STATIONARY MAGNETIZING FACILITIES

HELLMAG Type Vario 2500 Test Bench

The test bench Hellmag Type Vario 2500 has been designed for the combined magnetization with two magnetizing circuits - AC current flow and AC coil magnetization. Therefore the equipment is capable of simultaneous detecting flaws of any orientation. This bench is especially appropriate for testing railroad wheelset axles.

Specifications:	
AC current flow (infinitely adjustable):	max. 3.000 A eff. 4.200 A peak
AC coil magnetization (infinitely adjustable): max. 4.500 AT	max. 4.500 AT
Clamping length:	2500 mm
Work piece weight:	max. 500 kg
Stroke length of quick-clamping device:	
Two-hand-control:	approx. 25 mm
Foot switch:	approx: 7 mm
Suspension tank:	40 l
Mains connection:	400 V, 3-phase
Control voltage:	24 V, 50 Hz
Power consumption:	approx. 75 kVA
Pressurized air:	5 – 6 bar
Automatic demagnetization:	yes



Universal 450 Test Bench

This test bench has been designed for testing smaller batches and for training purposes.

Specifications:	
AC current flow:	1200 A eff.
AC yoke magnetization:	approx. 12000 AT.
Clamping length:	60 – 450 mm
Tangential field strength:	approx. 30 A/cm
Relative duty cycle:	60 %
Data storage:	yes
Data transfer to PC:	yes
Mains connection:	400 V / 50 Hz
Power consumption:	max. 10 KVA
Open-circuit voltage, current flow:	6V
Open-circuit voltage, yoke magnetization:	22 V
Dimensions:	approx. 125x64x160 cm
Weight:	approx. 237 kg



ZER-O-MAT MAGNETIZING AND REPAIR STATION

ZER-O-MAT® devices are magnetizing and inspection stations designed for the magnetic particle inspection of pipes, rods, bars and other tubular parts with the diameter from 20 up to 660 mm.

Specifications:	
Mains connection	400 V / 50 Hz
Control voltage	230 V / 50 Hz
Power consumption	max. 90 kVA
Current	min. 250 A
Tangential field strength	≥ 24 A/cm
Test piece diameter	20 – 660 mm



REFERENCE BLOCKS AND FIELD INDICATORS

Reference Block No.1 (DIN EN ISO 9934-2)

The reference block No.1 is a disc with 2 types of natural cracks on the surface. Coarse cracks are the result of the polishing, fine cracks are the result of stress corrosion. The block is permanently magnetized by central conductor through the hole. Estimation of magnetic particle suspensions is made by visual or other appropriated method of comparison of the indications

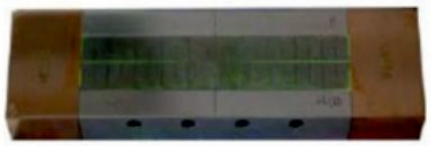


Specifications:	
Sample diameter:	50 mm
Sample height:	10 mm
Cracks width:	2-10 µm

Art.No. 134.002.002

Reference Block No.2 (DIN EN ISO 9934-2)

Reference block No. 2 is a self contained unit requiring no external magnetic field induction. It is used to determine the quality of the magnetic particle suspensions. The block consists of 2 soft iron bars, separated by a thin (15µm) Al-foil, representing an artificial defect. Permanent magnets are set on the sample ends. Because of the permanent magnetic field the bars get magnetized and magnetic particles accumulate over the artificial defect, forming the indication lines. The quality of the suspension or dry powder is estimated over the summarized length of the lines.



Art.No. 134.002.100

Specifications:	
Dimensions (LxWxH):	155x40x12 mm
Tangential component of magnetic field over the artificial defect at points G (-4):	-1A/cm
B (4):	1A/cm

Berthold Magnetic Field Indicator (Penetrameter)

The Berthold indicator is designed to determine the strength and direction of the selected magnetizing setup and the quality of fluorescent magnetic powder suspension.
When placed on a magnetized test piece, magnetic lines pass through the sectioned iron cylinder. The cuts on the iron cylinder will be visible when magnetic powder or fluorescent magnetic solution is applied. Maximum indication direction is achieved by rotating the sample about it's axis. The field direction is perpendicular to the flaw at maximum indication. Magnetizing efficiency, penetration and quality of the fluorescent oil suspension can be determined by slowly turning the outside ring of the field indicator, increasing the distance between the thin brass plate and the test piece. The amount of lift-off at the point where the indication just appears gives a measure of magnetic field test efficiency.



Specifications:	
Sample diameter:	20 mm
Sample height:	5 mm
Holder length:	95 mm
Weight:	24 g

Art.No. 134.003.000

MP-1000 Magnetic Field Meter

MP - 1000 is a handy universal instrument for measuring all magnetic fields, intended for fast, onsite measurements:

- Measurement of all kinds of steady and alternating fields (True-RMS).
- Very fast, integrated peak value store for measuring pulsed fields >= 0.1 msec.
- Measuring range up to 2000 kA/m, switchable between Gauss(Oe) and A/cm.
- Simple, one-button operation; automatic range selection.
- Can be used with tangential, axial or reed probes.



Scope of supply: MP - 1000 without measuring probe, incl. Certificate of Calibration, probe cable and carrying case

Art.No. 133.005.027

Specifications:	
Display	LCD 3-digit
Measurement Units	A/cm - Gauss(Oe) (selectable)
Measuring ranges	DC: 0-20.000 A/cm (Gauss/Oe) AC: 20-20.000 A/cm (Gauss/Oe) Automatic range selection
Resolution	0-100 A/cm (Gauss): 0,1 A/cm (G) > 100 A/cm (Gauss): 1 A/cm (G) > 10.000 A/cm (Gauss): 0,1 kA/cm (kG)
Accuracy in homogeneous filed	DC/AC - 0-2000 kA/m + 2%
AC frequency range (AC=RMS)	10 Hz – 5 kHz
Peak hold	Impuls duration >=0.1msec
Power supply	2 x 1,5V AA Mignon alternatively 2 x 1,2V AA rechargeable accumulators
Operating time	Appr. 80 hrs
Measuring probes	P-A2 axial, P-T2 tangential, P-Z2 flexible reed
Dimensions	105 x 65 x 26 mm
Weight	137 g (with batteries)

MP-2000 Magnetic Field Meter

MP - 2000 Universal Field Meter is the top model with special functions, offering the professional user every possibility:

- Measurement of all kinds of steady and alternating fields (True-RMS).
- Very fast, integrated peak value store for measuring pulsed fields >= 0.1 msec.
- Measuring range up to 4000 kA/m, switchable between Tesla - Gauss - A/cm - kA/m.
- Illuminated graphic display with additional analogue measured value indication
- Automatic range selection.
- Menu navigation in various languages.
- Measurement store (10,000 measurements), divisible into up to 100 applications memories.
- Can be used with tangential, axial or reed probes.
- Integrated RS232 and USB - wireless interfaces for documenting the measurement results on a PC or printer



Art.No. 133.005.028

Scope of supply: MP - 2000 without measuring probe, incl. Certificate of Calibration, probe cable, USB radio receiver and carrying case.

Specifications:	
Display	Illuminated graphic display
Measurement Units	kA/m - A/cm - Gauss(Oe) - Tesla (selectable)
Measuring ranges	DC: 0- 4000 kA/m; 0-40000 A/cm (Gauss/Oe); 0–4000 mT AC: 20-20000 A/cm (Gauss/Oe); 20–2000 kA/m; 20–2000 mT Automatic range selection
Resolution	0-200 A/cm (Gauss): 0,1 A/cm (G) > 200 A/cm (Gauss): 1 A/cm (G) > 10000 A/cm (Gauss): 1 kA/cm (G) 0-20 kA/m (mT): 0,01 kA/m (mT) > 20 kA/m (mT): 0,1 kA/m (mT) > 1000 kA/m (mT): 1 kA/m (mT)
Accuracy in homogeneous filed	DC/AC – 0-2000 kA/m + 2%; > 2.000 kA/m + 3%
AC frequency range (AC=RMS)	10 Hz – 5 kHz
Peak hold	Impulse duration >=0.1msec
Power supply	3 x 1,5V AA Mignon, or 3 x 1,2V AA rechargeable accumulators
Operating time	Appr. 100 hrs
Measuring probes	P-A2, P-A4 axial, P-T2, P-T4 tangential, P-Z2, P-Z4 flexible reed
Statistical evaluation	X
Dimensions	198 x 92 x 35 mm
Weight	265 g (with batteries)

UV SOURCES

ZERO 400 IP 20 stationary mercury-vapour UV lamp

The lamp has a steel housing incorporating all electrical components like starting controller, follow-up relay, mains switch, protective devices, temperature monitoring device, ventilator, connector block and aluminum case for UV radiant (400 W). The main power supply cable is the Oilflex 540 P.

