

P Mixer Drive Units

Worm Gear Mixer Drives...

Reliable power transmission for mixers/agitators.

Features

Fluid mixing is often a very complex process. While the properties of the materials to be mixed, as well as the mixing vessel and agitator are very important considerations, the type of drive can greatly affect mixing costs - both operating and initial investment. For a wide variety of materials in chemical, process, pollution control and many other applications, Delroyd Worm gear drives for mixers and agitators offer many advantages over the other types of gearing and drive units.

- Because of their unique worm and gear design, Delroyd worm gear sets operate with multiple tooth contact at all times. This assures shockless power delivery. As a result, operation is smooth and extremely quiet, normally in a sound range of 76 to 80 dBA ... very important for meeting OSHA standards.
- Single reduction Delroyd worm gear sets can easily provide gear reductions of 5: 1 through 70:1, for output speeds down to 25 rpm (using standard 1750 rpm motors). With double reduction Delroyd helical-worm gear reducers, gear reduction can go from 15:1 to 350:1 ratio to provide outputs as low as 5 rpm. This allows economical yet efficient mixing at lower speeds: power costs as well as initial capital outlay are usually lower with Delroyd worm gear drives.

Please remember that gearing efficiency is quite different from mixing efficiency. While mixing efficiency is influenced by gearing efficiency, it also depends on other technical and economic factors.

- Delroyd worm gear drives are engineered to withstand up to 300% momentary peak overloads and shock loads ... forces that would cause other forms of gearing to fail.
- Minimum service factor for Delroyd mixer drives is 1.25.
- In Delroyd units, heavy-duty tapered Timken roller bearings (B-10 life of over 10,000 hours on the worm shaft; B-10 life of 100,000 hours on low speed shaft) minimize shaft vibration and sensitivity to shaft deflection. This eliminates the need for hollow quill construction and lowers the overall cost of the mixer/agitator.

• The centrifugally cast phosphorous bronze gear mates with a hardened, ground and polished steel worm. As the drive operates, the bronze gear conforms and work-hardens to the contour of the worm. This is responsible for the saying that "Delroyd worm gears wear in, not wear out."

• Standard drywell construction provides positive protection against leakage of lubricants. There's no danger of product contamination.

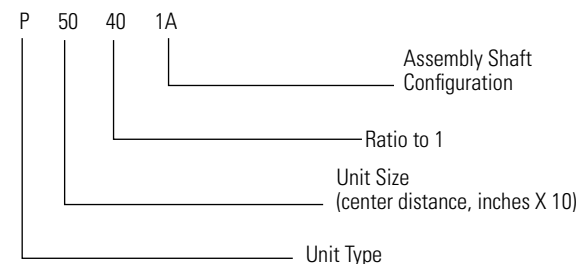
Standard Delroyd units range from 3 through 14-inch center distances, and horsepower from .132 to 265 HP.

Drives with even larger center distances and greater horsepower are available.



Mixer Drive Nomenclature

Example:

