



atis 3

English

2010

Index

General information	6
Pilot profile	7
Dimensions, diagrams and characteristics	8
Flying techniques	14
Comments on the testing procedures	25
Harness adjustments	25
Maintenance & checks	27
Guarantee	29



Thank you for flying SKY PARAGLIDERS products

Thank you for buying the ATIS 3 glider.

We hope it will work fine for you and we wish a lot of awesome flights.

Before the first flight it is strongly recommended to have a close look at the manual.

It might help to familiarize with the product faster.

Team Sky Paragliders

Sky Paragliders, manufacturer of gliders and paragliding equipment

Sky Paragliders is a Czech company with a long tradition in the production and development of wide range of paragliding products; wings, harnesses and rescue systems included.

All the products are manufactured in the Czech Republic using the latest technologies available.

The whole production is quality oriented and the production quality is well reflected in the fact the company holds **ISO 9001:2008**.

However, it is mainly the trust in our products that provides us with the best and most valuable certificate; and not only that – your trust is the challenge for our future work.

URS is a member of Registrar of Standards (Holdings) Ltd.

A vertical photograph on the left side of the page showing two paragliders in flight against a clear blue sky. The foreground glider is yellow and black, while the one in the distance is pink and black. Below them, a hazy landscape of rolling hills and mountains is visible.

User's manual for ATIS 3 (S, M, L, XL)

(General remark: This manual complies with the regulations of EN 926-2:2005 and LTF 35/03)

Any unauthorized modification results in the expiration of the glider type approval. The operation of the glider is at your own risk only. Any liability of manufacturer or distributor is excluded. The pilot bears all responsibility for the airworthiness of his aerial sports equipment. We assume that the pilot respects applicable laws and that his piloting skills stand up to the requirements of this wing.

A. General information

1. Model names:

ATIS 3 S, ATIS 3 M, ATIS 3 L, ATIS 3 XL

2. Name & address of manufacturer:

Sky Paragliders a.s.
Okružní 39
739 11 Frýdlant nad Ostravicí
Czech Republic
www.sky-cz.com; info@sky-cz.com

3. Total minimum & maximum weights in flight:

see the technical data

4. Brake travel at maximum take-off load:

see the technical data

5. ATIS 3 is a glider for pilots with a flying experience of at least 2 years and about 50 flights per year.
6. ATIS 3 was certified as a category B of the EN 926-2 standard and as LTF 1-2 according to German LTF 35/03.
7. Manual-version of Nov. 2009

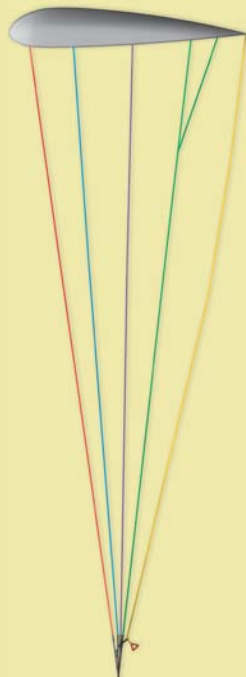
B. Pilot profile

Due to its high performance and its fine and responsive handling the ATIS 3 is not suited for basic training.

ATIS 3 addresses experienced pilots with at least 2 years of flying experience and at least 50 flights per year.

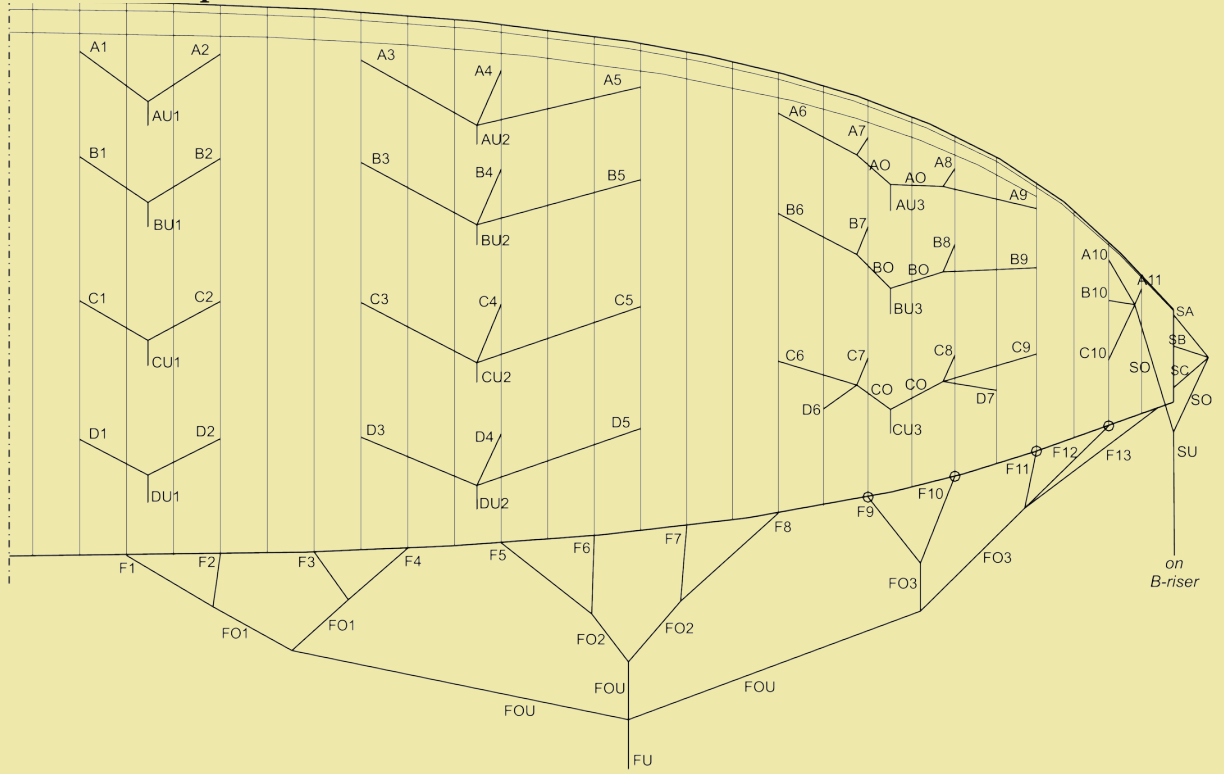
C. Dimensions, diagrams and characteristics

1a. Cross-section of ATIS 3

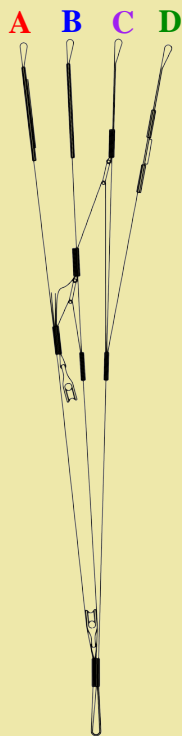


- A lines – red
- B lines – blue
- C lines – purple
- D lines – green
- Brake lines - yellow

1b. Line plan



1c. Riser diagram



Length of risers standard trim

- | S & M | L & XL |
|-------------|-------------|
| • A 47,0 cm | • A 50,0 cm |
| • B 47,0 cm | • B 50,0 cm |
| • C 47,0 cm | • C 50,0 cm |
| • D 47,0 cm | • D 50,0 cm |

Length of risers fully accelerated

- | S & M | L & XL |
|-------------|-------------|
| • A 31,6 cm | • A 33,0 cm |
| • B 34,4 cm | • B 36,0 cm |
| • C 40,7 cm | • C 43,0 cm |
| • D 47,0 cm | • D 50,0 cm |

Tolerance: +/- 0,5 cm

2. Flat span:

see technical data

3. Projected surface area:

see technical data

4. Number of cells:

see technical data

5. Number of risers:

see technical data

6. No trimmers on type-inspected or certified gliders.

7. Accelerator travel: ATIS 3 S & M: 15,4 cm

ATIS 3 L & XL: 17 cm

(see also the diagram of the riser above)

8. The brake lines are adjusted to the correct length.
If necessary, they can be shortened by 2 cm or lengthened by up to 5 cm.
9. Side views of risers: refer to the riser diagram on page 9
10. Drawings of risers:
refer to diagram of risers above



11. Technical data

ATIS 3	S	M	L	XL
Layout surface (m ²)	22,88	24,70	26,33	28,43
Layout span (m)	10,91	11,33	11,70	12,16
Layout aspect ratio	5,2	5,2	5,2	5,2
Projected surface (m ²)	20,32	22,94	23,39	25,25
Projected span (m)	9,04	9,40	9,70	10,08
Projected aspect ratio	4,02	4,02	4,02	4,02
Number of cells	53	53	53	53
Weight of the glider (kg)	4,7	4,9	5,1	5,4
Certified take-off weight (kg)	60-80	73-95	87-112	102-130
Trim speed (km/h)	37-38	37-38	37-38	37-38
Min. speed (km/h)	23	23	23	23
Max. speed (km/h)	50	51	51	52
Max. gliding ratio	> 8,8	> 8,8	> 8,8	> 8,8
Min. sink rate (m/s)	< 1,15	< 1,15	< 1,15	< 1,15
Certification	EN B/LTF1-2	EN B/LTF1-2	EN B/LTF1-2	EN B/LTF1-2

D. Flying techniques

In general the ATIS 3 can be flown conventionally.

