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### GENERAL PRODUCT DESCRIPTION

iPASSIVE FR Collars are designed to maintain the fire resistance of fire rated walls and floors where these are breached by plastic pipes, and may be used in gypsum, masonry and concrete walls and floors.

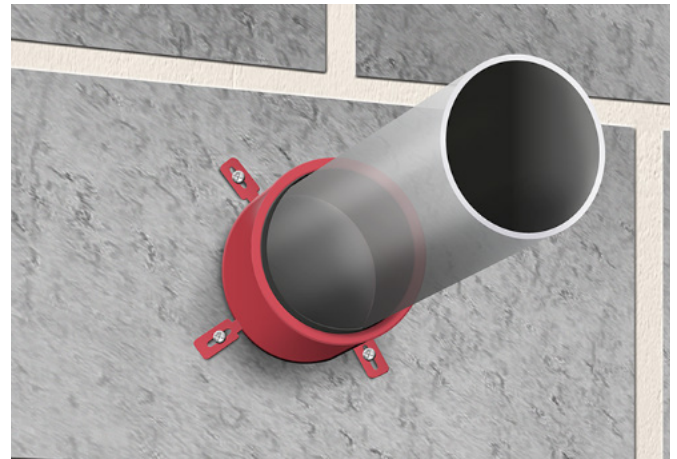
Each pipe collar consists of a white coated circular steel shell that splits in two to fit around the service penetrations by means of a simple 'slide-lock' system. The steel shell contains a graphite based reactive material which reacts when exposed to heat closing the openings left by the softening plastic pipe in fire.

### GENERAL GUIDE

**Minimum separations and limitations:** Services can be sealed as specified in the detailed drawings. Services within the iPASSIVE FR Collar systems do not require a minimum separation, only requiring sufficient to securely fit the collars onto the substrate. For larger apertures other than described in these installation instructions, iPASSIVE FR Board or iPASSIVE FR Mortar with iPASSIVE FR Wrap should be used.

**Supporting constructions:** Flexible walls must have a minimum thickness of 100 mm and comprise steel studs or timber studs\*) lined on both faces with minimum 2 layers of 12.5 mm thick boards. Rigid walls must have a minimum thickness of 100 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m<sup>3</sup>. Rigid floors must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 650 kg/m<sup>3</sup>. The supporting construction must be otherwise tested or assessed to achieve the required FRL of the penetration seal in accordance with AS1530.4 -2014.

\*Timber studs: no part of the penetration seal may be closer than 100 mm to a stud, and minimum 100 mm of insulation must be provided within the cavity between the penetration seal and the stud.



### INSTALLATION INSTRUCTIONS

1. For sealing plastic pipes in floors, a single pipe collar is installed on the underside of the floor and for flexible and solid walls, a pipe collar is installed on both sides of the wall.

2. Before fitting the pipe collar ensure that any gaps between the pipe and the separating element are sealed as follows:

**In gypsum walls,** gaps between the pipe and the construction below 8mm must have a bead of iPASSIVE FR Acrylic to cover the opening, and for gaps 8mm or above, the seal must be plugged with 25mm deep FR Acrylic.

**In masonry/concrete walls,** gaps between the pipe and the construction below 8mm must have a bead of iPASSIVE FR Acrylic to cover the opening, and for gaps 8mm or above, the seal must be plugged with 20mm deep FR Acrylic on 20mm deep backing of stone wool.

**In floors,** gaps between the pipe and the construction below 10mm must have 20mm deep stone wool to plug the opening, and for gaps 10mm or above, the seal must be plugged with 10mm deep FR Acrylic on 40mm deep backing of stone wool.

