

INSTRUCTIONS FOR OPERATION AND CARE OF



Whitehall **WHIRLPOOL**

SINCE 1946

EXCELLENCE IN HYDROTHERAPY
(Stationary Whirlpool)



E-27-S



S-90-S



Whitehall Manufacturing[®]
Manufacturer of Healthcare and Rehabilitation Products since 1946

WARNING



**PLEASE READ THIS ENTIRE
BOOKLET BEFORE OPERATING
YOUR NEW WHIRLPOOL**



**Failure to follow these instructions could result in damage
to your new whirlpool and/or bodily injury**

European Union CE Mark

The presence of the CE Mark on Whitehall equipment means that it has been designed, tested and certified as complying with all applicable European Union regulations and recommendations.

Waste Electrical and Electronic Equipment (WEEE)


This symbol on the product or on its packaging indicates that this product must not be disposed of with regular waste. Instead, it is the user's responsibility to dispose of waste equipment according to the local laws. Separate collection and recycling of the waste equipment at the time of disposal will help conserve natural resources and ensure it is recycled in a manner that protects human health and the environment. For information about where the user can drop off the waste equipment for recycling, please contact your local waste collection authority. See Page 30 for instructions on how to disassemble the equipment for recycling purposes.

General Warning or Caution

The Exclamation Symbol appears in Warning and Caution statements. This symbol designates where personal injury or damage to the equipment is possible.

Electric Shock

The Electric Shock Symbol is used to indicate a hazard arising from dangerous voltage. Any mishandling could result in irreparable damage to the equipment and/or personal injury or death.

	WARNING To avoid electric shock, connect the instrument to properly earth-grounded, GFCI protected, 3-prong receptacles only. Failure to observe this precaution can result in severe injury.
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- WHIRLPOOLS intended for professional use only.
- 220v WHIRLPOOLS for export only.
- DO NOT operate appliance without properly filling with water. Under no conditions should the appliance be operated without water. Fill appliance with water to the prescribed level before plugging into an electrical receptacle. Operating the appliance without water may result in damage to the motor.
- IMPROPER USE of the whirlpool can cause injury. Use the whirlpool only for the purpose described in this manual.
- THE TURBINE is top-heavy. Improper handling can cause injury or damage. Handle the turbine with care.
- ATTACHING IMPROPER items to the whirlpool can cause injury to persons and damage to equipment. Use only Whitehall approved items on the whirlpools.
- INCORRECT PARTS and service can cause injury to persons and damage equipment. Use only Whitehall parts and Whitehall approved service on whirlpools.



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OPERATOR SKILLS AND TRAINING

Skills:

Operators using the whirlpool need:

- a working knowledge of aquatic physical-therapy procedures.
- the ability to assist the patient.

WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel should operate the whirlpool.

TRAINING

Operator trainees need to:

- be trained in aquatic-therapy protocols.
- be familiar with the types of patients who should or should not receive this type of physical therapy (see Patient Evaluation, below).
- read and understand this manual (and the manual for the turbine, if used).
- be trained on the use of the whirlpool (and turbine, if used).
- practice with the whirlpool (and turbine, if used) before use with patient.

PATIENT EVALUATION

Require Each Patient To Be Evaluated

Patients who are electrically-susceptible (patients with exposed, non-waterproof electric leads, monitors, etc.), patients carrying infectious disease, or patients with certain other medical, mental or physical conditions should not receive treatment with the whirlpool.

The trained operator must evaluate and verify that each patient is suitable for hydrotherapy treatment before permitting the patient to begin hydrotherapy. If in doubt, consult a medical professional before providing hydrotherapy treatment.

WARNING

Certain medical conditions are incompatible with hydrotherapy. The trained operator is responsible for determining each user's suitability for hydrotherapy before beginning treatment.

Important

BLOODBORNE DISEASE NOTICE: To reduce the risk of exposure to bloodborne diseases such as HIV-1 and hepatitis when using the whirlpool, read and follow the disinfecting and cleaning instructions in this manual thoroughly.

INSPECTING THE WHIRLPOOL

This Whitehall product has been carefully packaged at the factory to minimize the possibility of damage during shipping.

- Inspect the packaging for external signs of damage.
- Inspect the contents for damage.

If there is visible damage to the instrument upon receipt, inform the shipping company and Whitehall immediately.

WARNING

Do not attempt to operate this equipment if there is evidence of shipping damage or you suspect the unit is damaged. Damaged equipment may present additional hazards to you. Contact Whitehall technical support for advice before attempting to plug in and operate damaged equipment.

Have your facility's equipment maintenance personnel inspect the whirlpool regularly. Follow the checklist at right and operate the whirlpool through all its functions as described in this manual.

Inspection Checklist

- Are all components present?
- Is the whirlpool free of excessive wear?
- Does the turbine mount securely in place?
- Is a properly-grounded and voltage-matched hospital grade receptacle available for the turbine?
- Is the outlet or turbine cord equipped with a functioning GFI (or RCD)?
- Can the turbine be raised, lowered and locked at the desired height?
- Does the drain valve open and close properly?
- Is the thermometer present and is it legible?
- Do the installed accessories operate without interfering with whirlpool use or turbine operation?



USING THE WHIRLPOOL

Before Placing the Whirlpool In Service:

Operators using the whirlpool need:

- Personnel who will work with the whirlpool need to read this manual.
- Have a plumbing professional install the whirlpool as instructed in *Installing the Whirlpool*, page 4. A rough-in drawing is available to assist the installer. Contact Whitehall Customer Service, bottom of page, for additional installation not covered in this manual.
- Confirm that the whirlpool operates properly. See *Inspecting the Whirlpool*, page 2.

General Guidelines for Use:

- Medical advice is beyond the parameters of this manual.
- The whirlpool is for professional use only. A minimum of one trained operator is required.
- The trained operator must evaluate and verify that the patient is suitable for hydrotherapy treatment before beginning hydrotherapy with whirlpool. See *Patient Evaluation*, page 2.
- Follow your state and local hydrotherapy procedures and, if the patient has one, the physician's order for treatment (see *Patient Evaluation*, page 2).
- Stay with patient at all times.
- It is the operators responsibility to ensure safe practices for the patient and themselves.
- If a turbine is used:
 - Plug the turbine cord only into a receptacle that is voltage-matched, properly grounded and polarized. Verify that the receptacle has GFI protection or order a GFCI plug for the turbine cord.
 - Keep patient hair, gown strings and other loose items away from the impeller housing to avoid entanglement and injury.
 - Keep the area around the turbine clear. The turbine requires a minimum of 24" (610mm) of clearance.
- Avoid prolonged contact with the motor cover, as elevated temperatures can cause discomfort.
- Ambient temperatures during use should not exceed 95°F (35°C).

WARNING

Certain medical conditions are incompatible with hydrotherapy. The trained operator is responsible for determining each user's suitability for hydrotherapy before beginning treatment.

Improper operation can cause injury. Operate the whirlpool only as described in this manual.

An unattended patient can be injured. Stay with patient at all times.

Loose items such as gown straps or gauze can be pulled into the turbine impeller and cause injury. Keep loose items away from the turbine impeller housing.

Important

Communicate with patient at all times. If a turbine is used, tell the patient before starting or stopping the turbine and before changing the water or aeration level.

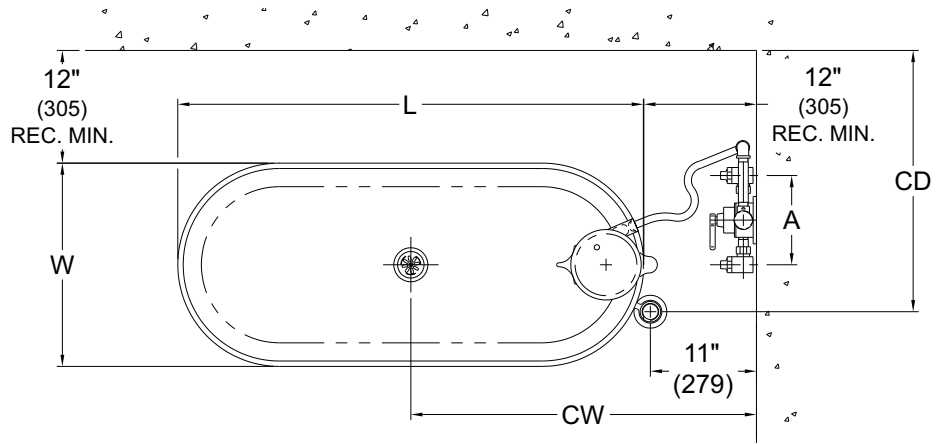


DIMENSION DESCRIPTION

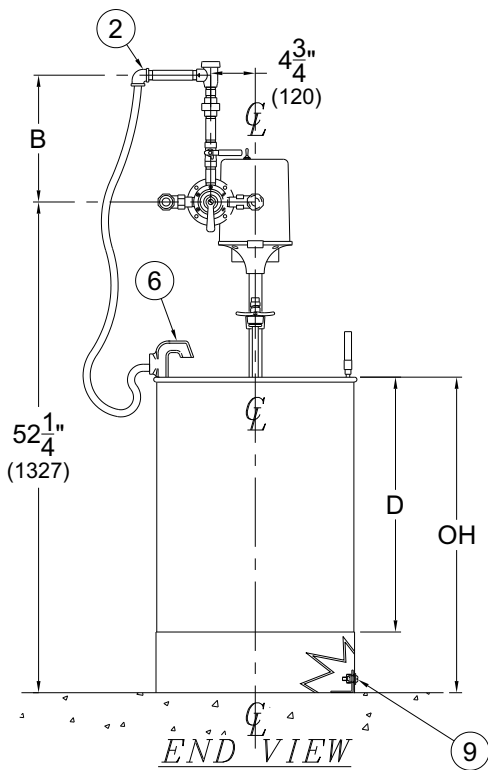
A
DISTANCE FOR:
MXT2 (MV2) 3/4" NPT
VALVE = 9-1/2"
MXT1 (MV1) 1/2" NPT
VALVE = 8-1/2"

B
DISTANCE FOR:
MXT2 (MV2) 3/4" NPT
VALVE = 13-1/2"
MXT1 (MV1) 1/2" NPT
VALVE = 13-3/4"

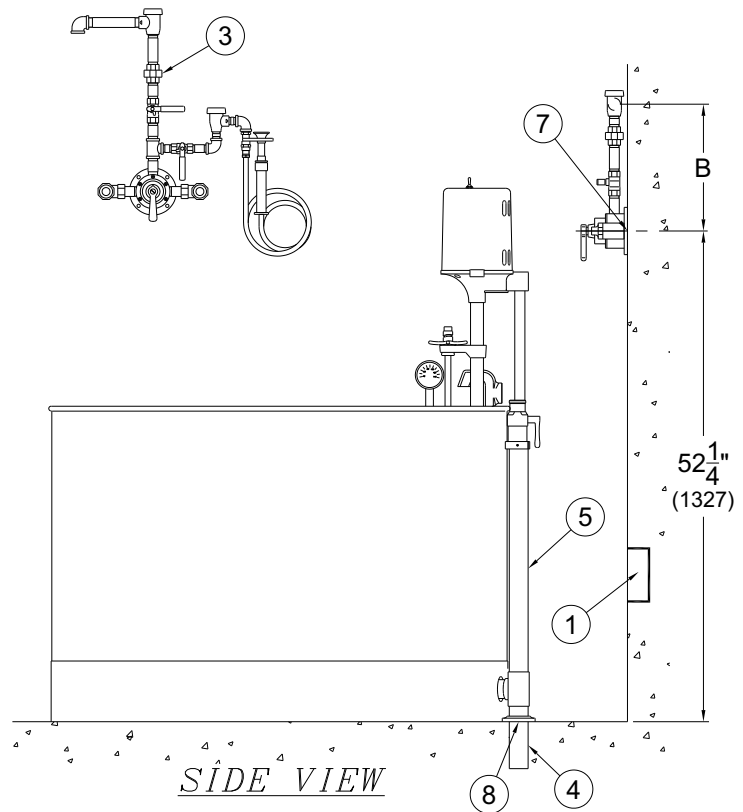
L = LENGTH (ID)
W = WIDTH (ID)
D = DEPTH (ID)
OH = OVERALL HEIGHT
CW = CENTER OF TANK TO WALL
CD = CENTER OF DRAIN TO WALL
REFER TO PAGE 5 FOR DIMENSIONS



TOP VIEW



END VIEW



SIDE VIEW

NOTES:

- ① ELECTRICAL REQUIREMENTS: 8 AMPS, 115 VOLTS. AT WALL PROVIDE ONE 3 POLE RECEPTACLE HOSPITAL GRADE WITH GROUND FAULT INTERRUPT FOR TURBINE ASSEMBLY
- ② THERMOSTATIC MIXING VALVES ARE OPTIONAL
- ③ OPTIONAL -MXWH (HA-WASHOUT ASSEMBLY)
- ④ 2" x 5" TAIL PIECE FURNISHED WITH UNIT
- ⑤ 2" COMBINATION DRAIN AND OVERFLOW ASSEMBLY FURNISHED BY WHITEHALL
- ⑥ OVER RIM INLET
- ⑦ HOT & COLD WATER INLET
- ⑧ 2" DRAIN
- ⑨ 'L'-CLIPS FOR FLOOR MOUNTING



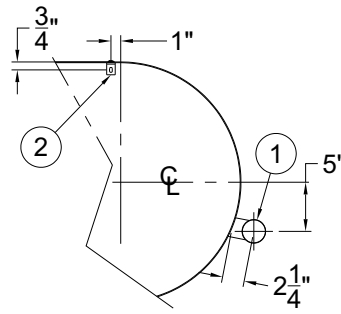
Whitehall Model Number	L DIM Inches/MM	W DIM Inches/MM	D DIM Inches/MM	OH DIM INCHES/M	CW DIM INCHES/M	CD DIM INCHES/M	PIPE SIZE FOR VALVE
P-10-S	22/559	13/330	12/305	18/457	23/584	26.5/673	1/2" IPS
P-15-S	25/635	13/330	15/381	21/533	25.5/648	26.5/673	1/2" or 3/4" IPS
P-22-S	28/711	15/381	18/457	24/610	26/660	26.5/673	1/2" or 3/4" IPS
E-15-S	25/635	13/330	15/381	21/533	25.5/648	26.5/673	1/2" or 3/4" IPS
E-22-S	28/711	15/381	18/457	24/610	26/660	26.5/673	1/2" or 3/4" IPS
E-22-SP	28/711	15/381	18/457	34/864	20/508	26.5/673	1/2" or 3/4" IPS
E-27-S	28/711	15/381	21/533	27/686	26/660	26.5/673	1/2" or 3/4" IPS
E-36-S	28/711	15/381	25/635	32/813	26/660	26.5/673	1/2" or 3/4" IPS
E-45-S	32/813	15/381	25/635	31/787	28/711	26.5/673	1/2" or 3/4" IPS
H-60-S	36/914	20/508	28/711	34/864	30/762	29/737	1/2" or 3/4" IPS
H-75-S	42/1067	20/508	28/711	34/864	33/838	29/737	1/2" or 3/4" IPS
H-90-S	48/1219	20/508	28/711	34/864	36/914	29/737	1/2" or 3/4" IPS
H-105-S	48/1219	24/610	28/711	34/864	26/660	31/787	1/2" or 3/4" IPS
L-75-S	52/1321	24/610	18/457	24/610	38/965	31/787	1/2" or 3/4" IPS
L-90-S	60/1524	24/610	18/457	24/610	42/1067	31/787	1/2" or 3/4" IPS
L-105-S	66/1676	24/610	18/457	24/610	45/1143	31/787	1/2" or 3/4" IPS
S-85-S	48/1219	20/508	25/635	31/787	36/914	29/737	1/2" or 3/4" IPS
S-85-SL	48/1219	20/508	25/635	35/889	17/432	N/A	1/2" or 3/4" IPS
S-90-S	46/1168	24/610	25/635	31/787	35/889	31/787	1/2" or 3/4" IPS
S-90-SL	46/1168	24/610	25/635	35/889	17/432	N/A	1/2" or 3/4" IPS
S-110-S	56/1422	24/610	25/635	31/787	40/1016	31/787	1/2" or 3/4" IPS
S-110-SL	56/1422	24/610	25/635	35/889	17/432	N/A	1/2" or 3/4" IPS

Refer to Page 4 for Layout Information.

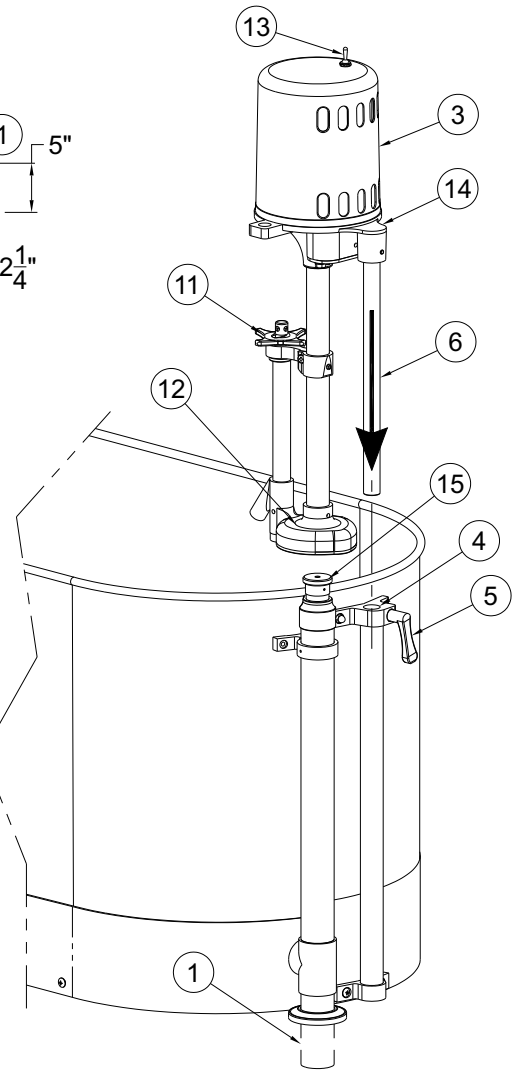
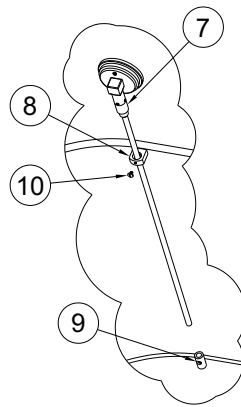


NOTE: THESE INSTALLATION INSTRUCTIONS ARE USED FOR ALL WHITEHALL OR DAKON STATIONARY ALL MODELS.

