

# DATA SHEET

## BELL HOUSINGS AND COUPLERS



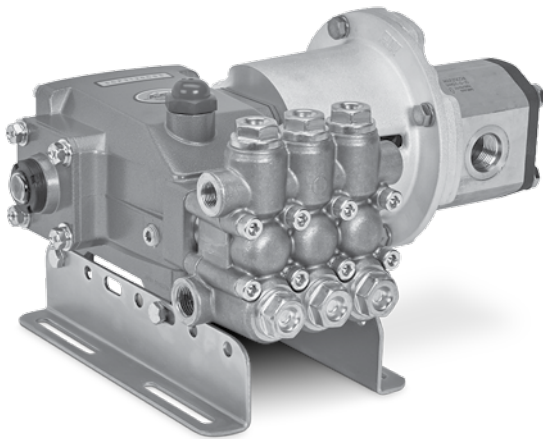
*The Pumps with Nine Lives*

### Hydraulic Bell Housing Models:

**76SAEA2.3FR, 76SAEB2.3FR, 76SAEB4.3FR**  
**76SAEA2.3CP, 76SAEB2.3CP, 76SAEB4.3CP**  
**76SAEA2.5FR, 76SAEB2.5FR, 76SAEB4.5FR**  
**76SAEA2.5CP, 76SAEB2.5CP, 76SAEB4.5CP**  
**76SAEA2.7FR, 76SAEB2.7FR, 76SAEB4.7FR**  
**76SAEA2.7CP, 76SAEB2.7CP, 76SAEB4.7CP**

### Flexible Coupling Models:

**8271, 8272, 8273, 8274, 8371, 8372**



Model 5CP312CSS Shown  
with Bell Housing, Flange and Hydraulic Motor

### FEATURES

- Optimal alignment reduces side-loading for quiet, trouble-free operation
- Compact direct mounting reduces space requirement
- Cast from lightweight, high-strength aluminum alloy
- Ease of assembly reduces fabrication costs
- Slotted housing allow easy access to coupler set screws
- Available as a complete drive package for fast and convenient assembly

# INSTALLATION

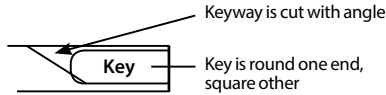
## Hydraulic bell housing and flexible coupling

1. Separate the parts which are included in the hydraulic bell housing assembly package and/or flexible coupler assembly package. Both assemblies are offered in separate kits to cover the various pump models.

**Note: Pump model series 7FR and 7CP require an additional adapter to be installed between the pump and hydraulic bell housing.**

2. Position this adapter with countersunk holes facing away from pump. Install conical lockwasher to each screw. Apply Loctite® 242® to the threads of the screws and torque to specifications per chart.
3. On the pump side, slide the small end of the hydraulic bell housing over the pump shaft with the Cat Pumps logo facing up and positioned 22° from the top.
4. Install conical lockwasher to each screw. Apply Loctite® 242® to the threads of the screws. Use a 4mm or 5mm allen wrench and torque to specifications per chart.
5. Apply a light film of antiseize lubricant to pump shaft.
6. Separate M16.5, M20 or M24 pump half of the flexible coupling and slide onto the pump shaft. Seat completely against the step on crankshaft.

7. Install pump key onto pump shaft with curved end up and towards pump.



8. Tighten each set screw by using a 3mm allen wrench and torque to specifications per chart.

**Note: one set screw located at keyway and second at 90° from keyway.**

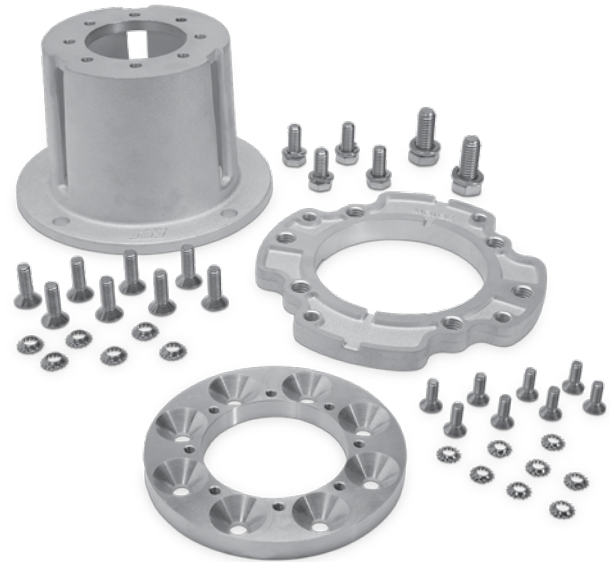
9. Apply a light film of antiseize lubricant to motor shaft.
10. Install motor key (as supplied with motor) onto motor shaft keyway.
11. On the motor side, slide 5/8" or 7/8" motor half of the flexible coupling onto motor shaft.
12. Install spyder onto motor side of flexible coupling.
13. Position adapter flange to the hydraulic bell housing with the cast word "PUMP" facing the pump and located at the top.
14. Insert four (4) screws and lockwashers from the pump side. Torque to specifications per chart.
15. Mount motor with coupling half onto pump shaft with coupling half, lining up the two halves.
16. Insert two (2) screws and lockwashers through motor bracket and hand thread into adapter flange. Torque to specifications per chart.
17. To secure motor side flexible coupling with set screw, insert a screwdriver into the hydraulic bell housing and press motor flexible coupling half towards pump.

