Hollaender
Your Handrail Source.

Aluminum-Magnesium Alloy 535.0 Sand Castings
Chemical Composition and Physical Properties

Chemical Composition Limits per ASTM B 26-98

Si	Fe	Cu	Mn	Mg	Ti	Other	Al
0.15	0.15	0.05	0.10-0.25	6.2-7.5	0.01-0.25	0.15	Remainder

Typical Mechanical Properties

Temper	Ultimate Strength (ksi)	Yield Strength (ksi)	Elongation (% in 2 in.)	Shear Strength (ksi)	Compressive Yield Strength (ksi)	Brinell Hardness	Endurance Limit (ksi)
F	40	20	13	27.45	23.5	70	10
	(35 min.)	(18 min.)	(9 min.)			(70 min.)	ASTM B26-98

- Thermal Conductivity (@ 77F, SI units): 0.24 cal/cm*s*K
- Heat Treatment – Achieves its physical and mechanical properties as-cast (F). This eliminates the time and cost of heat treating.
- Machinability – Excellent machinability as-cast, excellent surface finish, and high dimensional stability.
- Corrosion Resistance – Highest of any cast alloy. It can be anodized for additional corrosion protection to a 0.7 mil thickness (215R1).
- Finishing – Produces an excellent surface finish by burnishing or polishing. Anodizes well to a clear-satin finish due to the minimal amount of silicon in the alloy.
- Weldability – It can be welded by any of the inert gas processes, T.I.G. or M.I.G., using filler rod of 5356 or 5183.

Load Capacity of Fitting Set Screws When Properly Torqued

Std. IPS Size Steel Pipe Schedule 40

Fitting Size	Torque Ft. Lbs.	No. Screws	Push Out
3/4"	13	1	1000 lbs.
	13	2	1900 lbs.
1"	14	1	1200 lbs.
	14	2	1800 lbs.
1-1/4"	17	1	1800 lbs.
	17	2	2000 lbs.
1-1/2"	17	1	1850 lbs.
	17	2	2350 lbs.
2"	17	1	1925 lbs.
	17	2	3200 lbs.

Above data compiled by an independent laboratory using the following test procedures: Standard I.P.S.-sized pipe within the vertical barrel of the test fittings, to the torque shown above. A 30,000 lb. Universal Testing Machine applied vertical load to the pipe member in an attempt to produce pipe slippage. Load capacities listed above are based on a safety factor of 2:1.

Aluminum IPS Size Pipe Schedule 40

Fitting Size	Torque Ft. Lbs.	No. Screws	Push Out
1-1/4"	10	1	937 lbs.
	10	2	1006 lbs.
1-1/2"	12	1	950 lbs.
	12	2	1020 lbs.

Above data compiled by an independent laboratory using the following procedures: A 30,000 lb. Universal Testing Machine applied vertical load to the pipe member in an attempt to produce pipe slippage through the vertical barrel of the fitting. Load capacities listed above are based on a safety factor of 100%.