The ZERO 400 IP 20 lamp is furnished with a UVB long-pass filter, which cuts off the emission in UV-B and UV-C spectral ranges, protects the bandpass filter and limits the glass surface temperature to 80°C.
The lamp can be switched between two levels of UV irradiation intensity and thereby two risk classes.

Specifications:	
Input voltage	230V - 50/60Hz
Operating current	approx. 3,3 A
Warm-up time	approx. 3-4 min
Recovery time	< 10 min.
UV radiant	1 x HTC 400
Life time of UV irradiator	approx. 1500 hrs.
UV intensity at 400 mm	risk class II – 3500 µW/cm²,
	risk class III - 5500 µW/cm²
Wavelength	365 nm
Emission half-width	approx. 27 nm
Risk class acc. to EM6	II / III (switchable)
Weight	approx. 31 kg
Dimensions	500x500x300 mm
Protection class	IP 20



Art.No. 144.000.404



ZERO 400 IP 54
stationary mercury-vapour
UV lamp

Art.No. 144.000.403



ZERO 800 IP 54
stationary mercury-vapour
UV lamp

Art.No. 144.000.801

ZERO 400-A-UV stationary mercury-vapour UV lamp

Art.No. 144.000.408



The ZERO 400-A-UV is a compact lamp consisting of lamp housing with above-mounted ventilator and separate starting controller. The ZERO 400-A-UV lamp is furnished with a UVB long-pass filter, which cuts off the emission in UV-B and UV-C spectral ranges, protects the bandpass filter and limits the glass surface temperature to 80°C.

Helling Superlight C 10 A-HE portable mercury-vapour UV lamp

Art.No. 142.000.200



The Superlight C 10 A-HE lamp consists of three construction units: 1. power supply unit in a aluminum housing with integrated starting controller, switch and plug;2. UV source with connection cable; 3. aluminum holder

Helling Superlight C 10 A-SH portable focused mercury-vapour UV lamp

Art.No. 142.000.300



The Superlight C 10 A-SH lamp consists of three construction units: 1. power supply unit in a aluminum housing with integrated starting controller, switch und plug;
2. UV source with connection cable;
3. aluminum holder

Helling Superlight C 10 A-S portable mercury-vapour UV lamp

The Superlight C 10 A-S lamp consists of two construction units: 1. Metal case with integrated power supply unit, starting controller, switch, plug and holder; 2. UV source with connection cable

Advantages:
Additional spotlight with low voltage 12V (10W) for orientating illumination in dark rooms. Additional safety socket, e.g. for connecting an electromagnet.
Also useful for leak testing of oils with intrinsic fluorescence or oils treated with H 800 fluorescent additive

Scope of supply:
Metal case with starting controller, cable and holder; UV source case with HN 100 UV lamp, structured band-pass filter and UVB long-pass filter; UV protective glasses



Art.No. 142.000.110

Specifications:	
Input voltage	230V - 50/60Hz
Operating current	approx. 1,2 A
Warm-up time	< 5 min.
Recovery time	< 10 min.
UV source	HN 100W-E27
Lifetime of UV source	approx. 1500 hrs.
UV intensity at 400 mm	4000 µW/cm²
Wavelength	365 nm
Emission half-width	approx. 1,5 nm
Spotlight	Sofitte 12 V – 10W
Risk class acc. to EM6	II
Weight	approx. 7.5 kg
Dimensions	280x280x140 mm
Protection class	IP 20



Helling Superlight C 10 A-SHK portable focused mercury-vapour UV lamp

Art.No. 142.050.300

The Superlight C 10 A-SHK consists of two construction units: 1. Metal case with integrated power supply unit, starting controller, switch, plug and holder; 2. UV source with connection cable



Helling Super UV 2005 portable focused mercury-vapour UV lamp

Art.No. 142.000.106

The Super UV 2005 lamp consists of two construction units: 1. power supply unit in a steel housing with integrated starting controller, switch and plug; 2. UV source with connection cable

ZERO 700/7 stationary UV LED lamp



ZERO 700/7 is a compact stationary UV LED lamp, which can be equipped additionally with a white light LED bar. The plain aluminium housing integrates 63 UV LEDs, optics, active cooling and starting controller.

The ZERO 700/7 lamp distinguishes itself by high efficiency at low power consumption, low heat generation and next to unlimited lifetime of the UV radiant. Furthermore the lamp doesn't require any warm-up time and thereby is immediately ready for use after switch on.

Specifications:	Art.No. 144.200.020
Input voltage	230 V/50Hz
Operating voltage	36 V
Operating current	approx. 4,4 A
UV Source	63 x UV LED
Life time of UV-LED's	approx. 20000 hrs
UV-intensity at 400 mm	> 7.000 µW/cm²
Wave length	365 nm
Emission half-width	8,5 nm
Weight	approx. 5,1 kg
Dimensions	750 x 140 x 65 mm
Risk class acc. to EM 6	II
White light rate	< 3 lx
Protection class	IP 20

ZERO 400/3 stationary UV LED lamp



ZERO 400/3 is a compact stationary UV LED lamp wich can be additionally equipped with a swivel arm and/or white light LED bar.

The swivel arm serves for horizontal and vertical lamp adjustment. For passive cooling the lamp has a ribbed aluminium housing which integrates 27 UV LEDs, optics and starting controller.
The lamp excels in its power efficiency, energy consumption, low heat generation, near to unlimited LED life time and immediate operation readiness without warm-up time.

Specifications:	Art.No. 144.200.029
Input voltage	230 V/50Hz
Operating voltage	36 V
Operating current	approx.1,2 A
UV Source	27 x UV LED
Life time of UV-LED's	approx. 20000 hrs
UV-intensity at 400 mm	approx. 3.800 µW/cm²
Wave length	365 nm
Emissionhalf-width	8,5 nm
Weight	approx. 4,1 kg
Dimensions	430 x 135 x 30 mm
Risk class acc. to EM 6	II
White light rate	< 3 lx

ZERO 400/6
stationary UV LED lamp
Art.No. 144.200.031





ZERO 200/2
stationary UV LED lamp
Art.No. 144.200.041

ZERO 400/4
stationary UV LED lamp
Art.No. 144.200.030





SLIM-LINE
stationary UV LED lamp
Art.No. 144.100.001

ZERO 500/5
stationary UV LED lamp
Art.No. 144.200.025





ZERO-2500 IP 65
stationary UV LED lamp
Art.No. 144.002.510

UV-Inspector 2012 Standard UV LED Hand lamp

Handy battery powered UV LED hand lamp for application in NDT, criminalistics, as well as leak testing of oils with intrinsic fluorescence or oils treated with H 800 fluorescent additive.

Specifications:	Art.No. 142.200.416
Operating voltage	18 V
Operating current	approx. 750 mA
UV Source	4 x UV LED
Life time of UV-LED's	approx. 20000 hrs
UV-intensity at 400 mm	approx. 2.500 µW/cm2
Wavelength	365 nm
Emission half-width	8,5 nm
Weight	approx. 1,350 kg
Dimensions	75 x 320 x 110 mm
Risk class acc. to EM 6	II



UV-Inspector 2012 SH
UV LED Hand lamp
Art.No. 142.200.422



UV Inspector 3000-N
UV LED Hand lamp
Art.No. 142.200.511



UV Inspector 3000-N, LH-1 Type
UV LED Hand lamp
Art.No. 142.201.512



Scope of supply:
UV lamp with accumulator and reserve accumulator, charging unit, UV protective glasses, aluminum case.

UV-Inspector 711 UV LED Hand lamp

Compact battery powered UV LED hand lamp for application in NDT, criminalistics, as well as leak testing of oils with intrinsic fluorescence or oils treated with H 800 fluorescent additive. The lamp has a built-in rechargeable battery; the charger jack is mounted in the lamp handle.