**Note: flexible coupler halves should not contact each other. Ensure there is a small gap between coupler halves.**

18. Rotate motor shaft so set screws are lined up with hydraulic bell housing openings.

**Note: one set screw located at keyway and second at 90° from keyway.**

19. For 5/8" coupler halves, use a 4mm allen wrench to tighten set screws and torque to specifications per chart. For 7/8" coupler halves, use a 3mm allen wrench to tighten set screws and torque to specifications per chart.



## Bell Housing Assembly

PUMP SERIES	MODELS	SAE TYPE	BELL HOUSING ASSEMBLY
3CP Series	3CP1120-1140, 3CP1231-1241	A2	76SAEA2.3CP
		B2	76SAEB2.3CP
		B4	76SAEB4.3CP
3FR Series	230, 240, 270, 231, 241, 271, 237, 247, 277	A2	76SAEA2.3FR
		B2	76SAEB2.3FR
		B4	76SAEB4.3FR
5CP Series	5CP3105, 3110, 3160, 3120, 5CP4120, 5120, 6120, 6190, 5CP6221-6251	A2	76SAEA2.5CP
		B2	76SAEB2.5CP
		B4	76SAEB4.5CP
5FR Series	340, 350, 341, 351, 347, 357	A2	76SAEA2.5FR
		B2	76SAEB2.5FR
		B4	76SAEB4.5FR
7CP Series	7CP6110, 7CP6111	A2	76SAEA2.7CP
		B2	76SAEB2.7CP
		B4	76SAEB4.7CP
7FR Series	56, 60, 700, 781	A2	76SAEA2.7FR
		B2	76SAEB2.7FR
		B4	76SAEB4.7FR

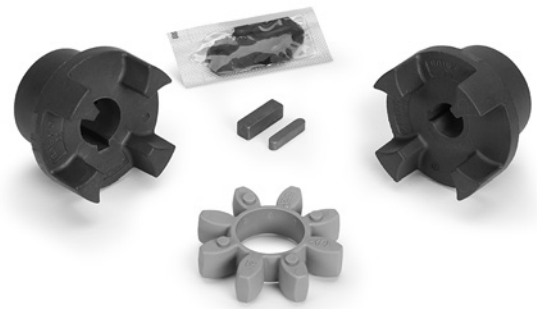
Bell Housing Assemblies include mounting hardware and flange

### SAE TYPE:

A2 = SAE "A" 2 Bolt, 3.25" Pilot  
 B2 = SAE "B" 2 Bolt, 4" Pilot  
 B4 = SAE "B" 4 Bolt, 4" Pilot

## Flexible Coupler Assembly

PUMP SERIES	SAE TYPE	FLEX COUPLER ASSY	SHAFT TO SHAFT	HP RATING
3CP & 3FR	A2	8271	16.5mm x 5/8"	10
	B2, B4	8272	16.5mm x 7/8"	10
5CP & 5FR	A2	8273	20mm x 5/8"	10
	B2, B4	8274	20mm x 7/8"	10
7CP & 7FR	A2	8371	24mm x 5/8"	20
	B2, B4	8372	24mm x 7/8"	20