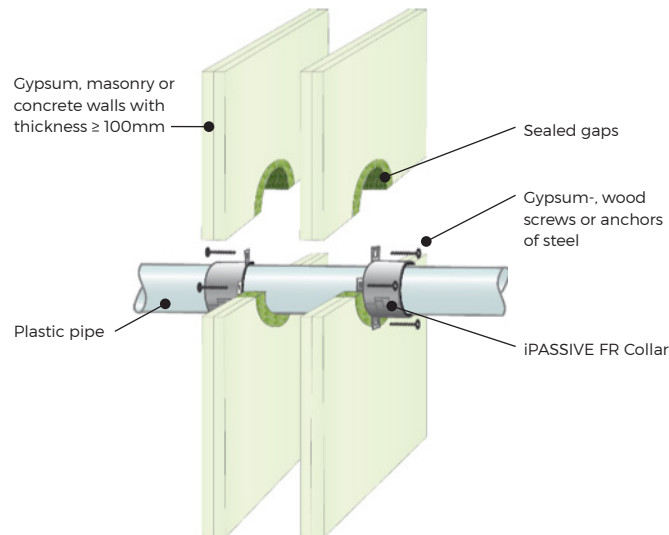
3. Place a pipe collar around the service penetration (pipe) and ensure that the fixing lugs are positioned tightly to the surface of the wall or the floor so that the anchors/fixings can be inserted fully.

4. Where the surface is uneven, apply a sealing bead of iPASSIVE FR Acrylic between the wall/floor and the pipe collar.

5. Attach the pipe collar with steel screws, anchors or fixings that are suitable for the substrate that the pipe collar will be fitted to. For flexible walls use > Ø4 mm gypsum, wood screws or anchors with a length suitable for the number of boards that form the wall. For concrete/masonry walls and floors, use > Ø4 x 50mm long masonry screws or expansion bolts.

6. On site where the penetration size is greater than the pipe diameter and/or the pipe is in an angle an oversized collar can be used. iPASSIVE FR Collars are tested 'oversize', i.e. the internal diameter of the collar can be larger than the pipe.

### iPASSIVE FR COLLARS IN FLEXIBLE OR SOLID WALLS



PE (LD-PE, MD-PE, HD-PE), ABS & SAN+PVC Pipes						
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 – 5.6	30	-/90/60	-/90/60	-/90/30	-/90/30
40	3.0 – 5.6	30	-/90/60	-/90/60	-/90/30	-/90/30
50	3.0 – 5.6	30	-/90/60	-/90/60	-/90/30	-/90/30
55	3.1 – 6.0	30	-/60/60	-/60/60	-	-
55	3.1 – 5.0	50	-/60/60	-/60/60	-/90/30	-/90/30
63	3.1 – 6.6	30	-/60/60	-/60/60	-	-
63	3.1 – 5.7	50	-/60/60	-/60/60	-/90/30	-/90/30
75	3.2 – 7.5	30	-/60/60	-/60/60	-	-
75	3.2 – 6.8	50	-/60/60	-/60/60	-/90/30	-/90/30
82	3.2 – 8.0	30	-/60/60	-/60/60	-	-
82	3.2 – 7.4	50	-/60/60	-/60/60	-/90/30	-/90/30
90	3.2 – 8.3	30	-/60/60	-/60/60	-	-
90	3.3 – 8.1	50	-/60/60	-/60/60	-/90/30	-/90/30
110	3.4 – 10.0	30	-/60/60	-/60/60	-	-
110	3.4 – 10.0	50	-/90/60	-/90/60	-/90/60	-/90/60
125	4.2 – 9.8	50	-/60/60	-/60/60	-	-
125	4.0 – 11.5	60	-/90/60	-/90/60	-/90/60	-/90/60
140	5.1 – 9.6	50	-/60/60	-/60/60	-	-
140	4.4 – 12.8	60	-/90/60	-/90/60	-/90/60	-/90/60
160	6.2 – 9.5	50	-/60/60	-/60/60	-	-
160	4.9 – 14.6	60	-/90/90	-/90/90	-/90/90	-/90/90
200	18.2	75	-/60/60	-	-	-
250	22.7	75	-/60/60	-	-	-

\*1.2 – 4.6 mm pipe wall thicknesses are allowed in C/C and U/C configurations.

