

ArcelorMittal Europe - Long Products
Bars & Rods



ArcelorMittal

Threaded Bar Anchoring System

New
Ø 75 mm
Grade 670/800



ArcelorMittal Threaded Bars



The **ArcelorMittal Threaded Bar** anchoring system is high quality material which contributes to an excellent stability of the sheet piles and can offer economical and technical advantages.

Indeed, the **ArcelorMittal Threaded Bar** can be supplied in one piece up to 24 meters length and can also avoid handling and connection problems thanks to the presence of the thread over the entire length of the bar (bars can be cut or lengthened with couplers at any position).

Due to its reliability and ease of installation, the anchoring system

is suitable for the most technical and complex applications. ArcelorMittal supplies a full range of subsidiary products and can service customers requirements by holding a permanent stock of material.

With **ArcelorMittal Threaded Bar** flexible system, we can propose alternative solutions that remain compliant with the original design parameters.

ArcelorMittal is certified to ISO 9001 (Quality Assurance) and 14001 standards (Environment Mngt). Our Quality Assurance system is the guarantee for continuous high quality standards and products.

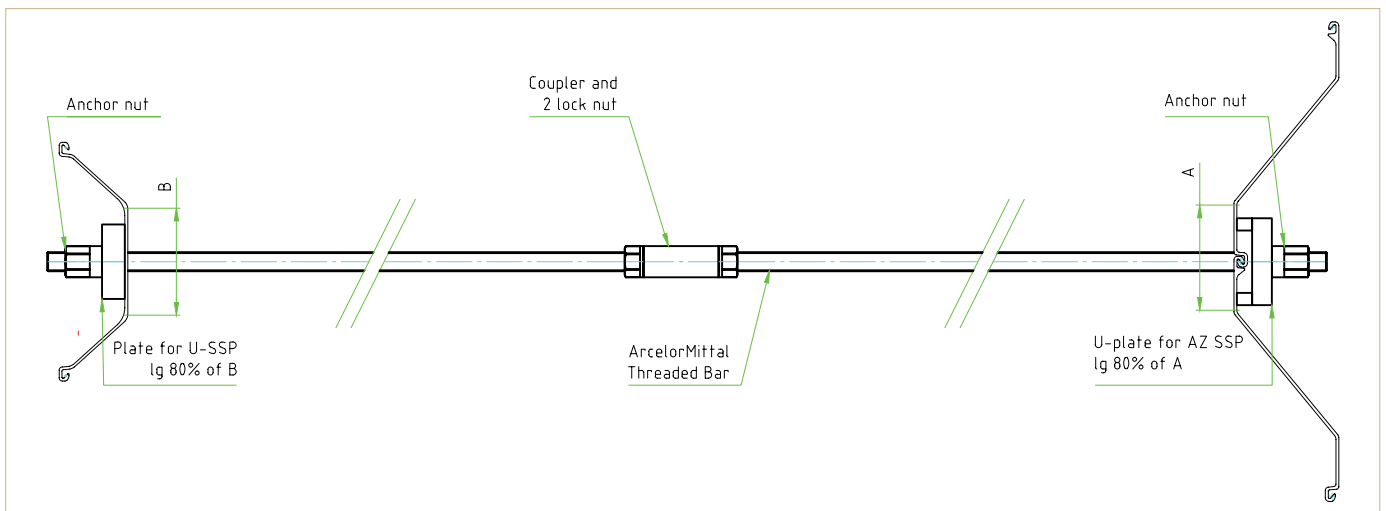
ArcelorMittal Threaded Bar 500 , 555 - Left-hand Thread

Specifications

Nominal Diameter d	mm	16	20	25	28	32	40	43	50	57.5	63.5	75	
Maximal Diameter d^*	mm	19	24	28	32	36	45	48	56	63	70	83	
$R_{p0.2}$ Min.	MPa	500								555		500	
Load at Yield Min.	kN	100	157	246	308	402	629	726	982	1441	1758	2209	
R_m Min.	MPa	550								700		550	
Ultimate Load Min.	kN	110	172	270	339	442	691	799	1078	1818	2217	2430	
Elongation Min.	%	$A_{gt} 6$						$A_{gt} 5$					
Weight	kg/m	1.58	2.47	3.85	4.83	6.31	9.87	11.40	15.41	20.38	24.86	34.68	



ArcelorMittal can supply a full system of anchorage, sample layout:



ArcelorMittal Threaded Bar 670 - Right-hand Thread

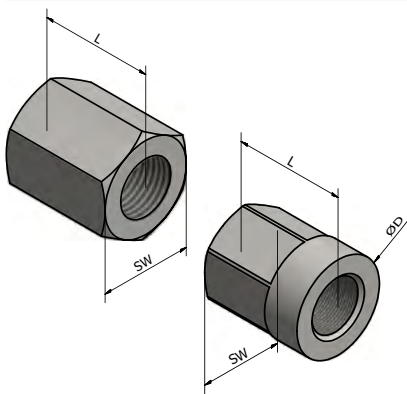
Specifications

Nominal Diameter d	mm	18	22	25	28	30	35	43	50	57.5	63.5	75
Maximal Diameter d^*	mm	23	26	28	32	34	40	48	56	63	70	83
$R_{p0.2}$ Min.	MPa	670										
Load at Yield Min.	kN	170	255	329	413	474	645	973	1315	1740	2122	2960
R_m Min.	MPa	800										
Ultimate Load Min.	kN	203	304	393	493	566	770	1162	1571	2078	2534	3535
Elongation Min.	%	A_{gt} 5%, A_{10d} 7%										
Weight	kg/m	2.00	2.98	3.85	4.83	5.54	7.55	11.40	15.41	20.38	24.86	34.68

