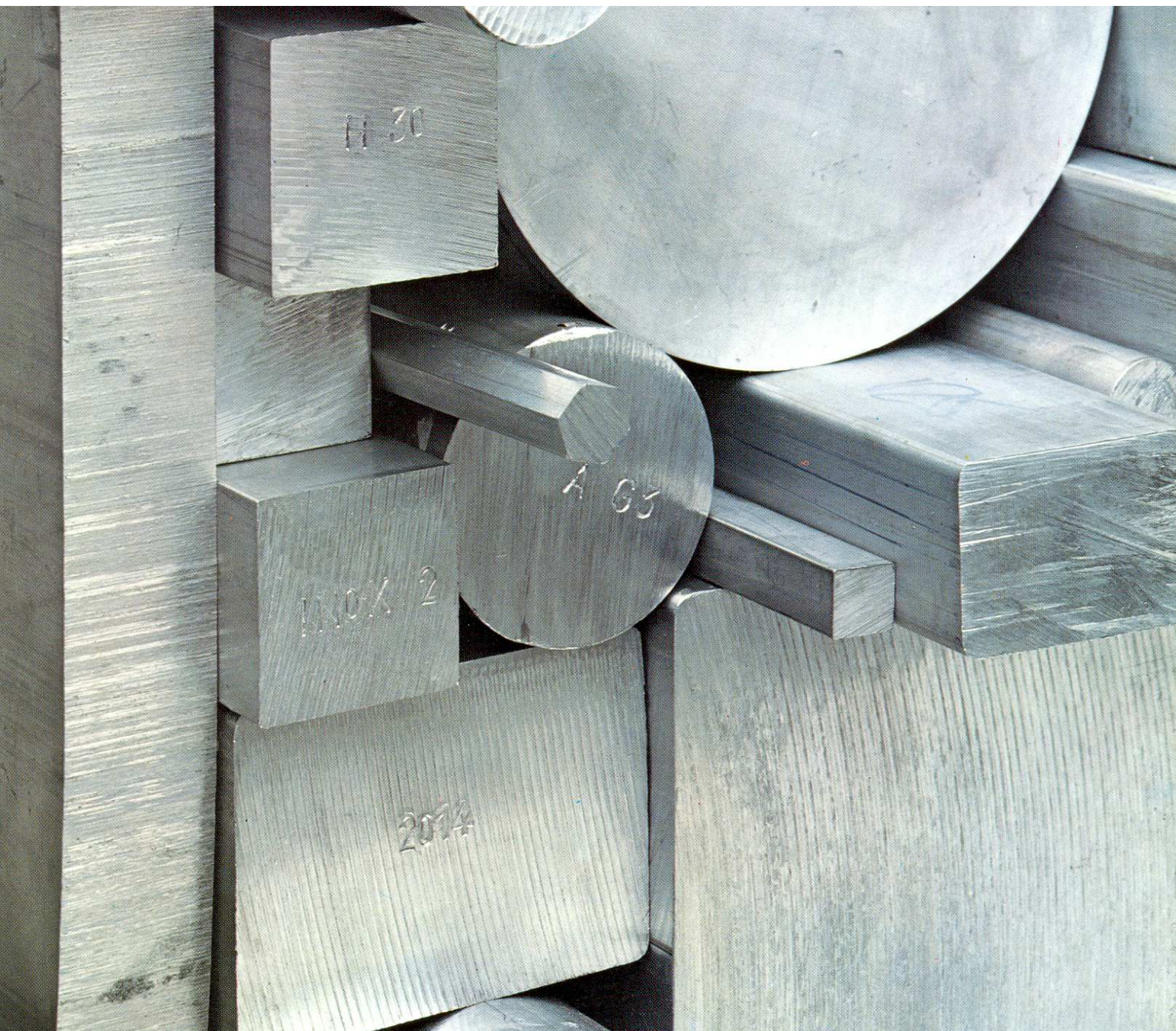


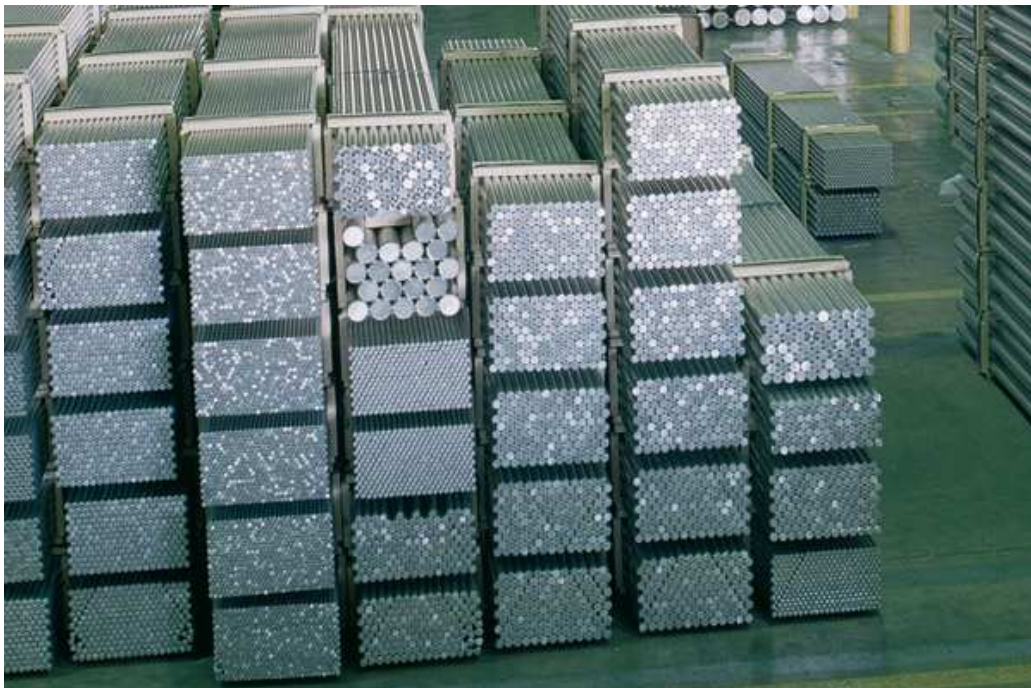


Aluminium



For more than 45 years, our company has been committed to providing the global distributors community with innovative, high quality, cost effective aluminium products. From our humble beginnings in 1968, the Company has grown to become one of the largest professional aluminium products company in the world. With operations in many countries, the Company distributes its TVH® products in over 72 countries under some of the most well established brand names in the industry. Worldwide, stockist and distribution professionals now depend upon TRAIID for quality and service.

TRAID VILLARROYA manufactures a complete range of aluminium TVH® alloy rods, and shapes for all types of industries and customers. Our materials operate in many varied and often challenging applications. An unwavering commitment has always been maintained to the highest standards of the quality, as well as for the protection of the environment in the communities in which we live and work. The long-term business success of our products depends on our ability to ensure that our quality remains a top priority for the management and each employee. This idea is our commitment to making sustainable health a reality through innovative technology and services focused on addressing three critical needs: lowering costs, helping our customers and improving quality. All our rods and shapes are inspected as well as analyzed for determining the perfect composition according to international norms. Here we present you our standard delivery program, besides the stock list shown, other sizes and formats are also available upon request. All our materials are tested to certify the hardness, tensile and ultimate tensile strength. Our quality certification DIN ISO 9001:2008 regularly audited covers all our production from the very first moment to your final stock. The evolution of TRAIID VILLARROYA continues ... After all, we're more than a manufacturer. More than a distributor. We're an essential resource. Our customers' challenges keep changing, and we're helping them adapt every step of the way.



