

SERIES 4800 ASSEMBLY MACHINE AIR MOTORS**P
A
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S****Models 4800M2, 4800P2, 4800Q2 and 4800S2 Nonreversible****Models 4810M2, 4810P2, 4810Q2 and 4810S2 Nonreversible
with 1 to 1 Ratio Offset Gear Head Assembly****Models 4820M2, 4820P2, 4820Q2 and 4820S2 Nonreversible
with Pressure Regulator Backhead****Models 4830M2, 4830P2, 4830Q2 and 4830S2 Nonreversible with Pressure
Regulator Backhead and 1 to 1 Ratio Offset Gear Head Assembly****Models 4840M2, 4840P2, 4840Q2, 4840S2, 4840T2 and 4840U2 Reversible****Models 4850M2, 4850P2, 4850Q2 and 4850S2 Reversible
with 1 to 1 Ratio Offset Gear Head Assembly****Models 4870M2, 4870P2, 4870Q2 and 4870S2 Nonreversible
with 1.5 to 1 Reduction Offset Gear Head Assembly****Models 4880M2, 4880P2, 4880Q2 and 4880S2 Nonreversible with Pressure
Regulator Backhead and 1.5 to 1 Reduction Offset Gear Head Assembly****Models 4890M2, 4890P2, 4890Q2 and 4890S2 Reversible
with 1.5 to 1 Reduction Offset Gear Head Assembly****B
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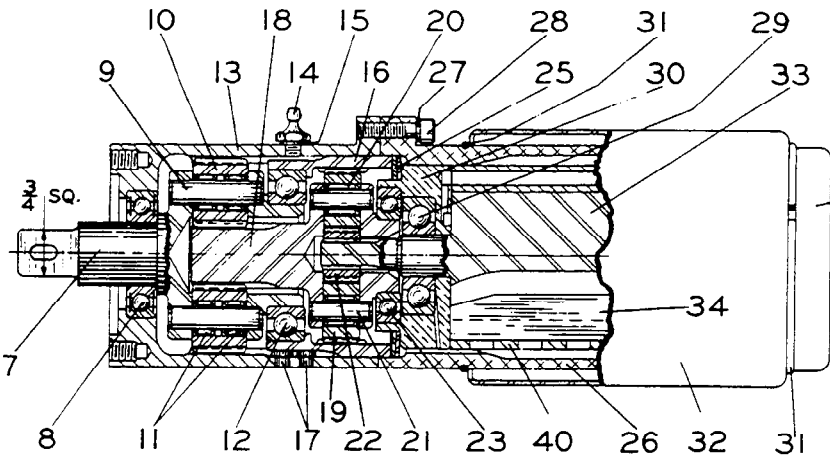
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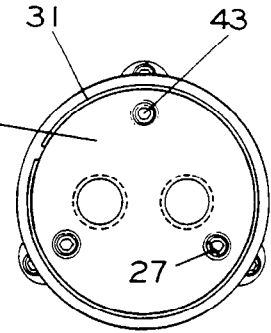
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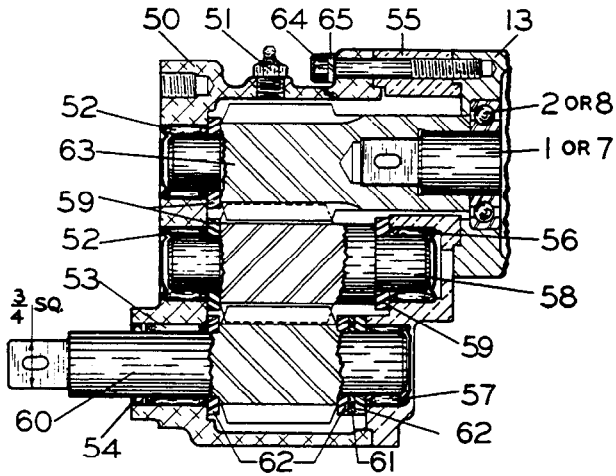
INGERSOLL-RAND®
PROFESSIONAL TOOLS