Accessories for ArcelorMittal Threaded Bars 500 Grade 500/550 & 555/700* Left-hand thread

Anchor Nut

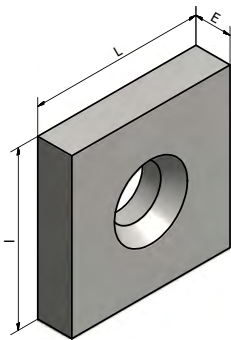
L2002



	Ø (mm)	Weight (kg)	SW (mm)	Ø D (mm)	L (mm)
16L		0.20	32		40
20L		0.26	36		45
25L		0.34	41		50
28L		0.48	46		55
32L		0.78	55		60
40L		1.19	65		70
43L		1.86	70		85
50L		2.17	80		85
57L		3.65	90	102	100
63L		6.60	100	114	135
75L		7.02	110	140	120

Plate for sph. Nut**

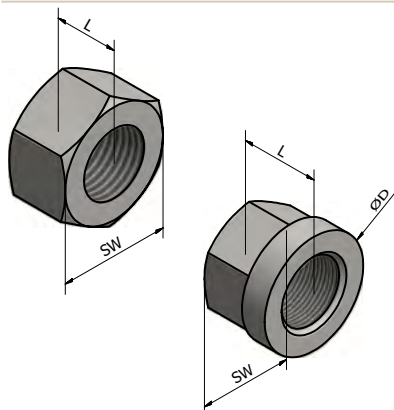
L2011



	Ø (mm)	Weight (kg)	L (mm)	I (mm)	E (mm)
16L		0.15	50	50	10
20L		0.37	70	70	12
25L		0.34	70	70	12
28L		1.33	100	100	20
32L		1.91	120	120	20
40L		4.48	150	150	30
43L		6.61	170	170	35
50L		10.78	190	190	45
57L		16.25	220	220	50
63L		20.09	245	245	50
75L		32.60	275	275	65

Lock Nut

L2040



	Ø (mm)	Weight (kg)	SW (mm)	Ø D (mm)	L (mm)
16L		0.10	32		20
20L		0.08	32		20
25L		0.14	41		20
28L		0.15	41		25
32L		0.28	50		30
40L		0.45	60		35
43L		0.87	70		40
50L		1.21	80		50
57L		2.16	90	102	60
63L		2.18	90	108	75
75L		4.54	110	140	80

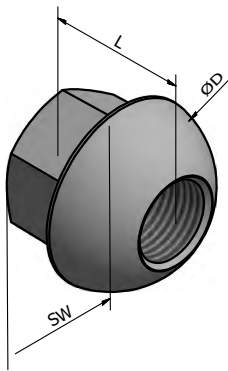
*Ø 57.5 mm and Ø 63.5 mm

**Grade S355, other dimension or steel grade on request

Accessories for ArcelorMittal Threaded Bars 500 Grade 500/550 & 555/700* Left-hand thread

Spherical Nut 55°

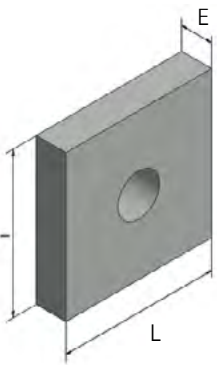
L2044



Ø (mm)	Weight (kg)	SW (mm)	Ø D (mm)	L (mm)
16L	0.10	27	33	35
20L	0.26	36	41	49
25L	0.35	41	45	55
28L	0.45	41	54	62
32L	0.65	46	57	70
40L	1.25	60	70	88
43L	2.26	70	80	100
50L	2.60	80	85	107
57L	4.15	90	100	120
63L	6.00	100	115	144
75L	9.69	120	120	165

Plate**

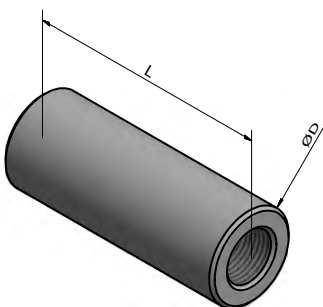
L2139



Ø (mm)	Weight (kg)	L (mm)	I (mm)	E (mm)
16L	0.15	50	50	8
20L	0.33	70	70	10
25L	0.35	70	70	10
28L	0.86	100	100	12
32L	2.06	120	120	20
40L	4.90	150	150	30
43L	7.40	170	170	35
50L	11.82	190	190	45
57L	17.69	220	220	50
63L	22.38	245	245	50
75L	35.60	275	275	65

Coupler

L3003

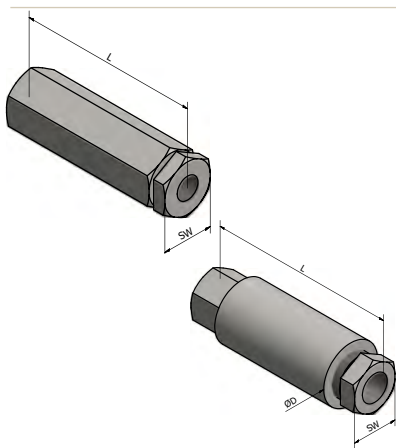


Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
16L	0.37	32	90
20L	0.52	36	105
25L	0.61	40	115
28L	0.85	45	125
32L	1.26	52	140
40L	2.34	65	160
43L	4.75	80	170
50L	4.23	80	200
57L	10.31	102	230
63L	9.55	102	260
75L	24.96	140	290

Accessories for ArcelorMittal Threaded Bars 500 Grade 500/550 & 555/700* Left-hand thread

