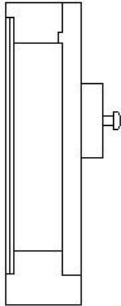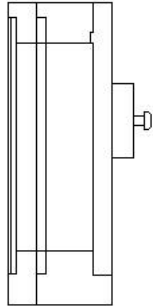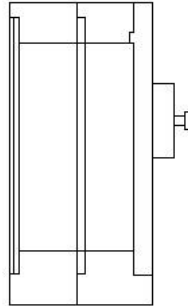# RealitySoSubtle 4x5 Z

- The RSS 4x5Z is a multi focal camera that can be arranged in 4 different configurations of focal distance - 35mm, 50mm, 75mm and 90mm.
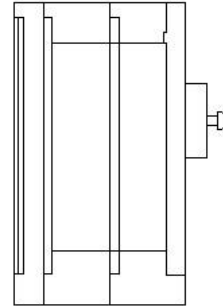

35mm - Back only

50mm - Back + half extension

75mm - Back + extension

90mm - Back + extension + half extension

- The camera consists of a back, extension, half extension and one or more shutter-boards.
- The camera and shutter-boards are oiled for a weatherproof finish. Material is marine grade plywood.
- The shutter boards come in 3 different configurations - 0.2mm with rise, 0.3mm with 'rise' and 0.3mm single hole with 52mm filter. All pinholes are precision laser drilled.
- The 'rise' pinholes (these are offset from the center) are to be used as movements are used with large format cameras. The 'rise' is especially useful for architecture photography and effects are more pronounced at shorter focal distances (35 and 50mm). The shutter-boards can be fitted 'upside-down' to turn 'rise' into 'fall'.
- Selection of the correct size pinhole for a given focal distance is important.. easiest way to remember is : **0.2mm for 35mm (shortest focal distance possible) and 0.3mm for everything else**.

Exposure:

- To determine exposure use the business card sized table supplied with the camera (shown here)

4X5Z EXPOSURE CHART

	35mm	50mm	75mm	90mm
f16	f/175	f/166	f/250	f/300
1/125	1.0	0.9	2.0	2.8
1/60	2.0	1.7	4.0	5.6
1/30	4.0	3	8.0	11.2
1/15	8	7	16	22
1/8	16	14	32	45
1/4	32	28	1m4	1m30
1/2	1m	55	2m08	3m
1 sec	2m	1m50	4m16	6m
2 sec	4m	3m40	8m32	12m
4 sec	8m	7m20	17m4	24m

Meter at f16 and convert for pinhole camera.
Reciprocity not included.

- Use a light meter (or a light meter app on your smart phone *) and meter your scene with an aperture of f16. Make sure to have your film ISO set on the meter beforehand. For example if your meter says to use a shutter speed of 1/15th of a sec at f16 you use the table to read the corresponding pinhole exposure value depending on which focal distance you have set.. say here you are using 50mm - then the required exposure will be 7 seconds..
- You need to include reciprocity failure which varies film to film but as a general guide the following works well.

  Exposures between 1 and 10 seconds - Add 1 stop (i.e. double exposure time - 2x)

  Exposures between 10 and 100 seconds - Add 2 stops (i.e. double exposure time twice - 4x)

  Exposures between 100 and 1000 seconds - Add 3 stops (i.e. double exposure time thrice - 8x)

* Light meter app for IOS - Pinhole Assist is an excellent app - will also include reciprocity for many films.

  For Android - Light Meter Free