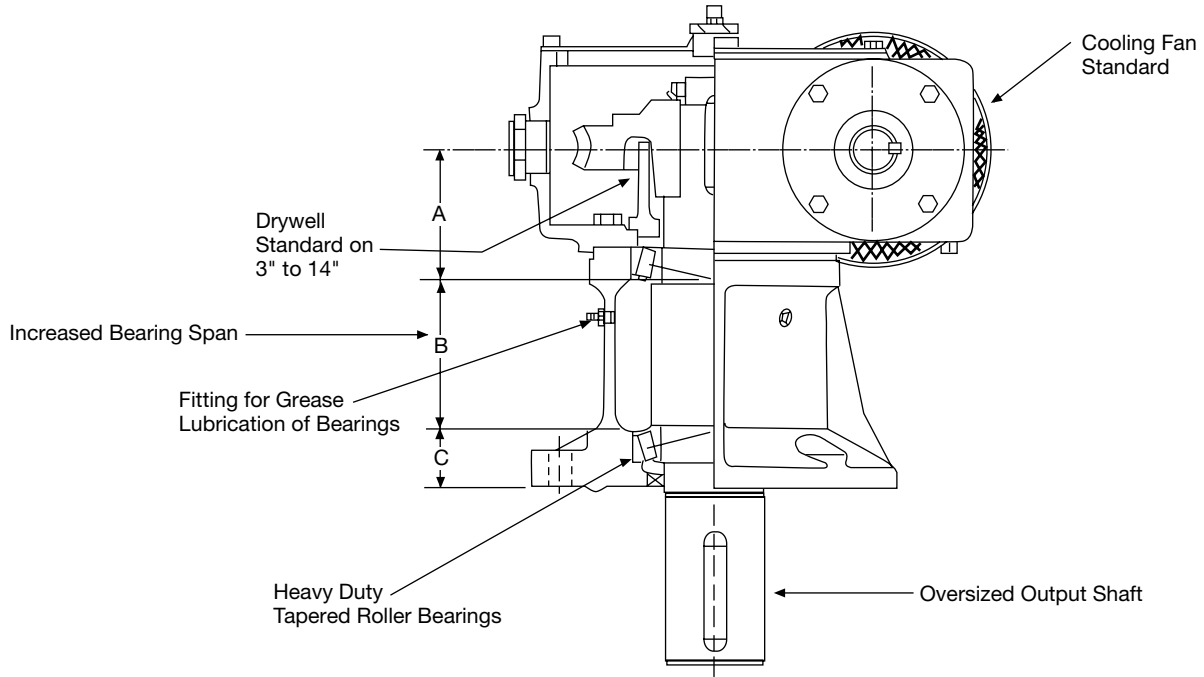


Delroyd Mixer Unit Types Available

Options	Single Reduction	Double-Reduction Helical-Worm	Double-Reduction Worm-Worm
Standard Shaft	P	HP	DP*
Tapered Output Shaft	PT	HPT *	DPT*
Scoop for Foot-Mounted Motor	PK*	HPK*	DPK*
Adaptor for "C"-Mounted Motor	PM*	HPM*	DPM*

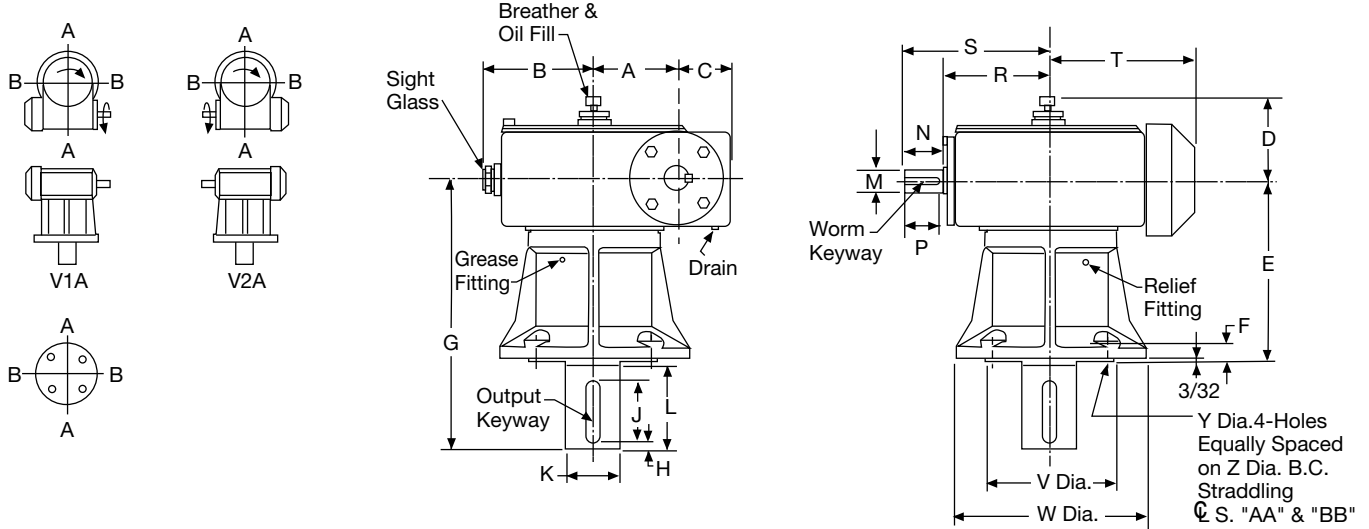
*Available but not included in dimensional sheets.
Note: If high overhung load capacity is needed, request information on Delroyd VFF and HVFF Series units.

