



300 / 450 / 600 / 900 SERIES

Pump Skid Assembly Manual

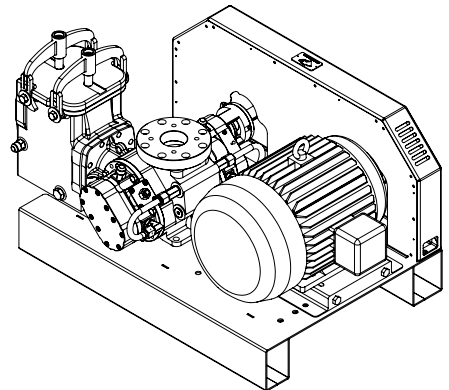
Component selection, connections and reference dimensions

TECHNICAL MANUAL

Rev F | 2026.09.28

Document BCP-SKID-SA

Based on the revised September 2026 assembly drawings



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DOCUMENTS

CONTENTS

Contents and use

Use this manual to select and identify the mechanical components of BearCat 300, 450, 600 and 900 belt-drive skid assemblies. The approved order drawing and component instructions govern the installed configuration.

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BEFORE ASSEMBLY OR SERVICE

Stop and isolate the equipment; follow the site lockout/tagout procedure and verify zero hazardous energy. Relieve trapped product pressure and let hot equipment reach a safe working condition before opening any connection.

- Use verified lifting points and suitable lifting equipment. Keep drive guards fitted during operation; support piping independently of the pump, meter and screenbox.
- **Any pump that is heated or pumping hot liquid should be operated with Safety Blankets properly installed.**
- Provide suitable pressure protection and verify the intended flow path. A relief setting is where opening begins, not a guaranteed maximum pressure. Follow the pump instructions for low-flow cold-start or cold-slug purging.

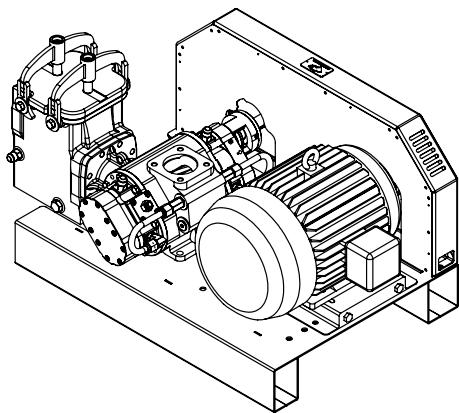
SEND PHOTOS BEFORE CALLING

Send wide, well-lit, high-resolution photos from several angles showing the complete installation, piping, valve positions, drive and controls. Include equipment identity, readings, fault behavior, what still works and recent changes. BearCat can zoom in; it cannot zoom out.

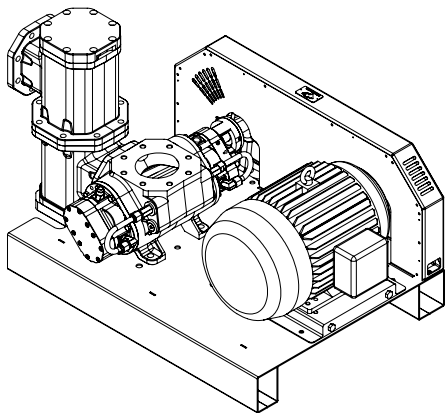
Rev F - September 28, 2026. Rebuilt from the six-page September 2026 source: updated port adapters and source drawings; removed electrical and administrative appendices. Earlier review revisions A-E are superseded.

Skid and component selection

Choose the pump, then the motor required by the application. Motor horsepower determines the skid size, subject to the pump exclusions below.



S42 | COMPACT



S48 | LARGE

Selection	Compact - S42	Large - S48
Base	42.0 x 30.0 in	48.0 x 36.0 in
Motor range	5-20 HP	25-40 HP; 20 HP optional
Pumps	300, 450; 600 optional	600, 900; 450 optional
Screenbox	SC4 / 4 in	SC4 / 4 in for 450/600 SC6 / 6 in for 900

Starting motor selections

Pump	Motor	Default skid	Screenbox
300	15 HP	Compact	SC4
450	20 HP	Compact	SC4
600	30 HP	Large	SC4
900	40 HP	Large	SC6