TVH® TV2011 (AA2011) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM DRAWN

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
4	0.035
5	0.055
6	0.079
7	0.107
8	0.140
9	0.178
10	0.219
11	0.266
12	0.316
13	0.371
14	0.431
15	0.494
16	0.562
17	0.635
18	0.712
19	0.793
20	0.879
21	0.969
22	1.064
23	1.163
24	1.266
25	1.374
26	1.486
27	1.603
28	1.724
29	1.849
30	1.979
31	2.113
32	2.251
33	2.394
34	2.542
35	2.693
36	2.850
37	3.010
38	3.175
40	3.518
42	3.879
43	4.066
45	4.451
46	4.650
48	5.066
50	5.497
52	5.946
53	6.177
55	6.652
58	7.397
60	7.916
65	9.287
70	11.250

TVH® TV2011 (AA2011) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM EXTRUDED

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
30	1.943
35	2.693
40	3.454
45	4.371
50	5.397
55	6.530
60	7.772
65	9.121
70	10.578
73	11.504
75	12.143
80	13.816
85	15.597
90	17.486
95	19.483
100	21.588
105	23.800
110	26.121
115	28.549
120	31.086
125	33.730
130	36.483
135	39.343
140	42.312
145	45.388
150	48.572
152	49.876
155	51.864
160	55.264
165	58.772
170	62.388
180	69.944
185	73.883
190	77.931
200	86.350
210	95.201
220	104.484
230	114.198
235	119.217
240	124.344
250	134.922

TVH® TV2017 (AA2017) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM DRAWN

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
14	0.431
15	0.494
16	0.562
17	0.635
18	0.712
19	0.793
20	0.879
21	0.969
22	1.064
23	1.163
24	1.266
25	1.374
26	1.486
27	1.603
28	1.724
29	1.849
30	1.979
31	2.113
32	2.251
33	2.394
34	2.542
35	2.693
36	2.850
37	3.010
38	3.175
40	3.518
42	3.879
43	4.066
45	4.451
46	4.650
48	5.066
50	5.497
52	5.946
53	6.177
55	6.652
58	7.397
60	7.916
65	9.287
70	11.250

TVH® TV2017 (AA2017) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM EXTRUDED

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
30	1.943
35	2.693
40	3.454
45	4.371
50	5.397
55	6.530
60	7.772
65	9.121
70	10.578
73	11.504
75	12.143
80	13.816
85	15.597
90	17.486
95	19.483
100	21.588
105	23.800
110	26.121
115	28.549
120	31.086
125	33.730
130	36.483
135	39.343
140	42.312
145	45.388
150	48.572
152	49.876
155	51.864
160	55.264
165	58.772
170	62.388
180	69.944
185	73.883
190	77.931
200	86.350
210	95.201
220	104.484
230	114.198
235	119.217
240	124.344
250	134.922

TVH® TV2030 (AA2030) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM DRAWN

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
15	0.494
16	0.562
17	0.635
18	0.712
19	0.793
20	0.879
21	0.969
22	1.064
23	1.163
24	1.266
25	1.374
26	1.486
27	1.603
28	1.724
29	1.849
30	1.979
31	2.113
32	2.251
33	2.394
34	2.542
35	2.693
36	2.850
37	3.010
38	3.175
40	3.518
42	3.879
43	4.066
45	4.451
46	4.650
48	5.066
50	5.497
52	5.946
53	6.177
55	6.652
58	7.397
60	7.916
65	9.287
70	11.250



TVH® TV2030 (AA2030) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM EXTRUDED

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>	<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
30	1.943	450	437.147
35	2.693	500	539.688
40	3.454	550	653.022
45	4.371	600	777.150
50	5.397		
55	6.530		
60	7.772		
65	9.121		
70	10.578		
73	11.504		
75	12.143		
80	13.816		
85	15.597		
90	17.486		
95	19.483		
100	21.588		
105	23.800		
110	26.121		
115	28.549		
120	31.086		
125	33.730		
130	36.483		
135	39.343		
140	42.312		
145	45.388		
150	48.572		
152	49.876		
155	51.864		
160	55.264		
165	58.772		
170	62.388		
180	69.944		
185	73.883		
190	77.931		
200	86.350		
210	95.201		
220	104.484		
230	114.198		
235	119.217		
240	124.344		
250	134.922		
260	145.932		
270	157.373		
280	169.246		
300	194.288		
310	210.540		
320	221.056		
330	235.088		
340	249.552		
350	264.447		
360	279.774		
370	295.533		
380	311.724		
400	345.400		
420	380.804		

