

IKELITE SLR PORTS

Ikelite offers a full range of interchangeable SLR ports to accommodate most camera lenses, from fisheye and macro to zoom and telephoto. These ports are easily interchangeable on Ikelite SLR housings. Match the camera lens with the appropriate lens port. *No port is provided with the housing.*

Treat the lens port as a camera lens. Upon entering the water, gently wipe the front of the lens port with your fingers to remove the small air bubbles. Immediately after use, rinse and gently dry the port to avoid water spotting.

INSTALLING THE PORT

Check that the clean lubricated o-ring is properly positioned on the lip of the lens port. Lift up on the release button and slide each port lock away from the port opening.

Center the port over the port opening on the housing. Press the port firmly and evenly onto the housing, and rotate the port slightly. **MAINTAIN** steady downward pressure on the port while sliding both port locks toward the port.

Push each port lock forward until the lock fully engages. It may help to slightly rotate the port as you push in on the port lock. **VISUALLY INSPECT** the port lock and confirm that the Port Lock Release Button is seated flush against the Port Lock Body. **DO NOT** rely on an audible "Click" to indicate that the lock is engaged.

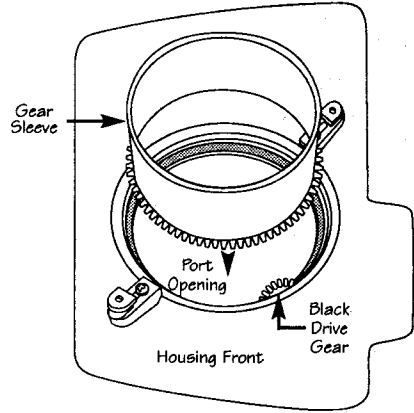
SECURING THE PORT

The lens port may be installed before or after inserting the camera and closing the housing. It is easiest to install the lens port **AFTER** the camera has been installed.

GEAR SLEEVE

The gear sleeve is required **ONLY** when using manual focus lenses **OR** auto focus zoom lenses.

It is easiest if the camera has already been installed in the housing with the focus / zoom clamp positioned around the focus or zoom barrel of the lens. Then place the gear sleeve **TEETH DOWN** over the port opening on the housing. Align the gear sleeve so the two ribs inside the sleeve slide thru the extension slots on the clamp. The gear teeth on the sleeve **MUST** mesh with the black drive gear operated by the focus or zoom control on the housing.

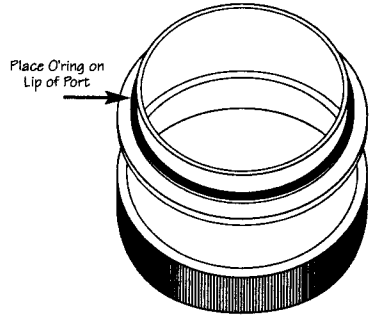


PORT O-RING

The port o-ring is supplied with the lens port. Note the positioning of the o-ring on the port.

Keep the port o-ring and all sealing surfaces clean. **DO NOT** stretch the o-ring when cleaning and lubricating. **LIGHTLY LUBRICATE** the port o-ring with the silicone lubricant provided. Use only enough lubricant to lightly cover the o-ring; wipe off any excess with a clean cloth. Also lightly lubricate the port opening on the housing.

Lubrication only reduces friction; it is **NOT** a sealant. Never use spray lubricant as it may cause cracking of the plastic. *Place the clean lubricated o-ring on the lip of the lens port.*



PORT LOCKS

INSTALLING THE PORT

Check that the clean lubricated o-ring is properly positioned on the lip of the lens port. Lift up on the release button and slide each port lock away from the port opening. Center the port over the port opening on the housing. Press the port firmly and evenly onto the housing, and rotate the port slightly. MAINTAIN steady downward pressure on the port while sliding both port locks toward the port. Push each port lock forward until the lock fully engages. It may help to slightly rotate the port as you push in on the port lock. VISUALLY INSPECT the port lock and confirm that the Port Lock Release Button is seated flush against the Port Lock Body. DO NOT rely on an audible "Click" to indicate that the lock is engaged.

