

33 URAI

pdblowers part #: 21012.C (LHC), 21013 (RHC), 21014 (BHC), 21015 (THC)

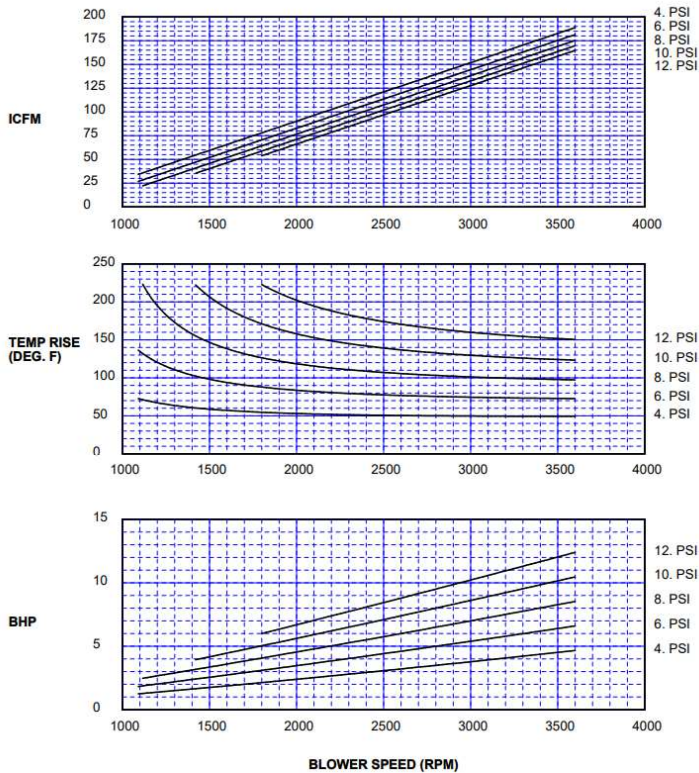
Roots part #: 6510502L, 6510502R, 6510502B, 6510502T

Specifications

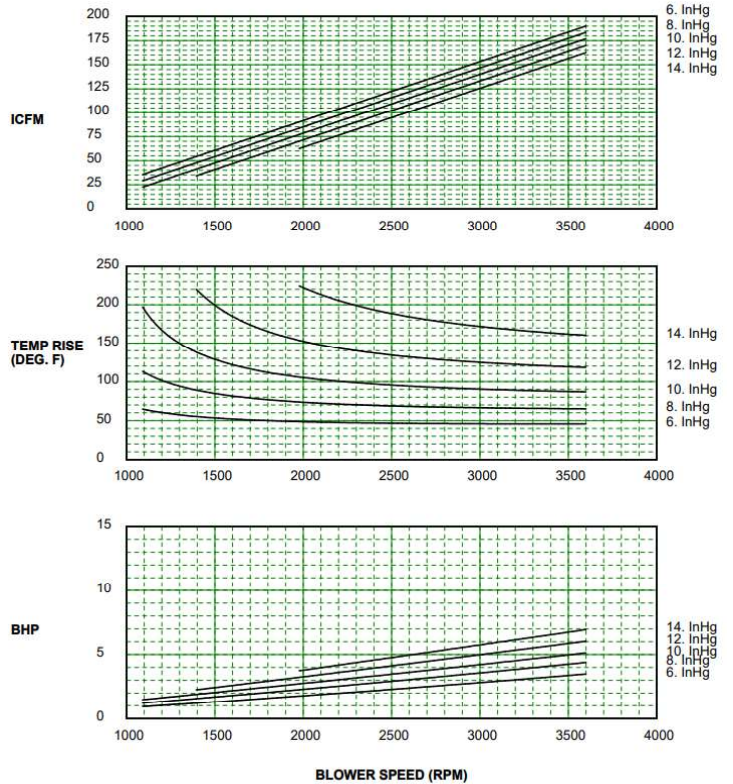
| | | | |
|---------------|----------|------------------|--|
| Max Flow: | 198 ACFM | Connection Size: | 2" FPT |
| Min Flow: | 44 ACFM | Shaft Diameter: | 0.750" |
| Max Pressure: | 12 PSI | Weight: | 74 lb |
| Max Vacuum: | 15 "HG | Shipping Weight: | 103 lb |
| Max RPM: | 3600 RPM | Ship Dimensions: | 30x30x15" |
| Min RPM: | 1090 RPM | Drive End: | Grease, Synthetic |
| Max ΔT: | 225°F | Gear End: | Oil (8.5oz vertical, 10.5oz horizontal) |
| CFR: | 0.0616 | | |
| 1 PSI Slip: | 267 RPM | | |