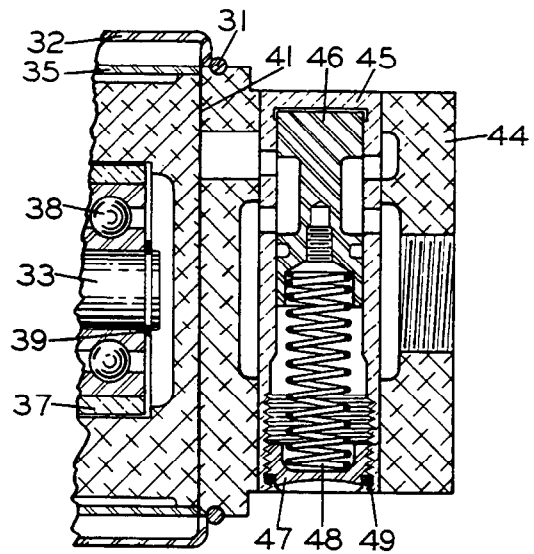
MODEL 4840P2 AIR MOTOR
 CONSTRUCTION ALSO TYPICAL OF ALL
 OTHER MOTORS WITH
 P, Q OR S GEARING



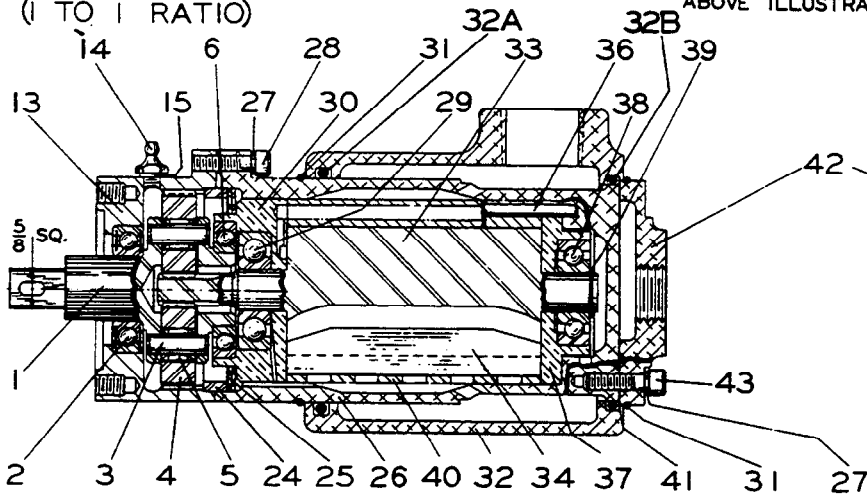
**DOUBLE INLET
 BACKHEAD**
 USED ON SERIES 4840, 4850
 & 4890 REVERSIBLE MOTORS



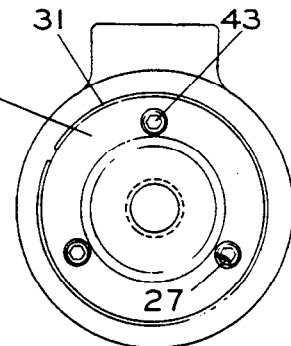
OFFSET GEAR HEAD ASSEMBLY
 USED ON 4810, 4830 & 4850 MOTORS
 (1 TO 1 RATIO)