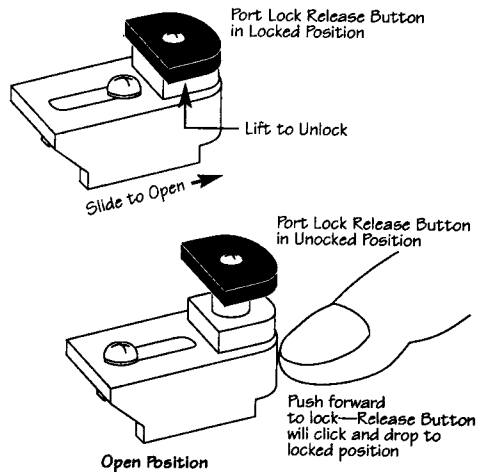
PORT LOCK #9072.24

Lift up on the release button and slide the port lock away from the port opening.

Now slide the port lock toward the port opening; the port lock will CLICK, and the release button will drop down when locked in position.

Port locks must CLICK into the locked position; otherwise the lens port could possibly leak or fall off.

DO NOT remove the port locks except when cleaning.



CHECK O-RING/PORT REMOVAL

CHECKING THE O-RING SEAL

Check the port o-ring seal from outside the port. Also view the port seal thru the sides of the housing.

Look for a *solid o-ring seal line* around the perimeter of the port. This indicates a proper seal. The o-ring seal should appear as a true circle with no indents. A properly sealed port may still have a slight wobble.

PORT REMOVAL

Remove the port o-ring before storing the housing for a prolonged period. Clean the o-ring and store it in a plastic bag inside the housing. To remove the port, release each port lock and SLIDE both locks away from the port.

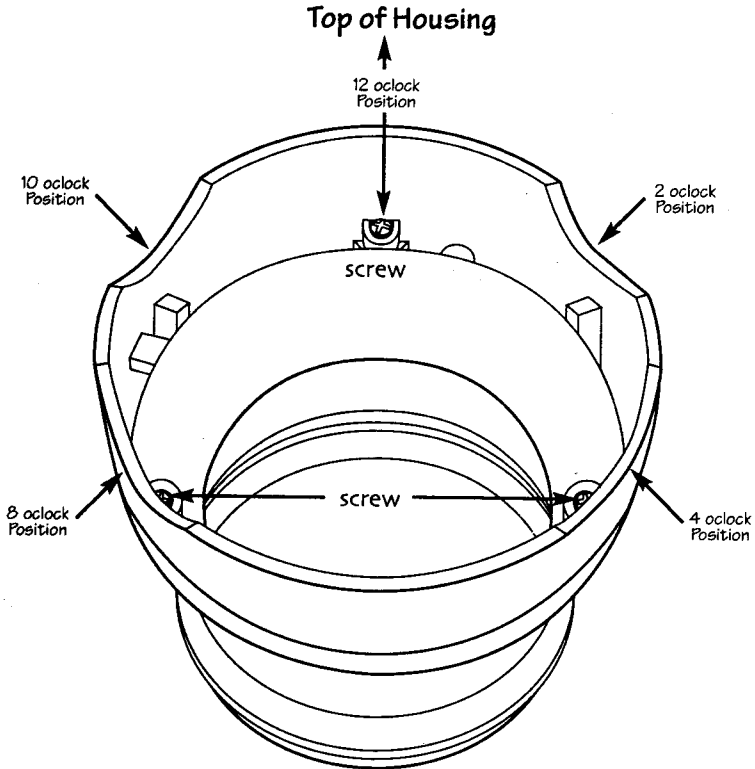
Should the o-ring stick to the housing when the port is removed, clean and lightly lubricate the port o-ring and place it back on the lip of the port. Or store the o-ring in a plastic bag.

DOME PORT SHADE

DOME PORT SHADE

The black protective shade is supplied with all dome ports except the Super-Wide Dome #5503.15 due to vignetting.

We suggest installing the dome port with the protective shade positioned as shown below to eliminate vignetting.



If you still experience vignetting with the dome shade properly aligned, the shade may be removed by removing the three screws shown in the drawing above.

CHOOSING A PORT

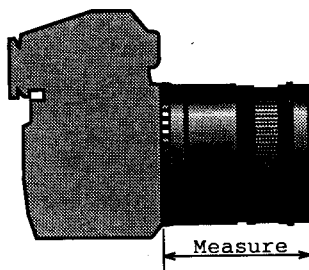
Ikelite offers a full range of interchangeable SLR ports to accommodate most camera lenses, from fisheye and macro to zoom and telephoto. Match the camera lens with the appropriate lens port based on the lens type and length. Treat the lens port as a camera lens. **DO NOT use the housing without a port.**

- **Dome Port**
Recommended for wide angle lenses and auto focus zoom lenses.
- **Flat Port**
Recommended for standard, macro, and telephoto lenses.