Pressure Curve



Vacuum Curve



Oil recommendations

| Ambient Temp | ISO Viscosity | pdblowers part #: | | | | |
|------------------------------|---------------|-------------------|-------|--------|---------|-------|
| | | Quart | 12 Qt | Gallon | 4 Gal | 5 Gal |
| 90° to 120° (32°C) | 320 | 54525 | 54529 | 53204 | 53204.C | 54532 |
| 32° to 90° (10°C to 32°C) | 220 | 54524 | 54528 | 54527 | 54527.C | 54531 |
| 0° to 32° (-18°C to 0°C) | 150 | 54585 | 54586 | 54049 | 54049.C | 57229 |
| Below 0° (-18°C) | 100 | 57060 | 54048 | 50754 | 50754.C | 54584 |

Oil service interval is approximately 6000 hours with an oil temp of 180°F or less. Oil life is reduced by half for each 15°F increase in oil temp.

Grease Recommendations

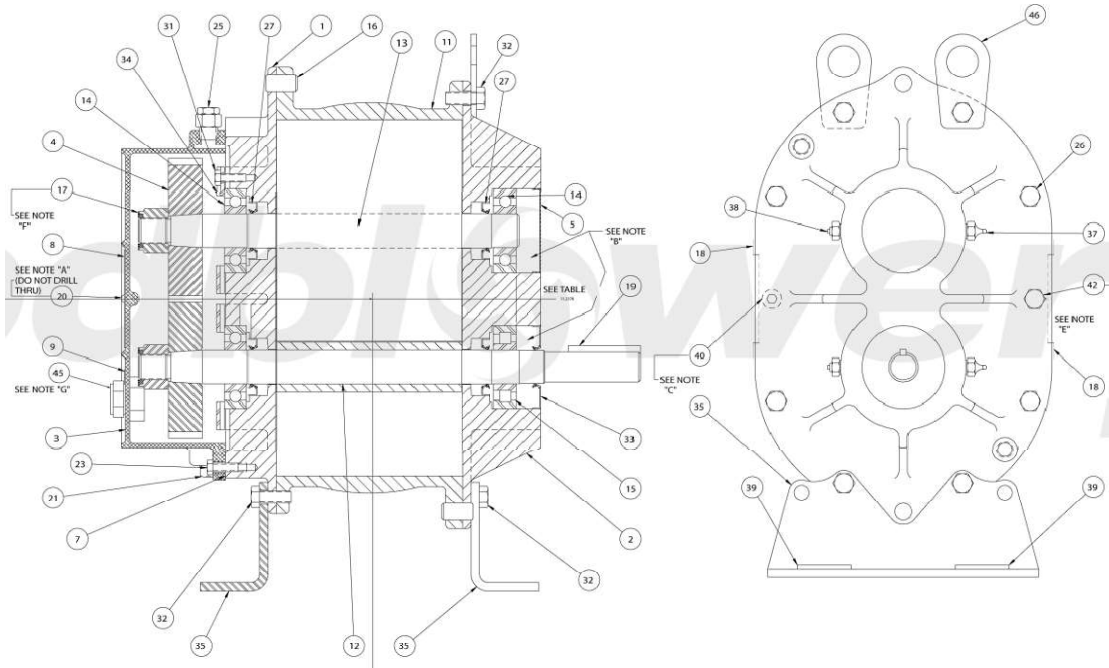
Grease is used for URAI blowers for lubrication on the drive end bearings. Blowers manufactured before 10/2016 typically use Shell Gadus grease (pdblowers part #: 54649). All blowers produced after 10/2016 use Roots synthetic grease (pdblowers part #: 25673).

Note: the two can NOT be mixed.

| Speed In RPM | Operating Hours Per Day | | |
|--------------|-------------------------|----|----|
| | 8 | 16 | 24 |
| 750-1000 | 7 | 4 | 2 |
| 1000-1500 | 5 | 2 | 1 |
| 1500-2000 | 4 | 2 | 1 |
| 2000-2500 | 3 | 1 | 1 |
| 2500-3000 | 2 | 1 | 1 |
| 3000+ | 1 | 1 | 1 |