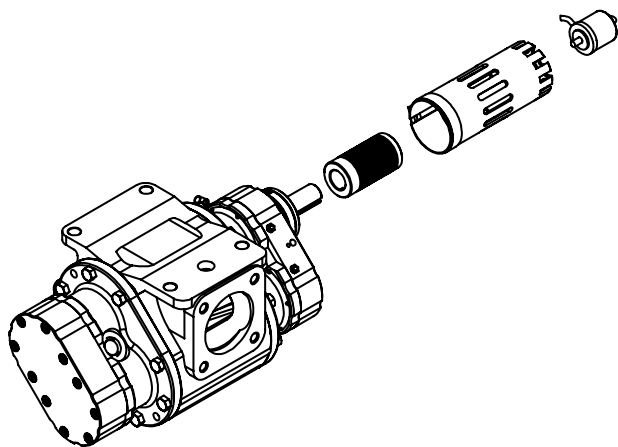
A 300 pump cannot use a large skid. A 900 pump cannot use a compact skid. For a 450/600 pump with 20 HP, compact is the default and large is optional. A 900 remains on the large skid.

When horsepower changes, reselect the skid and match the VFD to the actual motor. Confirm sizing for the material, temperature, viscosity, pressure and flow.

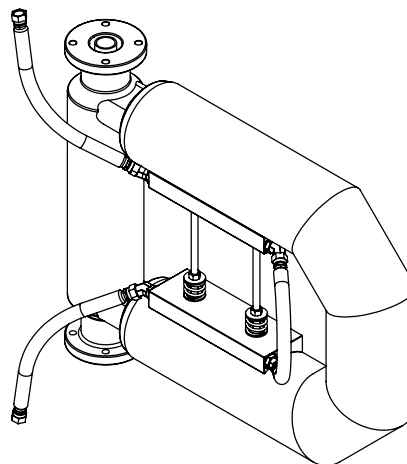
SC6 connects directly to the 900 pump. Its screenbox connection is built in and needs no separate B coupler.

Meter systems

Choose a gear meter system or a Micro Motion Coriolis system. The common sizes and pump pairings are shown below.



GEAR METER SYSTEM



MICRO MOTION SYSTEM

Pump	Micro Motion
300	CMF200
450	CMF300
600	CMF300

Common gear-meter sizes are **300U, 450U and 600U**. The encoder assembly includes the encoder, coupler and shroud. For 450/600 pumps, C3030 connects the pump discharge to the selected gear meter or a CMF300 with an NPS 3 connection.

Micro Motion accessories

Accessory	CMF200	CMF300
Heat block kit	HB200	HB300
Insulation blanket	IB - CMF200	IB - CMF300

900U GEAR METER - ADVANCED OPTION

For a 900 pump, use 900U with the C6060 meter port coupler. Selecting this Advanced option includes C6060. It is separate from the integral SC6 screenbox connection.

Confirm the selected meter and its connections for the material, temperature, pressure and operating flow range. The source does not specify a 900 Micro Motion combination.

Skid connections

450/600 assembly shown. M and C are alternative connections at the pump discharge.

Pump discharge flange adapters

NPS 4, Class 150 flange

BCP-side O-ring / connection-side gasket

- **M2540** — 300 pump
- **M3040** — 450/600 pump

Illustrated adapter height: 2.50 in.

Meter port couplers

- **C2525** — 300 pump
- **C3030** — 450/600 pump

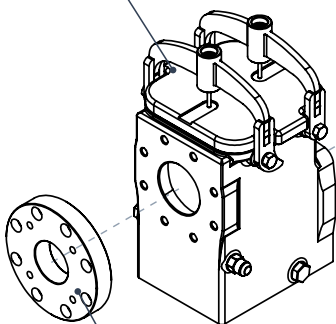
Gear meter or CMF300 with NPS 3 connection