PRESSURE REGULATOR BACKHEAD
 USED ON SERIES 4820, 4830 & 4880 MOTORS
 ABOVE ILLUSTRATION IS DOUBLE SCALE



MODEL 4800M2 AIR MOTOR
 CONSTRUCTION ALSO TYPICAL OF ALL OTHER MOTORS
 WITH M GEARING



**SINGLE INLET
 BACKHEAD**
 USED ON SERIES 4800, 4810 &
 4870 NONREVERSIBLE MOTORS

PART NUMBER FOR ORDERING

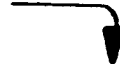
		↓	↓	↓	↓	↓	↓
MODEL		4800M2, 4810M2 4820M2, 4830M2 4840M2, 4850M2 4870M2, 4880M2 and 4890M2	4800P2, 4810P2 4820P2, 4830P2 4840P2, 4850P2 4870P2, 4880P2 and 4890P2	4800Q2, 4810Q2 4820Q2, 4830Q2 4840Q2, 4850Q2 4870Q2, 4880Q2 and 4890Q2	4800S2, 4810S2 4820S2, 4830S2 4840S2, 4850S2 4870S2, 4880S2 and 4890S2	4840T2	4840U2
	5/8" Square Drive Spindle Assembly	R4800M-A8	---	---	---	---	---
1	5/8" Square Drive Spindle	R4800M-8	---	---	---	---	---
• 2	Spindle Front Bearing	R4800-510	---	---	---	---	---
3	Spindle Planet Gear Shaft (2)	R4800-191	---	---	---	---	---
4	Spindle Planet Gear (31 teeth) (2)	R4800M-9	---	---	---	---	---
• 5	Spindle Planet Gear Bearing (1 for each Planet Gear)	R4800-654	---	---	---	---	---
• 6	Spindle Rear Bearing	W44-97	---	---	---	---	---
	3/4" Square Drive Spindle Assembly						
	with Standard Length Spindle	---	R4800P-A8	R4800P-A8	R4800P-A8	R4801T-A8	R4801U-A8
	with 2" Extended Spindle	---	R4800P-A308-2	R4800P-A308-2	R4800P-A308-2	---	---
	with 4" Extended Spindle	---	R4800P-A308-4	R4800P-A308-4	R4800P-A308-4	---	---
	with 6" Extended Spindle	---	R4800P-A308-6	R4800P-A308-6	R4800P-A308-6	---	---
	with 8" Extended Spindle	---	R4800P-A308-8	R4800P-A308-8	R4800P-A308-8	---	---
7	3/4" Square Drive Spindle						
	Standard Length	---	R4800P-8	R4800P-8	R4800P-8	R4801T-8	R4801U-8
	2" Extended Spindle	---	R4800P-308-2	R4800P-308-2	R4800P-308-2	---	---
	4" Extended Spindle	---	R4800P-308-4	R4800P-308-4	R4800P-308-4	---	---
	6" Extended Spindle	---	R4800P-308-6	R4800P-308-6	R4800P-308-6	---	---
	8" Extended Spindle	---	R4800P-308-8	R4800P-308-8	R4800P-308-8	---	---
• 8	Spindle Front Bearing	---	R4800-510	R4800-510	R4800-510	R4800-510	MR-988
9	Spindle Planet Gear Shaft (3)	---	R4800-190	R4800-190	R4800-190	R4800-190	R4801U-191
10	Spindle Planet Gear (16 teeth) (3)	---	R4800P-9	R4800P-9	R4800P-9	R4801T-9	R4801U-9
• 11	Spindle Planet Gear Bearing (2 for each Planet Gear)	---	WWU10-510	WWU10-510	WWU10-510	WWU10-510	R4801U-510
• 12	Spindle Rear Bearing	---	R4800-97	R4800-97	R4800-97	R4800-97	R4800-97
13	Gear Case	R4800M-37	R4800P-37	R4800P-37	R4800P-37	R4800P-37	R4801U-37
14	Gear Case Grease Fitting	R1-188	R1-188	R1-188	R1-188	R1-188	R1-188
15	Grease Fitting Washer	R3-92A	R3-92A	R3-92A	R3-92A	R3-92A	R3-92A
16	Internal Gear	---	R4800-406	R4800-406	R4800-406	R4800-406	R4800-406
17	Internal Gear Key (2)	---	R4800-407	R4800-407	R4800-407	R4800-407	R4800-407
	Gear Head Assembly	---	R4800P-A216	R4800Q-A216	R4800S-A216	R4801T-A216	R4801U-A216
18	Gear Head	---	R4800P-216	R4800Q-216	R4800S-216	R4801T-216	R4801U-216
19	Gear Head Planet Gear (2) (23 teeth on P ratio; 25 teeth on Q ratio; 27 teeth on S and T ratios; 28 teeth on U ratio)	---	R4800P-10	R4800Q-10	R4800S-10	R4800S-10	R4801U-10
20	Gear Head Planet Gear Bearing (1 for each Planet Gear)	---	R4800-654	R4800-654	R4800-654	R4800-654	R4800-654
21	Gear Head Planet Gear Shaft (2)	---	R4800-191	R4800-191	R4800-191	R4800-191	R4800-191
22	Rotor Pinion (19 teeth)	---	R4800P-17	---	---	---	---
• 23	Gear Head Bearing	---	W44-97	W44-97	W44-97	W44-97	W44-97
24	Motor Retaining Ring	R4800-118	---	---	---	---	---
25	Motor Retaining Washer (2)	R4800-81	R4800-81	R4800-81	R4800-81	R4800-81	R4800-81