Design Features and Internal Construction



Unit Size	P30	P40	P50	P60	P70	P80	P90	P100	P120	P140
		HP40	HP50	HP60	HP70	HP80	HP90	HP100	HP120	HP140
A"	3.638	3.74	4.309	4.719	4.94	4.938	5.5	6.75	6.75	6.93
B"	3.79	4.105	4.545	4.955	8.09	10.063	12.0	11.75	11.75	14.34
C"	1.573	1.905	1.896	2.076	2.345	2.50	2.75	3.75	3.75	3.73

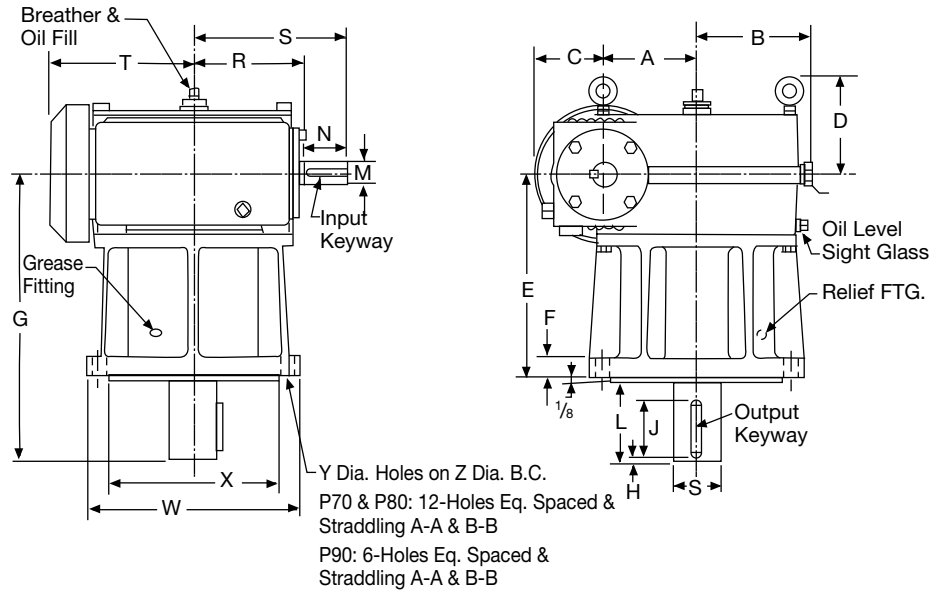
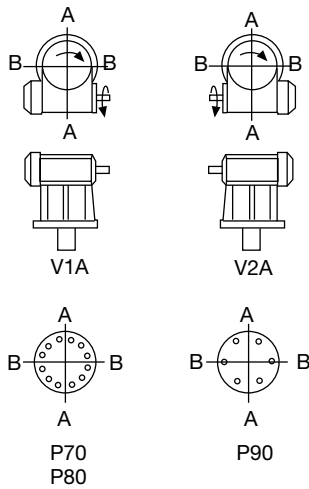
P30 - P40 - P50 - P60



Unit Size	Reducer Wt.	A	B	C	D	E	F	G	H	J	Output Keyway	K▲	L	M▲	N	P	Worm Keyway	R	S	T	U	V■	W	Y	Z DIA. B.C.
P30	110	3	4 ³ / ₈	2 ⁵ / ₁₆	3 ⁹ / ₁₆	9	5 ⁵ / ₈	13 ¹ / ₂	1 ¹ / ₄	3	1/2 wide x 3/16 deep	1 ¹⁵ / ₁₆	4 ¹ / ₄	7 ⁷ / ₈	1 ⁷ / ₈	1 ¹³ / ₁₆	3/16 wide x 3/32 deep	4 ³ / ₁₆	6 ¹ / ₈	5 ¹⁵ / ₁₆	3 ¹ / ₁₆	7.749	11 ¹ / ₂	1 ¹¹ / ₁₆	9 ³ / ₄
P40	170	4	5 ¹ / ₂	2 ⁷ / ₈	3 ⁷ / ₈	9 ³ / ₄	1	15 ¹ / ₄	3 ³ / ₈	3 ³ / ₄	3/4 wide x 1/4 deep	2 ⁷ / ₈	5 ¹ / ₄	1 ¹ / ₈	2 ¹ / ₁₆	2	1/4 wide x 1/8 deep	5 ¹¹ / ₁₆	7 ³ / ₄	7 ³ / ₄	3 ⁹ / ₁₆	7.749	11 ¹ / ₂	1 ¹¹ / ₁₆	9 ³ / ₄
P50	225	5	6 ¹ / ₂	3 ³ / ₈	4 ⁵ / ₁₆	10 ³ / ₄	1 ¹ / ₈	16 ¹ / ₄	3 ³ / ₈	3 ³ / ₄	3/4 wide x 1/4 deep	3 ¹ / ₈	5 ¹ / ₄	1 ³ / ₈	2 ⁵ / ₁₆	2 ¹ / ₄	5/16 wide x 3/32 deep	6 ⁷ / ₁₆	8 ³ / ₄	8 ⁵ / ₈	4 ⁷ / ₁₆	7.749	11 ¹ / ₂	1 ¹¹ / ₁₆	9 ³ / ₄
P60	350	6	7 ³ / ₄	3 ⁷ / ₈	4 ¹³ / ₁₆	11 ³ / ₄	1 ¹ / ₄	17 ¹ / ₂	3 ³ / ₈	3 ⁷ / ₈	7/8 wide x 5/16 deep	3 ¹ / ₂	5 ¹ / ₂	1 ¹ / ₂	2 ¹¹ / ₁₆	2 ⁵ / ₈	3/8 wide x 3/16 deep	7 ³ / ₄	10 ¹ / ₄	10 ¹ / ₁₆	5	7.749	11 ¹ / ₂	1 ¹¹ / ₁₆	9 ³ / ₄