The points listed below should help you to familiarize with your new wing even more quickly.

1. Checking the paraglider before take off

- *Check the canopy: Check for outer (sail), structural damages (ribs) or damages to the sewing.*
- *Check the gallery-lines: Check for damages and twists.*
- *Check the main lines: Check for damages and correct mounting.*
- *Check the quick links: Quick links must be mounted correctly and securely locked.*
- *Check the risers: Check for damages and twists.*
- *Check the brake lines: Check brake lines for free travel and correct length (when flown with no brake applied the brakes must not deform the canopy).
Brake handles must be linked to the brake lines properly and brake lines must be able to run freely through their pulleys.*

2. Take off

We recommend to lay out the glider in a horseshoe shape. This way the central lines are tensioned first during hoisting. Position yourself in the middle of the canopy before straightening the lines. Do so by holding your A-risers near the quick links and move forward until the slack has been taken out of your central main lines evenly.

In nil wind or a slight headwind the ATIS 3 inflates reliably and rises above the pilot after a few resolute steps with slight tension on the A-risers.

The risers should neither be pushed forward nor pulled down during inflation. It is sufficient to lead the risers upwards while applying gentle pressure, until the wing has reached its peak position.

When the canopy is positioned above the pilot, release the risers and accelerate your steps until liftoff. Watch out to keep your risers tensioned while accelerating by keeping the upper part of your body (center of gravity) in front of your feet. The take off distance can be reduced by applying brakes during the last steps.

In case of a strong headwind the canopy might overshoot the pilot.

In this case the wing has to be stopped in its peak position actively by applying brakes.

In these conditions brake input can also shorten the take off distance.



3. Landing

The ATIS 3 features a good glide (clear by above 8,5) and fine agile cornering; this has to be taken into consideration during approach and landing.

Harsh brake-operations are to be avoided during the final approach. We recommend that you make your first flights with your new ATIS 3 at a well known site with a large landing field.

Pendulum movements and very slow flying should be avoided during landing.

Recommendation: Steer your breaks negatively.

This involves applying 30% of brake symmetrically, then releasing the outside brake.

Sufficient speed upon the last meters of final approach provides a buffer for a clean flair and a soft landing.



4. Turning

The ATIS 3 was designed with comfortable handling and straightforward, stable thermal behaviour in mind.

Active piloting improves glide and climb and therefore the fun of flying.

"Active flying" means following the movements of the canopy smoothly and avoiding sudden and harsh movements. Input countering the dynamic of the canopy is to be avoided in any case!

Symmetric brake-input by about 10 to 15% ensures the retention of pressure inside the canopy and enables you to brake further in case of overshooting or to accelerate the wing when entering headwind/thermals.

5. Descent procedures

These procedures should only be carried out in suitable surroundings. Avoid crowded areas, turbulent conditions and thermal or dynamic upwash.

If a descent procedure has to be carried out (e. g. thunderstorm or over-development) the following techniques can be used:

A. Big Ears

- Pull the outmost A-line (or the respective device, if mounted) down, until the wingtip collapses. We recommend to pull in the ears one by one.
- Hold the lines (or respective device) down to keep the ears collapsed.
- Depending on the size of big ears the sinkrate can increase to 3-4 m/s.
- Operation of the accelerator can improve sink rate and speed.
- You can steer the glider while performing big ears by the weight-shift.

When releasing the lines the ears normally open gently and on their own.

Reopening can be aided by "pumping" the brakes one by one.

Symmetrical brake input to open both ears may lead to a stall.

B. Spiral

The ATIS 3 is a wing featuring fine, precise and progressive cornering behaviour.

To induce a spiral one brake is pulled up to 35 % progressively and held in this position. Weight shift to the inner side helps, but is not mandatory.

Rotational speed in the spiral increases with further brake input. Once in the spiral, speed and diving angle can be increased or slowed down by varying the brake input by a few centimeters. With a bit of experience a spiral enables sink rates of more than 10 m/s.

Fast or poorly synchronized brake-input or very steep spirals can lead to asymmetrical collapses or a flat spin.

Because of high sink rates and a possibly demanding exit we recommend not to perform this manoeuvre below 100 m above the ground.

Caution: A spiral is not a simple manoeuvre. The kinetic energy built up must be controlled by releasing the brakes. Clean entry and exit have to be trained in flying schools and must be refreshed repeatedly.

C. B-stall

Grasp the B-risers (second riser counted from the front backwards) near the quick links and pull down symmetrically.

The wing centre will deform slightly and the wing will fall back, then stabilize above the pilot and provide a sink rate of 6-8 m/s.

Exit the B-stall by symmetrically releasing both B-risers quickly. The ATIS 3 will instantly adopt trim speed.

Pilot errors (releasing risers too slowly), bad trimming or particular conditions (rain) can result in the wing not adopting trim speed on its own. In this case gently push the accelerator – the ATIS 3 will continuously return to normal flight.

If no accelerator bar is mounted pull A-risers symmetrically for about 5 cm.

***Caution: A B-stall is a stall, where the canopy does not fly any more.
Perform this manoeuvre at sufficient altitude only.***

6. Performance & use of brakes

At 0 % brake (hands up in calm air) the ATIS 3 provides best glide. The speed is 37 to 38 km/h. Minimum sink rate is achieved at 10 to 15 % brake.

Beyond 30% brake, performance figures and the behaviour of ATIS 3 will change; performance and roll-stability deteriorate and brake pressure increases heavily.

Very heavy brake pressure warns the pilot of an approaching stall-point (100 % brake).

Normally, best performance and maximum security can be found in the first third of brake travel.

7. Use of speed bar

The ATIS 3 is equipped with a speed system. Refer to your harness manufacturer's instructions for fitting and positioning of the speed bar.

Before launching, check the speed bar works freely and that the lines are long enough to ensure that it is not permanently engaged.

If the harness is equipped with a front container rescue, make sure the speed bar lines do not cross the reserve bridle.

Operation of the speed bar can increase the maximum speed of the glider by 30 % (hands up, speed bar fully engaged). The profile's angle of attack is thereby reduced, enhancing the risk for symmetric or asymmetric deformations and collapses.

Recommendation: Only operate the speed bar at sufficient altitude. In turbulent conditions apply only gently or no speed bar at all. Efficient utilization of the speed bar should be trained.

Advice: On full speed bar the glide of ATIS 3 deteriorates.

Learn to know the entire polar curve in calm air. Full bar rarely is the best choice!

8. Asymmetric or frontal (symmetric) collapses

Whilst type-inspection/certification proved the ATIS 3's ability to recover from collapses quickly and on its own, we recommend active flying and appropriate pilot's input in case of collapses. Doing so you minimize unwanted loss of altitude or change of direction.

Pilot input in case of frontal collapse:

Quickly apply 50 % brake symmetrically to speed up reopening. Release brakes instantly.

Pilot-input in case of asymmetric collapse:

Keep the glider flying straight by applying an appropriate amount of opposite brake.

Speed up the reopening of the closed side by a single, positive brake input to the collapsed side.

9. Full stall

Pilot errors or particular aerodynamic conditions can lead to a stall. Stalls are serious incidents and often difficult to control.

We recommend you instantly deploy the reserve parachute if there is less than 100 m ground clearance.