Turnbuckle

L3105

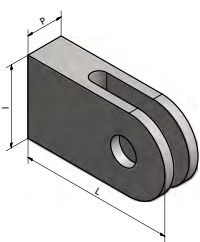


Ø (mm)	Weight (kg)	SW (mm)	Ø D (mm)	L (mm)
16L				
20L				
25L				
28L				
32L	3.6	60		225
40L	6.6	80		270
43L	11.9	90		290
50L	14.3	100		305
57L	20.7	100	127	340
63L	22	100	127	390
75L	26.22	110	140	375

on request

Fork piece

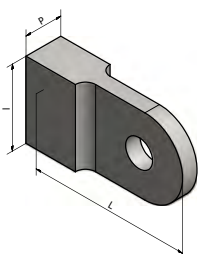
L4000



Ø (mm)	Weight (kg)	L (mm)	I (mm)	P (mm)
40L	13.6	140	305	65
43L	21.5	150	350	80
50L	39.7	190	445	90
57L	44.6	210	435	100
63L	66	230	470	120
75L	94.8	260	510	140

Eye pieces

L4100



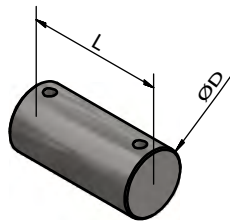
Ø (mm)	Weight (kg)	L (mm)	I (mm)	P (mm)
40L	12.3	140	310	65
43L	18.6	150	355	80
50L	36.6	190	450	90
57L	39.5	210	440	100
63L	55.7	230	475	120
75L	77.6	260	525	140

*Ø 57.5 mm and Ø 63.5 mm

Accessories for ArcelorMittal Threaded Bars 500 Grade 500/550 & 555/700* Left-hand thread

Bolt eye piece

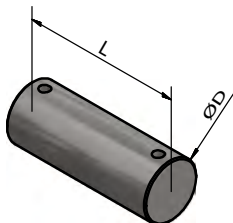
L4200



Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
40L	1.70	50	115
43L	2.35	55	130
50L	3.64	65	145
57L	5.20	75	155
63L	6.93	80	180
75L	10.3	90	210

Bolt T-plates eye piece

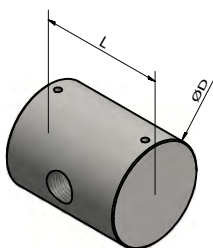
L4220



Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
40L	2.17	50	145
43L	2.63	55	145
50L	5.07	65	200
57L	5.73	75	170
63L	9.3	80	240
75L	11.05	90	225

Joint nut

L4230



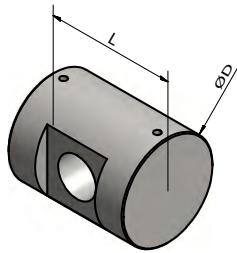
Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
16L	on request		
20L			
25L			
28L			
32L	7.3	90	160
40L	13.8	120	170
43L	14.1	115	190
50L	28.8	160	200
57L	23.8	140	220
63L	33.2	170	230
75L	50.4	180	280

Other Ø on request

Accessories for ArcelorMittal Threaded Bars 500 Grade 500/550 & 555/700* Left-hand thread

Joint bolt

L4240

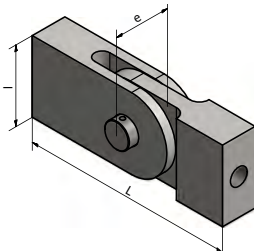


Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
16L			
20L			
25L			
28L			
32L	6.6	90	160
40L	12.6	120	170
43L	12.3	115	190
50L	26.7	160	200
57L	20.7	140	220
63L	33	170	230
75L	44.2	180	280

on request

Clevis

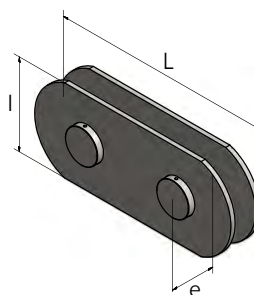
L4300



Ø (mm)	Weight (kg)	L (mm)	l (mm)	e (mm)
40L	27.5	445	140	115
43L	42.4	515	150	130
50L	79	675	190	145
57L	89.3	625	210	155
63L	129	675	230	180
75L	182.8	735	260	210

Hinged joint

L4320



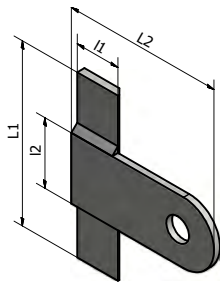
Ø (mm)	Weight (kg)	L (mm)	l (mm)	e (mm)
16L				
20L				
25L				
28L				
32L	32.1	500	235	160
40L	69.4	710	310	170
43L	62	625	295	190
50L	156	950	410	200
57L	125	780	400	218
63L	234	1130	435	230
75L	260	1040	485	280

on request

Accessories for ArcelorMittal Threaded Bars 500 Grade 500/550 & 555/700* Left-hand thread

T-plate eye pieces

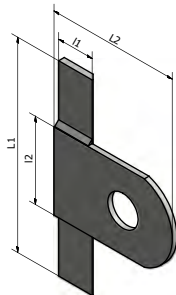
L5100



Ø (mm)	Weight (kg)	l1 (mm)	L1 (mm)	l2 (mm)	L2 (mm)
40L	12.5	120	370	140	390
43L	14.4	130	390	150	420
50L	26.5	140	550	210	490
57L	28.9	140	540	190	460
63L	51.3	180	625	230	550
75L	54	180	680	260	580