TVH® TV6026 (AA6026) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM DRAWN

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
8	0.140
9	0.178
10	0.219
11	0.266
12	0.316
13	0.371
14	0.431
15	0.494
16	0.562
17	0.635
18	0.712
19	0.793
20	0.879
21	0.969
22	1.064
23	1.163
24	1.266
25	1.374
26	1.486
27	1.603
28	1.724
29	1.849
30	1.979
31	2.113
32	2.251
33	2.394
34	2.542
35	2.693
36	2.850
37	3.010
38	3.175
40	3.518
42	3.879
43	4.066
45	4.451
46	4.650
48	5.066
50	5.497
52	5.946
53	6.177
55	6.652
58	7.397
60	7.916
65	9.287
70	11.250

TVH® TV6026 (AA6026) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM EXTRUDED

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
30	1.943
35	2.693
40	3.454
45	4.371
50	5.397
55	6.530
60	7.772
65	9.121
70	10.578
73	11.504
75	12.143
80	13.816
85	15.597
90	17.486
95	19.483
100	21.588
105	23.800
110	26.121
115	28.549
120	31.086
125	33.730
130	36.483
135	39.343
140	42.312
145	45.388
150	48.572
152	49.876
155	51.864
160	55.264
165	58.772
170	62.388
180	69.944
185	73.883
190	77.931
200	86.350
210	95.201
220	104.484
230	114.198
235	119.217
240	124.344
250	134.922

TVH® TV6061 (AA6061) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM DRAWN

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
15	0.494
16	0.562
17	0.635
18	0.712
19	0.793
20	0.879
21	0.969
22	1.064
23	1.163
24	1.266
25	1.374
26	1.486
27	1.603
28	1.724
29	1.849
30	1.979
31	2.113
32	2.251
33	2.394
34	2.542
35	2.693
36	2.850
37	3.010
38	3.175
40	3.518
42	3.879
43	4.066
45	4.451
46	4.650
48	5.066
50	5.497
52	5.946
53	6.177
55	6.652
58	7.397
60	7.916
65	9.287
70	11.250

TVH® TV6061 (AA6061) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM EXTRUDED

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
30	1.943
35	2.693
40	3.454
45	4.371
50	5.397
55	6.530
60	7.772
65	9.121
70	10.578
73	11.504
75	12.143
80	13.816
85	15.597
90	17.486
95	19.483
100	21.588
105	23.800
110	26.121
115	28.549
120	31.086
125	33.730
130	36.483
135	39.343
140	42.312
145	45.388
150	48.572
152	49.876
155	51.864
160	55.264
165	58.772
170	62.388
180	69.944
185	73.883
190	77.931
200	86.350
210	95.201
220	104.484
230	114.198
235	119.217
240	124.344
250	134.922

TVH® TV6082 (AA6082) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM DRAWN

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
8	0.140
9	0.178
10	0.219
11	0.266
12	0.316
13	0.371
14	0.431
15	0.494
16	0.562
17	0.635
18	0.712
19	0.793
20	0.879
21	0.969
22	1.064
23	1.163
24	1.266
25	1.374
26	1.486
27	1.603
28	1.724
29	1.849
30	1.979
31	2.113
32	2.251
33	2.394
34	2.542
35	2.693
36	2.850
37	3.010
38	3.175
40	3.518
42	3.879
43	4.066
45	4.451
46	4.650
48	5.066
50	5.497
52	5.946
53	6.177
55	6.652
58	7.397
60	7.916
65	9.287
70	11.250

TVH® TV6082 (AA6082) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM EXTRUDED

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
30	1.943
35	2.693
40	3.454
45	4.371
50	5.397
55	6.530
60	7.772
65	9.121
70	10.578
73	11.504
75	12.143
80	13.816
85	15.597
90	17.486
95	19.483
100	21.588
105	23.800
110	26.121
115	28.549
120	31.086
125	33.730
130	36.483
135	39.343
140	42.312
145	45.388
150	48.572
152	49.876
155	51.864
160	55.264
165	58.772
170	62.388
180	69.944
185	73.883
190	77.931
200	86.350
210	95.201
220	104.484
230	114.198
235	119.217
240	124.344
250	134.922