REFERENCE DRAWINGS	
ASSEMBLIES	PAGE NUMBER
MOTOR/TURBINE	9
RAISING/LOWERING/SM	15
RAISING/LOWERING	16
DRAIN OVERFLOW E	19
DRAIN OVERFLOW H/S	18
DRAIN OVERFLOW - L	20
DRAIN OVERFLOW - P	21
THERMOMETER	27



DETAIL "A" (TOP VIEW)



ASSEMBLY PROCEDURE:

- A- ROUGH-IN FOR 2" OD DRAIN LINE (1) AND WATER INLET VALVE. (SEE DETAIL A) NOTE: FOR INFORMATION ON OPTIONAL THERMOSTATIC MIXING VALVE CONTACT FACTORY.
- B- LOCATE TANK AND SECURE WITH "L" BRACKETS (2), WITH INSTALLER PROVIDED FLOOR ANCHORS AND ANCHORING HARDWARE. MAKE WASTE CONNECTIONS (1).
- C- INSTALL MOTOR/TURBINE ASSEMBLY (3) INTO RAISING AND LOWERING ASSEMBLY (4) BY LOOSENING HANDLE (5), SLIDING MOTOR SUPPORT ROD (6) INTO RAISING AND LOWERING ASSEMBLY (4) AND TIGHTENING HANDLE (5).
- D- INSTALL THERMOMETER (7) THRU UPPER BRACKET (8) AND INTO LOWER BRACKET (9), TIGHTEN SCREW (10).
- E- TURN THE PRESSURE CONTROL VALVE HANDLE (11) FULLY CLOCKWISE, THEN FULLY COUNTERCLOCKWISE TO COMPLETELY LUBRICATE THE PLUNGER ASSEMBLY.
- F- PROVIDE ELECTRICAL SERVICE AND PROPERLY INSTALLED, GROUND FAULT CIRCUIT INTERRUPTER (GFCI) FOR MOTOR SPECIFIED. MOTOR SPECIFICATIONS AVAILABLE ARE EITHER 120V AC / 60 HZ ON 15A CIRCUIT OR 240 V AC / 50 HZ ON 10A

OPERATION PROCEDURE:

- A- FILL TUB AS DESIRED USING THERMOSTATIC MIXING VALVE. WATER LEVEL SHOULD BE A MAXIMUM OF 4" BELOW THE RIM AND A MINIMUM OF 6" ABOVE BOTTOM PUMP (12).
- B- TURN THE PRESSURE CONTROL VALVE HANDLE (11) FULLY CLOCKWISE, THIS PROVIDES MAX PRESSURE AND AGITATION.
- C- TURN ON THE SWITCH (13).
- D- ADJUST RAISING AND LOWERING ASSEMBLY (4) BY SLOWLY PUSHING DOWN ON TOP OF THE MOTOR SUPPORT CASTING (14) UNTIL THE PUMP (12) IS AT THE DESIRED LOCATION. TIGHTEN HANDLE (5). INTERNAL BUSHING MAY NEED ADJUSTMENT.
- E- ADJUST PRESSURE CONTROL VALVE (11) TO DELIVER DESIRED LEVEL OF AGITATION AND PRESSURE.

DRAINING PROCEDURE:

- A- TURN OFF SWITCH (13).
- B- LIFT COMBINATION DRAIN & OVERFLOW ASSEMBLY HANDLE (15).

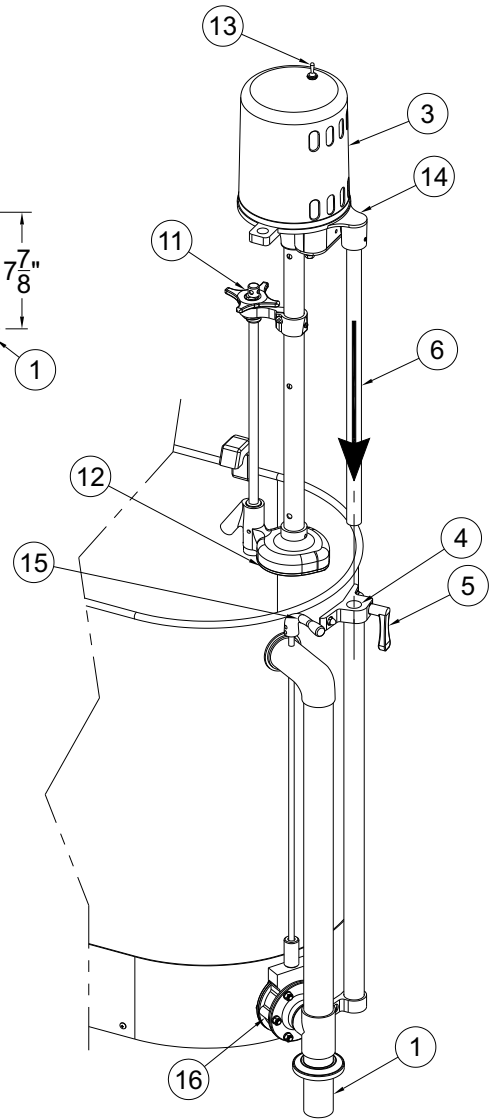
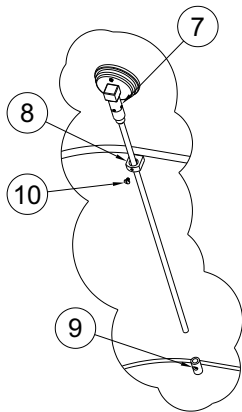
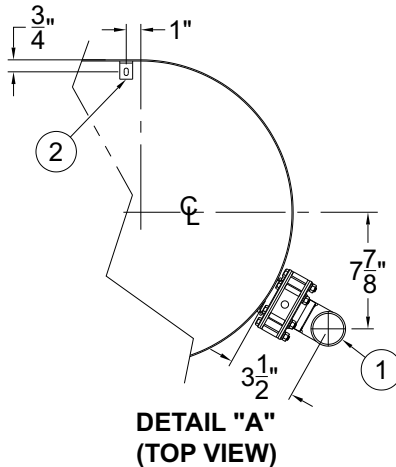
WARNING

Turbine assembly is provided with a 3-way plug. The third prong functions as a built-in ground and must be plugged into a matching grounded receptacle to properly ground the product.



NOTE: THESE INSTALLATION INSTRUCTIONS ARE USED FOR ALL WHITEHALL OR DAKON ALL STATIONARY -SDO MODELS.

REFERENCE DRAWINGS	
ASSEMBLIES	PAGE NUMBER
MOTOR/TURBINE	9
RAISING/LOWERING/SM	15
RAISING/LOWERING	16
DRAIN OVERFLOW E	24
DRAIN OVERFLOW H/S	25
DRAIN OVERFLOW - P	23
THERMOMETER	27



ASSEMBLY PROCEDURE:

- A- ROUGH-IN FOR 2" OD DRAIN LINE (1) AND WATER INLET VALVE. (SEE DETAIL A) NOTE: FOR INFORMATION ON OPTIONAL THERMOSTATIC MIXING VALVE CONTACT FACTORY.
- B- LOCATE TANK AND SECURE WITH "L" BRACKETS (2), WITH INSTALLER PROVIDED FLOOR ANCHORS AND ANCHORING HARDWARE. MAKE WASTE CONNECTIONS (1).
- C- INSTALL MOTOR/TURBINE ASSEMBLY (3) INTO RAISING AND LOWERING ASSEMBLY (4) BY LOOSENING HANDLE (5), SLIDING MOTOR SUPPORT ROD (6) INTO RAISING AND LOWERING ASSEMBLY (4) AND TIGHTENING HANDLE (5).
- D- INSTALL THERMOMETER (7) THRU UPPER BRACKET (8) AND INTO LOWER BRACKET (9), TIGHTEN SCREW (10).
- E- TURN THE PRESSURE CONTROL VALVE HANDLE (11) FULLY CLOCKWISE, THEN FULLY COUNTERCLOCKWISE TO COMPLETELY LUBRICATE THE PLUNGER ASSEMBLY.
- F- PROVIDE ELECTRICAL SERVICE AND PROPERLY INSTALLED, GROUND FAULT CIRCUIT INTERRUPTER (GFCI) FOR MOTOR SPECIFIED. MOTOR SPECIFICATIONS AVAILABLE ARE EITHER 120V AC / 60 HZ ON 15A CIRCUIT OR 240 V AC / 50 HZ ON 10A

OPERATION PROCEDURE:

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DRAINING PROCEDURE:

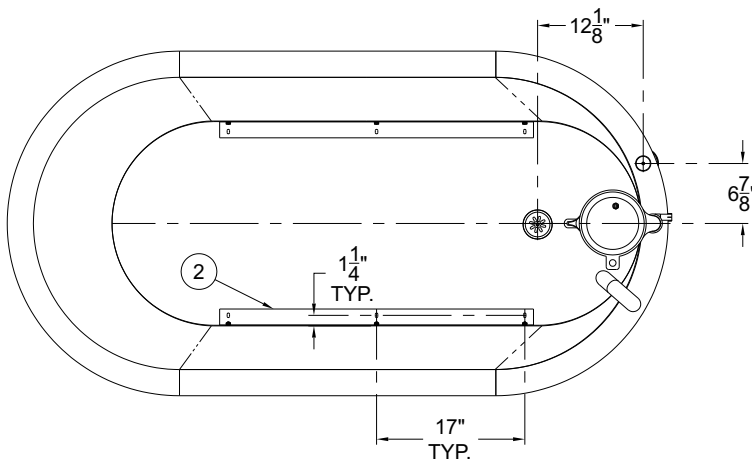
- A- TURN OFF SWITCH (13).
- B- TURN HANDLE (15) CLOCKWISE TO OPEN DRAIN VALVE (16).

⚠ WARNING

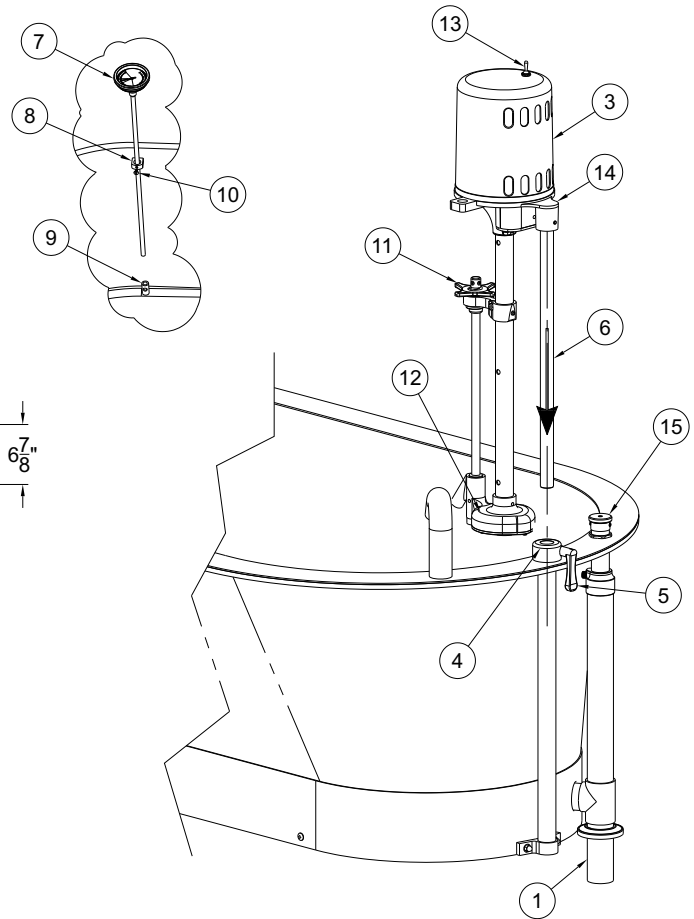
Turbine assembly is provided with a 3-way plug. The third prong functions as a built-in ground and must be plugged into a matching grounded receptacle to properly ground the product.



REFERENCE DRAWINGS	
ASSEMBLIES	PAGE NUMBER
MOTOR/TURBINE	9
RAISING/LOWERING	17
DRAIN OVERFLOW	22
THERMOMETER	27



DETAIL "A"
(TOP VIEW)



ASSEMBLY PROCEDURE:

- A- ROUGH-IN FOR 2" OD DRAIN LINE (1) AND WATER INLET VALVE. (SEE DETAIL A) NOTE: FOR INFORMATION ON OPTIONAL THERMOSTATIC MIXING VALVE CONTACT FACTORY.
- B- LOCATE TANK AND SECURE WITH "L" BRACKETS (2), WITH INSTALLER PROVIDED FLOOR ANCHORS AND ANCHORING HARDWARE. MAKE WASTE CONNECTIONS (1).
- C- INSTALL MOTOR/TURBINE ASSEMBLY (3) INTO RAISING AND LOWERING ASSEMBLY (4) BY LOOSENING HANDLE (5), SLIDING MOTOR SUPPORT ROD (6) INTO RAISING AND LOWERING ASSEMBLY (4) AND TIGHTENING HANDLE (5).
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- E- ADJUST PRESSURE CONTROL VALVE (11) TO DELIVER DESIRED LEVEL OF AGITATION AND PRESSURE.

DRAINING PROCEDURE:

- A- TURN OFF SWITCH (13).
- B- LIFT COMBINATION DRAIN & OVERFLOW ASSEMBLY HANDLE (15).

WARNING

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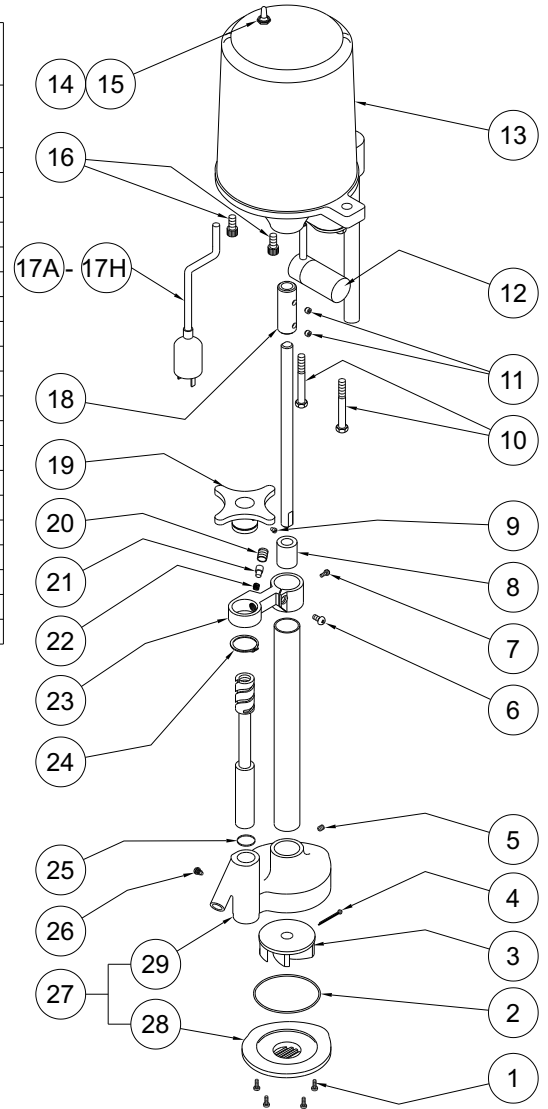


THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:

WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS	WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
E-15-M-SDP	DD-2516	L-75-M-SDP	
E-15-S	DF-2516	L-75-S	
E-22-M-SDP	DD-2818	L-90-M-SDP	DD-6018
E-22-S	DF-2818	L-90-S	DF-6018
E-22-SP		L-90-SL	
E-27-M-SDP	DD-2821	L-105-M-SDP	DD-6618
E-27-S	DF-2821	L-105-S	DF-6618
E-36-M-SDP	DD-2825	L-105-SL	
E-36-S	DF-2825	P-10-S	
E-45-M-SDP		P-15-M-SDP	DD-2516
E-45-S	DF-3225	P-15-S	DF-2516
H-60-M-SDP	DD-3628	P-22-M-SDP	DD-2818
H-60-S	DF-3628	P-22-S	DF-2818
H-75-M-SDP		S-85-M-SDP	DDT-4825
H-75-S		S-85-S	DFT-4825
H-90-M-SDP		S-90-M-SDP	
H-90-S		S-90-S	
H-105-M-SDP	DD-4828	S-110-M-SDP	DDT-5625
H-105-S	DF-4828	S-110-S	DFT-5625
		SB-100-S	

NOTE: SEE ADDITIONAL DRAWINGS FOR COMPLETE ASSEMBLY NUMBERS AND DETAIL OF ITEMS NOT LISTED.