Main causes of a full stall

- Poorly timed or synchronized brake-input, especially at low speed or reduced approach flow (e. g. after exiting spiral or B-stall).
- A build up of droplets of water on the leading edge (from rain or cloud) can result in a stall due to disrupted airflow over the leading edge.

This has been linked to high levels of porosity in glider fabrics.

Regardless of the cause, a full stall can be symmetrical or asymmetrical (flat spin). In both cases the pilot can take two actions:

- If the full stall happens at more than 100m above the ground AND you know the recovery procedures well, you can recover the stall as trained. Let the wing stabilize overhead and release both brakes as trained.
- If lower than 100m or not familiar with exit procedures throw your reserve parachute instantly.

10. Flying without brakes

In case of brake failure (line blocked or broken) the ATIS 3 can be steered using the D-lines (last riser). Brake travel using D-lines is much less than using brakes. Watch for the deformation of the canopy to prevent a full stall.

Advice: Practice this steering-method so you can use it safely when necessary.



E. Comments on the testing procedures

ATIS 3 is certified to EN-category B/type-inspected as LTF 1-2; the wing is suited for qualified pilots with at least 2 years of flying experience and at least 50 flights per year. Please note that ATIS 3 responds quickly and requires measured input.

All manoeuvres during test flights were performed by professional pilots in calm air and given amounts of temperature, pressure and humidity according to the standards. Test pilots are well trained for the performance of particular manoeuvres and know how to react in case of problems.

F. Harness adjustments

Size	Height of hang points ¹⁾	Distance between riser bases ²⁾
ATIS 3 S	42-44 cm	38-42 cm
ATIS 3 M	44-46 cm	42-44 cm
ATIS 3 L	46-48 cm	44-46 cm
ATIS 3 XL	48-50 cm	46-48 cm

For test flights the pilots used ABS harnesses with the following set-up.

- 1) *Distance between seatboard and the lowest point of each riser.*
- 2) *Distance between both risers, measured at the middle of the lowest point.*

We recommend using a harness with the maximum settings as used during the certification flights. Smaller horizontal distance between risers increases the risk of twisted risers.

A looser setting will result in leaning more towards the side of a collapse and can slow down the reopening.

Low hangpoints reduce the roll-stability of your harness and can also slow down the reopening of collapses.

Hangpoints higher than tested by about 2-4 cm can be tolerated and have no influence on inflight security.

G. Maintenance & checks

1. Advice on maintenance

The lifespan of your paraglider largely depends on the care with which you maintain and use it. Avoid ruggedly dropping the leading edge onto the surface. Avoid friction of all kinds, don't drag your wing across the ground.

Don't expose your wing to sunlight unnecessarily.

Choose a folding technique preserving Mylar-stiffeners and inner structure (profile and diagonal ribs). We do not recommend the use of stuff sacks.

Always use the inner glider bag to avoid friction between the glider and rucksack or harness.

Never store your glider when it is wet or damp.

If immersed in sea water rinse with fresh water. Never use detergents or solvents – pure freshwater is sufficient.

Dry your wing in a slightly windy place in the shade.

Empty your wing regularly. Sand, grass and rocks damage stitching and cloth. Insects and organic matters may cause holes or mildew.

2. Check Ups

Before the delivery

Your wing has been checked in the factory and has been flight-tested by the distributor. It is delivered with a standard brake setting.

Periodic checks & repairs

For safety reasons we recommend having your wing checked **annually or after 100 flights**. Have your wing professional inspected if you detect damage or unusual flying behaviour.

Switzerland: Mcc Aviation SA, la Tuillière, CH-1091 Grandvaux
Tel: 021 781 26 26, Fax: 021 781 28 96, E-mail: info@mccaviation.ch

France: Rip'Air sàrl, Z.A. de Perroix, F-74290 Talloires
Tel: 04 50 64 41 02, Fax: 04 50 64 41 17, E-mail: ripair@ripair.com

Germany: Flightclub-Lenggries - Martin Schwarz, Gilgenhöfe 9, 83661 Lenggries
E-mail: martin@flightclub-lenggries.de

Austria: takeoff-paragliding - Klaus Donat, Bahnhofstraße 6, 8753 Fohnsdorf
Tel: 0664/2308196, E-mail: office@takeoff-paragliding.com

All other countires: contact local importer for hints: see www.skyparagliders.cz

H. Guarantee

ATIS 3 is guaranteed for 2 years against any production fault since the date of purchase.

The guarantee does not cover:

Damage that was caused by misuse, by neglecting the regular maintenance, or if the glider is overloaded or misused.

The guarantee also does not cover any damage caused by the inappropriate landings.

If you are ever unsure about the information contained in the manual, contact your SKY dealer.

Sky Paragliders a.s.
Okružní 39
739 11 Frýdlant nad Ostravicí
Czech Republic
Tel. + 420 558 67 60 88
www.skyparagliders.cz
info@sky-cz.com

Atis 3 S

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A1	2	7850-080-14	121,4	666,2
A2	2	7850-080-14	118,6	663,4
AU1	2	PPSL 200	545,6	
A3	2	7850-080-14	237,6	662,0
A4	2	7850-080-14	229,2	653,6
A5	2	7850-080-14	233,2	657,6
AU2	2	PPSL 200	425,2	
A6	2	7850-080-14	124,4	654,0
A7	2	7850-080-14	115,6	645,2
A8	2	7850-080-14	109,4	639,0
A9	2	7850-080-14	105,0	634,6
AO	4	7850-080-14	113,6	
AU3	2	PPSL 160	417,2	

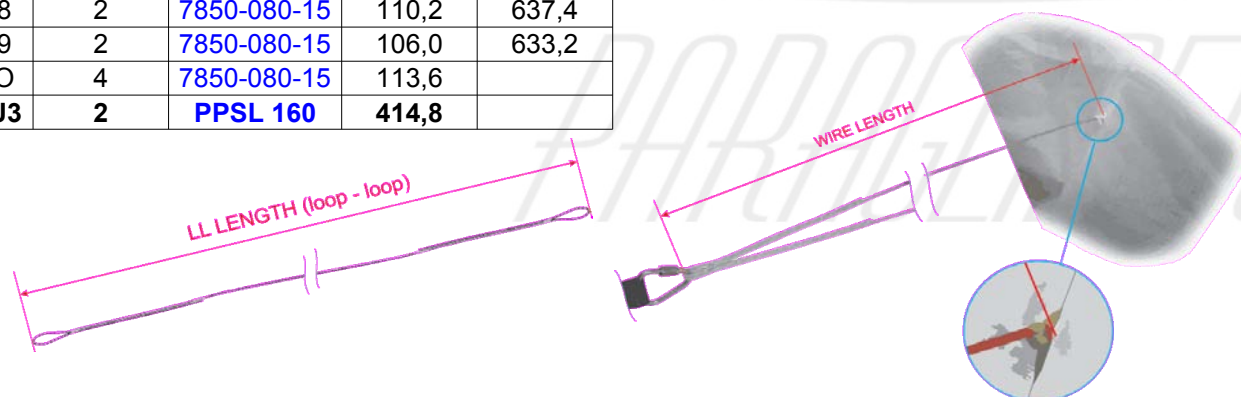
B1	2	7850-080-15	121,4	659,8
B2	2	7850-080-15	118,6	657,0
BU1	2	PPSL 200	539,2	
B3	2	7850-080-15	237,0	656,0
B4	2	7850-080-15	229,2	648,2
B5	2	7850-080-15	233,8	652,8
BU2	2	PPSL 200	419,8	
B6	2	7850-080-15	122,8	650,0
B7	2	7850-080-15	115,4	642,6
B8	2	7850-080-15	110,2	637,4
B9	2	7850-080-15	106,0	633,2
BO	4	7850-080-15	113,6	
BU3	2	PPSL 160	414,8	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
C1	2	7850-080-04	121,2	662,0
C2	2	7850-080-04	118,6	659,4
CU1	2	PPSL 160	541,6	
C3	2	7850-080-04	237,0	658,6
C4	2	7850-080-04	229,2	650,8
C5	2	7850-080-04	233,8	655,4
CU2	2	PPSL 160	422,4	
C6	2	7850-080-04	123,8	657,0
D6	2	7850-080-04	124,2	657,4
C7	2	7850-080-04	116,0	649,2
C8	2	7850-080-04	110,2	643,4
D7	2	7850-080-04	110,4	643,6
C9	2	7850-080-04	105,0	638,2
CO	4	7850-080-04	113,6	
CU3	2	PPSL 160	420,8	