Specifications:	Art.No. 142.500.007
Operating voltage	16,8 V (4 x 4,2 V battery)
Operating current	approx. 650 mA
UV Source	3 x UV LED
Life time of UV-LED's	approx. 20000 hrs
UV-intensity at 400	mmapprox. 1.700 µW/cm2
Wave length	365 nm
Emission half-width	8,5 nm
Weight	approx. 0,900 kg
Dimensions	160 x 200 x 80 mm
Risk class acc. to EM 6	II



Art.No. 142.500.008
UV-Inspector 711 SH
UV LED Hand lamp



Art.No. 142.500.001
UV-Inspector 801
UV LED Hand lamp



Art.No. 142.500.003
UV-Inspector 801
SH UV LED Hand lamp



Scope of supply:
UV lamp with accumulator, charging unit, UV protective glasses, aluminum case.

UV-Inspector 385
UV LED Pocket lamp



Art.No. 142.200.129

UV-Inspector Policheck NDT
UV LED Pocket lamp



Art.No. 142.200.139

UV Inspector 380-R UV LED Pocket lamp



Specifications:	
Operating voltage	4,8 V (4 x 1,2 V battery)
Operating current	approx. 650 mA
UV source	1 x UV LED
Lifetime of UV LED	approx. 20000 hrs
UV intensity at 400 mm	approx. 1.200 µW/cm²
Wavelength	365 nm
Emission half-width	8,5 nm
Weight	approx. 0,320 kg
Dimensions	170 x 45 mm
Risk class acc. to EM6	II

Art.No. 142.200.109

Scope of supply: UV lamp, 4 x NiMh batteries, UV protective glasses.

UV Inspector 365 UV LED Pocket lamp



UV LED pocket lamp in aluminium housing for application in NDT, criminalistics, as well as leak testing of oils with intrinsic fluorescence or oils treated with H 800 fluorescent additive.

Specifications:	
Operating voltage	4,8 V (4 x 1,2 V battery)
Operating current	approx. 650 mA
UV source	1 x UV LED
Lifetime of UV LED	approx. 20000 hrs
UV intensity at 400 mm	approx. 6.000 µW/cm²
Wavelength	365 nm
Emission half-width	8,5 nm
Weight	approx. 0,320 kg
Dimensions	170 x 45 mm
Risk class acc. to EM6	II

Art.No. 142.200.301

Scope of supply: UV lamp, 4 x NiMh batteries, UV protective glasses.

UV-Flash Camera

The UV-flash camera is an easy-to-use camera with integrated UV flash and infrared shortpass filter designed for documenting fluorescent images. It is used during penetrant and magnetic particle inspection to capture fluorescent defect indications. This camera is also useful for reclamation reports, further it can be applied in criminalistics for detection of false banknotes, licenses, papers and other materials.

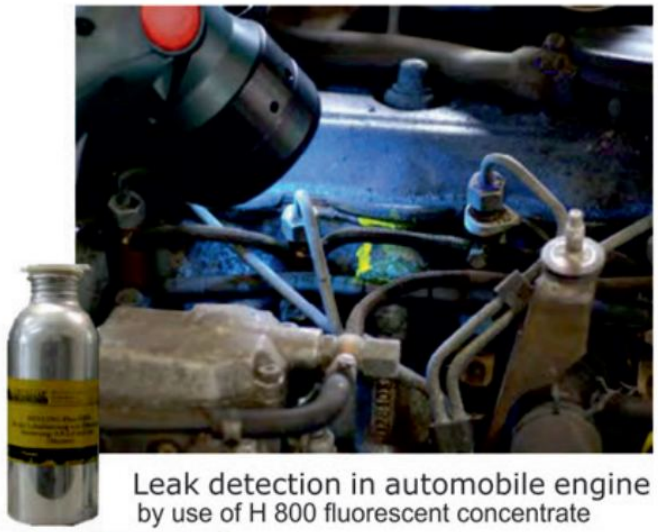
The UV-flash camera is appropriate for fluorescent indications photographing even by daylight (appr. 150 – 200 lx).

Specifications:
10,0 megapixel
10 x optical zoom
Optical image stabilizer
3,00 inch LCD
Digic 4
Smart AUTO



Art.No. 147.000.100

LEAK TESTING



Leak detection in automobile engine
by use of H 800 fluorescent concentrate

Art.No. 616.000.034



Detection of vessel depressurization
by use of H 849 fluorescent concentrate

Art.No. 616.100.102

Proof Check – aerosol foam-film indicator

Art.No. 616.000.001





Leak detection using Proof Check

An emulsion containing surface-active, film-forming and moisture-retaining agents, having low surface tension, high foam-forming ability and crawl resistance.

Detection time for leaks with leakage rate > $1x10^{-4}$ m^3Pa/s is 2 to 3 seconds, for leaks with leakage rate of about $1x10^{-7}$ m^3Pa/s the detection time is 15 minutes upon the average.



Leak detection in cooling system by use of fluorescent concentrate



Art.No. 613.100.010

HELLOPHONE
Ultrasonic Leak Detector



Art.No. 611.002.015

ISH 2000-C Hydrogen
Leak Detector



Art.No. 613.000.020

PHD-4 Helium
Leak Detector

RADIOGRAPHIC TESTING

RB-3 X-ray view box

X-ray view box for radiographic films with optical density D < 3,65

Specifications:	Art.No. 241.003.000
Screen:	440 x 85 mm
Additional blind 1:	440 x 50 mm (for films of 60 mm width)
Additional blind 2:	with 30 mm aperture
Luminance:	45 000 cd/m²
Optical density:	D=3,65
Light emitter:	11 x halogen, 24 V at 150 W
Input voltage:	230 V 50 Hz
Power consumption:	1400 VA
Dimensions:	655 x 272 x 225 mm
Weight:	11 kg
Light adjustment:	manual or by foot switch



LED X-ray view box



RB-2 X-ray view box



Art.No. 241.002.000

FUJI FNDX 2.0b – NDT Film Processor



Processing machine for industrial X-ray films with space-saving design. Can be easily installed in a darkroom or in a container. Compatible with all industry standards.

The roller transport system is designed in such a way that the rollers always remain below the solution level, eliminating crystallization problems, so that roll and sheet films can be developed without any damage of the film surface.

Specifications:	
Development time:	electronically adjustable from 1.5 to 9.4 minutes
Temperature control:	electronically adjustable between 18° C and 43° C
Regeneration system:	automatic regeneration, calculable upon film surface scans
Film formats:	Sheet films of up to 43 cm width, as well as roll films
Tank capacity:	7.5 liters for developer bath, 6.5 liters for fixer bath, 6.5 liters for water
Power connection:	220 / 240 Volts, 16A, 50 / 60 Hz
Consumables:	IX x-ray films, Fuji chemistry
Safety:	meets UL safety regulations, GS / CE label certified

FUJI FNDX 5 – NDT Film Processor



Art.No. 232.010.003

FUJI FNDX 2.0b – NDT Film Processor



Art.No. 232.010.002

FUJI FNDX 1 – NDT Film Processor



Art.No. 232.010.001

Products qualified under SAE aerospace
Material specification SAE AMS 2644; inspection material, penetrant.

Fluorescent penetrants - type 1 -, method A, Water washable - and usable for Methode C (solvent remover)

Manufacturer	Level 0,5(1/2)	Level 1	Level 2	Level 3	Level 4
SHERWIN (DUBL-CHECK + AQUA-CHEK)	HM-1	WB-100	HM-3A	HM-430	HM-704
	-	HM-2D	HM-406	HM-604	HM-707
	-	HM-220	WB-200	HM-607	-
	-	WB-101	WB-201	-	-
	-	-	HM-412	-	-
	-	-	HM-440	-	-
	-	-	HM-602	-	-
American Gas and Chemical	AG-1 /2 -FW	AG-1C -FW	AG-2AFW	AG-3A -FW	AG-4C-FW
	-	-	-	-	AG-4D-FW
Chemetall (Ardrox)	970P21	970P22/E	970P23/E	970P25/E	970P26E
	-	P131D/E	970P24/E	P135D	P136E
	-	P6F1	P133D/E	P6F3	P6F5
	-	9731	P134D/E	P6F4	-
	-	-	P6F2	9733	-
	-	-	9732	-	-
Cigiemme	-	-	-	-	-
Dynamold	-	-	-	-	-
Ecolink	-	-	-	-	-
Eishin Kagaku (Neo-Glo)	-	F-4A/1	F-4A-B/1	F-4A-C/1	F-4A-E/2
Ely Chemical (Britemor)	-	444	4455	446	447
	-	445	4455A	-	-
ITW Magnaflux (Zyglo)	ZL-15B	ZL-19	ZL-60C	ZL-67	ZL-56
	-	-	ZL-60D	ZL-67A	-
	-	-	ZL-61	-	-
Karl Deutsch (KD-Check)	-	-	-	FWP-2	-
Marktec	P-100	P-110A	P-120	P-130	P-141D
	-	-	P-121	P-131	P-141E
	-	-	P-122	P-140E	-
Met-I-Chek + Pen-Chek	FP-900	FBP-911	FBP-912	FBP-913	FBP-914
	-	FP-901	FP-922	FP-923	-
	-	FP-921	FP-902	FP-903	-
	-	-	FP-92B(M)	FP-98A	-
SPCA	PWHS-20	PWHS-24A	PWHS-25	-	-
Taseto	-	-	-	-	-
Western Chemical Intl.	-	-	-	-	-

Products qualified under SAE aerospace
Material specification SAE AMS 2644; inspection material, penetrant.