T-plate joint nut

L5110

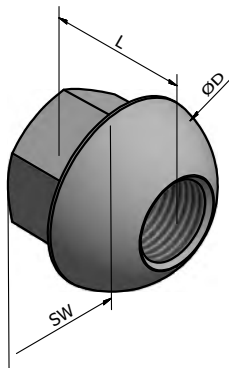


Ø (mm)	Weight (kg)	l1 (mm)	L1 (mm)	l2 (mm)	L2 (mm)
16L					
20L					
25L					
28L					
32L					
40L	29.35	120	800	310	480
43L	29.1	130	760	295	475
50L	57.6	140	1000	410	585
57L	54.8	140	1000	400	540
63L	92.8	180	1100	435	670
75L	105	180	1250	485	680

Accessories for ArcelorMittal Threaded Bars 670 Grade 670/800 Right-hand thread

Spherical nut 55°

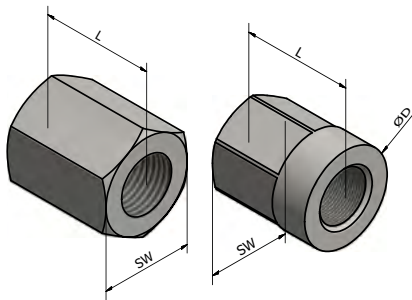
R2001



Ø (mm)	Weight (kg)	SW (mm)	Ø D (mm)	L (mm)
18R	0.20	32	35	43
22R	0.31	36	45	53
25R	0.43	41	50	60
28R	0.60	46	55	67
30R	0.79	50	60	71
35R	1.30	60	70	83
43R	2.20	70	85	102
50R	3.59	80	100	116
57R	5.50	90	115	137
63R	7.30	100	125	151
75R	11.90	120	150	174

Anchor nut

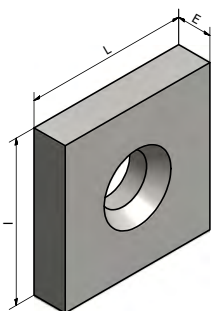
R2002



Ø (mm)	Weight (kg)	SW (mm)	Ø D (mm)	L (mm)
18R	0.29	36		45
22R	0.39	41		50
25R	0.53	46		55
28R	0.67	50		60
30R	0.90	55		65
35R	1.37	65		70
43R	2.62	80		90
50R	2.80	80		100
57R	4.42	90	102	120
63R	8.05	100	114	165
75R	7.88	110	140	150

Plate for spherical nut*

L2011

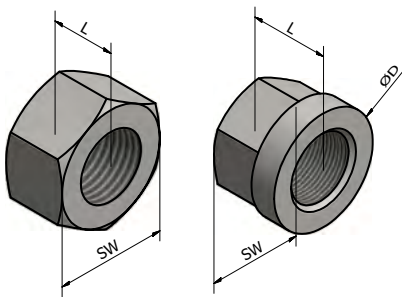


Ø (mm)	Weight (kg)	L (mm)	l (mm)	E (mm)
18R	2.20	100	100	25
22R	2.62	110	110	30
25R	3.39	125	125	30
28R	4.59	135	135	35
30R	5.32	145	145	35
35R	8.36	170	170	40
43R	15.90	210	210	50
50R	22.59	240	240	55
57R	32.80	275	275	60
63R	42.20	300	300	65
75R	51.89	325	325	70

Accessories for ArcelorMittal Threaded Bars 670 Grade 670/800 Right-hand thread

Lock nut

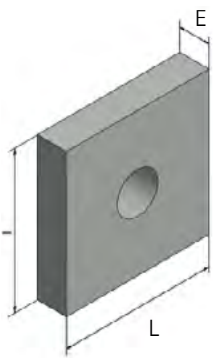
R2040



Ø (mm)	Weight (kg)	SW (mm)	Ø D (mm)	L (mm)
18R	0.10	30		22
22R	0.12	36		22
25R	0.15	41		22
28R	0.26	46		30
30R	0.31	50		30
35R	0.47	55		40
43R	1.00	70		50
50R	1.39	80		50
57R	1.93	90	102	60
63R	3.03	100	114	70
75R	4.53	110	140	80

Plate*

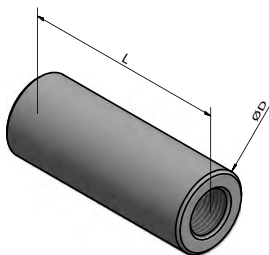
R2139



Ø (mm)	Weight (kg)	L (mm)	I (mm)	E (mm)
18R	1.85	100	100	25
22R	2.66	110	110	30
25R	3.18	120	120	30
28R	3.45	125	125	30
30R	5.43	130	130	35
35R	8.53	150	150	40
43R	16.30	185	185	55
50R	20.44	215	215	60
57R	33.50	245	245	65
63R	43.20	270	270	70
75R	54.85	325	325	70

Coupler

R3003

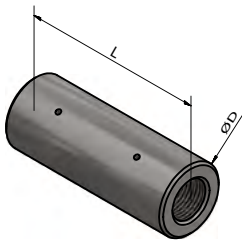


Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
18R	0.56	36	100
22R	0.71	40	110
25R	0.94	45	120
28R	1.36	50	140
30R	1.84	55	150
35R	2.95	65	170
43R	5.42	80	200
50R	7.24	90	210
57R	10.31	102	250
63R	14.48	114	300
75R	27.50	140	320

