

Apocalypse Stirling Engine Supplies

Stirling engine system design by David Hartkop, 2017

| Category | Item | Item Notes | Part Number | Supplier |
|----------------|--|--|---|---|
| Bearing | pillow block bearing 1 inch bore | flywheel support bearings | McMaster #6494K14 | McMaster Carr |
| Bearing | linear bearing 3/4 inch bore | support displacer & piston rods, 1.25" OD 3/4"ID | McMaster # 6262K85 | McMaster Carr |
| Bearing | FR8ZZ Shielded Flanged Ball Bearing 1/2"ID | for connecting rods, 1 3/8in OD, 1/2in ID | McMaster # 6384K363 | McMaster Carr |
| Generator | 1 HP permanent magnet motor/generator | 24vdc motor 1800 RPM, 5/8inch shaft | Grainger# 26VU37 | Grainger Industrial Supply |
| Hardware | 3 inch pulley, 5/8 in bore | Generator pulley | McMaster # 6245K616 | McMaster Carr |
| Hardware | clamping 1" ID shaft collar w. keyway | For flywheel cranks | McMaster # 3357K15 | McMaster Carr |
| Metal, Angle | Angle Iron, 1.5 x 2 x 0.25 in | Flywheel support structure | 20' stick, new | Local Steel Supplier |
| Metal, Channel | Channel 1.5 x 4 x 1/2 in | Flywheel & Generator base support | 20' stick, new | Local Steel Supplier |
| Metal, Flat | Flat stock 1 x 1/4 inch | support hoops throughout engine | 20' stick, new | Local Steel Supplier |
| Metal, Shaft | Cold Rolled Rod 1 inch | flywheel shaft | scrap | Local Steel Supplier |
| Metal, Shaft | Cold Rolled Rod 3/4 inch | piston and displacer shaft | 20' | Local Steel Supplier |
| Metal, Sheet | Sheet Metal Stock 1/16 in | body of displacer | 4 x 8 x 1/16, new | Local Steel Supplier |
| Metal, Sheet | Sheet Metal Stock 1/2 inch | Fire box ceiling plate, Flywheels, top plate | scrap sizes | Local Steel Supplier |
| Metal, Sheet | Sheet Metal Stock 1/4 inch | bottom plate | 4 x 8 x 1/4 new | Local Steel Supplier |
| Metal, Sheet | Sheet Metal Stock 3/16 inch | Body cylinder wall, displacer top & bottom | 4x8x3/16 in new | Local Steel Supplier |
| Metal, Tube | Seamless Tube 1in ID, 1/8in wall. | Displacer chamber shaft feed tube | scrap | Local Steel Supplier |
| Metal, Tube | Seamless Tube 8 in ID, 3/8 in wall. | main drive cylinder | scrap | Local Steel Supplier |
| Metal, Tube | 6 inch dia x 1/8 inch thick steel pipe | fire box chimney port, reservoir steam port | scrap | Local Steel Supplier |
| Metal, Tube | Seamless Tube 1 1/4 in ID | tube for holding linear bearings slip fit | scrap | Local Steel Supplier |
| Metal, Shaft | 304 stainless rod 3/4 OD 3 ft length | shat to drive displacer and piston | McMaster # 89535K12 | McMaster Carr |
| misc | high density fire brick | fire box floor and walls | | |
| misc | v-belt | flywheel to generator link | | |
| misc | fireplace grate | fire box floor | | |
| Seal | Viton O-ring 1/8 inch x 11/16 inch ID | o rings for displacer rod | Model: BV75313 | http://www.theoringstore.com/ |
| Seal | Viton o-ring 1/4 inch x 8 inch OD | o ring for piston | Model: -443 BV75 Brown Viton, Model: BV75443 | http://www.theoringstore.com/ |