Fluorescent penetrants - type 1 - ,method B, C & D post emulsifiable

Manufacturer	Level 1	Level 2	Level 3	Level 4
SHERWIN (DUBL-CHECK)	RC-29	RC-50	RC-65	RC-77
	-	FP-22B	-	RC-88
American Gas and Chemical	AG-1-FS	AG-2-FS	AG-3D-FS	AG-4B-FS
	AG-1A-FS	AG-2A-FS	AG-3E-FS	-
Chemetall (Ardrox)	985-P11	985-P12	985-P13	985-P14
	-	-	P7F3(nur B+D)	-
Cigiemme	-	MG-22(nur C+D)	MG-27(nur C+D)	MG-54(2)(nur C+D)
	-	-	MG-46(2)(nur C+D)	-
Dynamold	-	-	-	-
Ecolink	-	-	-	-
Eishin Kagaku (Neo-Glo)	F-5L/1	F-5L-SP/1	F-6A/1	F-6A-SP/1
Ely Chemical (Britemor)	-	555	600	668 (nur C+D)
	-	-	667A	668A
ITW Magnaflux (Zyglo)	ZL-1D	ZL-2C	ZL-27A	ZL-37
Karl Deutsch (KD-Check)	-	-	-	-
Marktec	P-210	P-220	P-230	P-240
Met-I-Chek + Pen-Chek	FP-94	FP-93A(M)	FP-95A(M)	FP-97A(M)
SPCA	-	PWHS-42(nur C+D)	PWHS-43A(nur C+D)	PWHS-47(nur C+D)
Taseto	-	-	-	AP-6(nur C+D)
Western Chemical Intl.	-	-	-	-

Products qualified under SAE aerospace
Material specification SAE AMS 2644; inspection material, penetrant.

Lipophilic (method B) and hydrophilic (method D) emulgators for fluorescent penetrants, type 1 (AMS-2644)

Manufacturer	Level 1	Level 2	Level 3	Level 4
SHERWIN (DUBL-CHECK)	ER-85	ER-85	ER-85	ER-85
American Gas and Chemical	AG-FL	AG-FL	AG-FL	AG-FL
Chemetall (Ardrox)	9PR3	9PR3	9PR3	9PR3
Cigiemme	-	-	-	-
Dynamold	-	-	-	-
Ecolink	-	-	-	-
Eishin Kagaku (Neo-Glo)	F-5E-SP/1	F-5E-SP/1	F-5E-SP/1	F-5E-SP/1
Ely Chemical (Britemor)	-	L-80	L-80	L-80
ITW Magnaflux (Zyglo)	ZE-4B	ZE-4B	ZE-4B	ZE-4B
Karl Deutsch (KD-Check)	-	-	-	-
Marktec	E-400	E-400	E-400	E-400
Met-I-Chek + Pen-Chek	E-57	E-57	E-57	E-57
SPCA	-	-	-	-
Taseto	-	-	-	-
Western Chemical Intl.	-	-	-	-

Hydrophilic emulsifiers - method D

Manufacturer	Level 1	Level 2	Level 3	Level 4
SHERWIN (DUBL-CHECK)	ER-83A(30%)	ER-83A(30%)	ER-83A(30%)	ER-83A(30%)
	ER-83B	ER-83B	ER-83B	ER-83B
American Gas and Chemical	AG-FH(20%)	AG-FH(20%)	AG-FH(20%)	AG-FH(20%)
Chemetall (Ardrox)	9PR12(10%)	9PR12(10%)	9PR12(10%)	9PR12(10%)
	-	-	E-1(10%) nur P7F3	-
Cigiemme	-	VE-100(20%)	VE-100(20%)	VE-100(20%)
Dynamold	-	-	-	-
Ecolink	-	-	-	-
Eishin Kagaku (Neo-Glo)	F-6E-W/1(20%)	F-6E-W/1(20%)	F-6E-W/1(20%)	F-6E-W/1(20%)
Ely Chemical (Britemor)	-	H91(20%)	H91(20%)	H91(20%)
	-	H91A(20%)	H91A(20%)	H91A(20%)
ITW Magnaflux (Zyglo)	ZE-10B(20%)	ZE-10B(20%)	ZE-10B(20%)	ZE-10B(20%)
	-	ZE-10C(20%)	ZE-10C(20%)	ZE-10C(20%)
Karl Deutsch (KD-Check)	-	-	-	-
Marktec	R-500(30%)	R-500(30%)	R-500(30%)	R-500(30%)
Met-I-Chek + Pen-Chek	E-58D(20%)	E-58D(20%)	E-58D(20%)	E-58D(20%)
SPCA	-	EH-5(20%)	EH-5(20%)	EH-5(20%)
Taseto	-	-	-	AE-56(20%)
Western Chemical Intl.	-	-	-	-

Products qualified under SAE aerospace
Material specification SAE AMS 2644; inspection material, penetrant.

Red dye penetrants - type 2

Manufacturer	Method A Waterwashable	Method B Post emulsifiable Lipophilic emulgator	Method C Solvent removable	Method D Post emulsifiable hydrophilic emulgator
SHERWIN(DUBL-CHECK)	DP-55	DP-40	DP-55	DP-40
	DP-51	-	DP-51	-
	DP-54B	-	DP-54B	-
	KO-17	-	KO-17	-
	-	-	DP-40	-
American Gas and Chemical	AG-1-VW	AG-1-VS	AG-1-VW	-
	AG-1A-VW	AG-1B-VS	AG-1A-VW	-
	-	AG-1C-VS	AG-1-VS	-
	-	-	AG-1B-VS	-
	-	-	AG-1C-VS	-
Chemetall (Ardrox)	906	996	906	-
	907PB	996PB	907PB	-
	P6R	-	P6R	-
	-	-	996	-
	-	-	996PB	-
Cigiemme	-	-	-	-
Dynaflux	-	-	P-HF	-
Eishin Kagaku (Red-Mark)	R-3B(NT)/1	-	R-1A(NT)/1	-
	-	-	R-3B(NT)/1	-
Ely Chemical (Checkmor)	200	222	200	222
	-	-	222	-
ITW Magnaflux (Spotcheck)	SKL-WP	SKL-SP	SKL-WP	SKL-SP
	-	SKL-SP1	SKL-SP	SKL-SP1
	-	-	SKL-SP1	-
Karl Deutsch (KD-Check)	-	-	-	-
Marktec	MP-G3T	-	MP-G3T	-
	-	-	MP-T	-
Met-I-Chek + Pen-Chek	VBP-300	VP-31A	VBP-300	-
	VP-30	-	VP-30	-
	-	-	VP-31A	-
SPCA	P-138/V	-	P-138/V	-
Taseto	-	-	FP-S	-
Western Chemical Intl.	-	-	-	-

Products qualified under SAE aerospace
Material specification SAE AMS 2644; inspection material, penetrant.

Lipophilic & hydrophilic emulgator (AMS-2644)

Manufacturer	Method B Lipophilic emulgator	Method D hydrophilic emulgator
SHERWIN (DUBL-CHECK)	ER-85	ER-83A (30%)
American Gas and Chemical	AG-VL	-
Chemetall (Ardrox)	9PR2	-
Cigiemme	-	-
Dynaflux	-	-
Dynamold	-	-
Ecolink	-	-
Eishin Kagaku (Red-Mark)	-	-
Ely Chemical (Checkmor)	L-80	H91(20%)
	-	H91A(20%)
ITW Magnaflux (Spotcheck)	EZ-4B	ZR-10B
Karl Deutsch (KD-Check)	-	-
Marktec	-	-
Met-I-Chek + Pen-Chek	E50	-
SPCA	-	-
Taseto	-	-
Western Chemical Intl.	-	-

Products qualified under SAE aerospace
Material specification SAE AMS 2644; inspection material, penetrant.