*Grade S355, other dimension of grade on request

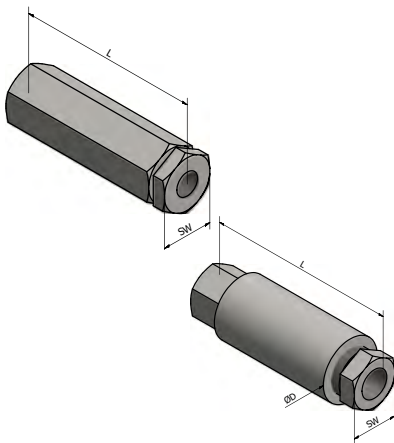
Accessories for ArcelorMittal Threaded Bars 670 Grade 670/800 Right-hand thread

Coupler with set screws R3020



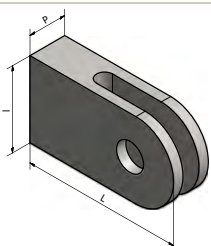
	Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
18R		0.56	36	100
22R		0.71	40	110
25R		0.94	45	120
28R		1.36	50	140
30R		1.84	55	150
35R		2.95	65	170
43R		5.42	80	200
50R		7.18	90	210
57R		10.31	102	250
63R		14.48	114	300
75R		27.5	140	320

Turnbuckle R3105



	Ø (mm)	Weight (kg)	SW (mm)	Ø D (mm)	L (mm)
35R		8.9	80		275
43R		13.9	90		330
50R		16.77	100		350
57R		24	100	127	390
63R		25.5	100	133	405
75R		29.4	110	140	405

Fork piece R4000

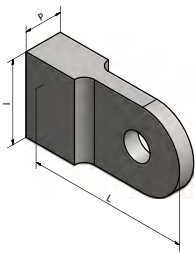


	Ø (mm)	Weight (kg)	L (mm)	I (mm)	P (mm)
35R		13.7	140	305	65
43R		40.4	190	400	90
50R		39.9	185	470	90
57R		66	230	470	120
63R		74	260	495	120
75R		123.5	300	575	150

Accessories for ArcelorMittal Threaded Bars 670 Grade 670/800 Right-hand thread

Eye pieces

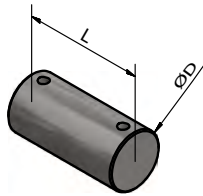
R4100



Ø (mm)	Weight (kg)	L (mm)	l (mm)	P (mm)
35R	12.3	140	310	65
43R	36.2	190	405	90
50R	37.9	185	475	90
57R	55.7	230	475	120
63R	67.5	260	505	120
75R	114.2	300	585	150

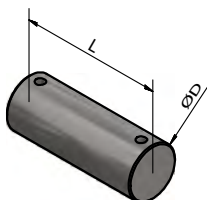
Bolt eye piece

R4200



Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
35R	1.70	50	115
43R	3.64	65	145
50R	4.40	70	150
57R	6.93	80	180
63R	9.2	90	190
75R	14.95	105	225

Bolt T-plates eye piece R4220



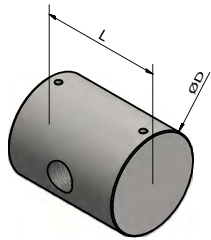
Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
35R	2.17	50	145
43R	5.07	65	200
50R	5,14	70	175
57R	9.3	80	240
63R	11.7	90	240
75R	17.34	105	260

Other Ø on request.

Accessories for ArcelorMittal Threaded Bars 670 Grade 670/800 Right-hand thread

Joint nut

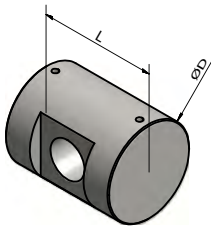
R4230



Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
18R		on request	
22R			
25R			
28R			
30R			
35R	11.8	110	170
43R	22.5	140	200
50R	31.9	160	220
57R	33.2	160	230
63R	49.2	190	240
75R	67.6	200	300

Joint bolt

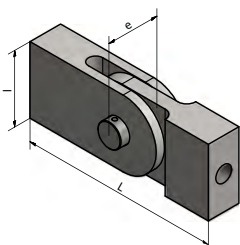
R4240



Ø (mm)	Weight (kg)	Ø D (mm)	L (mm)
35R	10.5	110	170
43R	20.54	140	200
50R	29.8	160	220
57R	29.8	160	230
63R	44.5	190	240
75R	61.3	200	300

Clevis

R4300

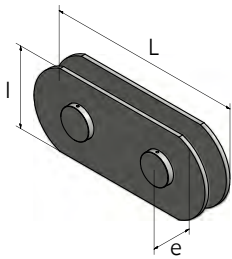


Ø (mm)	Weight (kg)	L (mm)	l (mm)	e (mm)
35R	27.8	445	140	115
43R	80.3	585	190	145
50R	81.3	705	185	150
57R	129	675	230	180
63R	151.5	700	260	190
75R	258	810	300	225

Accessories for ArcelorMittal Threaded Bars 670 Grade 670/800 Right-hand thread

Hinged joint

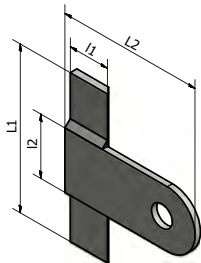
R4320



Ø (mm)	Weight (kg)	L (mm)	l (mm)	e (mm)
35R	60.5	680	285	170
43R	123.1	850	360	200
50R	151.2	860	410	220
57R	194.7	980	410	230
63R	278	1160	485	240
75R	422.5	1250	510	300

T-plate eye piece

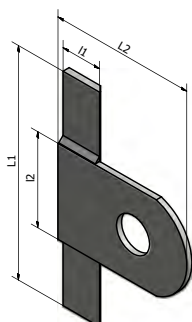
R5100



Ø (mm)	Weight (kg)	l1 (mm)	L1 (mm)	l2 (mm)	L2 (mm)
35R	12.5	120	370	140	390
43R	26.5	140	540	190	460
50R	28.8	170	480	185	510
57R	51.3	180	625	230	550
63R	59.1	200	700	260	600
75R	103	250	775	300	700

