

A.O. SMITH

Century® Close-Coupled and Large Commercial Pump Motors

Shaft Extensions for All Close-Coupled Pump Duty Requirements

These new A.O. Smith Century® Close-Coupled pump motors are made to the specific requirements of centrifugal pumps. They are designed for mounting the pump impeller on the motor shaft extension. The shaft extension is machined to standard dimensions adopted by NEMA and developed jointly with the Hydraulic Institute.

Shaft extension types are:

- Type JM – short shaft
- Type JP – long shaft
- Type WCP – long shaft, similar to Type JP

Motors may be mounted horizontally or vertically. For vertically mounted motors, protective top covers are required. Shaft dimensions for all three types are found in the dimensional table in this bulletin.



- 1** The NEMA Type JP motor has a long shaft extension for pumps with packing gland or mechanical rotary seal.
- 2** The "West Coast Pump" motor is a Century® standard design with a long shaft extension, similar to the NEMA Type JP.
- 3** The NEMA Type JM motor has a short shaft extension and may be used for pumps with packing or mechanical rotary seal.

New Nameplate Shows Total Motor Capability

Century's close-coupled pump motors are so unique that a nameplate has been developed which shows the total capability of the motor by horsepower, full load amps and service factor amps.

Each value of the motor is clearly described on the nameplate for complete and easy identification.

To the right is a typical nameplate which shows where all nameplate information is placed.

- UL, CSA approved
- Oversized shaft end bearing
- Split conduit box

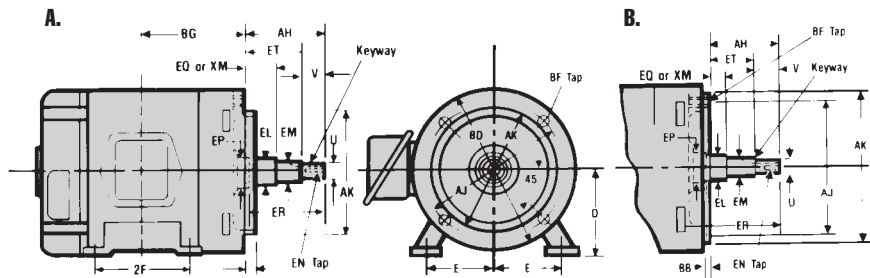
Century® Definite Purpose Motor Dimensions:

