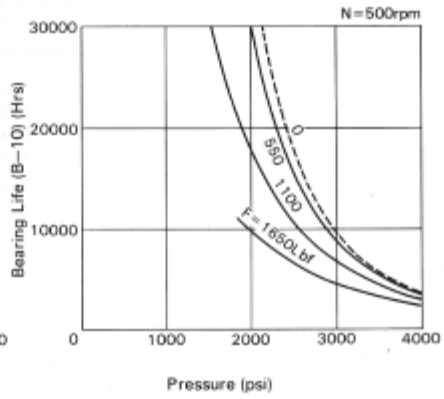


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8.
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 500 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 500 rpm, the bearing life can be obtained by the formula below.

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm)

   $$\times \frac{100}{\text{Actual Shaft Speed}}$$

   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

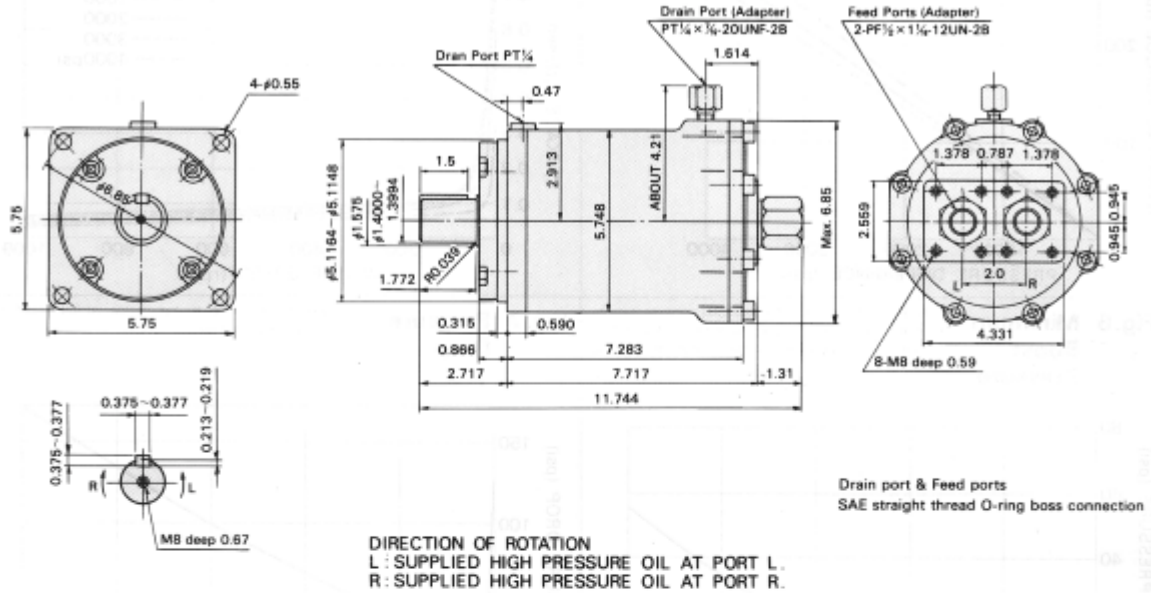
   1800lbf

5. Applications with axial thrust loads should be referred to us.

ME100

Dimensions in inches

Nominal Dimensions

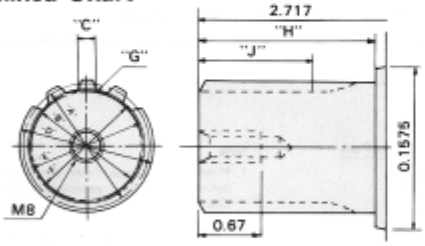


Drain port & Feed ports
SAE straight thread O-ring boss connection

DIRECTION OF ROTATION
L : SUPPLIED HIGH PRESSURE OIL AT PORT L.
R : SUPPLIED HIGH PRESSURE OIL AT PORT R.

Optional Shaft Dimensions

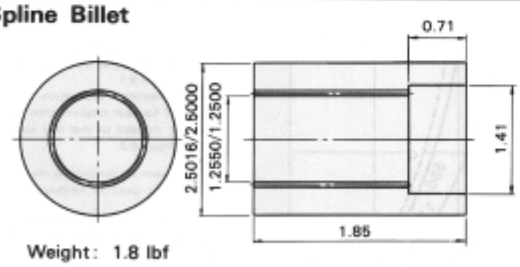
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 16/32
Class 1 fit : To B.S.3550 or A.S.A.–B5–15.

No. of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
21	1.3125	1.1367	0.0951 0.0939	1.3535 1.3585	1.2460	1.2225 1.2335	0.011	1.772	1.102

Spline Billet



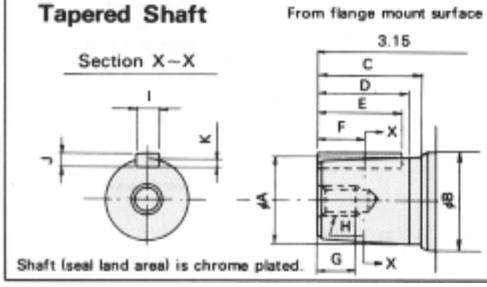
Weight : 1.8 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet : 4000 psi

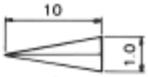
No. of Teeth:	21
Pitch:	16/32
Pressure Angle:	30°
Pitch Dia:	1.3125
Major Dia:	1.3860/1.3750
Minor Dia:	1.2550/1.2500
Space Width:	0.1010/0.0998

Tapered Shaft



Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
1.3780 1.3773	0.1575	1.772	1.57	1.50	0.79	0.98	M12	0.3937 0.3923	0.3150 0.3114	0.2047 0.1969

(Taper : 1.0/10 

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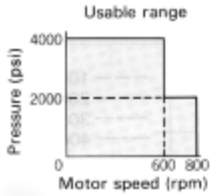
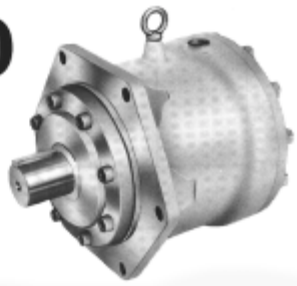
DOWMAX ME150



Displacement	: 9.27 in³/rev.
Rated Pressure	: 4000 psi
Peak Pressure	: 4700 psi
Rated Torque	: 492 lbf·ft
Rated Speed	: 600 rpm
Max. Speed	: 800 rpm
Max. Horse Power	: 56 hp
Weight	: 92 lbf



The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig. 1 Output torque vs speed

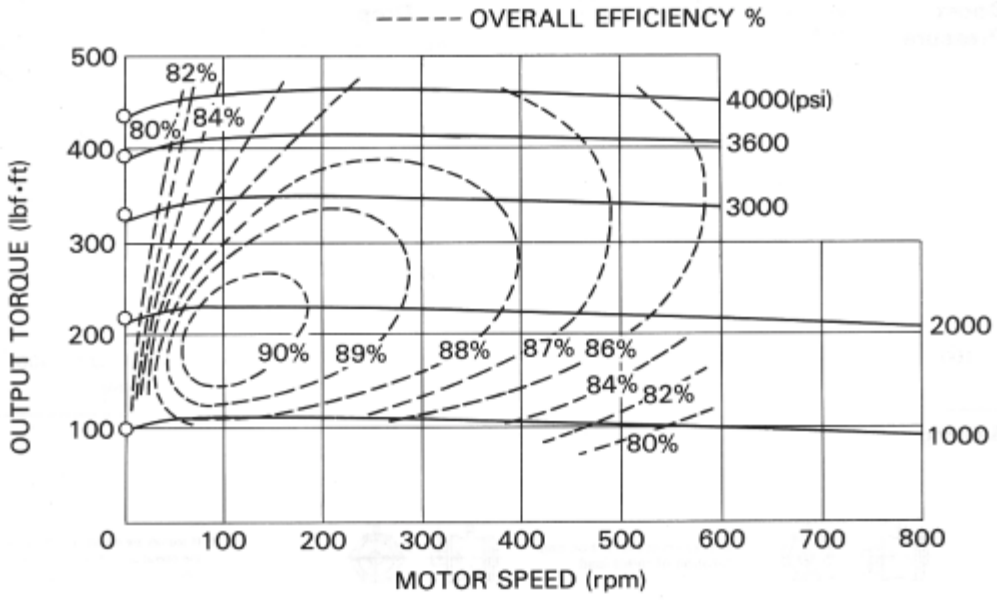
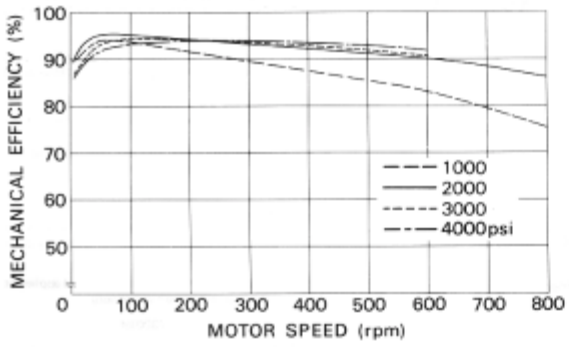
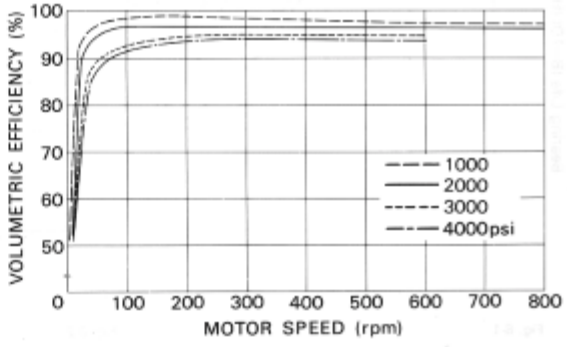


Fig. 2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig. 3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig. 4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

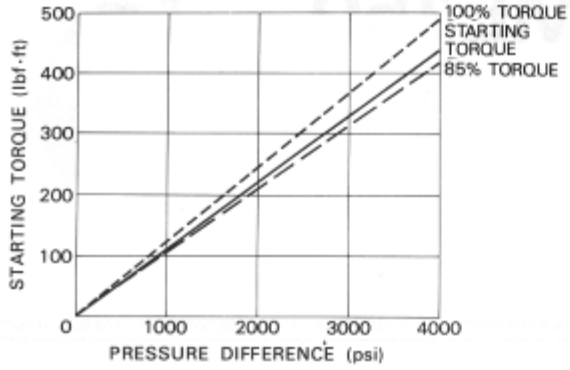


Fig. 5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

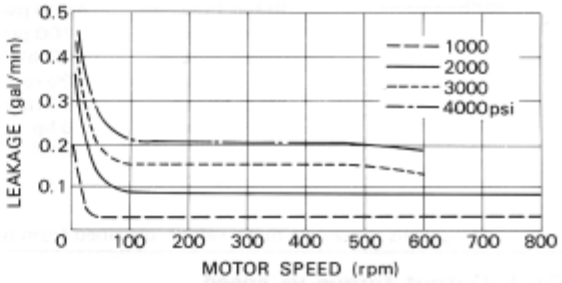


Fig. 6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

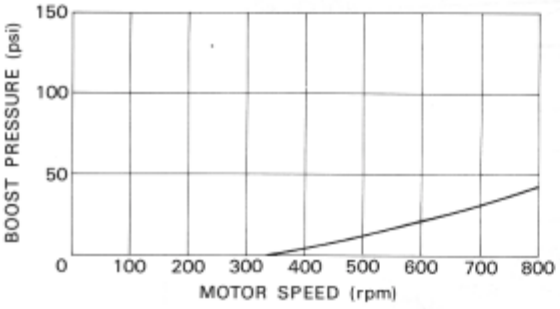


Fig. 7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

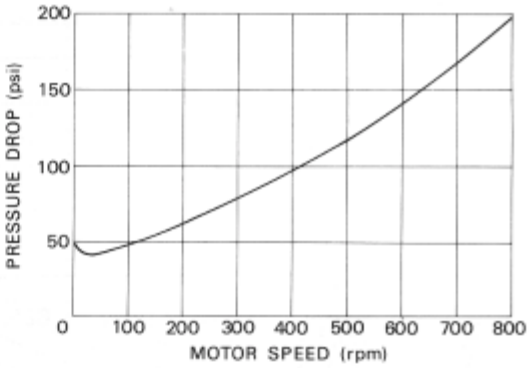
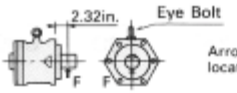
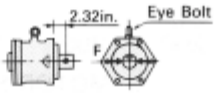


Fig. 8 Bearing Life and Motor Shaft Radial Load



Arrow shows direction and location of radial load



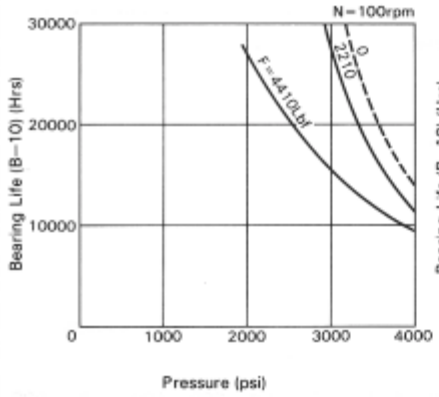


Fig. 8-1

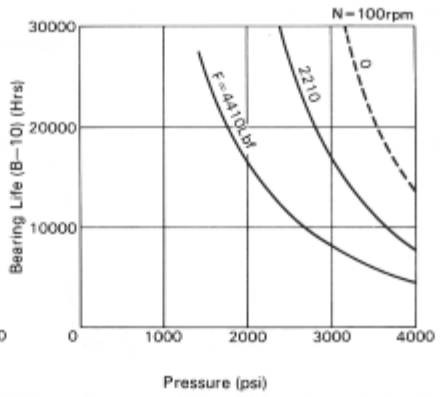


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8.
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below:

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

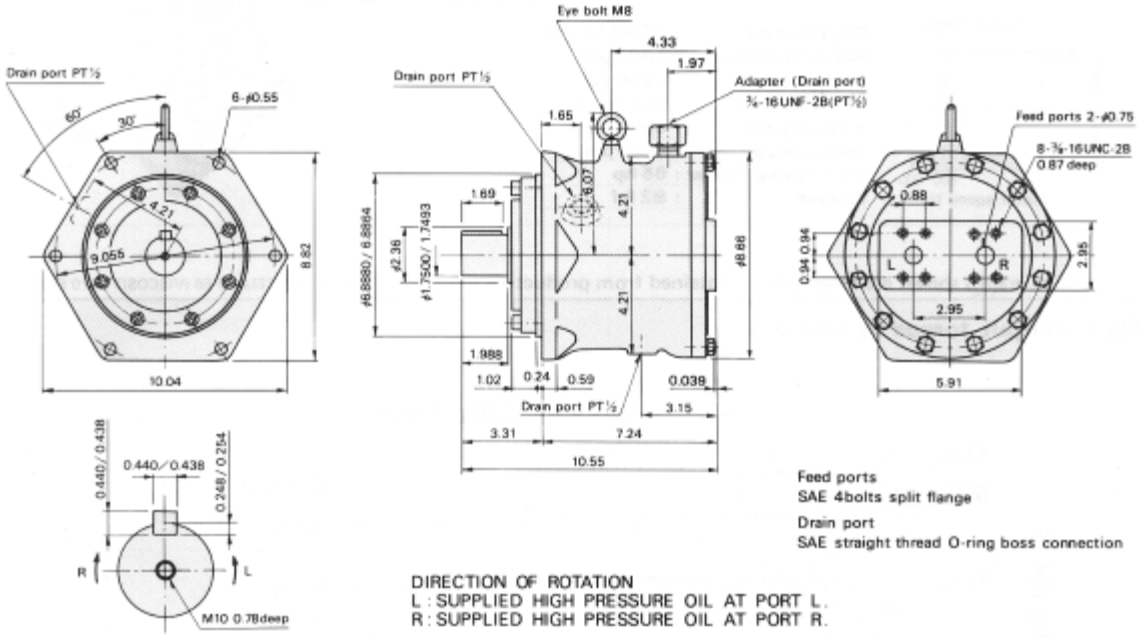
   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

   7300lbf
5. Applications with axial thrust loads should be referred to us.

ME150

Dimensions in inches

Nominal Dimensions



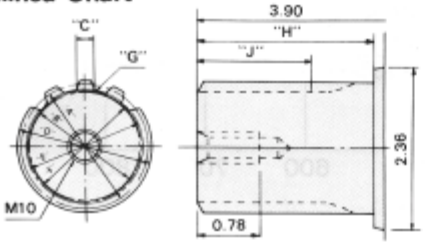
Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

DIRECTION OF ROTATION
L : SUPPLIED HIGH PRESSURE OIL AT PORT L.
R : SUPPLIED HIGH PRESSURE OIL AT PORT R.

Optional Shaft Dimensions

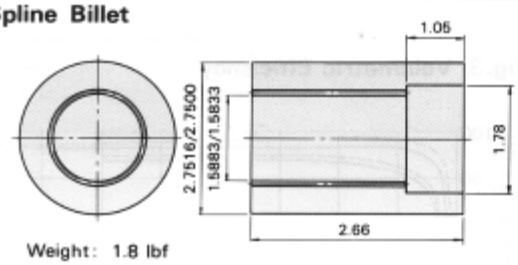
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 12/24
Class 1 fit : To B.S.3550 or A.S.A.–B5–15.

No. of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
20	1.6667	1.4434	0.1294 0.1263	1.7293 1.7243	1.5793	1.5627 1.5497	0.014	2.58	1.57

Spline Billet



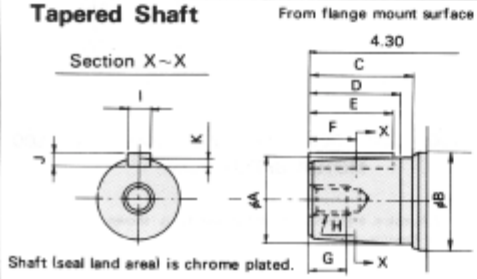
Weight : 1.8 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet : 4000 psi

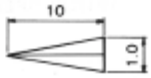
No. of Teeth:	20
Pitch:	12/24
Pressure Angle:	30°
Pitch Dia:	1.6667
Major Dia:	1.7630/1.7500
Minor Dia:	1.5883/1.5833
Space Width:	0.1339/0.1326

Tapered Shaft



Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
1.7717 1.7710	2.36	2.32	2.13	1.97	1.06	0.98	M16	0.5512 0.5495	0.3543 0.3508	0.2244 0.2165

(Taper : 1.0/10 

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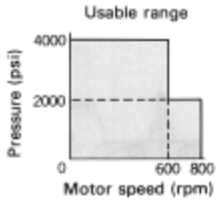
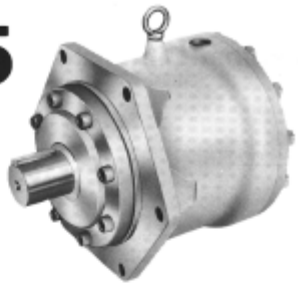
DOWMAX ME175



Displacement	: 10.68 in³/rev.
Rated Pressure	: 4000 psi
Peak Pressure	: 4700 psi
Rated Torque	: 566 lbf·ft
Rated Speed	: 600 rpm
Max. Speed	: 800 rpm
Max. Horse Power	: 65 hp
Weight	: 92 lbf



The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig. 1 Output torque vs speed