• To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

PART NUMBER FOR ORDERING

		↓	↓	↓	↓	↓	↓
	MODEL	4800M2, 4810M2 4820M2, 4830M2 4840M2, 4850M2 4870M2, 4880M2 and 4890M2	4800P2, 4810P2 4820P2, 4830P2 4840P2, 4850P2 4870P2, 4880P2 and 4890P2	4800Q2, 4810Q2 4820Q2, 4830Q2 4840Q2, 4850Q2 4870Q2, 4880Q2 and 4890Q2	4800S2, 4810S2 4820S2, 4830S2 4840S2, 4850S2 4870S2, 4880S2 and 4890S2	4840T2	4840U2
26	Motor Housing	R4800-40	R4800-40	R4800-40	R4800-40	R4800-40	R4800-40
27	Gear Case Cap Screw Lock Washer or Backhead Cap Screw Lock Washer (6)	8U-58	8U-58	8U-58	8U-58	8U-58	8U-58
28	Gear Case Cap Screw (3)	5080-638	5080-638	5080-638	5080-638	5080-638	5080-638
● 29	Front Rotor Bearing	R3H-24	R3H-24	R3H-24	R3H-24	R3H-24	R3H-24
● 30	Front End Plate	R4800-11	R4800-11	R4800-11	R4800-11	R4800-11	R4800-11
31	Exhaust Deflector Retaining Ring (2)	R4800-323	R4800-323	R4800-323	R4800-323	R4800-323	R4800-323
32	Exhaust Deflector with slotted front exhaust	R4800-23	R4800-23	R4800-23	R4800-23	R4800-23	R4800-23
	with 3/4" pipe tap exhaust	R4801-A123	R4801-A123	R4801-A123	R4801-A123	---	---
32A	Deflector Front Seal (used with R4801-A123)	R4800-210	R4800-210	R4800-210	R4800-210	---	---
32B	Deflector Rear Seal (used with R4801-A123)	MOV003AA-739	MOV003AA-739	MOV003AA-739	MOV003AA-739	---	---
33	Rotor (9 teeth on M, P, S or T ratios; 13 teeth on Q ratio; 7 teeth on U ratio)	R4800M-53	R4800M-53	R4901-53	R4800M-53	R4800M-53	R4800U-53
● 34	Vane Packet (set of 5 Vanes)	R4800-42-5	R4800-42-5	R4800-42-5	R4800-42-5	R4800-42-5	R4800-42-5
35	Muffler	R4800-175	R4800-175	R4800-175	R4800-175	R4800-175	R4800-175
36	Cylinder Dowel	R4800-98	R4800-98	R4800-98	R4800-98	R4800-98	R4800-98
● 37	Rear End Plate	R4800-12	R4800-12	R4800-12	R4800-12	R4800-12	R4800-12
● 38	Rear Rotor Bearing	R2-24A	R2-24A	R2-24A	R2-24A	R2-24A	R2-24A
39	Rear Rotor Bearing Retainer	R4800-119	R4800-119	R4800-119	R4800-119	R4800-119	R4800-119