MEASURING THE LENS

Select the appropriate port based on the length of the camera lens.

1. Install lens on camera.
2. Extend the lens to its maximum length.
3. Measure from the front of the camera to the face of the lens.



See the Dome Port and Flat Port sections for a listing of ports offered.

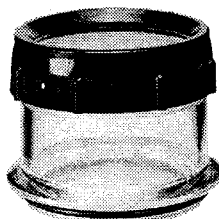
LIMITATIONS

Maximum lens diameter accommodated is 8.4cm (3.3"). For attachment of zoom or focus clamp, the maximum diameter is 7.1cm (2.8")

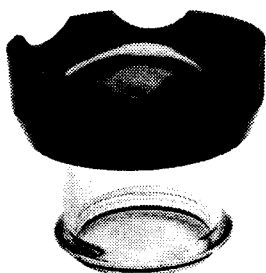
A flat port may cause vignetting with a 1:1 macro lens at infinity; if full range 1:1 to infinity is needed, select a dome port instead.



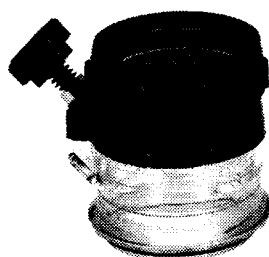
5503



5502



5503.80



5506

REASONS FOR THE DOME PORT

A dome port is recommended for lenses wider than 35mm, all zoom lenses, and 1:1 macro lenses to eliminate vignetting. The dome corrects for refraction to maintain the same coverage angle underwater. Standard and telephoto lenses will NOT benefit by using a dome. Manual focus zooms are not recommended.

The following dome ports are available. Treat the dome port as a camera lens. Black protective shade is provided with all dome ports except #5503.15.

Maximum Lens Length	Dome Port
Wide angle lens 28mm to 17mm or Lens up to 7.6 cm (to 3")	#5503
7.6 - 10.1 cm (3 - 4")	#5503.50
8.9 - 11.4 cm (3.5 - 4.5")	#5503.55
10.1 - 12.7 cm (4 - 5")	#5503.80
12.7 - 15.2 cm (5 - 6")	#5503.85
110°-170° Superwide lens to 6.3cm (2.5")	#5503.15

LENS-SPECIFIC 6" DOME PORTS

Nikon 18mm & 20mmD	#5503.20
Olympus (Zuiko) 7-14mm	#5503.30
Tokina 12-24mm	#5503.51
Nikkor 28-105mm 1:3.5-4.5D Macro	#5503.81
Nikkor 18-105mm 1:3.5-5.6 VR.....	#5503.82
Canon 17-85mm EFS.....	#5503.90

For the latest information on lenses and ports see the Ikelite website.

FOCUSING BEHIND THE DOME

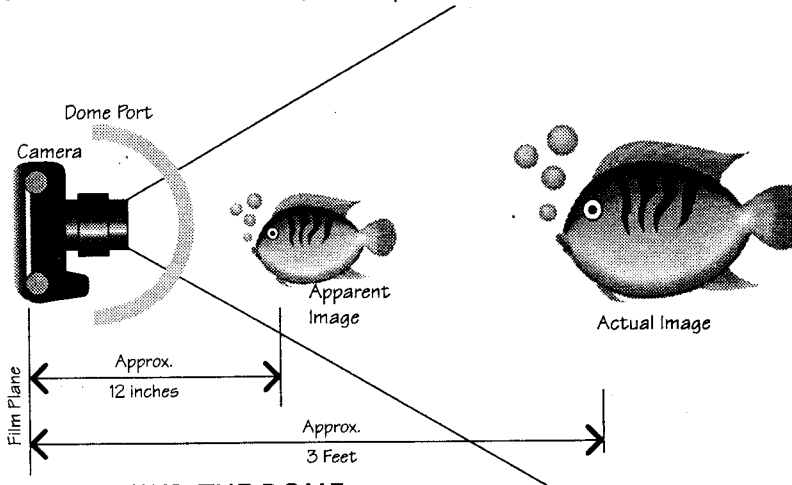
REASONS FOR THE DOME

- Increases color saturation.
- Corrects for refraction, thereby providing the same coverage angle underwater as above water.
- Increases definition of underwater images.