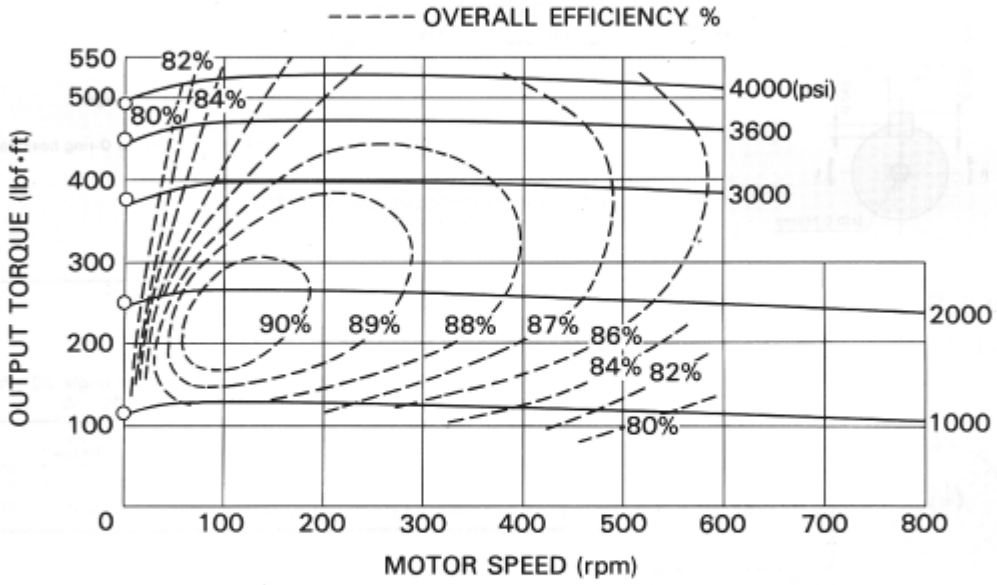
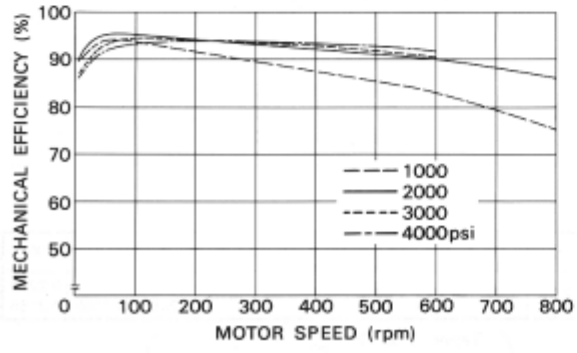
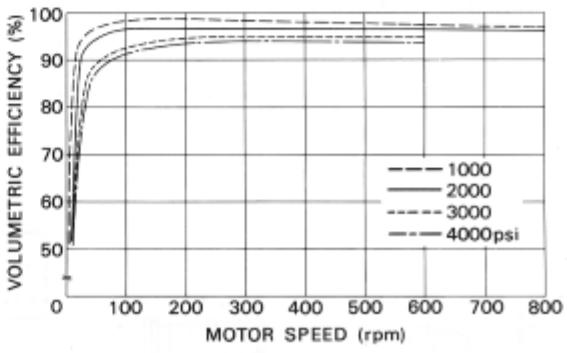


Fig. 2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig. 3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig.4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

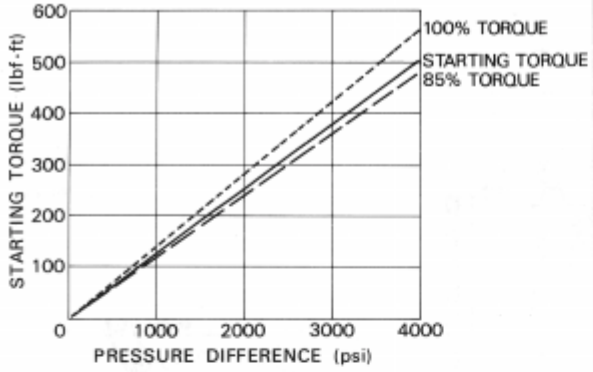


Fig.5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

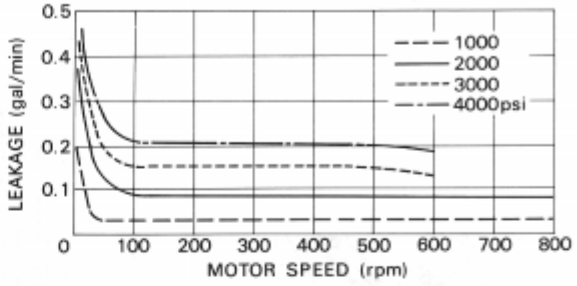


Fig.6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

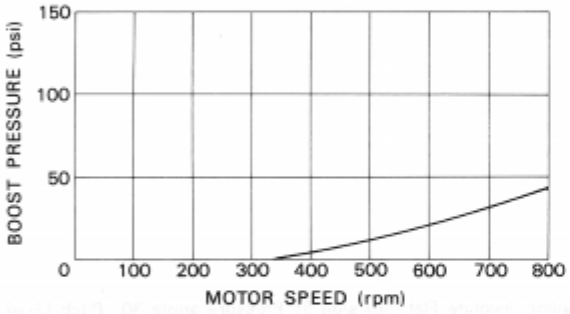


Fig.7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

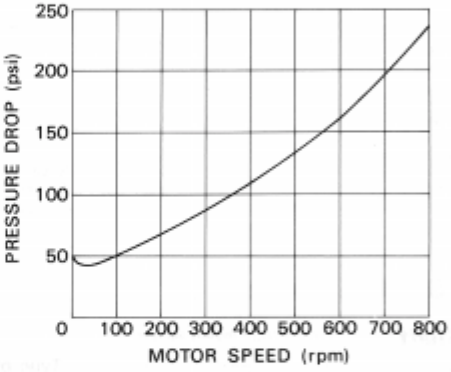
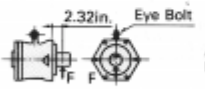
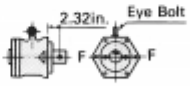


Fig.8 Bearing Life and Motor Shaft Radial Load



Arrow shows direction and location of radial load



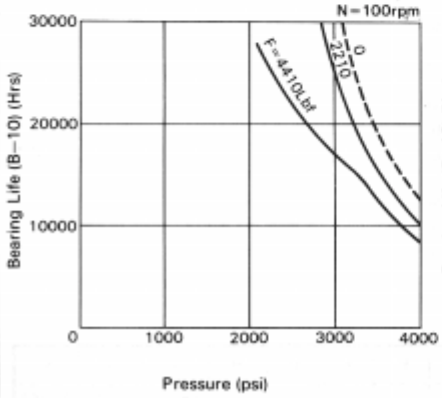


Fig. 8-1

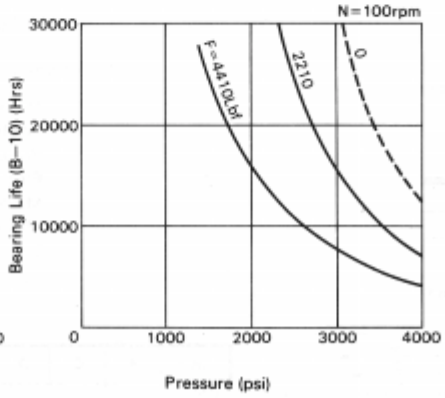


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8;
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below.

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

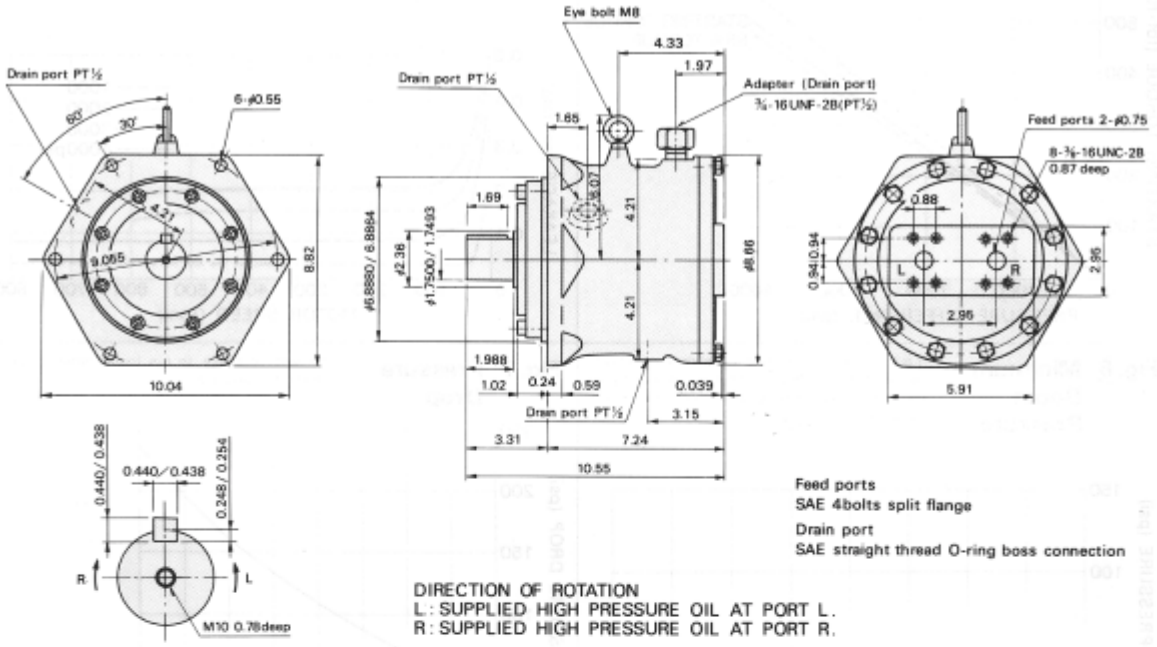
   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

   7300lbf
5. Applications with axial thrust loads should be referred to us.

ME175

Dimensions in inches

Nominal Dimensions



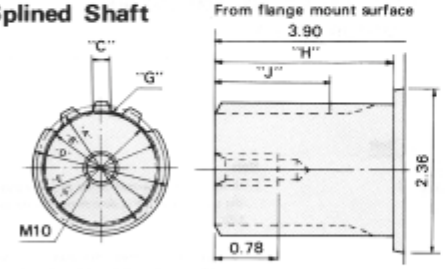
Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

DIRECTION OF ROTATION
L: SUPPLIED HIGH PRESSURE OIL AT PORT L.
R: SUPPLIED HIGH PRESSURE OIL AT PORT R.

Optional Shaft Dimensions

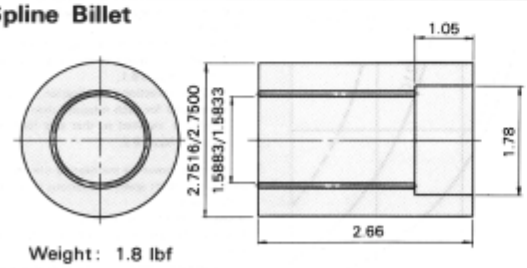
Splined Shaft



Type of Spline: Involute: Flat root side fit: Pressure angle 30°: Pitch 12/24
Class 1 fit: To B.S.3550 or A.S.A.–B5–15.

No. of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
20	1.6667	1.4434	0.1294 0.1263	1.7293 1.7243	1.5793	1.5627 1.5497	0.014	2.58	1.57

Spline Billet



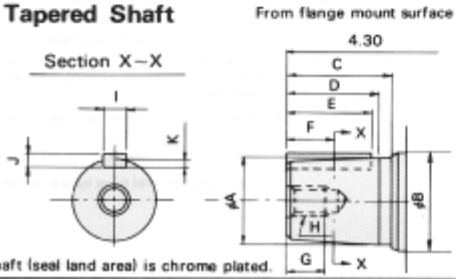
Weight: 1.8 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet: 4000 psi

No. of Teeth:	20
Pitch:	12/24
Pressure Angle:	30°
Pitch Dia:	1.6667
Major Dia:	1.7630/1.7500
Minor Dia:	1.5883/1.5833
Space Width:	0.1339/0.1326

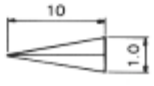
Tapered Shaft



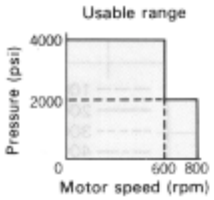
Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
1.7717 1.7710	2.36	2.32	2.13	1.97	1.06	0.98	M16	0.5512 0.5495	0.3543 0.3508	0.2244 0.2165

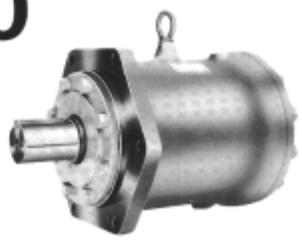
Taper: 1.0/10



DOWMAX ME300



Displacement	: 18.55 in³/rev.
Rated Pressure	: 4000 psi
Peak Pressure	: 4700 psi
Rated Torque	: 984 lbf·ft
Rated Speed	: 600 rpm
Max. Speed	: 800 rpm
Max. Horse Power	: 112 hp
Weight	: 117 lbf



The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig. 1 Output torque vs speed

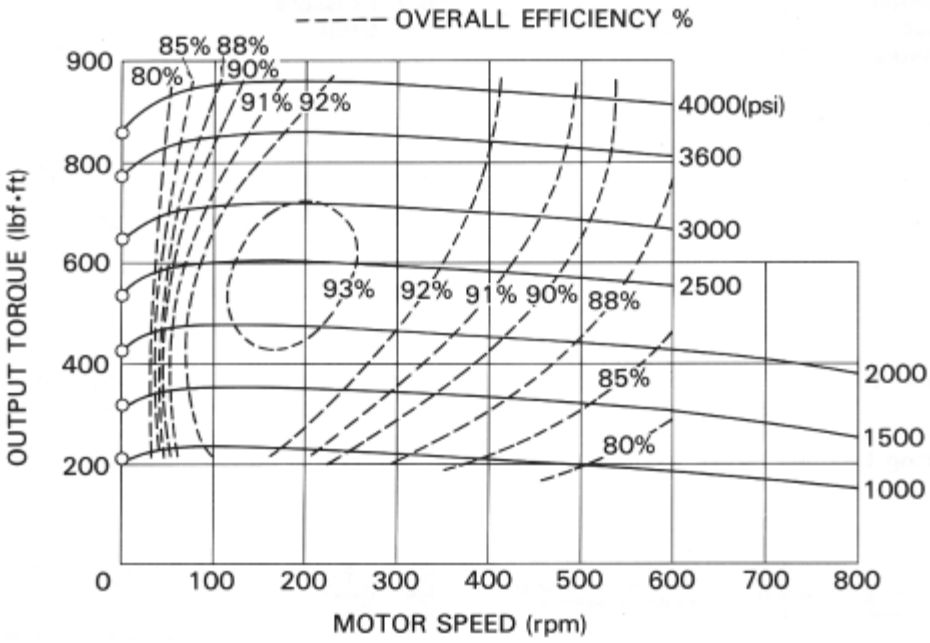
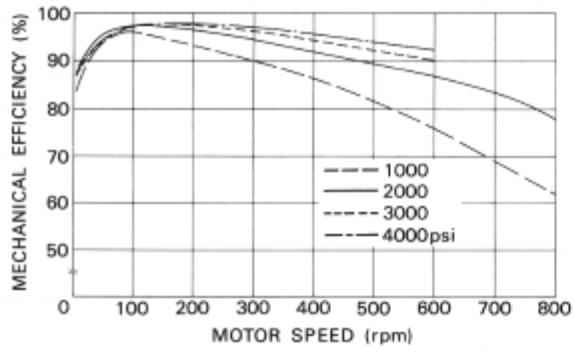
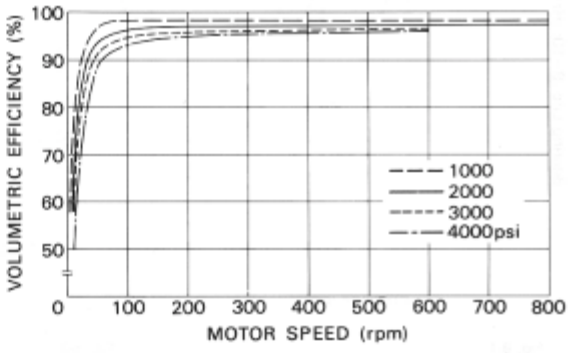


Fig. 2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig. 3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig. 4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

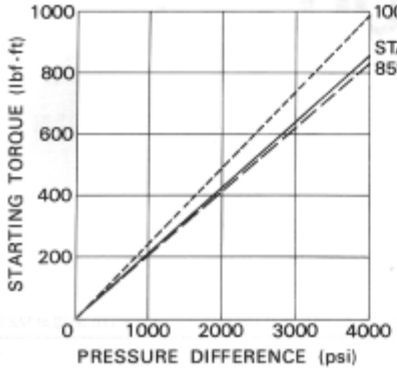


Fig. 5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

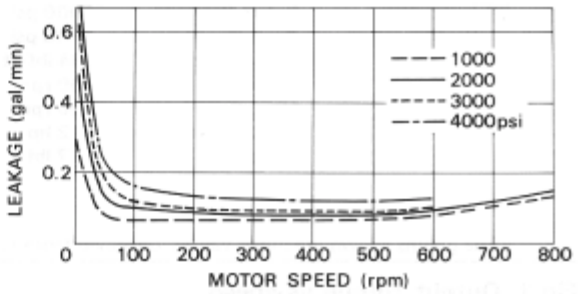


Fig. 6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

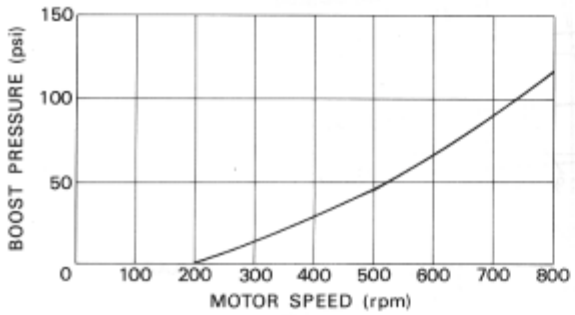


Fig. 7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

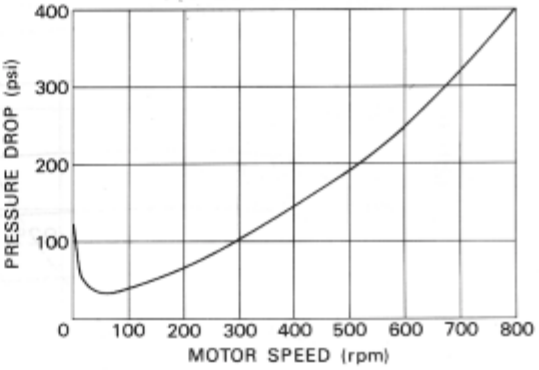


Fig. 8 Bearing Life and Motor Shaft Radial Load

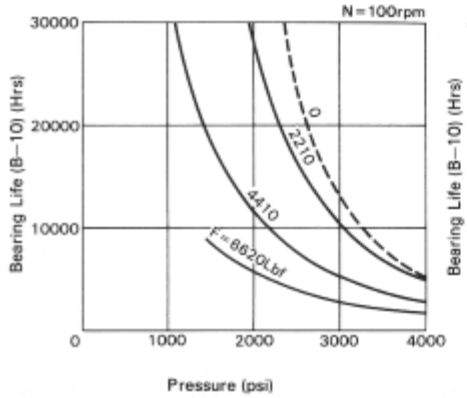


Fig. 8-1

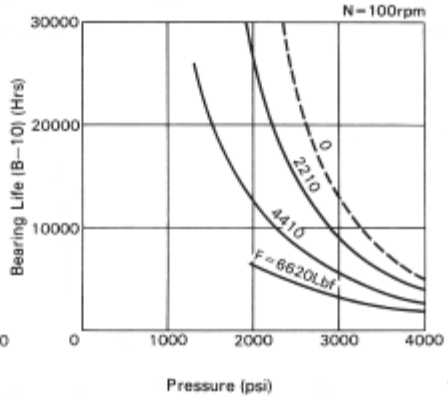


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8.
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below:

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

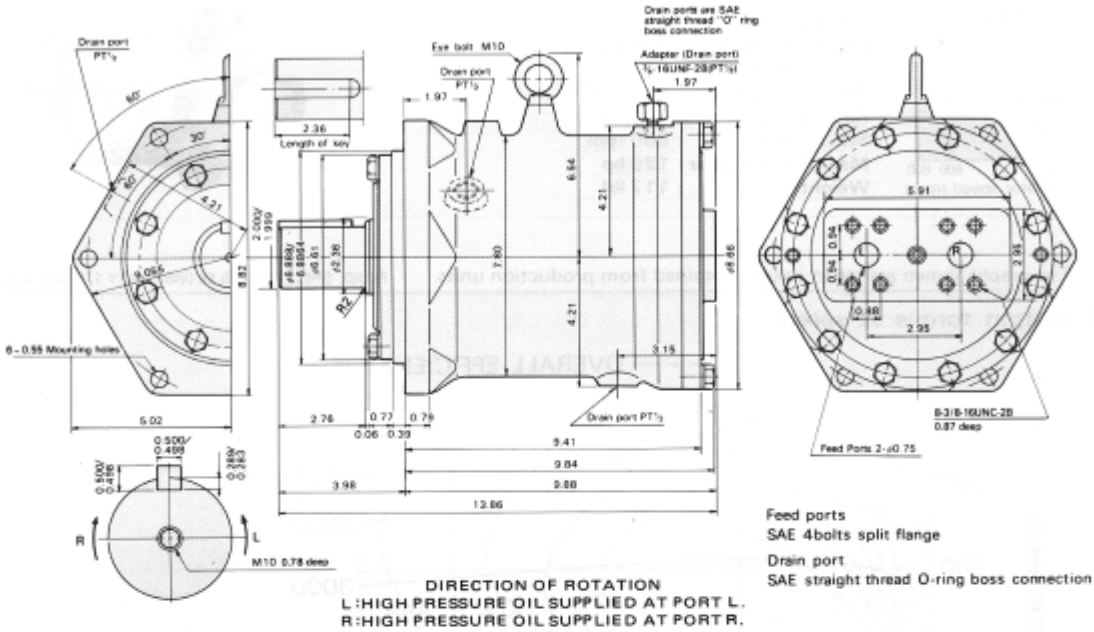
   7300lbf

5. Applications with axial thrust loads should be referred to us.

ME300

Dimensions in inches

Nominal Dimensions



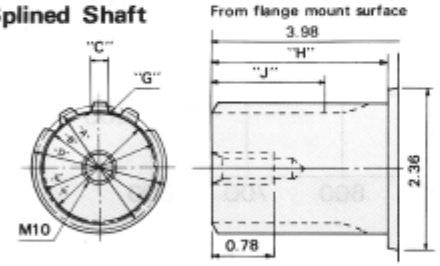
DIRECTION OF ROTATION
L : HIGH PRESSURE OIL SUPPLIED AT PORT L.
R : HIGH PRESSURE OIL SUPPLIED AT PORT R.

Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

Optional Shaft Dimensions

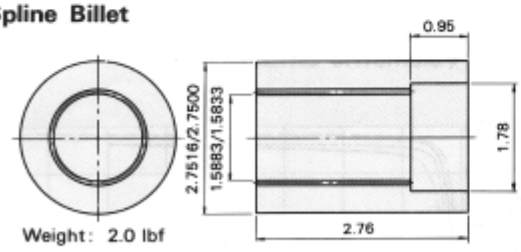
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 12/24
Class 1 fit : To B.S.3550 or A.S.A.—B5—15.

No. of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
20	1.6667	1.4434	0.1294 0.1263	1.7293 1.7243	1.5793	1.5627 1.5497	0.014	2.68	1.77

Spline Billet



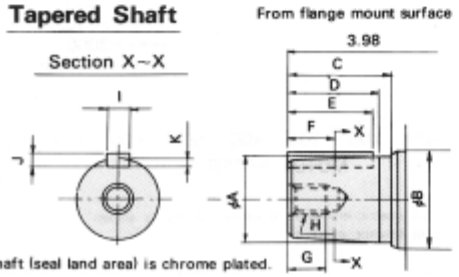
Weight : 2.0 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet : 4000 psi

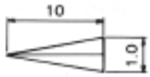
No. of Teeth :	20
Pitch :	12/24
Pressure Angle :	30°
Pitch Dia :	1.6667
Major Dia :	1.7630/1.7500
Minor Dia :	1.5883/1.5833
Space Width :	0.1339/0.1326

Tapered Shaft



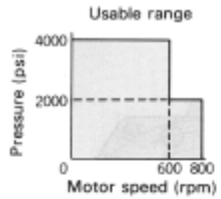
Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
1.9685 1.9679	2.362	2.323	2.126	1.890	1.063	0.984	M16	0.6299 0.6282	0.3937 0.3902	0.2441 0.2362

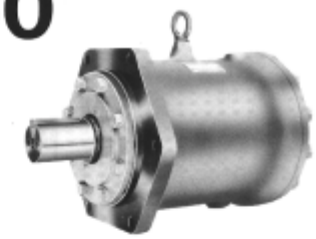
(Taper : 1.0/10 

)

DOWMAX ME350



Displacement	: 21.36 in³/rev.
Rated Pressure	: 4000 psi
Peak Pressure	: 4700 psi
Rated Torque	: 1133 lbf·ft
Rated Speed	: 600 rpm
Max. Speed	: 800 rpm
Max. Horse Power	: 129 hp
Weight	: 117 lbf



The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig. 1 Output torque vs speed

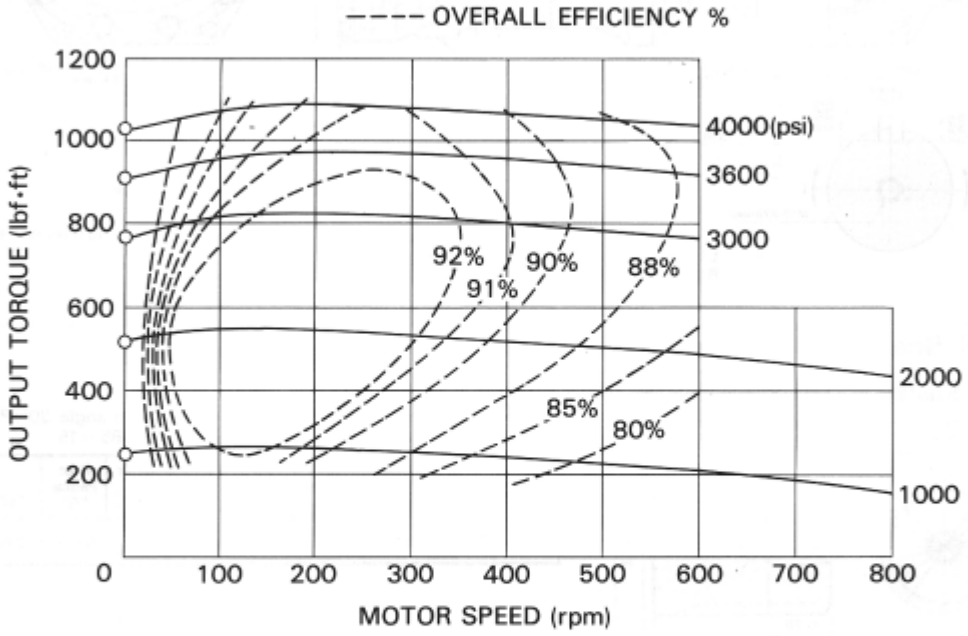
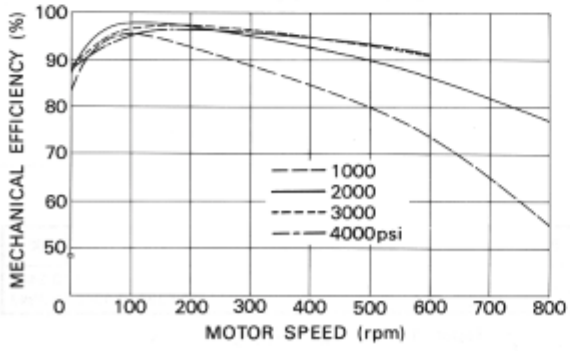
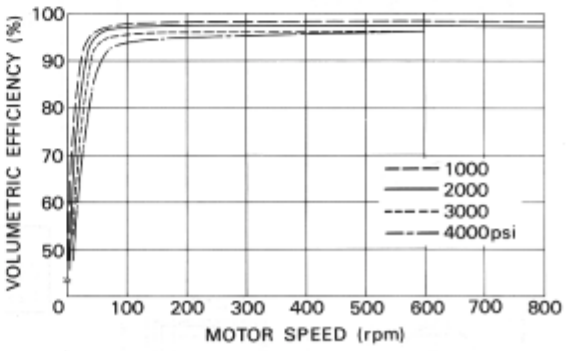


Fig. 2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig. 3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig.4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

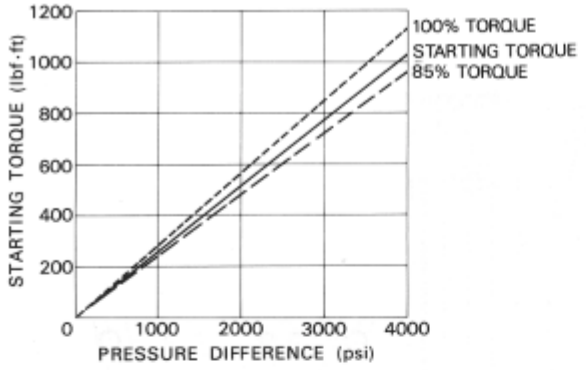


Fig.5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

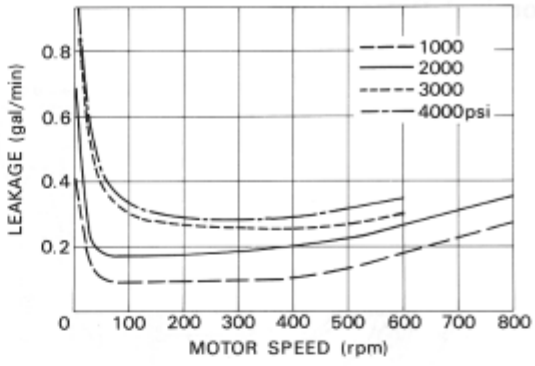


Fig.6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor, is operated as a pump or when the load overruns the motor, to prevent cavitation.

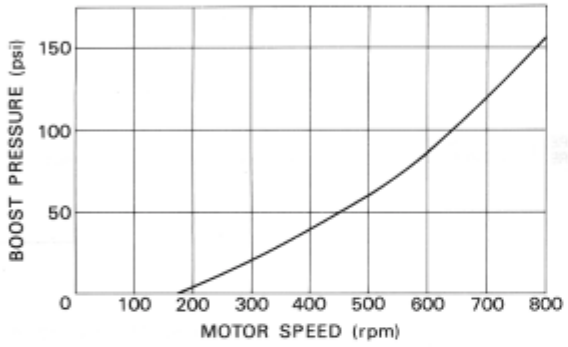


Fig.7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

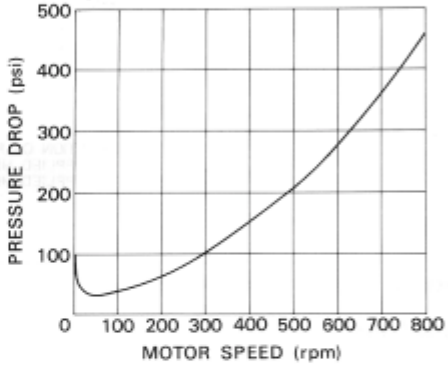
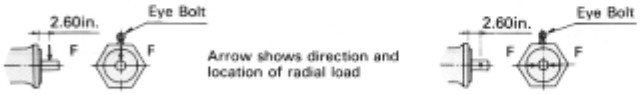


Fig.8 Bearing Life and Motor Shaft Radial Load



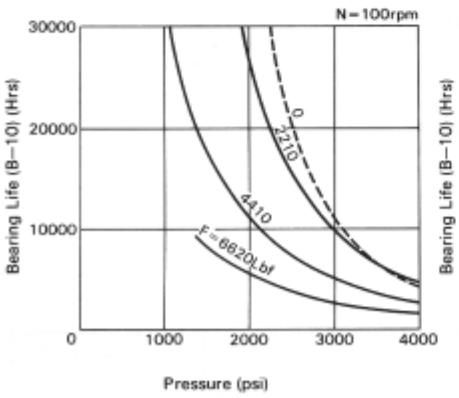


Fig. 8-1

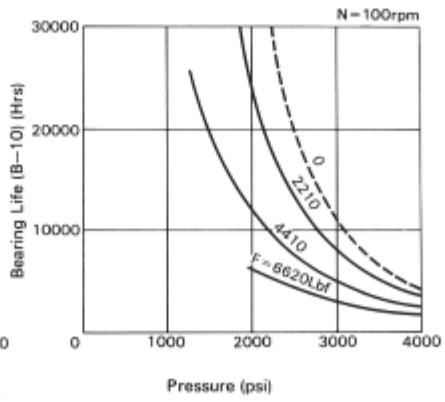


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8;
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below.

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

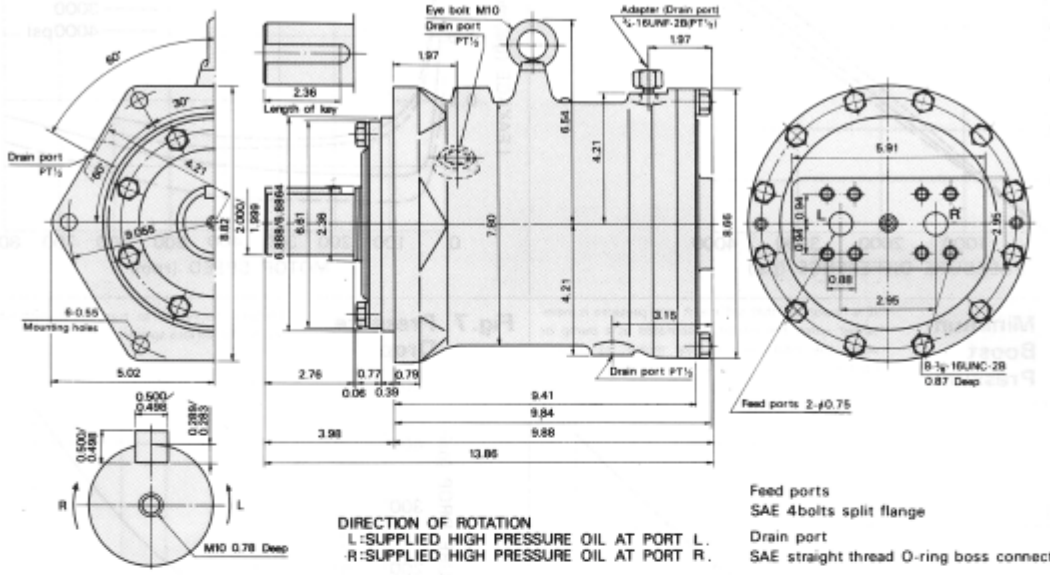
   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

   7300lbf
5. Applications with axial thrust loads should be referred to us.

ME350

Dimensions in inches

Nominal Dimensions



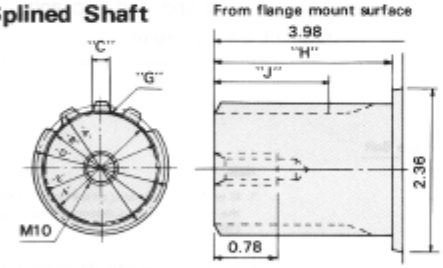
DIRECTION OF ROTATION
L:SUPPLIED HIGH PRESSURE OIL AT PORT L.
R:SUPPLIED HIGH PRESSURE OIL AT PORT R.

Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

Optional Shaft Dimensions

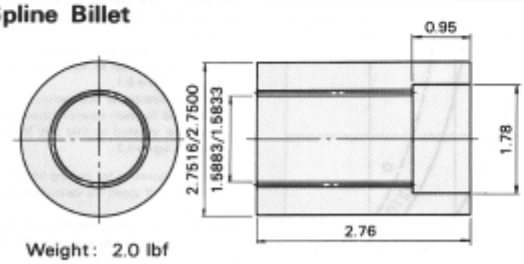
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 12/24
Class 1 fit : To B.S.3550 or A.S.A.–B5–15.

No. of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
20	1.6667	1.4434	0.1294 0.1263	1.7293 1.7243	1.5793	1.5627 1.5497	0.014	2.68	1.77

Spline Billet



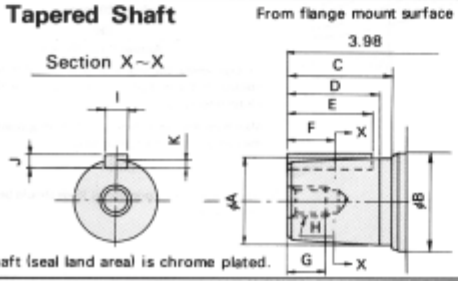
Weight : 2.0 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet : 4000 psi

No. of Teeth:	20
Pitch:	12/24
Pressure Angle:	30°
Pitch Dia:	1.6667
Major Dia:	1.7630/1.7500
Minor Dia:	1.5883/1.5833
Space Width:	0.1339/0.1326

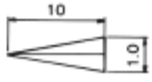
Tapered Shaft



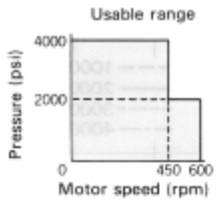
Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
1.9685 1.9679	2.362	2.323	2.126	1.890	1.063	0.984	M16	0.6299 0.6282	0.3937 0.3902	0.2441 0.2362

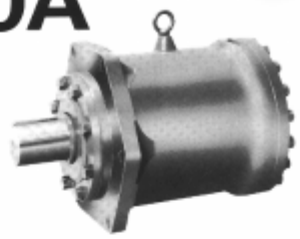
Taper : 1.0/10



DOWMAX ME600A



Displacement	: 36.74 in³/rev.
Rated Pressure	: 4000 psi
Peak Pressure	: 4700 psi
Rated Torque	: 1948 lbf·ft
Rated Speed	: 450 rpm
Max. Speed	: 600 rpm
Max. Horse Power	: 167 hp
Weight	: 203 lbf



The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig. 1 Output torque vs speed

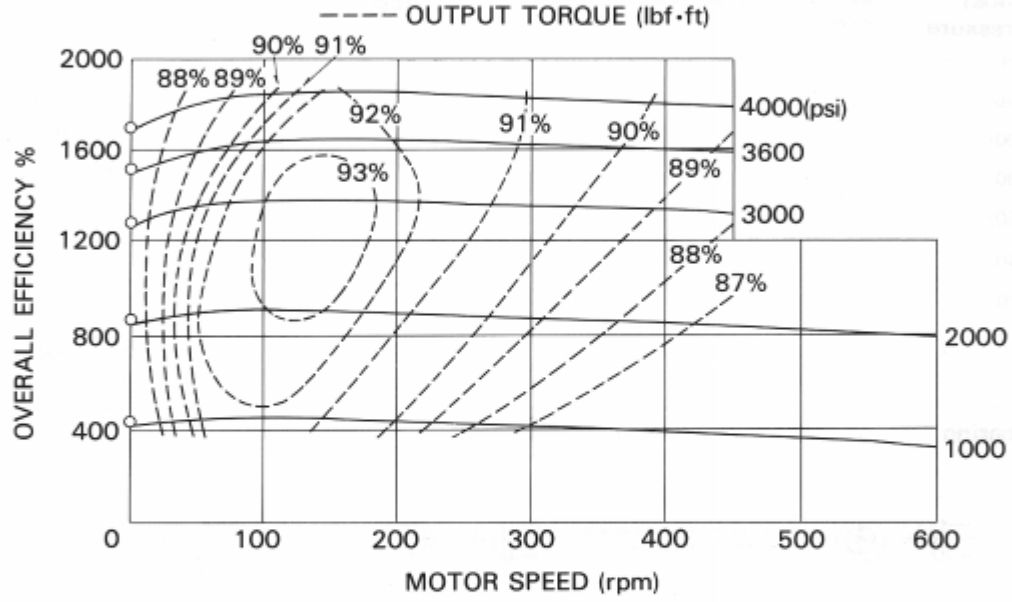
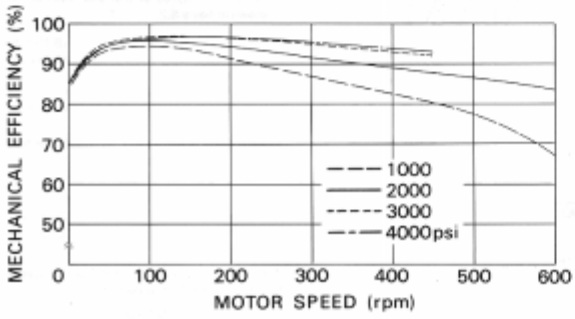
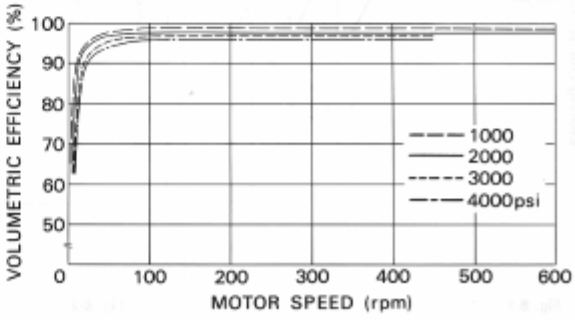


Fig. 2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig. 3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig.4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

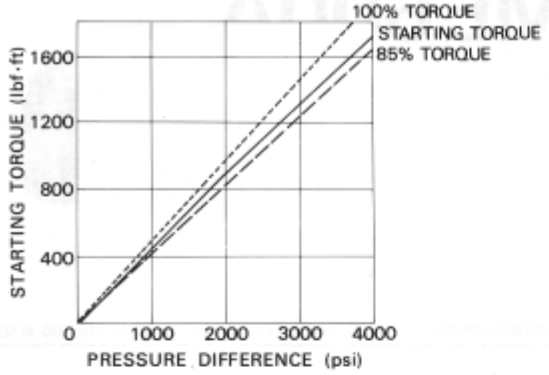


Fig.5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

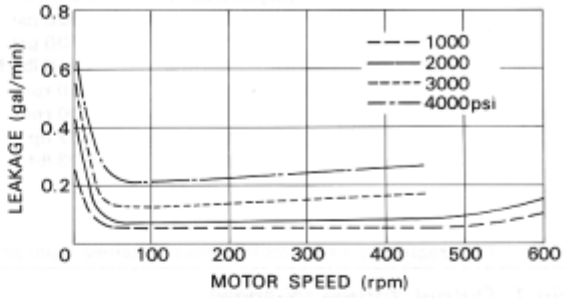


Fig.6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor, is operated as a pump or when the load overruns the motor, to prevent cavitation.

