



OPERATION AND MAINTENANCE MANUAL

Explosion Proof / Dust Ignition Proof Vacuum Cleaner System
Pneumatically (Air) Operated

MODEL SS-IT EX CFE

FOR THE RECOVERY OF EXPLOSIVE DUSTS AND COMBUSTIBLE METAL DUSTS

CE  II 2 G/D c IIC T6 (85°C)
LCIE 03 ATEX 6310

Designed for use in Class I - Groups A, B; C and D, T6
and Class II - Groups E, F, G Hazardous Locations
as defined in the National Electric Code (NFPA 70)

**READ ALL INSTRUCTIONS BEFORE OPERATING,
CLEANING OR SERVICING
IMPORTANT - SAVE THESE INSTRUCTIONS**

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January 13, 2015

1.0 INSPECTION

Carefully unpack and inspect your Explosion Proof/Dust Ignition Proof vacuum cleaner for shipping damage. This equipment has been inspected before being shipped; therefore, any damage is the responsibility of the delivering carrier, who should be notified.

2.0 APPLICATIONS

WARNING: A full Process Hazard Analysis has to be conducted by the user for the recovery of dusts in hazardous areas. The recommendations in this manual cannot, in any case, supplant the conclusions of a full Process Hazard Analysis.

Europe

Model SS-IT EX CFE is an explosion proof / dust ignition proof vacuum cleaner system, pneumatically (air) operated for use in potentially explosive atmospheres classified ATEX Zones 1 and 2 for Gas and ATEX zones 21 and 22 for Dust.

SS-IT EX CFE vacuum cleaner is certified in conformance with Directive 94/9/EC for Group II and Category 2 and bear the following marking

  II 2 G/D c IIC T6 (85°C)

For this equipment an EC Type Examination certificate No. LCIE 03 ATEX 6310 according to Annex III of Directive 94/9/EC has been obtained. The examination and tests results are recorded in confidential report No. 60010688-504549.

North-America

SS-IT EX CFE explosion proof / dust ignition proof vacuum cleaner system, pneumatically (air) operated is also designed for use in Class I - Groups A, B, C & D, T6 and Class II - Groups E, F & G hazardous locations as defined in NFPA 70 (U.S National Electric Code and Canadian Electrical Code)

SS-IT EX CFE explosion proof / dust ignition proof vacuum cleaner system, pneumatically (air) operated is designed to recover conductive and explosive dust. Dust is recovered into a liquid bath that renders dust inert in the interceptor.

NOTE CONCERNING THE RECOVERY OF EXPLOSIVE DUSTS AND OF METAL DUSTS:

The applicable standards do not specifically regulate the recovery of combustible dusts and flammable liquids in hazardous areas.

For the recovery of explosive dusts and of metal dusts, in particular, a risk assessment shall be conducted by the user. The following recommendations cannot, in any case, supplant the conclusions of a risk assessment.

In Particular, it is the user's responsibility to conduct a risk assessment in regard to the compatibility of the dusts recovered and the flammable gases, vapors or liquids and other combustible dusts present in the hazardous location.

WARNING: It is the user's responsibility to determine the appropriate liquid (water, oil, etc) to be used to neutralize the recovered dust.

WARNING: This equipment is designed for the recovery of dry materials only. Do not recover liquids.

2.1. APPLICATIONS IN POTENTIALLY EXPLOSIVE ATMOSPHERES IN PRESENCE OF GAS

Europe

SS-IT EX CFE vacuum cleaner can be used in **Zone 1** classified areas in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally.

SS-IT EX CFE vacuum cleaner can be used in **Zone 2** classified areas in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

SS-IT EX CFE vacuum cleaner is certified for Gas Group II C which representative gases are Hydrogen and Acetylene and their maximum surface temperature is T6 – 85°C.

North-America

SS-IT EX CFE vacuum cleaner is designed for use in Class I, Division 1 - Groups A, B, C and D, T6 which representative gases are Acetylene and Hydrogen, Hazardous Locations, where ignitable concentrations of flammable gases, vapors or liquids can exist all of the time or some of the time under normal operating conditions.

WARNING: The maximum surface temperature of SS-IT EX CFE vacuum cleaner (85°C/185°F) must always be lower than the ignition temperature of the gas present in the hazardous area.

WARNING: It is the user's responsibility to conduct a risk assessment in regard to the compatibility of the dusts recovered and the flammable gases, vapors or liquids and other combustible dusts present in the hazardous location.

2.2. APPLICATIONS IN POTENTIALLY EXPLOSIVE ATMOSPHERES IN PRESENCE OF SOLVENTS AND FLAMMABLE LIQUIDS

SS-IT EX CFE vacuum cleaner can be used in areas where solvents and flammable liquids are present.

WARNING: SS-IT EX CFE vacuum cleaner cannot be used to recover flammable liquids and solvents.

2.3. APPLICATIONS IN POTENTIALLY EXPLOSIVE ATMOSPHERES IN PRESENCE OF COMBUSTIBLE DUST

NOTE CONCERNING THE RECOVERY OF EXPLOSIVE DUSTS AND OF METAL DUSTS:

The applicable standards do not specifically regulate the recovery of combustible dusts and flammable liquids in hazardous areas.

For the recovery of explosive dusts and of metal dusts, in particular, a full Process Hazard Analysis has to be conducted by the user. The following recommendations cannot, in any case, supplant the conclusions of a risk assessment.

Europe

SS-IT EX CFE vacuum cleaner can be used in **Zone 21** classified areas in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally.

SS-IT EX CFE vacuum cleaner can be used in **Zone 22** classified areas in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation but – if it does occur – will persist for a short period only.

North-America

SS-IT EX CFE vacuum cleaner is designed for use in Class II, Division 1 - Groups E, F, G, which representative dusts are metals, coal and grain, Hazardous Locations, where ignitable concentrations of combustible dust can exist all of the time or some of the time under normal operating conditions.

SS-IT EX CFE can be used to recover into an immersion bath:

- combustible metal dusts especially when two or more types of dust are combined together, including aluminum, magnesium, zirconium, and their commercial alloys, perchlorate powder or other combustible dusts whose particle size, abrasiveness, and conductivity present an equivalent hazard
- unspent gun powder, sulphur, heat powder, anode powders or any other explosive dust.

WARNING: It is the user's responsibility to determine the appropriate liquid (water, oil, etc) to be used to neutralize the recovered dust.

WARNING: DO NOT RECOVER ANY HOT EMBERS OR IGNITED DUSTS.

WARNING: It is the user's responsibility to conduct a risk assessment in regard to the compatibility of the dusts recovered and the flammable gases, vapors or liquids and other combustible dusts present in the hazardous location.

3.0 COMPRESSED AIR REQUIREMENTS

IMPORTANT: The compressed air has to be clean, dry and oil free to prevent blockage of the pneumatic system.

	Single Venturi
Minimum diameter of air supply hose and fittings	0.5" (12.7mm)
Input air pressure for ideal performance	80 psi (5.5. bars)
Input air volume for ideal performance	45 cfm (76.5 cu. meters / hour)
Minimum compressor size	15 hp

IMPORTANT: Do not downsize the compressed air fittings or air supply line. Downsizing the fittings will result in a reduction of the vacuum cleaner's performance.

IMPORTANT: Brass (or stainless steel) fittings are required to ensure spark free operation and to ensure ground continuity between vacuum cleaner and the compressed air supply.