- STATIONARY "E" SERIES Page 10
- STATIONARY "SB" SERIES Page 10
- STATIONARY "H" SERIES Page 11
- STATIONARY "L" SERIES Page 12
- STATIONARY "P" SERIES Page 13
- STATIONARY "S" SERIES Page 14



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1	6502-307-000	#8-32 x 1/2" PHIL FLAT HD SELF TAPPING	17C	6505-044-001	RUSSIAN POWER CORD, 250VAC, 50Hz
2	6504-501-199	17" PUMP GASKET	17D	6505-074-001	INDIA/S. AFRICA POWER CORD, 230VAC, 50Hz
3	6525-518-000	TURBINE IMPELLER - PLASTIC	17E	6505-043-001	EUROPEAN POWER CORD, 250 VAC, 50Hz
4	0341-101-000	COTTER PIN	17F	6505-073-001	UK POWER CORD, 230VAC, 50Hz
5	6502-401-000	1/4"-20 x 5/16" HEX SOCKET SET SCREW	17G	6505-070-001	ISRAEL POWER CORD, 250VAC, 50Hz
6	6502-042-000	1/4"-20 x 5/8" PHIL PAN HEAD SCREW	17H	6505-071-001	AUSTRALIAN POWER CORD, 250VAC 50Hz
7	6502-300-000	#8-32 x 3/8" PHIL FLAT HEAD SELF TAPPING	18	6525-513-199	SHAFT COUPLING
8	6525-514-199	SHAFT BEARING	19	6525-584-199	HANDLE
9	6502-410-000	1/4"-20 x 1/4" DOG SET SCREW	20	6531-112-199	TENSION ADJUSTER
10	6502-352-000	3/8"-16 x 3" HEX CAP SCREW	21	6531-111-199	FRICTION LOCK ROD
11	6502-402-000	5/16"-16 x 1/4" HEX SOCKET SET SCREW	22	6531-113-000	SPRING
12	6502-020-001	CONDENSER ASSEMBLY	23	6525-570-199	AIR RING BRACKET
13	6525-600-000	PLASTIC MOTOR COVER	24	6502-620-000	1-3/8" RETAINING RING
14	6505-025-000	DPST TOGGLE SWITCH	25	6504-022-000	O-RING
15	6505-035-000	WATERPROOF TOGGLE SWITCH CAP	26	6502-413-000	1/4"-20 x 5/16" DOG SETR SCREW
16	6502-452-000	3/8"-16 x 3/4" HEX SOCKET CAP SCREW	27	6525-509-001	PUMP BODY / COVER ASSEMBLY
17A	6505-030-000	10 FEET, 115VAC, 60Hz POWER CORD	28	6525-509-299	PUMP COVER
17B	6505-034-001	DOMESTIC POWER CORD 220VAC, 60Hz	29	6525-510-299	PUMP BODY

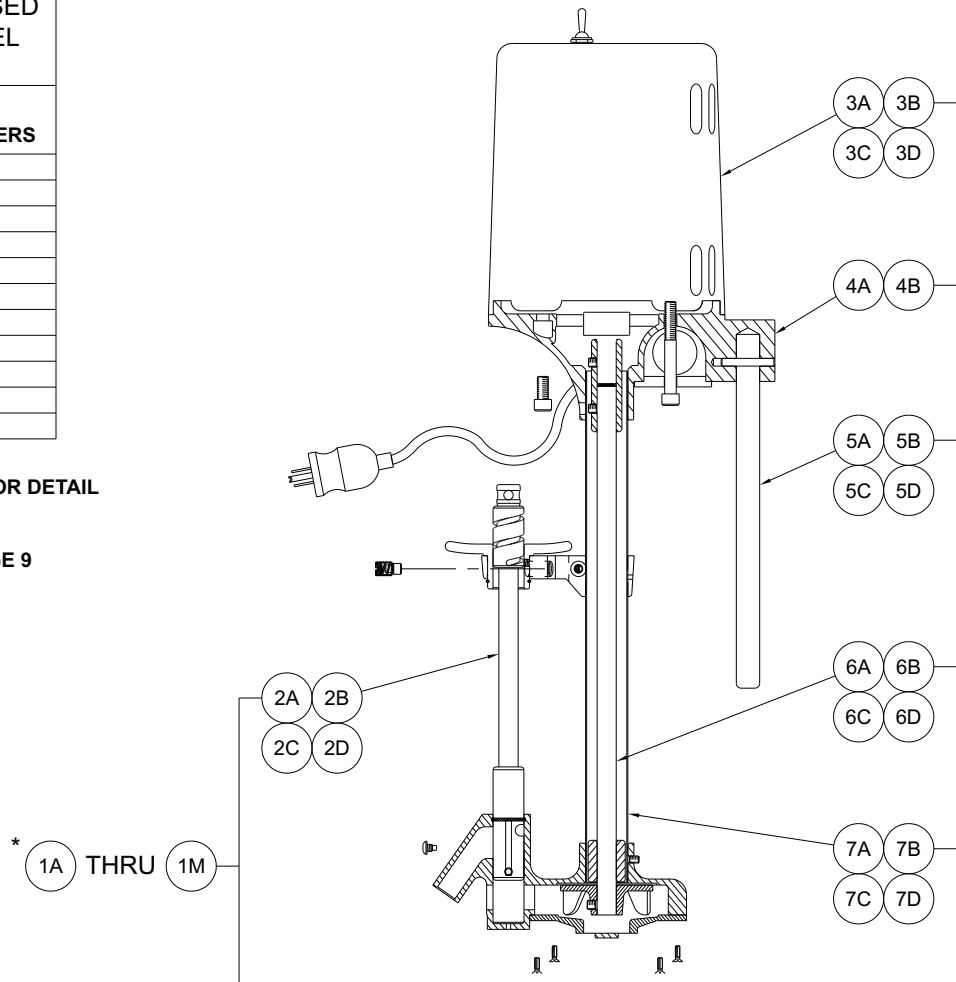


THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:

WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
E-15-M-SDP	DD-2516
E-15-S	DF-2516
E-22-M-SDP	DD-2818
E-22-S	DF-2818
E-22-SP	
E-27-M-SDP	DD-2821
E-27-S	DF-2821
E-36-S	DF-2825
E-45-M-SDP	
E-45-S	DF-3225
SB-100-S	

* NOTE: SEE ADDITIONAL DRAWING FOR DETAIL OF ITEMS NOT SHOWN.

STATIONARY MOTOR/TURBINE - PAGE 9



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6525-105-001	TURBINE ASSY - E-15, 115VAC, 60Hz	3B	6525-201-001	MOTOR ASSY - 115VAC, 60Hz - E-15/22
1B	6525-106-001	TURBINE ASSY - E-15, 230VAC, 60Hz	3C	6525-210-001	MOTOR ASSY - 230VAC, 60Hz - E-15/22/27/45-S
1C	6525-107-001	TURBINE ASSY - E-15, 230VAC, 50Hz	3D	6525-220-001	MOTOR ASSY - 230VAC, 50Hz - E-15/22/27/45-S
1D	6525-108-001	TURBINE ASSY - E-22, 115VAC, 60Hz	4A	6525-500-199	3/4" MOTOR BASE CASTING - E-15/22-S
1E	6525-109-001	TURBINE ASSY - E-22, 230VAC, 60Hz	4B	6525-500-299	1" MOTOR BASE CASTING - E-27/45-S
1F	6525-110-001	TURBINE ASSY - E-22, 230VAC, 50Hz	5A	6509-560-199	3/4" DIA. x 13" ROD - E-15
1G	6525-161-001	TURBINE ASSY - E-27, 115VAC, 60Hz	5B	6509-565-199	3/4" DIA. x 16" ROD - E-22
1H	6525-162-001	TURBINE ASSY - E-27, 230VAC, 60Hz	5C	6509-160-199	1" DIA. x 21-1/4" ROD - E-27
1J	6525-163-001	TURBINE ASSY - E-27, 230VAC, 50Hz	5D	6509-165-199	1" DIA. x 23-1/2" ROD - E-45
1K	6525-165-001	TURBINE ASSY - E-45, 115VAC, 60Hz	6A	6509-510-199	IMPELLER SHAFT - 16-1/8" - E-15
1L	6525-166-001	TURBINE ASSY - E-45, 230VAC, 60Hz	6B	6509-515-199	IMPELLER SHAFT - 19-1/8" - E-22
1M	6525-167-001	TURBINE ASSY - E-45, 230VAC, 50Hz	6C	6509-520-199	IMPELLER SHAFT - 22-1/8" - E-27
2A	6525-525-001	PLUNGER ASSY - 12" - E-15-S	6D	6509-525-199	IMPELLER SHAFT - 26-3/8" - E-45
2B	6525-528-001	PLUNGER ASSY - 15-1/4" - E-22-S	7A	6509-110-199	IMPELLER TUBE - 15-1/4" - E-15
2C	6525-531-001	PLUNGER ASSY - 16-1/2" - E-27-S	7B	6509-115-199	IMPELLER TUBE - 18-1/4" - E-22
2D	6525-535-001	PLUNGER ASSY - 20" - E-45-S	7C	6509-120-199	IMPELLER TUBE - 21-1/4" - E-27
3A	6525-200-001	MOTOR ASSY - 115VAC, 60Hz - E-27/45-S	7D	6509-125-199	IMPELLER TUBE - 25-1/2" - E-45

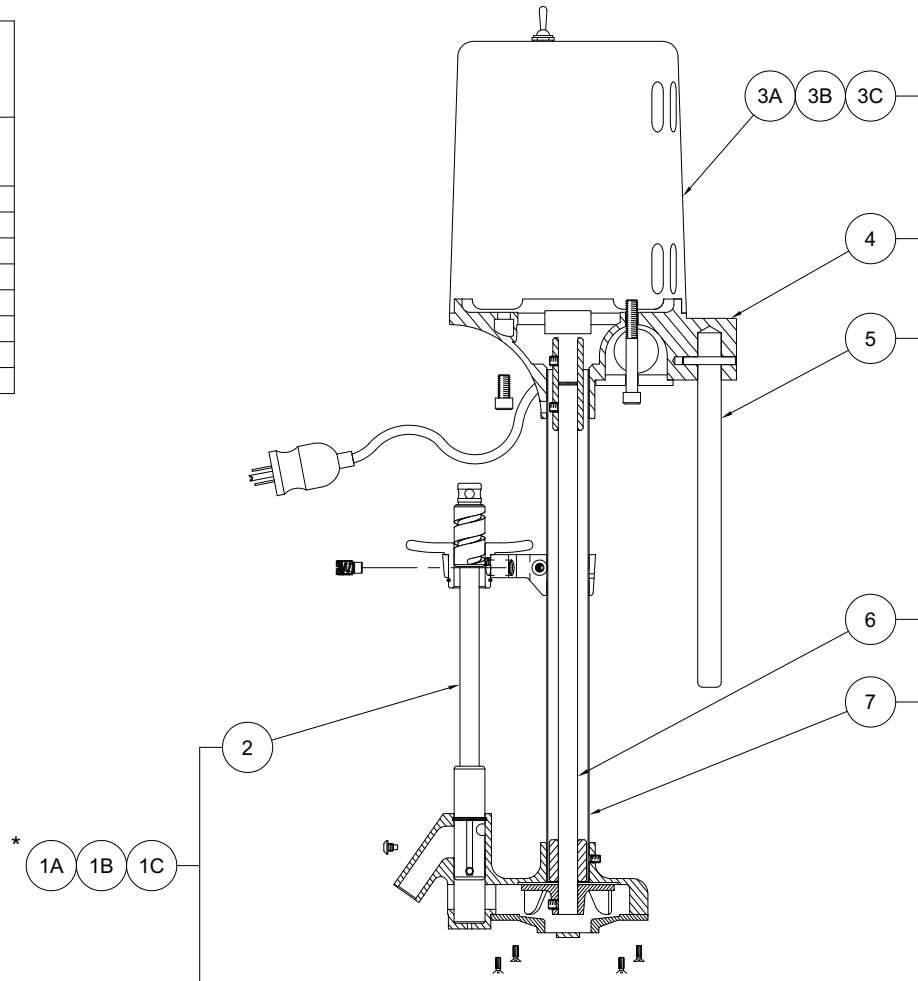


THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:

WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
H-60-M-SDP	DD-3628
H-60-S	DF-3628
H-75-M-SDP	
H-75-S	
H-90-M-SDP	
H-90-S	
H-105-M-SDP	DD-4828
H-105-S	DF-4828

* NOTE: SEE ADDITIONAL DRAWING FOR DETAIL OF ITEMS NOT SHOWN.

STATIONARY MOTOR/TURBINE - PAGE 9



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6525-168-001	TURBINE ASSY - H-60/75/90/105 - 115VAC, 60Hz	3C	6525-220-001	MOTOR ASSY - 230VAC, 50Hz
1B	6525-169-001	TURBINE ASSY - H-60/75/90/105 - 230VAC, 60Hz	4	6525-500-299	1" MOTOR BASE CASTING -S
1C	6525-170-001	TURBINE ASSY - H-60/75/90/105 - 230VAC, 50Hz	5	6509-170-199	1" DIA. x 25-1/2" TUBING R & L DEVICES
2	6525-538-001	PLUNGER ASSY - 23-1/4" - H-60/75/90/105-S	6	6509-530-199	IMPELLER SHAFT - 29-3/8"
3A	6525-200-001	MOTOR ASSY - 115VAC, 60Hz	7	6509-130-199	IMPELLER TUBE - 28-1/2"
3B	6525-210-001	MOTOR ASSY - 230VAC, 60Hz			

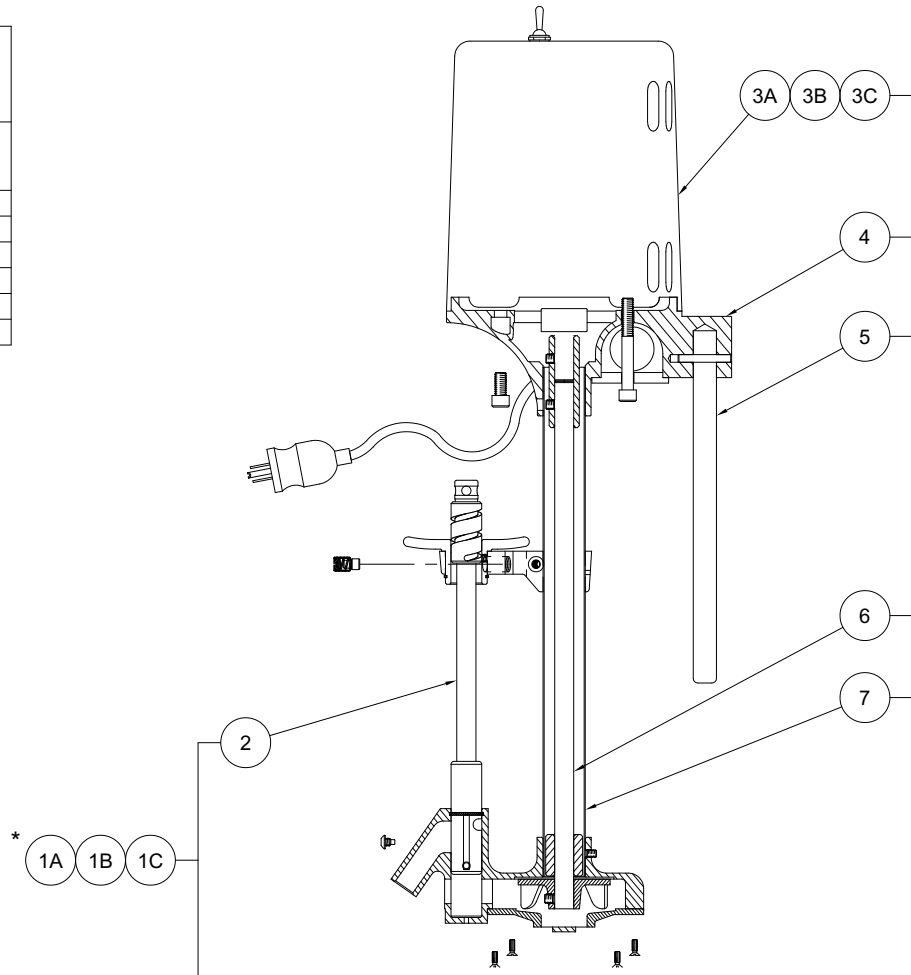


THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:

WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
L-75-M-SDP	
L-75-S	
L-90-M-SDP	DD-6018
L-90-S	DF-6018
L-105-M-SDP	DD-6618
L-105-S	DF-6618

* NOTE: SEE ADDITIONAL DRAWING FOR DETAIL OF ITEMS NOT SHOWN.

STATIONARY MOTOR/TURBINE - PAGE 9



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6525-158-001	TURBINE ASSY - L-75/90/105 - 115VAC, 60Hz	3C	6525-220-001	MOTOR ASSY - 230VAC, 50Hz
1B	6525-159-001	TURBINE ASSY - L-75/90/105 - 230VAC, 60Hz	4	6525-500-299	MOTOR BASE CASTING R & L -S
1C	6525-160-001	TURBINE ASSY - L-75/90/105 - 230VAC, 50Hz	5	6525-155-199	1" DIA. x 16-1/2" ROD
2	6525-528-001	PLUNGER ASSY - 15-1/4'	6	6509-515-199	IMPELLER SHAFT - 19-1/8"
3A	6525-200-001	MOTOR ASSY - 115VAC, 60Hz	7	6509-115-199	IMPELLER TUBE - 18-1/4"
3B	6525-210-001	MOTOR ASSY - 230VAC, 60Hz			

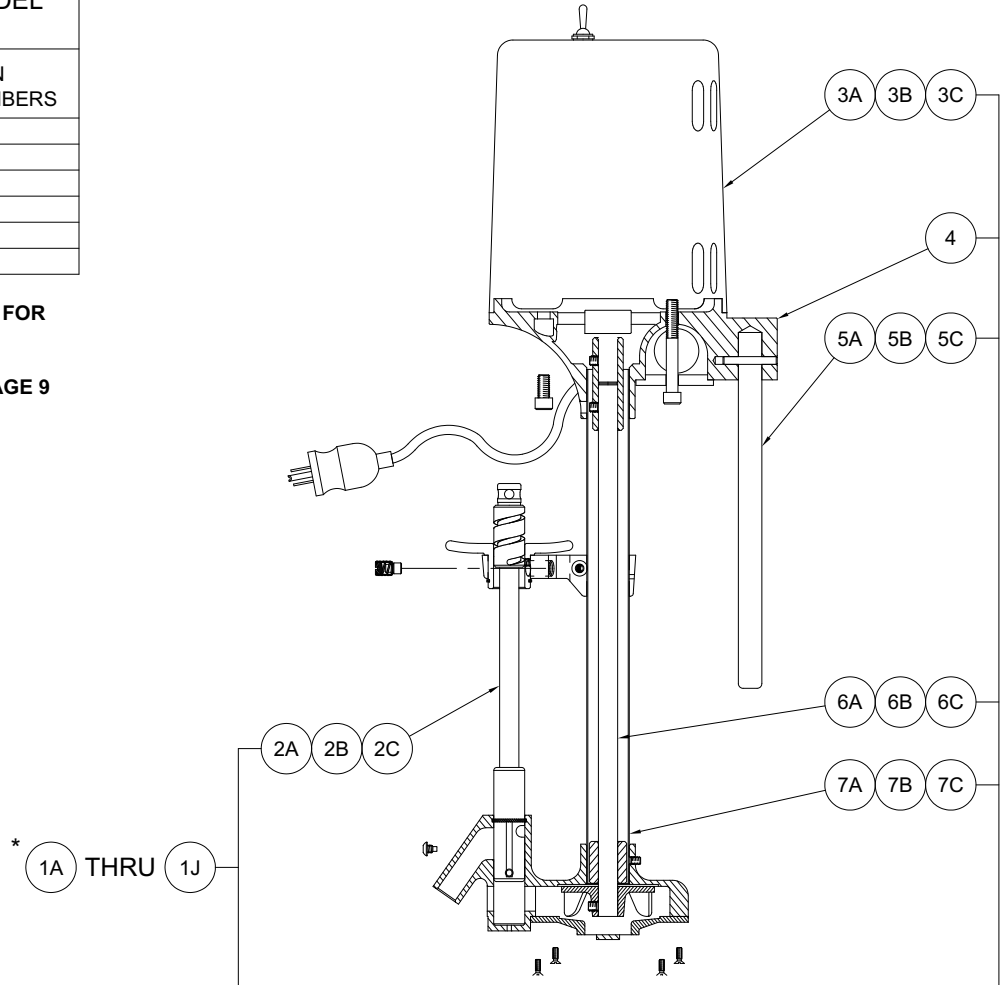


THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:

WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
P-10-M-SDP	
P-10-S	
P-15-M-SDP	DD-2516
P-15-S	DF-2516
P-22-M-SDP	DD-2818
P-22-S	DF-2818

* NOTE: SEE ADDITIONAL DRAWING FOR DETAIL OF ITEMS NOT SHOWN.