D1	2	7850-080-07	121,2	672,0
D2	2	7850-080-07	119,0	669,8
DU1	2	PPSL 160	551,6	
D3	2	7850-080-07	237,0	669,4
D4	2	7850-080-07	229,2	661,6
D5	2	7850-080-07	233,8	666,2
DU2	2	PPSL 160	433,2	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A10	2	7850-080-07	100,0	614,4
A11	2	7850-080-07	91,0	605,4
B10	2	7850-080-07	98,4	612,8
C10	2	7850-080-07	104,0	618,4
SA	2	7850-080-07	83,2	597,6
SB	2	7850-080-07	82,4	596,8
SC	2	7850-080-07	85,2	599,6
SO	4	7850-080-07	206,0	
SU	2	PPSL 120	309,6	

F1	2	7850-080-40	126,8	738,0
F2	2	7850-080-40	110,0	721,2
F3	2	7850-080-40	98,4	709,6
F4	2	7850-080-40	92,0	703,2
FO1	4	7850-080-40	156,8	
F5	2	7850-080-40	103,2	694,8
F6	2	7850-080-40	93,4	685,0
F7	2	7850-080-40	89,0	680,6
F8	2	7850-080-40	90,0	681,6
FO2	4	7850-080-40	137,2	
F9	2	7850-080-40	97,6	679,0
F10	2	7850-080-40	89,8	671,2
F11	2	7850-080-40	85,2	666,6
F12	2	7850-080-40	77,0	658,4
F13	2	7850-080-40	75,0	656,4
FO3	4	7850-080-40	127,0	
FOU	6	7850-130-40	228,8	
FU	2	7850-200-40	228,8	



- 1) Before checking the wire length, pre-tension the line by the load of 22 kilograms for about 3 seconds per each line.
- 2) Always measure the wire length only when the line is tensioned by 5 kilograms.
- 3) If you need to cut the new line, the line has to be stabilized by the tension of 22 kilograms and only then could be cut under the tension of 5 kilograms.

Atis 3 S PPG

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A1	2	7850-080-14	121,4	666,2
A2	2	7850-080-14	118,6	663,4
AU1	2	PPSL 200	545,6	
A3	2	7850-080-14	237,6	662,0
A4	2	7850-080-14	229,2	653,6
A5	2	7850-080-14	233,2	657,6
AU2	2	PPSL 200	425,2	
A6	2	7850-080-14	124,4	654,0
A7	2	7850-080-14	115,6	645,2
A8	2	7850-080-14	109,4	639,0
A9	2	7850-080-14	105,0	634,6
AO	4	7850-080-14	113,6	
AU3	2	PPSL 200	417,2	

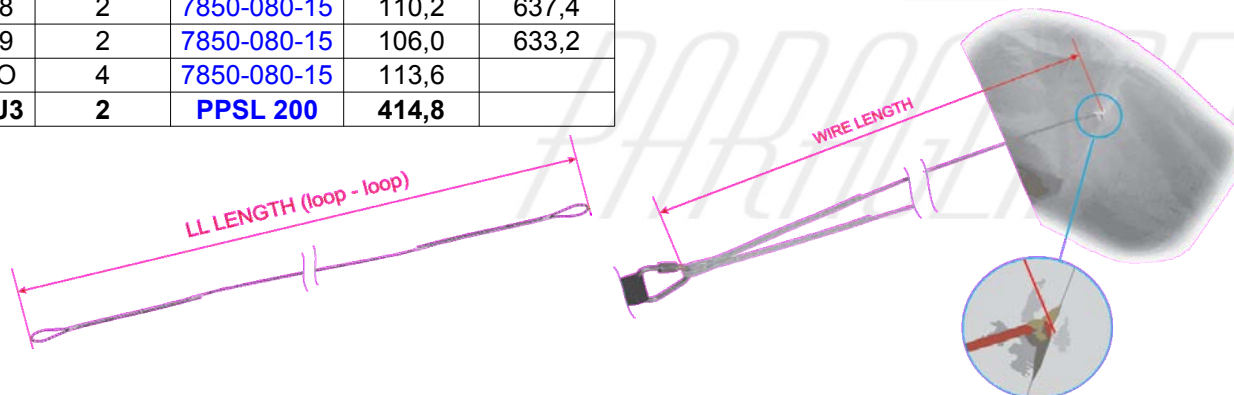
B1	2	7850-080-15	121,4	659,8
B2	2	7850-080-15	118,6	657,0
BU1	2	PPSL 200	539,2	
B3	2	7850-080-15	237,0	656,0
B4	2	7850-080-15	229,2	648,2
B5	2	7850-080-15	233,8	652,8
BU2	2	PPSL 200	419,8	
B6	2	7850-080-15	122,8	650,0
B7	2	7850-080-15	115,4	642,6
B8	2	7850-080-15	110,2	637,4
B9	2	7850-080-15	106,0	633,2
BO	4	7850-080-15	113,6	
BU3	2	PPSL 200	414,8	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
C1	2	7850-080-04	121,2	662,0
C2	2	7850-080-04	118,6	659,4
CU1	2	PPSL 200	541,6	
C3	2	7850-080-04	237,0	658,6
C4	2	7850-080-04	229,2	650,8
C5	2	7850-080-04	233,8	655,4
CU2	2	PPSL 200	422,4	
C6	2	7850-080-04	123,8	657,0
D6	2	7850-080-04	124,2	657,4
C7	2	7850-080-04	116,0	649,2
C8	2	7850-080-04	110,2	643,4
D7	2	7850-080-04	110,4	643,6
C9	2	7850-080-04	105,0	638,2
CO	4	7850-080-04	113,6	
CU3	2	PPSL 160	420,8	

D1	2	7850-080-07	121,2	672,0
D2	2	7850-080-07	119,0	669,8
DU1	2	PPSL 160	551,6	
D3	2	7850-080-07	237,0	669,4
D4	2	7850-080-07	229,2	661,6
D5	2	7850-080-07	233,8	666,2
DU2	2	PPSL 160	433,2	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A10	2	7850-080-07	100,0	614,4
A11	2	7850-080-07	91,0	605,4
B10	2	7850-080-07	98,4	612,8
C10	2	7850-080-07	104,0	618,4
SA	2	7850-080-07	83,2	597,6
SB	2	7850-080-07	82,4	596,8
SC	2	7850-080-07	85,2	599,6
SO	4	7850-080-07	206,0	
SU	2	PPSL 160	309,6	

F1	2	7850-080-40	126,8	738,0
F2	2	7850-080-40	110,0	721,2
F3	2	7850-080-40	98,4	709,6
F4	2	7850-080-40	92,0	703,2
FO1	4	7850-080-40	156,8	
F5	2	7850-080-40	103,2	694,8
F6	2	7850-080-40	93,4	685,0
F7	2	7850-080-40	89,0	680,6
F8	2	7850-080-40	90,0	681,6
FO2	4	7850-080-40	137,2	
F9	2	7850-080-40	97,6	679,0
F10	2	7850-080-40	89,8	671,2
F11	2	7850-080-40	85,2	666,6
F12	2	7850-080-40	77,0	658,4
F13	2	7850-080-40	75,0	656,4
FO3	4	7850-080-40	127,0	
FOU	6	7850-130-40	228,8	
FU	2	7850-200-40	228,8	



- 1) Before checking the wire length, pre-tension the line by the load of 22 kilograms for about 3 seconds per each line.
- 2) Always measure the wire length only when the line is tensioned by 5 kilograms.
- 3) If you need to cut the new line, the line has to be stabilized by the tension of 22 kilograms and only then could be cut under the tension of 5 kilograms.

