

Metzeler Inflatables

By Herm Hoops ~ 2014

Metzeler is best known as a manufacturer of premium tires. It was one of the first to produce the tubeless radial then the belted radial. Some may also know of Metzler premium motorcycle tires. Metzeler also produced an inflatable line, primarily inflatable kayaks, of German manufactured Hypalon (Named Trevira) and Neoprene fabrics. The company was one of the earliest pioneers in the inflatable industry and they originated many innovative designs, including round boats, sport boats and strange designs that were considered off-beat in their day. An example was the sled-type canoe they designed for flat water.(2) While they stressed manufacture and sales of yacht tenders and recreational speed boats they also entered the whitewater market with their Canyon, Elefant, Indo, XR Trekking, Mamut and River Star Models. By 1979 they had introduced a self-bailing, inflatable floor.(1,3)

Metzeler's whitewater boat manufacturing began in 1975 with six employees in Stadt Haag, Lower Austria. Helmit Peters, an ex-submarine commander worked for Metzler as a design engineer. By 1977 Metzeler rented six adjacent businesses and employed thirty people. In 1986 Metzeler purchased the Semperit boat factory in Kirchberg (Upper Austria). Economic issues and changing markets created cash flow difficulties for Metzeler in the late 1980s. Metzeler was purchased and marketed by Zodiac for a short time and was operated as an independent entity.(6) Grabner Sports purchased the Metzeler production facilities in 1998.(8)(#c.) In 2000/2001 Zodiac divested the Metzeler line a short time later.(5,7)(#c.)

The Metzler Tramper S was designed for lakes and flat water, it carried two people and was not designed for whitewater. It came with a pair of wooden seat backs held in place by hard rubber fittings on each tube and ungainly, glued breakdown wooden paddles. The boat is easy to paddle, and tracks smartly on flatwater.(4)

The Metzeler legendary XR Trekking was the first inflatable canoe designed to be lightweight, compact and suitable to be taken as luggage on air travel. The original 1980 SOAR S-16 inflatable Pro Pioneer(#d.) was an exact copy of the Metzeler Canyon Model with a few modifications (no inflatable bow and stern cover, etc.). The XR Trekking distribution was taken over by the Big Pack Outdoor Specialists and Grabner continued to produce the boat, under the name "XR Trekking".

The Canyon, shaped much like the tramper, was a flat, long and skinny kayak that could carry heavy loads. It's tubes were a larger diameter than the Tramper and combined with its larger size it was stable enough to use on Class III rivers. It came with bow and stern carry handles, and was equipped with knee straps and thwart seats for paddling. Though not designed for heavy whitewater, it was a popular remote Alaskan hunting boat in part because of the load it could carry.(2,3,4)

{Numbers in parenthesis (1) are REFERENCES; letters in parenthesis (#a) are described in SIGNIFICANT NOTES.}

The Indo, a boat that looks and operates like a canoe, was designed for moderate whitewater, and according to some floated like a duck. The inflatable floor was comfortable to kneel on and it came with a wooden seat back that was held in place by hard rubber fittings. The Indo's inflation rating was 4.2 p.s.i., much higher than most inflatable boats, and probably why it held its hard shape in all conditions. The Indo Special came with a full length spray skirt.(4)

The boats are made overseas, where tight quality control was challenging.(2,3) Metzeler boats were handmade and crafted using the hot vulcanization method rather than laying up fabric and cold gluing it. Early Metzeler boats were made of Polyester webbing base-cloth and natural rubber while Grabner boats are made of Polyester webbing base-cloth with a Hypalon outer and a butyl rubber/EPDM(#a.) inner fabric.

Metzeler used the Halkey-Roberts valves and operated at almost twice as high a p.s.i. as other inflatables making their boats quite rigid.(4,10) The early productions were occasionally plagued with pinhole leaks in the valleys of corrugations. They are also heat sensitive, while the fabric is color stable in Ultra Violet rays, hot sun could deform the boats by hemorrhaging out the corrugations. Age or over-pressures also created problems and the older boats needed to be inflated carefully to keep the floor I-beams from coming apart internally.(3) The boats occasionally had glue smears and fabric voids.(2,3)

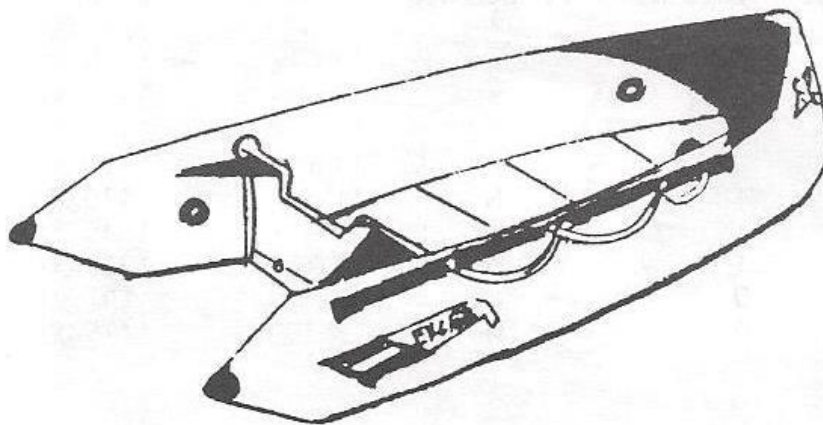
The boats came with a complete repair kit, container of boat polish, double action inflation/deflation pump and as appropriate a break down paddle or wood transom.(4) Metzeler boats have a five year fabric and a two year workmanship warranty.