STATIONARY MOTOR/TURBINE - PAGE 9



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6528-102-001	TURBINE ASSY - P-10 - 115VAC, 60Hz	3B	6528-210-001	MOTOR ASSY - 230VAC, 60Hz - P-11/15/22
1B	6528-103-001	TURBINE ASSY - P-10 - 230VAC, 60Hz	3C	6528-220-001	MOTOR ASSY - 230VAC, 50Hz - P-11/15/22
1C	6528-104-001	TURBINE ASSY - P-10 - 230VAC, 50Hz	4	6528-500-199	3/4" MOTOR BASE CASTING -S
1D	6528-105-001	TURBINE ASSY - P-15 - 115VAC, 60Hz	5A	6509-555-199	3/4" DIA. x 11-1/2" ROD - P-10
1E	6528-106-001	TURBINE ASSY - P-15 - 230VAC, 60Hz	5B	6509-560-199	3/4" DIA. x 13" ROD - P-15
1F	6528-107-001	TURBINE ASSY - P-15 - 230VAC, 50Hz	5C	6509-565-199	3/4" DIA. x 16" ROD - P-22
1G	6528-108-001	TURBINE ASSY - P-22 - 115VAC, 60Hz	6A	6509-505-199	IMPELLER SHAFT - 13-7/8" - P-10
1H	6528-109-001	TURBINE ASSY - P-22 - 230VAC, 60Hz	6B	6509-510-199	IMPELLER SHAFT - 16-1/8" - P-15
1J	6528-110-001	TURBINE ASSY - P-22 - 230VAC, 50Hz	6C	6509-515-199	IMPELLER SHAFT - 19-1/8" - P-22
2A	6528-522-001	PLUNGER ASSY - 9-1/2" - P-10	7A	6509-105-199	IMPELLER TUBE - 13" - P-10
2B	6528-525-001	PLUNGER ASSY - 12" - P-15	7B	6509-110-199	IMPELLER TUBE - 15-1/4" - P-15
2C	6528-528-001	PLUNGER ASSY - 15-1/4" - P-22	7C	6509-115-199	IMPELLER TUBE - 18-1/4" - P-22
3A	6528-201-001	MOTOR ASSY - 115VAC, 60Hz - P-11/15/22			

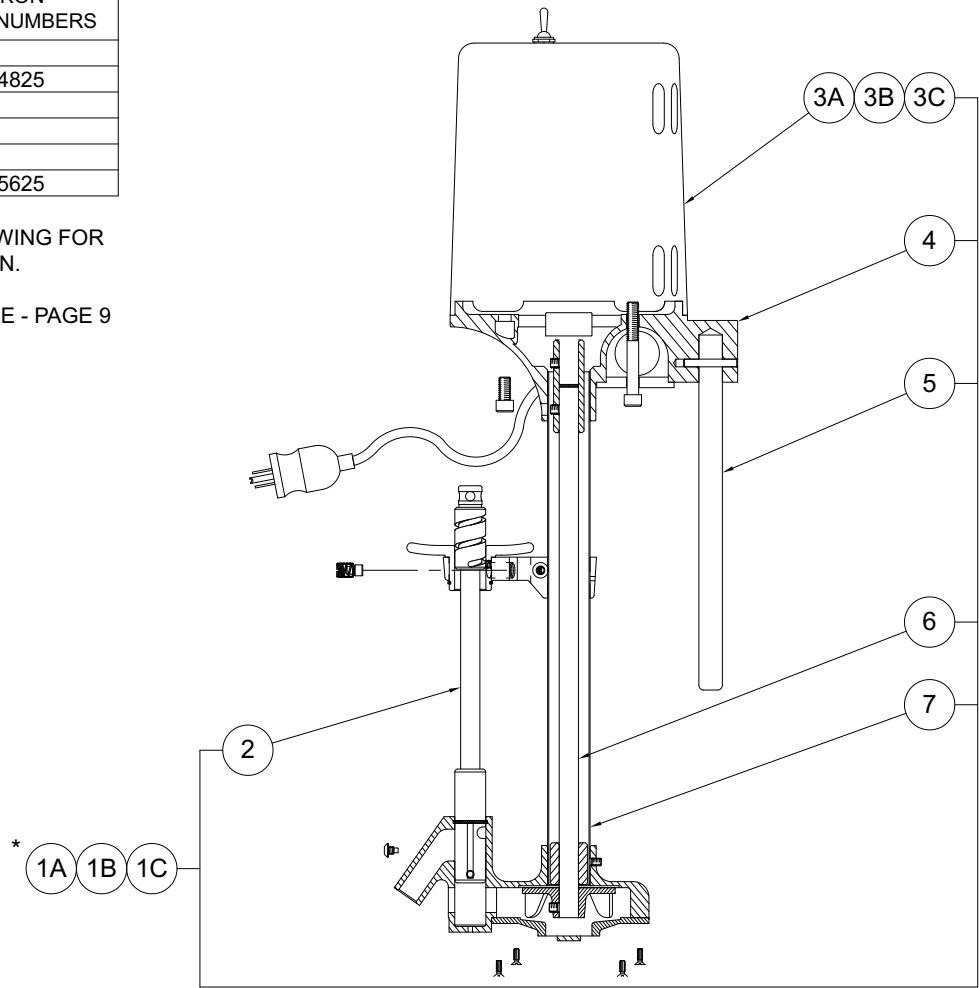


THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:

WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
S-85-M-SDP	
S-85-S	DFT-4825
S-90-M-SDP	
S-90-S	
S-110-M-SDP	
S-110-S	DFT-5625

* NOTE: SEE ADDITIONAL DRAWING FOR DETAIL OF ITEMS NOT SHOWN.

STATIONARY MOTOR/TURBINE - PAGE 9

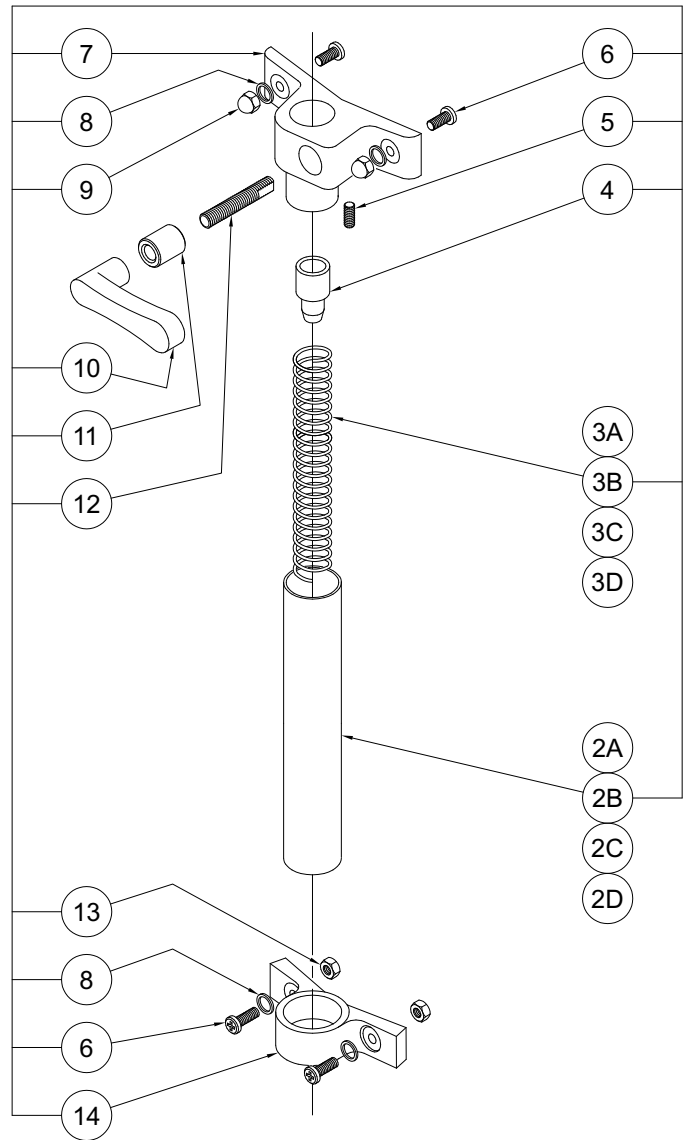


ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6525-165-001	TURBINE ASSY S-85/90/110 - 115VAC, 60Hz	3C	6525-220-001	MOTOR ASSEMBLY - 230VAC, 50Hz
1B	6525-166-001	TURBINE ASSY S-85/90/110 - 230VAC, 60Hz	4	6525-500-299	1" DIA. MOTOR BASE CASTING
1C	6525-167-001	TURBINE ASSY S-85/90/110 - 230VAC, 50Hz	5	6509-165-199	1" DIA. x 23-1/2" ROD
2	6525-535-001	PLUNGER ASSEMBLY 20"	6	6509-525-199	IMPELLER SHAFT - 26-3/8"
3A	6525-200-001	MOTOR ASSEMBLY - 115VAC, 60Hz	7	6509-125-199	IMPELLER TUBE - 25-1/2"
3B	6525-210-001	MOTOR ASSEMBLY - 230VAC, 60Hz			



THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:

WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
E-15-S	DF-2516
E-22-MU	
E-22-S	DF-2818
E-22-SP	
P-10-S	
P-15-S	DF-2516
P-22-S	DF-2818



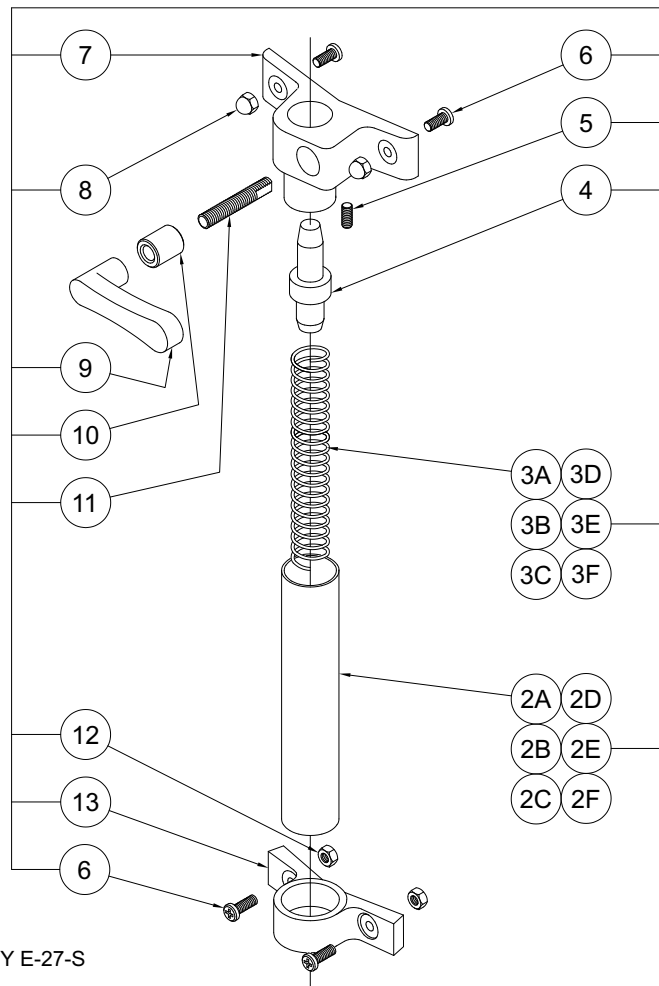
- 1A R & L ASSY P-10-S
- 1B R & L ASSY P/E-15-S
- 1C R & L ASSY P/E-22-MU/SP
- 1D R & L ASSY P/E-22-S

ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6530-015-001	3/4" DIM. R & L ASSEMBLY - P-10-S	4	6530-110-199	END CAP
1B	6530-025-001	3/4" DIM. R & L ASSEMBLY - P/E-15-S	5	6502-411-000	1/4"-20 x 5/16" ALLEN HEAD SET SCREW
1C	6530-030-001	3/4" DIM. R & L ASSEMBLY - P/E-22-MU/SP	6	6502-200-000	1/4"-20 x 5/8" PHILLIPS TRUSS HEAD MACH SCRW
1D	6530-045-001	3/4" DIM. R & L ASSEMBLY - P/E-22-S	7	6530-100-199	UPPER BRACKET
2A	6509-205-199	1-1/8" DIA. x 12-1/8" TUBE - P-10-S	8	0337-050-000	1/4" STAINLESS STEEL LOCKWASHER
2B	6509-215-199	1-1/8" DIA. x 18" TUBE - P/E-15-S	9	6502-520-000	1/4"-20 HIGH CROWN ACORN NUT
2C	6509-215-199	1-1/8" DIA. x 18" TUBE - P/E-22-MU/SP	10	6530-111-199	HANDLE
2D	6509-225-199	1-1/8" DIA. x 20" TUBE - P/E-22-S	11	6530-112-199	BUSHING
3A	6503-005-000	7/8" DIA. x 13" SPRING - P-10-S	12	6530-114-199	STUD
3B	6503-015-000	7/8" DIA. x 9" SPRING - P/E-15-S	13	0302-005-000	1/4"-20 HEX NUT
3C	6503-015-000	7/8" DIA. x 9" SPRING - P/E-22-MU/SP	14	6530-101-199	LOWER BRACKET
3D	6503-030-000	7/8" DIA. x 23" SPRING - P/E-22-S			



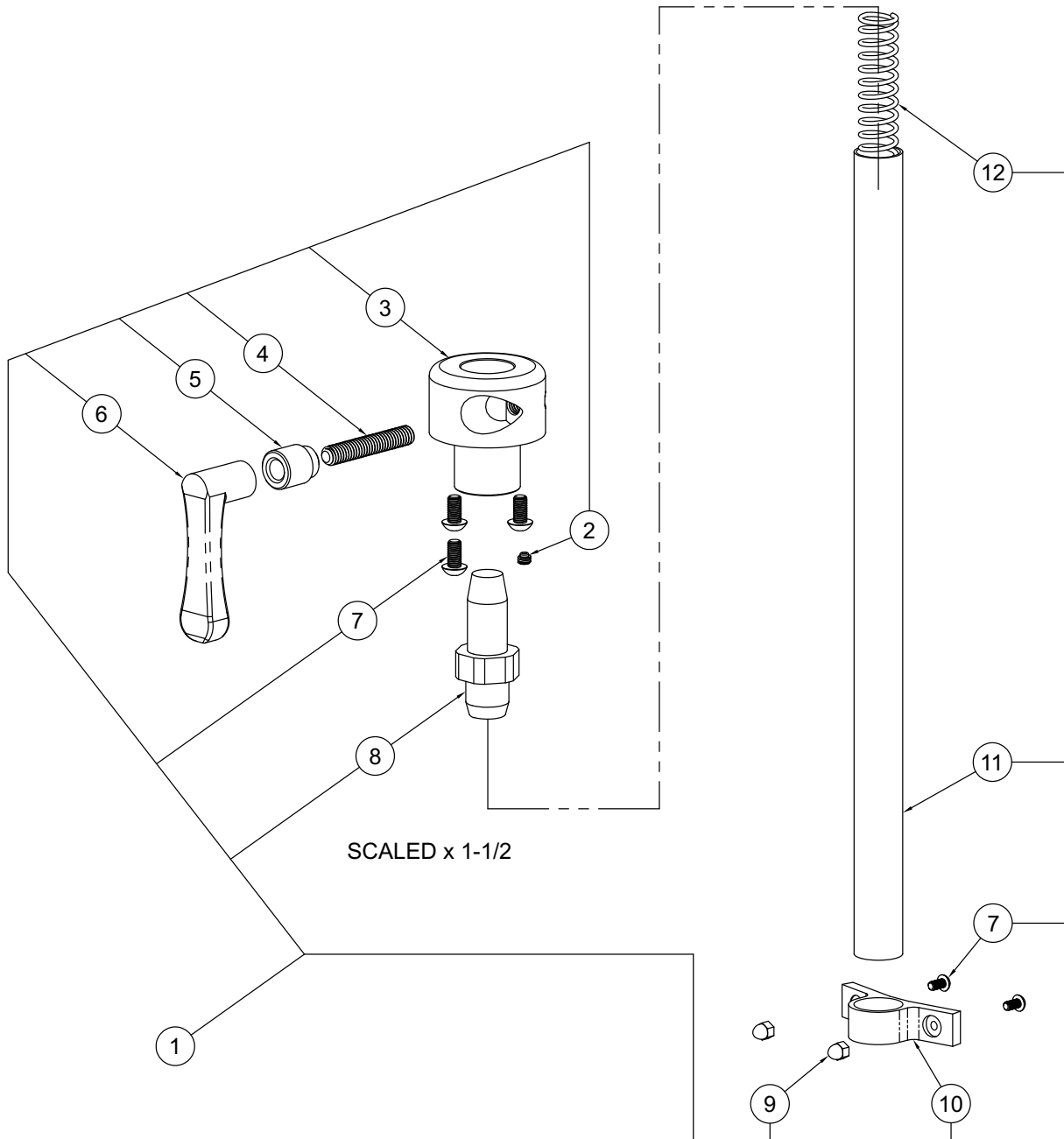
THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:

WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
E-27-S	DF-2821
E-36-S	DF-2825
E-45-S	DF-3225
H-60-S	DF-3628
H-75-S	
H-90-S	
H-105-S	DF-4828
L-75-M	
L-75-M-SDP	
L-75-SL	
L-75-S	
L-90-M	
L-90-M-DS	
L-90-M-SDP	
L-90-S	DF-6018
L-90-SL	
L-105-M	
L-105-M-DS	
L-105-M-SDP	
L-105-S	DF-6618
L-105-SL	
S-85-M	
S-85-M-SDP	DDT-4825
S-85-S	DFT-4825
S-85-SL	
S-90-M	
S-90-M-SDP	
S-90-S	
S-90-SL	
S-110-M	DST-5625
S-110-M-SDP	DDT-5625
S-110-S	DFT-5625
S-110-SL	

