

## ATR Analyser: Oil and fuel condition monitoring instrument

Bringing the lab to the field





ENGINEERING YOUR SUCCESS.

# **Introducing the future** of oil and fuel testing

Monitoring the condition of lubricants and fuels is a key priority for engineers within the marine, mining and other industrial sectors. Contaminated and degraded lubricants and fuels can lead to a whole host of problems, ranging from inefficiencies and costly downtime, to expensive repairs and permanent damage.

While chemical testing may be one of the most common ways of analysing lubricants and fuels, it's a process that involves transporting, using and disposing of hazardous chemicals.

The ATR Analyser from Parker Kittiwake has been specifically developed to eliminate these risks by replacing the need for chemical testing.

A reagentless test analyser, the ATR Analyser is safe and highly cost effective and can be used in a wide range of applications to provide reliable trending analysis of oil and fuel parameters.



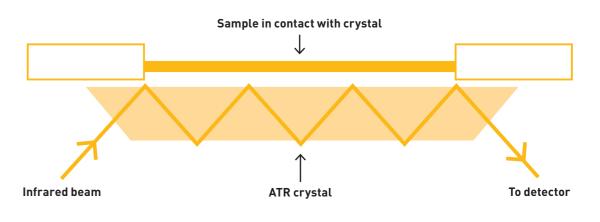
#### The ATR Analyser can be used in the following industries:

Truck and mobile equipment Off-shore
Off-shore

#### Tried and tested technology

The ATR Analyser from Parker Kittiwake incorporates ATR (Attenuated Total Reflectance) technology, and uses a predictive method of testing from the recorded IR spectrum.

Mid-Infrared (IR) spectroscopy is an extremely reliable and well recognised fingerprinting method, capable of characterising, identifying and quantifying a wide range of substances. The ATR Analyser is fitted with a crystal upon which samples are placed for analysis, as illustrated in the diagram below.



## One product,

### seven different tests

Easy to use, the Parker Kittiwake ATR Analyser enables multi-parameter testing to be carried out for different types of oil and fuel:

Fluid type	Property	Range	Typical uncertainty <sup>1</sup>	Units
Mineral oil	Water content	0 – 20,000	500	ppm by mass
Mineral oil	Base number (BN)	0 – 150	3.0	mg KOH / g
Mineral oil	Acid number (AN)	0 – 10	0.2	mg KOH / g
Mineral oil	Anti-wear additive <sup>2</sup>	0 – 20	2.0	AU per 0.1mm
Mineral oil	Soot loading	0 – 5.0	0.5	% by mass
Mineral oil	Viscosity	5 - 450	10% of reading	cSt <sup>3</sup>
Diesel fuel	FAME content	0.1 – 99.9	0.3	% by mass

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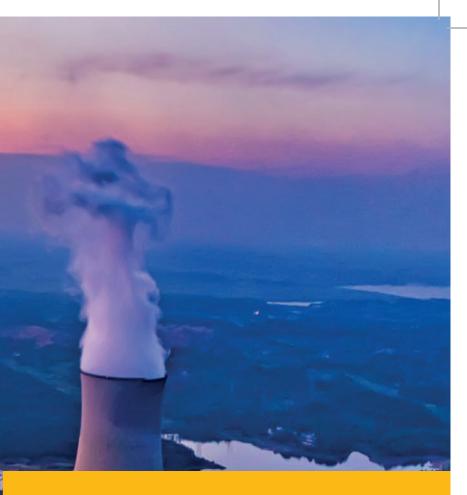
<sup>1</sup> For a 95% confidence level.

<sup>2</sup> Calibrated using FTIR trend values measured by ASTM E2412 standard practice. <sup>3</sup> Predicted value in centistokes that would be measured at 40°C.

#### Condition monitoring excellence

Not only does the ATR Analyser enable multiple tests to be conducted using a single product, it can determine the physical and chemical condition of oil and fuel, as well as detect any traces of contamination.





#### ATR Analyser benefits - at a glance

Faster testing - all results delivered in <3 minutes

Easy to use - no specialist training required

Low maintenance - simply wipe clean after use

Reagentless - no supply logistics or costs

**Option to upgrade** - for analysis of additional fluid types

## Simple.

## Efficient.



Whatever the conditions, the ATR Analyser from Parker Kittiwake offers a straightforward method of testing that can be operated by anyone.

#### Step 1

Turn on and allow home screen to appear.

#### Step 2

Select oil/fuel type.

Step 3

Follow on-screen instructions.

#### Step 4

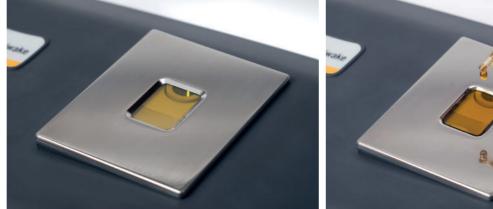
Place oil sample on to the ATR crystal, using supplied pipette.