Developers for fluorescent penetrants -type 1- form a,b,c,d,f (AMS-2644)

Manufacturer	Method A Dry power	Method B Water soluble	Method C Water suspendible	Method D nonaqueous, solvent base	Method F Special Application
SHERWIN (DUBL-CHECK + AQUA-CHEK)	D-90G	D113G.1	D110A.1	D-100	-
	D-90G.1	-	-	D-104	-
	D-99A	-	-	D-104	-
	-	-	-	D-106	-
American Gas and Chemical	AG-DD	-	AG-WD	AG-DN	-
Chemetall (Ardrox)	9D4A	9D75	9D76	9D1B	-
	D-1	-	-	NQ1	-
Cigiemme	D-1	-	-	-	-
Dynaflux	-	-	-	-	FDS
Dynamold	-	-	-	-	-
Ecolink	-	-	-	-	-
Eishin Kagaku (Neo-Glo)	F-5D/1	-	F-4W-SP/1	F-1S(NT)/1	-
	-	-	-	F-4S(NT)/1	-
Ely Chemical (Britemor)	PD3	-	LDW	LD3	-
	PD4	-	-	LD5	-
	-	-	-	LD-6	-
	-	-	-	LD-7	-
ITW Magnaflux (Zyglo)	ZP-4A	ZP-14A	ZP-5B	SKD-S2	-
	ZP-4B	-	-	ZP-9F	-
Karl Deutsch (KD-Check)	-	-	-	-	-
Marktec	D-700	D-721	D-720	D-701	-
	-	-	-	D-712	-
Met-I-Chek + Pen-Chek	D-72A	D-76B	D-76B	D-70	-
SPCA	RP-1	-	-	R-764/S1	-
Taseto	ADD-456	-	-	-	-
Western Chemical Intl.	-	-	-	-	-

Products qualified under SAE aerospace
Material specification SAE AMS 2644; inspection material, penetrant.

Developers for fluorescent penetrants -type 2- form c and e (AMS-2644)

Manufacturer	Method c Water suspendible	Method e nonaqueous, solvent base
SHERWIN (DUBL-CHECK)	D-110A.1	D-100
	-	D-104
	-	D-105
	-	D-106
American Gas and Chemical	AG-WD	AG-DN
Chemetall (Ardrox)	9D76	9D1B
	-	NQ1
	-	NQ1RVSL
Cigiemme	-	-
Dynaflux	-	D-F
Dynamold	-	-
Ecolink	-	-
Eishin Kagaku (Red-Mark)	F-4W-SP/1	R-1S(NT)/1
	-	F-4S(NT)/1
Ely Chemical (Checkmor)	LDW	LD-3
	-	LD-5
	-	LD-6
	-	LD-7
ITW Magnaflux (Spotcheck)	ZP-5B	SKD-S2
	-	ZP-9F
Karl Deutsch (KD-Check)	-	-
Marktec	-	D-701
	-	MD-T
Met-I-Chek + Pen-Chek	D-78B	D-70
SPCA	-	R-764/S1
Taseto	-	FD-S
Western Chemical Intl.	-	-

Products qualified under SAE aerospace
Material specification SAE AMS 2644; inspection material, penetrant.

Solvent remover class 1,2 and 3 (AMS-2644)

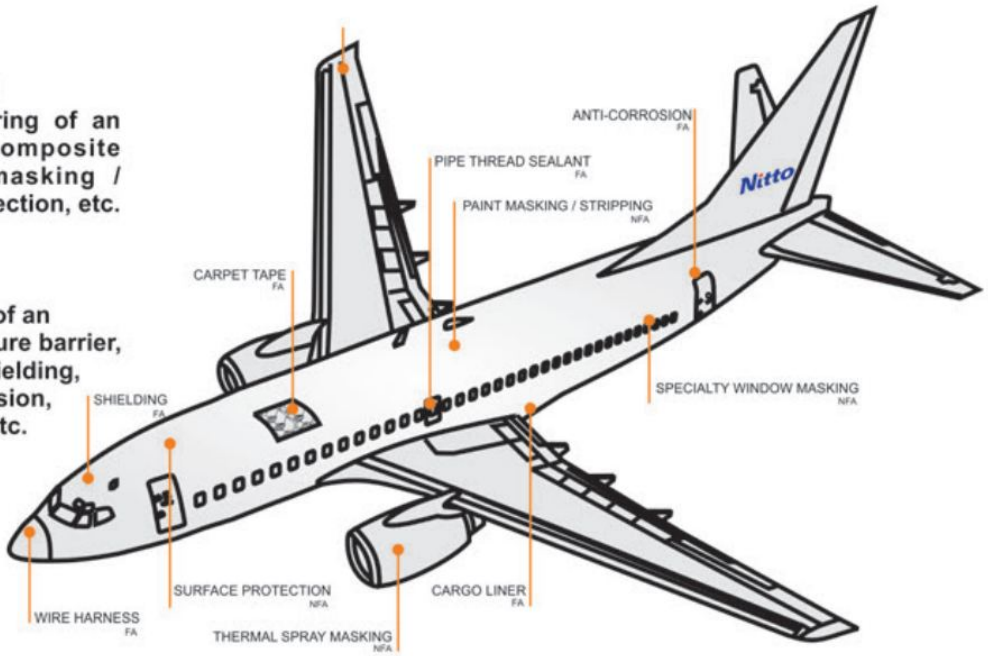
Manufacturer	Class 1 halogenated	Method B nonhalogenated	Method C special application
SHERWIN (DUBL-CHECK + AQUA-CHEK)	-	DR-60	-
	-	DR-62	-
	-	DR-63	-
	-	DR-64	-
	-	KO-19	-
American Gas and Chemical	-	AG-1-RS	-
	-	AG-2-RS	-
	-	AG-3-RS	-
	-	AG-RS	-
Chemetall (Ardrox)	-	9PR5	-
	-	9PR50 / A / B / C	-
	-	9PR70	-
	-	9PR80	-
	-	PR1	-
Cigiemme	-	-	-
Dynaflux	-	C-F	FCS
Dynamold	-	DS-104	-
	-	DS-108	-
Ecolink	-	Electron-NDE Dielectric	-
Eishin Kagaku (Neo-Glo + Red-Mark)	-	R-1M(NT)/1	-
Ely Chemical (Britemor + Checkmor)	-	S-72	-
	-	S-74	-
	-	S-76	-
ITW Magnaflux (Zyglo + Spotcheck)	-	SKC-HF	-
	-	SKC-S	-
Karl Deutsch (KD-Check)	-	-	-
Marktec	-	MR-T	-
	-	MR-TM	-
	-	S-600	-
Met-I-Chek + Pen-Chek	-	E-59	-
	-	E-59A	-
	-	R-503	-
	-	R-504	-
SPCA	-	C-10/S1	-
Taseto	-	FR-Q	-
Western Chemical Intl.	Rapid Clean HF98	EPA 2000	-

NON FLY-AWAY TAPES (NFA)

Products used in the manufacturing of an aircraft or its components: composite bonding, flame spray, paint masking / stripping, processing, surface protection, etc.

FLY-AWAY TAPES (FA)

Products used in the construction of an aircraft : cargo bay seaming, moisture barrier, mounting, sound damping, heat shielding, cable harness wrapping, anti-corrosion, electrical and electronic systems, etc.