Close-Coupled Pump Motors

- Type JM and Type JP NEMA Standard
- West Coast Pump Type Century Standard

A. Types JM and JP 143-184 Frame WCP Type 143-145 Frame

B. Types JM and JP 213-256 Frame WCP Type 182-256 Frame



Frame	Keyway			D	E	2F	U	V	AH	AJ	AK	BB	BD	BF Tap			BG	EL	EM	EN Tap		EP	EQ or XM(5)	ER	ET
	W	D	L											Thrd.	No.	Dpth.				Thrd.	Dpth.				
143JM	3/16	3/32	1.63	3.50	2.75	4.00	.8745	—	4.250	5.875	4.500	.14	6.41	3/8-16	4	.56	4.88	1.156	1.000	3/8-16	.75	1.16	.625	4.250	2.875
143JP	3/16	3/32	1.63	3.50	2.75	4.00	.8745	—	7.312	5.875	4.500	.14	6.41	3/8-16	4	.56	4.88	1.156	1.000	3/8-16	.75	1.16	1.563	7.313	5.937
143TCZ	3/16	3/32	1.63	3.50	2.75	4.00	.8745	1.38	7.312	5.875	4.500	.14	6.41	3/8-16	4	.56	4.88	1.250	1.000	3/8-16	1.00	—	1.563	—	—
145JM	3/16	3/32	1.63	3.50	2.75	5.00	.8745	—	4.250	5.875	4.500	.14	6.41	3/8-16	4	.56	5.38	1.156	1.000	3/8-16	.75	1.16	.625	4.250	2.875
145JP	3/16	3/32	1.63	3.50	2.75	5.00	.8745	—	7.312	5.875	4.500	.14	6.41	3/8-16	4	.56	4.88	1.156	1.000	3/8-16	.75	1.16	1.563	7.313	5.937
145TCZ	3/16	3/32	1.63	3.50	2.75	5.00	.8745	1.38	7.312	5.875	4.500	.14	6.41	3/8-16	4	.56	4.88	1.250	1.000	3/8-16	1.00	—	1.563	—	—
182JM	3/16	3/32	1.63	4.50	3.75	4.50	.8745	—	4.250	5.875	4.500	.14	6.41	3/8-16	4	.56	5.88	1.250	1.000	3/8-16	.75	1.25	.625	4.250	2.875
182JP	3/16	3/32	1.63	4.50	3.75	4.50	.8745	—	7.312	5.875	4.500	.14	6.41	3/8-16	4	.56	5.88	1.250	1.000	3/8-16	.75	1.25	1.563	7.313	5.937
182TCZ	3/16	3/32	1.63	4.50	3.75	4.50	.8745	1.38	7.312	7.250	8.500	.27	8.96	1/2-13	4	.75	5.88	1.250	1.000	3/8-16	1.00	—	1.563	—	—
184JM	3/16	3/32	1.63	4.50	3.75	5.50	.8745	—	4.250	5.875	4.500	.14	6.41	3/8-16	4	.56	6.38	1.250	1.000	3/8-16	.75	1.25	.625	4.250	2.875
184JP	3/16	3/32	1.63	4.50	3.75	5.50	.8745	—	7.312	5.875	4.500	.14	6.41	3/8-16	4	.56	6.38	1.250	1.000	3/8-16	.75	1.25	1.563	7.313	5.937
184TCZ	3/16	3/32	1.63	4.50	3.75	5.50	.8745	1.38	7.312	7.250	8.500	.27	8.96	1/2-13	4	.75	6.38	1.250	1.000	3/8-16	1.00	—	1.563	—	—
213JM	3/16	3/32	1.63	5.25	4.25	5.50	.8745	—	4.250	7.250	8.500	.27	8.75	1/2-13	4	.75	7.25	1.250	1.000	3/8-16	.75	1.75	.625	4.250	2.875
213JP	1/4	1/8	2.50	5.25	4.25	5.50	1.2495	—	8.125	7.250	8.500	.27	8.75	1/2-13	4	.75	7.25	1.750	1.375	1/2-13	1.00	1.75	2.375	8.125	5.875
213TCZ	3/16	3/32	1.63	5.25	4.25	5.50	.8745	1.38	7.312	7.250	8.500	.27	8.75	1/2-13	4	.75	7.25	1.250	1.000	3/8-16	1.00	—	1.563	—	—
215JM	3/16	3/32	1.63	5.25	4.25	7.00	.8745	—	4.250	7.250	8.500	.27	8.75	1/2-13	4	.75	8.00	1.250	1.000	3/8-16	.75	1.75	.625	4.250	2.875
215JP	1/4	1/8	2.50	5.25	4.25	7.00	1.2495	—	8.125	7.250	8.500	.27	8.75	1/2-13	4	.75	8.00	1.750	1.375	1/2-13	1.00	1.75	2.375	8.125	5.875
215TCZ	3/16	3/32	1.63	5.25	4.25	7.00	.8745	1.38	7.312	7.250	8.500	.27	8.75	1/2-13	4	.75	8.00	1.250	1.000	3/8-16	1.00	—	1.563	—	—
254JM	1/4	1/8	2.50	6.25	5.00	8.26	1.2495	—	5.250	7.250	8.500	.27	9.25	1/2-13	4	.75	9.13	1.750	1.375	1/2-13	1.00	1.75	.625	5.250	3.000
254JP	1/4	1/8	2.50	6.25	5.00	8.26	1.2495	—	8.125	7.250	8.500	.27	9.25	1/2-13	4	.75	9.13	1.750	1.375	1/2-13	1.00	1.75	2.375	8.125	5.875
254TCZ	1/4	1/8	2.63	6.25	5.00	8.26	1.2495	2.25	8.125	7.250	8.500	.27	9.25	1/2-13	4	.75	9.13	1.750	1.375	1/2-13	1.25	—	2.375	—	—
256JM	1/4	1/8	2.50	6.25	5.00	10.00	1.2495	—	5.250	7.250	8.500	.27	9.25	1/2-13	4	.75	10.00	1.750	1.375	1/2-13	1.00	1.75	.625	5.250	3.000
256JP	1/4	1/8	2.50	6.25	5.00	10.00	1.2495	—	8.125	7.250	8.500	.27	9.25	1/2-13	4	.75	10.00	1.750	1.375	1/2-13	1.00	1.75	2.375	8.125	5.875
256TCZ	1/4	1/8	2.63	6.25	5.00	10.00	1.2495	2.25	8.125	7.250	8.500	.27	9.25	1/2-13	4	.75	10.00	1.750	1.375	1/2-13	1.25	—	2.375	—	—