T-plate joint nut

R5110

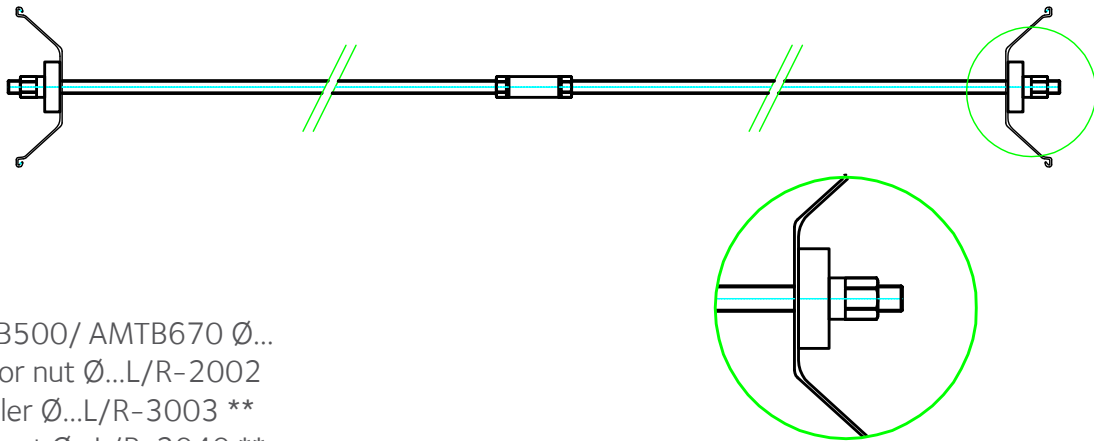


Ø (mm)	Weight (kg)	l1 (mm)	L1 (mm)	l2 (mm)	L2 (mm)
18R					
22R					
25R					
28R					
230R					
35R	26.3	120	720	285	460
43R	51.6	140	950	360	540
50R	67.1	170	1050	410	615
57R	83.7	180	1000	410	635
63R	114.6	200	1250	485	725
75R	185	250	1350	510	805

on request

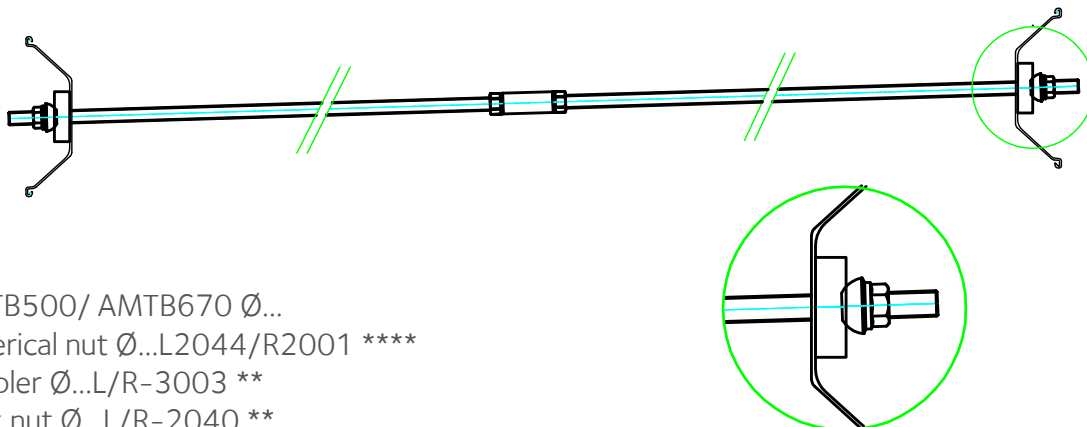
Typical assembly for AU™, PU®, GU® and AZ® sheet piles

1- Standard design for AU™, PU® and GU®



- 2 x AMTB500/ AMTB670 Ø...
- 2 x Anchor nut Ø...L/R-2002
- 1 x Coupler Ø...L/R-3003 **
- 2 x Lock nut Ø...L/R-2040 **
- 2 x Plate LxIxe grade S.... ***

2- Inclined anchorage for AU™, PU® and GU®



- 2 x AMTB500/ AMTB670 Ø...
- 2 x Spherical nut Ø...L2044/R2001 ****
- 1 x Coupler Ø...L/R-3003 **
- 2 x Lock nut Ø...L/R-2040 **
- 2 x Plate for spherical nut LxIxe grade S.... ***

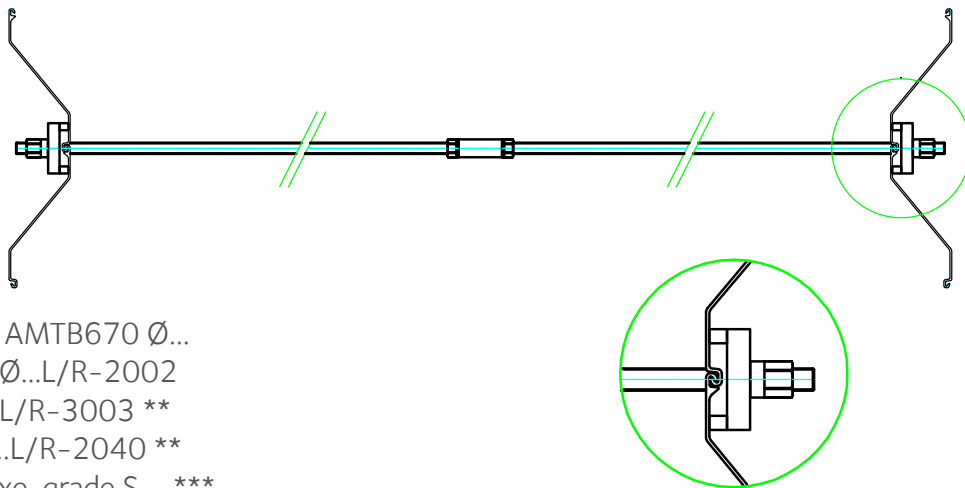
**Used according to the total length of the tie rods.