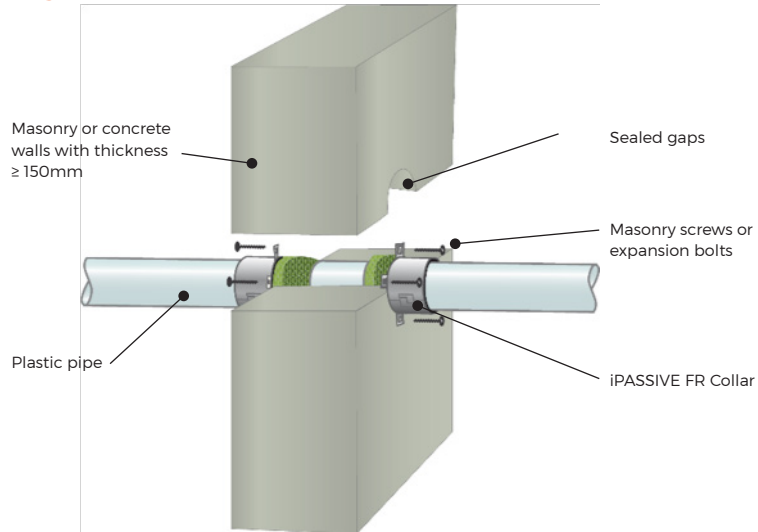
### IPASSIVE FR COLLARS IN FLEXIBLE OR SOLID WALLS CONT...

PE (LD-PE, MD-PE, HD-PE), ABS & SAN+PVC PIPES						
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 5.6	30	-/90/60	-/90/60	-/90/30	-/90/30
40	3.0 - 5.6	30	-/90/60	-/90/60	-/90/30	-/90/30
50	3.0 - 5.6	30	-/90/60	-/90/60	-/90/30	-/90/30
55	3.1 - 6.0	30	-/60/60	-/60/60	-	-
55	3.1 - 5.0	50	-/60/60	-/60/60	-/90/30	-/90/30
63	3.1 - 6.6	30	-/60/60	-/60/60	-	-
63	3.1 - 5.7	50	-/60/60	-/60/60	-/90/30	-/90/30
75	3.2 - 7.5	30	-/60/60	-/60/60	-	-
75	3.2 - 6.8	50	-/60/60	-/60/60	-/90/30	-/90/30
82	3.2 - 8.0	30	-/60/60	-/60/60	-	-
82	3.2 - 7.4	50	-/60/60	-/60/60	-/90/30	-/90/30
90	3.2 - 8.3	30	-/60/60	-/60/60	-	-
90	3.3 - 8.1	50	-/60/60	-/60/60	-/90/30	-/90/30
110	3.4 - 10.0	30	-/60/60	-/60/60	-	-
110	3.4 - 10.0	50	-/90/60	-/90/60	-/90/60	-/90/60
125	4.2 - 9.8	50	-/60/60	-/60/60	-	-
125	4.0 - 11.5	60	-/90/60	-/90/60	-/90/60	-/90/60
140	5.1 - 9.6	50	-/60/60	-/60/60	-	-
140	4.4 - 12.8	60	-/90/60	-/90/60	-/90/60	-/90/60
160	6.2 - 9.5	50	-/60/60	-/60/60	-	-
160	4.9 - 14.6	60	-/90/90	-/90/90	-/90/90	-/90/90
200	18.2	75	-/60/60	-	-	-
250	22.7	75	-/60/60	-	-	-