Atis 3 M

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A1	2	7850-080-14	126,2	692,2
A2	2	7850-080-14	123,2	689,2
AU1	2	PPSL 200	566,8	
A3	2	7850-080-14	247,0	688,0
A4	2	7850-080-14	238,2	679,2
A5	2	7850-080-14	242,2	683,2
AU2	2	PPSL 200	441,8	
A6	2	7850-080-14	129,2	679,4
A7	2	7850-080-14	120,2	670,4
A8	2	7850-080-14	113,8	664,0
A9	2	7850-080-14	109,0	659,2
AO	4	7850-080-14	118,0	
AU3	2	PPSL 160	433,4	

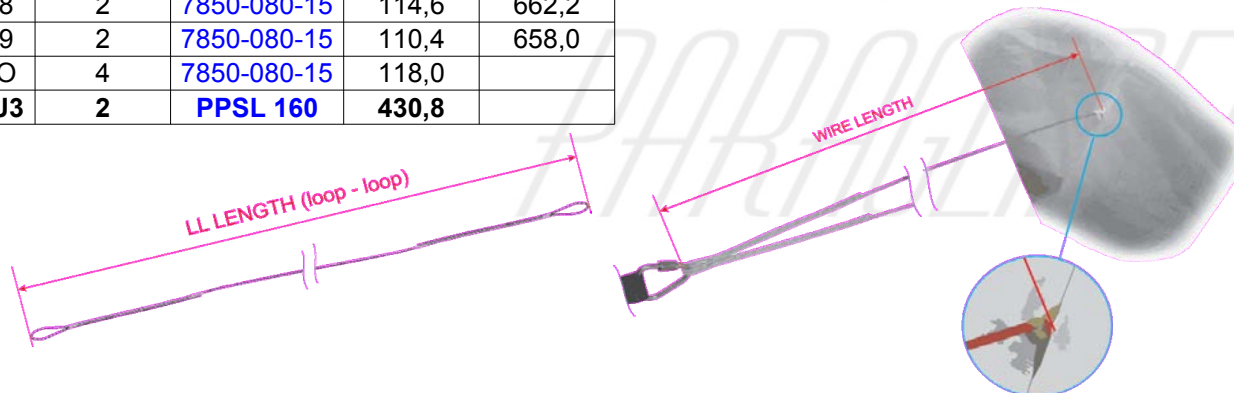
B1	2	7850-080-15	126,0	685,4
B2	2	7850-080-15	123,2	682,6
BU1	2	PPSL 200	560,2	
B3	2	7850-080-15	246,4	681,6
B4	2	7850-080-15	238,4	673,6
B5	2	7850-080-15	243,0	678,2
BU2	2	PPSL 200	436,0	
B6	2	7850-080-15	127,8	675,4
B7	2	7850-080-15	120,0	667,6
B8	2	7850-080-15	114,6	662,2
B9	2	7850-080-15	110,4	658,0
BO	4	7850-080-15	118,0	
BU3	2	PPSL 160	430,8	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
C1	2	7850-080-04	126,0	687,8
C2	2	7850-080-04	123,2	685,0
CU1	2	PPSL 160	562,6	
C3	2	7850-080-04	246,2	684,2
C4	2	7850-080-04	238,2	676,2
C5	2	7850-080-04	243,0	681,0
CU2	2	PPSL 160	438,8	
C6	2	7850-080-04	128,4	682,6
D6	2	7850-080-04	128,8	683,0
C7	2	7850-080-04	120,4	674,6
C8	2	7850-080-04	114,2	668,4
D7	2	7850-080-04	114,4	668,6
C9	2	7850-080-04	108,8	663,0
CO	4	7850-080-04	118,0	
CU3	2	PPSL 160	437,4	

D1	2	7850-080-07	125,8	698,2
D2	2	7850-080-07	123,4	695,8
DU1	2	PPSL 160	573,2	
D3	2	7850-080-07	246,2	695,4
D4	2	7850-080-07	238,2	687,4
D5	2	7850-080-07	243,0	692,2
DU2	2	PPSL 160	450,0	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A10	2	7850-080-07	104,0	638,4
A11	2	7850-080-07	94,6	629,0
B10	2	7850-080-07	102,2	636,6
C10	2	7850-080-07	108,0	642,4
SA	2	7850-080-07	86,4	620,8
SB	2	7850-080-07	85,6	620,0
SC	2	7850-080-07	88,6	623,0
SO	4	7850-080-07	214,0	
SU	2	PPSL 120	321,6	

F1	2	7850-080-40	131,8	766,6
F2	2	7850-080-40	114,4	749,2
F3	2	7850-080-40	102,2	737,0
F4	2	7850-080-40	95,6	730,4
FO1	4	7850-080-40	162,8	
F5	2	7850-080-40	107,4	722,0
F6	2	7850-080-40	97,0	711,6
F7	2	7850-080-40	92,6	707,2
F8	2	7850-080-40	93,4	708,0
FO2	4	7850-080-40	142,6	
F9	2	7850-080-40	101,4	705,4
F10	2	7850-080-40	93,2	697,2
F11	2	7850-080-40	88,6	692,6
F12	2	7850-080-40	80,0	684,0
F13	2	7850-080-40	78,0	682,0
FO3	4	7850-080-40	132,0	
FOU	6	7850-130-40	237,6	
FU	2	7850-200-40	237,6	



- 1) Before checking the wire length, pre-tension the line by the load of 22 kilograms for about 3 seconds per each line.
- 2) Always measure the wire length only when the line is tensioned by 5 kilograms.
- 3) If you need to cut the new line, the line has to be stabilized by the tension of 22 kilograms and only then could be cut under the tension of 5 kilograms.

Atis 3 M PPG

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A1	2	7850-080-14	126,2	692,2
A2	2	7850-080-14	123,2	689,2
AU1	2	PPSL 200	566,8	
A3	2	7850-080-14	247,0	688,0
A4	2	7850-080-14	238,2	679,2
A5	2	7850-080-14	242,2	683,2
AU2	2	PPSL 200	441,8	
A6	2	7850-080-14	129,2	679,4
A7	2	7850-080-14	120,2	670,4
A8	2	7850-080-14	113,8	664,0
A9	2	7850-080-14	109,0	659,2
AO	4	7850-080-14	118,0	
AU3	2	PPSL 200	433,4	

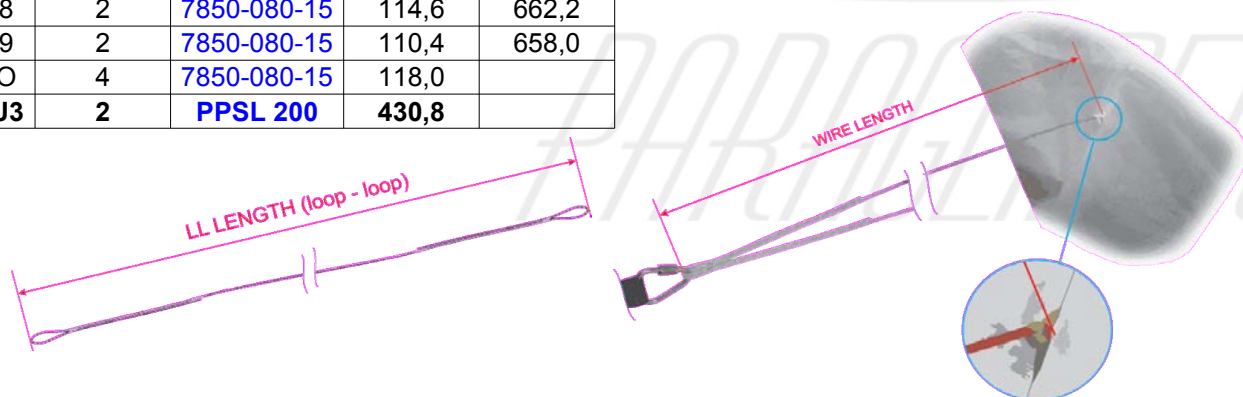
B1	2	7850-080-15	126,0	685,4
B2	2	7850-080-15	123,2	682,6
BU1	2	PPSL 200	560,2	
B3	2	7850-080-15	246,4	681,6
B4	2	7850-080-15	238,4	673,6
B5	2	7850-080-15	243,0	678,2
BU2	2	PPSL 200	436,0	
B6	2	7850-080-15	127,8	675,4
B7	2	7850-080-15	120,0	667,6
B8	2	7850-080-15	114,6	662,2
B9	2	7850-080-15	110,4	658,0
BO	4	7850-080-15	118,0	
BU3	2	PPSL 200	430,8	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
C1	2	7850-080-04	126,0	687,8
C2	2	7850-080-04	123,2	685,0
CU1	2	PPSL 200	562,6	
C3	2	7850-080-04	246,2	684,2
C4	2	7850-080-04	238,2	676,2
C5	2	7850-080-04	243,0	681,0
CU2	2	PPSL 200	438,8	
C6	2	7850-080-04	128,4	682,6
D6	2	7850-080-04	128,8	683,0
C7	2	7850-080-04	120,4	674,6
C8	2	7850-080-04	114,2	668,4
D7	2	7850-080-04	114,4	668,6
C9	2	7850-080-04	108,8	663,0
CO	4	7850-080-04	118,0	
CU3	2	PPSL 160	437,4	