33 URAI

Part Diagram



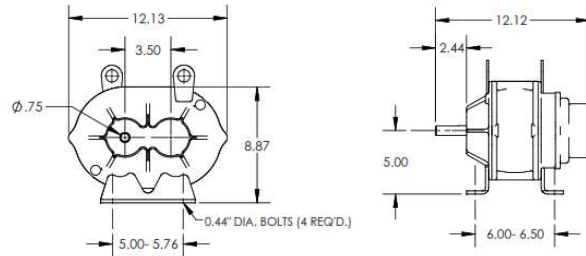
Part Listing

| Ref | Description | Qty | Mfg PN | pdb PN |
|-----|-------------------------------|-----|----------|-------------|
| 001 | HDPL GE 3-1/2" URAI | 1 | 64860022 | 26406.01 |
| 002 | HDPL DE 3-1/2" URAI | 1 | 64855022 | 26406.01 |
| 003 | GRBX, 3-1/2" URAI | 1 | 65332022 | 26406.03 |
| 004 | GEAR,ASSY 3-1/2" URAI T/B | 1 | 63889021 | 26406.04 |
| 005 | PLUG,OPENING FOR 2.0474" BORE | 1 | 12957003 | 26406.05 |
| 007 | GSKT,GRBX 3-1/2"URAI TS9003 | 1 | 62752021 | 26406.07 |
| 011 | CYL 33 URAI, Cylinder | 1 | 38992022 | 26406.11.33 |
| 012 | Drive End Impeller | 1 | 64863022 | 26406.12.33 |
| 013 | Driven End Impeller | 1 | 64863522 | 26406.13.33 |
| 014 | BRG,BALL FAG #6304 | 3 | 10987002 | 26406.14 |
| 015 | BRG,ROLLER FAG #NJ304E | 1 | 10222035 | 26406.15 |
| 016 | PIN,DOWEL 1/2X1.00 | 4 | 10226001 | 26406.16 |
| 017 | NUT,HEX ESNA 5/8-18 | 2 | 10319007 | 26406.17 |
| 019 | KEY,SQ 3/16"X 3/16"X 1-5/8" | 1 | 10825005 | 26406.19 |
| 020 | SCR,SELF-TPNG RNDH 8-32X.25 | 1 | 10815002 | 26406.20 |
| 021 | PLG,PIPE 1/4 STL | 3 | 10008002 | 26406.21 |
| 025 | PLUG,VENT 1/4" | 1 | 13005001 | 26400.25 |
| 027 | SEAL,LIP(VITON) 13/16"SFT | 4 | 10005157 | 26406.27 |
| 031 | SCR,CAP HEXH NYL 1/4-20X.50 | 4 | 11540003 | 26406.31 |
| 033 | SEAL,LIP(BUNA-N) 3/4" SFT | 1 | 10005172 | 26406.33 |
| 034 | PLT,CLAMP 3-1/2" UNIT | 2 | 64449020 | 26406.34 |
| 035 | BLWR,FOOT 3-1/2 URAI | 2 | 64999021 | 26406.35 |
| 037 | FITTING,GREASE 1/8"MPT | 2 | 10007001 | 26406.37 |
| 038 | PLUG,VENT 1/8" | 2 | 13002001 | 26400.38 |
| 039 | WSHR,OBLONG 1 1/2 SLOT | 4 | 12892001 | 26406.39 |
| 046 | URAI LIFTING, LUG | 2 | 64361020 | 26414.42 |

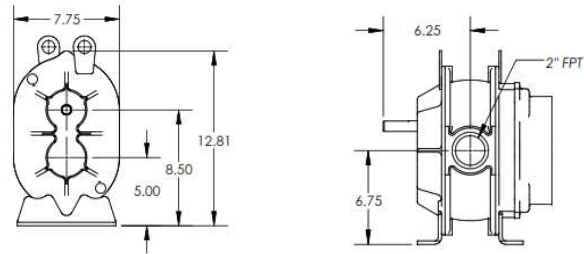
Standard Repair Kit (651050RK / 26406) includes blue highlighted items

Standard Repair Kit with Gears (651040RK/ 26405) includes blue & green items

Dimensional Drawings – Horizontal



Dimensional Drawings – Vertical



Clearances

Impeller/Impeller: 0.010–0.012"
 Impeller End to Headplate
 DE & GE: 0.003-0.008"
 GE w/ Spring Installed: 0.003"
 Impeller Tips to Cylinder:
 Inlet & Discharge: 0.004-0.006"
 Center: 0.002-0.003"

Critical Dimensions

Impeller Width: 5.675-5.676"
 Shaft Dia. at Bearing Bore:
 2.0472-2.0473"
 Bearing Bore Dia.: 0.7875-0.7879"

Materials of Construction

HEADPLATE MATERIAL: CAST IRON ASTM A48 CLASS 30B
 CYLINDER MATERIAL: CAST IRON ASTM A48 CLASS 30B
 IMPELLER MATERIAL: CAST IRON ASTM A48 CLASS 30B

SHAFT MATERIAL: STEEL, PRESS THRU ASTM 108-90 & 311-90
 HEADPLATE SEAL (4): LABYRINTH - INTEGRAL W/ SHAFT FLANGE
 BEARING SEAL (4): RADIAL LIP VITON

DRIVE SHAFT SEAL: RADIAL LIP BUNA-N
 GEAR MATERIAL: SAE 8620 STEEL CARBURIZED, HT 58-62 Rc
 GEAR RATING: AGMA -#11