Screenbox-to-pump couplers

2.50 in long; O-ring seals on both sides

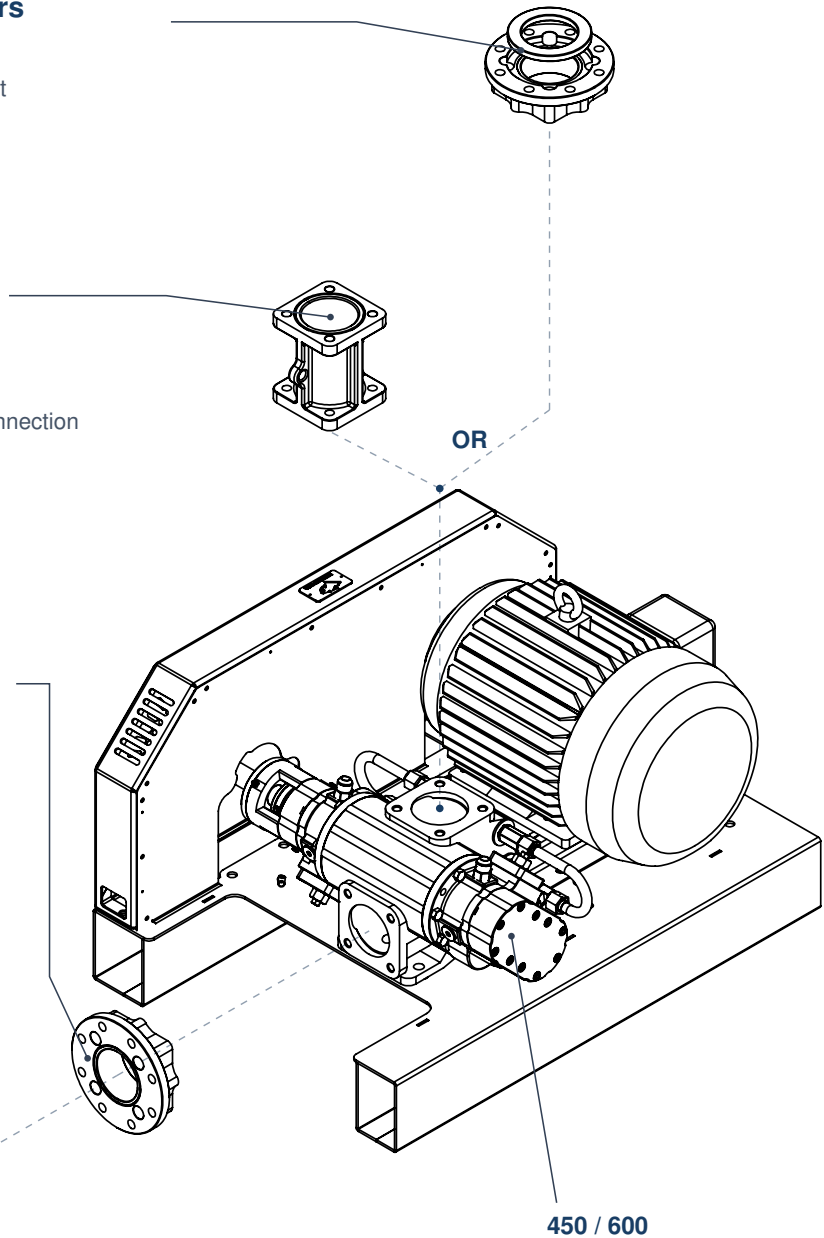
- **B2540** — 300 pump
- **B3040** — 450/600 pump

SC4



Screenbox inlet flange adapters

- **A2540** — NPS 2½, Class 150 flange
- **A3040** — NPS 3, Class 150 flange



Adapter and port reference

B: Screenbox-to-pump coupler; O-ring seals on both sides.

M / A: BCP-side O-ring; gasket at the mating flange. M adapts to a larger port; A to a smaller port.

Model	Application	Connection / dimension
B2540	300 pump to SC4	2.50 in long
B3040	450/600 pump to SC4	2.50 in long
M2540	300 pump discharge	NPS 4, Class 150 flange
M3040	450/600 pump discharge	NPS 4, Class 150 flange
A2540	SC4 inlet	NPS 2½, Class 150, 4-bolt flange; 1.50 in thick
A3040	SC4 inlet	NPS 3, Class 150, 4-bolt flange; 1.50 in thick
C2525	300 pump to meter	3.38 in long
C3030	450/600 pump to meter	7.00 in long

Illustrated M-adapter height: **2.50 in.** SC4 inlet: **NPS 4, Class 150, 8-bolt flange.** C3040 is legacy and replaced by B3040 for new selections.