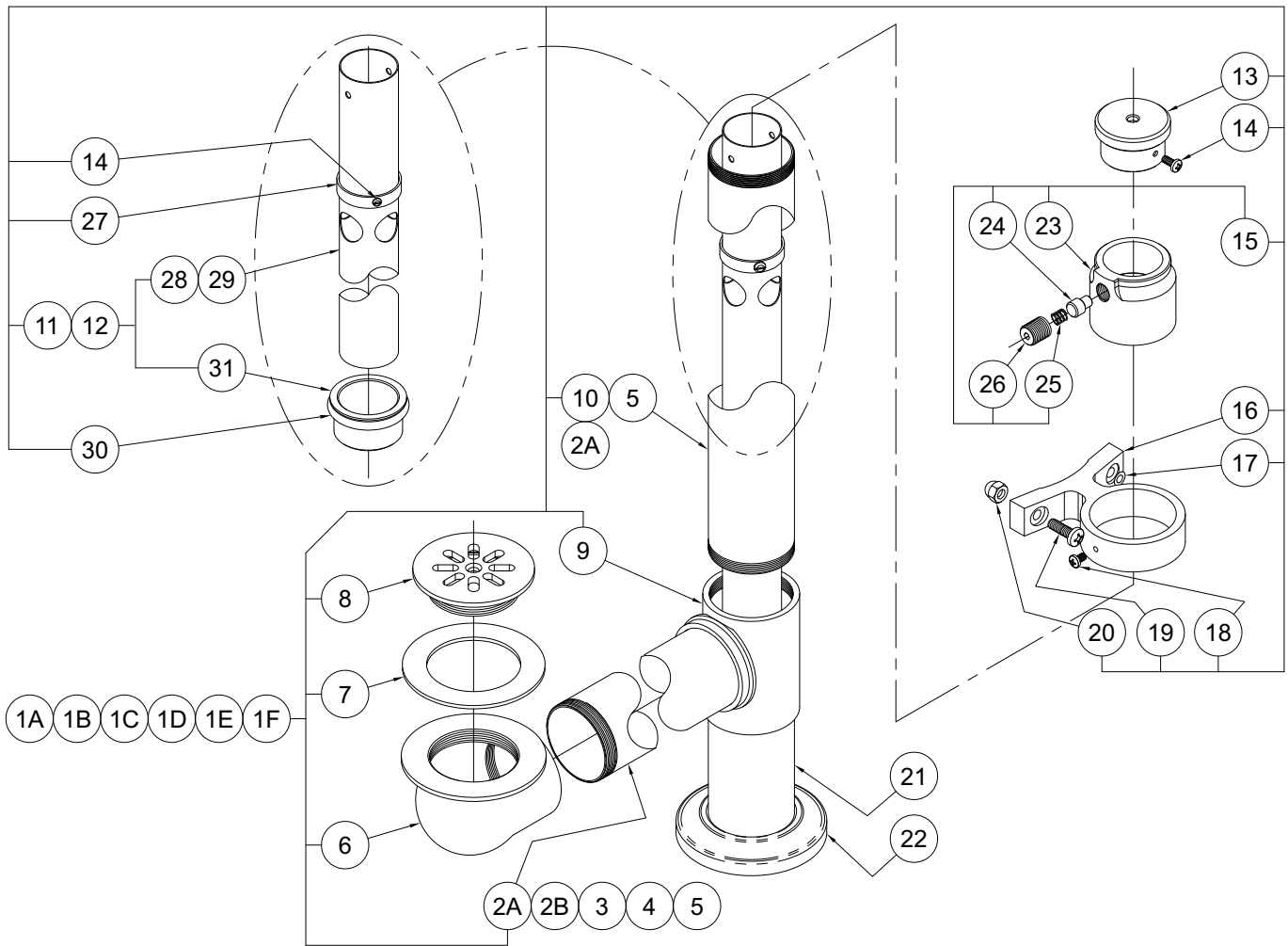


- 1A R & L ASSY E-27-S
- 1B R & L ASSY E-45-/S-85/90/110-S
- 1C R & L ASSY H-60/75/90/105-S
- 1D R & L ASSY L-75/90/105-S
- 1E R & L ASSY L-75/90/105-M/SL
- 1F R & L ASSY H-60/75/90/105-S

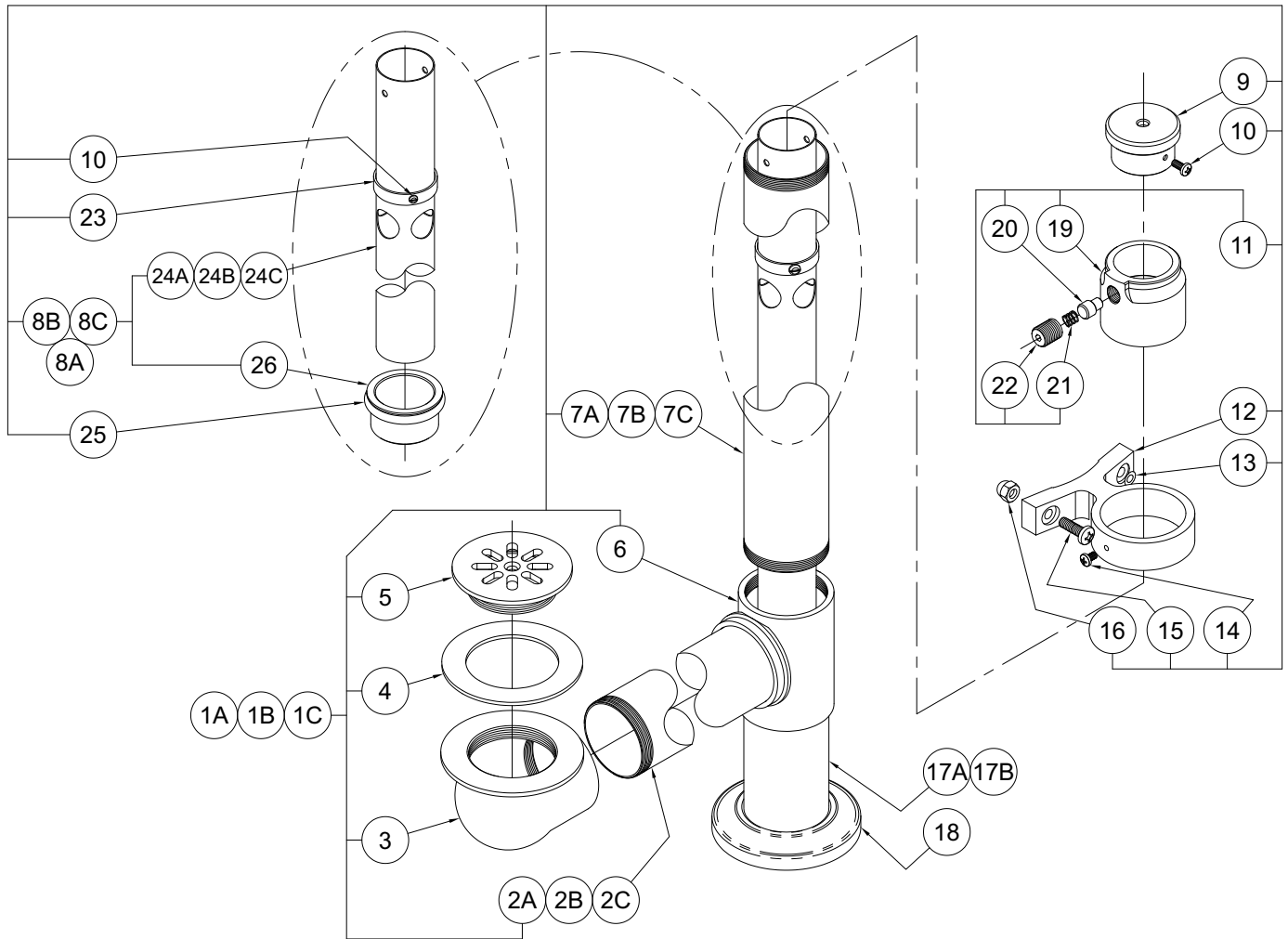
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6530-220-001	1" DIA. R & L ASSY - E-27-S	3C	6503-075-000	1-1/8" x 34" SPRING - H-60/75/90/105-S
1B	6530-235-001	1" DIA. R & L ASSY - E-45/S-85/90/110-S	3D	6503-060-000	1-3/8" x 23-1/2" SPRING - L-75/90/105-S
1C	6530-245-001	1" DIA. R & L ASSY - H-60/75/90/105-S	3E	6503-055-000	1-18" x 19" SPRING - L-75/90/105-M/S
1D	6530-215-001	1" DIA. R & L ASSY - L-75/90/105-S	3F	6503-065-000	1-18" x 27" SPRING - S-58/90/110-M/SL
1E	6530-210-001	1" DIA. R & L ASSY - L-75/90/105-M/SL	4	6530-310-199	END CAP
1F	6530-225-001	1" DIA. R & L ASSY - E-45-SL/S-85/90/110-M/SL	5	6502-411-000	SET SCREW
2A	6509-265-199	1-3/8" DIA. x 23-1/2" TUBE - E-27-S	6	6502-200-000	1/4"-20 x 5/8" TRUSS HEAD PHILLIPS MS
2B	6509-275-199	1-3/8" DIA. x 27-1/4" TUBE - E-45/S-85/90/110-S	7	6530-300-199	UPPER BRACKET
2C	6509-280-199	1-3/8" DIA. x 30-1/2" TUBE - H-60/75/90/105-S	8	6502-520-000	1/4"-20 HIGH CROWN ACORN NUT
2D	6509-260-199	1-3/8" DIA. x 21-1/4" TUBE - L-75/90/105-S	9	6530-111-199	HANDLE
2E	6509-255-199	1-3/8" DIA. x 18-1/2" TUBE - L-75/90/105-M/S	10	6530-112-199	BUSHING
2F	6509-270-199	1-3/8" DIA. x 18-1/2" TUBE - S-85/90/110-M/SL	11	6530-114-199	STUD
3A	6503-265-000	1-1/8" x 23-1/2" SPRING - E-27-S	12	0302-005-000	1/4"-20 HEX NUT
3B	6503-070-000	1-1/8" x 30-1/2" SPRING - E-45/S-85/90/110-S	13	6530-301-199	LOWER BRACKET



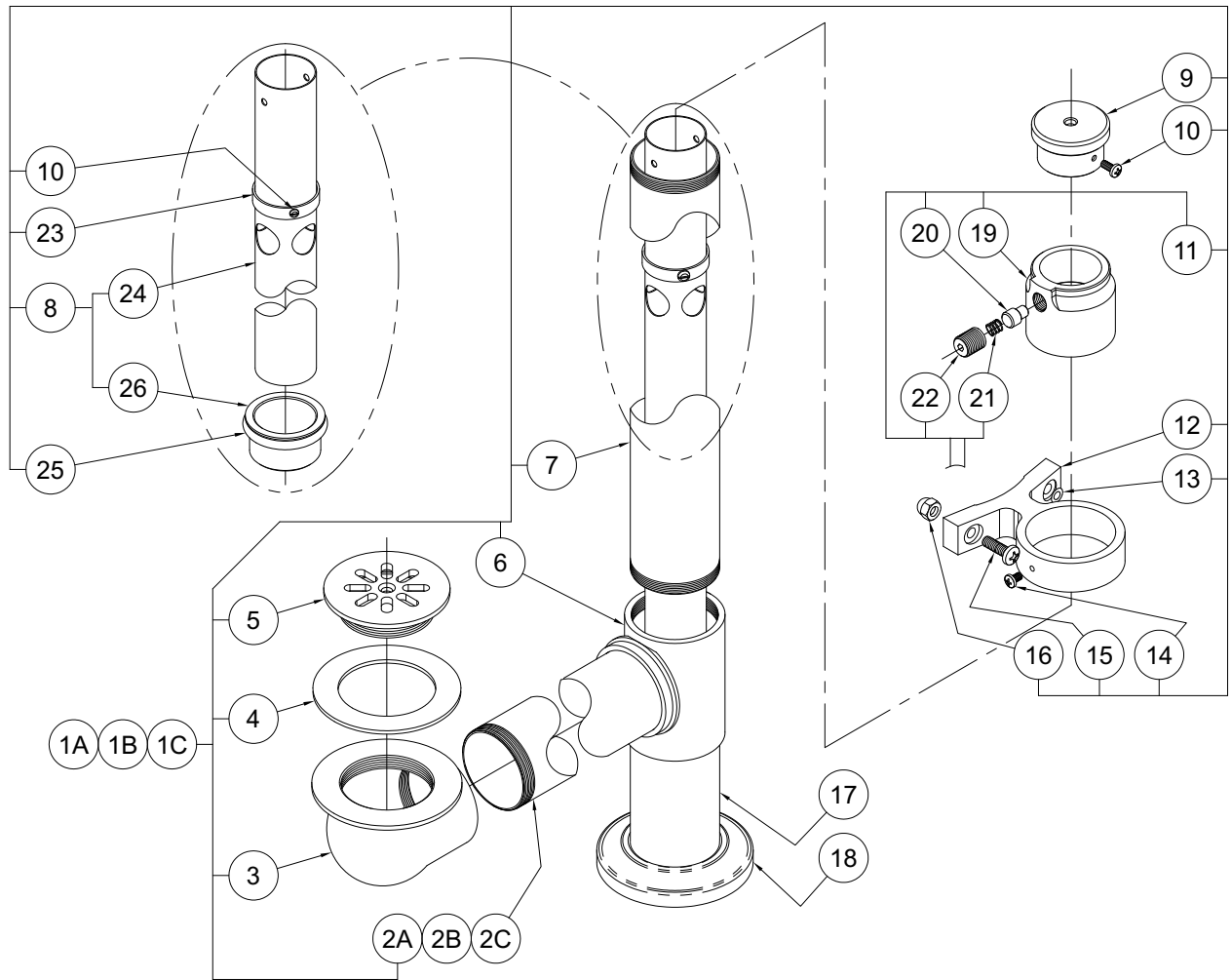
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1	6530-260-001	R & L ASSEMBLY	7	0116-104-000	1/4"-20 x 1/2" PHILLIPS ROUND HEAD SCREW
2	6502-401-000	1/4"-20 x 5/16 SET SCREW	8	6530-310-199	END CAP
3	6530-411-199	LOCKING HUB	9	6530-520-000	1/4"-20 STAINLESS STEEL ACORN NUT
4	6530-114-199	3/8"-16 UNC STUD	10	6530-301-199	LOWER BRACKET
5	6530-112-199	BUSHING	11	6509-265-199	1-3/8" DIA. x 23-1/2" R & L TUBE
6	6530-111-199	LOCKING HANDLE	12	6503-065-000	1-1/8" DIA. x 27" SPRING



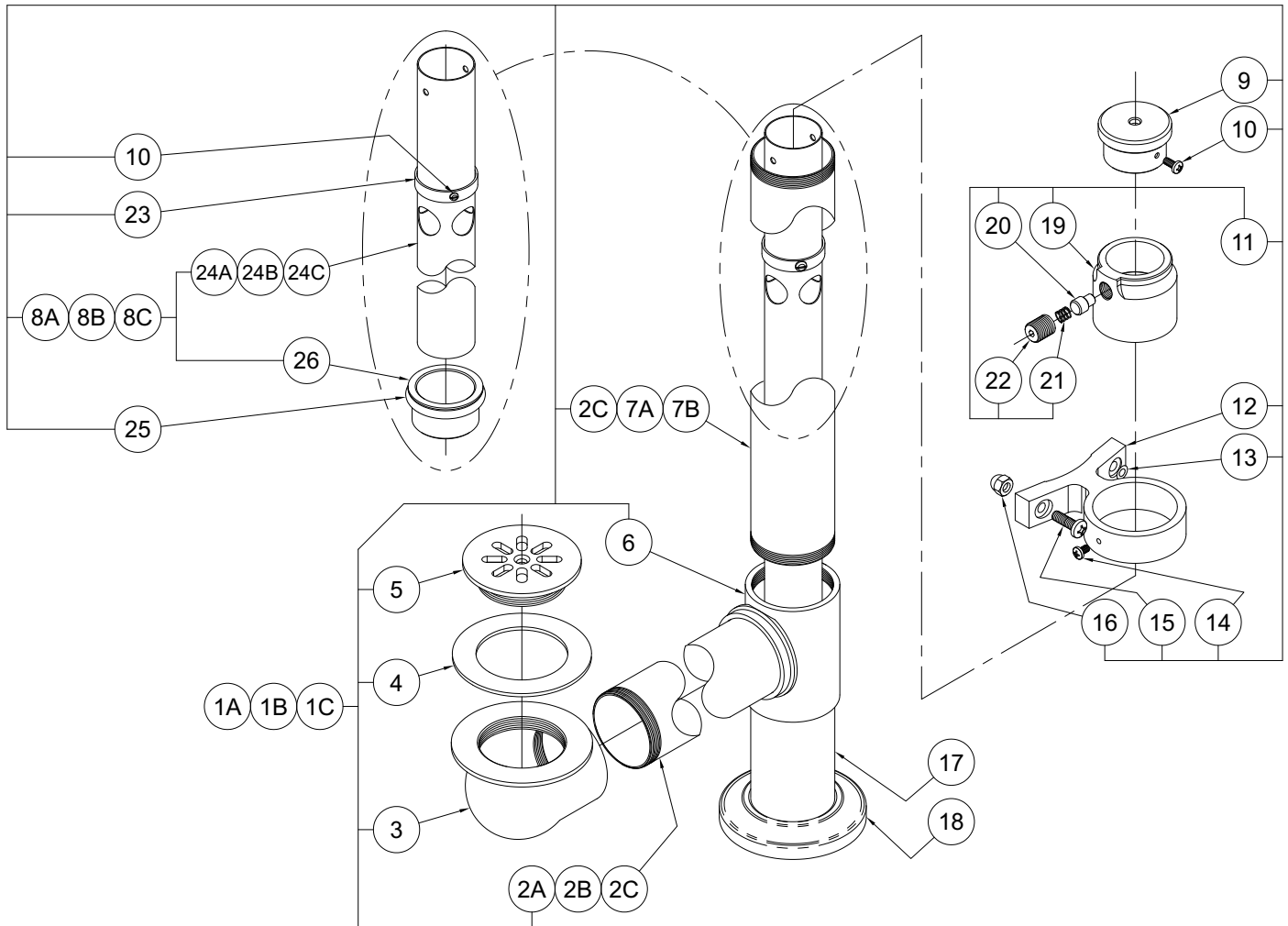
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6531-010-001	DRAIN & OVERFLOW - H-60-S	14	6502-450-000	#8-32 x 3/8" PHILLIPS PAN HEAD SCREW
1B	6531-012-001	DRAIN & OVERFLOW - H-75-S	15	6531-110-001	FRICTION LOCK ASSEMBLY
1C	6531-011-001	DRAIN & OVERFLOW - H-90/105-S	16	6531-100-001	OVERFLOW BRACE
1D	6531-015-001	DRAIN & OVERFLOW - S-85-S	17	0337-050-000	1/4" STN STL HELICAL LOCKWASHER
1E	6531-014-001	DRAIN & OVERFLOW - S-90-S	18	6502-103-000	#8-32 x 1/4" PHILLIPS PAN HEAD SCREW
1F	6531-016-001	DRAIN & OVERFLOW - S-110-S	19	6502-200-000	1/4"-20 x 5/8" PHILLIPS TRUSS HEAD SCREW
2A	6509-346-199	2" O.D. x 17-3/4" DRAIN TUBE - H-60-S	20	6502-520-000	1/4"-20 ACORN NUT
2B	6509-360-199	2" O.D. x 20-3/8" DRAIN TUBE - H-75-S	21	6509-405-199	2" O.D. x 5" DRAIN TUBE
3	6509-370-199	2" O.D. x 23-5/8" DRN TUBE - H-90/105-S/-85-S	22	6531-104-000	ESCUTCHEON
4	6509-365-199	2" O.D. x 22-3/8" DRAIN TUBE - S-90-S	23	6531-110-199	FRICTION LOCK HOUSING
5	6509-385-199	2" O.D. x 27-1/2" DRAIN TUBE - S-110-S/HI-BOY	24	6531-111-199	FRICTION LOCK ROD
6	6508-000-199	DRAIN ELBOW	25	6531-113-000	SPRING
7	6504-500-000	DRAIN GASKET	26	6531-112-199	TENSION ADAPTER
8	6508-050-199	STRAINER	27	6531-101-199	COLLAR (UP-STOP)
9	6508-010-199	DRAIN TEE	28	6509-085-199	33-1/4" OVERFLOW TUBE
10	6509-375-199	2" O.D. x 24" DRAIN TUBE - SPORTS	29	6509-080-199	29-5/8" OVERFLOW TUBE
11	6531-056-001	33-1/4" OVERFLOW ASSEMBLY - HI-BOY	30	6504-221-000	O-RING
12	6531-055-001	29-5/8" OVERFLOW ASSEMBLY	31	6531-103-199	O-RING COUPLING
13	6531-102-199	HANDLE			