***The plate design is depending on diameter and grade of tie rods, type and grade of sheet piles and general design solution.

**** Spherical nut can be used for misalignment max 5° without an inclined plate or to anticipate settlement.

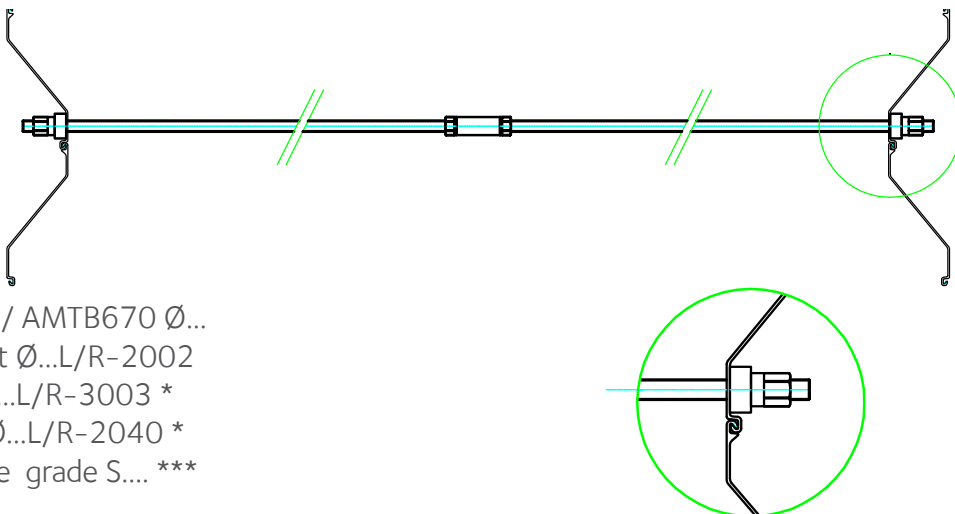
Typical assembly for AU™, PU®, GU® and AZ® sheet piles

3- Standard design for AZ®



- 2 x AMTB500/ AMTB670 Ø...
- 2 x Anchor nut Ø...L/R-2002
- 1 x Coupler Ø...L/R-3003 **
- 2 x Lock nut Ø...L/R-2040 **
- 2 x U-plate Lxlxe grade S... ***

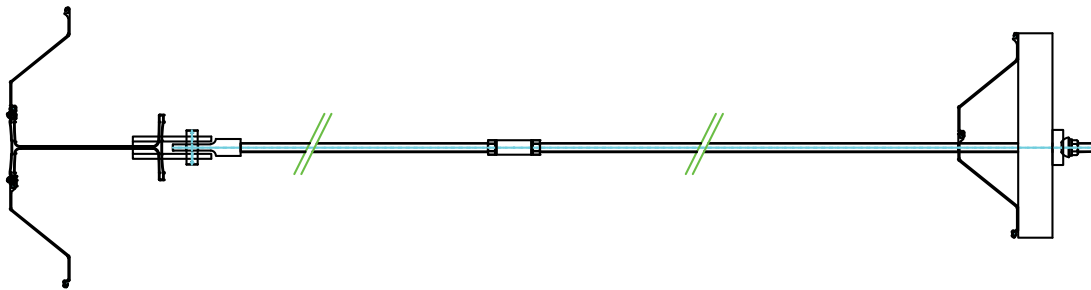
4- Eccentric anchor design for AZ®



- 2 x AMTB500/ AMTB670 Ø...
- 2 x Anchor nut Ø...L/R-2002
- 1 x Coupler Ø...L/R-3003 *
- 2 x Lock nut Ø...L/R-2040 *
- 2 x Plate Lxlxe grade S... ***

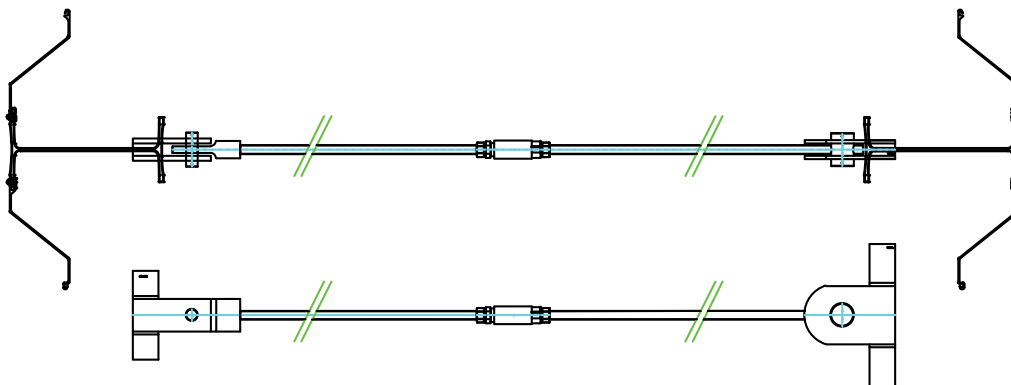
Typical assembly for HZ[®]/AZ[®] combi-wall