Pump-port patterns

Pump ports use modified ANSI patterns. Match the actual bolt pattern and bore; nominal flange size alone does not establish compatibility.

Pump	Modified port pattern	Bore
300	Nominal NPS 2½, 4-bolt	3.0 in
450 / 600	Nominal NPS 3, 4-bolt	4.0 in

Other 450/600 port connections

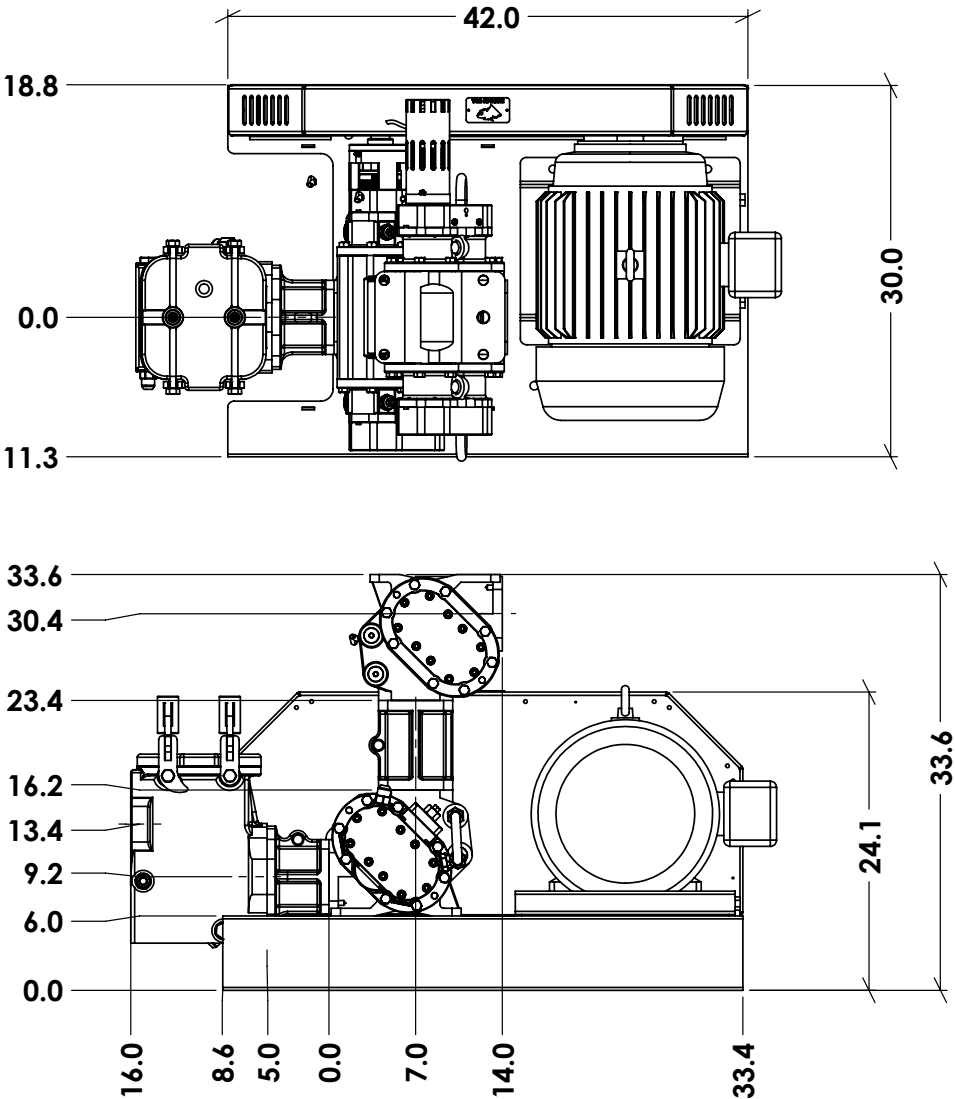
Model	Connection / use
WLD3040	Welds to NPS 4, Schedule 40 pipe
Q3030	Spacer for Q34 retrofit
FPT3040	4 in female pipe thread

Dimensions and model codes follow the revised September 2026 port-adapter drawing. C3030 is listed at 7.00 in in this source, replacing the earlier 7.25 in value.