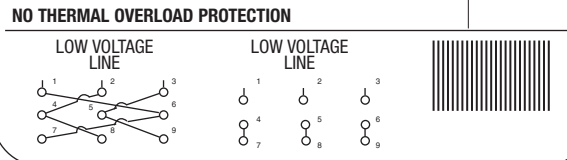
For Reference Only Unless Approved for Construction

A.O. SMITH CENTURY® Pump Motors



PART	7-8505500J-01	ENCL	DP	CAT NUMBER	E492
FRAME	S256JP	PHASE	3	SERIAL CODE	BY11
TYPE	MOGB	AMBIENT/INS.	40/F	OPER. INSTR.	
DRV BRG	309SF	OPP.DRV.BRG.	207SF	PROT.	
CUSTOMER PART NUMBER					

VOLTS	230/460	200/400	200
H.P.	25.0	25.0	25.0
HERTZ	60	50	60
AMPS	61.0/30.5	71.0/35.5	67.0
R.P.M.	3505	2870	2460
NEMA NOM EFF	87.5	84.0	86.5
NEMA DESIGN	B	B	—
DUTY	CONT	CONT	CONT
SERVICE FACTOR	1.15	1.00	1.15
CODE	G	F	E
NOM PF	87.7	90.3	92.9



Commercial Pump Motors

Three Phase, C-Face, 1081, 60 HZ

HP	RPM	Volts	Amps	S. F.	Frame	Stock No.	Shaft	Protector	Ins. Class	Notes
2	3450	208-230/460	7.0-6.6/3.3	1.20	56C	H704	Keyed	None	A	1
2	3450	208-230/460	7.0-6.6/3.3	1.20	56J	H705	Threaded	None	A	1
2	3450	208-230/460	8.6/4.3	1.20	56C	K3202	Keyed	None	B	
2	3450	208-230/460	8.6/4.3	1.2	56J	T3202	Threaded	None	B	
3	3450	208-230/460	9.6-9.2/4.6	1.15	56C	H740	Keyed	None	A	
3	3450	208-230/460	9.6-9.2/4.6	1.15	56J	H741	Threaded	None	A	
3	3450	208-230/460	9.0/4.5	1.15	56C	K3302	Keyed	None	B	
3	3450	208-230/460	9.0/4.5	1.15	56J	T3302	Keyed	None	B	

Three Phase, Square Flange, 60HZ

2	3450	208-230/460	7.1-6.8/3.4	1.30	56Y	H637	Threaded	None	B	1
2	3450	208-230/460	8.5/4.25	1.30	48Y	Q3202	Threaded	None	B	
3	3450	208-230/460	9.0-8.6/4.3	1.15	56Y	H755	Threaded	None	B	1
3	3450	200-230/460	9.7/4.9	1.15	56Y	Q3302	Threaded	None	B	

Purex Replacements

Single Phase, Capacitor Start

5	3450	230	25.6	1.15	184TY	V214	Keyed	None	B	2
5	3450	230	25.6	1.15	184TY	V220	Threaded	None	B	3

Three Phase, 50/60 HZ

5	3450/2850	208-220/440	14.0-13.5/6.75	1.15	182TY	R237	Keyed	None	F	2
5	3450/2820	208-220/440	14.0-13.5/6.75	1.15	182TY	R236	Threaded	None	F	3
7-1/2	3450/2850	208-220/440	21.6-19.4/9.7	1.15	184TY	R232	Keyed	None	F	2
10	3450/2850	208-220/440	28.0-26.0/13.0	1.15	213TY	R338	Keyed	None	B	2
15	3450/2820	208-220/440	40.0-38.0/19.0	1.15	215TY	R339	Keyed	None	F	2
20	3450/2820	208-220/440	55.0-53.0/26.5	1.15	254TY	R346	Keyed	None	F	