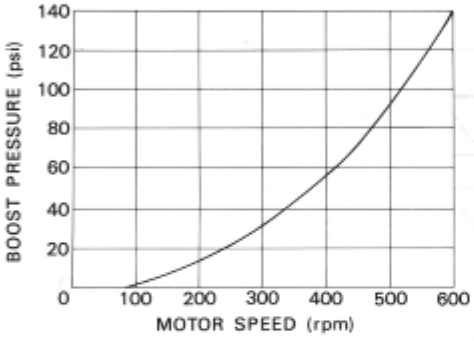


Fig.7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

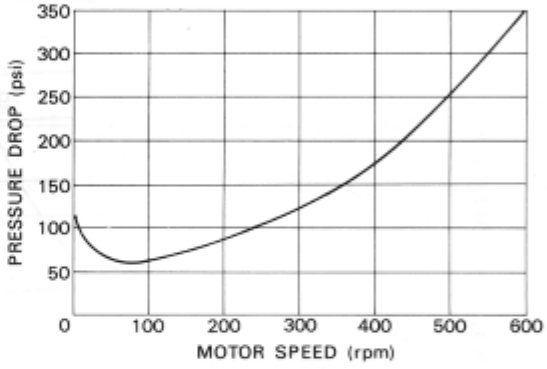
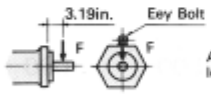
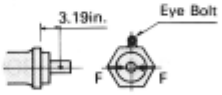


Fig.8 Bearing Life and Motor Shaft Radial Load



Arrow shows directionfand location of radial load



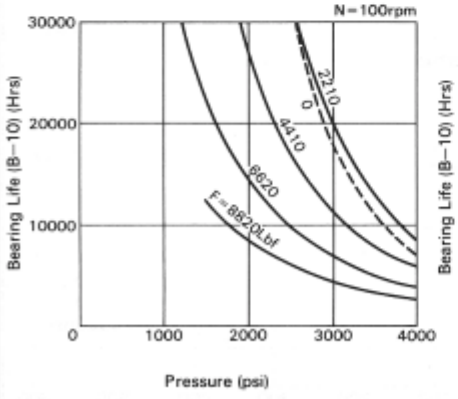


Fig. 8-1

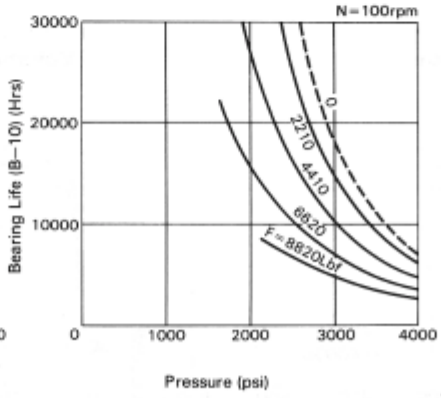


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8.
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below.

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

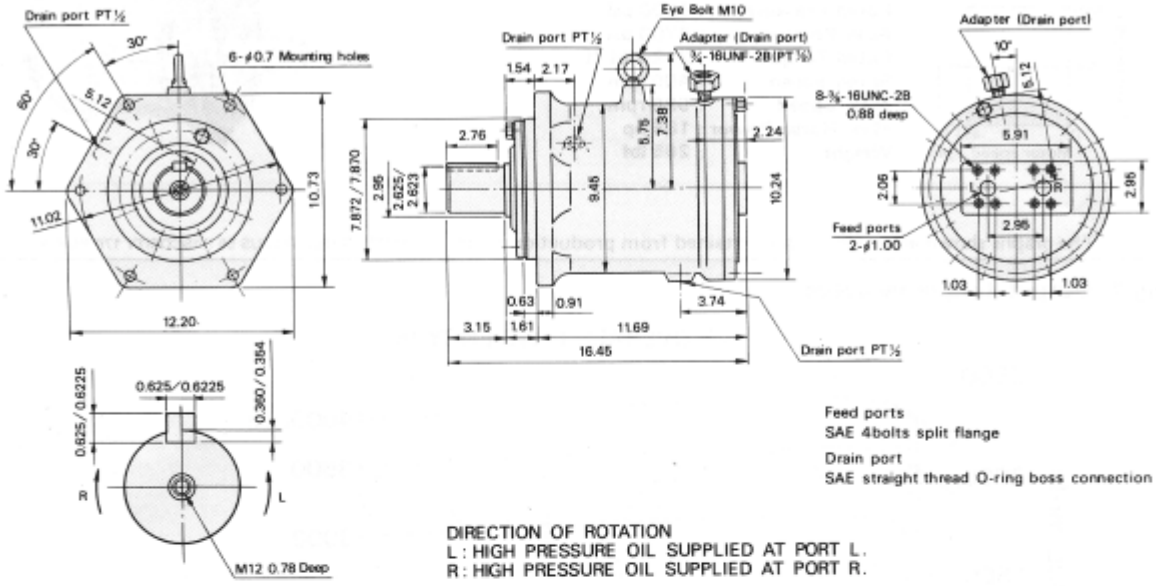
   12600lbf

5. Applications with axial thrust loads should be referred to us.

ME600A

Dimensions in inches

Nominal Dimensions



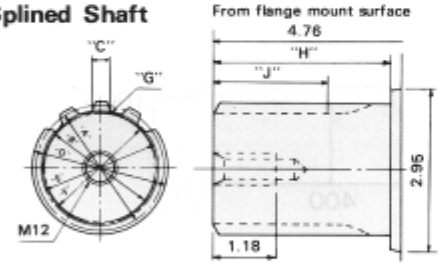
Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

DIRECTION OF ROTATION
L : HIGH PRESSURE OIL SUPPLIED AT PORT L.
R : HIGH PRESSURE OIL SUPPLIED AT PORT R.

Optional Shaft Dimensions

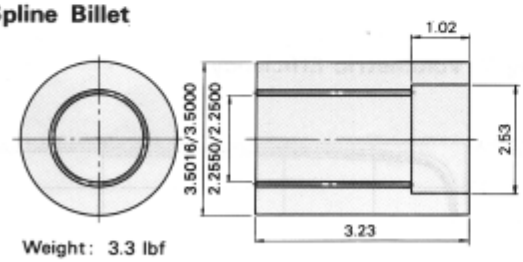
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 8/16
Class 1 fit : To B.S.3550 or A.S.A.—B5—15.

No. of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
19	2.3750	2.0568	0.1928 0.1914	2.4710 2.4660	2.2452	2.2210 2.2030	0.039	3.15	2.17

Spline Billet



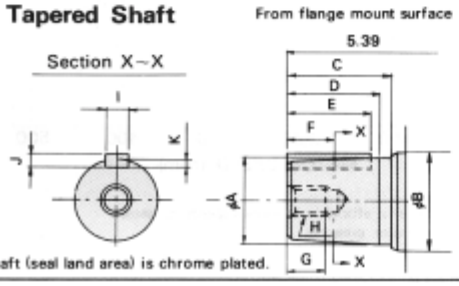
Weight : 3.3 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet : 4000 psi

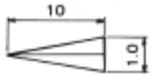
No. of Teeth:	19
Pitch:	8/16
Pressure Angle:	30°
Pitch Dia:	2.3750
Major Dia:	2.5180/2.5000
Minor Dia:	2.2550/2.2500
Space Width:	0.1996/0.1982

Tapered Shaft



Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
2.5591 2.5579	2.95	3.35	3.15	2.91	1.57	1.18	M24	0.7087 0.7070	0.4331 0.4287	0.2835 0.2756

(Taper : 1.0/10 

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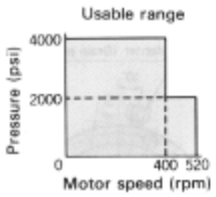
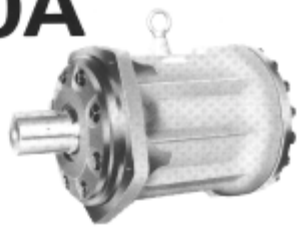
DOWMAX ME 750A



Displacement	: 45.76 in³/rev.
Rated Pressure	: 4000 psi
Peak Pressure	: 4700 psi
Rated Torque	: 2426 lbf-ft
Rated Speed	: 400 rpm
Max. Speed	: 520 rpm
Max. Horse Power	: 185 hp
Weight	: 265 lbf



The graphs shown are mean values obtained from production units. FLUID: SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig.1 Output torque vs speed

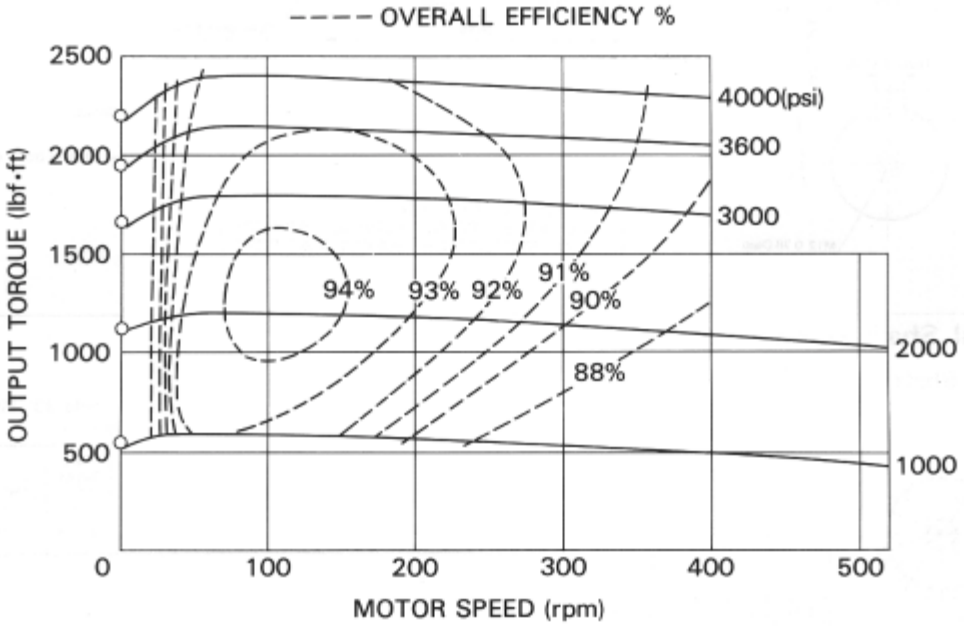
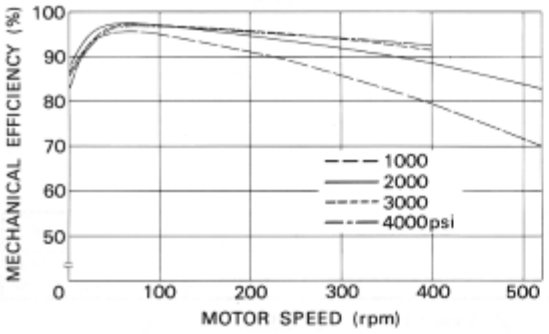
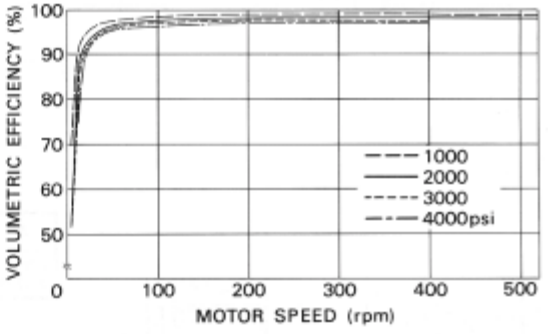


Fig.2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig.3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig. 4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

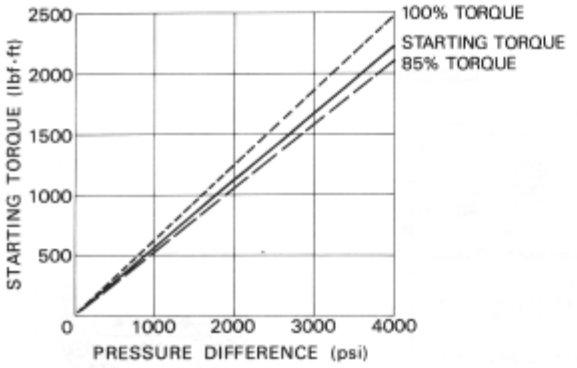


Fig. 5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

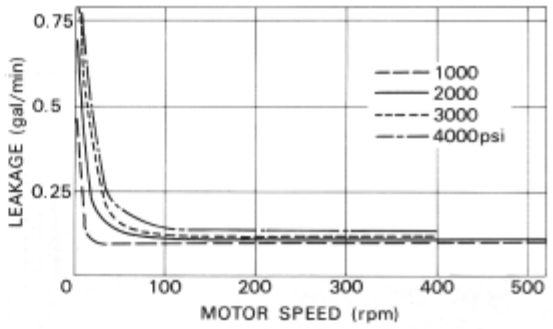


Fig. 6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

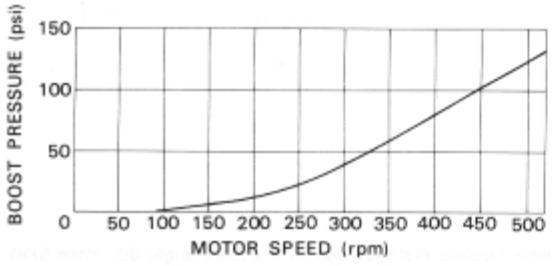


Fig. 7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

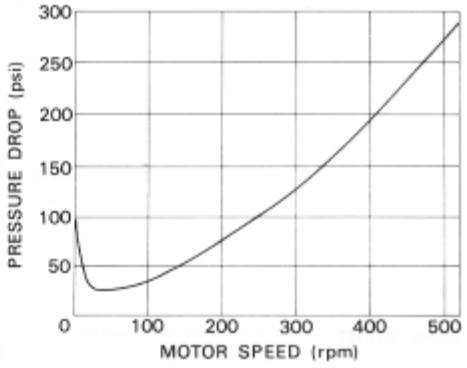
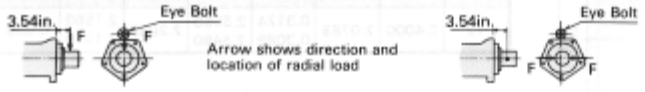


Fig. 8 Bearing Life and Motor Shaft Radial Load



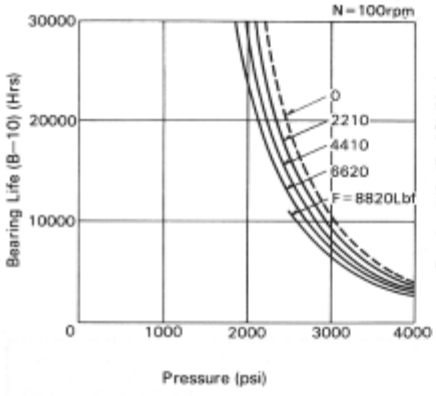


Fig. 8-1

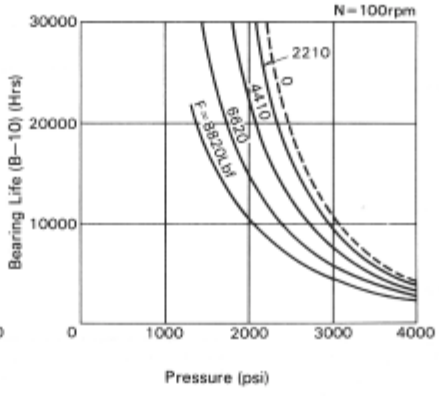


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8;
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below.

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

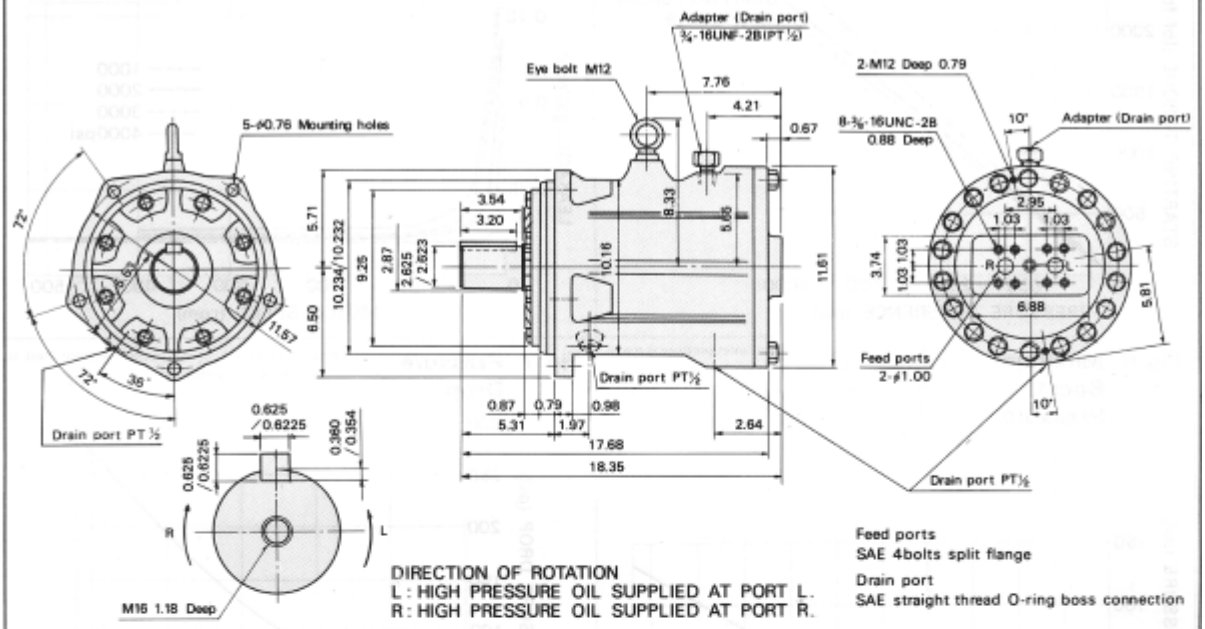
   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

   8600 lbf
5. Applications with axial thrust loads should be referred to us.

ME750A

Dimensions in inches

Nominal Dimensions



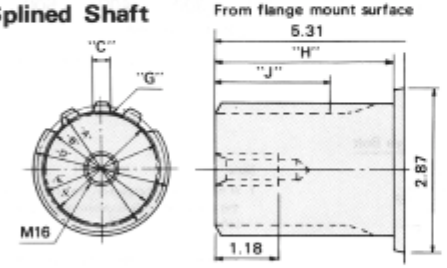
DIRECTION OF ROTATION
L : HIGH PRESSURE OIL SUPPLIED AT PORT L.
R : HIGH PRESSURE OIL SUPPLIED AT PORT R.

Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

Optional Shaft Dimensions

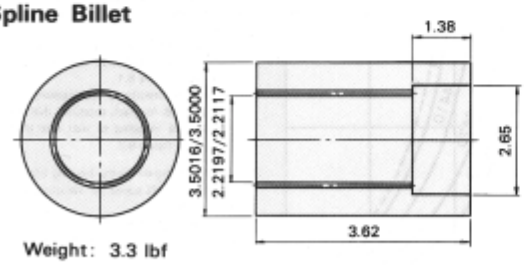
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 5/10
Class 1 fit : To B.S.3550 or A.S.A.—B5—15.