4.0 SPECIAL CONDITION FOR SAFE USE IN REGARD TO THE HYDROGEN RELIEF VALVE (OPTIONAL)

A hydrogen relief valve can be installed as an optional safety feature to prevent hydrogen from building up in the interceptor.

Any gas which may develop escapes through the degasification valve. The valve is “forced” open (spring return) when the vacuum cleaner stops and close again automatically during suctioning.

IMPORTANT: Check that the hydrogen relief valve is working properly before use. Do not perform this check when the vacuum cleaner is on. The valve disc should slot into place with gentle pressure and automatically return to its original position with the help of the pressure spring.

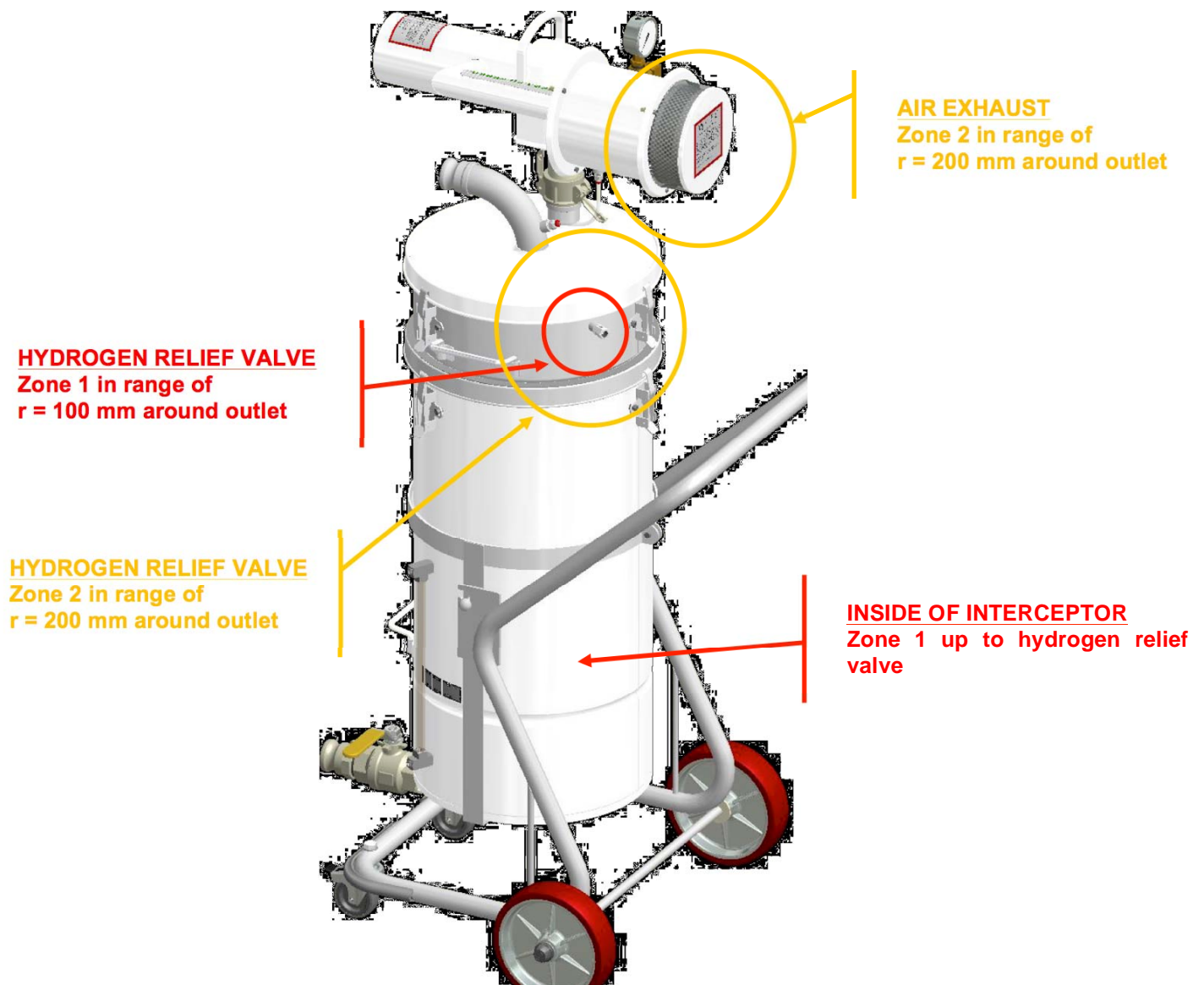
IMPORTANT: The hydrogen relief valve must be open when the vacuum is not in use.

WARNING: Flammable gas caused by chemical reactions between the liquid present in the interceptor and the dusts recovered may develop in the interceptor both during operation and idle time. Look at the below drawing to identify where potentially explosive gas atmospheres can be formed.

SPECIAL WARNING:

Hydrogen is extremely flammable and very easy to ignite. Hydrogen shall not be trapped. Make sure to use the vacuum cleaner in a well ventilated area where hydrogen gas can dissipate and free of potential ignition sources. Lower Flammable Limit of hydrogen is 4%. It is recommended to use ventilation in order to KEEP THE CONCENTRATION OF HYDROGEN GAS WELL BELOW ITS LOWER FLAMMABLE LIMIT AT/OR BELOW 1% CONCENTRATION IN AIR.

GAZ ZONE CLASSIFICATION



Definition of zones

Zone 1: area in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally.

Zone 2 area in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

5.0 PRE-USAGE INSTRUCTIONS AND IMPORTANT SAFETY PRECAUTIONS

WARNING: The pneumatic explosion proof vacuum cleaner must be grounded during use. (See Section “GROUNDING INSTRUCTIONS)

WARNING: DO NOT OPERATE UNIT WITHOUT A PROPER GROUND SOURCE. This unit is designed to operate on a grounded air supply outlet. It is the responsibility of the user to ensure that the air supply outlet is grounded. A secondary grounding reel is available as an option for this Pneumatic Explosion Proof vacuum cleaner. This grounding reel may be used where a grounded air supply outlet is not available or is not reliable.

WARNING: Air-operated vacuum cleaners can generate static electricity during use. To ensure that there is no static build up during operation, the vacuum cleaner unit and detachable tools and accessories are completely grounded and use special static-free materials. Any static charge developed is dissipated to ground through the static dissipating grounded air supply hose included with the vacuum cleaner unit.

WARNING: It is the user’s responsibility to determine the appropriate liquid (water, oil, etc) to be used to neutralize the recovered dust.

WARNING: It is the user’s responsibility to conduct a risk assessment in regard to the compatibility of the dusts recovered and the flammable gases, vapors or liquids and other combustible dusts present in the hazardous location.

WARNING: Improper use of this vacuum cleaner will result in the voiding of the warranty.

WARNING: Operation and service of this interceptor must only be carried out by trained personnel.

WARNING: Use only original replacement parts from the manufacturer or from one of its authorized distributors. This equipment is certified for explosion proof operation, only if used with supplied or recommended hose and tools. Any alteration to this equipment by a third party nullifies its certification.