### SAE TYPE:

A2 = SAE "A" 2 Bolt, 3.25" Pilot

B2 = SAE "B" 2 Bolt, 4" Pilot

B4 = SAE "B" 4 Bolt, 4" Pilot

## Flexible Coupler Model Assemblies

	8271	8272	8273	8274	8371	8372
SAE Type	A	B	A	B	A	B
Motor Shaft Ø	5/8"	7/8"	5/8"	7/8"	5/8"	7/8"
Motor Shaft Key	5/32"	1/4"	5/32"	1/4"	5/32"	1/4"
Pump Shaft Ø	16.5mm	16.5mm	20mm	20mm	24mm	24mm
Pump Shaft Key	5mm	5mm	6mm	6mm	8mm	8mm
Weight (lbs.)	1.26	1.22	0.97	0.93	1.20	1.61
Diameter	2.56"	2.56"	2.56"	2.56"	2.56"	2.56"
Length	3.49"	3.47"	3.52"	3.50"	3.52"	3.50"
Spyder	34410	34410	34410	34410	991903	991903
(Color)	Purple	Purple	Purple	Purple	Light Green	Light Green
Coupler Half, Motor	998563	38297	998563	38297	998563	38297
Coupler Half, Pump	38290	38290	38287	38287	38291	38291
Key, Pump	30047	30047	30057	30057	30067	30067

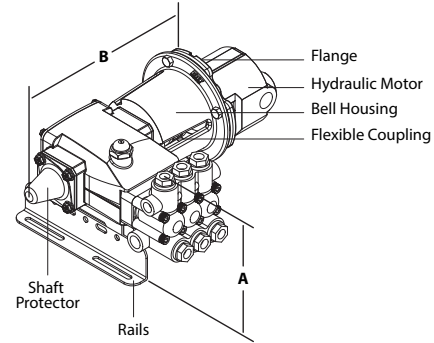
## Torque Specifications Chart

Screw	Tool	in/lbs.	ft/lbs.	Nm.
Coupler Set Screws	3 or 4 mm allen	120	10	13
m6	4mm allen	50	4.2	5.4
m8	5mm allen	115	9.6	12.5
3/8	9/16 wrench	150	12.5	16.2
1/2	3/4 wrench	300	25	32.4

## Dimensional Drawing

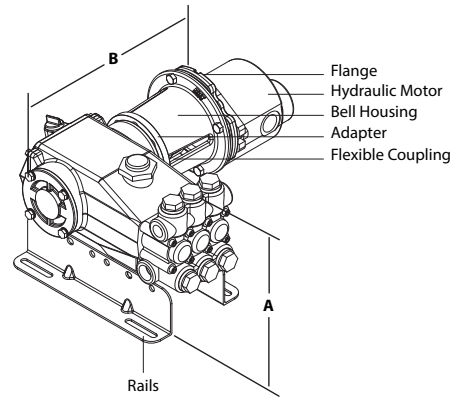
	A	B
3FR	5.70	12.13
3CP	6.25	12.13
5FR	6.73	13.19
5CP	7.33	13.19
7FR	8.67	12.09
7CP	9.08	12.95

**Note:** Overall length will vary pending hydraulic motor selection



## Rail Selection

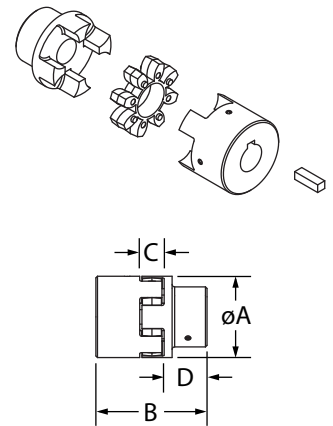
	Part Number
3FR	30612
3CP	30612
5FR	30611
5CP	30611
7FR	30645
7CP	30613



## Flexible Coupling Assembly

Model	A	B	C	D
8271	2.56 (65.02)	3.49 (88.64)	.77 (19.55)	1.37 (34.79)
8272	2.56 (65.02)	3.47 (88.13)	.77 (19.55)	1.35 (34.29)
8273	2.56 (65.02)	3.52 (89.40)	.77 (19.55)	1.37 (34.79)
8274	2.56 (65.02)	3.50 (88.90)	.77 (19.55)	1.35 (34.29)
8371	2.56 (65.02)	3.52 (89.40)	.77 (19.55)	1.37 (34.79)
8372	2.56 (65.02)	3.50 (88.90)	.77 (19.55)	1.35 (34.29)

## DIMENSIONAL



## CAUTIONS AND WARNINGS

All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at [www.catpumps.com/cautions-warnings](http://www.catpumps.com/cautions-warnings) or can be requested directly from Cat Pumps.

## WARRANTY

View the Limited Warranty on-line at [www.catpumps.com/warranty](http://www.catpumps.com/warranty).



### CAT PUMPS

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