#### Step 5

Select 'start test'.

#### Step 6

The measured values are presented on-screen and stored in memory for later retrieval.





## Bringing the lab to the field

No re-calibration required as the ATR Analyser does its own internal performance checks, it is incredibly easy to use and requires minimal maintenance. Other key benefits include:

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ATR ANALYSER

#### Quick testing and results

Obtain real-time results in a matter of minutes and effortlessly detect any potential issues before major damage is caused.

#### Easy to use

The ATR Analyser utilises a simple method that can be carried out by anyone, without the need for training.

#### Multi-parameter

Save time, as well as money, by eliminating the need to carry out separate chemical tests, which can be hazardous and time consuming.

#### Easy to maintain

Simply wipe the ATR crystal clean after use with supplied cleaning wipes.

#### Reliable trending

Obtain results that correlate to accepted laboratory methods.

#### Minimal hassle

Analyse oil and fuel easily and minimise the amount of on-board equipment required to do it. The ATR Analyser is the only piece of equipment that's required.

#### Tailored analysis

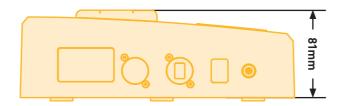
The ATR Analyser can be upgraded to analyse additional types of fluids.



#### The Parker Kittiwake ATR Analyser specifications:

Rated input voltage	12 V d.c. (regulated power supply)
Rated input current	0.7 A
Operating temperature	10°C to 40°C
IP rating	IP22
Instrument weight	1.6 Kg
Test time	100 seconds
Unit dimensions	246mm wide
	276mm deep
	81mm high

# 246mm 276mm



#### The Parker Kittiwake ATR Analyser features:





#### Ordering information for the Parker Kittiwake ATR Analyser:

Option		Measureme	nt range	Future options	Future optional (ie. branding indent)		
Mineral oil	1	Standard	1	0	Standard	0	
Part number Option		Measurement range		Future range	Future options		
1		1		0	0		
Description Qu				To discuss how Parker Kittiwake can help you monitor and control the quality and efficiency of your lubricants and fuels, contact our expert consultants:			
ATR Analyser		ATR1100					
ATR Consumable pack:			004				
Pipette 3ml							
Alcohol wipes							
				United Kingdom, BN17 7LU T. +44 1903 731 470			
				E. kittiwakeinfo@pa www.kittiwake.com			
	Mineral oil Option	Mineral oil 1 Option	Mineral oil       1       Standard         Option       Measurement         1       1         1       1         1       1         I       1         I       1         I       1         I       1         I       1         I       1         I       1         I       1         I       1         I       1         I       100 per pack	Mineral oil1Standard1OptionMeasurement range1111111ATR11001ACCK05U4100 per pack100 per pack	Mineral oil       1       Standard       1       0         Option       Measurement range       Future range         1       1       0         Quantity       Part number       To discuss how Park you monitor and con efficiency of your lub contact our expert of 100 per pack       To discuss how Park you monitor and con efficiency of your lub contact our expert of 100 per pack       To discuss how Park you monitor and con efficiency of your lub contact our expert of the parker Kittiwake, 3-Littlehampton, West United Kingdom, BN         100 per pack       T. +44 1903 731 470 E. kittiwakeinfo@pace	Option     Measurement range     Puture options     fie. branding in       Mineral oil     1     Standard     1     0     Standard       Option     Measurement range     Future range     Future options       1     Measurement range     Future options     0       Option     Measurement range     Future range     Future options       1     1     0     0	

Product Option		Measureme		ent range		Future options	Future optional (ie. branding indent)		
Attenuated Total Reflectance	Mineral oil	1	Standard	1		0	Standard	0	
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Pipette 3ml Alcohol wipes		100 per pack			CC	contact our expert consultants:			
		100 per pack			Parker Kittiwake, 3-6 Thorgate Road, Littlehampton, West Sussex,				
				United Kingdom, BN17 7LU					
					T. +44 1903 731 470				
				E.	. kittiwakeinfo@pa ww.kittiwake.com				

Product Option		Measurement range			Future options	Future optional (ie. branding indent)			
Attenuated Total Reflectance	Mineral oil	1	Standard	1		0	Standard	0	
Part number Option		Measurement ra		nt range	nge Future rang		Future option	ptions	
ATR 1		1				0	0		
Description		Oracatila	Death						
Description ATR Analyser ATR Consumable pack: Pipette 3ml Alcohol wipes		Quantity	Part num	iber	To discuss how Parker Kittiwake can help you monitor and control the quality and			n help	
		1	ATR1100						
		1	ACCK050	004			bricants and fuels,		
		100 per pack			contact our expert consultants:				
		100 per pack			Parker Kittiwake, 3-6 Thorgate Road, Littlehampton, West Sussex,				
				United Kingdom, BN17 7LU					
						T. +44 1903 731 470			
						. kittiwakeinfo@pa /ww.kittiwake.com			



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