1- Design for HZ[®]/AZ[®] on main wall and AZ on anchor wall



- 2 x AMTB500/ AMTB670 Ø...
- 2 x T-Plate for eye piece Ø... L/R5100 *
- 1 x pin for T-Plate Ø... L/R4220 *
- 1 x eye piece Ø... L/R4100*
- 2 x lock nut Ø... L/R2040**
- 1 x coupler Ø... L/R3003**
- 1 x spherical nut Ø... L2044/R2001
- 1 x plate for spherical nut LxLx grade S....***

2- Design for double HZ[®]/AZ[®] combi-wall



- | | |
|--|--|
| <ul style="list-style-type: none"> - 2 x AMTB500/ AMTB670 Ø... - 2 x T-Plate for eye piece Ø... L/R5100 * - 1x pin for T-Plate Ø... L/R4220 * - 1x eye piece Ø... L/R4100* | <ul style="list-style-type: none"> - 2 x T-Plate for joint nut Ø... L/R5110 * - 1 x joint nut Ø... L/R4230 * - 2 x lock nut Ø... L/R2040 - 1 x turnbuckle Ø... L/R3105 |
|--|--|

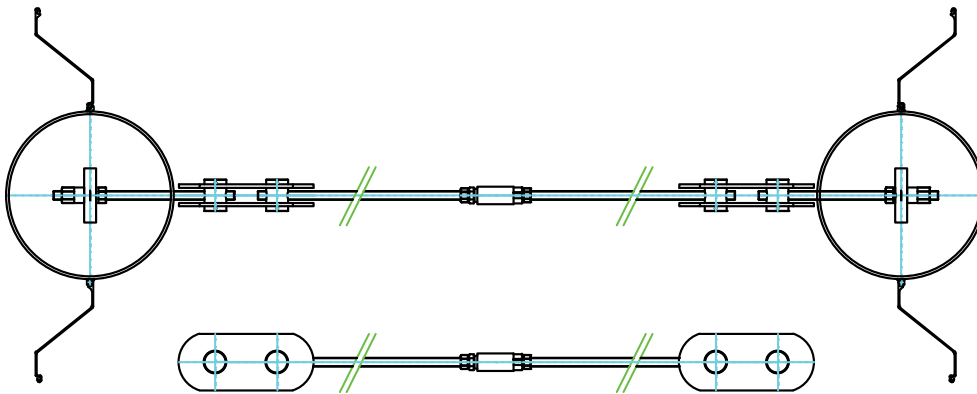
*2x Ø... L/R5100 + 1x Ø... L/R4220 + 1x Ø... L/R4100 can be replaced with 2x Ø... L/R5110 + 1x Ø... L/R4230 and conversely.

**Used according to the total length of the tie rods.

***The plate design is depending on diameter and grade of tie rods, type and grade of sheet piles and general design solution.

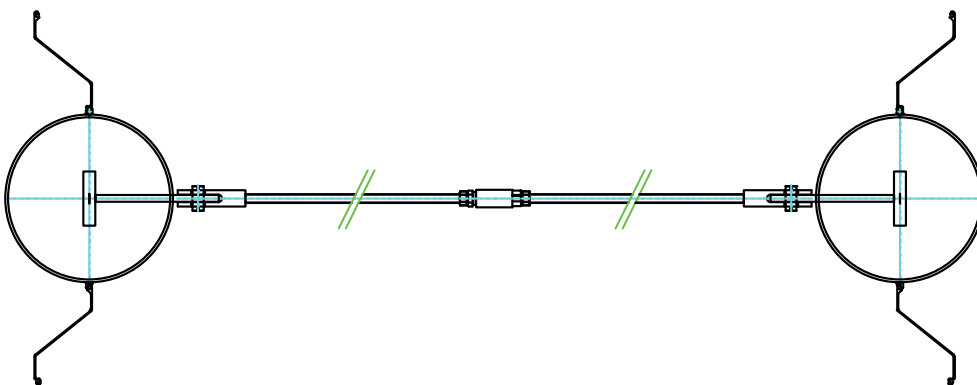
Typical assembly for Pipe/AZ[®] combi-wall

1- Standard design for pipe/AZ[®] combi-wall



- 2 x AMTB500/ AMTB670 Ø...
- 2 x anchor nut Ø... L/R2002
- 2 x plate for concrete Lxlxe grade S ***
- 2 x hinge joint Ø... L/R4320*
- 4 x lock nut Ø... L/R2040
- 1 x turnbuckle Ø... L/R3105

2- Alternative standard design for pipe/AZ[®] combi-wall



- 2 x AMTB500/ AMTB670 Ø...
- 2 x concrete connector **
- 2 x fork piece Ø... L/R4000
- 2 x bolt eye Ø... L/R4200
- 2 x lock nut Ø... L/R2040
- 1 x turnbuckle Ø... L/R3105

*2x Ø... L/R4320 can be replaced with 2x Ø... L/R54300 and conversely.

**design is depending on pipe and tie rods.

***The plate design is depending on diameter and grade of tie rods, type and grade of sheet piles and general design solution.

References

Denmark:

- Højgaard Ballen Havn
- FredericiaC -Tørdok
- Esbjerg: Kammerslusen
- Vordingborg Vesthavn
- Herning-Holstebro Motorvejen
- Ishøj, Brentedalen
- Enghavebrygge vand delen
- Rørvig Havn
- Helsingør Promenade
- Hjarnø Havn
- Valby
- Fur Havn

France:

- Melles Fos
- Vernon

Poland:

- Szczecin

American continent:

- Cuba
- Costa Rica
- Chile

Africa:

- Nigeria
- Ivory Coast

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