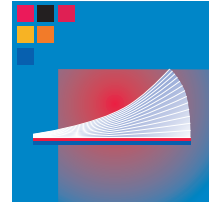
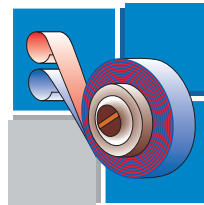




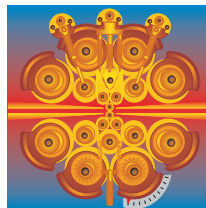
**AUERHAMMER**  
METALLWERK GMBH



Thermostatic Bimetals



Clad Materials



**Metal Strips**

Soft-magnetic Iron-Nickel-Alloys

Sealing and Expansion Alloys

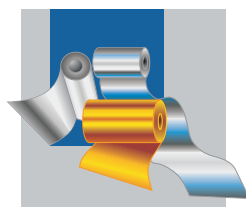
Nickel

Nickel-Chromium-Alloys

Nickel-Copper-Alloys

Copper-Nickel-Alloys

Nickel-Manganese-Alloys



Metallic Foils

Product group:

# Soft-magnetic Iron-Nickel-Alloys

## 1. ALLOY

AMW-TRADE NAME	ALLOY	STANDARD	MATERIAL-NO. DIN/UNS
Normaperm	FeNi36	DIN 17745/DIN 17405/ DIN IEC 740-2	1.3910/1.3911
Nifemax	FeNi48	DIN 17745/DIN 17405/ DIN IEC 740-2/ASTM A 753	1.3922/1.3926/ 1.3927/K94840
Perm 77	FeNi77CuMo	DIN 17745/DIN 17405/ DIN IEC 740-2	2.4530
Super-Muniperm	FeNi80Mo	DIN 17745/DIN 17405/DIN IEC 740-2/ ASTM A 753/MIL-N-14411C	2.4545 N14080

## 2. AVERAGE CHEMICAL COMPOSITION

(mass - %)

AMW-TRADE NAME	Ni	Mn	Mo	S	Cr	Cu	C	Si	P	Fe
Normaperm	36	0.3	≤ 0.2	≤ 0.008	≤ 0.3	≤ 0.3	≤ 0.02	≤ 0.2	≤ 0.02	bal.
Nifemax	48	0.4	≤ 0.2	≤ 0.008	≤ 0.3	≤ 0.3	≤ 0.02	≤ 0.2	≤ 0.02	bal.
Perm 77	77	0.5	4.1	≤ 0.008	≤ 0.3	4.4	≤ 0.02	≤ 0.2	≤ 0.02	bal.
Super-Muniperm	80	0.5	4.9	≤ 0.008	≤ 0.3	≤ 0.3	≤ 0.02	≤ 0.15	≤ 0.02	bal.

### 3. PHYSICAL PROPERTIES

AMW-TRADE NAME	DENSITY	B <sub>s</sub>	T <sub>c</sub>	H <sub>c</sub>	μ <sub>0,4</sub> <sup>1</sup>	μ <sub>max</sub> <sup>1</sup>	MODULUS OF ELASTICITY
	g/cm <sup>3</sup>	T	°C	A/m	DC/AC	DC/AC	Gpa
Normaperm	8.2	1.2	240	10	6000/5000	25000/20000	135
Nifemax	8.3	1.5	470	4	13000/9000	150000/70000	150
Perm 77	8.8	0.75	410	0.5	250000/100000	300000/150000	195
Super-Muniperm	8.8	0.75	410	0.5	250000/100000	300000/150000	195

1 measured on wound cores strip thickness 0.2 mm (reference value)

B<sub>s</sub> - Saturation flux density

T<sub>c</sub> - Curietemperature

H<sub>c</sub> - Coercive force

μ<sub>0,4</sub> - Initial permeability

μ<sub>max</sub> - Maximum permeability

DC - Direkt Current

AC - Alternating Current

### 4. MECHANICAL PROPERTIES

AMW-TRADE NAME	TEMPER	YIELD STRENGTH Rp 0.2	TENSILE STRENGTH Rm	VICKERS-HARDNESS
		MPa	MPa	HV
Normaperm	annealed hard	280 750	440 800	140 230
Nifemax	annealed hard	300 800	520 850	140 250
Perm 77	annealed hard	320 1000	630 1050	160 320
Super-Muniperm	annealed hard	320 1050	650 1100	160 330

## 5. DIMENSIONS AND TOLERANCES

(mm)

### THICKNESS TOLERANCES

THICKNESS	WIDTH 10 - 50	WIDTH > 50 - 200	WIDTH > 200 - 320
0.10 - 0.20	± 0.010	± 0.015	± 0.020
> 0.20 - 0.50	± 0.020	± 0.020	± 0.030
> 0.50 - 1.00	± 0.030	± 0.030	± 0.040
> 1.00	± 0.050	± 0.050	± 0.070

Other thickness and tolerances on request.

### WIDTH TOLERANCES

WIDTH	THICKNESS 0.10 - 0.20	THICKNESS > 0.20 - 0.50	THICKNESS > 0.50 - 1.00	THICKNESS > 1.00 - 2.00
10 - 50	± 0.1	± 0.2	± 0.2	± 0.3
> 50 - 200	± 0.2	± 0.3	± 0.3	± 0.4
> 200 - 320	± 0.3	± 0.4	± 0.5	± 0.6

Other width and tolerances on request.

### LENGTH TOLERANCES (CUT LENGTH)

THICKNESS	LENGTH 500 - 3000
0.40 - 2.00	+ 10

Other tolerances on request.

## 6. PRODUCT FORM

(mm)

FORM	THICKNESS	WIDTH	LENGTH	COIL-ID	COIL-OD
Strip	0.10 - 2.00	10 - 320		300/400/500	max. 1050
Cut length	0.40 - 2.00	50 - 320	500 - 3000		

Other form on request.

All data contained in this document are for information purposes only.  
Other properties can be engineered according to customer specifications.

Guarantees of specific characteristics or applications require special written agreement.

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