

Construction Standards

Utility Grade (BMC 50 Spec)

Separation equipment made to our utility grade specs is recommended for use in applications where products are inert and typically not intended for human consumption. Utility grade equipment is used primarily for handling granular or pelletized materials without concern for product retention.



Inside of Housing

Food Grade (BMC 200 Spec)

Food grade construction is designed for applications where products for human or animal consumption are handled as an ingredient in a finished product. Construction criteria assume that the product will undergo a finishing process that will eliminate the potential for bacterial contamination. Equipment features FDA-approved gaskets and seals. Stainless steel is the primary material. All mating panels are formed or welded into one continuous surface.



Inside of Housing

Sanitary Grade (BMC 300 Spec)

Sanitary grade units are made to be used where products destined for human or animal consumption are handled in final form. This grade follows many of the guidelines set by the USDA-3A standard for sanitary fabrication. These separators feature FDA-approved gaskets and seals and special interior and exterior finishes, including optional electro-polishing. Bunting® was the **FIRST** to have special sanitary grade models earn the USDA, AMS-Acceptance: They meet or exceed the USDA, AMS criteria as published in the NSF/ANSI/3-A 14159-1 2002 specifications and bear the USDA, AMS Meat and Poultry Accepted Equipment logo.



Inside of Housing

Construction Specifications

General Materials:

- 10-12 ga. mild steel standard where applicable.
- 11-13 ga. 304/316 stainless steel with rare earth magnets.
- Optional 316 stainless steel where required or upon request.

Magnetic Materials:

- Ceramic and neodymium NdFeB (rare earth) magnetic materials in various grades are standard. (Other magnetic materials, such as Alnico, are available upon request or for special applications.)

Construction:

- All seam welded or full seam welded utility grade standard on most models.
- Liquid tight, food grade, sanitary 3-A, and USDA optional finishes available.

Contaminant Removal:

- Ferrous fragments, nuts, bolts and other tramp metal with ceramic magnets.
- All sizes of ferrous metals including fines and 400 series and work hardened stainless steel with neodymium NdFeB (rare earth) magnets.

Cleaning Methods:

- Manual cleaning is standard, Manual Self-Cleaning option is optional on Manual Self-Cleaning models.
- Manual Self cleaning, pneumatic self cleaning, and continuous self cleaning available based on product required and application parameters.

Options:

- Adaptors and transitions with same specifications as construction above to fit all line sizes whether piping, ductwork, chutes, or other.

Comparison Table

	CERAMIC	NEODYMIUM								
GRADE	8	35SH	35	38	40	45	45SH	48SH	50	52
MAGNETIC CHARACTERISTICS										
MAX. ENERGY PRODUCT (Bd Hd) MAX. (MGO)	3.5	35	35	38	40	45	45	48	50	52
RESIDUAL INDUCTION Br. GAUSS	3850	11900	12150	12500	12900	13800	13500	13900	14300	14500
COERCIVE FORCE Hc-OERSTEDS	2950	11000	11050	11800	12300	10500	12000	12500	11500	10500
INTRINSIC COERCIVE FORCE Hci-OERSTEDS	3250	>17000	13500	>12000	>14000	>11000	>17000	>19000	>110000	>11000
SATURATION MAGNETIZING FORCE Hs-OERSTEDS	10000	30000	30000	30000	30000	30000	30000	30000	30000	30000
RECOIL PEREABILITY	1.07	1.05	1.05	1.08	1.08	1.05	1.05	1.05	1.05	1.05
MAGNETIC ORIENTATION (ANISOTROPIC)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
MATERIAL CHARACTERISTICS										
DENSITY LB./IN. ³	0.177	2.75	0.268	0.268	0.269	0.268	0.274	0.279	0.268	0.274
CURIE TEMP. -F°	842	648	625	635	635	600	600	600	600	600
MAX PRACTICAL OPERATING TEMPERATURE -F°	480	300	180	180	180	180	300	300	180	180
REVERSIBLE TEMP. COEF * OF BR %/F°	0.105	0.052	0.066	0.066	0.061	0.61	0.067	0.067	0.061	0.067
HARDNESS ROCKWELL	---	Rc58	rC55	rC55	Rc58	Rc58	Rc58	Rc58	Rc58	Rc58

Expected Magnetic Performance Characteristics for Elevated Temperatures with NdFeB (Rare Earth) Magnets

Mag Load	70°F	100°F	150°F	200°F	250°F	300°F
NUHI	100%	95%	83%			
NHIT	100%	99%	96%	93%	89%	78%
NTC	100%	98%	95%	92%	86%	75%

* Exposure to elevated temperatures will only be partially be recovered at lower temperatures

Specifications are subject to change without notice.