No. of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
12	2.4000	2.0785	0.3124 0.3089	2.5560 2.5480	2.2069	2.1560 2.1310	0.039	3.54	2.20

Spline Billet



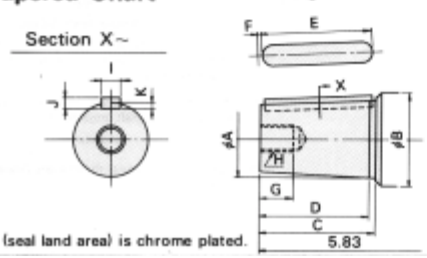
Weight : 3.3 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet : 4000 psi

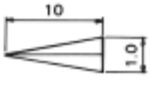
No. of Teeth :	12
Pitch :	5/10
Pressure Angle :	30°
Pitch Dia :	2.4000
Major Dia :	2.6250/2.6000
Minor Dia :	2.2197/2.2117
Space Width :	0.3178/0.3163

Tapered Shaft



Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
2.3819 2.3811	2.953	3.543	3.346	3.346	0.079	1.575	M24	0.6299 0.6282	0.394 0.390	0.244 0.236

(Taper : 1.0/10 

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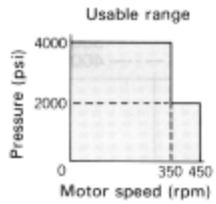
DOWMAX ME850



Displacement	: 51.68 in³/rev.
Rated Pressure	: 4000 psi
Peak Pressure	: 4700 psi
Rated Torque	: 2740 lbf·ft
Rated Speed	: 350 rpm
Max. Speed	: 450 rpm
Max. Horse Power	: 183 hp
Weight	: 265 lbf

The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig. 1 Output torque vs speed

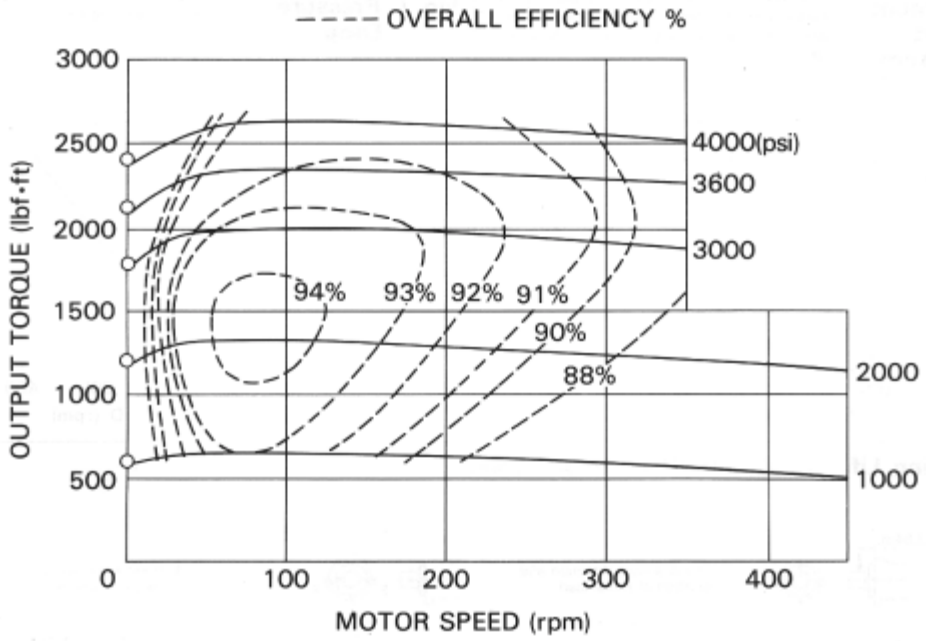
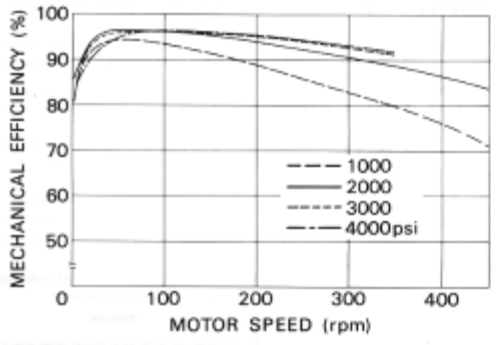
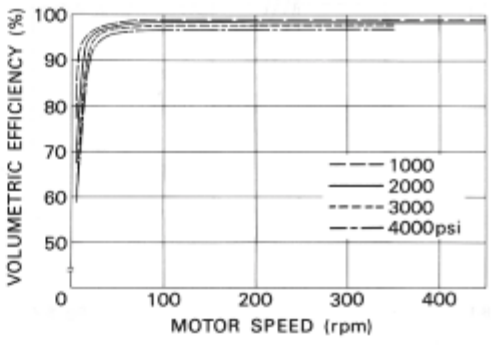


Fig. 2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig. 3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig. 4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

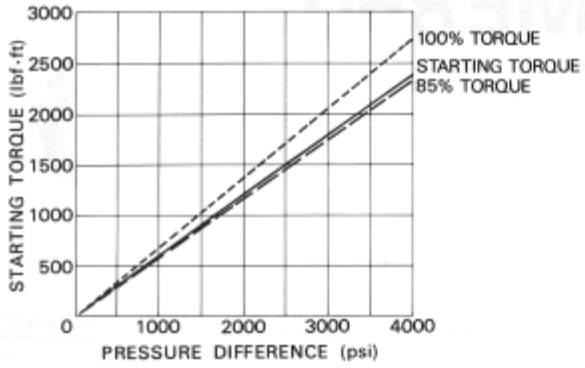


Fig. 5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

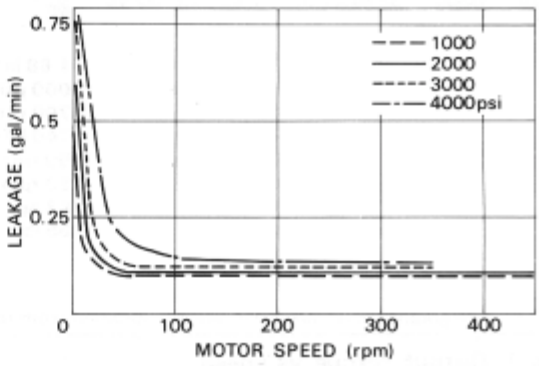


Fig. 6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

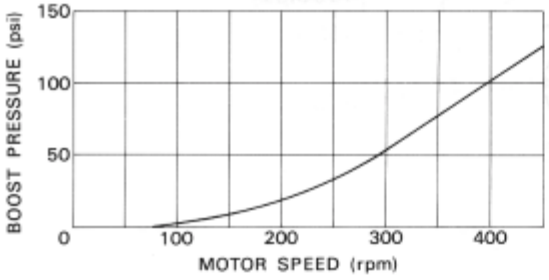


Fig. 7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

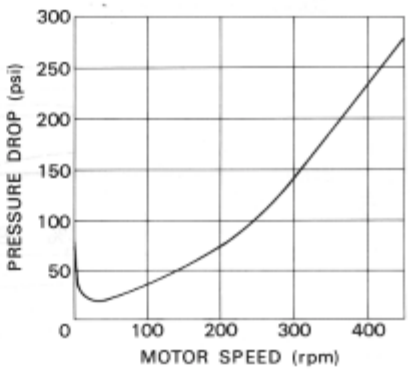
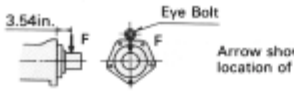
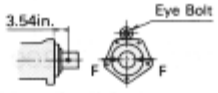


Fig. 8 Bearing Life and Motor Shaft Radial Load



Arrow shows direction and location of radial load



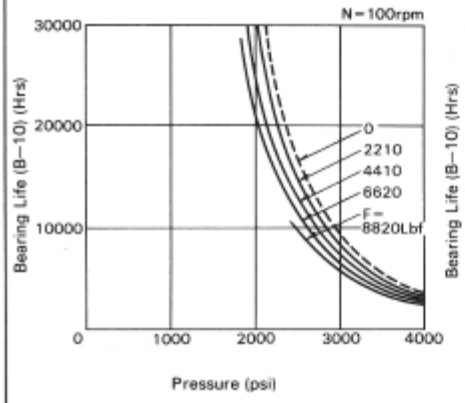


Fig. 8-1

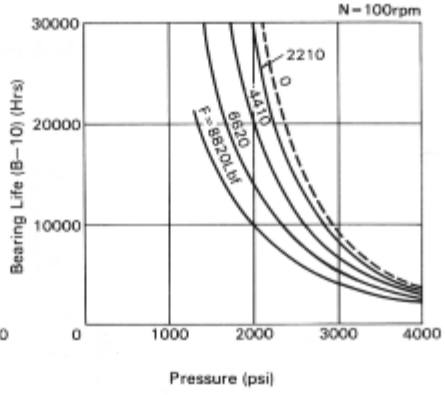


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8.
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below.

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

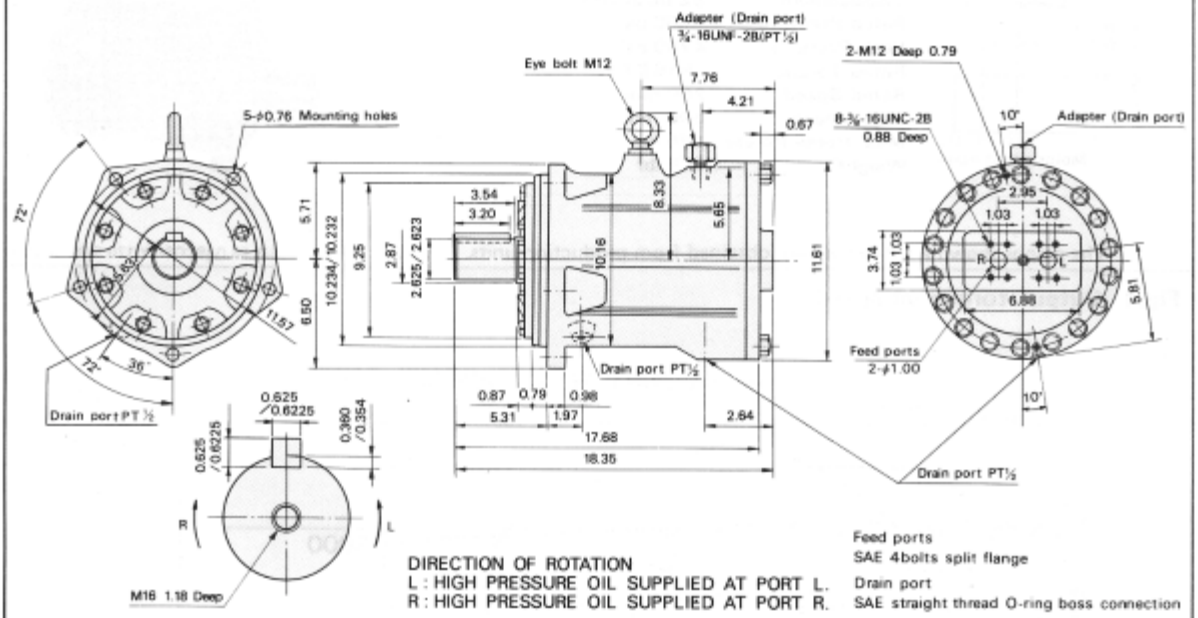
   8400lbf

5. Applications with axial thrust loads should be referred to us.

ME850

Dimensions in inches

Nominal Dimensions

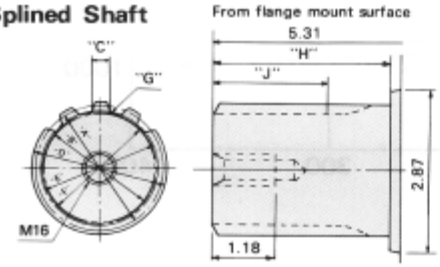


DIRECTION OF ROTATION
L : HIGH PRESSURE OIL SUPPLIED AT PORT L.
R : HIGH PRESSURE OIL SUPPLIED AT PORT R.

Feed ports
SAE 4bolts split flange
Drain port
SAE straight thread O-ring boss connection

Optional Shaft Dimensions

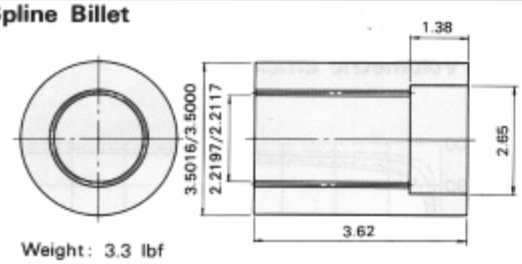
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 5/10
Class 1 fit : To B.S.3550 or A.S.A.–B5–15.

No. of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
12	2.4000	2.0785	0.3124 0.3089	2.5560 2.5480	2.2069	2.1560 2.1310	0.039	3.54	2.20

Spline Billet

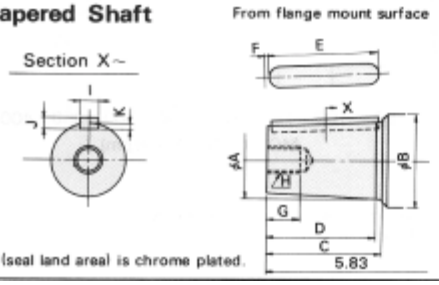


Weight : 3.3 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15
Allowable Pressure for Spline Billet : 4000 psi

No. of Teeth :	12
Pitch :	5/10
Pressure Angle :	30°
Pitch Dia :	2.4000
Major Dia :	2.6250/2.6000
Minor Dia :	2.2197/2.2117
Space Width :	0.3178/0.3163

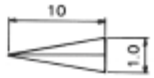
Tapered Shaft



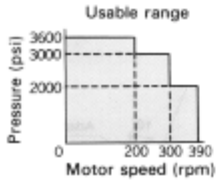
Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
2.3819 2.3811	2.953	3.543	3.346	3.346	0.079	1.575	M24	0.6299 0.6282	0.394 0.390	0.244 0.236

Taper : 1.0/10



DOWMAX ME1300A



Displacement	: 82.06 in³/rev.
Rated Pressure	: 3600 psi
Peak Pressure	: 4700 psi
Rated Torque	: 3916 lbf·ft
Rated Speed	: 200 rpm
Max. Speed	: 390 rpm
Max. Horse Power	: 186 hp
Weight	: 375 lbf

The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig.1 Output torque vs speed

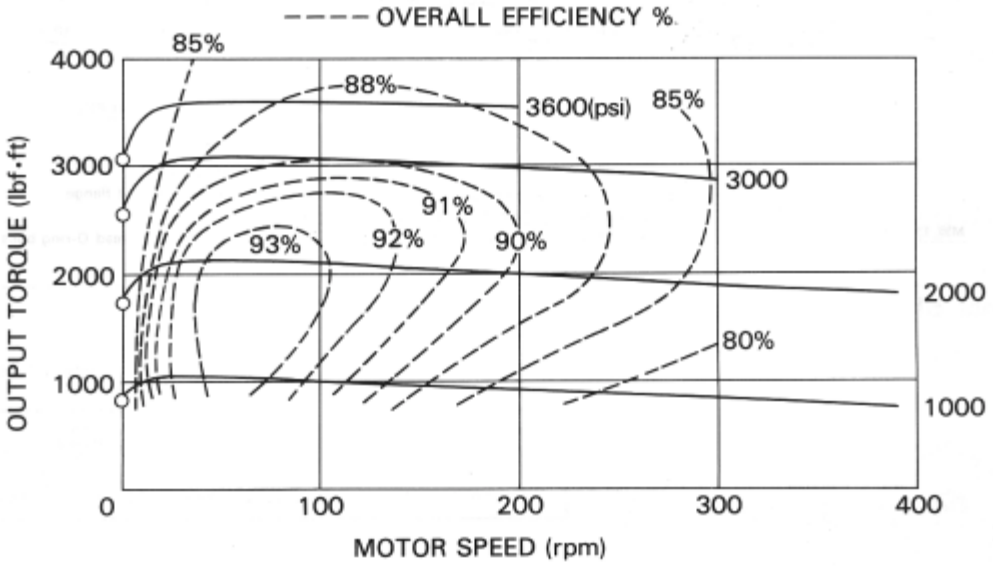
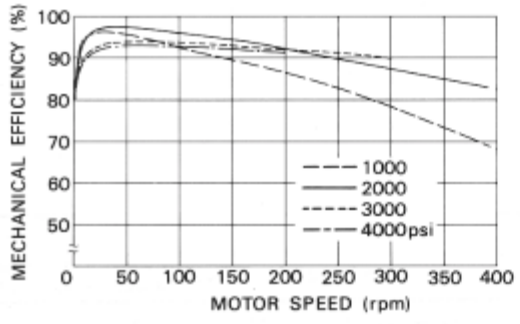
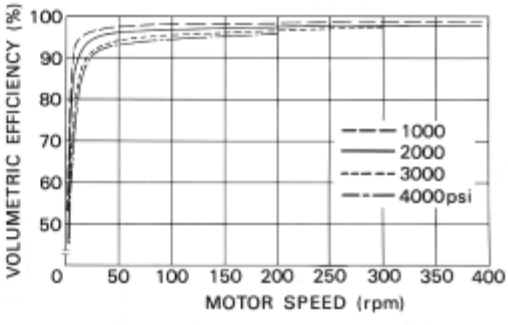


Fig.2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig.3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig.4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

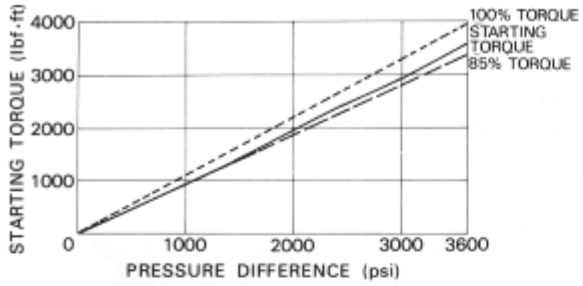


Fig.5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

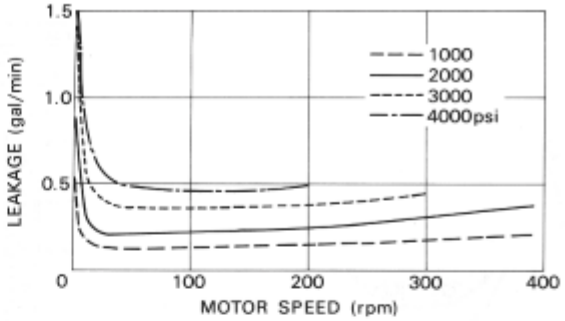


Fig.6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

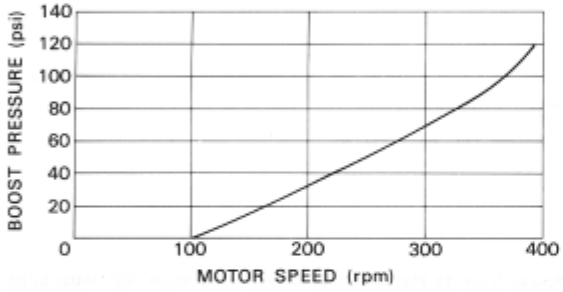


Fig.7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

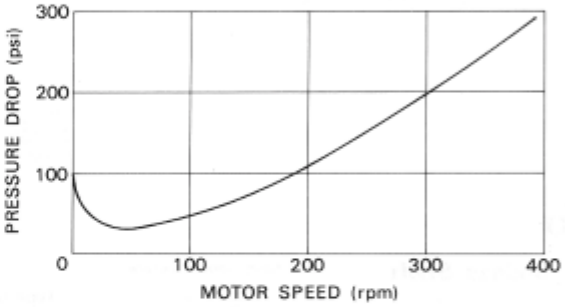
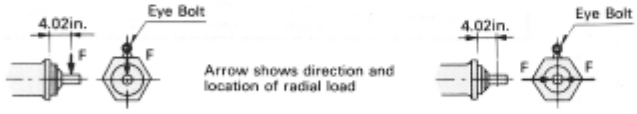


Fig.8 Bearing Life and Motor Shaft Radial Load



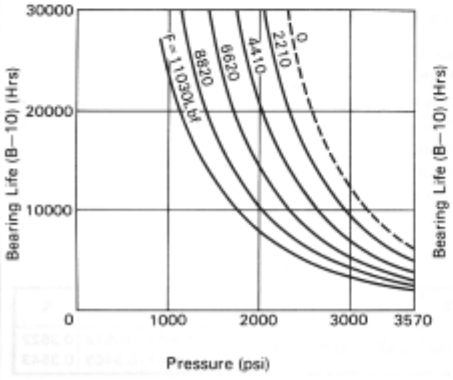


Fig. 8-1

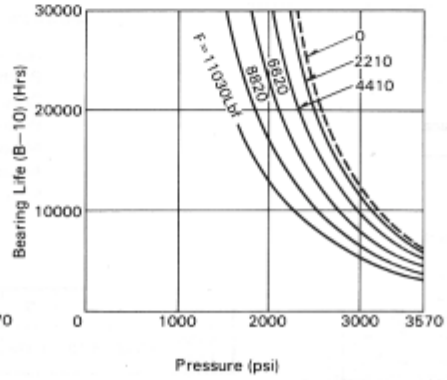


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8;
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below.