TVH® TV7075 (AA7075) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM DRAWN

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
25	1.374
26	1.486
27	1.603
28	1.724
29	1.849
30	1.979
31	2.113
32	2.251
33	2.394
34	2.542
35	2.693
36	2.850
37	3.010
38	3.175
40	3.518
42	3.879
43	4.066
45	4.451
46	4.650
48	5.066
50	5.497
52	5.946
53	6.177
55	6.652
58	7.397
60	7.916
65	9.287

TVH® TV7075 (AA7075) MANUFACTURING PROGRAM

SOLID RODS ALUMINIUM EXTRUDED

<i>Ø Size mm.</i>	<i>Approx. weight Kg/m.</i>
30	1.943
35	2.693
40	3.454
45	4.371
50	5.397
55	6.530
60	7.772
65	9.121
70	10.578
73	11.504
75	12.143
80	13.816
85	15.597
90	17.486
95	19.483
100	21.588
105	23.800
110	26.121
115	28.549
120	31.086
125	33.730
130	36.483
135	39.343
140	42.312
145	45.388
150	48.572
152	49.876
155	51.864
160	55.264
165	58.772
170	62.388
180	69.944
185	73.883
190	77.931
200	86.350

TVH® TV 2011 (AA 2011)

Density 2,83 g/cm³

Aluminium alloy according to EU directives: 2000/53/CE (ELV) – 2002/95/CE (RoHS)

Specifications:

TRAID	TVH®	TV 2011
D	DIN 1712/1725	3.1655
USA	A.A.	2011
E	UNE	L-3192

Nominal composition:

Al	Rest
Si	Max. 0,40 %
Fe	Max. 0,70 %
Cu	5 – 6 %
Zn	Max. 0,30 %
Pb	0,2 – 0,4 %
Bi	0,2 – 0,6 %

TEMPER	PROPERTIES	RESULT	UNIT
T6	Breaking load	360	Rm MPa
	Yield point	245	Rp 0,2 MPa
	Elongation	16	%
	Hardness	120	Brinell
T6	Breaking load	370	Rm MPa
	Yield point	280	Rp 0,2 MPa
	Elongation	15	%
	Hardness	115	Brinell
T8	Breaking load	400	Rm MPa
	Yield point	310	Rp 0,2 MPa
	Elongation	16	%
	Hardness	125	Brinell
T3/T6/T8	Modulus of elasticity	70.000	MPa
T3/T6/T8	Thermal expansion	22,90	10 ⁻⁶ / °C
T3	Thermal conductivity	151	W/(K+m)
T8	Thermal conductivity	171	W/(K+m)
T3	Electrical resistivity	0,038	Ω mm ² /m
T8	Electrical resistivity	0,043	Ω mm ² /m

MAIN CHARACTERISTICS

Easy machining material
 Cutting stress lower than most of other alloys
 Longer life of cutting tools
 High mechanical properties
 Possible to anodize

INDUSTRY APPLICATIONS

Screws
 Bolts
 Nuts
 Threaded bars

TVH® TV 2017 (AA 2017)

Density 2,85 g/cm³

Aluminium alloy according to EU directives: 2000/53/CE (ELV) – 2002/95/CE (RoHS)

Specifications:

TRAID	TVH®	TV 2017
D	DIN 1712/1725	3.1325
USA	A.A.	2017
E	UNE	L-3120

Nominal composition:

Al	Rest
Si	0,2 – 0,8 %
Fe	Max. 0,70 %
Cu	3,5 – 4,5 %
Mn	0,4 – 1,0 %
Mg	0,4 – 1,0 %
Cr	Max. 0,1 %
Zn	Max. 0,25 %