- a. Inspect the vacuum cleaner's static dissipating air supply hose before every use. Return to manufacturer for servicing if damaged. Use only static dissipating air supply hose supplied with the unit or purchased from the manufacturer.
- b. Do not pull vacuum cleaner by the static dissipating air supply hose.
- c. Turn off the vacuum cleaner and disconnect the static dissipating air supply hose before servicing or storing the pneumatic explosion proof vacuum cleaner. Clean and service this vacuum cleaner **only in a NON-HAZARDOUS AREA**.
- d. Always shut off main air supply and open ball valve on the vacuum to relieve the line pressure before disconnecting the static dissipating air supply hose.
- e. The interceptor should be clean and dry before using the vacuum.
- f. **Warning: Do not pick-up anything that is burning or smoking, such as hot ashes, cigarettes, matches or live embers.**
- g. Do not use without appropriate filters in place inside the vacuum cleaner.
- h. Brass (or stainless steel) fittings are required to ensure spark free operation and to ensure ground continuity between vacuum cleaner and the compressed air supply

6.0 PRECAUTIONS FOR THE RECOVERY OF TOXIC / NUISANCE DUST

DANGER: If the explosion proof vacuum cleaner is used to recover toxic or nuisance dust, the following safety precautions must be taken:

- a. The vacuum cleaner must be equipped with an absolute filter HEPA or ULPA type.
- b. Service and operation should only be carried out by trained personnel.
- c. Appropriate clothing and personal protective equipment should be worn when operating or servicing the vacuum cleaner.
- d. Dispose of collected materials responsibly. Follow applicable government regulations for the disposal of hazardous materials.

7.0 GROUNDING INSTRUCTIONS

This vacuum cleaner must be properly grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to prevent the build-up static electrical charge and to ensure that static electricity is discharged to ground. The build-up of static electricity could create a sparking hazard and an ignition hazard.

This vacuum cleaner is equipped with a static dissipating air supply hose with brass fittings. It is the responsibility of the user to ensure that the compressed air supply outlet is grounded. If the grounding of the air supply outlet is questionable, or if a portable compressor is being used to power the pneumatic explosion proof vacuum, a secondary grounding reel is available as an option for this pneumatic explosion proof vacuum cleaner. The grounding reel may be used to connect the pneumatic explosion proof vacuum cleaner to a secondary grounding source, such as a grounding pole, in the event that grounded air supply outlet is not available or if the pneumatic explosion proof vacuum is being powered by portable compressor.

WARNING: This vacuum cleaner for use in potentially explosive atmospheres is equipped with conductive wheels which allow for the vacuum cleaner to be grounded with the floor. Do not substitute the conductive wheels and use only replacement conductive wheels supplied by the manufacturer.

WARNING: To effectively dissipate static electricity and to ensure spark-free operation, this vacuum cleaner must be grounded during use.

DANGER: Do not operate vacuum cleaner if the air supply outlet is not properly grounded or if the grounding is questionable.

8.0 TESTING FOR GROUND CONTINUITY

WARNING: Test the electrical continuity of the vacuum cleaner before each use. This will ensure that any static electricity that is produced while vacuuming will be discharged to ground.

WARNING: Use only original replacement parts from the manufacturer or from one of its authorized distributors.

An ohm-meter is required to perform the following electrical continuity test. A reading of 10 ohms or less is satisfactory to ensure proper grounding and static dissipation.

- a. Disconnect the static dissipating air supply hose from the compressed air supply.
- b. Make sure that all the latches on the vacuum cleaner are fastened.
- c. Disconnect the suction hose from the vacuum cleaner.
- d. Connect the static dissipating air supply hose, 25' (7.5 m) or 50' (15 m) long, to the compressed air inlet on the vacuum cleaner.
- e. Using an ohm-meter test for the electrical continuity of the air supply hose from one metallic end to the other. A reading of 10 ohms or less is satisfactory to ensure proper grounding and static dissipation.
- f. Using an ohm-meter test for the electrical continuity of the vacuum cleaner from the end of the static dissipating air supply hose to the suction intake of the vacuum cleaner. A reading of 10 ohms or less is satisfactory to ensure proper grounding and static dissipation.
- g. Using an ohm-meter test for the electrical continuity of the suction hose from one metallic end to the other. For 1.5" X 10' (3.8 mm X 3 m) or 1.5" X 15' (38 mm X 4.5 m) Kanaflex, EPDM or nitrile suction hoses, a reading of 10 ohms or less is satisfactory to ensure proper grounding and static dissipation.

9.0 OPERATING INSTRUCTIONS

WARNING: Use caution when connecting and disconnecting compressed air lines. When static air pressure is suddenly released, it can cause the airline to whip.

- a. **Shut off main air supply** and **open the ball valve** on the vacuum cleaner to relieve the pressure in the static dissipating air supply hose.



- b. Close the ball valve



c. Detach the recovery tank



- d. Remove the baffle system



WARNING:

Before use of the interceptor, the baffle system, hoses and accessories should be clean and dry

- e. Fill the interceptor with liquid. The appropriate level is just below the inward bead on the interceptor



WARNING: It is the user's responsibility to determine the appropriate liquid (water, oil, etc) to be used to neutralize the dust.

- a. If liquid foams upon agitation, use a de-foaming agent. Add the prescribed amount of de-foaming agent into the recovery tank in order to prevent foam from entering the powerhead.

WARNING: Do not add any foaming agent to liquid. Foam could damage parts located in the powerhead of the vacuum cleaner.

- f. Put back the baffle system in place.



- g. Put back the recovery tank in place:



h. Connect the suction hose to the air intake and close camlock's levers



i. Connect the accessory to the hose. Respect instructions written on the accessory.



j. Test the ground continuity:

- between main air supply and end of air supply hose



- between air supply hose and accessory



A reading of 10 ohms or less is satisfactory to ensure proper grounding and static dissipation.

- k. Open the main air supply and the ball valve on the vacuum cleaner. The gage must show a minimum of 80 PSI.



10.0 MAINTENANCE AND CLEAN-UP PROCEDURE

- a. After operation **shut off main air supply** and **open the ball valve on the vacuum cleaner's powerhead** to relieve the pressure in the static dissipating air supply hose.



- b. Close the ball valve.



c. Use the drain valve to empty collected material.

WARNING: Empty collected material as soon as the liquid reach the maximum indicated level.

IMPORTANT: In order to check the level of liquid the vacuum cleaner needs to be shut down.



d. To operate drain valve lift the safety ring and turn the handle. Optional drain hoses are available for use with the drain valve.



Tilt cart (TC) model illustrated

WARNING: Empty collected materials into suitable container.

WARNING: After use, be sure to remove any remaining materials by rinsing and cleaning the interceptor, the baffle system, hoses and accessories.

WARNING: Flush the suction hose with water to remove build up dirt

WARNING: Empty the interceptor regularly. Do not allow recovered materials to sit for extended periods of time. An excessive accumulation of recovered materials can create a dust ignition hazard.

WARNING: Keep the static dissipating air supply hose clean and dry. This will help prevent blockage of the venturi jet which could reduce the vacuum cleaner's performance.

11.0 STORAGE

- a. It is recommended that the inside of the interceptor be clean and dry when storing the pneumatic explosion proof vacuum cleaner.
- b. The suction intake must be closed using the storage cap provided with the vacuum cleaner.



12.0 REPLACING THE COALESCING FILTER ELEMENT (CFE)

For users who wish to implement a conservative protocol for replacing the coalescing filter element (CFE), it is recommended that it be replaced once a year.

WARNING: Proper clothing and respiratory equipment are required when replacing the coalescing filter element.

IMPORTANT: Use only original brand replacement coalescing filter elements (CFE).

- a. **Shut off main air supply** and **open the ball valve on the vacuum** to relieve the pressure in the static dissipating air supply hose.



- b. Close the ball valve



- c. Unscrew the four screws and remove the housing of the coalescing filter element (CFE).



- d. Remove the used coalescing filter element (CFE) and install a new coalescing filter element (CFE).