■ Tolerances: +.000 -.002 ▲ Tolerances: 1/2 Diameter or less +.0000 -.0005 over 1/2 Diameter +.000 -.001

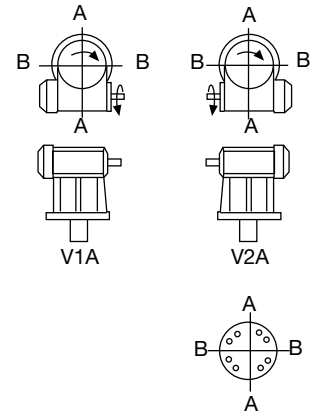
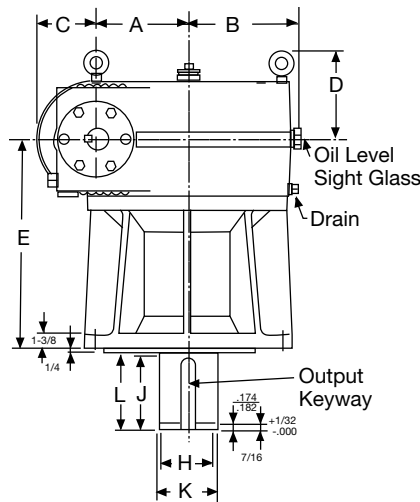
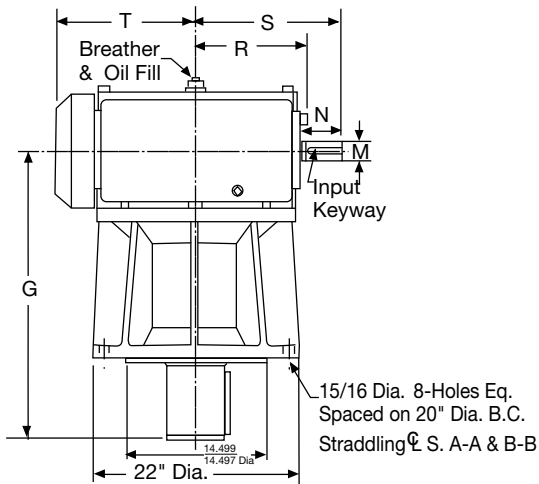
P70 - P80 - P90