TEMPER	PROPERTIES	RESULT	UNIT
T4	Breaking load	410	Rm MPa
	Yield point	260	Rp 0,2 MPa
	Elongation	11	%
	Hardness	115	Brinell
T3	Breaking load	470	Rm MPa
	Yield point	390	Rp 0,2 MPa
	Elongation	11	%
	Hardness	135	Brinell
	Modulus of elasticity	75.000	MPa
	Thermal expansion	23,60	10 ⁻⁶ / °C
	Thermal conductivity	134	W/(K·m)
	Electrical resistivity	0,051	Ω mm ² /m

MAIN CHARACTERISTICS

High mechanical properties
 Great resistance to fatigue

INDUSTRY APPLICATIONS

Screws
 Bolts
 High structural resistance components for aviation industry
 Defence

TVH® TV 2024 (AA 2024)

Density 2,79 g/cm³

Aluminium alloy according to EU directives: 2000/53/CE (ELV) – 2002/95/CE (RoHS)

Specifications:

TRAID	TVH®	TV 2024
D	DIN 1712/1725	3.1355
USA	A.A.	2024
E	UNE	L-3140

Nominal composition:

Al	Rest
Si	Max. 0,50 %
Fe	Max. 0,50 %
Cu	3,8 – 4,9 %
Mn	0,3 – 0,9 %
Mg	1,2 – 1,8 %
Cr	Max. 0,1 %
Zn	Max. 0,25 %
Ti	Max. 0,15 %

TEMPER	PROPERTIES	RESULT	UNIT
T3 Extruded	Breaking load	490	Rm MPa
	Yield point	380	Rp 0,2 MPa
	Elongation	8	%
	Hardness	130	Brinell
T3 Drawn	Breaking load	520	Rm MPa
	Yield point	420	Rp 0,2 MPa
	Elongation	10	%
	Hardness	140	Brinell
	Modulus of elasticity	70.000	MPa
	Thermal expansion	23,10	10 ⁻⁶ / °C
	Thermal conductivity	120	W/(K·m)
	Electrical resistivity	0,057	Ω mm ² /m

MAIN CHARACTERISTICS

High mechanical properties

Great resistance to fatigue

INDUSTRY APPLICATIONS

Screws

Bolts

High structural resistance components for aviation industry

Defence

TVH® TV 2030 (AA 2030)

Density 2,85 g/cm³

Aluminium alloy

Specifications:

TRAID	TVH®	TV 2030
D	DIN 1712/1725	3.1645
USA	A.A.	2030
E	UNE	L-3121

Nominal composition:

Al	Rest
Si	Max. 0,80 %
Fe	Max. 0,70 %
Cu	3,3 – 4,5 %
Mn	0,2 – 1,0 %
Mg	0,5 – 1,3 %
Cr	Max. 0,1 %
Zn	Max. 0,5 %
Ti	Max. 0,2 %
Pb	0,8 – 1,0 %
Bi	Max. 0,2 %

TEMPER	PROPERTIES	RESULT	UNIT
T4	Breaking load	440	Rm MPa
	Yield point	300	Rp 0,2 MPa
	Elongation	12	%
	Hardness	125	Brinell
T3	Breaking load	465	Rm MPa
	Yield point	410	Rp 0,2 MPa
	Elongation	8	%
	Hardness	125	Brinell
	Modulus of elasticity	71.000	MPa
	Thermal expansion	23,50	10 ⁻⁶ / °C
	Thermal conductivity	140	W/(K·m)
	Electrical resistivity	0,057	Ω mm ² /m

MAIN CHARACTERISTICS

High mechanical properties
 Good machinability
 Low corrosion resistance
 Possible to anodize

INDUSTRY APPLICATIONS

Screws
 Bolts
 Nuts
 Threaded bars

TVH® TV 6061 (AA 6061)

Density 2,71 g/cm³

Aluminium alloy according to EU directives: 2000/53/CE (ELV) – 2002/95/CE (RoHS)

Specifications:

TRAID	TVH®	TV 6061
D	DIN 1712/1725	3.3211
USA	A.A.	6061
E	UNE	L-3420

Nominal composition:

Al	Rest
Si	0,4 – 0,8 %
Fe	Max. 0,70 %
Cu	0,15 – 0,4 %
Mn	Max. 0,15 %
Mg	0,8 – 1,2 %
Cr	0,04 – 0,35 %
Zn	Max. 0,25 %
Ti	Max. 0,15 %