- e. Re-install the housing of the coalescing filter element (CFE) and secure the four screws.
- f. Dispose of the used coalescing filter element (CFE) in accordance with applicable government or state regulations.

13.0 HEPA FILTER REPLACEMENT

The best indication of a saturated HEPA filter is a noticeable drop in the performance of the vacuum cleaner. For users who wish to implement a conservative protocol for replacing the HEPA filter, it is recommended that the HEPA filter be replaced once a year.

WARNING: Proper clothing and respiratory equipment are required when replacing the HEPA filter.

IMPORTANT: Use only original brand replacement HEPA filters.

- a. **Shut off main air supply** and **open the ball valve on the vacuum** to relieve the pressure in the static dissipating air supply hose.



- b. Close the ball valve



- c. Remove the three bolts that hold the HEPA filter housing and remove the HEPA filter housing.



- d. Remove the used HEPA filter and install a new HEPA filter.
- e. Re-install the HEPA filter housing by securely fastening the three bolts that hold the HEPA filter housing in place.
- f. Dispose of the contaminated filter according to applicable government or state regulations.

ROUTINE MAINTENANCE FOR MODELS CD/SS-IT

- This unit must be filled at all times with either mineral oil, water or any other neutralizing liquid required for the product being recovered.
- This unit must be filled up to the liquid level indicator line shown on the recovery drum.
- Do not exceed the recommended maximum dust recovery capacity.

Model	Max. dust recovery capacity	Neutralizing liquid required
SS-IT EX TC	15 lbs / 7 kg	5.3 gallons / 20 liters
CD/SS-IT (85L)	22 lbs / 10 kg	7.9 gallons / 30 liters
CD/SS-IT (114L)	33 lbs / 15 kg	11.9 gallons / 45 liters
CD/SS-IT (160L)	44 lbs / 20 kg	15.8 gallons / 60 liters

- When maximum capacity is reached the first step is to drain the neutralizing liquid by opening up the manifold drain valve.
- Once drained the unit must be disconnected from its power source – either from the electrical outlet or from the air compressor.
- Disconnect the power head (if applicable) and all hoses from the top lid.
- Open all latches.
- Remove all parts off of the recovery drum.
- Remove the sieve basket from inside of the recovery drum. Discard all recovered material from inside of the sieve basket.
- Thoroughly clean all parts of the unit, including the sieve basket and suction hoses.
- Once unit is clean reinstall sieve basket inside the recovery drum and fill it of clean neutralizing liquid.

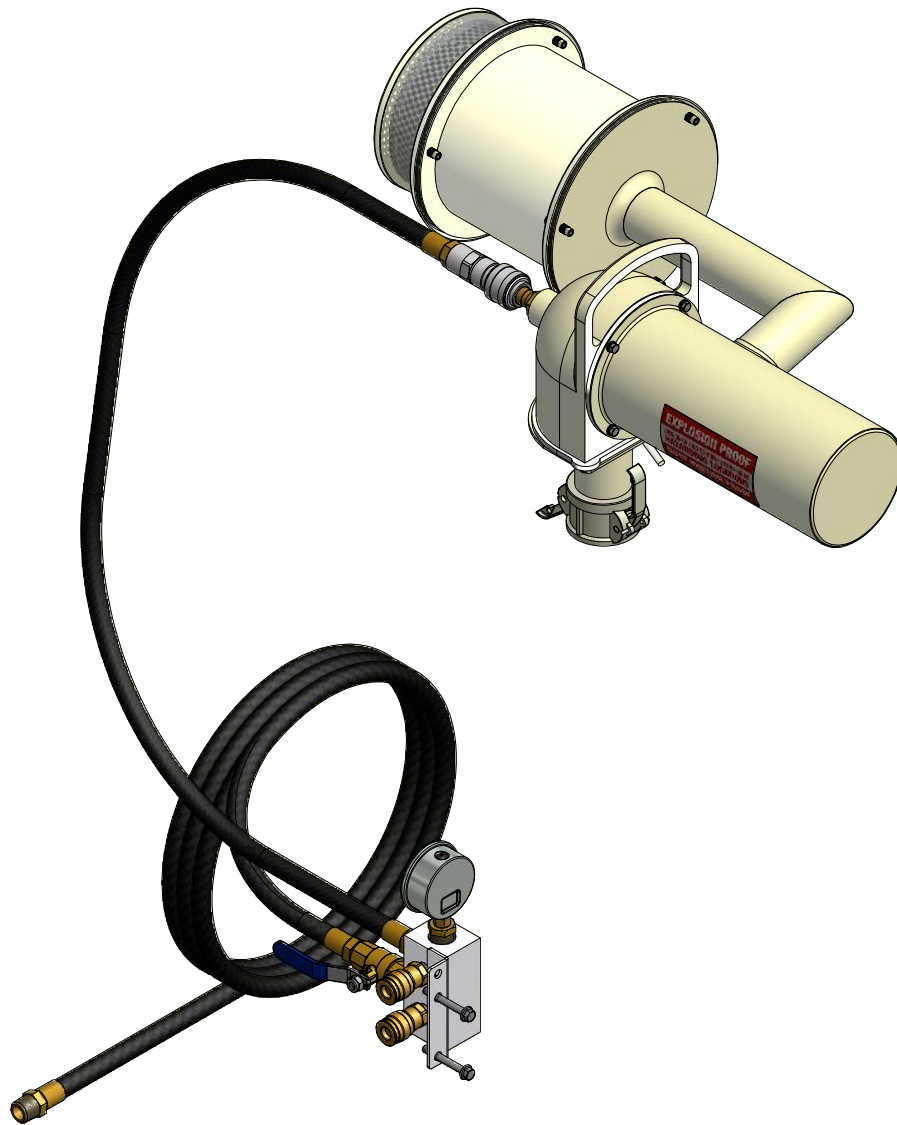
COALESCING FILTER ELEMENT (CFE)

The Coalescing Filter Element (CFE) is located downstream of the recovery drum at the air exhaust. Verify if the CFE needs to be drained or replaced as part of routine maintenance. The CFE can be removed from the unit and washed from the inside and then dried and reused several times.