PP PIPES						
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.8 - 5.6	30	-/90/60	-/90/60	-/90/60	-/90/60
40	1.8 - 5.6	30	-/90/60	-/90/60	-/90/60	-/90/60
50	1.8 - 5.6	30	-/90/60	-/90/60	-/90/60	-/90/60
55	2.0 - 5.7	30	-/90/60	-/90/60	-	-
55	2.0 - 4.7 *)	50	-/90/60	-/90/60	-/90/60	-/90/60
63	2.2 - 5.8	30	-/90/60	-/90/60	-	-
63	2.2 - 5.0 *)	50	-/90/60	-/90/60	-/90/60	-/90/60
75	2.5 - 5.9	30	-/90/60	-/90/60	-	-
75	2.5 - 5.4 *)	50	-/90/60	-/90/60	-/90/60	-/90/60
82	2.7 - 6.0	30	-/90/60	-/90/60	-	-
82	2.7 - 5.6 *)	50	-/90/60	-/90/60	-/90/60	-/90/60
90	2.9 - 6.1	30	-/90/60	-/90/60	-	-
90	2.9 - 5.9 *)	50	-/90/60	-/90/60	-/90/60	-/90/60
110	3.4 - 6.3	30	-/90/60	-/90/60	-	-
110	3.4 - 6.6 *)	50	-/90/60	-/90/60	-/90/60	-/90/60
125	3.8 - 11.7	50	-/60/60	-/60/60	-	-
125	3.9 - 9.0	60	-/60/60	-/60/60	-/60/60	-/60/60
140	4.2 - 12.9	50	-/60/60	-/60/60	-	-
140	4.4 - 11.4	60	-/60/60	-/60/60	-/60/60	-/60/60
160	4.9 - 14.6	50	-/60/60	-/60/60	-	-
160	4.9 - 14.6	60	-/60/60	-/60/60	-/60/60	-/60/60

\*Thicker pipe wall thicknesses are allowed in C/C and U/C configurations.

### IPASSIVE FR COLLARS IN SOLID WALLS



#### PVC-U & PVC-C PIPES

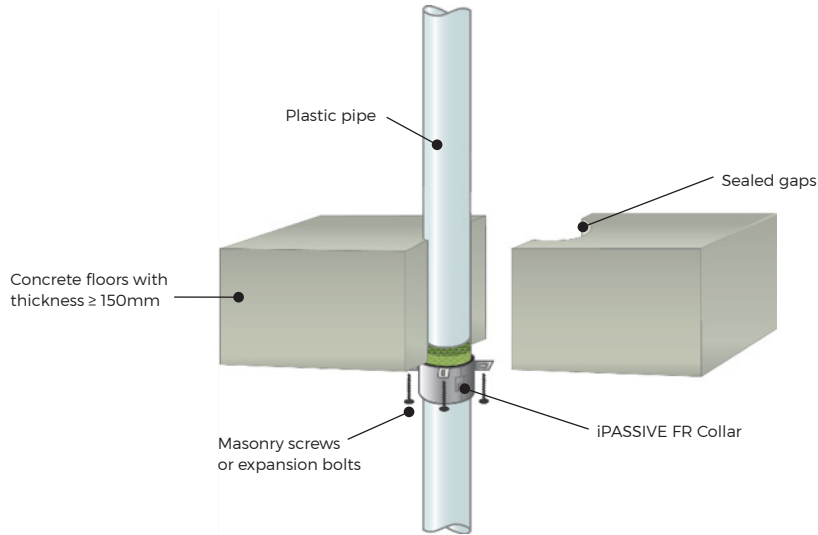
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	2.0 - 3.7	50	-/240/180	-/240/180	-/240/180	-/240/180
40	2.0 - 3.7	50	-/240/180	-/240/180	-/240/180	-/240/180
50	2.0 - 3.7	50	-/240/180	-/240/180	-/240/180	-/240/180
55	2.1 - 3.9	50	-/180/180	-/180/180	-/180/180	-/180/180
63	2.2 - 4.3	50	-/180/180	-/180/180	-/180/180	-/180/180
75	2.3 - 4.9	50	-/180/180	-/180/180	-/180/180	-/180/180
82	2.4 - 5.2	50	-/180/180	-/180/180	-/180/180	-/180/180
90	2.5 - 5.6	50	-/180/180	-/180/180	-/180/180	-/180/180
110	2.7 - 6.6	50	-/180/180	-/180/180	-/180/180	-/180/180
125	3.1 - 7.5	60	-/240/240	-/240/240	-/240/240	-/240/240
140	3.4 - 8.4	60	-/240/240	-/240/240	-/240/240	-/240/240
160	4.0 - 9.5	60	-/240/240	-/240/240	-/240/240	-/240/240
315	9.2	75	-/120/120	-	-	-