TEMPER	PROPERTIES	RESULT	UNIT
T6 Extruded	Breaking load	360	Rm MPa
	Yield point	320	Rp 0,2 MPa
	Elongation	11	%
	Hardness	110	Brinell
T6 Drawn	Breaking load	370	Rm MPa
	Yield point	330	Rp 0,2 MPa
	Elongation	10	%
	Hardness	110	Brinell
	Modulus of elasticity	69.000	MPa
	Thermal expansion	23,50	10 ⁻⁶ / °C
	Thermal conductivity	173	W/(K·m)
	Electrical resistivity	0,037	Ω mm ² /m

MAIN CHARACTERISTICS

Medium mechanical properties

Great resistance to corrosion

Good weldability properties

INDUSTRY APPLICATIONS

Components for railroad

Nautical

Defence and aviation

Stressed structures



TVH® TV 6082 (AA 6082)

Density 2,71 g/cm³

Aluminium alloy according to EU directives: 2000/53/CE (ELV) – 2002/95/CE (RoHS)

Specifications:

TRAID	TVH®	TV 6082
D	DIN 1712/1725	3.2315
USA	A.A.	6082
E	UNE	-

Nominal composition:

Al	Rest
Si	0,7 – 1,3 %
Fe	Max. 0,50 %
Cu	Max. 0,10 %
Mn	0,4 – 1,0 %
Mg	0,6 – 1,2 %
Cr	Max. 0,25 %
Zn	Max. 0,20 %
Ti	Max. 0,10 %

TEMPER	PROPERTIES	RESULT	UNIT
T6 Extruded	Breaking load	325	Rm MPa
	Yield point	285	Rp 0,2 MPa
	Elongation	10	%
	Hardness	105	Brinell
T6 Drawn	Breaking load	380	Rm MPa
	Yield point	360	Rp 0,2 MPa
	Elongation	10	%
	Hardness	110	Brinell
	Modulus of elasticity	69.000	MPa
	Thermal expansion	24,00	10 ⁻⁶ / °C
	Thermal conductivity	167	W/(K·m)
	Electrical resistivity	0,037	Ω mm ² /m

MAIN CHARACTERISTICS

Medium mechanical properties
Great resistance to corrosion
Good weldability properties

INDUSTRY APPLICATIONS

Anti-impact lateral bars
Door frames
Hydraulic systems
Platforms
Screws and rivets for nuclear plants

TVH® TV 7075 (AA 7075)

Density 2,80 g/cm³

Aluminium alloy according to EU directives: 2000/53/CE (ELV) – 2002/95/CE (RoHS)

Specifications:

TRAID	TVH®	TV 7075
D	DIN 1712/1725	3.4365
USA	A.A.	7075
E	UNE	L 3710

Nominal composition:

Al	Rest
Si	Max. 0,40 %
Fe	Max. 0,50 %
Cu	1,20 – 2,0 %
Mn	Max. 0,30 %
Mg	2,1 – 2,9 %
Cr	0,18 – 0,28 %
Zn	5,1 – 6,1 %
Ti	Max. 0,20 %

TEMPER	PROPERTIES	RESULT	UNIT
T6 Extruded	Breaking load	580	Rm MPa
	Yield point	510	Rp 0,2 MPa
	Elongation	7	%
	Hardness	160	Brinell
T6 Drawn	Breaking load	590	Rm MPa
	Yield point	530	Rp 0,2 MPa
	Elongation	7	%
	Hardness	160	Brinell
	Modulus of elasticity	72.000	MPa
	Thermal expansion	23,50	10 ⁻⁶ / °C
	Thermal conductivity	130	W/(K+m)
	Electrical resistivity	0,052	Ω mm ² /m

MAIN CHARACTERISTICS

High mechanical properties
High resistance to fatigue
Good resistance to corrosion
Protective and decorative anodizing

INDUSTRY APPLICATIONS

Military
Automotive
High resistance structural parts



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