WIRE HARNESS

NO. 21



VINYL ADHESIVE TAPE

NO. 223S



FLAME RETARDANT VINYL ELECTRICAL TAPE

P-100



ALUMINUM FOIL / GLASS CLOTH

P-212 WHT



7.5 MIL GLASS CLOTH

P-212HD WHT



10 MIL GLASS CLOTH

P-221 AMB



1 MIL KAPTON* POLYIMIDE FILM

P-222 AMB



2 MIL KAPTON POLYIMIDE FILM

P-223 AMB



1 MIL DOUBLE COATED KAPTON POLYIMIDE FILM

P-224 AMB



1 MIL KAPTON POLYIMIDE FILM

P-421 NAT



5 MIL PTFE FILM TAPE

P-422 NAT



2 MIL PTFE FILM TAPE

P-423 NAT



2 MIL BONDABLE PTFE FILM TAPE

P-424 NAT



10 MIL PTFE FILM TAPE

P-430 NAT



2 MIL PTFE FILM TAPE

CARPET TAPE

P-50



MULTI-PURPOSE DOUBLE-COATED CLOTH TAPE

P-51



FLAME RETARDANT CARPET TAPE

P-55 / P-55B

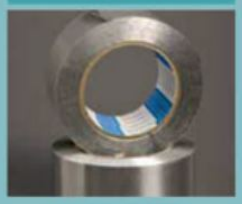


FLAME RETARDANT DOUBLE COATED CLOTH TAPE

PAINT MASKING / STRIPPING

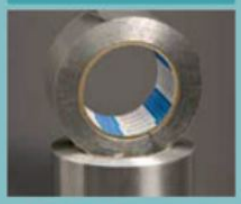
NO. 7288

HEAT RESISTANT FLAT PAPER MASKING TAPE

P-11 / P-11L

ALUMINUM FOIL TAPE

P-12L

ALUMINUM / CLOTH LAMINATED TAPE

P-14

GENERAL PURPOSE ALUMINUM FOIL TAPE

N32

FINE LINE MASKING TAPE

N34

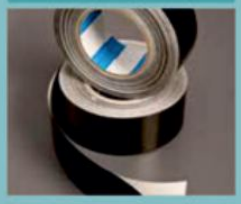
PREMIUM FINE LINE MASKING TAPE

P-100

ALUMINUM FOIL / GLASS CLOTH

P-306

VINYL PROTECTION TAPE

P-306L

INTERLINED VINYL PROTECTION TAPE

P-703

HIGH TEMPERATURE ALL-PURPOSE MASKING TAPE

P-781

HIGH TEMPERATURE CREPE PAPER MASKING TAPE

P-787

MEDIUM TEMPERATURE PAINT MASKING TAPE

P-790

PAPER MASKING TAPE

SPECIALTY WINDOW MASKING

P-11 / P-11L

ALUMINUM FOIL TAPE

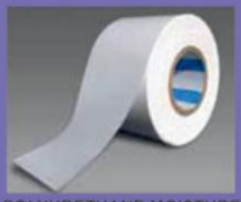
P-12L

ALUMINUM / CLOTH LAMINATED TAPE

N34

PREMIUM FINE LINE MASKING TAPE

ANTI-CORROSION

11611-MB

POLYURETHANE MOISTURE BARRIER TAPE

SC-140


AEROSEAL® ANTI-CORROSION TAPE

P-306

VINYL PROTECTION TAPE

P-306L

INTERLINED VINYL PROTECTION TAPE

COMPOSITE BONDING

422OR

PTFE FILM TAPE

P-02

7.4 MIL DOUBLE COATED SPLICING & BONDING TAPE

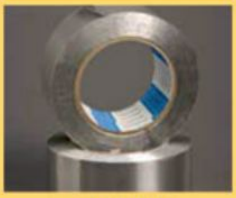
PS-1

4.7 MIL HIGH TEMPERATURE SILICONE FLASH MASKING TAPE

PS-2

2.4 MIL HIGH TEMPERATURE SILICONE FLASH MASKING TAPE

P-11



ALUMINUM FOIL TAPE

P-422 NAT



2 MIL PTFE FILM TAPE

P-440/P-440L



4 MIL PTFE COATED GLASS CLOTH TAPE

P-703



HIGH TEMPERATURE ALL-PURPOSE MASKING TAPE

P-781



HIGH TEMPERATURE CREPE PAPER MASKING TAPE

P-787



MEDIUM TEMPERATURE PAINT MASKING TAPE

NO. 923S



NITOFLON ADHESIVE TAPE

CARGO LINER

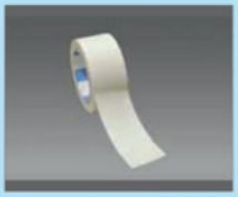
P-629 SERIES



CARGO PIT SEAM TAPE

THERMAL SPRAY MASKING

212DC



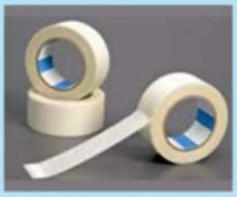
7.5 MIL DOUBLE COATED TAPE FOR HVOF SPRAY

P-100



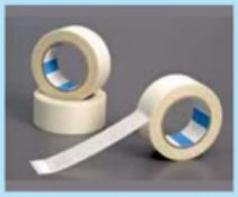
6.8 MIL ALUMINUM FOIL / GLASS CLOTH FOR PLASMA SPRAY