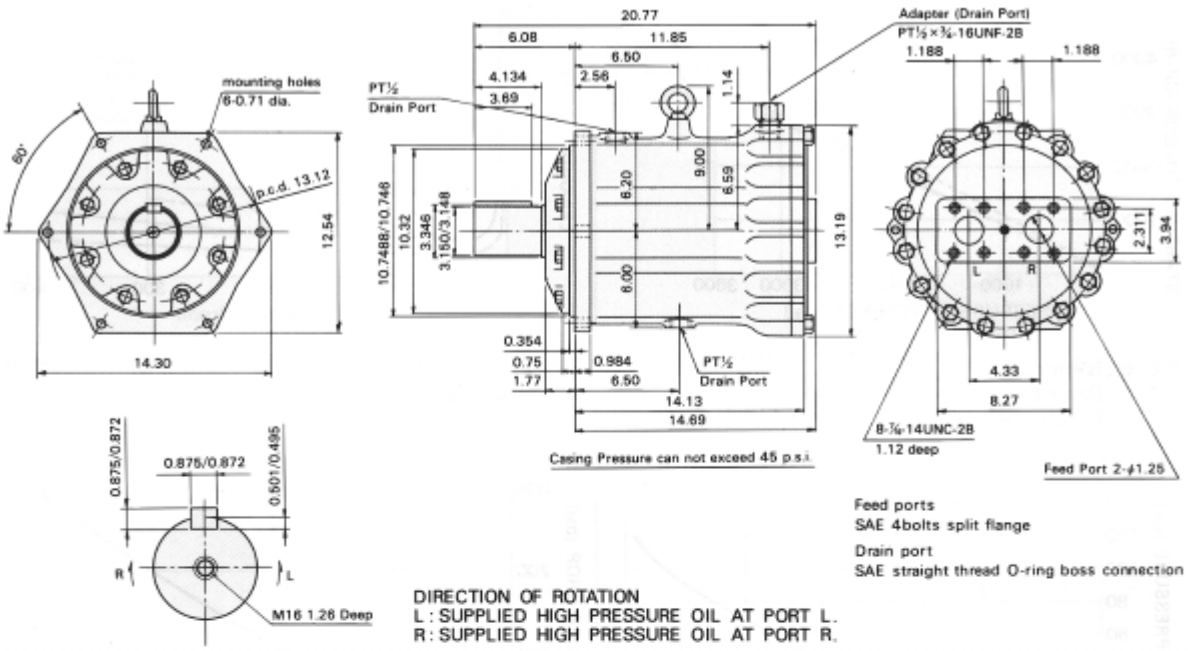
   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)
   10500lbf
5. Applications with axial thrust loads should be referred to us.

ME1300A

Dimensions in inches

Nominal Dimensions



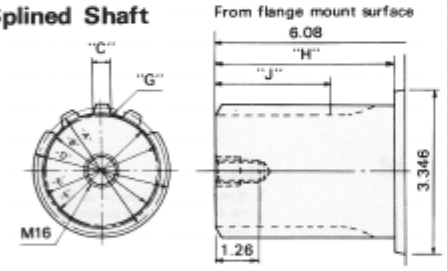
Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

DIRECTION OF ROTATION
L : SUPPLIED HIGH PRESSURE OIL AT PORT L.
R : SUPPLIED HIGH PRESSURE OIL AT PORT R.

Optional Shaft Dimensions

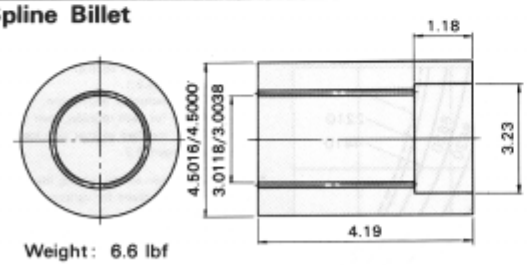
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 5/10
Class 1 fit : To B.S.3550 or A.S.A.–B5–15.

No.of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
15	3.0000	2.5981	0.3120 0.3087	3.1560 3.1480	2.7992	2.7560 2.7310	0.035	4.134	3.01

Spline Billet



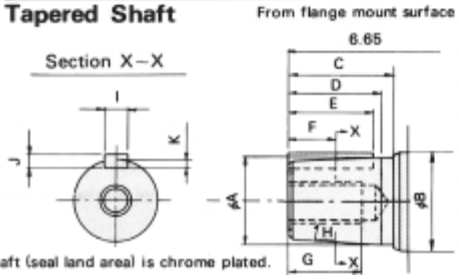
Weight : 6.6 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet : 3600 psi

No.of Teeth:	15
Pitch:	5/10
Pressure Angle:	30°
Pitch Dia:	3.0000
Major Dia:	3.2250/3.2000
Minor Dia:	2.8132/2.8052
Space Width:	0.3179/0.3164

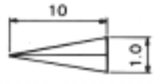
Tapered Shaft



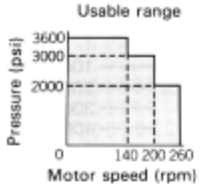
Shaft (seal land areal is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
3.150 3.149	3.346	4.13	3.976	3.54	1.988	2.54	M24	0.8661 0.8641	0.5512 0.5469	0.3622 0.3543

Taper : 1.0/10



DOWMAX ME1900



Displacement	: 113.97 in³/rev.
Rated Pressure	: 3600 psi
Peak Pressure	: 4700 psi
Rated Torque	: 5438 lbf·ft
Rated Speed	: 140 rpm
Max. Speed	: 260 rpm
Max. Horse Power	: 173 hp
Weight	: 595 lbf

The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig. 1 Output torque vs speed

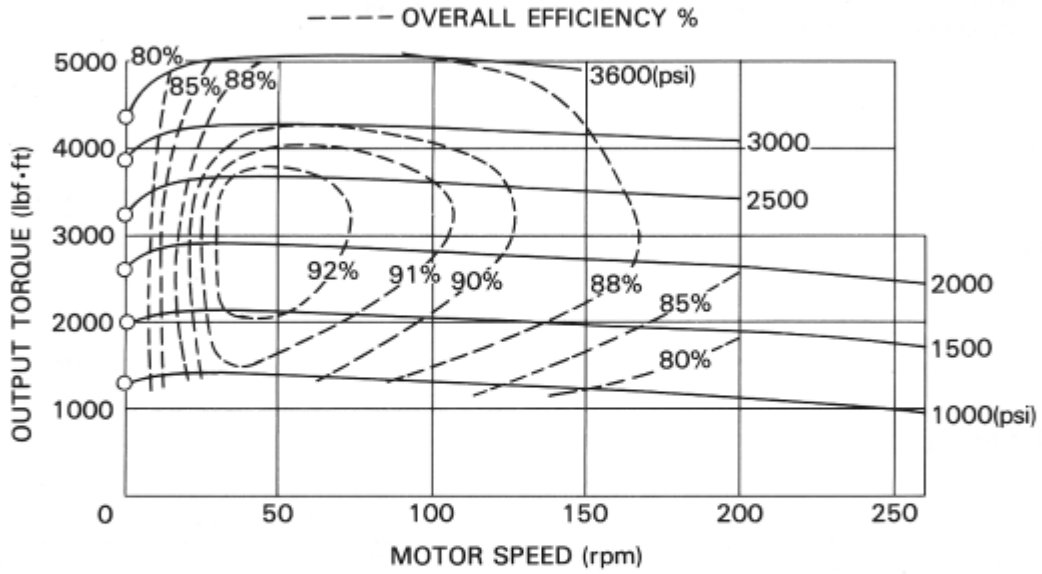
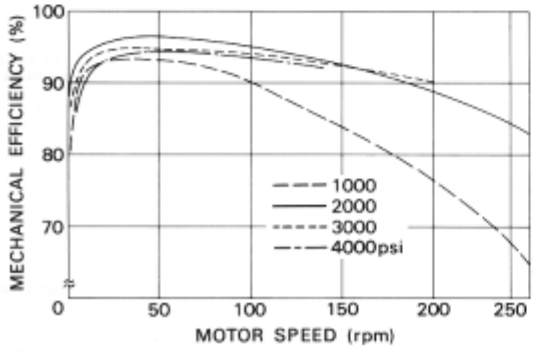
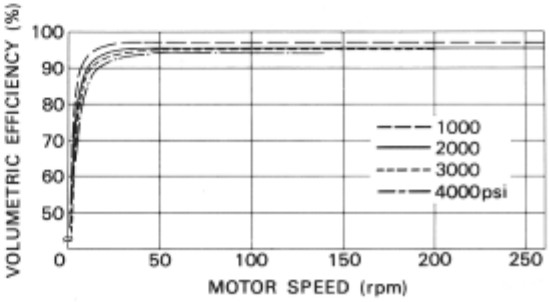


Fig. 2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig. 3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig.4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

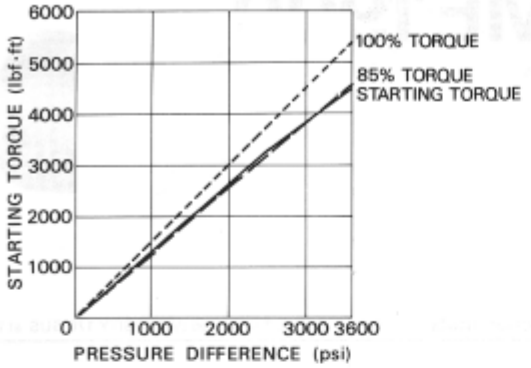


Fig.5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

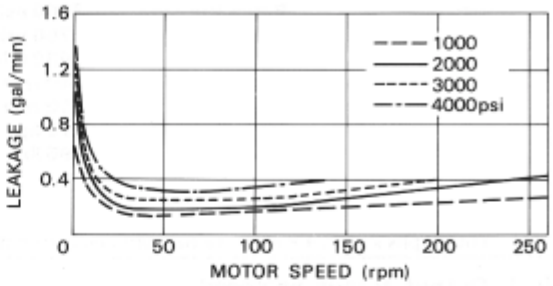


Fig.6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

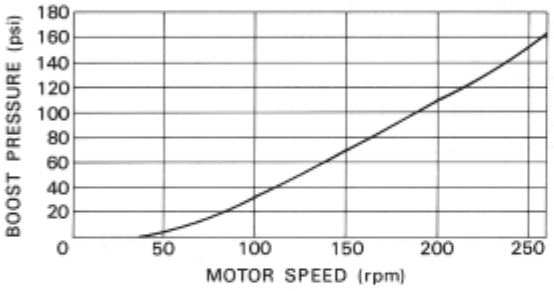


Fig.7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

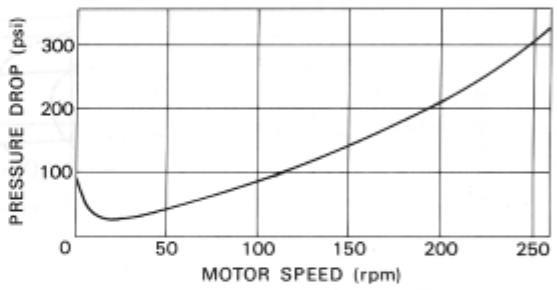


Fig.8 Bearing Life and Motor Shaft Radial Load

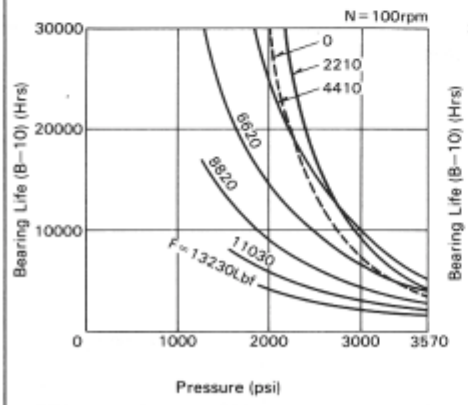


Fig. 8-1

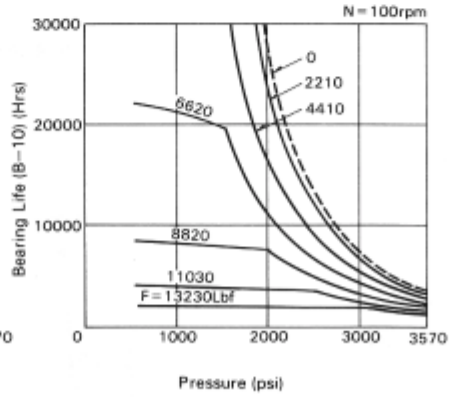


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8.
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below.

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

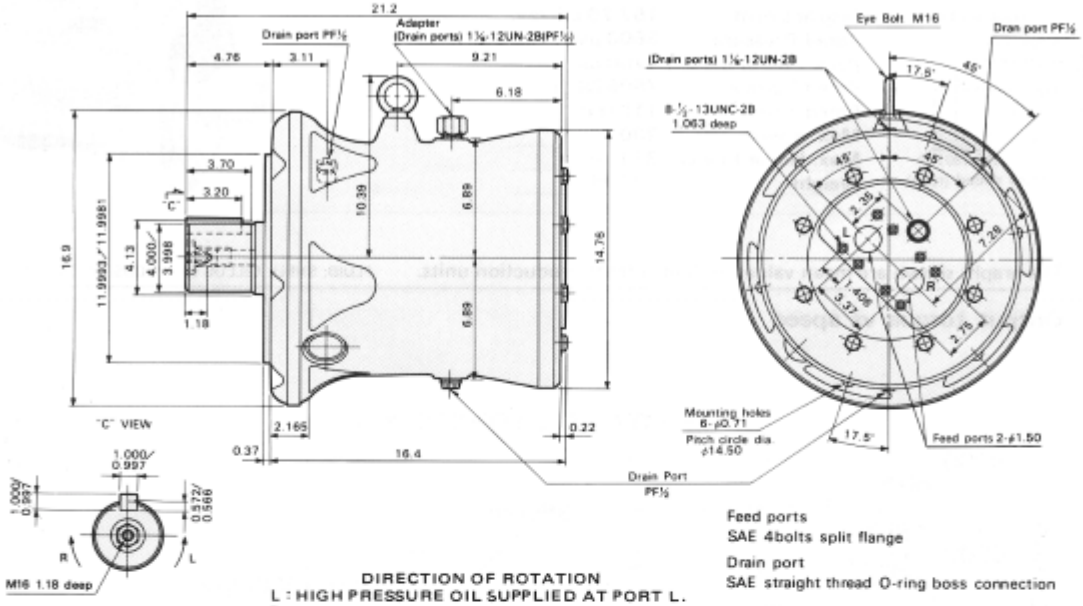
   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

   11900lbf
5. Applications with axial thrust loads should be referred to us.

ME1900

Dimensions in inches

Nominal Dimensions



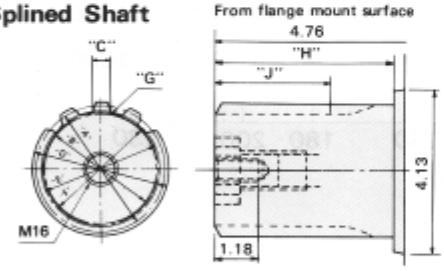
DIRECTION OF ROTATION
L : HIGH PRESSURE OIL SUPPLIED AT PORT L.
R : HIGH PRESSURE OIL SUPPLIED AT PORT R.

Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

Optional Shaft Dimensions

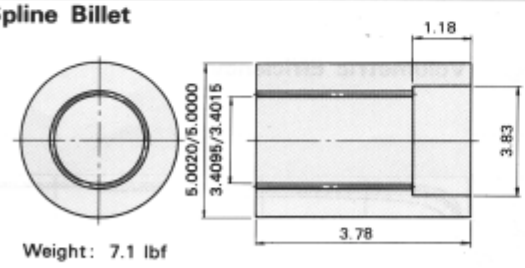
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 5/10
Class 1 fit : To B.S.3550 or A.S.A.–B5–15.

No.of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
18	3.6000	3.1177	0.3123 0.3085	3.7560 3.7480	3.3943	3.3560 3.3310	0.032	3.70	2.55

Spline Billet



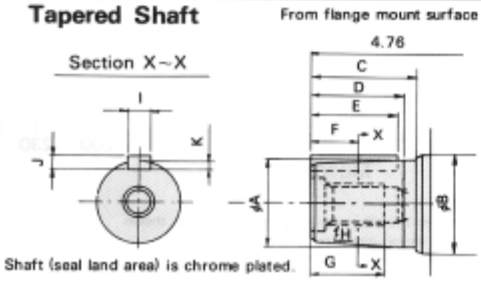
Weight : 7.1 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet : 3600 psi

No.of Teeth:	18
Pitch:	5/10
Pressure Angle:	30°
Pitch Dia:	3.6000
Major Dia:	3.8250/3.8000
Minor Dia:	3.4095/3.4015
Space Width:	0.3180/0.3164

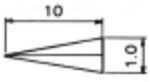
Tapered Shaft



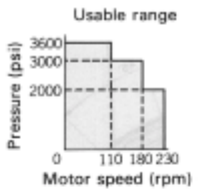
Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
3.9370 3.9361	4.134	3.898	3.701	3.150	1.850	2.500	M36	1.1024 1.1003	0.6299 0.6256	0.4016 0.3937

Taper : 1.0/10



DOWMAX ME2600



Displacement	: 157.29 in³/rev.
Rated Pressure	: 3600 psi
Peak Pressure	: 4700 psi
Rated Torque	: 7505 lbf·ft
Rated Speed	: 110 rpm
Max. Speed	: 230 rpm
Max. Horse Power	: 214 hp
Weight	: 772 lbf

The graphs shown are mean values obtained from production units. FLUID: SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig. 1 Output torque vs speed

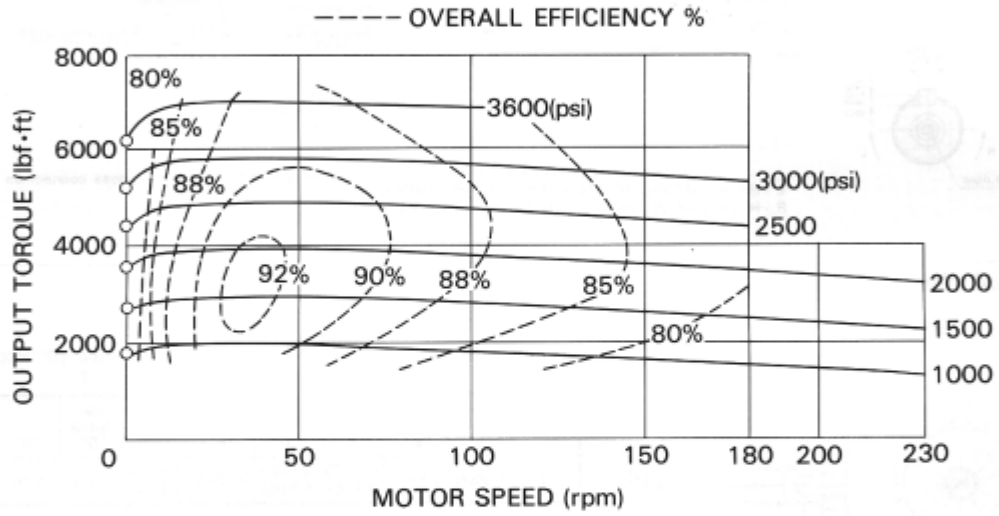
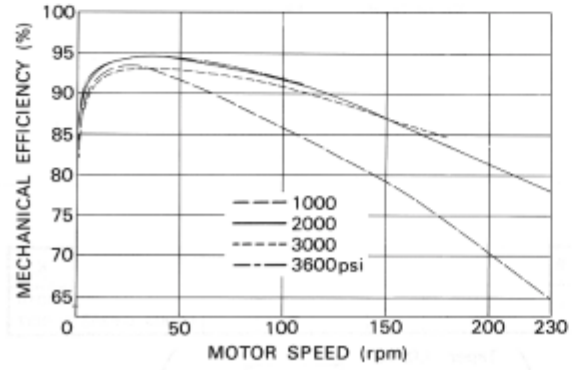
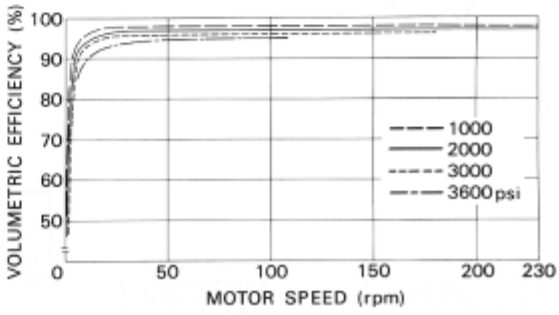