HOW THE DOME WORKS

The dome port offers no special optics *above water* and simply functions as a clear window.

Underwater, the dome functions as an optical lens in conjunction with the water to create an apparent image much closer than the actual subject and the camera then focuses on this apparent image. Zoom lenses are unable to focus on the apparent image at this close distance so a +4 close-up lens must be added.



FOCUSING BEHIND THE DOME

Manual Focus Lens

Set camera focus to 30cm (12"). Subjects between a few centimeters/inches and 2-2.5m (6-8') should remain in focus without refocusing. Subjects farther away may require a slight adjustment of the manual focus control. Manual focus zoom lenses are not recommended.

Auto Focus Lens

The camera's auto focus feature will automatically focus the lens on the apparent image when you lightly depress the shutter release.

Auto focus zoom lenses are ideal as they allow medium wide angle, standard, and close-up photographs to be taken all on the same dive. Simply rotate the zoom ring to the picture desired and press the shutter release. Only rotational type zoom lenses can be used; push-pull zooms will NOT work.

When using an auto focus zoom lens, a +4 close-up lens may be required on the front of the zoom lens. The +4 close-up allows the camera to automatically focus on the apparent image throughout the entire zoom range. For above water use, the +4 close-up lens MUST be removed. (+4 close-up lens is available from a camera store).

FLAT PORT

A Flat Port is recommended for standard, macro, and telephoto lenses as these lenses benefit from the refraction effects of water.

HOW THE FLAT PORT WORKS

The flat port offers no special optics *above water* and simply functions as a clear window. *Underwater*, the flat port magnifies the subject to appear closer and larger. Termed refraction, it also narrows the coverage angle underwater. The enlarged image is beneficial for standard, telephoto, and macro lenses. Lens focal lengths longer than 135mm are not recommended.

The following flat extension ports are available. Treat the flat port as a camera lens.

Maximum Lens Length	Flat Port
Lens up to 6.3 cm (to 2.5")	#5501
6.3 - 8.9 cm (2.5 - 3.5")	#5502
7.9 - 10.4 cm (3.125 - 4.125")	#5502.41
8.9 - 11.4 cm (3.5 - 4.5")	#5505
10.4 - 13.0 cm (4.125 - 5.125")	#5505.45
11.4 - 14.0 cm (4.5 - 5.5")	#5505.5
13.0 - 15.5 cm (5.125 - 6.125")	#5505.58

Maximum Lens Length	Flat Port with Focus
8.9 - 11.4 cm (3.5 - 4.5")	#5506
11.4 - 14.0 cm (4.5 - 5.5")	#5506.5
14.0 - 16.5 cm (5.5 - 6.5")	#5507
16.5 - 19.0 cm (6.5 - 7.5")	#5508
Specifically for Nikon 105mm AF	#5508.05

NOTE FOR 1:1 MACRO LENS

The flat port may cause vignetting with a 1:1 macro lens at infinity; if full range 1:1 to infinity is needed, select a dome port instead.

LENS-SPECIFIC FLAT PORTS

Nikon 105mm 1:2.8 G ED-IF AF-S VR *	#5505.46
Nikon 105mm Micro-Nikkor Macro D **	#5508.05
Canon 100mm 1:2.8 EF USM Macro	#5508.45
Sigma 70mm f/2.8 EX DG Macro	#5508.70

* Auto focus only

** AF/MF and ratio switches on lens cannot be operated

For the latest information on lenses and ports see the Ikelite website.

FLAT PORT WITH FOCUS

A flat port with focus is recommended for long manual focus lenses whose focus collar extends beyond the housing's gear sleeve. A gear sleeve and lens focus clamp are included with these ports.

LONG LENS (No Extension Tube)

*Focus control on the housing will NOT be used.
Instead use the focus control on the port.*

1. Install the focus clamp and aperture gear on the lens as usual.
2. Remove the gear sleeve from the housing and remove the gear sleeve from this port. NEITHER gear sleeve will be used with this camera lens.
3. Install the camera and lens in the housing.
4. Another gear sleeve is permanently secured in this port. Align the gear sleeve with the two slots on the focus clamp, and install the port on the housing.