D1	2	7850-080-07	125,8	698,2
D2	2	7850-080-07	123,4	695,8
DU1	2	PPSL 160	573,2	
D3	2	7850-080-07	246,2	695,4
D4	2	7850-080-07	238,2	687,4
D5	2	7850-080-07	243,0	692,2
DU2	2	PPSL 160	450,0	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A10	2	7850-080-07	104,0	638,4
A11	2	7850-080-07	94,6	629,0
B10	2	7850-080-07	102,2	636,6
C10	2	7850-080-07	108,0	642,4
SA	2	7850-080-07	86,4	620,8
SB	2	7850-080-07	85,6	620,0
SC	2	7850-080-07	88,6	623,0
SO	4	7850-080-07	214,0	
SU	2	PPSL 160	321,6	

F1	2	7850-080-40	131,8	766,6
F2	2	7850-080-40	114,4	749,2
F3	2	7850-080-40	102,2	737,0
F4	2	7850-080-40	95,6	730,4
FO1	4	7850-080-40	162,8	
F5	2	7850-080-40	107,4	722,0
F6	2	7850-080-40	97,0	711,6
F7	2	7850-080-40	92,6	707,2
F8	2	7850-080-40	93,4	708,0
FO2	4	7850-080-40	142,6	
F9	2	7850-080-40	101,4	705,4
F10	2	7850-080-40	93,2	697,2
F11	2	7850-080-40	88,6	692,6
F12	2	7850-080-40	80,0	684,0
F13	2	7850-080-40	78,0	682,0
FO3	4	7850-080-40	132,0	
FOU	6	7850-130-40	237,6	
FU	2	7850-200-40	237,6	



- 1) Before checking the wire length, pre-tension the line by the load of 22 kilograms for about 3 seconds per each line.
- 2) Always measure the wire length only when the line is tensioned by 5 kilograms.
- 3) If you need to cut the new line, the line has to be stabilized by the tension of 22 kilograms and only then could be cut under the tension of 5 kilograms.

Atis 3 L

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A1	2	7850-080-14	130,2	714,6
A2	2	7850-080-14	127,2	711,6
AU1	2	PPSL 200	585,2	
A3	2	7850-080-14	254,8	710,2
A4	2	7850-080-14	245,8	701,2
A5	2	7850-080-14	250,0	705,4
AU2	2	PPSL 200	456,2	
A6	2	7850-080-14	133,6	701,6
A7	2	7850-080-14	124,2	692,2
A8	2	7850-080-14	117,6	685,6
A9	2	7850-080-14	112,6	680,6
AO	4	7850-080-14	121,8	
AU3	2	PPSL 160	447,4	

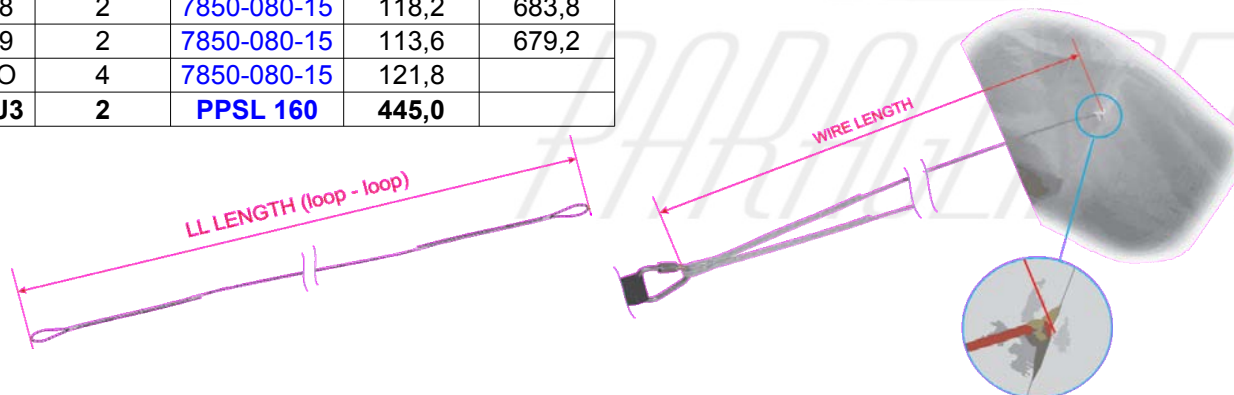
B1	2	7850-080-15	130,2	707,8
B2	2	7850-080-15	127,2	704,8
BU1	2	PPSL 200	578,4	
B3	2	7850-080-15	254,4	703,8
B4	2	7850-080-15	246,0	695,4
B5	2	7850-080-15	250,8	700,2
BU2	2	PPSL 200	450,2	
B6	2	7850-080-15	131,8	697,4
B7	2	7850-080-15	123,8	689,4
B8	2	7850-080-15	118,2	683,8
B9	2	7850-080-15	113,6	679,2
BO	4	7850-080-15	121,8	
BU3	2	PPSL 160	445,0	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
C1	2	7850-080-04	130,0	710,2
C2	2	7850-080-04	127,2	707,4
CU1	2	PPSL 160	581,0	
C3	2	7850-080-04	254,4	706,6
C4	2	7850-080-04	246,0	698,2
C5	2	7850-080-04	251,0	703,2
CU2	2	PPSL 160	453,0	
C6	2	7850-080-04	132,6	704,8
D6	2	7850-080-04	133,0	705,2
C7	2	7850-080-04	124,2	696,4
C8	2	7850-080-04	117,8	690,0
D7	2	7850-080-04	118,0	690,2
C9	2	7850-080-04	112,2	684,4
CO	4	7850-080-04	121,8	
CU3	2	PPSL 160	451,6	

D1	2	7850-080-07	129,8	721,0
D2	2	7850-080-07	127,4	718,6
DU1	2	PPSL 160	592,0	
D3	2	7850-080-07	254,0	718,0
D4	2	7850-080-07	245,8	709,8
D5	2	7850-080-07	250,8	714,8
DU2	2	PPSL 160	464,8	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A10	2	7850-080-07	107,4	659,0
A11	2	7850-080-07	97,8	649,4
B10	2	7850-080-07	105,6	657,2
C10	2	7850-080-07	111,6	663,2
SA	2	7850-080-07	89,0	640,6
SB	2	7850-080-07	88,2	639,8
SC	2	7850-080-07	91,4	643,0
SO	4	7850-080-07	220,8	
SU	2	PPSL 120	332,0	

F1	2	7850-080-40	136,0	791,6
F2	2	7850-080-40	118,0	773,6
F3	2	7850-080-40	105,6	761,2
F4	2	7850-080-40	98,6	754,2
FO1	4	7850-080-40	168,4	
F5	2	7850-080-40	110,8	745,4
F6	2	7850-080-40	100,2	734,8
F7	2	7850-080-40	95,6	730,2
F8	2	7850-080-40	96,4	731,0
FO2	4	7850-080-40	147,4	
F9	2	7850-080-40	104,6	728,4
F10	2	7850-080-40	96,2	720,0
F11	2	7850-080-40	91,4	715,2
F12	2	7850-080-40	82,6	706,4
F13	2	7850-080-40	80,4	704,2
FO3	4	7850-080-40	136,6	
FOU	6	7850-130-40	245,2	
FU	2	7850-200-40	245,2	



- 1) Before checking the wire length, pre-tension the line by the load of 22 kilograms for about 3 seconds per each line.
- 2) Always measure the wire length only when the line is tensioned by 5 kilograms.
- 3) If you need to cut the new line, the line has to be stabilized by the tension of 22 kilograms and only then could be cut under the tension of 5 kilograms.