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DYNABRADE DETACHABLE PNEUMATIC POWERHEAD KIT
NORTH AMERICA



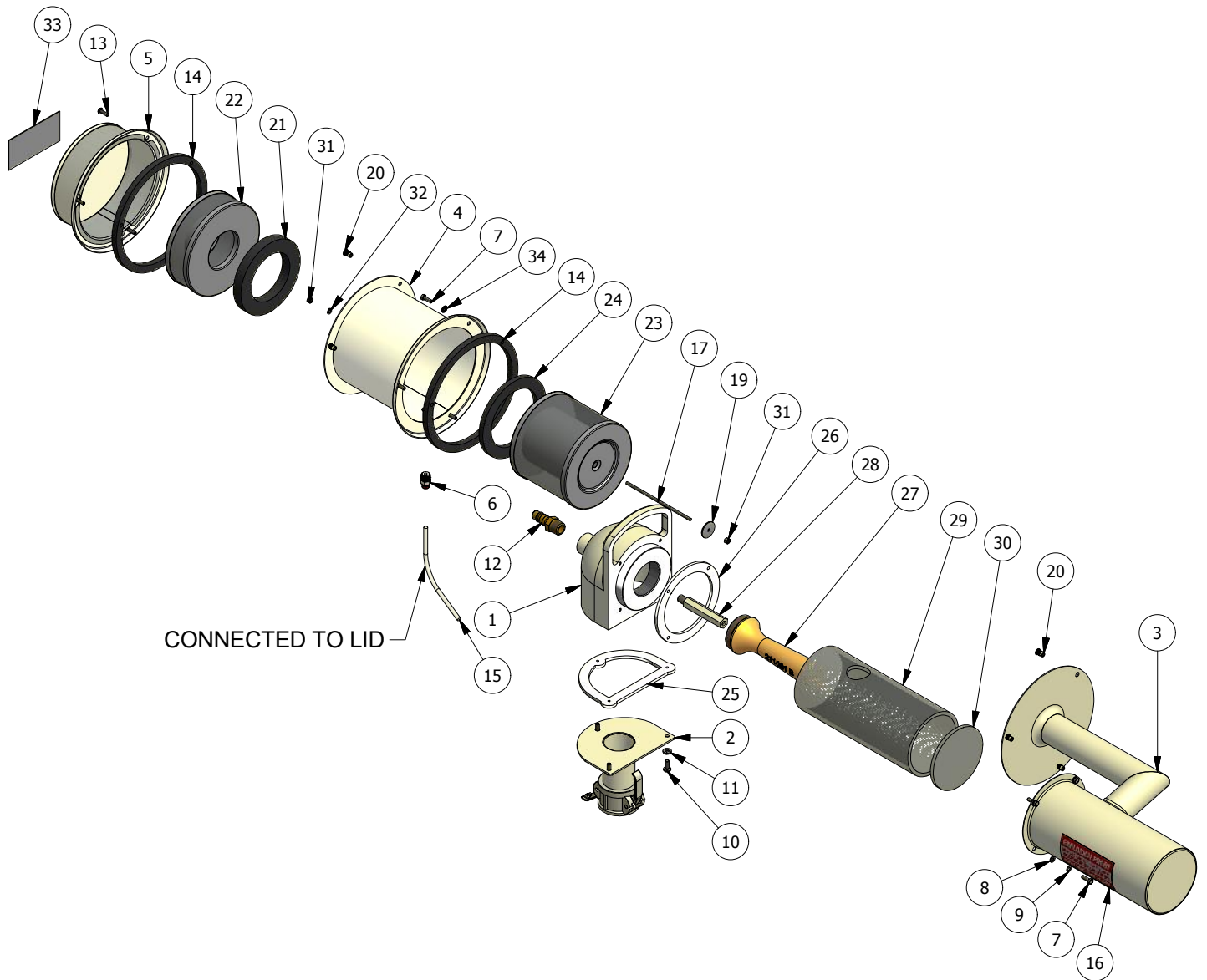
PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY
1	61460	Pneumatic Immersion Separator kit/Manifold	1



II 2 G/D c IIC T6 (85°C)
LCIE 03 ATEX 6310

DYNABRADE DETACHABLE PNEUMATIC POWERHEAD KIT POWER HEAD





II 2 G/D c IIC T6 (85°C)
LCIE 03 ATEX 6310

DYNABRADE DETACHABLE PNEUMATIC POWERHEAD KIT
MARCH 2015

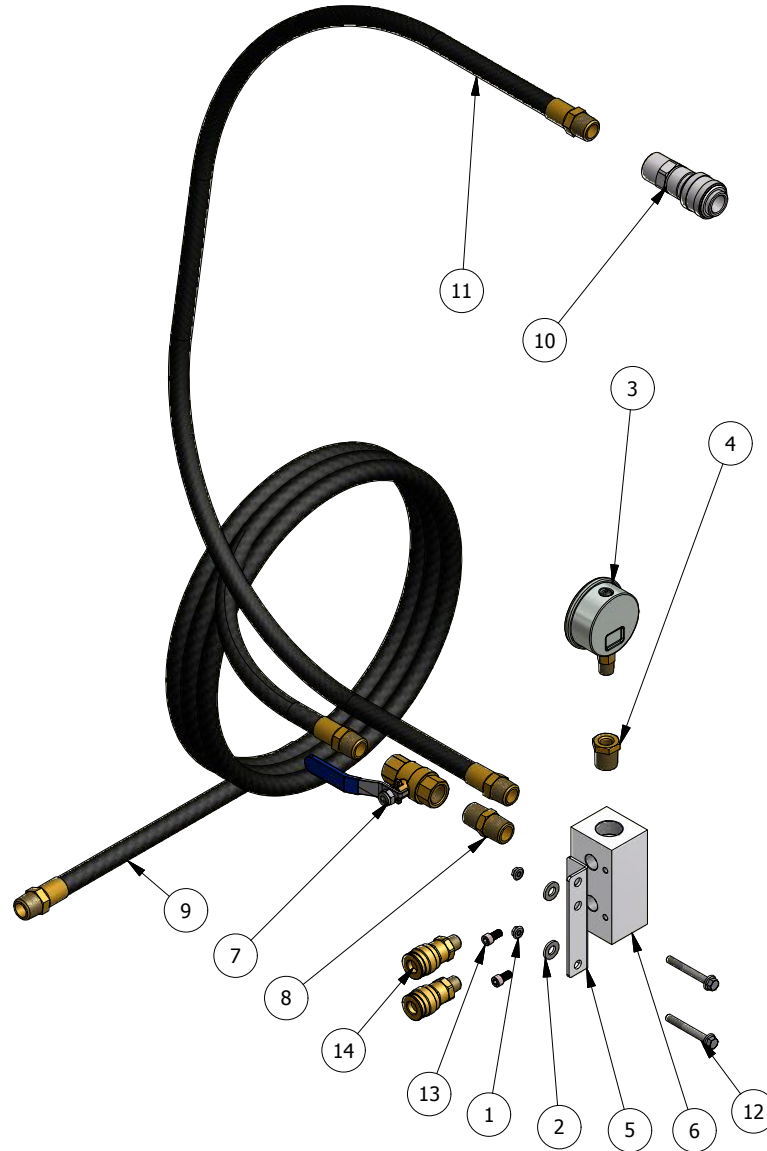
PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY
1	62593	DOME VENTURI	1
2	62434	SUPPORT PLATE	1
3	62471	SILENCER HOUSING	1
4	62543	HOUSING	1
5	62542	HEPA HOUSING	1
6	62656	FITTING	1
7	62590	BOLT	7
8	62402	SEAL WASHER	4
9	62361	FLAT WASHER	4
10	62358	BOLT	3
11	62367	SPRING WASHER	3
12	62351	MALE QUICK DISCONNECT	1
13	62445	SCREW	3
14	62386	GASKET	2
15	62654	TUBE	1
16	96619	EXPLOSION PROOF LABEL	1
17	62662	THREADED ROD	1
18	62372	ACORN HEX NUT	1
19	62462	SEALING WASHER	1
20	62442	RIVET NUT	6
21	62586	GASKET	1
22	62410	HEPA FILTER	1
23	62681	COALESCING FILTER ELEMENT	1
24	62495	GASKET	1
25	62357	GASKET	1
26	62396	GASKET	1
27	62595	BLOWER CHAMBER SHORT	1
28	62359	AIR JET	1
29	62750	1/4" WHITE NITRILE / SQ-FT	1
30	62751	1/4" WHITE NITRILE CUT CIRCLE	1
31	62363	HEX NUT	2
32	62364	SPRING WASHER	1
33	96618	HEPA FILTERED LABEL	1
34	62355	SEAL WASHER	3



II 2 G/D c IIC T6 (85°C)
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DYNABRADE DETACHABLE PNEUMATIC POWERHEAD KIT
MANIFOLD KIT



PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY
1	61460	PNEUMATIC IMMERSION SEPARATOR KIT/MANIFOLD	1



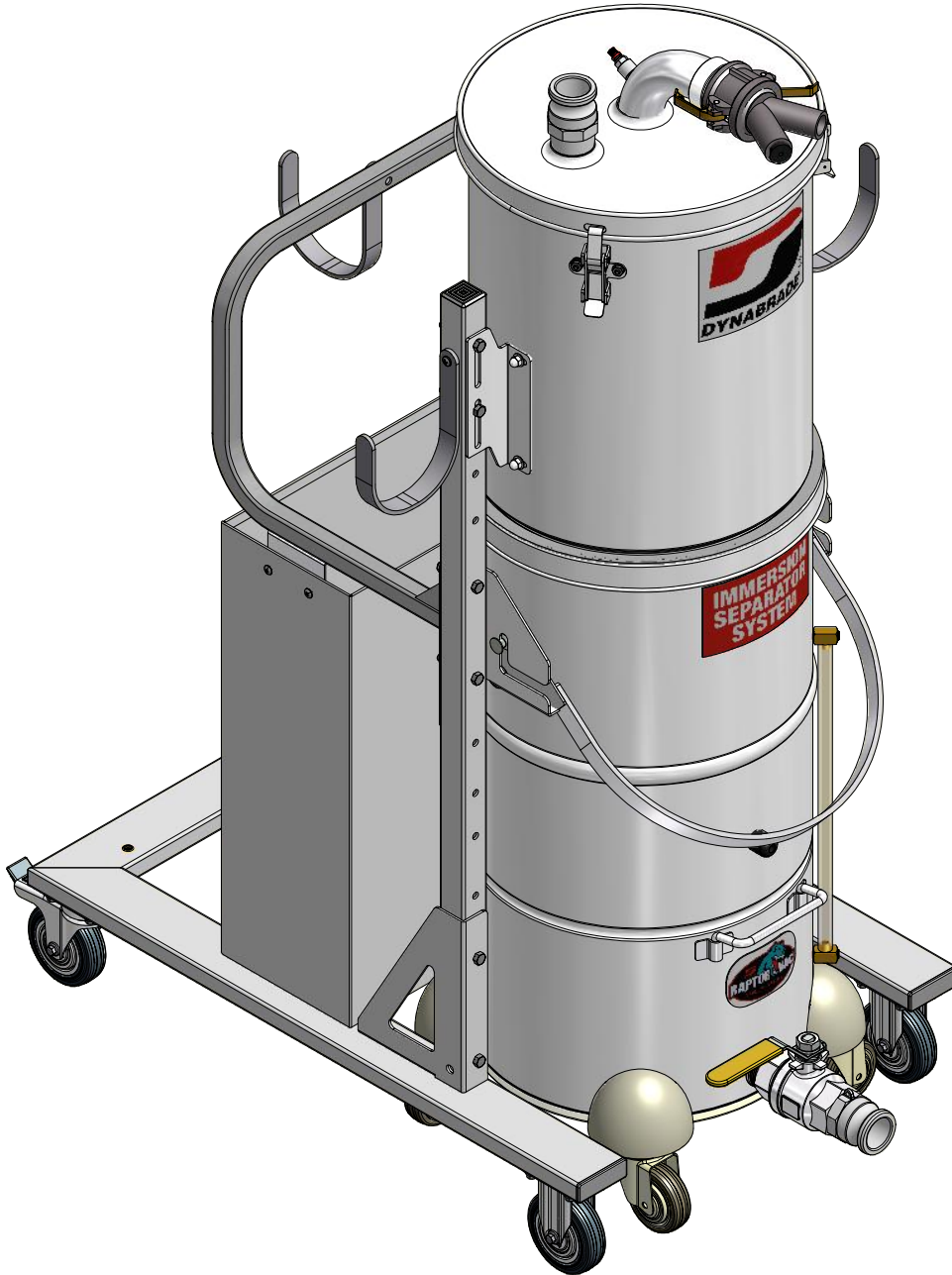
II 2 G/D c IIC T6 (85°C)
LCIE 03 ATEX 6310

DYNABRADE DETACHABLE PNEUMATIC POWERHEAD KIT
MANIFOLD KIT

PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY
1	62458	FLANGE NUT	2
2	62481	FLAT WASHER	2
3	62362	PRESSURE GAUGE	1
4	62473	HEX BUSHING	1
5	62560	BRACKET	1
6	62557	MANIFOLD	1
7	62502	BALL VALVE	1
8	62460	HEX NIPPLE	1
9	62449	AIR SUPPLY HOSE	1
10	62589	QUICK DISCONNECT, FEMALE	1
11	62658	AIR SUPPLY HOSE	1
12	62699	SCREW	2
13	62419	SCREW	2
14	62548	QUICK DISCONNECT, FEMALE	2

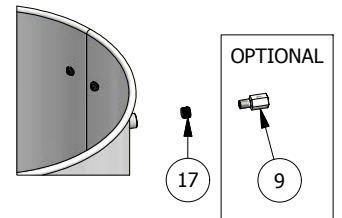
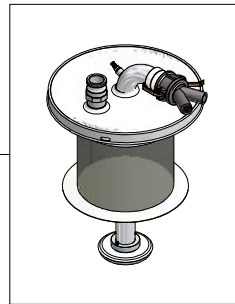
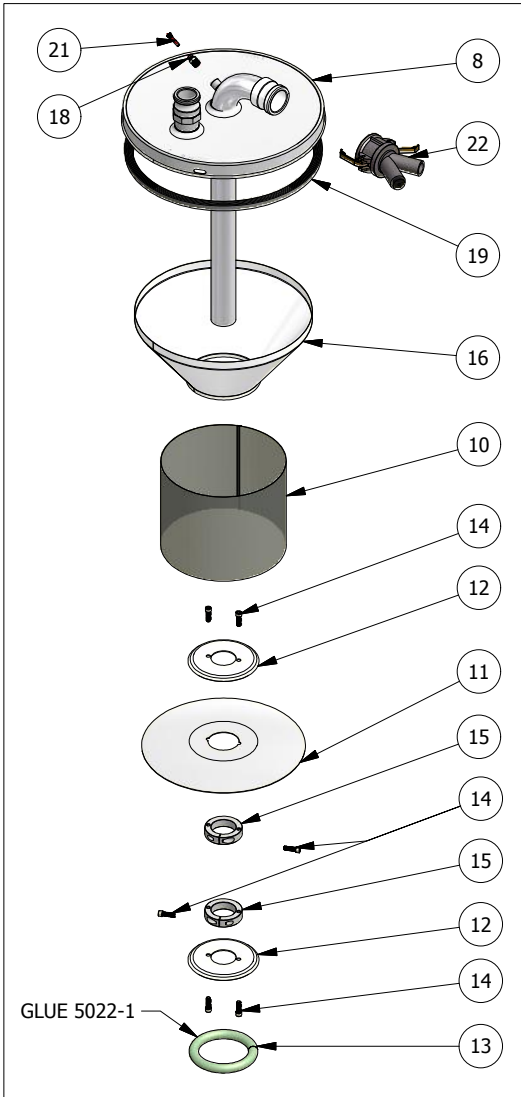
DYNABRADE IT-85L EX IMMERSION SEPARATOR
 NORTH AMERICA