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40	Cylinder for Series 4800, 4810, 4820, 4830, 4870 and 4880 for Series 4840, 4850 and 4890	R4800-3 R4840-3
• 41	Backhead Gasket for Series 4800, 4810, 4820, 4830, 4870 and 4880 for Series 4840, 4850 and 4890	R4800-283 R4840-283
42	Backhead for Series 4800, 4810 and 4870 for Series 4840, 4850 and 4890	R4800-102 R4840-102
43	Backhead Cap Screw (3) for Series 4800, 4810, 4840, 4850, 4870 and 4890 for Series 4820, 4830 and 4880	5080-638 12E-354
	Pressure Regulator Backhead Assembly (This Assembly and its component parts are used on Series 4820, 4830 and 4880).	R4820-A202
44	Pressure Regulator Backhead	R4820-202
45	Pressure Regulator Backhead Bushing	R4820-203
46	Pressure Regulator Valve	R4820-204
47	Pressure Regulator Valve Cap	R4820-205
48	Pressure Regulator Valve Spring	R4820-206
49	Pressure Regulator Valve Cap Retainer	R4820-340
	Offset Gear Head Assembly (1 to 1 gear ratio) (This Assembly and its component parts are used on Series 4810, 4830 and 4850)	
	for M ratio	R4810M2-A137
	for P, Q and S ratios.	R4810P2-A137
50	Offset Gear Housing.	R4810-137
51	Offset Gear Housing Grease Fitting.	23-188
• 52	Intermediate Gear Front Bearing or Drive Gear Bearing (2)	R4810-501
• 53	Socket Driver Front Bearing	20BM-399A
• 54	Socket Driver Seal	R4810-271
55	Offset Gear Housing Cover	R4810-378
• 56	Intermediate Gear Rear Bearing	R4810-501
• 57	Socket Driver Rear Bearing	R4810-705
58	Intermediate Gear	R4810-82
59	Intermediate Gear Thrust Washer or Drive Gear Thrust Washer (3)	R4810-332
60	Socket Driver (3/4" square drive)	R4810-607-3/4
*	Socket Driver Snap Ring.	BU-362
• 61	Socket Driver Thrust Bearing.	R4810-105
62	Socket Driver Thrust Washer (3).	R4810-706
63	Drive Gear for M ratio for P, Q and S ratios.	R4810M-756 R4810P-756
64	Offset Gear Housing Cap Screw (4).	R4810-68
65	Offset Gear Housing Cap Screw Lock Washer (4).	34U-58

* Not illustrated.

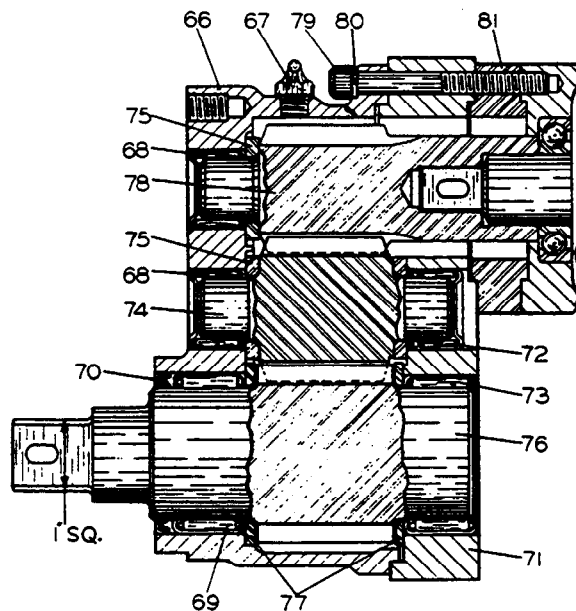
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	Offset Gear Head Assembly (1.5 to 1 gear reduction) (This Assembly and its component parts are used on Series 4870, 4880 and 4890)	
	for M ratio	R4870M2-A237
	for P, Q and S ratios.	R4870P2-A237
66	Offset Gear Housing.	R4860-237
67	Offset Gear Housing Grease Fitting.	23-188
• 68	Intermediate Gear Front Bearing or Drive Gear Bearing (2)	R4810-501
• 69	Socket Driver Bearing.	R4860-693
• 70	Socket Driver Seal.	R4860-371
71	Offset Gear Housing Cover	R4860-578
• 72	Intermediate Gear Rear Bearing	R4810-501
73	Socket Driver Bearing.	R4860-693
74	Intermediate Gear	R4860-182
75	Intermediate Gear Thrust Washer or Drive Gear Thrust Washer (3)	R4810-332
76	Socket Driver (1" square drive)	R4860-707-1
77	Socket Driver Thrust Washer (2).	R4860-806
78	Drive Gear	
	for M ratio	R4810M-756
	for P, Q and S ratios.	R4810P-756
79	Offset Gear Housing Cap Screw (4).	R4860-168
80	Offset Gear Housing Cap Screw Lock Washer (4).	34U-58
81	Offset Gear Head Adapter.	R4860-621
*	Air Strainer.	R4800-565