<u>1985 MODELS</u>	<u>TYPE HULL</u>	<u>LENGTH</u>	<u>BEAM</u>
Jolly S	Inflatable	8'	4'8"
Aztek M	Inflatable	10'	4'11"
Bronco S	Inflatable	10'	4'11"
Tender	Inflatable	10'	4'11"
Markant S	Inflatable	11'	5'
Adventure	Inflatable	12'	5'3"
Markant VE	Inflatable	12'	5'3"
Maya S	Inflatable	12'	5'3"
Raystar GT	Inflatable	12'	5'3"
Tramper S	Inflatable	12'	5'4"
Brigant LS	Inflatable	13'	5'10"
Juca S	Inflatable	13'	5'10"
Canyon	Inflatable	14'	5'10"
Tornado GT	Inflatable	14'	6'
XR Trekking	Inflatable	14'	6'
Elefant	Inflatable	15'	6'3"
Indo	Inflatable	15'	6'3"
Mammut	Inflatable	15'	6'3"
Riverstar S	Inflatable	17'	6'5"

<u>1991 MODELS</u>	<u>TYPE HULL</u>	<u>LENGTH</u>	<u>BEAM</u>
Jolly M	Inflatable	8'	4'8"
Aztek M	Inflatable	10'	4'11"
Maya LS	Inflatable	12'	5'3"
Maya S	Inflatable	12'	5'3"
Tramper S	Inflatable	12'	5'4"
Juca LS	Inflatable	13'	5'10"
Canyon	Inflatable	14'	5'10"
XR Trekking	Inflatable	14'	5'10"
Indiana	Inflatable	15'	6'

Metzler models are relatively unknown to Americans, in part because of the company's very individual approach to boat design. Although Metzeler rafts never really caught on in the lower United States river market they had a robust sales in other parts of the world and their inflatable kayaks had were very popular in Alaska and Canada.

METZELER - A sport, fishing, and whitewater boat all in one; and, with an inflatable floor. METZELER has replaced the conventional wooden floor with a light-weight fabric floor which inflates to an extremely rigid platform for fishing or moving about. All METZELERS include pump, oars, repair kit, and a transom which is removable for river running. Steering and seat optional.



REFERENCES

- * - University of Utah, J. Willard Marriott Library, Special River Archive, Herm Hoops Collection
- (1) *River Runner*; "Floating on Air: the Evolution of Rafting," by David M. Bolling; March/April 1985;
 - (2) Internet comment: Jim Stuntz, Anchorage, AK 2006;
 - (3) Internet comment: Brian Richardson Alaska Raft Connection;
 - (4) "Inflatable Kayak Review" by David M. Bolling; *River Runner*; September 1986;
 - (5) Grabner Sports website; 2/9/2014;
 - (6) From Zodiac S.A. History Website; 2014;
 - (7) Email from Gertrand Pfaffenbichler at Grabner Sports to Herm Hoops, 2/10/2014;*
 - (8) Email from Gertrand Pfaffenbichler at Grabner Sports to Herm Hoops, 3/31/2014;*
 - (9) Richard DeChant (Hyside), Oral Interview with Herm Hoops; Kernville, CA, 1/23/13;*
 - (10) Aplenglow 1986 Price catalog; Herm Hoops Collection;

MISCELLANEOUS

- Hull Code Metzeler: SSG

SIGNIFICANT NOTES:

(#a.) EPDM

Grabner boats use EPDM, a synthetic rubber with excellent ozone-resistance (doesn't oxidize, fade or weather-check as easily as some materials), and it's slick on wet rocks. EPDM or Eethylene propylene diene monomer (M-class) rubber a type of synthetic rubber, is an elastomer which is characterized by a wide range of applications. The *M* class includes rubbers having a saturated chain of the polymethylene type. Dienes currently used in the manufacture of EPDM rubbers are dicyclopentadiene (DCPD), ethylidene norbornene (ENB), and vinyl norbornene (VNB). EPDM rubber is closely related to ethylene propylene rubber (ethylene propylene rubber is a copolymer of ethylene and propylene whereas EPDM rubber is a terpolymer of ethylene, propylene and a diene-component). The ethylene content is around 45% to 75%. The higher the ethylene content the higher the loading possibilities of the polymer, better mixing and extrusion. Peroxide curing these polymers gives a higher crosslink density compared with their amorphous counterpart.

(#b.) Metzeler

There is a scant amount of information on Metzeler products. A Google search produced a thread on Alaska Outdoors that discusses Metzeler rafts.

(#c.) Grabner Sports

Grabner Sports has a number of facilities in Germany, Austria and Switzerland. Their boat manufacturing plant is in Kirchberg, Oberösterreich (Austria) which is southeast of Nuremberg Germany. In 2003 Grabner built a new, state of the art plant in Haag, Germany, and took full control of the Semperit Inflatables and other German company's lines of inflatable boats. The Haag, Germany plant is east of Munich, Germany.

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