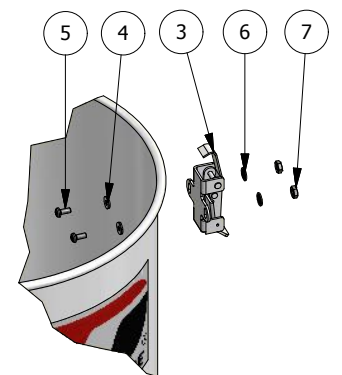
PARTS LIST

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1	61457	IMMERSION SEPARATOR	1

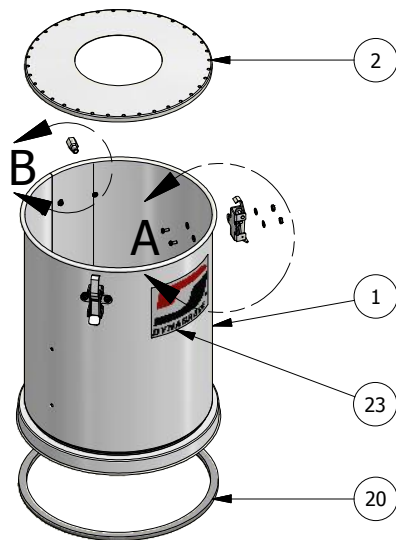
DYNABRADE IT-85L EX IMMERSION SEPARATOR
MIDDLE RING



DETAIL B



DETAIL A

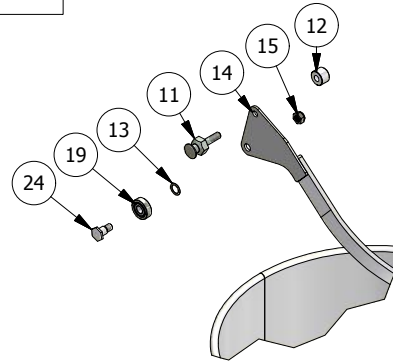
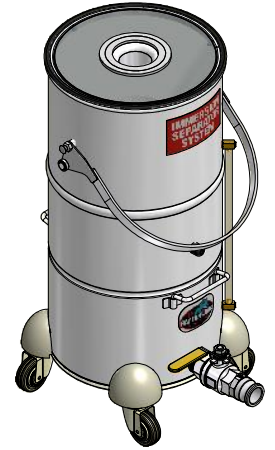
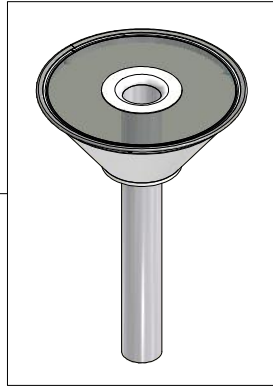
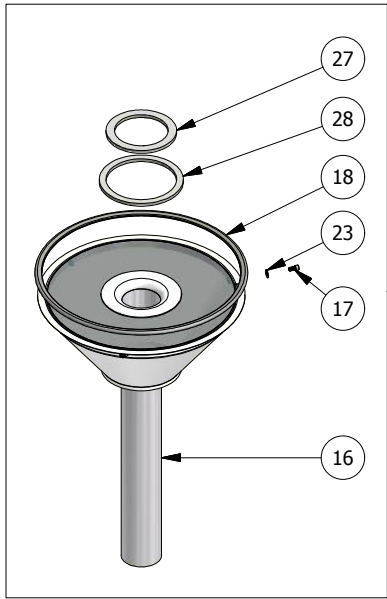


DYNABRADE IT-85L EX IMMERSION SEPARATOR
MIDDLE RING

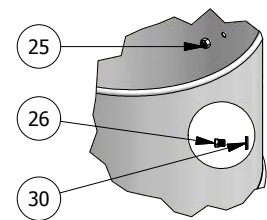
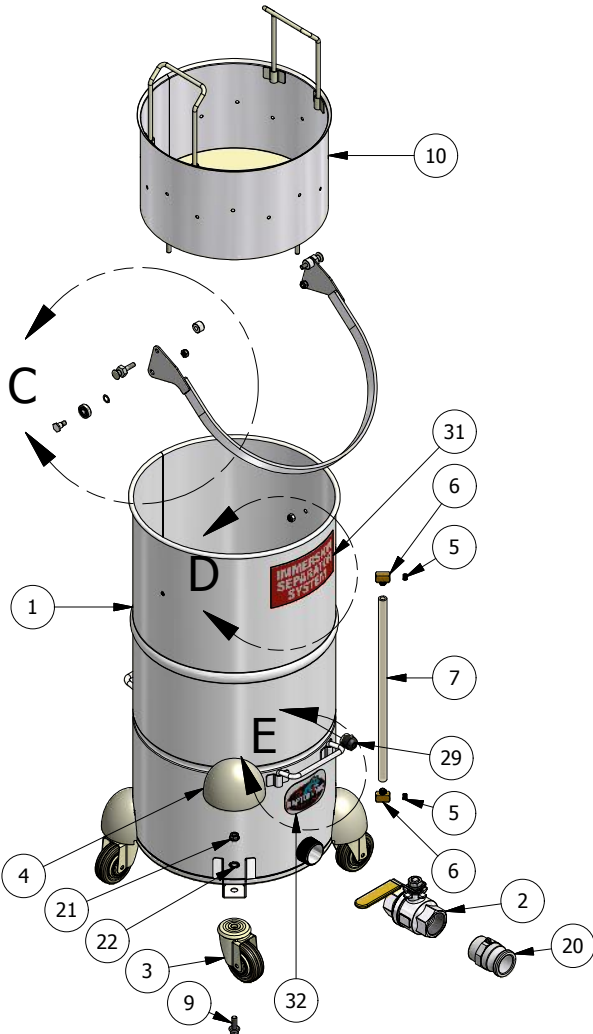
PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY
1	62421	MIDDLE RING	1
2	62757	CONE	1
3	62604	LATCH	3
4	62399	SEAL WASHER	6
5	62360	BOLT	6
6	62602	LOCK WASHER	6
7	62487	LOCKNUT	6
8	62555	LID ASSEMBLY	1
9	62758	HYDROGEN RELIEF VALVE	OPT
10	62507	CYLINDER	1
11	62535	SPLASHGUARD	1
12	62721	GASKET HOLDER	2
13	62537	TUBE SEAL	1
14	62418	SCREW	6
15	62720	TUBE COLLAR	2
16	62533	UPPER CONE	1
17	62759	HEX SOCKET PLUG	1
18	62656	FITTING	1
19	62520	GASKET	1
20	62753	NEOPRENE GASKET	48"
21	62467	RAPID FITTING	1
22	62583	WYE CONNECTOR	1
23	12412	LARGE DYNABRADE LABEL	1

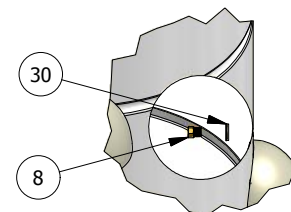
DYNABRADE IT-85L EX IMMERSION SEPARATOR
TANK