### IPASSIVE FR COLLARS IN SOLID WALLS CONT...

PE (LD-PE, MD-PE, HD-PE), ABS & SAN+PVC PIPES						
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 4.6	50	-/240/240	-/240/240	-/240/240	-/240/240
40	3.0 - 4.6	50	-/240/240	-/240/240	-/240/240	-/240/240
50	3.0 - 4.6	50	-/240/240	-/240/240	-/240/240	-/240/240
55	3.1 - 4.5	50	-/240/180	-/240/180	-/240/180	-/240/180
63	3.1 - 4.3	50	-/240/180	-/240/180	-/240/180	-/240/180
75	3.2 - 4.1	50	-/240/180	-/240/180	-/240/180	-/240/180
82	3.3 - 3.9	50	-/240/180	-/240/180	-/240/180	-/240/180
90	3.3 - 3.8	50	-/240/180	-/240/180	-/240/180	-/240/180
110	3.4 - 3.4	50	-/240/180	-/240/180	-/240/180	-/240/180
125	3.9 - 5.2	60	-/180/180	-/180/180	-/180/180	-/180/180
140	4.3 - 7.0	60	-/180/180	-/180/180	-/180/180	-/180/180
160	4.9 - 9.5	60	-/180/180	-/180/180	-/180/180	-/180/180
200	18.2	75	-/60/60	-	-	-
250	22.7	75	-/120/90	-	-	-

PP PIPES						
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.6 - 5.5	30	-/240/240	-/240/240	-/240/240	-/240/240
40	1.6 - 5.5	30	-/240/240	-/240/240	-/240/240	-/240/240
50	1.6 - 5.5	30	-/240/240	-/240/240	-/240/240	-/240/240
55	1.7 - 5.9	50	-/240/240	-/240/240	-/240/60	-/240/60
63	1.8 - 6.5	50	-/240/240	-/240/240	-/240/60	-/240/60
75	2.1 - 7.3	50	-/240/240	-/240/240	-/240/60	-/240/60
82	2.2 - 7.9	50	-/240/240	-/240/240	-/240/60	-/240/60
90	2.3 - 8.5	50	-/240/240	-/240/240	-/240/60	-/240/60
110	2.7 - 10.0	50	-/240/240	-/240/240	-/240/60	-/240/60
125	3.3 - 11.4	60	-/240/180	-/240/180	-/240/60	-/240/60
140	4.0 - 12.8	60	-/240/180	-/240/180	-/240/60	-/240/60
160	4.9 - 14.6	60	-/240/180	-/240/180	-/240/180	-/240/180

### PASSIVE FR COLLARS IN FLOORS



PVC-U & PVC-C PIPES						
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.9 - 3.7	30	-/90/60	-/90/60	-/90/60	-/90/60
32	2.0 - 3.7	50	-/120/120	-/120/120	-/90/60	-/90/60
40	1.9 - 3.7	30	-/90/60	-/90/60	-/90/60	-/90/60
40	2.0 - 3.7	50	-/120/120	-/120/120	-/90/60	-/90/60
50	1.9 - 3.7	30	-/90/60	-/90/60	-/90/60	-/90/60
50	2.0 - 3.7	50	-/120/120	-/120/120	-/90/60	-/90/60
55	2.1 - 3.9	30	-/60/60	-/60/60	-/60/60	-/60/60
55	2.4 - 4.3	50	-/120/120	-/120/120	-/60/60	-/60/60
63	2.2 - 4.3	30	-/60/60	-/60/60	-/60/60	-/60/60
63	3.0 - 4.6	50	-/120/120	-/120/120	-/60/60	-/60/60
75	2.5 - 4.9	30	-/60/60	-/60/60	-/60/60	-/60/60
75	3.9 - 4.9	50	-/120/120	-/120/120	-/60/60	-/60/60
82	2.6 - 5.2	30	-/60/60	-/60/60	-/60/60	-/60/60
82	4.5 - 5.2	50	-/120/120	-/120/120	-/60/60	-/60/60
90	2.8 - 5.6	30	-/60/60	-/60/60	-/60/60	-/60/60
90	5.1 - 5.6	50	-/120/120	-/120/120	-/60/60	-/60/60
110	3.2 - 6.6	30	-/60/60	-/60/60	-/60/60	-/60/60
110	6.6 - 6.6	50	-/120/120	-/120/120	-/60/60	-/60/60
125	3.2 - 7.4	60	-/120/120	-/120/120	-/60/60	-/60/60
140	3.2 - 8.3	60	-/120/120	-/120/120	-/60/60	-/60/60
160	3.2 - 9.5	50	-/180/90	-/180/90	-	-
160	3.2 - 9.5	60	-/120/120	-/120/120	-/60/60	-/60/60



