

## **EXTRACTION EQUIPMENT APPROVALS** **INFORMATIONAL BULLETIN 2015-001-10**

In accordance with 2019 Denver Fire Code 3909.3 extraction equipment using hazardous materials shall be *Listed* or *Approved*. Equipment manufactures' can submit a Master Engineering Report for approval of their equipment signed and sealed by the responsible Colorado licensed design professional in lieu of a listing. This approval method has typically only included liquidified petroleum gas (LPG) and CO2 equipment; listings have been available for flammable liquid extraction equipment or regulated under flammable liquid codes. This master approval allows manufacturers the ability to create and sell multiple extractors of the same type and not submit an entire report for each one. A site specific letter signed and sealed by the engineer responsible for the master engineering report is then required prior to final approval of equipment for use. The letter shall identify that the equipment onsite meets the approved master engineering report (by inspection) and additionally include the location address, make and model number, serial number, photos of the equipment, and any other pertinent information specific to that equipment such as optional equipment features.

All equipment shall be operated strictly in accordance with the manufacturer's instructions. Any modification of equipment from the approved engineering report / listing (i.e. repiping the system, addition of pumps, replacing components, using unapproved gasses, etc) voids the approval of the extraction equipment.

Below is extraction equipment that has an approved master engineering report for use in the City and County of Denver. Note that this list does not grant approval for use without additional required safety requirements such as exhaust systems, gas detection, operational permits, building occupancy, etc. These approvals also do not include processes for filling equipment supply tanks. Please consult the manufacturer for the site specific letter; note that the State of Colorado Marijuana Enforcement Division requires an equipment approval letter to be maintained on site, the site specific letter is in addition to this state requirement.

NOTE to other authorities having jurisdictions using this list for approvals. Approved engineering reports may be modified during the approval process and manufacturers may have features that are not approved for use in the City of Denver but sold for use in jurisdictions outside of the City and County of Denver. Please use this list with caution as it may not be a blanket approval for all equipment features offered by the manufacturer.

**Extraction Equipment Approvals Table**

	MANUFACTURER	MODEL #	Solvent	Approved LPG pump	Engineer Report Approval	Remarks
1	Emotek Labs	Obe	Butane	Haskel EXT 420	Pressure Safety Inspectors. Rev 4 report 3/10/2015	
2	APEKS Supercritical	1500-1L, 1500-5L, 1500-20L, 5000-5L, 5000-20L	CO2		Pressure Safety Inspectors. Rev 9 report 2/23/2018	
		1500-20LE & 1500-5LE	CO2		Pressure Safety Inspectors. Rev 0 report 10/6/2014	
3	Waters Corporation	SFE 2X5	CO2		Pressure Safety Inspectors. Rev 3 report 3/10/2015	
4	Extraction Tek Solutions	1300 LHBES 1300/C	Butane or Propane	Haskel EXT 420	Pressure Safety Inspectors. Rev 5 report 8/12/2015	
		MeP-HCU/C & mMEP	Butane or Propane	Haskel EXT 420	Pressure Safety Inspectors. Rev 1 report 2/7/2017	Open blasting port on oil collection pot stricken from approval.
5	Isolate Extraction Systems	ISO-CD2500 ISO-CD5000 ISO-CD5000h ISO-CD10000 ISO-CD10000h ISO-CDM5 ISO-CDM10 ISO-CDM20 ISO-CDMH5 ISO-CDMH10 ISO-CDMH20 ISO-CDMH50 ISO-CDMH120 ISO-CDMH200	CO2		Pressure Safety Inspectors. Rev 9 report 11/21/2019	

	MANUFACTURER	MODEL #	Solvent	Approved LPG pump	Engineer Report Approval	Remarks
		LP1000 & LP 250	Butane or Propane	none	Pressure Safety Inspectors. Rev 2 report 12/11/2014	
6	MC Machinery	The Incredible Extractor	Butane or Propane	1) Haskel EXT 420 2) Haskel EXT 420-2	Pressure Safety Inspectors. Rev 4 report 3/24/2020	1) Sauce pan stricken from approval. 2) Includes proprietary LPG supply tank; protective collar required whenever tank is moved.
7	Eden Labs	Hi-Flo 5L-2000 PSI Hi-Flo 20L-2000 PSI Hi-Flo 5L-5000 PSI Hi-Flo 20L-5000 PSI 5000 PSI 2x 5L System Hi-Flo FX2 20L2K (Vegas 1) Hi-Flo FX2 20L5K (Vegas 5000)	CO2		Pressure Safety Inspectors. Rev 13 report 2/24/2020	
8	Delta 9 Design	B1000	Butane or 30% propane / 70% butane	Haskel EXT 420	Pressure Safety Inspectors. Rev 3 report 8/19/2015	
9	PIC Solutions	PICLAB 400	CO2		Pressure Safety Inspectors. Rev 0 report 3/20/2015	

	MANUFACTURER	MODEL #	Solvent	Approved LPG pump	Engineer Report Approval	Remarks
10	Universal Grow Controls	Kelvinator	Butane	none	John Elliot PE Rev 0 Report 2/24/2015	
11	5 <sup>th</sup> Dimension	710.005	Butane or Propane	none	Pressure Safety Inspectors. Rev 0 report 8/18/2014	
12	Sweet Leaf Technologies	Approval Revoked 10/27/2016				
13	Edipure EPM LLC	EA-H	CO2		Pressure Safety Inspectors. Rev 0 report 4/20/2015	
14	Precision Extraction Solutions	PX1 & V2016 PX1	Butane or 50/50% butane/ propane	Haskel EXT 420	Pressure Safety Inspectors. Rev 2 report 2/2/2016	
15	Colorado Extractions LTD	071-KJ	Butane or Propane	Haskel EXT 420	Pressure Safety Inspectors. Rev 1 report 6/15/2015	
16	Strainz	SCE-1100-A	CO2		Pressure Safety Inspectors. Rev 2 report 3/21/2017	Alcohol co solvent
17	Newport Scientific	46-19365-X	CO2		Pressure Safety Inspectors. Rev 0 report 1/21/2016	
18	SepareCO – Distributed by HighTech Extracts LLC	SCFN-P5, SCFN-P10, & SCFN-P20	CO2		Pressure Safety Inspectors. Rev 2 report 6/16/2017	
19	Vitalis Extraction Technology	Q45 & Q90	CO2		Pressure Safety Inspectors. Rev 0 report 3/14/2018	Alcohol co solvent

	MANUFACTURER	MODEL #	Solvent	Approved LPG pump	Engineer Report Approval	Remarks
20	Anion	Trifecta & Minifecta	Butane or Propane	Anion Goliath	Pressure Safety Inspectors. Rev 4 report 7/17/2019	1) Includes proprietary solvent tank with protective ring 2) Integral / removable diamond miner on dewax version
21	IronFist	EX-20	Butane or Propane	Haskel AGD-1.5	3P Certz Rev 0 report 2/4/2021	1) Includes proprietary solvent tank with protective ring 2) Opening blasting port on collection pot not approved
22	White Mouse CoT	WM-420	Butane or Propane	Haskel EXT 420	John Elliot PE Rev 0 report 3/8/2021	Opening blasting port on collection pot not approved