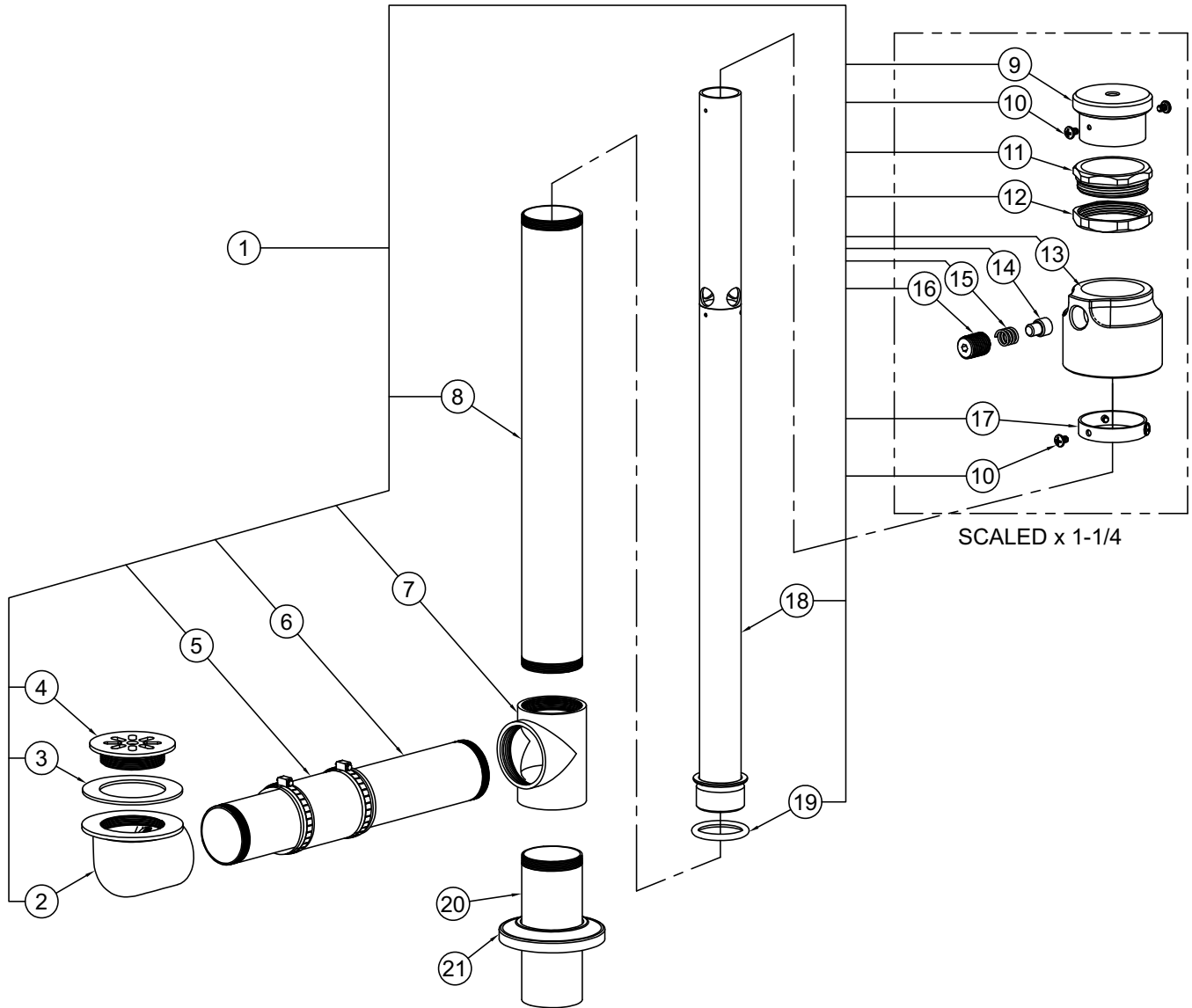
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6531-018-001	DRAIN & OVERFLOW ASSEMBLY - E-22-P	12	6531-100-199	OVERFLOW BRACE
1B	6531-017-001	DRAIN & OVERFLOW ASSEMBLY - E-27-S	13	0337-050-000	1/4" HELICAL STAINLESS STEEL LOCKWASHER
1C	6531-013-001	DRAIN & OVERFLOW ASSEMBLY - E-45-S	14	6502-103-000	#8-32 x 1/4" PAN HEAD PHILLIPS SCREW
2A	6509-305-199	2" O.D. x 7-3/8" DRAIN TUBE - E-22-SP	15	6502-200-000	1/4"-20 x 5/8" PHILLIPS TRUSS HEAD SCREW
2B	6509-325-199	2" O.D. x 13-3/4" DRAIN TUBE - E-27-S	16	6502-520-000	1/4"-20 ACORN NUT
2C	6509-335-199	2" O.D. x 15-1/2" DRAIN TUBE - E-45-S	17A	6509-405-199	2" O.D. x 5" DRAIN TUBE
3	6508-000-199	DRAIN ELBOW	17B	6509-435-199	2" O.D. x 16" DRAIN TUBE - E-22-SP
4	6504-500-000	DRAIN GASKET	18	6531-104-000	ESCUTCHEON
5	6508-050-199	STRAINER	19	6531-110-199	FRICTION LOCK HOUSING
6	6508-010-199	DRAIN TEE	20	6531-111-199	FRICTION LOCK ROD
7A	6509-350-199	2" O.D. x 19" DRAIN TUBE - E-22-SP	21	6531-113-000	SPRING
7B	6509-355-199	2" O.D. x 20" DRAIN TUBE - E-27-S	22	6531-112-199	TENSION ADAPTER
7C	6509-375-199	2" O.D. x 24" DRAIN TUBE - E-45-S	23	6531-101-199	COLLAR (UP-STOP)
8A	6531-053-001	25" OVERFLOW ASSEMBLY - E-22-SP	24A	6509-070-199	25" OVERFLOW TUBE - E-22-SP
8B	6531-054-001	26" OVERFLOW ASSEMBLY - E-27-S	24B	6509-075-199	26" OVERFLOW TUBE - E-27-S
8C	6531-055-001	29-5/8" OVERFLOW ASSEMBLY - E-45-S	24C	6509-080-199	29-5/8" OVERFLOW TUBE - E-45-S
9	6531-102-199	HANDLE	25	6504-221-000	O-RING
10	6502-450-000	#8-32 x 3/8" PAN HEAD PHILLIPS SCREW	26	6531-103-199	O-RING COUPLING
11	6531-110-001	FRICTION LOCK ASSEMBLY			



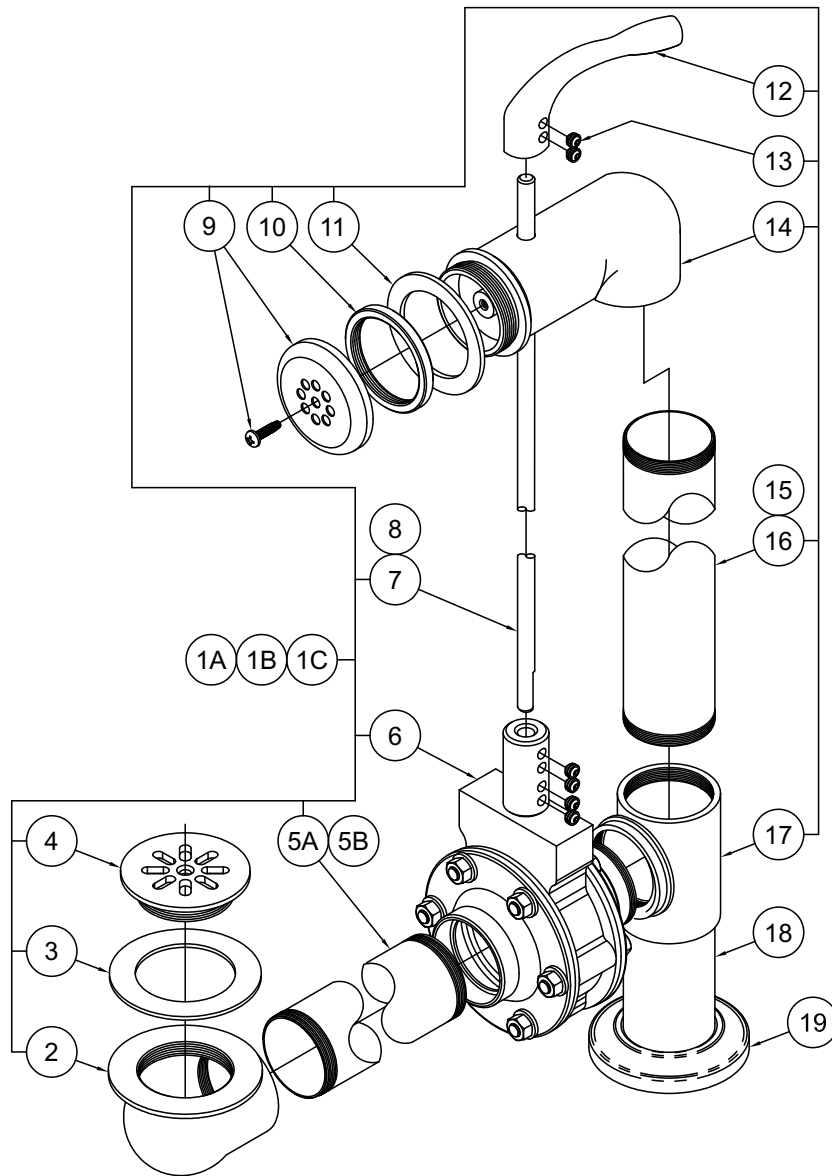
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6531-024-001	DRAIN & OVERFLOW ASSEMBLY - L-75-S	12	6531-100-199	OVERFLOW BRACE
1B	6531-023-001	DRAIN & OVERFLOW ASSEMBLY - L-90-S	13	0337-050-000	1/4" HELICAL STAINLESS STEEL LOCKWASHER
1C	6531-022-001	DRAIN & OVERFLOW ASSEMBLY - L-105-S	14	6502-103-000	#8-32 x 1/4" PHILLIPS PAN HEAD SCREW
2A	6509-380-199	2" O.D. x 25-3/8" DRAIN TUBE - L-75-S	15	6502-200-000	1/4"-20 x 5/8" PHILLIPS TRUSS HEAD SCREW
2B	6509-390-199	2" O.D. x 29-1/4" DRAIN TUBE - L-90-S	16	6502-500-000	1/4"-20 ACORN NUT
2C	6509-395-199	2" O.D. x 32-3/8" DRAIN TUBE - L-105-S	17	6509-405-199	2" O.D. x 5" DRAIN TUBE
3	6508-000-199	DRAIN ELBOW	18	6531-104-000	ESCUTCHEON
4	6504-500-000	DRAIN GASKET	19	6531-110-199	FRICITION LOCK HOUSING
5	6508-050-199	STRAINER	20	6531-111-199	FRICITION LOCK ROD
6	6508-010-199	DRAIN TEE	21	6531-113-199	SPRING
7	6509-340-199	2" O.D. x 17" DRAIN TUBE - L-75/90/105-S	22	6531-112-199	TENSION ADAPTER
8	6531-052-001	22-1/2" OVERFLOW ASSEMBLY	23	6531-101-199	COLLAR (UP-STOP)
9	6531-102-199	HANDLE	24	6509-065-199	22-1/2" OVERFLOW TUBE
10	6502-450-000	#8-32 x 3/8" PHILLIPS PAN HEAD SCREW	25	6504-221-000	O-RING
11	6531-110-001	FRICITION LOCK ASSEMBLY	26	6531-103-199	O-RING COUPLING



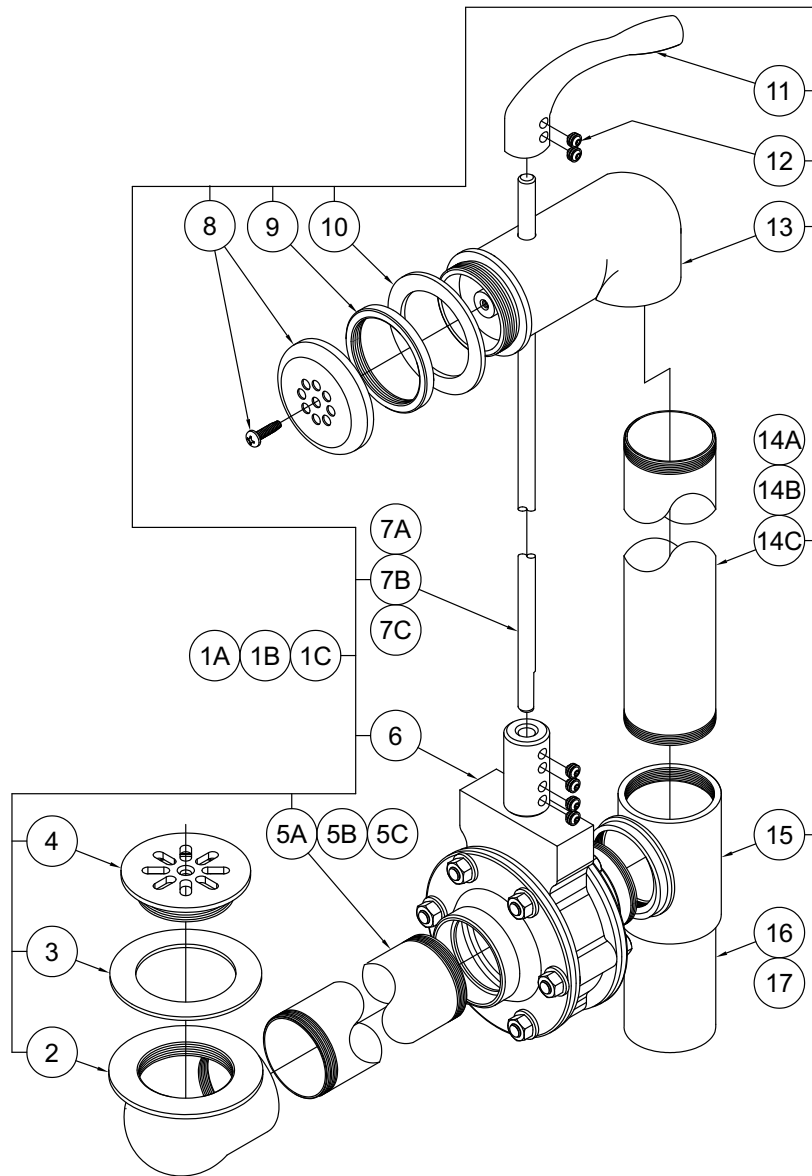
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6531-021-001	DRAIN & OVERFLOW ASSEMBLY - P-10-S	12	6531-100-199	OVERFLOW BRACE
1B	6531-020-001	DRAIN & OVERFLOW ASSEMBLY - E/P-15-S	13	0337-050-000	1/4" STAINLESS STEEL HELICAL LOCKWASHER
1C	6531-019-001	DRAIN & OVERFLOW ASSEMBLY - E/P-22-S	14	6502-103-000	#8-32 x 1/4" PHILLIPS PAN HEAD SCREW
2A	6509-311-199	2" O.D. x 10-3/4" DRAIN TUBE - P-10-S	15	6502-200-000	1/4"-20 x 5/8" PHILLIPS TRUSS HEAD SCREW
2B	6509-321-199	2" O.D. x 12" DRAIN TUBE - E/P-15-S	16	6502-520-000	1/4"-20 ACORN NUT
2C	6509-330-199	2" O.D. x 14" DRAIN TUBE - E/P-22-S	17	6509-405-199	2" x 5" DRAIN TUBE
3	6508-000-199	DRAIN ELBOW	18	6531-104-000	ESCUTCHEON
4	6504-500-000	DRAIN GASKET	19	6531-110-199	FRICTION LOCK HOUSING
5	6508-050-199	STRAINER	20	6531-111-199	FRICTION LOCK ROD
6	6508-010-199	DRAIN TEE	21	6531-113-000	SPRING
7A	6509-320-199	2" O.D. x 11-1/2" DRAIN TUBE - P-10-S	22	6531-112-199	TENSION ADAPTER
7B	6509-340-199	2" O.D. x 17" DRAIN TUBE - E/P-22-S	23	6531-101-199	COLLAR (UP-STOP)
8A	6531-050-001	17" OVERFLOW ASSEMBLY - P-10-S	24A	6509-055-199	17" OVERFLOW - P-10-S
8B	6531-051-001	19-3/4" OVERFLOW ASSEMBLY - E/P-15-S	24B	6509-060-199	19-3/4" OVERFLOW - E/P-15-S
8C	6531-052-001	22-1/2" OVERFLOW ASSEMBLY - E/P-22-S	24C	6509-065-199	22-1/2" OVERFLOW - E/P-22-S
9	6531-102-199	HANDLE	25	6504-221-000	O-RING
10	6502-450-000	#8-32 x 3/8" PHILLIPS PAN HEAD SCREW	26	6531-103-199	O-RING COUPLING
11	6531-110-001	FRICTION LOCK ASSEMBLY			