Pentair Replacements

Single Phase, PSC 1081

5	3450	208-230	21.0-19.4	1.0	56Y	B1000	Threaded	Auto	B	
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Three Phase, 1081

3	3450	208-230/460	11.0-10.4/5.2	1.15	56Y	H994	Threaded	None	B	
5	3450	208-230/460	13.4-13.4/6.7	1.0	56Y	H995	Threaded	None	B	

Close Coupled Pump Motors

Three Phase, ODP, Rigid Base

3	3450	200-230/460	9.0-8.6/4.3	1.15	145JM	E177	Keyed	None	B	4
5	3450	208-230/460	13.4-13.2/6.6	1.15	182JM	E296	Keyed	None	B	4
7-1/2	3450	200-230/460	22.0-19.0/9.5	1.15	184JM	E285	Keyed	None	F	
10	3450	200-230/460	29.0-27.0/13.5	1.15	213JM	E371	Keyed	None	F	
15	3450	200-230/460	42.0-38.0/19.0	1.15	215JM	E377	Keyed	None	F	
15	3450	200-230/460	42.0-38.0/19.0	1.15	215JP	E378	Keyed	None	F	
20	3450	200-230/460	54.0-48.0/24.0	1.15	254JM	E485	Keyed	None	F	
20	3450	200-230/460	54.0-48.0/24.0	1.15	254JP	E486	Keyed	None	F	
25	3450	200-230/460	67.0-58.0/29.0	1.15	256JM	E491	Keyed	None	F	
25	3450	200-230/460	67.0-58.0/29.0	1.15	256JP	E492	Keyed	None	F	

Three Phase, TEFC, Rigid Base

3	3450	208-230/460	8.5-8.2/4.1	1.15	182JM	N223	Keyed	None	F	5
5	3450	230/460	13.0/6.5	1.15	184JM	N245	Keyed	None	F	5
7 1/2	3450	208-230/460	23.0-20.0/10.0	1.15	213JM	N342	Keyed	None	F	5
10	3450	208-230/460	31.0-25.0/12.5	1.15	215JM	N343	Keyed	None	F	5
15	3450	230/460	36.0/18.0	1.15	254JM	N417	Keyed	None	F	
20	3450	230/460	46.0/23.0	1.15	256JM	N425	Keyed	None	F	

Single Phase, ODP, Rigid Base

3	3450	230	13.4	1.15	182JP	P131	Keyed	None	B	4
3	3450	115/230	32.0/16.0	1.15	182JM	P229	Keyed	None	B	
5	3450	230	26.0	1.15	184JM	P231	Keyed	None	B	
5	3450	230	26.0	1.15	184JP	P235	Keyed	None	B	
5	1725	230	25.0	1.15	213JM	P317	Keyed	None	B	
5	1725	230	25.0	1.15	213JP	P324	Keyed	None	B	
7 1/2	3450	230	39.0	1.15	213JM	P318	Keyed	None	B	
7 1/2	3450	230	39.0	1.15	213JP	P325	Keyed	None	B	
7 1/2	1725	230	32.0	1.15	215JM	P319	Keyed	None	B	
10	3450	230	42.5	1.15	215JM	P320	Keyed	None	B	
10	3450	230	42.5	1.15	215JP	P327	Keyed	None	B	

Notes:

- 50/60 HZ
- Pump Series: C
- Pump Series: L
- Terminal in Bracket Construction
- 208 Volt @ 1.0 Service Factor

For the complete line of A.O. Smith and A.O. Smith Century™ Commercial Pump Motors, contact A.O. Smith or your A.O. Smith Wholesaler for #1081 and #1082 catalogs.