Fig. 2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig. 3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig.4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

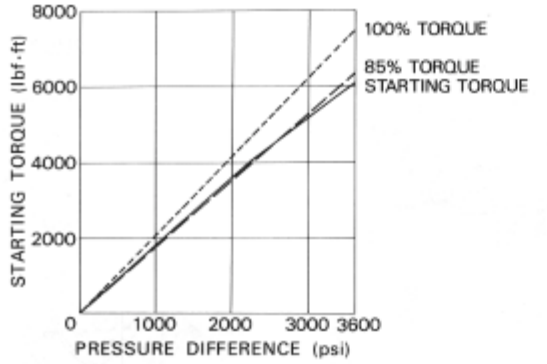


Fig.5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

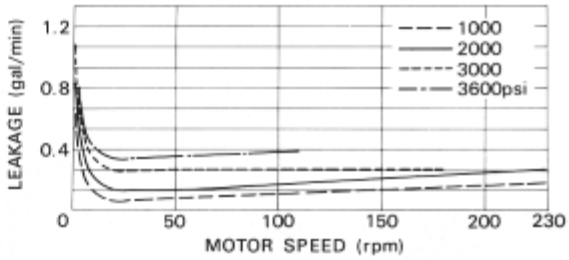


Fig.6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

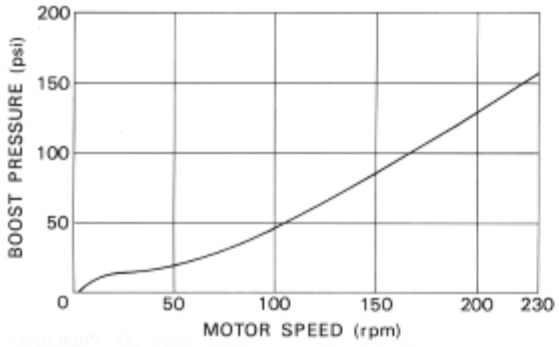


Fig.7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

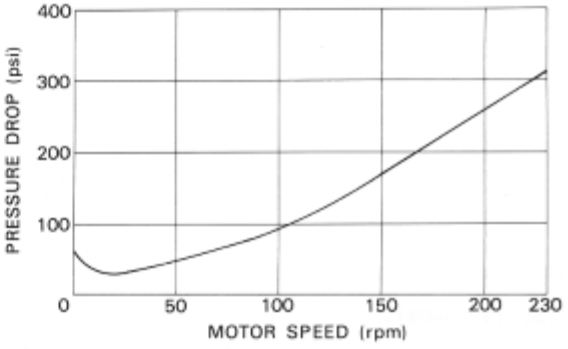
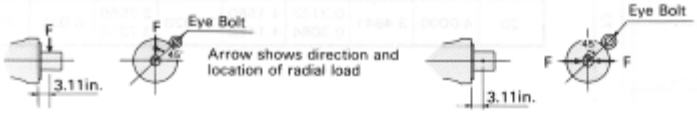


Fig.8 Bearing Life and Motor Shaft Radial Load



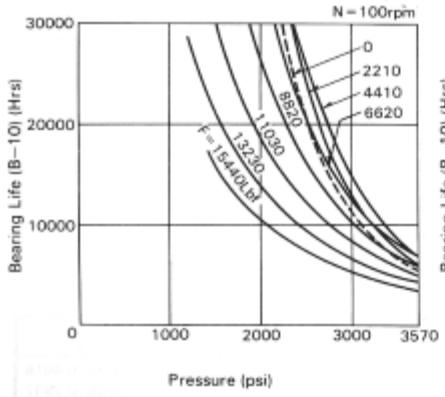


Fig. 8-1

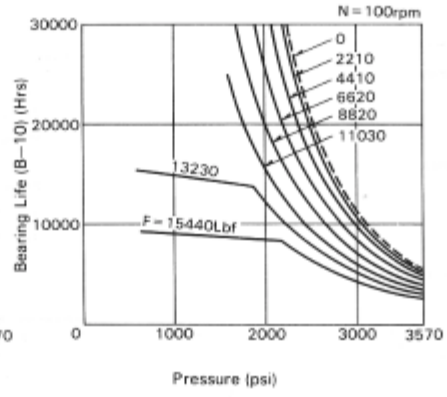


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8:
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below:

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

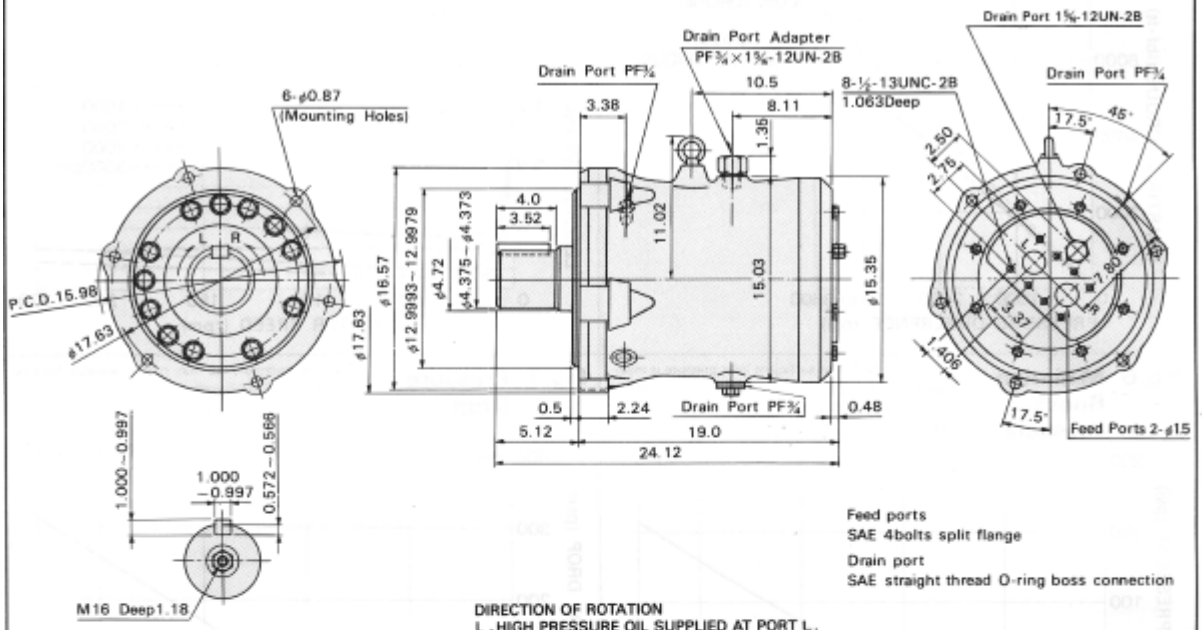
   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

   14800lbf
5. Applications with axial thrust loads should be referred to us.

ME2600

Dimensions in inches

Nominal Dimensions



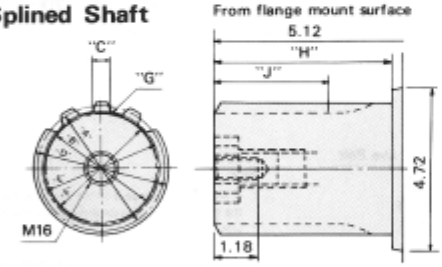
Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

DIRECTION OF ROTATION
L : HIGH PRESSURE OIL SUPPLIED AT PORT L.
R : HIGH PRESSURE OIL SUPPLIED AT PORT R.

Optional Shaft Dimensions

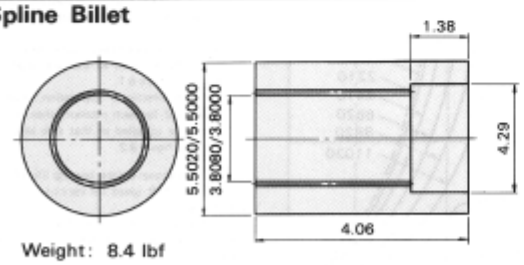
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 5/10
Class 1 fit : To B.S.3550 or A.S.A.-B5-15.

No.of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
20	4.0000	3.4641	0.3123 0.3084	4.1560 4.1480	3.7920	3.7560 3.7310	0.031	4.00	2.70

Spline Billet



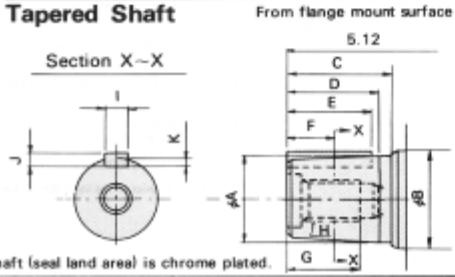
Weight : 8.4 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet : 3600 psi

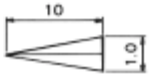
No.of Teeth:	20
Pitch:	5/10
Pressure Angle:	30°
Pitch Dia:	4.0000
Major Dia:	4.2250/4.2000
Minor Dia:	3.8080/3.8000
Space Width:	0.3181/0.3165

Tapered Shaft



Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
4.3307 4.3298	4.724	4.197	4.000	3.465	1.969	2.500	M36	1.1024 1.1003	0.6299 0.6256	0.4016 0.3937

(Taper : 1.0/10 

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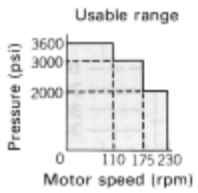
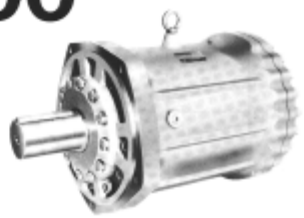
DOWMAX ME3100



Displacement	: 189.42 in³/rev.
Rated Pressure	: 3600 psi
Peak Pressure	: 4700 psi
Rated Torque	: 9039 lbf·ft
Rated Speed	: 110 rpm
Max. Speed	: 230 rpm
Max. Horse Power	: 251 hp
Weight	: 802 lbf



The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F

Fig. 1 Output torque vs speed

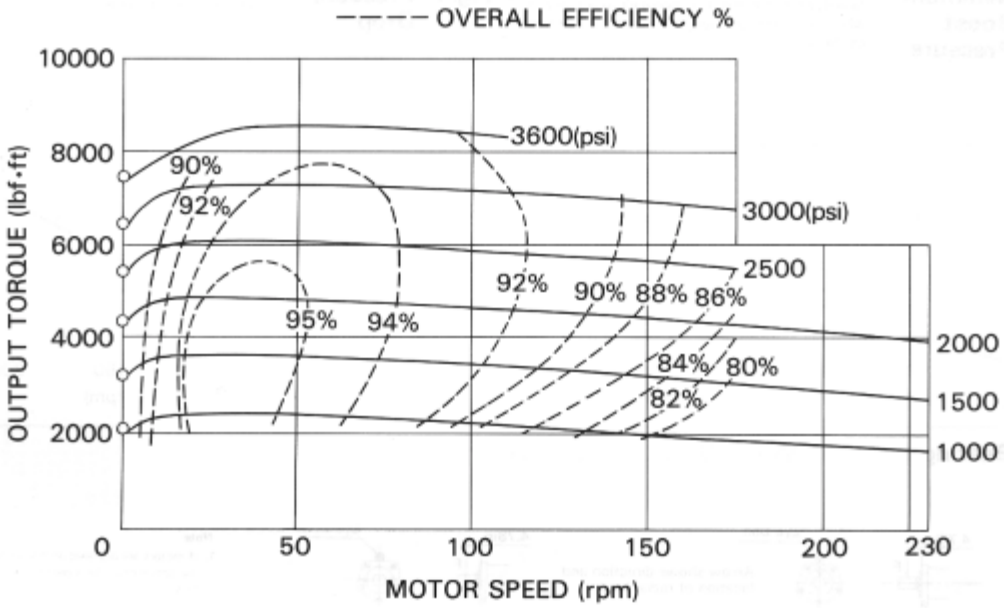
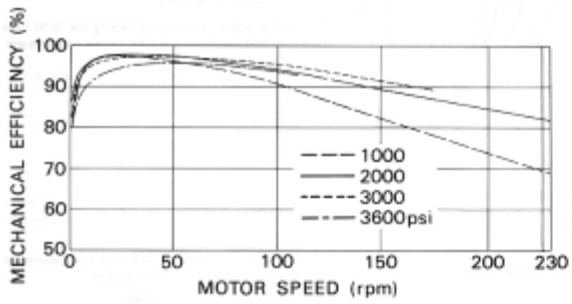
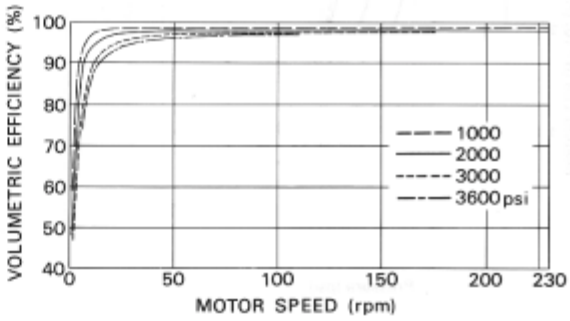


Fig. 2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig. 3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig. 4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

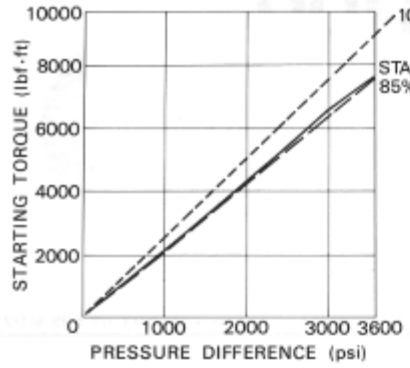


Fig. 5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

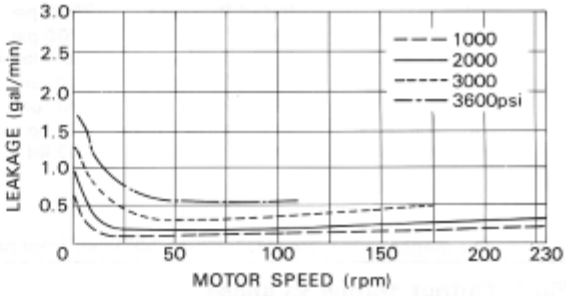


Fig. 6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

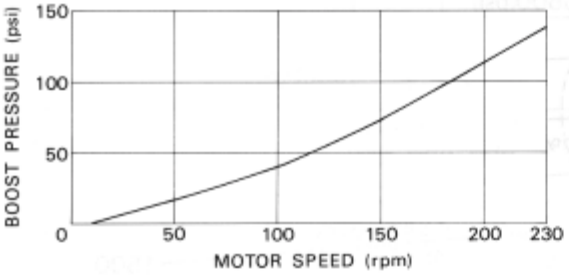


Fig. 7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

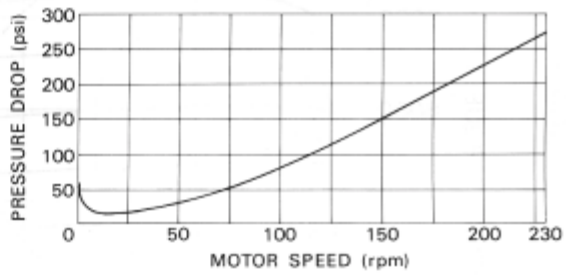


Fig. 8 Bearing Life and Motor Shaft Radial Load

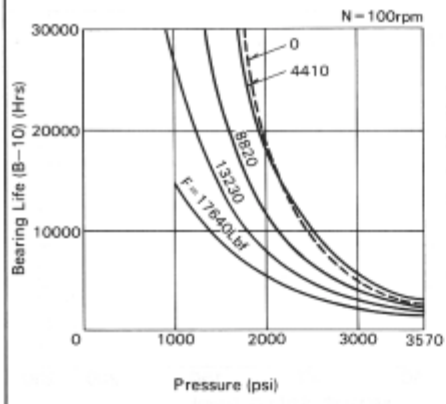


Fig. 8-1

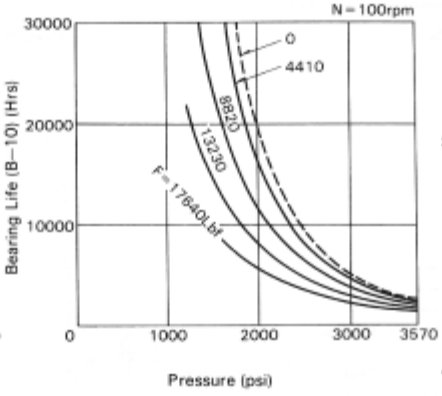


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8.
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below.

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

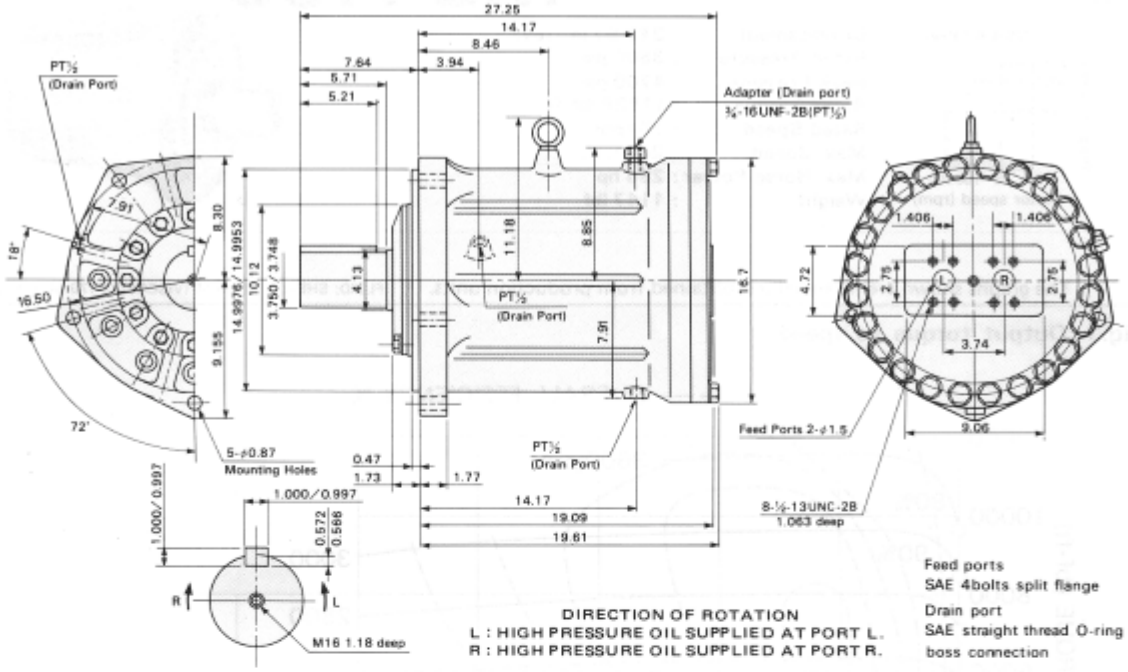
   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

   1650lbf
5. Applications with axial thrust loads should be referred to us.

ME3100

Dimensions in inches

Nominal Dimensions



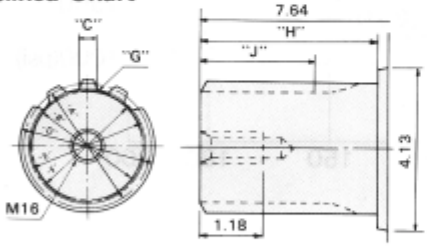
DIRECTION OF ROTATION
L : HIGH PRESSURE OIL SUPPLIED AT PORT L.
R : HIGH PRESSURE OIL SUPPLIED AT PORT R.

Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

Optional Shaft Dimensions

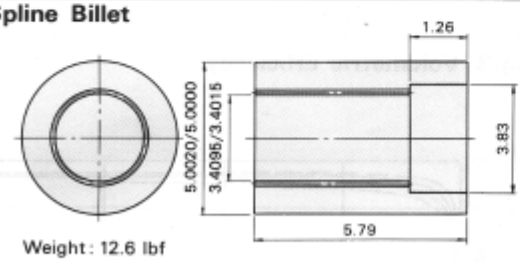
Splined Shaft



Type of Spline : Involute : Flat root side fit : Pressure angle 30° : Pitch 5/10
Class 1 fit : To B.S.3550 or A.S.A.–B5–15.