P-212 WHT



7.5 MIL GLASS CLOTH FOR PLASMA SPRAY

P-212HD WHT



10 MIL GLASS CLOTH FOR PLASMA SPRAY

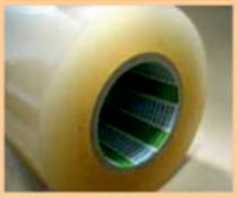
SURFACE PROTECTION

PE-3415



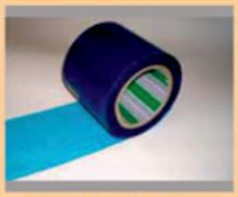
TRANSPARENT PE TAPE

SPV 214



SURFACE PROTECTIVE MATERIAL FOR STAINLESS STEEL

SPV 224



SURFACE PROTECTIVE FILM FOR HEAVY PROCESSING

SPV 3648F



EXTENDED OUTDOOR PROTECTION OF PAINTED SURFACES

SPV 9320



SURFACE PROTECTIVE MATERIAL FOR EXTREMELY ROUGH SURFACES

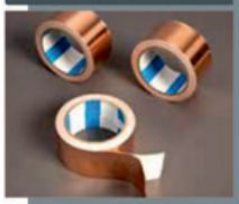
PIPE THREAD SEALANT

P-412



RIBBON DOPE THREAD SEALANT

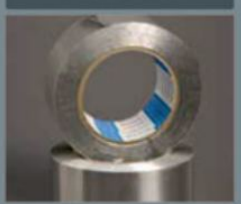
P-391 CO



1 OZ. COPPER FOIL CONDUCTIVE

SHIELDING

P-11 / P-11L



ALUMINUM FOIL TAPE

P-100



ALUMINUM FOIL / GLASS CLOTH

P-111 AL



ALUMINUM FOIL / CONDUCTIVE ADHESIVE

P-389 CO



1 OZ. COPPER FOIL TAPE

When it comes to Aircraft
ACC is Specialized in Specialty Chemical



EASTMAN SKYDROL AVIATION HYDRAULIC FLUIDS



EASTMAN TURBO OILS AVIATION LUBRICANTS



ExxonMobil Aviation



NYCO



Shell

ENGINE OILS-CROSS REFERENCE

Products							
Nyco	Shell	EASTMAN	EXXON	Specification	Joint Service Designation	Nato Code	DESCRIPTION
TURBONYCOIL 3516	Aeroshell Turbine Oil 2	-	Mobil Avrex M Turbo 201/1010	UK. - U.S. MIL-PRF-6081D,Gr.1010 French AIR 3516/A	OM-10	O-133	Petroleum lubricating oil, gas turbine
TURBONYCOIL 280 P	Aeroshell Turbine Oil 3	-	-	UK. DEF STAN 91-99 U.S. - French AIR 3515/B	OM-11	O-135	
TURBONYCOIL 3512	Aeroshell Turbine Oil 9	-	-	UK. DEF STAN 91-97 U.S. - French AIR 3512/A	OM-71	O-138	
TURBONYCOIL 310	Aeroshell Turbine Oil 9B	-	-	UK. DEF STAN 91-97, Gr.2479/1 U.S. - French 7808	OEP-71	O-136	
TURBONYCOIL 160	Aeroshell Turbine Oil 308	-	-	UK. MIL-PRF-7908L,Gr.3 U.S. - French -	OX-9	O-148	Synthetic lubricating oil, 3 cSt, gas turbine
-	Aeroshell Turbine oil 390	EASTMAN Turbo Oil 2389	Mobil Avrex S Turbo 256	UK. DEF STAN 91-94 U.S. French -	OX-7	-	
TURBONYCOIL 600	Aeroshell Turbine oil 500	-	-	UK. DEF STAN 91-101 U.S. MIL-PRF-23699G,Gr.STD French DCSEA 299/A	OX-27	O-156	Synthetic lubricating oil,5 cSt, gas turbine
TURBONYCOIL 601	Aeroshell Turbine oil 560	EASTMAN Turbo Oil 2380	Mobil Jet Oil II	UK. DEF STAN 91-101 U.S. MIL-PRF-23699 Grade HTS French DCSEA 299/A	OX-27	O-154	Synthetic lubricating oil, 5 cSt, gas turbine, corrosion inhibited
TURBONYCOIL 699	Aeroshell Turbine oil 555 (5cst)	EASTMAN Turbo Oil 2197	Mobil Jet Oil 254	UK. DEF STAN 91-100 U.S. DOD-PRF-85734A French -	OX-26	O-160	Synthetic lubricating oil, 5 cSt, gas turbine
TURBONYCOIL 35M	Aeroshell Turbine oil 750	EASTMAN Turbo Oil 25	-	UK. DEF STAN 91-98 U.S. - French Air 3517A	OX-38	O-149	Synthetic lubricating oil, 7.5 cSt, gas turbine
TURBONYCOIL 400	-	EASTMAN Turbo Oil 247	-	UK. - U.S. - French -	-	O-163	Synthetic lubricating oil, 4 cSt, gas turbine
TURBONYCOIL 13B	-	-	-	UK. - U.S. MIL-PRF-7808 L, Gr.4 French AIR 3514/A Iss.2	-	O-150	Synthetic lubricating oil, 3 cSt, gas turbine
-	Aeroshell Oil 65	-	-	UK. - U.S. - French -	-	O-113	Synthetic lubricating for aircraft piston engins
-	Aeroshell Oil 80	-	-	UK. DERD.2472 A/O U.S. MIL-PRF-6082, Gr.1065 French -	OM-170	-	Aircraft Piston Engine oil
-	Aeroshell Oil 100	-	-	UK. DERD.2472 B/O U.S. - French -	OM-270	O-117	
-	Shell Aviation Oil	-	-	UK. DERD.2472 B/O U.S. MIL-L-6082D, Gr.1100 French -	OM-270	O-117	
-	Aeroshell Oil W.80	-	-	UK. DERD.2450 Gr.D-65 U.S. - French -	OMD-160	O-123	Lubricating oil for aircraft piston engins, ashless dispersant type
-	Aeroshell Oil W.100	-	-	UK. DERD.2450 GR.D -80 U.S. MIL-L-22851 C, TYPE IIIB French -	OMD-250	O-125	
-	Aeroshell Oil W.120	-	-	UK. DERD.2450 Gr. D -100 U.S. - French -	OMD-370	O-128	

GREASES - CROSS REFERENCE

Products			Specification		Joint Service Designation	Nato Code	DESCRIPTION
Nyco	Shell	ExxonMobil Aviation					
NYCO GREASE GN HC	AEROSHELL AVIATION GREASE S.7108	-	UK. U.S. French	DEF STAN 91-6 MIL-G-6032,TYPE I DCSEA 363/B	XG-235	G-363	Synthetic grease, hydrocarbon resistant, plug valve
NYCO GREASE GN 05	AEROSHELL GREASE 5	-	UK. U.S. French	- MIL-G-3445C AIR 4205/B	-	G-359	Petroleum based, -18°C to +149°C
NYCO GREASE GN 06	AEROSHELL GREASE 8	-	UK. U.S. French	DEF STAN 91-54 MIL-G-7187 DCSEA 355/A (AIR 4206 B)	XG-285	G-355	Petroleum graphited grease, -40°C to +121°C
NYCO GREASE GN 07	AEROSHELL GREASE 16	-	UK. U.S. French	- MIL-G-25760A DCSEA 361/B (AIR 4207/A)	-	G-361	Synthetic based grease, extreme pressure, -40°C to +177°C
NYCO GREASE GN 10	AEROSHELL GREASE 7	Mobilgrease 33	UK. U.S. French	DEF STAN 91-53 MIL-PRF-23827 C DCSEA 353/A (AIR 4210/B)	XG-287	G-354	Synthetic ester based grease, -73°C to +121°C
NYCO GREASE GN 15	AEROSHELL GREASE 6	-	UK. U.S. French	DEF STAN 91-12 MIL-G-7711 A DCSEA 382/A (AIR 4215/B)	XG-271	G-382	Petroleum based grease,general purpose, -40°C to +121°C
NYCO GREASE GN 17	AEROSHELL GREASE 17	-	UK. U.S. French	DEF STAN 91-57 MIL-G-21164D DCSEA 353/A (AIR 4217/A)	XG-276	G-353	Synthetic ester based grease, molybdenum disulphide, -73°C to +121°C
NYCO GREASE GN 22	AEROSHELL GREASE 22	Mobilgrease 28	UK. U.S. French	DEF STAN 91-52 MIL-PRF-81322D DCSEA 395/B (AIR 4222)	XG-293	G-395	Synthetic hydrocarbon based grease, -54°C to +177°C
NYCO GREASE GN 46	AEROSHELL GREASE 14	-	UK. U.S. French	DEF STAN 91-51 MIL-G-25537 C -	XG-284	G-366	Petroleum based grease, anti-fretting
NYCO GREASE GN GA 47	-	-	UK. U.S. French	DEF STAN 80-80 AMS 2518 A AIR 4247/A	ZX-13	S-720	Anti-seize coumpound, graphited petrolatum
NYCO 65 VASELINE	-	-	UK. U.S. French	DEF STAN 91-38 VV-P-236 A AIR 3565/A	PX-7	S-743	Technical petrolatum
NYCO GREASE GN 67	AEROSHELL AVIATION GREASE S.4768	-	UK. U.S. French	DEF STAN 80-81 - -	ZX-38	S-722	Anti-seize compound, molybdenum disulphide
NYCO GREASE GN 68	-	-	UK. U.S. French	DEF STAN 91-56 - -	XG-315	G-394	Silicone based grease, pneumatic system
NYCO GREASE GN 69	-	-	UK. U.S. French	DEF STAN 68-69 AS 8660 -	XG-250	S-736	Silicone based grease, electrical insulating
NYCO GREASE GN 74	-	-	UK. U.S. French	DEF STAN 91-18 VV-G-671 F -	XG-264	G-412	Graphited grease
NYCO GREASE GN 142	-	-	UK. U.S. French	- - DCSEA 301/A	-	G-414	Petroleum based grease, automotive and weapon
NYCO GREASE GN 145	-	-	UK. U.S. French	DEF STAN 91-27 MIL-PRF -10924 G -	XG-279	G-403	General automotive and artillery (GAA) grease
NYCO GREASE GN 155	-	-	UK. U.S. French	DEF STAN 91-34 - -	XG-286.	G-460	Heavy duty Naval Grease, sea water resistant: STM(310/A)
NYCO GREASE GN 4343	AEROSHELL GREASE 43C	-	UK. U.S. French	- MIL-G-4343C SAE AMS -G-4343	XG-269	G-392	Synthetic based grease, aircraft pneumatic system
NYCO GREASE GN 25013	AEROSHELL GREASE 15 A	-	UK. U.S. French	DEF STAN 91-55 MIL-G-25013E 	XG-300	G-372	Synthetic based grease, ball & roller bearing -73°C to +232°C