Atis 3 L PPG

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A1	2	7850-080-14	130,2	714,6
A2	2	7850-080-14	127,2	711,6
AU1	2	PPSL 200	585,2	
A3	2	7850-080-14	254,8	710,2
A4	2	7850-080-14	245,8	701,2
A5	2	7850-080-14	250,0	705,4
AU2	2	PPSL 200	456,2	
A6	2	7850-080-14	133,6	701,6
A7	2	7850-080-14	124,2	692,2
A8	2	7850-080-14	117,6	685,6
A9	2	7850-080-14	112,6	680,6
AO	4	7850-080-14	121,8	
AU3	2	PPSL 200	447,4	

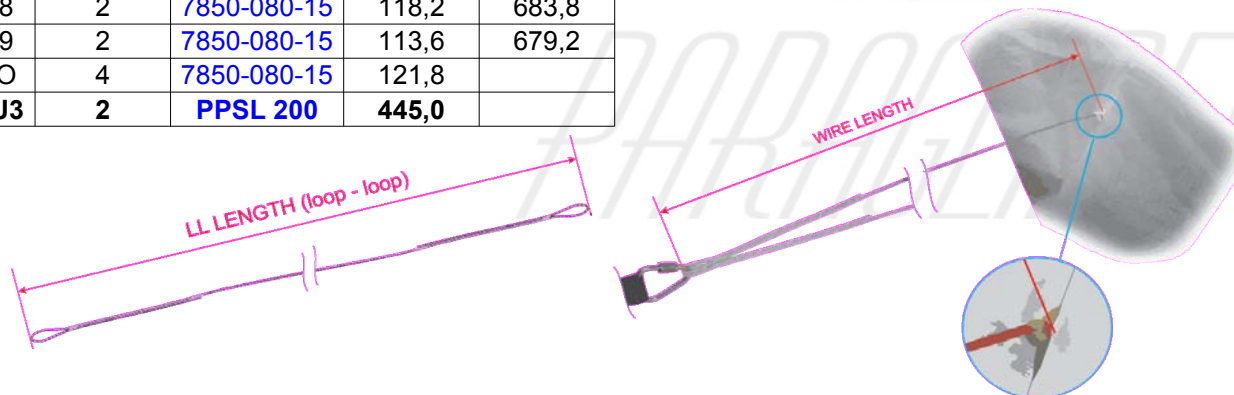
B1	2	7850-080-15	130,2	707,8
B2	2	7850-080-15	127,2	704,8
BU1	2	PPSL 200	578,4	
B3	2	7850-080-15	254,4	703,8
B4	2	7850-080-15	246,0	695,4
B5	2	7850-080-15	250,8	700,2
BU2	2	PPSL 200	450,2	
B6	2	7850-080-15	131,8	697,4
B7	2	7850-080-15	123,8	689,4
B8	2	7850-080-15	118,2	683,8
B9	2	7850-080-15	113,6	679,2
BO	4	7850-080-15	121,8	
BU3	2	PPSL 200	445,0	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
C1	2	7850-080-04	130,0	710,2
C2	2	7850-080-04	127,2	707,4
CU1	2	PPSL 200	581,0	
C3	2	7850-080-04	254,4	706,6
C4	2	7850-080-04	246,0	698,2
C5	2	7850-080-04	251,0	703,2
CU2	2	PPSL 200	453,0	
C6	2	7850-080-04	132,6	704,8
D6	2	7850-080-04	133,0	705,2
C7	2	7850-080-04	124,2	696,4
C8	2	7850-080-04	117,8	690,0
D7	2	7850-080-04	118,0	690,2
C9	2	7850-080-04	112,2	684,4
CO	4	7850-080-04	121,8	
CU3	2	PPSL 160	451,6	

D1	2	7850-080-07	129,8	721,0
D2	2	7850-080-07	127,4	718,6
DU1	2	PPSL 160	592,0	
D3	2	7850-080-07	254,0	718,0
D4	2	7850-080-07	245,8	709,8
D5	2	7850-080-07	250,8	714,8
DU2	2	PPSL 160	464,8	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A10	2	7850-080-07	107,4	659,0
A11	2	7850-080-07	97,8	649,4
B10	2	7850-080-07	105,6	657,2
C10	2	7850-080-07	111,6	663,2
SA	2	7850-080-07	89,0	640,6
SB	2	7850-080-07	88,2	639,8
SC	2	7850-080-07	91,4	643,0
SO	4	7850-080-07	220,8	
SU	2	PPSL 160	332,0	

F1	2	7850-080-40	136,0	791,6
F2	2	7850-080-40	118,0	773,6
F3	2	7850-080-40	105,6	761,2
F4	2	7850-080-40	98,6	754,2
FO1	4	7850-080-40	168,4	
F5	2	7850-080-40	110,8	745,4
F6	2	7850-080-40	100,2	734,8
F7	2	7850-080-40	95,6	730,2
F8	2	7850-080-40	96,4	731,0
FO2	4	7850-080-40	147,4	
F9	2	7850-080-40	104,6	728,4
F10	2	7850-080-40	96,2	720,0
F11	2	7850-080-40	91,4	715,2
F12	2	7850-080-40	82,6	706,4
F13	2	7850-080-40	80,4	704,2
FO3	4	7850-080-40	136,6	
FOU	6	7850-130-40	245,2	
FU	2	7850-200-40	245,2	



- 1) Before checking the wire length, pre-tension the line by the load of 22 kilograms for about 3 seconds per each line.
- 2) Always measure the wire length only when the line is tensioned by 5 kilograms.
- 3) If you need to cut the new line, the line has to be stabilized by the tension of 22 kilograms and only then could be cut under the tension of 5 kilograms.

Atis 3 XL

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A1	2	7850-080-14	135,4	742,4
A2	2	7850-080-14	132,2	739,2
AU1	2	PPSL 200	607,8	
A3	2	7850-080-14	264,8	738,0
A4	2	7850-080-14	255,4	728,6
A5	2	7850-080-14	259,8	733,0
AU2	2	PPSL 200	474,0	
A6	2	7850-080-14	138,8	729,0
A7	2	7850-080-14	129,0	719,2
A8	2	7850-080-14	122,0	712,2
A9	2	7850-080-14	117,0	707,2
AO	4	7850-080-14	126,6	
AU3	2	PPSL 160	464,8	

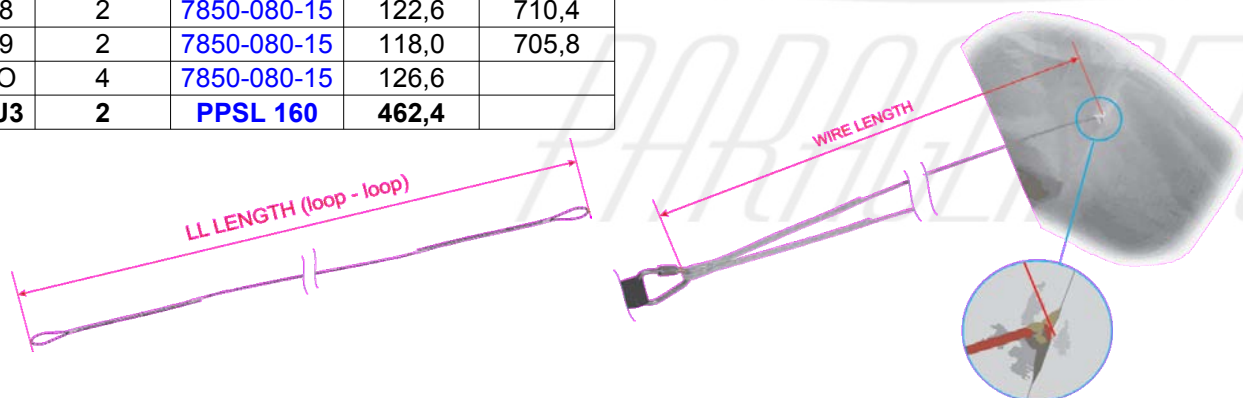
B1	2	7850-080-15	135,4	735,4
B2	2	7850-080-15	132,2	732,2
BU1	2	PPSL 200	600,8	
B3	2	7850-080-15	264,4	731,4
B4	2	7850-080-15	255,6	722,6
B5	2	7850-080-15	260,6	727,6
BU2	2	PPSL 200	467,8	
B6	2	7850-080-15	136,8	724,6
B7	2	7850-080-15	128,6	716,4
B8	2	7850-080-15	122,6	710,4
B9	2	7850-080-15	118,0	705,8
BO	4	7850-080-15	126,6	
BU3	2	PPSL 160	462,4	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
C1	2	7850-080-04	135,2	738,0
C2	2	7850-080-04	132,2	735,0
CU1	2	PPSL 160	603,6	
C3	2	7850-080-04	264,4	734,2
C4	2	7850-080-04	255,6	725,4
C5	2	7850-080-04	260,6	730,4
CU2	2	PPSL 160	470,6	
C6	2	7850-080-04	137,8	732,2
D6	2	7850-080-04	138,2	732,6
C7	2	7850-080-04	129,2	723,6
C8	2	7850-080-04	122,6	717,0
D7	2	7850-080-04	122,8	717,2
C9	2	7850-080-04	116,8	711,2
CO	4	7850-080-04	126,6	
CU3	2	PPSL 160	469,0	