Commercial Pump Motor Cross Reference

SINGLE PHASE 230 (115) VOLT ODP

HP	RPM	FRAME	AOS	MARATHON	BALDOR	EMERSON	GE	STA-RITE BERKLEY	ITT-MARLOW	AURORA	PENTAIR/PUREX
3	3600	182JM	P229	Z406	JML1406T						
3	3600	182JM	P130					DMH/DDH			
3	1800	184JM	P230	Z407	JML1408T						
5	3600	184JM	P231	Z408	JML1409T			DMJ/DHJ	3B28EC-C2-1		
5	3600	184TY	V214								CH50/CM50 LH50
5	3600	184TY	V220								
5	1800	184JM	P317	Z409	JML1508T						
7.5	3600	213JM	P318	Z410	JML1509T			CSPHK	3B32EC-C2-1		
7.5	1800	215JM	P319	Z411	JML1510T					341A-3X4X9B-7.5-1	
10	3600	215JM	P320	Z412	JML1511T			CSPHL			

THREE PHASE 230/460 VOLT ODP

HP	RPM	FRAME	AOS	MARATHON	BALDOR	EMERSON	GE	STA-RITE BERKLEY	ITT-MARLOW	AURORA	PENTAIR/PUREX
3	3600	145JM	E177	M311	JMM3158T	DJ3S1AM	N846	DMH3/DHH3			
3	1800	182JM	E294	M313	JMM3211T	DJ3S2AM	N704				
5	3600	182JM	E296	M315	JMM3212T	DJ5S1AM	N705	DMJ3/DHJ3	3B28EC-C2-3		
5	3600	182TY	R237								CHK50/CMK50 LHK50
5	3600	182TY	R236								
5	1800	184JM	E282	M317	JMM3218T	DJ5S2AM	N706				
7.5	3600	184JM	E285	M319	JMM3219T	DJ7S1AM	N707	CSPHK3	3B32EC-C2-3		
7.5	3600	184TY	R232								CMK75/CHK75
7.5	1800	213JM	E368	M321	JMM3311T	DJ7S2AM	N708			341A-3X4X9B-7.5-3	
10	3600	213JM	E371	M323	JMM3312T	DJ10S1AM	N709	CSPHL3			
10	3600	213TY	R338								CMK100/CHK100
10	1800	215JM	E374	M325	JMM3313T	DJ10S2AM	N710			341A-3X4X9B-10-3	
15	3600	215JM	E377	M327	JMM3314T	DJ15S1AM	N711	CSPHM3			
15	3600	215TY	R339								CMK150/CHK150
15	1800	254JM	E482	M329		DJ15S2AM	N712			341A-3X4X9B-15-3	
20	3600	254JM	E485	M330	JMM2514T	DJ20S1AM	N713	CSPHN3			
20	3600	254TY	R346								CHK200
20	1800	256JM	E488	M331	JMM2515T	DJ20S2AM	N714			341A-4X5X11-20-3	
25	3600	256JM	E491	M332	JMM2516T	DJ25S1AM	N715				
25	1800	284JM	E566	M333		DJ25S2AM	N716			341A-4X5X11-25-3	

THREE PHASE 208-230/460 VOLT TEFC

HP	RPM	FRAME	AOS	MARATHON	BALDOR	EMERSON	GE	STA-RITE BERKLEY	ITT-MARLOW	AURORA	PENTAIR/PUREX
3	3600	182JM	N223	M405	JMM3610T	UJ3S1AM	N735				
3	1800	182JM	N232	M406	JMM3611T	UJ3S2AM	N737				
5	3600	184JM	N245	M407	JMM3613T	UJ5S1AM	N738				
5	1800	184JM	N246	M408	JMM3615T	UJ5S2AM	N739				
7.5	3600	213JM	N342	M409	JMM3709T	UJ7S1AM	N740				
7.5	1800	213JM	N344	M410	JMM3710T	UJ7S2AM	N741				
10	3600	215JM	N343	M411	JMM3711T	UJ10S1AM	N742				
10	1800	215JM	N345	M412	JMM3714T	UJ10S2AM	N743				
15	3600	254JM	N417	M413	JMM2394T	UJ15S1AM	N744				
15	1800	254JM	N424	M420	JMM2333T	UJ15S2AM	N745	M08311			
20	3600	256JM	N425	M414	JMM4106T	UJ20S1AM	N746				
20	1800	256JM	N426	M421	JMM2334T	UJ20S2AM	N747	M10490			
25	3600	284JM	N516		JMM4107T	UJ25S1AM	N748	S34562			
25	1800	284JM	N535		JMM4103T	UJ25S2AM	N749				

Distribution Services
531 North Fourth Street
Tipp City, OH 45371

A.O. SMITH
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(866) 887-5216
Fax: (800) 468-2062
www.aosmithmotors.com