No. of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
18	3.6000	3.1177	0.3107 0.3085	3.7560 3.7480	3.3943	3.3560 3.3310	0.032	5.71	4.53

Spline Billet



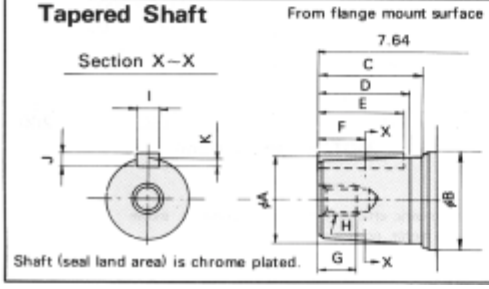
Weight : 12.6 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet : 3600 psi

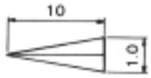
No. of Teeth:	18
Pitch:	5/10
Pressure Angle:	30°
Pitch Dia:	3.6000
Major Dia:	3.8250/3.8000
Minor Dia:	3.4095/3.4015
Space Width:	0.3180/0.3166

Tapered Shaft



Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
3.7402 3.7393	4.13	5.71	5.51	4.92	2.76	2.56	M36	0.9843 0.9822	0.5512 0.5469	0.3622 0.3543

(Taper : 1.0/10 

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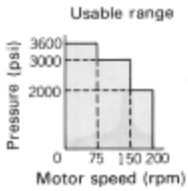
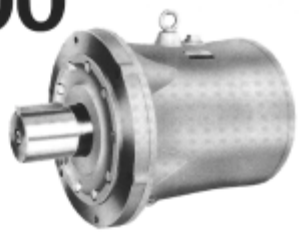
DOWMAX ME4100



Displacement	:	249.97 in³/rev.
Rated Pressure	:	3600 psi
Peak Pressure	:	4700 psi
Rated Torque	:	11928 lbf·ft
Rated Speed	:	75 rpm
Max. Speed	:	200 rpm
Max. Horse Power	:	284 hp
Weight	:	1147 lbf



The graphs shown are mean values obtained from production units. FLUID; SHELL TELLUS 56 (VISCOSITY 170 SUS at 122°F)

Fig. 1 Output torque vs speed

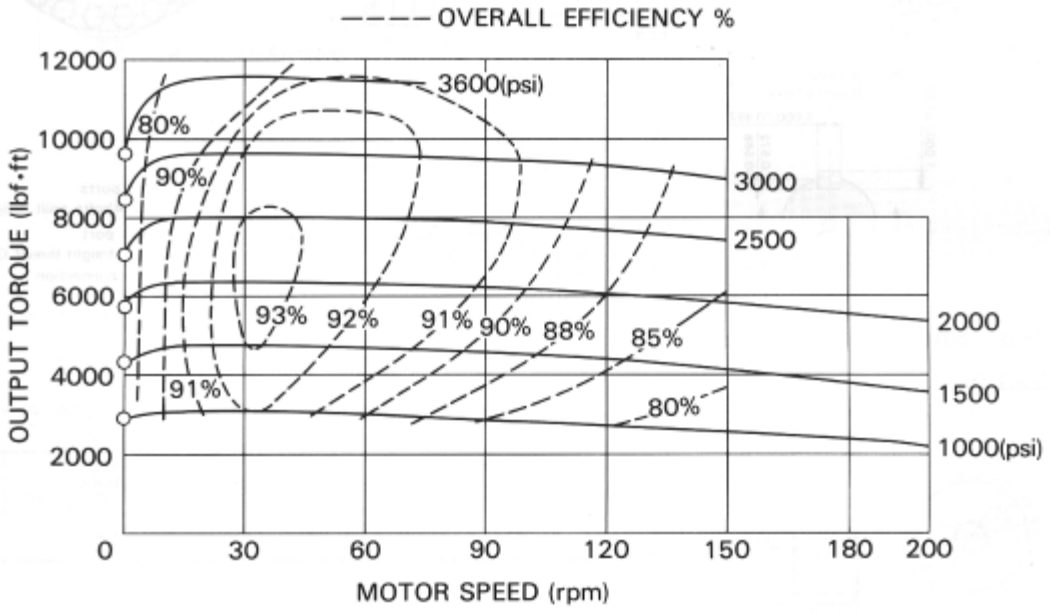
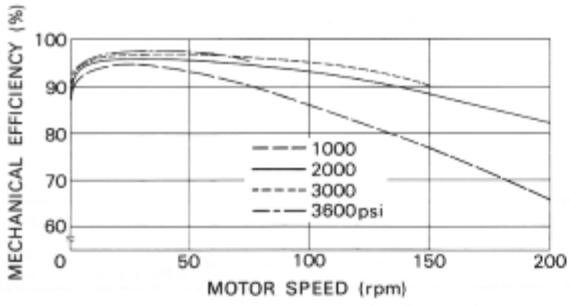
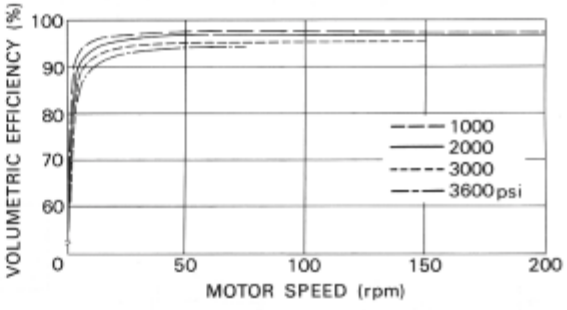


Fig. 2 Mechanical Efficiency



Mechanical efficiency at various speeds is shown for 4 motor pressures.

Fig. 3 Volumetric Efficiency



Volumetric efficiency at various speeds is shown for 4 motor pressures.

Fig. 4 Starting Torque

Starting torque versus effective pressure is shown. Oil viscosity will not affect the starting torque efficiency.

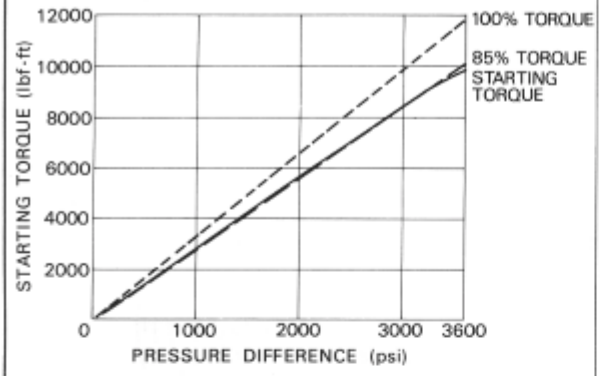


Fig. 5 Case Leakage

Case leakage (from motor drain ports) relative to various speeds is shown for 4 motor pressures.

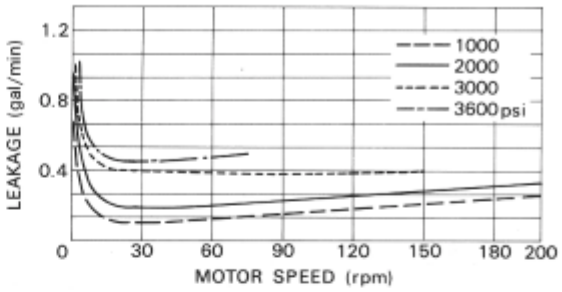


Fig. 6 Minimum Boost Pressure

It is important that sufficient inlet pressure is maintained when the motor is operated as a pump or when the load overruns the motor, to prevent cavitation.

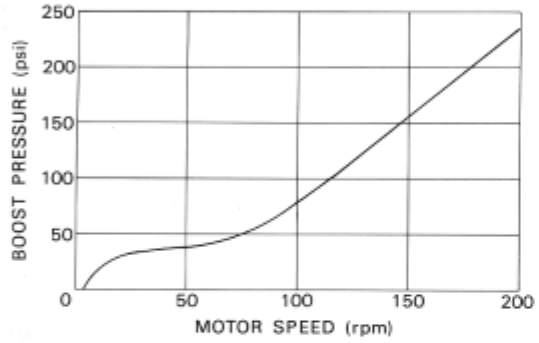


Fig. 7 Pressure Drop

Pressure necessary to run motor without load is shown for various speeds.

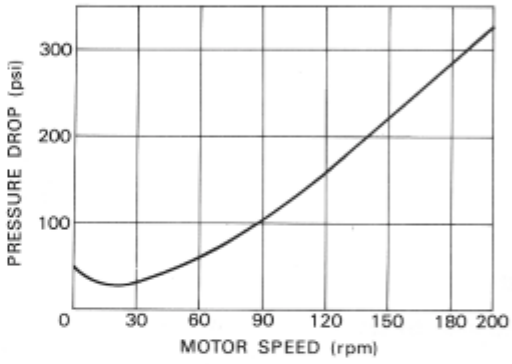


Fig. 8 Bearing Life and Motor Shaft Radial Load

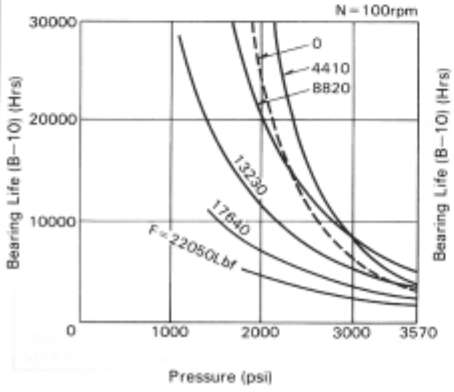


Fig. 8-1

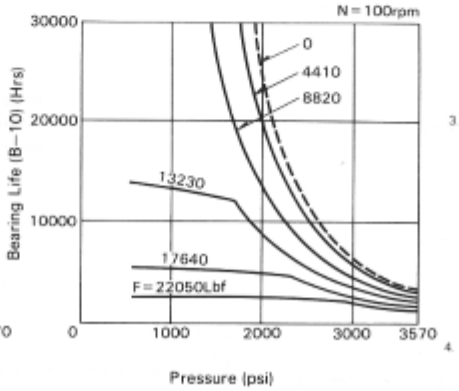


Fig. 8-2

Note

1. If motors are operated on the proper conditions, the operational life is determined by the Bearing Life.
2. In order to maintain the maximum bearing life, when a radial load is imposed on the output shaft the motor should be installed as illustrated in Fig. 8.
   For a uni-directional application, motor should be installed so that side load acts as shown in figure 8.1.
   For a bi-directional application, involving a radial load for each rotation, then the motor should be installed so that side loads act as shown in figure 8.2.
3. The graphs shown are the bearing life (B-10 Life) at 100 rpm shaft speed for various pressures and radial loads.
   When the shaft speed differs from 100 rpm, the bearing life can be obtained by the formula below.

   B-10 Life = (Bearing Life obtainable in the graph at 100 rpm) × 100 / Actual Shaft Speed

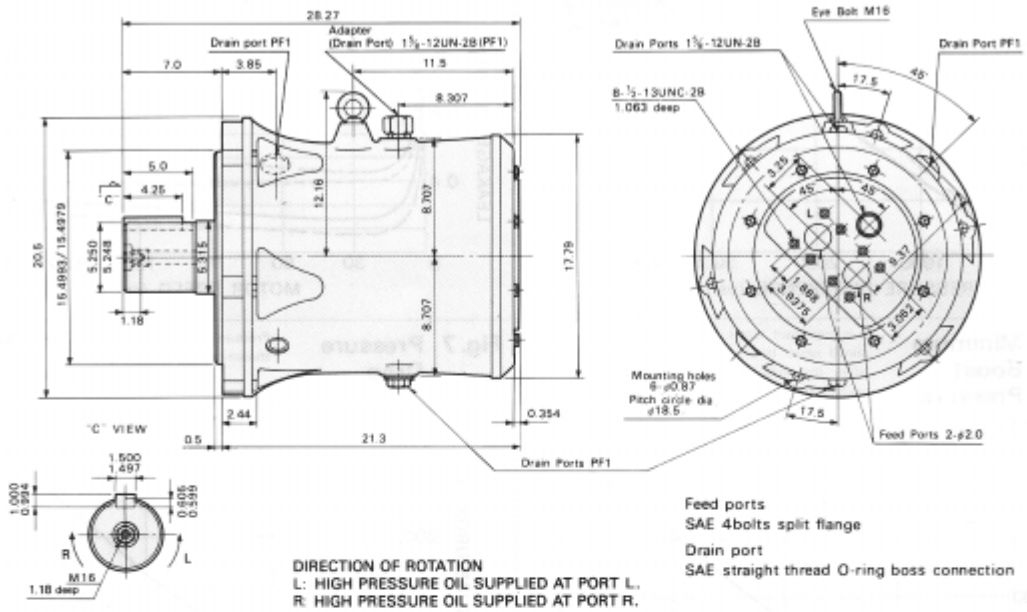
   In case where the side load acts at a different position to the mid point of the shaft projection please refer to us.
4. Maximum allowable radial load (load applied at the mid-point of shaft projection)

   21600lbf
5. Applications with axial thrust loads should be referred to us.

ME4100

Dimensions in inches

Nominal Dimensions



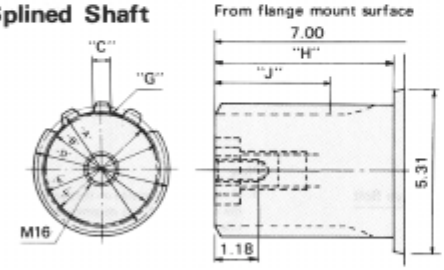
DIRECTION OF ROTATION
L: HIGH PRESSURE OIL SUPPLIED AT PORT L.
R: HIGH PRESSURE OIL SUPPLIED AT PORT R.

Feed ports
SAE 4bolts split flange

Drain port
SAE straight thread O-ring boss connection

Optional Shaft Dimensions

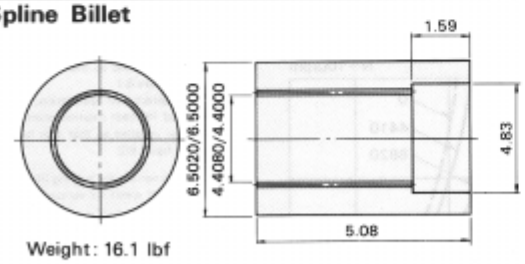
Splined Shaft



Type of Spline: Involute: Flat root side fit: Pressure angle 30°: Pitch 5/10
Class 1 fit: To B.S.3550 or A.S.A.—B5—15.

No.of teeth	Pitch Dia. "A"	Base Dia. "B"	Tooth Thickness "C"	Major Dia. "D"	Form Dia. "E"	Minor Dia. "F"	Fillet Radius "G"	"H"	"J"
23	4.6000	3.9837	0.3123 0.3083	4.7560 4.7480	4.3908	4.3580 4.3310	0.030	5.00	3.45

Spline Billet



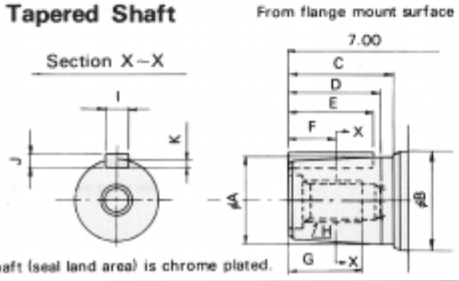
Weight: 16.1 lbf

Involute Spline (Flat root side fit, Class 1 fit)
B.S.3550 or A.S.A-B5-15

Allowable Pressure for Spline Billet: 3600 psi

No.of Teeth:	23
Pitch:	5/10
Pressure Angle:	30°
Pitch Dia:	4.6000
Major Dia:	4.8250/4.8000
Minor Dia:	4.4080/4.4000
Space Width:	0.3182/0.3166

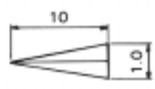
Tapered Shaft



Shaft (seal land area) is chrome plated.

A	B	C	D	E	F	G	H	I	J	K
5.1181 5.1171	5.315	5.000	4.331	3.622	2.165	2.500	M36	1.4173 1.4149	0.7874 0.7823	0.4843 0.4724

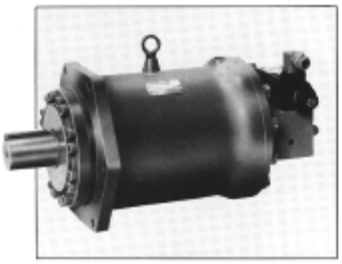
Taper: 1.0/10



Dowmax Motor Family

More information on each product below is available. Request a separate catalog.

TWO SPEED MOTOR



- High Starting Efficiency
- Good Low-speed Performance
- Slim Configuration and light weight
- Change-over between large and small displacement can be done while running with a load.
- No separate pilot pressure is required for changing-over because the self pressure is utilized as a pilot pressure.

Model	Displacement (in^3/rev)	Rated Pressure (psi)	Peak Pressure (psi)	Rated Torque (lbf·ft)	Rated Speed (rpm)	Weight (lbf)
MK300	18.55/9.275	3000	3600	738/369	600/800	132
MK600	36.74/18.37	3600	4700	1754/877	300/600	242

BRAKE MOTOR

- The mechanical brake has high durability because wet type multiple discs are used.
- Safe operation is ensured as it is a reverse function type (brake is only released by applying a pressure).
- Being compact configuration, it is easy to design its installation on any equipment.
- It provides a large radial load capability, because of a large capacity roller bearing adopted on the drive shaft.
- Servicing for the brake motor is easy as the brake can easily be removed.

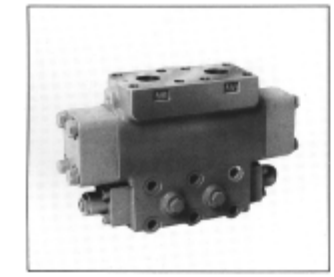
Model	Static Brake Torque (lbf·ft)	Brake Release Pressure (psi)	Endurable Press. of Brake Cylinder (psi)	Weight (lbf)
MB100-N40	289	178	4622	75
MB150-P100	723	142	498	148
MB175-P100				
MB300-P150	1085	171		172
MB350-P150				
ME150-FS1566+BL70-N	506		4622	185
ME175-FS1024+BL70-N				
ME300-FS1908+BA121-N	875			209
ME350-FS1151+BA121-N				
MK300-FS001+BP121-N				225
ME600ANS1005+BB250-N	1808			410
MK600-NS002+BR250-N				450
ME750ANS1091+BC300-N	2170			478
ME850-NS1152+BC300-N				

GEARED MOTOR

- Models with different gear ratios and torques not listed herein are available.

Model	Gear Ratio	Equivalent Displacement (in^3/rev)	Rated Speed (rpm)	Rated Torque (lbf·ft)	Peak Pressure (psi)	Allowable Radial Load (lbf)	Weight (lbf)
ME-100-G +CPHFL-60S-5	5.053	30.5	40	1,500	3,982	11,000	176
ME175-G +CPHFL-66S-5	5.053	53.9	40	2,240	3,356	14,300	254
ME350-G +CPHFL-72D-5	5.053	108	40	4,430	3,313	22,100	386
ME850-G +CPHFL-90D-5	5.053	261	40	8,250	2,560	27,600	739
ME2600-G +CPHFL-132D-5	5.053	795	23	29,300	2,986	70,100	2,160
ME100-G +CPHFL-96D-26	25.53	154	39	6,290	3,413	33,100	529
ME175-G +CPHFL-96D-26	25.53	273	23	11,500	3,527	39,700	573
ME350-G +CPHFL-108D-26	25.53	545	23	16,100	2,474	46,100	931
ME600AG +CPHFL-120D-26	25.53	938	23	21,500	1,920	61,700	1,410
ME850-G +CPHFL-132D-26	25.53	1,319	13	33,100	2,090	77,200	1,680
ME175-SS1905 +P21-1100	21.33	228	15	8,570	2,986	33,100	390
ME150-G +P31-1500	31.19	289	20	10,800	2,986	35,300	772
ME1300AG +CPHFL-108D-6	6.00	492	15	18,500	2,986	55,100	1,100
ME4100-S1115 +1PA165	6.50	1,625	10	61,200	2,986	132,000	2,540

COUNTER BALANCE VALVE



- High Response
- Good Pressure Override Characteristics.
- Can be directly mounted on Dowmax motor.

Model	Rated Flow (gpm)	Pressure Adjustable Range (psi)	Max. Peak Pressure (psi)	Weight (lbf)	Two-directional (Slewing, Running)	One-directional (Winching)	w/Mech. Brake Release Port	w/Adjusting Screws for main spool stroke
C70	18.5	1,420~3,980	4,700	15.4	○			
C70Y					○		○	
C70Z					○			○
C200C	52.8	1,420~2,980		41.9	○			
C200YC					○		○	
C200ZC					○			○
C300A	79.3	1,420~3,910		79.4	○			
CW300		2,560~3,980		59.5		○		