### IPASSIVE FR COLLARS IN FLOORS CONT...

PE (LD-PE, MD-PE, HD-PE), ABS & SAN+PVC PIPES						
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 4.6	30	-/60/60	-/60/60	-/60/60	-/60/60
32	3.0 - 4.6	50	-/120/120	-/120/120	-/60/60	-/60/60
40	3.0 - 4.6	30	-/60/60	-/60/60	-/60/60	-/60/60
40	3.0 - 4.6	50	-/120/120	-/120/120	-/60/60	-/60/60
50	3.0 - 4.6	30	-/60/60	-/60/60	-/60/60	-/60/60
50	3.0 - 4.6	50	-/120/120	-/120/120	-/60/60	-/60/60
55	3.1 - 5.1	50	-/120/120	-/120/120	-/60/60	-/60/60
63	3.1 - 5.8	50	-/120/120	-/120/120	-/60/60	-/60/60
75	3.2 - 6.9	50	-/120/120	-/120/120	-/60/60	-/60/60
82	3.3 - 7.5	50	-/120/120	-/120/120	-/60/60	-/60/60
90	3.3 - 8.2	50	-/120/120	-/120/120	-/60/60	-/60/60
110	3.4 - 10.0	50	-/120/120	-/120/120	-/60/60	-/60/60
125	3.9 - 11.3	50	-/120/120	-/120/120	-	-
125	3.9 - 11.3	60	-/120/120	-/120/120	-/60/60	-/60/60
140	4.4 - 12.7	50	-/120/120	-/120/120	-	-
140	4.4 - 12.7	60	-/120/120	-/120/120	-/60/60	-/60/60
160	4.9 - 14.7	50	-/180/120	-/180/120	-	-
160	4.9 - 14.6	60	-/180/120	-/180/120	-/60/60	-/60/60

PP PIPES						
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.8 - 4.6	30	-/120/120	-/120/120	-/120/120	-/120/120
40	1.8 - 4.6	30	-/120/120	-/120/120	-/120/120	-/120/120
50	1.8 - 4.6	30	-/120/120	-/120/120	-/120/120	-/120/120
55	1.9 - 4.7	50	-/120/120	-/120/120	-/60/60	-/60/60
63	2.0 - 5.0	50	-/120/120	-/120/120	-/60/60	-/60/60
75	2.2 - 5.4	50	-/120/120	-/120/120	-/60/60	-/60/60
82	2.3 - 5.6	50	-/120/120	-/120/120	-/60/60	-/60/60
90	2.5 - 5.9	50	-/120/120	-/120/120	-/60/60	-/60/60
110	2.7 - 6.6	50	-/120/120	-/120/120	-/60/60	-/60/60
125	4.7 - 11.4	50	-/60/60	-/60/60	-	-
125	3.4 - 8.9	60	-/120/120	-/120/120	-	-
140	6.8 - 12.8	50	-/60/60	-/60/60	-	-
140	4.1 - 11.2	60	-/120/120	-/120/120	-	-
160	9.5 - 14.6	50	-/60/60	-/60/60	-	-
160	4.9 - 14.6	60	-/180/180	-/180/180	-	-