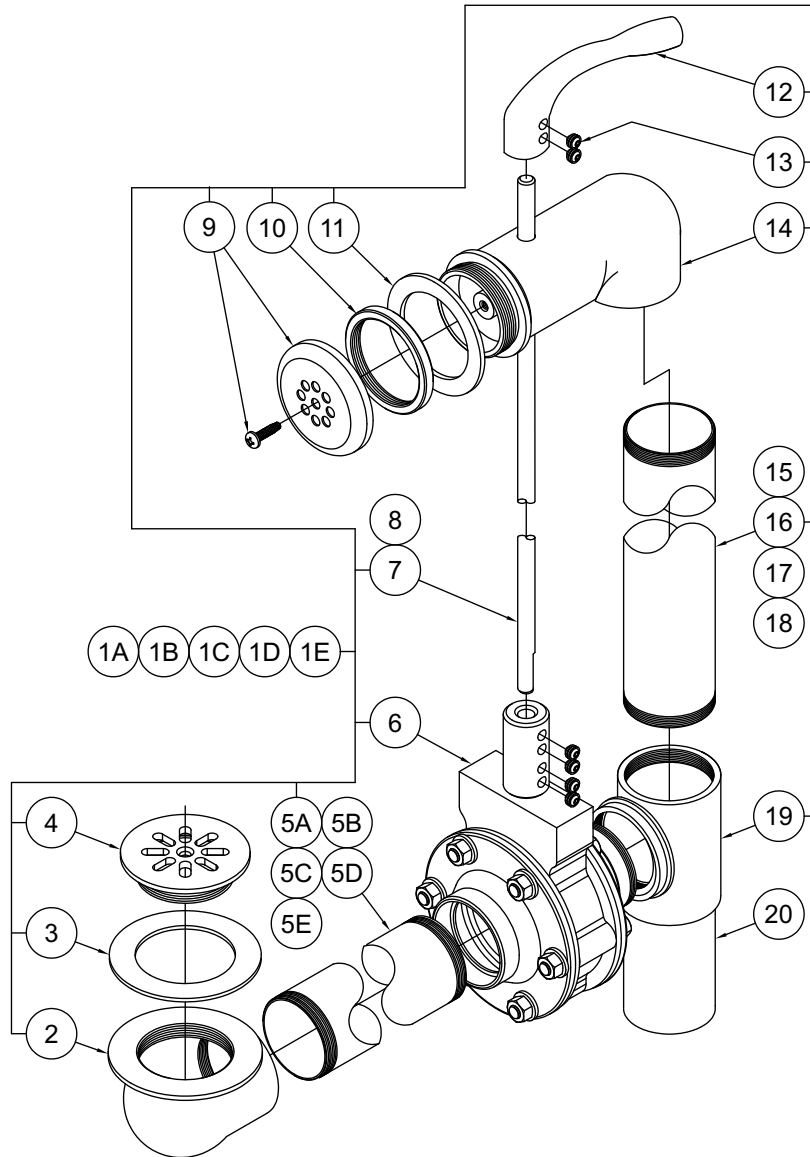
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1	WHR00050-001	DRAIN & OVERFLOW ASSEMBLY	12	WHR00057-199	GROMMET GUIDE NUT
2	6508-000-199	DRAIN ELBOW	13	6531-110-199	FRICTION LOCK HOUSING
3	6504-500-000	DRAIN GASKET	14	6531-111-199	FRICTION LOCK ROD
4	6508-050-199	STRAINER	15	6531-113-000	SPRING
5	4995-040-000	1-1/2" x 1-1/2" COUPLING	16	6531-112-199	TENSION ADJUSTER
6	6509-320-199	2" O.D. x 11-1/2" DRAIN TUBE	17	6531-101-199	COLLAR (UPSTOP OVERFLOW)
7	6508-010-199	DRAIN TEE	18	WHR00047-001	23-3/8" OVERFLOW TUBE ASSEMBLY
8	6509-335-199	2" O.D. x 15-1/2" DRAIN TUBE	19	6504-221-000	O-RING
9	6531-102-199	HANDLE	20	6509-405-199	2" O.D. x 5" DRAIN TUBE
10	6502-450-000	#6-32 x 3/16" PHILLIPS PAN HEAD SCREW	21	6531-104-000	ESCUTCHEON
11	WHR00049-199	GROMMET GUIDE			



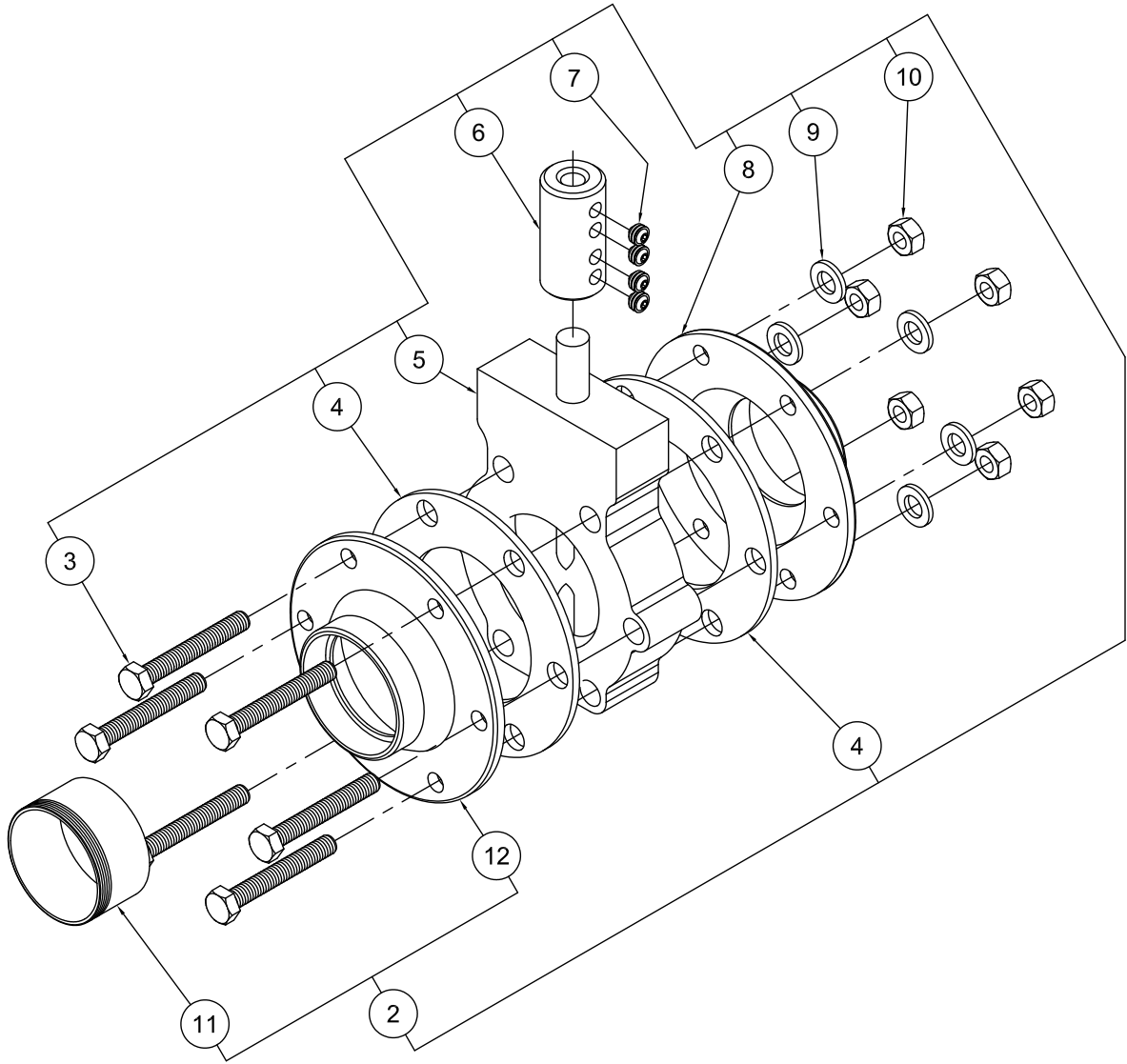
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6531-200-001	SEPARATE DRAIN OVERFLOW - P-10-S	9	6531-330-000	STRAINER ASSY - FOR -SDO & BURN TANKS
1B	6531-205-001	SEPARATE DRAIN OVERFLOW - P/E-15-S	10	6531-331-199	LOCK RING
1C	6531-210-001	SEPARATE DRAIN OVERFLOW - P/E-22-S	11	6504-507-000	TUB WALL ELBOW GASKET
2	6508-000-199	FLOOR PAN DRAIN ELBOW	12	6531-333-199	DRAIN HANDLE
3	6504-500-000	DRAIN GASKET	13	6502-402-000	5/16"-18 x 1/4" HEX SOCKET SET SCREW
4	6508-050-199	STRAINER	14	6531-310-199	UPPER DRAIN ELBOW
5A	6531-400-199	2" O.D. ANGLED DRAIN TUBE - P-10-S	15	6509-308-199	2" O.D. x 9-1/8" TUBE - P-10-S, P/E-15-S
5B	6531-405-199	2" O.D. ANGLED DRAIN TUBE - P/E-15/22-S	16	6509-335-199	2" O.D. x 15-1/2" TUBE - P/E-22-S
6	6531-325-001	DRAIN VALVE ASSEMBLY	17	6508-010-199	DRAIN TEE
7	6509-600-199	DRAIN ROD - P-10-S, P/E-15-S	18	6509-405-199	2" O.D. x 5" DRAIN TUBE
8	6509-601-199	DRAIN ROD - P/E-22-S	19	6531-104-000	ESCUTCHEON



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6531-215-001	SEPARATE DRAIN OVERFLOW - E-22-SP	8	6531-330-000	STRAINER FOR -SDO & BURN TANK ASSEMBLIES
1B	6531-220-001	SEPARATE DRAIN OVERFLOW - E-27-S	9	6531-331-199	LOCK RING
1C	6531-225-001	SEPARATE DRAIN OVERFLOW - E-45-S	10	6504-507-000	ELBOW GASKET FOR TUB WALL
2	6508-000-199	DRAIN ELBOW FOR FLOOR PAN	11	6531-333-199	DRAIN HANDLE
3	6504-500-000	DRAIN GASKET	12	6502-402-000	5/16"-18 x 1/4" HEX SOCKET SET SCREW
4	6508-050-199	STRAINER	13	6531-310-199	UPPER DRAIN ELBOW
5A	6531-403-199	2" O.D. x 6-5/8" DRAIN TUBE - E-22-SP	14A	6509-338-199	2" O.D. x 15-1/2" DRAIN TUBE - E-22-SP
5B	6531-405-199	2" O.D. x 12-3/8" DRAIN TUBE - E-27-S	14B	6509-348-199	2" O.D. x 18-1/8" DRAIN TUBE - E-27-S
5C	6531-331-199	2" O.D. x 14-1/4" DRAIN TUBE - E-45-S	14C	6509-363-199	2" O.D. x 22-3/8" DRAIN TUBE - E-45-S
6	6531-325-001	DRAIN VALVE ASSEMBLY	15	6508-010-199	DRAIN TEE
7A	6509-602-199	DRAIN ROD - E-22-SP	16	6509-435-199	2" EXTENSION TUBE - E-22-SP
7B	6509-603-199	DRAIN ROD - E-27-S	17	6509-405-199	2" EXTENSION TUBE - ALL OTHERS
7C	6509-604-199	DRAIN ROD - E-45-S			



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6531-230-001	SEPARATE DRAIN OVERFLOW - H-60-S	7	6509-605-199	DRAIN ROD - H-60/75/90-S
1B	6531-235-001	SEPARATE DRAIN OVERFLOW - H-75-S	8	6509-604-199	DRAIN ROD - S-85/90-S
1C	6531-250-001	SEPARATE DRAIN OVERFLOW - H-90-S	9	6531-330-000	STRAINER FOR -SDO & BURN TANK ASSEMBLIES
1D	6531-245-001	SEPARATE DRAIN OVERFLOW - S-85-S	10	6531-331-199	LOCK RING
1E	6531-240-001	SEPARATE DRAIN OVERFLOW - S-90-S	11	6504-507-000	ELBOW GASKET FOR TUB WALL
2	6508-000-199	DRAIN ELBOW FOR FLOOR PAN	12	6531-333-111	DRAIN HANDLE
3	6504-500-000	DRAIN GASKET	13	6502-402-000	5/16"-18 x 1/4" HEX SOCKET SET SCREW
4	6508-050-199	STRAINER	14	6531-310-199	UPPER DRAIN ELBOW
5A	6509-338-199	2" O.D. x 15-15/32" DRAIN TUBE - H-60-S	15	6509-380-199	2" O.D. x 25-3/8" DRAIN TUBE - S-60/75-S
5B	6531-406-199	2" O.D. ANGLED DRAIN TUBE - H-75-S	16	6509-378-199	2" O.D. x 25-1/8" DRAIN TUBE - H-90-S
5C	6531-409-199	2" O.D. ANGLED DRAIN TUBE - H-90-S	17	6509-363-199	2" O.D. x 22-1/8" DRAIN TUBE - S-85-S
5D	6531-408-199	2" O.D. ANGLED DRAIN TUBE - S-85-S	18	6509-365-199	2" O.D. x 22-3/8" DRAIN TUBE - S-90-S
5E	6531-407-199	2" O.D. x 21-1/4" DRAIN TUBE - S-90-S	19	6508-010-199	DRAIN TEE
6	6531-325-001	DRAIN VALVE ASSEMBLY	20	6509-405-199	2" EXTENSION



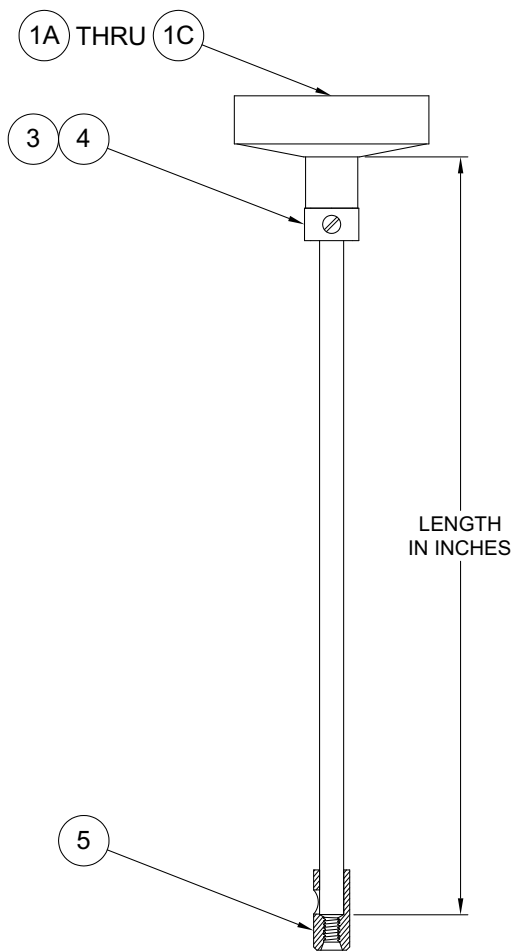
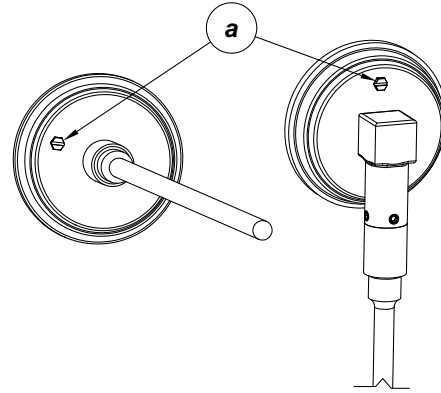
1 DRAIN VALVE ASSEMBLY

ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1	6531-325-001	DRAIN VALVE ASSEMBLY	7	6502-402-000	5/16"-18 x 1/4" HEX SOCKET SET SCREW
2	6531-321-001	DRAIN VALVE FLANGE - MALE ASSEMBLY	8	6531-320-199	DRAIN VALVE FLANGE - FEMALE
3	6502-143-000	5/16"-18 x 2-1/4" STAINLESS STEEL HEX HD BOLT	9	6502-563-000	5/16" STAINLESS STEEL HELICAL LOCK WASHER
4	6504-506-000	DRAIN VALVE GASKET	10	6502-502-000	5/16"-18 HEX NUT
5	6531-323-000	WAFER BUTTERFLY VALVE	11	6531-322-199	MALE ADAPTER
6	6531-332-199	VALVE COUPLING	12	6531-321-199	DRAIN VALVE FLANGE - MALE



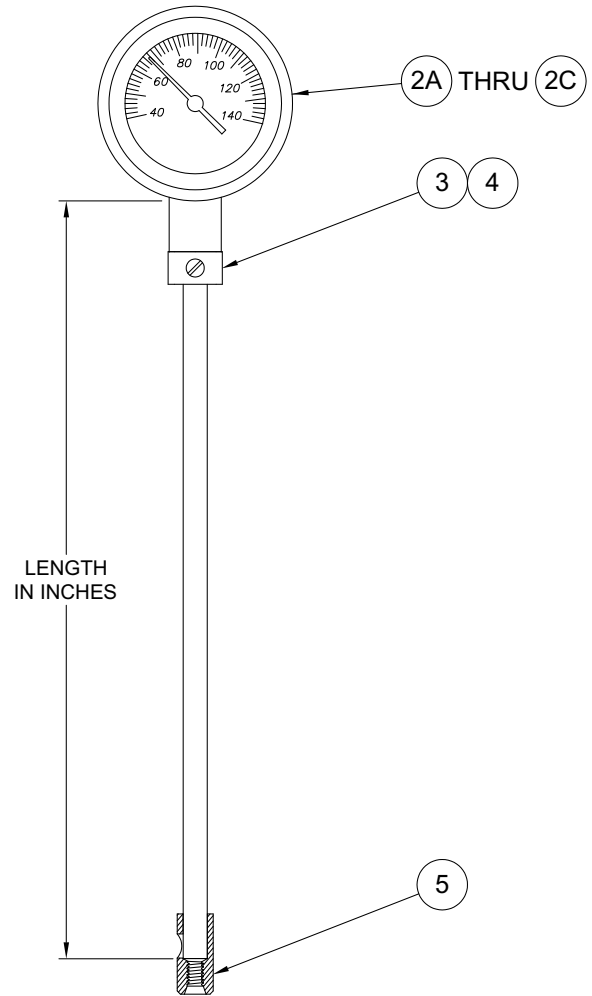
NOTE: THE THERMOMETER GAUGES TEMPERATURES FROM 40° TO 140° F. DO NOT ALLOW TEMPERATURES TO EXCEED 140° TO AVOID DAMAGING THE THERMOMETER.