DETAIL C



DETAIL D



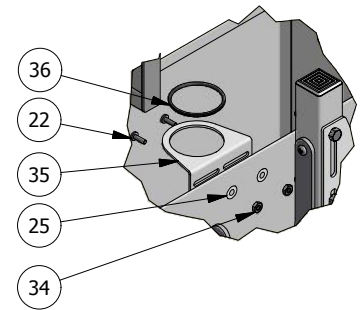
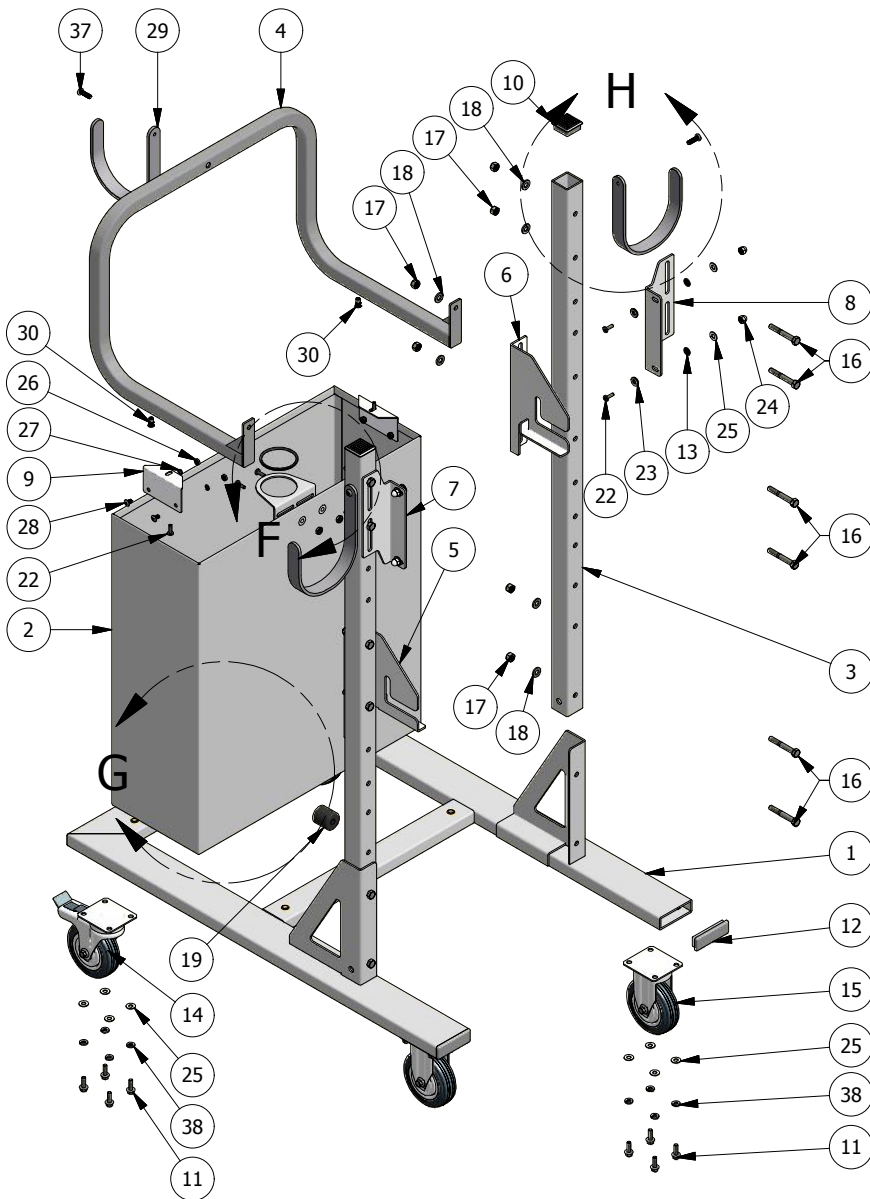
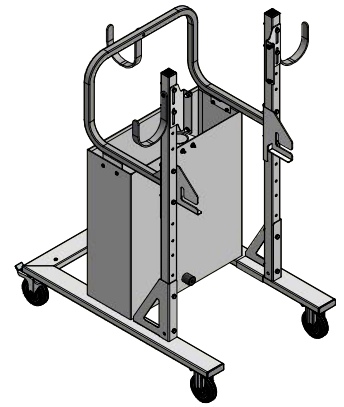
DETAIL E

DYNABRADE IT-85L EX IMMERSION SEPARATOR
TANK

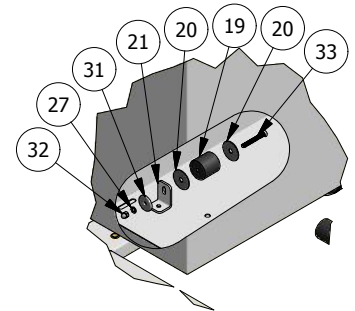
PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY
1	62642	DRUM WITH WHEEL BRACKETS	1
2	62431	DRAIN VALVE	1
3	62475	WHEEL	4
4	62464	WHEEL COVER	4
5	62553	HEX-SOCKET PLUG	2
6	62552	PIPE FITTING	2
7	62716	TUBE	1
8	62554	HEX REDUCING BUSHING	1
9	62505	HEX BOLT	4
10	62545	SIEVE BASKET	1
11	62663	PIVOT	2
12	62722	SPACER	2
13	62760	FIBER FLAT WASHER	2
14	62710	LIFTING HANDLE	1
15	62465	LOCKNUT	2
16	62532	LOWER TUBE ASSEMBLY	1
17	62419	SCREW	3
18	62689	EDGE TRIM	1
19	62761	BALL BEARING	2
20	62754	INTAKE COUPLER	1
21	62504	LOCKNUT	4
22	62644	LOCKWASHER	4
23	62468	SEALING WASHER	3
24	62762	BEARING SHAFT	2
25	62488	HEX NUT	2
26	62544	PIPE FITTING	1
27	62763	GASKET WHITE NITRILE	1
28	62764	GASKET WHITE NITRILE	1
29	62411	RECESSED RUBBER BUMPER	1
30	62765	SEALING WASHER	2
31	96617	IMMERSION SEPARATOR SYSTEM LABEL	1
32	96616	RAPTOR VAC SYSTEMS LABEL	1

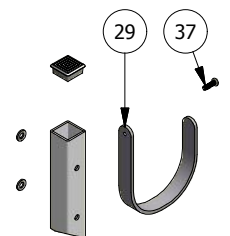
DYNABRADE IT-85L EX IMMERSION SEPARATOR
CART



DETAIL F



DETAIL G



DETAIL H

DYNABRADE IT-85L EX IMMERSION SEPARATOR
CART

PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY
1	62711	CART ASSEMBLY	1
2	62709	BASKET	1
3	62682	STEM	2
4	62707	HANDLE	1
5	62712	BRACKET	1
6	62713	BRACKET	1
7	62714	BRACKET	1
8	62715	BRACKET	1
9	62708	HANDLE SUPPORT	2
10	62650	PLUG	2
11	62657	HEX BOLT	16
12	62706	FINISHING PLUG	2
13	62602	LOCK WASHER	4
14	62477	WHEEL	2
15	62478	WHEEL	2
16	62531	HEX BOLT	12
17	62447	HEX NUT	12
18	62481	FLAT WASHER	12
19	62540	RUBBER BUMPER	2
20	62627	GASKET	2
21	62667	WAND SUPPORT	1
22	62439	SCREW	8
23	62371	SEAL WASHER	4
24	62443	ACORN NUT	4
25	62516	FLAT WASHER	22
26	62441	HEX NUT	4
27	62364	SPRING WASHER	5
28	62457	SCREW	4
29	62754	CABLE HOOK	3
30	62744	NUT	2
31	62766	FLAT WASHER	1
32	62372	ACORN HEX NUT	1
33	62400	BOLT	1
34	62486	HEX JAM HUT	2
35	62767	WAND SUPPORT BRACKET	1
36	62768	GASKET WAND SUPPORT	1
37	62755	HEX BOLT	3
38	62367	SPRING WASHER	16