Unit Size	Reducer Wt.	A	B	C	D	E	F	G	H	J	Output Keyway	K▲	L	M▲	N	Input Keyway	R	S	T	W	X■	Y	Z
P70	475	7	8 ⁹ / ₁₆	5 ³ / ₁₆	7 ⁵ / ₁₆	15 ³ / ₈	1 ⁵ / ₈	21 ⁵ / ₈	3 ³ / ₈	4 ³ / ₈	7/2 wide x 7/16 deep	3/2	6	1 ⁵ / ₈	3/8	3/8 x 3/16 x 3/16	8 ¹ / ₂	11 ¹ / ₂	10 ³ / ₄	16	12.749	1	14 ¹ / ₄
P80	780	8	9 ⁷ / ₁₆	5 ³ / ₁₆	7 ¹⁵ / ₁₆	17 ¹ / ₂	1 ⁵ / ₈	24 ¹ / ₂	3/8	4 ¹ / ₂	1 wide x 1/2 deep	4	8 ³ / ₈	1 ⁷ / ₈	3/8	1/2 x 1/4 x 3/16	9 ¹ / ₂	12 ¹ / ₂	11 ³ / ₄	16	12.749	1	14 ¹ / ₄
P90	1100	9	10 ³ / ₈	6 ³ / ₁₆	8 ¹⁵ / ₁₆	20 ¹ / ₄	1 ⁵ / ₈	27 ¹ / ₄	3/8	4 ³ / ₄	1 ¹ / ₄ wide x 5/8 deep	4 ⁵ / ₈	6 ³ / ₄	2 ¹ / ₈	3 ¹⁵ / ₁₆	1/2 x 1/4 x 3/8	10 ³ / ₈	14 ¹ / ₄	13 ¹³ / ₁₆	16	14.999	1	17

■ Tolerances: +.000 -.003 ▲ Tolerances: 1/2 Diameter or less +.0000 -.0005 over 1/2 Diameter +.000 -.001