D1	2	7850-080-07	135,0	749,0
D2	2	7850-080-07	132,6	746,6
DU1	2	PPSL 160	614,8	
D3	2	7850-080-07	264,2	746,0
D4	2	7850-080-07	255,6	737,4
D5	2	7850-080-07	260,4	742,2
DU2	2	PPSL 160	482,6	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A10	2	7850-080-07	111,6	685,0
A11	2	7850-080-07	101,6	675,0
B10	2	7850-080-07	109,8	683,2
C10	2	7850-080-07	116,0	689,4
SA	2	7850-080-07	92,6	666,0
SB	2	7850-080-07	91,8	665,2
SC	2	7850-080-07	95,0	668,4
SO	4	7850-080-07	229,6	
SU	2	PPSL 120	345,0	

F1	2	7850-080-40	141,4	822,6
F2	2	7850-080-40	122,6	803,8
F3	2	7850-080-40	109,6	790,8
F4	2	7850-080-40	102,6	783,8
FO1	4	7850-080-40	174,8	
F5	2	7850-080-40	115,2	774,6
F6	2	7850-080-40	104,0	763,4
F7	2	7850-080-40	99,2	758,6
F8	2	7850-080-40	100,2	759,6
FO2	4	7850-080-40	153,0	
F9	2	7850-080-40	108,6	756,6
F10	2	7850-080-40	100,0	748,0
F11	2	7850-080-40	95,0	743,0
F12	2	7850-080-40	85,8	733,8
F13	2	7850-080-40	83,6	731,6
FO3	4	7850-080-40	141,6	
FOU	6	7850-130-40	254,8	
FU	2	7850-200-40	254,8	



- 1) Before checking the wire length, pre-tension the line by the load of 22 kilograms for about 3 seconds per each line.
- 2) Always measure the wire length only when the line is tensioned by 5 kilograms.
- 3) If you need to cut the new line, the line has to be stabilized by the tension of 22 kilograms and only then could be cut under the tension of 5 kilograms.

Atis 3 XL PPG

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A1	2	7850-080-14	135,4	742,4
A2	2	7850-080-14	132,2	739,2
AU1	2	PPSL 200	607,8	
A3	2	7850-080-14	264,8	738,0
A4	2	7850-080-14	255,4	728,6
A5	2	7850-080-14	259,8	733,0
AU2	2	PPSL 200	474,0	
A6	2	7850-080-14	138,8	729,0
A7	2	7850-080-14	129,0	719,2
A8	2	7850-080-14	122,0	712,2
A9	2	7850-080-14	117,0	707,2
AO	4	7850-080-14	126,6	
AU3	2	PPSL 200	464,8	

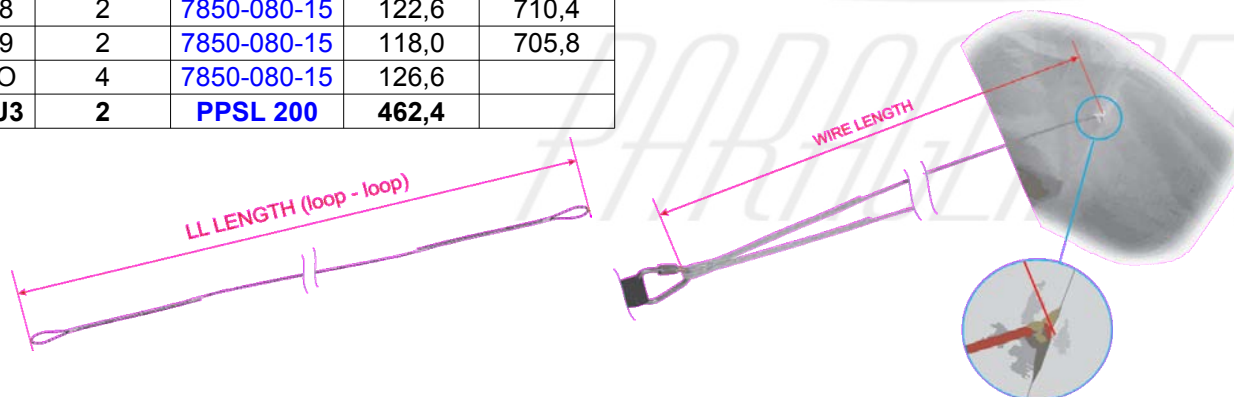
B1	2	7850-080-15	135,4	735,4
B2	2	7850-080-15	132,2	732,2
BU1	2	PPSL 200	600,8	
B3	2	7850-080-15	264,4	731,4
B4	2	7850-080-15	255,6	722,6
B5	2	7850-080-15	260,6	727,6
BU2	2	PPSL 200	467,8	
B6	2	7850-080-15	136,8	724,6
B7	2	7850-080-15	128,6	716,4
B8	2	7850-080-15	122,6	710,4
B9	2	7850-080-15	118,0	705,8
BO	4	7850-080-15	126,6	
BU3	2	PPSL 200	462,4	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
C1	2	7850-080-04	135,2	738,0
C2	2	7850-080-04	132,2	735,0
CU1	2	PPSL 200	603,6	
C3	2	7850-080-04	264,4	734,2
C4	2	7850-080-04	255,6	725,4
C5	2	7850-080-04	260,6	730,4
CU2	2	PPSL 200	470,6	
C6	2	7850-080-04	137,8	732,2
D6	2	7850-080-04	138,2	732,6
C7	2	7850-080-04	129,2	723,6
C8	2	7850-080-04	122,6	717,0
D7	2	7850-080-04	122,8	717,2
C9	2	7850-080-04	116,8	711,2
CO	4	7850-080-04	126,6	
CU3	2	PPSL 160	469,0	

D1	2	7850-080-07	135,0	749,0
D2	2	7850-080-07	132,6	746,6
DU1	2	PPSL 160	614,8	
D3	2	7850-080-07	264,2	746,0
D4	2	7850-080-07	255,6	737,4
D5	2	7850-080-07	260,4	742,2
DU2	2	PPSL 160	482,6	

NAME	QUANTITY	MATERIAL	LL LENGTH	WIRE LENGTH
A10	2	7850-080-07	111,6	685,0
A11	2	7850-080-07	101,6	675,0
B10	2	7850-080-07	109,8	683,2
C10	2	7850-080-07	116,0	689,4
SA	2	7850-080-07	92,6	666,0
SB	2	7850-080-07	91,8	665,2
SC	2	7850-080-07	95,0	668,4
SO	4	7850-080-07	229,6	
SU	2	PPSL 160	345,0	

F1	2	7850-080-40	141,4	822,6
F2	2	7850-080-40	122,6	803,8
F3	2	7850-080-40	109,6	790,8
F4	2	7850-080-40	102,6	783,8
FO1	4	7850-080-40	174,8	
F5	2	7850-080-40	115,2	774,6
F6	2	7850-080-40	104,0	763,4
F7	2	7850-080-40	99,2	758,6
F8	2	7850-080-40	100,2	759,6
FO2	4	7850-080-40	153,0	
F9	2	7850-080-40	108,6	756,6
F10	2	7850-080-40	100,0	748,0
F11	2	7850-080-40	95,0	743,0
F12	2	7850-080-40	85,8	733,8
F13	2	7850-080-40	83,6	731,6
FO3	4	7850-080-40	141,6	
FOU	6	7850-130-40	254,8	
FU	2	7850-200-40	254,8	



- 1) Before checking the wire length, pre-tension the line by the load of 22 kilograms for about 3 seconds per each line.
- 2) Always measure the wire length only when the line is tensioned by 5 kilograms.
- 3) If you need to cut the new line, the line has to be stabilized by the tension of 22 kilograms and only then could be cut under the tension of 5 kilograms.