TO RECALIBRATE: IMMERSE THE STEM A MINIMUM OF 4" INTO THE WATER TURN ON THE TURBINE ASSEMBLY AND ANOTHER ACCURATE TEMPERATURE GAUGE TO COMPARE AND USE THE EXTERNAL ADJUSTMENT SCREW PROVIDED ON THE THERMOMETER CASING AS INDICATED (a).



BACK CONNECTED THERMOMETER

AVAILABLE IN 12", 15" & 18" LENGTHS



BOTTOM CONNECTED THERMOMETER

AVAILABLE IN 21", 25" & 28" LENGTHS

ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6532-005-000	BACK CONNECTED THERMOMETER 12"	2C	6532-080-000	BOTTOM CONNECTED THERMOMETER 28"
1B	6532-010-000	BACK CONNECTED THERMOMETER 15"	3	6502-451-000	#10-32 x 1/4" PAN HD SLOTTED NYLON SCREW
1C	6532-015-000	BACK CONNECTED THERMOMETER 18"	4	6532-100-199	UPPER THERMOMETER BRACKET
2A	6532-070-000	BOTTOM CONNECTED THERMOMETER 21"	5	6532-101-199	LOWER THERMOMETER BRACKET
2B	6532-075-000	BOTTOM CONNECTED THERMOMETER 25"			



Cleaning and Disinfecting the Whirlpool

After draining the Whirlpool:

1. Verify that the turbine is OFF.
2. Remove any loose objects or debris that may be present in whirlpool.
3. To Disinfect:
 - *Whitehall recommends that you disinfect the whirlpool after each patient.
 - *Spray or wipe all surfaces of the whirlpool tank and thermometer with a hard surface disinfectant, following the disinfectant manufacturer's instructions.
 - *Rinse away disinfectant residue with warm, clean water. If needed (or after the last patient of the day) wipe the inside and outside surfaces of the whirlpool with a towel to reduce streaking and spotting.
4. To Clean:
 - *Clean as needed, or weekly at minimum.
 - *Hand-wash all surfaces of the whirlpool and thermometer with a non-abrasive stainless steel cleaner. Scrub only in the direction of the polish lines on the whirlpool. Follow the manufacture's instructions for use.
 - *Rinse with cold water.
 - *Wipe inside and outside surfaces with a towel to reduce streaks and spotting.

Disinfecting and Cleaning of the Turbine

1. Drain the tank.
2. Place an empty bucket beneath the turbine. Fill with water and add disinfectant solution per manufacturers recommended use.
3. Turn the control valve to the slow position.
4. Turn on the turbine for 5 seconds and turn it off. Allow the turbine to soak for a 10 minute contact time.
5. Spray or wipe all exposed surfaces with a mixture of suitable disinfectant solution per manufacture's recommended use. Exposed surfaces should remain wet for at least 10 minutes.
6. Drain the turbine bucket into the tank and open drain.
7. Rinse all exposed surfaces with warm/hot water.
8. Fill the bucket with water and run turbine for five seconds to rinse impeller cavity.

**Whitehall recommends the use of Hydrochlor® Whirlpool Antiseptic with all patient treatments. This simplifies cleaning of equipment by eliminating need for repeated rinsing and scrubbing.*

Important

The following chemicals are NOT recommended:

- **Sodium or calcium hypochlorite, chlorines, or bleach:** Chloride ions are a major cause of stainless steel pitting and are highly caustic and corrosive. If used, wear skin, eye and respiratory protection. Immediately rinse off residue.
- **Phenolics:** Phenolics damage metal parts and plastics and distort the water-lubricated hard-rubber bearing in turbine. **DO NOT USE.**
- **Glutaraldehydes:** These chemicals are good disinfectants but poor cleaners. Exposure to vapors is harmful. **DO NOT USE.**
- **Iodines:** Iodines are good disinfectants but poor cleaners. Iodines corrode metal surfaces including stainless steel. If used wear respiratory protection. Immediately rinse off residue.
- **Alcohol:** Alcohol-based cleaners have limited effectiveness against some common microorganisms. They are also extremely flammable and corrosive. **DO NOT USE.**

Important

Using abrasive compounds or applicators can damage the whirlpool's appearance. Do not use abrasive materials to clean the whirlpool.



CARE AND CLEANING OF STAINLESS STEEL

NORMAL CLEANING

Clean weekly or more often, as needed (especially high-polish surfaces)

RECOMMENDED CLEANING MATERIALS

- Sponge - natural or artificial
- Nylon or other soft-bristle material brush
- **SOFT** cloth (as used on automobile finishes)

RECOMMENDED CLEANING SOLUTIONS

- Hand dishwashing liquid/soft water solution
- Mild soap/soft water solution
- 3M Stainless Steel Cleaner/Polish
- White vinegar/soft water solution (for brightening, removing oil deposit and hard water deposits)
- CLR Brand Cleaner or baking soda /soft water solution (for brightening, removing hard water deposits)
- Club soda and sponge

To remove smudges and fingerprints:

Wipe surfaces with a quality Stainless Steel Cleaner / Polish. Apply using a soft non-abrasive cloth. Always follow cleaner/polish product directions provided.

To remove dirt and debris:

Wash surfaces with a mild liquid soap. Apply using a soft, non-abrasive cloth. Rinse surfaces thoroughly with clean water. Afterwards, using a soft non-abrasive cloth, wipe surfaces with stainless steel cleaner/polish.

To remove rust stains:

Wipe surfaces with CRES (available through Whitehall) or equivalent cleaner. Use recommended solutions. Apply using a soft non-abrasive sponge. Rinse surfaces thoroughly immediately after application. Always follow cleaner product directions provided. Afterwards, using a soft, non-abrasive cloth, wipe surfaces with stainless steel cleaner/polish.

FOR TOUGH PROBLEMS

- CRES Cleaner specifically for rust stains (Available through Whitehall)
- Tarn-X for general stains
- # 7 chrome polish
- Silver polish

To remove stubborn spots or to treat a scratch (Standard Satin Finish only):

Use of synthetic, abrasive, general-purpose pads such as Scotch Brite® is recommended. Apply the stainless steel cleaner/polish to the synthetic, abrasive pads and

To remove stubborn spots or to treat a scratch (Standard Satin Finish only): Continued:

CAREFULLY rub out spot with cleaner/polish. *Be sure to rub in the direction of the grain!* Do not allow steel wool to come in contact with stainless steel. Steel particles can embed into the stainless steel surface and create rust!

Special Note: After cleaning for serious problems, let dry, and expose to air for at least 24 hours to allow "healing" (restoring of the chromium oxide layer) of the stainless steel surface.

FOR ENVIRO-GLAZE STAINLESS STEEL

Protecting the powder coated surface is the major key in keeping an Whitehall Enviro-Glazed stainless steel product clean and under warranty.

- For normal wipe-down cleaning, a mild soap and a sponge or cotton cloth will perform well.
- Ordinary mild cleaners for home use will sanitize the fixture. (eg. Soft-Scrub®, Comet Soft Cleanser®, Clorox®, Scrubbing Bubbles® Gel.)
- NEVER use harsh cleansers such as "Kaboom®", Lysol® Gel, Lysol Cling® or "The Works" as these contain powerful acidic or alkaline chemicals which may damage the finish or even the metal of the tank itself. Use of such chemicals will void the warranty.
- NEVER use a metal brush while cleaning. The use of such a tool at any time will scratch the finish and perhaps cause corrosion, voiding the warranty.

THINGS TO AVOID

- Harsh polishing cleanser (Comet, Bon Ami, etc.)
- Harsh chemicals (strong acidic or alkaline materials such as hydrochloric acid, sodium hydroxide, etc.)
- Any abrasive substance (dirt/mud, ceramic items, etc.)
- Chlorinated cleansers, sanitizers or bleach of any kind
- Steel wool, steel utensils or any object made of steel or metal, left in contact with stainless surface (hair pins, paper clips, aerosol cans)
- Scotch-Brite® type pads on high-polished surfaces
- Seawater or excessively hard water
- Salt or salty foods allowed to dry on surface
- Leaving scratches in metal surface (soil can collect in these, preventing surface from "healing")
- Leaving hard water sitting (evaporating) for extended periods, allowing mineral deposits to collect.



Maintenance Schedule

The whirlpool requires regular maintenance. Set up and follow a maintenance schedule. The table at right represents minimum intervals for maintenance.

When using maintenance products, follow the manufacturers' directions and read the manufacturer's MSDS, Material Safety Data Sheets. You can purchase a recommended disinfectant from Whitehall Customer Service (Back of Manual) or your Whitehall distributor.

Maintenance Procedures

Motor:

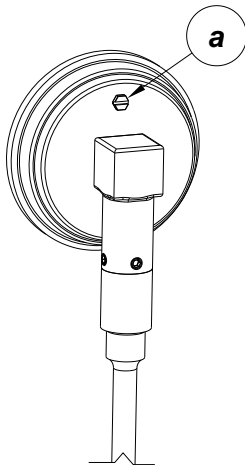
Motors are equipped with sealed greased ball bearings that do not require lubrication. Vent holes in the motor and motor cover shell must be cleaned periodically to allow free air flow and prevent overheating.

Hard Water:

The mineral properties of hard water, if allowed to build up over a period of time, have the potential for creating damage to the moving parts of the turbine assembly. We recommend the installation of a water softener or if that is not possible, the use of a water softening agent.

Note: The thermometer gauges temperatures from 40° to 140° F. Do not allow temperatures to exceed 140° to avoid damaging the thermometer.

To recalibrate: Immerse the stem a minimum of 4" into the water turn on the turbine assembly and another accurate temperature gauge to compare and use the external adjustment screw provided *a* on the thermometer casing as indicated.



Troubleshooting

When there is a significant loss in pressure at the turbine assembly:

- Check water inlet holes underneath the pump, clean away any foreign material.
- Add water, pump body must be completely submerged.

Motor does not start when switch is turned on:

- Check your power source.
- Have a qualified technician check switch.

Motor ceases operation:

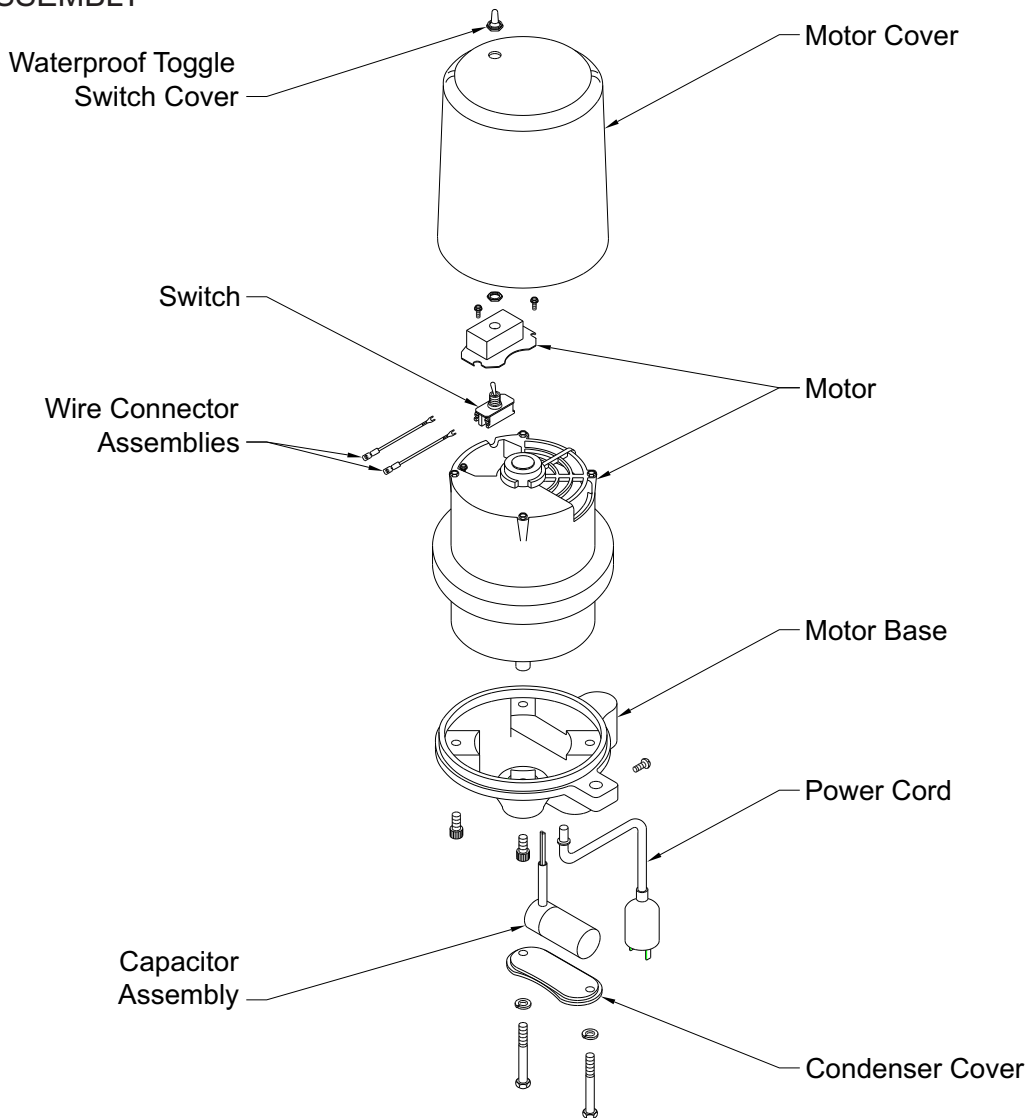
- Check for motor overloads: Possible causes are:
 - A- Blocked motor ventilation holes
 - B- Excessive current load

NOTE: The motor is equipped with an overload protector. In an overheated condition, the motor will automatically shut off until it has returned to a normal operating temperature.

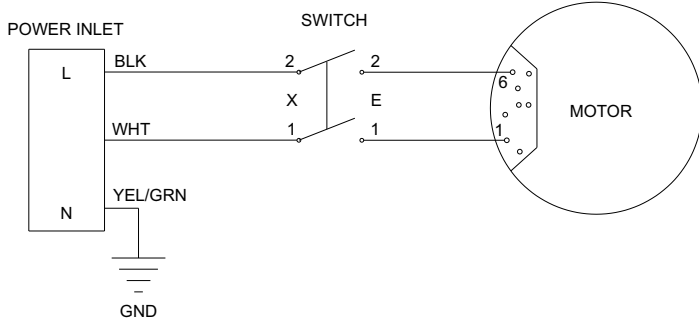
Minimum Maintenance Intervals	Each Use	As Needed	Each Week	Each Month
Disinfecting (page 17)	●			
Cleaning (page 18)		●	●	
Inspecting (page 2)		●		●



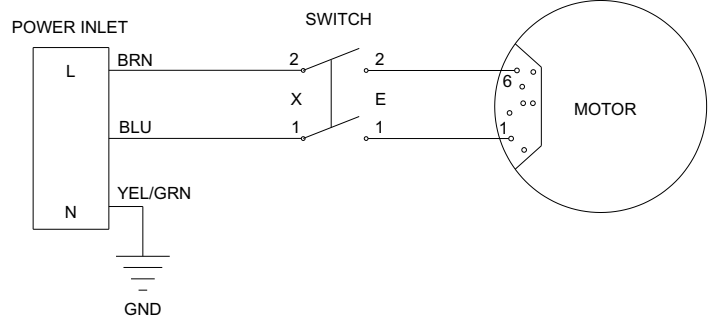
MOTOR DISASSEMBLY



SWITCH WIRING (115V)



SWITCH WIRING (230V)





Whitehall Manufacturing®
Manufacturer of Healthcare and Rehabilitation Products since 1946

MANUFACTURER'S WARRANTY

Whitehall Manufacturing Company warrants that its products are free from defects in material or workmanship under normal use and service for a period of one year from date of shipment. Whitehall's liability under this warranty shall be discharged solely by replacement or repair of defective material, provided Whitehall is notified in writing within one year from date of shipment, F.O.B. Industry, California.

This warranty does not cover installation or labor charges, and does not apply to materials which have been damaged by other causes such as mishandling or improper care or abnormal use. The repair or replacement of the defective materials shall constitute the sole remedy of the Buyer and the sole remedy of Whitehall under this warranty. Whitehall shall not be liable under any circumstances for incidental, consequential or direct charges caused by defects in the materials, or any delay in the repair or replacement thereof. This warranty is in lieu of all other warranties expressed or implied. Product maintenance instructions are issued with each fixture, and disregard or non-compliance with these instructions will constitute an abnormal use condition and void the warranty. If you have any questions or require technical assistance, please call 800-743-8219.

NOTICE TO KEEP ORIGINAL PACKAGING- Regarding warranty claims: customer must retain original packaging for one year upon receipt of product. If packaging is discarded, it is the customer's responsibility to provide adequate packaging. Any shipping claims that are a direct result of customer-provided packaging materials will be handled by the shipper.