* Not illustrated.

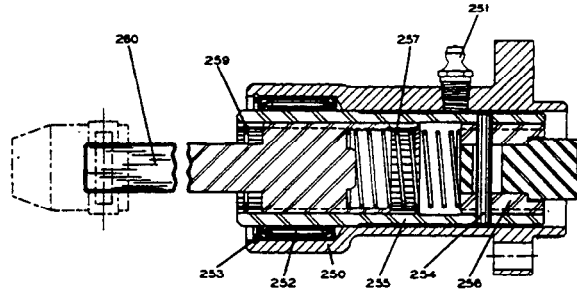
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(Dwg. TPC222)

**Offset Gear Head Assembly
Used on 4870, 4880 and 4890 Motors
(1.5 to 1 Ratio)**

SPRING LOADING ATTACHMENT
 (For use on Series 4800, 4820 and 4840)



(Dwg. TPC223-1)

PART NUMBER FOR ORDERING



	Spring Loading Attachment Assembly (3/4" square drive)	
	for M ratio	R4800M2-A304A
	for P, Q, S, T and U ratios.	R4800P2-A304A
250	Spring Loading Attachment Housing.	R4800-581
251	Grease Fitting.	23-188
● 252	Spindle Sleeve Bearing	R4800-606
253	Sleeve Bearing Retainer	R4800-6
254	Spindle Pin.	R4800-15
255	Spindle Sleeve.	R4800-304
256	Spindle Collar	
	for M ratio	R4800-506
	for P, Q, S, T and U ratios.	R4800-306
● 257	Spindle Loading Spring (1-3/16" dia. x 5-1/4").	R4800-127
259	Collar Retainer.	R4800-120
260	Socket Driver (3/4" square drive).	R4800-507

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MAINTENANCE TOOLS

TOOL NUMBER FOR ORDERING	TOOL NAME FOR ORDERING	OPERATION
P25-228 32791	Grease Gun Intermediate Gear Bearing Inserting Tool	Lubrication. Pressing the Intermediate Gear Bearing (52, 56, 68 or 72) into the Offset Gear Housing (50 or 66) or Offset Gear Housing Cover (55 or 71).
36188	Socket Driver Bearing Inserting Tool . .	Pressing the Socket Driver Bearing (53 or 57) into the Off- set Gear Housing (50) or Offset Gear Housing Cover (55).
50239	Gear Head Planet Gear Bearing Inserting Tool	Pressing the Gear Head Planet Gear Bearings (20) into the Gear Head Planet Gears (19).
50240	Spindle Planet Gear Bearing Inserting Tool	Pressing the Spindle Planet Gear Bearings (11) into the Spindle Planet Gears (10).
68073	Socket Driver Bearing Inserting Tool . .	Pressing the Socket Driver Bearing (69 or 73) into the Off- set Gear Housing (66) or Offset Gear Housing Cover (71).