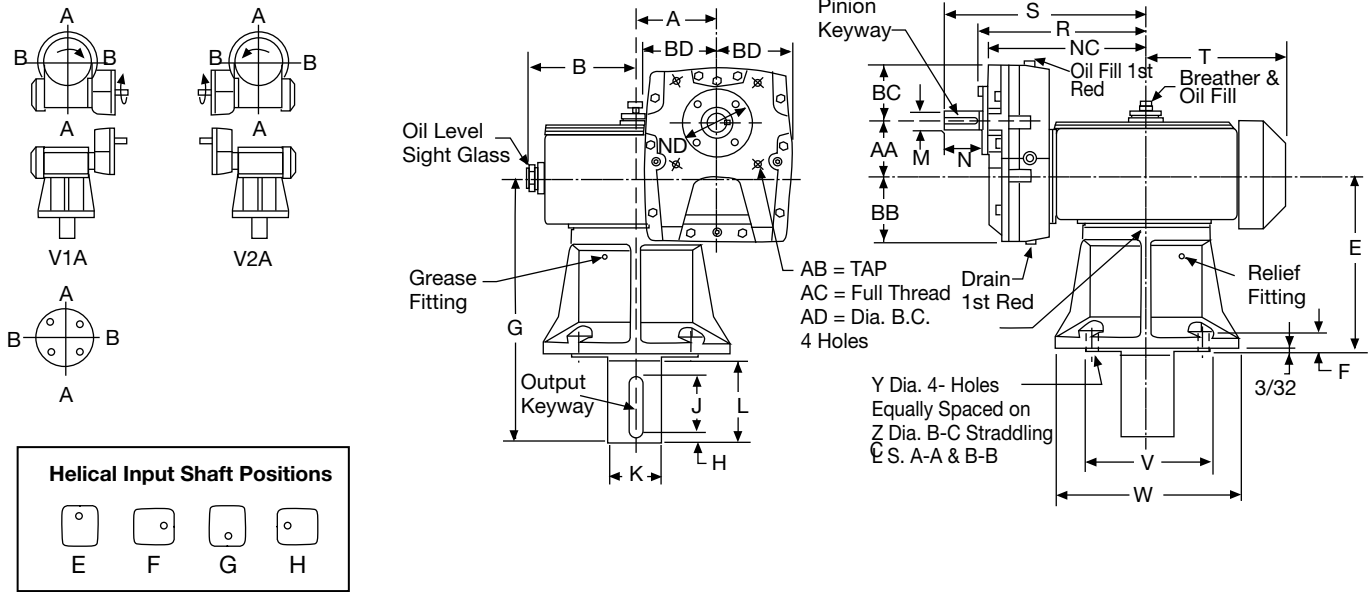
P100 - P120 - P140



Unit Size	Reducer Wt.	A	B	C	D	E	G	H■	J	Output Keyway	K▲	L	M▲	N	Input Keyway	R	S	T
P100	1700	10	11 ⁵ / ₈	6 ³ / ₁₆	9 ⁷ / ₁₆	22 ¹ / ₄	31	5.993	8 ¹ / ₈	1 ¹ / ₂ wide x 3/4 deep	6.250	8 ¹ / ₄	2 ¹ / ₄	4	1/2 x 1/4 x 3 ¹⁵ / ₁₆	11 ¹³ / ₁₆	15 ¹ / ₂	15 ¹ / ₈
P120	2150	12	13 ¹ / ₂	6 ³ / ₁₆	10 ⁹ / ₁₆	22 ¹ / ₄	31	5.993	8 ¹ / ₈	1 ¹ / ₂ wide x 3/4 deep	6.250	8 ¹ / ₄	2 ¹ / ₂	4 ⁹ / ₁₆	5/8 x 5/16 x 4 ¹ / ₂	13 ⁹ / ₁₆	18	17
P140	2750	14	14 ³ / ₄	7 ¹¹ / ₁₆	11 ¹ / ₈	25	34 ³ / ₄	6.713	9	1 ³ / ₄ wide x 7/8 deep	7.000	9 ¹ / ₈	3	5 ⁵ / ₈	3/4 x 3/8 x 5 ⁵ / ₈	15 ¹ / ₂	21	20 ¹¹ / ₁₆