Compact skid dimensions

S42 | 42.0 x 30.0 in base. For 5-20 HP motors with 300, 450 or 600 pumps. The 900 pump is excluded.

Dimensions are in inches. This reference drawing is retained in the September 2026 source; its original sheet is marked 3-2025 Ver 1.0. Verify the ordered configuration before locating piping or foundations.



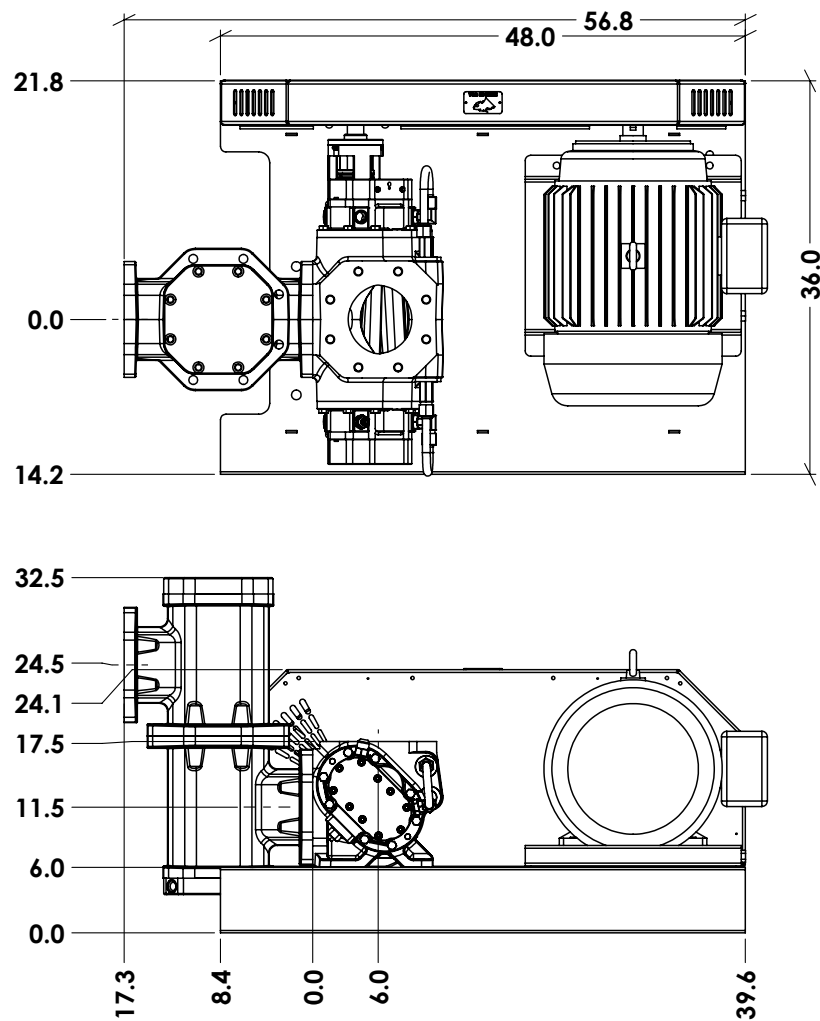
Component	Approximate source weight
Skid / 15 HP motor	150 lb / 300 lb
450 pump / 600 pump	235 lb / 265 lb
450 gear meter / 600 gear meter	245 lb / 275 lb
Screenbox / pallet	100 lb / 80 lb

The 15 HP motor weight is a reference for that motor, not a 20 HP value. Verify the ordered motor envelope and weight. Component weights are not a shipping total or a lifting plan.

Large skid dimensions

S48 | 48.0 x 36.0 in base. For 25-40 HP motors; 20 HP is optional. Compatible with 450, 600 and 900 pumps. The 300 pump is excluded.

Dimensions are in inches. This reference drawing is retained in the September 2026 source; its original sheet is marked 3-2025 Ver 1.0. The 56.8-inch projection is the illustrated overall length, not the base length.



Component	Approximate source weight
Skid / 30 HP motor	200 lb / 400 lb
900 pump / screenbox	400 lb / 200 lb
Pallet	80 lb

VERIFY THE ORDERED MOTOR

The listed 400 lb motor weight is for the source 30 HP motor. Verify the envelope and weight of the selected 20, 25, 30 or 40 HP motor before setting piping or lifting the assembly.