Lineator vs Other Passive Filters

Other passive harmonic filters have the following issues that the MIRUS LINEATOR Advanced Universal Harmonic Filters do not share:

1. All have limited filter HP ranges. Some that offer higher ratings, use paralleled units which could have current sharing issues. Mirus has the most experience selling large units up to 3500 HP (2600 kW).
2. All have poor performance when background THD(V) is present and lose their performance guarantee with any background voltage distortion. Mirus maintains this guarantee with up to 5% background THD(V).
3. Most can introduce no load over-voltage boost nuisance tripping of VFD's.
4. Most have 30% to 40% capacitive reactive current at light load which causes diesel generator Automatic Voltage Regulator problems. Mirus guarantees less than 15% capacitive reactive power to ensure compatibility with generators.
5. Most must add capacitor switching contactors because of above items 3 and 4.
6. All do not have a real world performance guarantee. All void their performance guarantees with ANY background THD(V) and typically any line unbalance greater than 1%.
    - Mirus Lineator guarantees less than 8% TDD(I) even with:
        - background THD(V) as high as 5%.
        - unbalanced line voltage up to 3%
    - Mirus Lineator-HP guarantees less than 5% TDD(I) even with:
        - background THD(V) as high as 2%
        - unbalanced line voltage up to 2%
7. All have source impedance restrictions which significantly limit performance guarantee.
    - Maximum limit example: A maximum limit of 6% source impedance means that for an 18% impedance generator, the filter load can only be 33% of the generator rating. Mirus filters have no maximum source impedance restrictions, and have no issue being applied to 100% of a generator's capacity. Generators do not require oversizing.
    - Minimum limit example: A minimum limit of 1.5% source impedance means that for a 6% impedance transformer/source, the individual filter size cannot be less than 25% of the supply rating without voiding the performance guarantee. Mirus filters have no minimum source impedance restrictions, and therefore any size filter can be put on any size power system with a full performance guarantee.
8. Every Mirus filter is performance tested under variable speed drive load to ensure that it will meet our performance guarantee.
9. Most require derating for constant torque loads (example: conveyors, extruders). Mirus requires no derating.
10. All require derating with background voltage distortion, THD(V). Mirus requires no derating up to 8% background THD(V). In addition, only Mirus offers an Extreme Duty (ED) model that allows for:
    - Up to 12% background voltage distortion, THD(V) without derating.
    - Up to 55deg C ambient, without forced air cooling.
11. Mirus has the most powerful simulation software (SOLV) that analyzes the power system based on discrete components, allowing for accurate simulations under any load and source condition. SOLV is the only software which allows for the inclusion of background voltage distortion and voltage imbalance in the simulation. Many companies do not have simulation software and those that do are based on lookup tables or selective test lab measurements.
12. Mirus filters are the most efficient, at higher than 99% efficiency.
13. Many require forced cooling (fans). All Mirus units are convection cooled.
14. Mirus filters are CSA and cULus certified. Mirus filters are ABS type approved for marine applications and have been approved for DNV GL and Lloyd's Register installations.