■ Tolerance: +.000 -.014 ▲ Tolerance: +.000 -.001

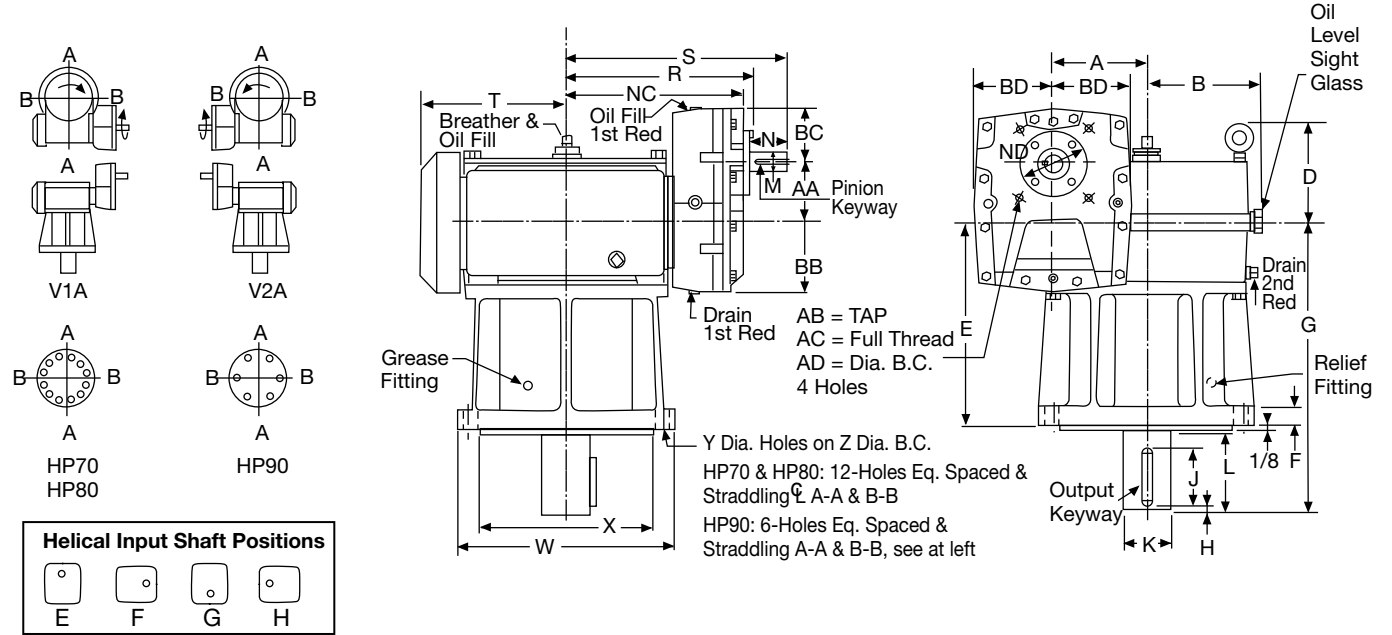
HP40 - H50 - HP60



Unit Size	Reducer Wt.	A	AA	AB	AC	AD	B	BB	BC	BD	E	F	G	H	J	Output Keyway	K▲	L	M▲	Pinion Keyway	N	NC	ND	R	S	T	V■	W	Y	Z
HP40	215	4	3	3/8-16	5/8	5/4	5 1/2	3 1/2	2 7/8	4	9 1/4	1	15 1/4	3/8	3 3/4	3/4 wide x 1/4 deep	2 7/8	5 1/4	7/8	3/16 x 3/32 x 1 15/16	2	9 1/16	3 5/16	9 9/16	11 1/16	7 3/4	7.749	11 1/2	1 1/16	9 3/4
HP50	325	5	3 1/2	1/2-13	3/4	7 1/4	6 1/2	4	3 1/2	4 5/8	10 3/4	1 1/8	16 1/4	3/8	3 3/4	3/4 wide x 1/4 deep	3 1/8	5 1/4	1 1/8	1/4 x 1/8 x 2 3/16	2 1/4	9 7/8	4 1/4	10 9/8	12 5/8	8 5/8	7.749	11 1/2	1 1/16	9 3/4
HP60	410	6	4	1/2-13	3/4	7 1/4	7 3/4	4 3/4	3 5/8	5 1/2	11 3/4	1 1/4	17 1/2	3/8	3 7/8	7/8 wide x 5/16 deep	3 1/2	5 1/2	1 1/4	1/4 x 1/8 x 2 7/16	2 1/2	11 3/4	4 1/4	12 1/4	14 3/4	10 1/16	7.749	11 1/2	1 1/16	9 3/4

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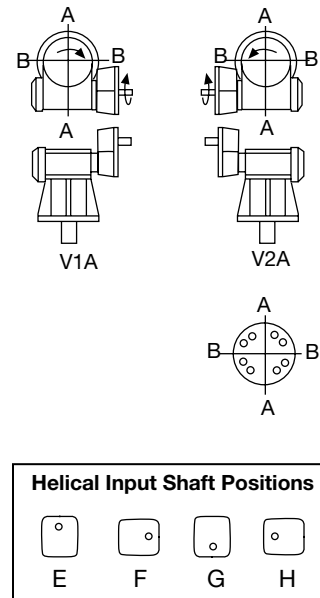
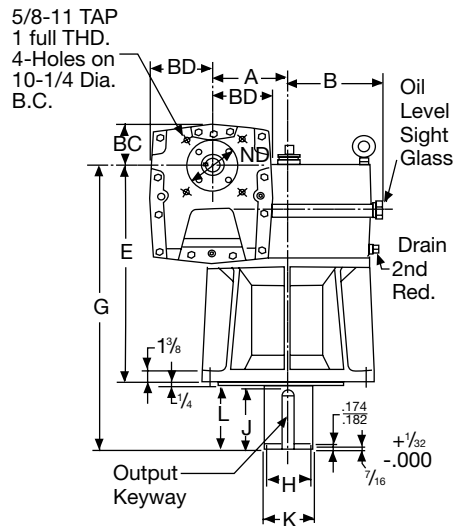
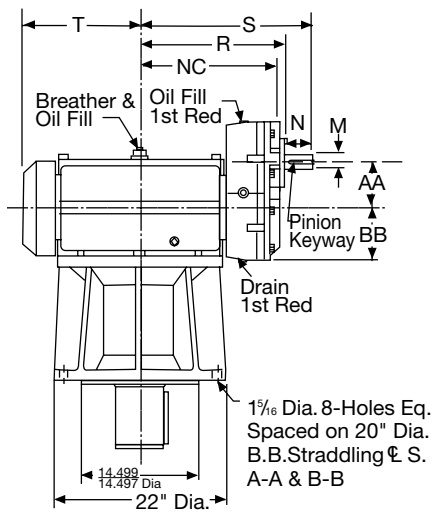
HP70 - HP80 - HP90