LONG LENS WITH EXTENSION TUBE

*Aperture control on housing will NOT be used because of the extension tube.
Instead, use the focus control on the housing to change aperture, and use the focus control on the port to adjust the focus.*

1. Install the focus clamp on the lens as usual. Install the other focus clamp on the lens aperture ring. (Focus control on housing now operates the aperture).
2. Remove the gear sleeve from the housing; it will not be used.
3. Install the camera and lens in the housing.
4. Remove the gear sleeve from this port, and position it around the clamp on the lens aperture.
5. Another gear sleeve is permanently secured in this port. Align the gear sleeve with the two slots on the focus clamp, and install the port on the housing.

FLAT PORT #5508.05

*This port is intended exclusively for use with the Nikon 105mm AF lens.
Focus control on housing will change the lens between auto and manual focus.
Focus control on port manually focuses the lens after changing lens to manual.*

1. Install the aperture gear on the lens as usual.
2. Remove the gear sleeve from the housing; it will not be used.
3. Place the switch on the camera body in the auto focus mode and then install the camera and lens in the housing.
4. Remove the gear sleeve from the end of the port. One rib inside the gear sleeve is shorter and tapered; align this shorter tapered rib with the manual-to-auto focus button on the lens and slide the gear sleeve over the lens so that the shorter rib depresses the focus button. The gear teeth on the sleeve MUST mesh with the black gear operated by the focus control on the housing.
5. Another gear sleeve is permanently secured in this special port and it will automatically mesh with the focus barrel on the lens once the port is installed on the housing; no separate clamp is needed.

CLEANING

CLEANING THE PORT

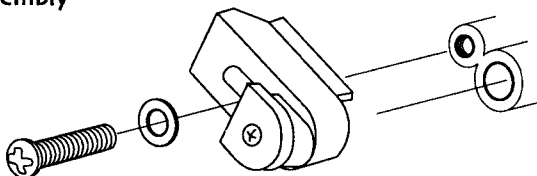
Immediately after use, rinse and gently dry the port to avoid water spotting. **DO NOT** use alcohol or window cleaners on the port as either may cause cracking. Use a mild soap solution or lens cleaner. Minor exterior scratches will usually fill with water and not affect the picture quality.

CLEANING THE PORT LOCKS

Each port lock can be removed from the housing to be cleaned and lightly lubricated. When removing the port lock from the housing, it is **NOT** necessary to disassemble the port lock.

The screw securing the port lock to the housing should be tightened as securely as possible while still allowing the port lock assembly to slide freely and smoothly.

Port Lock Assembly



MAINTENANCE

1. Keep the port o-ring and sealing surfaces clean. **DO NOT** stretch the o-ring when cleaning. Lightly lubricate the port o-ring to facilitate installation and removal of the port.
2. Always rinse the camera housing in fresh water after each use. Rinse and gently dry the port immediately after use to avoid water spotting. The housing can be cleaned by soaking it in a mild soapy solution. Use a liquid soap; **RINSE** and **DRY** the housing before storage.
3. **DO NOT** use alcohol or window cleaners on Ikelite ports as either may cause cracking. Use a mild soap solution or lens cleaner. Minor exterior scratches will usually fill with water and not affect picture quality.
4. Remove the port o-ring before storing the housing for a prolonged period. Store the o-ring in a plastic bag inside the housing.
5. Each port lock can be removed to be cleaned and lightly lubricated. The screw should be tightened as securely as possible while still allowing the assembly to slide freely and smoothly.

LUBRICANT

Use only Ikelite brand silicone lubricant with Ikelite brand o-rings as other brand lubricants can cause Ikelite o-rings to swell in size.

DO NOT use spray lubricant as it may cause cracking of the plastic.

Silicone lubricant is provided. Use only enough lubricant to lightly cover the port o-ring; wipe off any excess with a clean cloth.

Lubricant only reduces friction; it is NOT a sealant.

LIMITED WARRANTY

All Ikelite products are warranted against any manufacturing defects for a period of one (1) year from the date of purchase. Defective products should be returned prepaid to Ikelite. Ikelite will, at its discretion, repair or replace such products, and will return to customer prepaid. All other claims, of any nature, including but not limited to bulb failure are not covered. Except as mentioned above, no other warranty expressed or implied, applies to this Ikelite product.

IKELITE UNDERWATER SYSTEMS

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