Unit Size	Reducer Wt.	A	AA	AB	AC	AD	B	BB	BC	BD	D	E	F	G	H	J	Output Keyway	K▲	L	M▲	N	Pinion Keyway	NC	ND	R	S	T	W	X■	Y	Z
HP70	670	7	4 1/2	1/2-13	3/4	7 1/4	8 9/16	5 1/8	4	5 1/8	7 5/16	15 3/8	1 3/4	21 5/8	3/8	4 3/8	7/8 wide x 7/16 deep	3 1/2	6	1 3/8	2 3/4	5/16 x 5/32 x 2 11/16	13 1/16	4 7/8	13 3/8	16 3/8	10 3/4	16	12.749	1	14 1/4
HP80	875	8	5	5/8-11	1	8 1/4	9 7/16	5 1/2	4 3/8	6 3/8	7 15/16	17 1/2	1 5/8	24 1/8	3/8	4 1/2	1 wide x 1/2 deep	4	6 3/8	1 1/2	3	3/8 x 3/16 x 2 15/16	14 7/16	5 3/4	15 1/16	18	11 3/4	16	12.749	1	14 1/4
HP90	1204	9	5 1/2	5/8-11	1	8 1/4	10 3/8	6 3/16	4 7/16	8 1/32	8 15/16	20 1/4	1 5/8	27 1/4	3/8	4 3/4	1 1/4 wide x 5/8 deep	4 5/8	6 3/4	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	16 1/16	5 3/4	16 1/16	20 1/8	13 3/16	19	14.999	1	17

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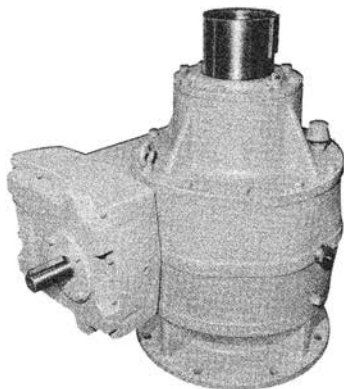
HP100 - HP120 - HP140



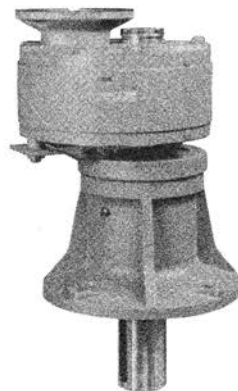
Unit Size	Reducer Wt.	A	AA	B	BB	BC	BD	E	G	H	J	Output Keyway	K	L	M	N	Pinion Keyway	NC	ND	R	S	T
HP100	1890	10	6	11 ⁵ / ₈	6 ¹ / ₂	5 ¹ / ₄	7 ⁵ / ₈	28 ¹ / ₄	37	5.993	8 ¹ / ₈	1 ¹ / ₂ wide x ³ / ₄ deep	6.250	8 ¹ / ₄	1 ⁷ / ₈	3 ³ / ₄	1/2 x 1/4 x 3 ¹¹ / ₁₆	18	6 ³ / ₄	18 ¹¹ / ₁₆	22 ¹ / ₄	15 ¹ / ₈
HP120	2150	12	7	13 ¹ / ₂	7 ⁵ / ₁₆	5 ¹¹ / ₁₆	8 ³ / ₄	29 ¹ / ₄	38	5.993	8 ¹ / ₈	1 ¹ / ₂ wide x ³ / ₄ deep	6.250	8 ¹ / ₄	2 ¹ / ₈	4 ¹ / ₄	1/2 x 1/4 x 4 ³ / ₁₆	20 ¹¹ / ₁₆	7	21 ¹ / ₂	25 ⁵ / ₈	17
HP140	2995	14	7	14 ³ / ₄	7 ⁵ / ₁₆	5 ¹¹ / ₁₆	8 ³ / ₄	32	41 ³ / ₄	6.713	9	1 ⁵ / ₄ wide x ⁷ / ₈ deep	7.000	9 ¹ / ₈	2 ¹ / ₈	4 ¹ / ₄	1/2 x 1/4 x 4 ³ / ₁₆	22 ⁵ / ₁₆	7	28 ³ / ₈	32 ⁵ / ₈	20 ¹¹ / ₁₆

■ Tolerances: +.000 -.014 ▲ Tolerances: +.000 -.001

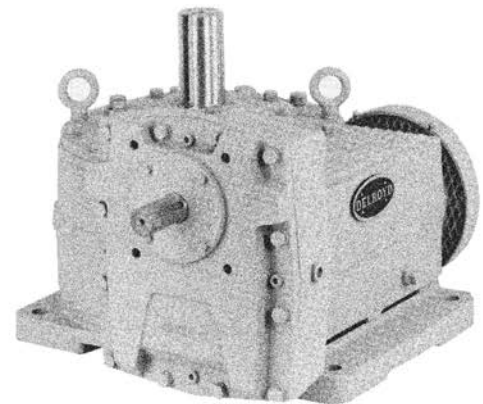
Other Models Available



**Helical Worm
HVFH100-S2**



**Helical
FPM40**



**Helical Worm
HV80**