LUBRICATING OILS- CROSS REFERENCE



Products		Specification		Joint Service Designation	Nato Code	DESCRIPTION
Nyco	Shell					
NYCOLUBE 11B	AEROSHELL FLUID 12	UK.	DEF STAN 91-49	OX-14	O-147	Synthetic lubricating oil, instrument
		U.S.	MIL-PRF-6085 D			
		French	AIR 3511/A			
NYCOLUBE 30	AEROSHELL FLUID 18	UK.	DEF STAN 91-79	OX-18	O-190	Petroleum lubricating oil
		U.S.	MIL-PRF-32033 (VV-L-800)			
		French	-			
NYCOLUBE 60	-	UK.	DEF STAN 8034	PX-4	C-642	Petroleum lubricating oil, preservative
		U.S.	MIL-PRF-21260E.GR 30			
		French	-			
NYCOLUBE 64	AEROSHELL FLUID 5L-A	UK.	DEF STAN 91-112	OEP-30	O-153	Petroleum lubricating oil, aircraft gear, light
		U.S.	MIL-PRF-6068 E, Gr.L			
		French	-			
NYCOLUBE 74	-	UK.	-	-	-	Semi-synthetic lubricating oil
		U.S.	A-A-59137 GR. B			
		French	-			
NYCOLUBE109	-	UK.	-	-	-	Semi-synthetic lubricating oil
		U.S.	A-A-59137 GR. A			
		French	-			
NYCOLUBE 127	-	UK.	-	-	S-758	Lubricant cleaner preservative weapon (CLP), and BT-PS-661 A
		U.S.	MIL-PRF- 63460 D			
		French	-			
NYCOLUBE 210	-	UK.	-	-	O-1177	Synthetic 2-stroke biodegradable oil
		U.S.	-			
		French	DCSEA 242/B			
NYCOLUBE 227	-	UK.	-	-	S-758	Lubricant, cleaner and preservative oil for weapon
		U.S.	-			
		French	DCSEA 501			
NYCOLUBE 227	-	UK.	-	-	S-761	General purpose oil, weapon, German specification TL 9150-0078 Iss.5
		U.S.	-			
		French	DCSEA 502/A			
NYCOLUBE 269	-	UK.	-	-	O-1179	High performance synthetic engine oil SAE 5W40
		U.S.	-			
		French	DCSEA 215/B			
NYCOLUBE 3525	AEROSHELL FLUID 5M-A	UK.	DEF STAN 91-112	OEP-70	O-155	Aircraft gear oil, medium
		U.S.	MIL-PRF- 6068E, Gr.M			
		French	DCSEA 255/A			
NYCOLUBE 7870	AEROSHELL FLUID 3	UK.	DEF STAN 91-47	OM-12	O-142	Petroleum lubricating oil, instrument
		U.S.	MIL-PRF- 7870 C			
		French	-			
NYCOLUBE 25681	-	UK.	DOD-L-25681 D	OX-70	S-1736	Silicone lubricating oil, molybdenum disulphide
		U.S.	-			
		French	-			

SPECIALITY PRODUCTS- CROSS REFERENCE




Products		Specification		Joint Service Designation	Nato Code	DESCRIPTION
Nyco	Shell					
NYCOPROTEC 03	AEROSHELL FLUID 2XN	UK.	DTD.900/4913A	ZX-21	C-608	Petroleum corrosion preventive oil concentrate
		U.S.	MIL-C-6529 C,TYPE I			
		French	AIR 1503/B type B			
NYCOPROTEC 04	-	UK.	-	-	C-610	Petroleum corrosion preventive oil
		U.S.	MIL-C-6529 C,Amd.2 Type 3			
		French	DCSEA 510/A			
NYCOPROTEC 05	-	UK.	-	-	C-609	Petroleum corrosion preventive oil
		U.S.	MIL-C-6529 C, Amd.2 Type 2			
		French	AIR 1503/B Type B			
NYCOPROTEC 06	AEROSHELL FLUID 9	UK.	DEF STAN 91-40	PX-27	C-615	Petroleum corrosion preventive oil
		U.S.	-			
		French	AIR 1503/B Iss.3			
NYCOPROTEC12	-	UK.	-	-	O-192	Petroleum lubricating oil,preservative
		U.S.	MIL-PRF- 3150 D			
		French	DCSEA 231 Iss.2			
NYCOPROTEC 8131	-	UK.	-	-	C-632	Corrosion preventive coumpound
		U.S.	MIL-PRF- 6173 E, GR 1			
		French	-			
NYCOPROTEC 132	AEROSHELL COMPOUND 02	UK.	-	-	C-620	Corrosion preventive coumpound
		U.S.	MIL-PRF- 16173 E, GR2			
		French	-			
NYCOPROTEC 8188	SHELL PRODUCT MIL-C-8188C	UK.	-	-	C-638	Corrosion preventive coumpound
		U.S.	MIL-PRF- 8188 D			
		French	-			
NYCO 4223	AEROSHELL COMPOUND 09	UK.	DEF STAN 68-62	ZX-35	S-740	Molybdenum disulphide powder, lubricating
		U.S.	AMS-M- 7866 D			
		French	AIR 4223 Iss.1			
NYCO 4224	-	UK.	-	-	S-732	Graphite powder, lubricating grade
		U.S.	SS-G-659 A			
		French	AIR 4224 Iss.1			
NYCO 8243	SHELL COMPOUND S7632	UK.	-	-	S-742	De-icing fluid, aircraft surface ground use
		U.S.	SAE AMS 1424/B			
		French	-			
NYCOSOL 4	AEROSHELL COMPOUND 06A	UK.	BS 1595/1986, PART I	AL-11	S-737	Technical isopropanol
		U.S.	TT-I-735 A Amd.3 GR B			
		French	AIR 3660/A Iss.2			
NYCOSOL 12	SHELL METHANOL MIXTURE 44/55/0	UK.	DEF STAN 68-253	AL-28	S-1744	Thrust augmentation fluid
		U.S.	-			
		French	AIR 3651/A Iss.2, (44/56)			
NYCOSOL 13	-	UK.	DEF STAN 68-252	AL-41	S-1745	Icing inhibitor additive, fuel system, high flash point
		U.S.	MIL-DTL- 85470 B			
		French	DCSEA 745/A			
NYCOSOL 17 Type 2	-	UK.	-	-	-	Calibrating fluid
		U.S.	MIL-PRF- 7024 E, Type II			
		French	-			
NYCOSOL 18	-	UK.	-	-	S-753	Degreasing solvant for maintenance
		U.S.	MIL-PRF -680B, Type II			
		French	-			
NYCOSOL 131	-	UK.	-	-	XS-1745	Fuel icing inhibitor, high flash point, with anti-corrosion/lubricating additives
		U.S.	-			
		French	DCSEA 745/A			
NYCODIEL	-	UK.	-	-	S-1748	Synthetic dielectric coolant fluid
		U.S.	MIL-PRF- 87252 C			
		French	-			

HYDRAULIC FLUIDS
CROSS REFERENCE



Products			Specification		Joint Service Designation	Nato Code	DESCRIPTION
Nyco	Shell	ExxonMobil Aviation					
HYDRAUNYCOIL FH 2	AEROSHELL FLUID 31	-	UK. U.S. French	- MIL-PRF- 83282 D, AMD 1 DCSEA 437/B	OX-19	H-537	Synthetic hydrocarbon fluid, fire resistant
HYDRAUNYCOIL FH 3	AEROSHELL FLUID 61,TY I	-	UK. U.S. French	- MIL-PRF- 46170 D,TY I -	-	H-544	Synthetic hydrocarbon fluid, fire resistant, anti-rust
HYDRAUNYCOIL FH 5	AEROSHELL FLUID 4	-	UK. U.S. French	DEF STAN 91-48 - DCSEA 415/A	OM-18	H-520	Petroleum based fluid
HYDRAUNYCOIL FH 6	AEROSHELL FLUID 71	-	UK. U.S. French	DEF STAN 80-142 MIL-PRF-6083 F DCSEA 535/A	PX-26	C-635	Petroleum corrosion preventive fluid, superclean, hydraulic system
HYDRAUNYCOIL FH 5AW	-	-	UK. U.S. French	- - -	-	-	Shock strut fluid - Boeing BMS 3-32 B Type II
HYDRAUNYCOIL FH 6WA	-	-	UK. U.S. French	- - -	-	-	Shock strut fluid - Boeing BMS 3-32 B Type I
HYDRAUNYCOIL FH 13	-	-	UK. U.S. French	- MIL-PRF-17672 D,Amd,3 -	-	H-537	Petroleum hydraulic fluid, Navy vessels, propeller pitch control, rotary air compressor
HYDRAUNYCOIL FH 14	-	-	UK. U.S. French	- - -	-	H-540	Petroleum, inhibited fluid (German spec. TL 9150-0035 Iss.5)
HYDRAUNYCOIL FH 18	-	-	UK. U.S. French	- MIL-S -81087 C, Amd.1 -	-	H-536	Halogenated silicone hydraulic fluid, precision instrument, electrical and mechanical
HYDRAUNYCOIL FH 19	-	-	UK. U.S. French	- MIL-DTL-17111 D -	-	H-575	Petroleum based fluid, ordnance
HYDRAUNYCOIL FH 23	-	-	UK. U.S. French	- MIL-H-19457 D STM 7320 Iss. 1, Amd. 2	-	H-580	Phosphte ester based fluid, fire resistant
HYDRAUNYCOIL FH 26	-	-	UK. U.S. French	- - -	-	H-576	Mineral hydraulic fluid, machine navy tools, gunnery, radar equipments as per Belgium specification BN-PH-372 D
HYDRAUNYCOIL FH 42	-	-	UK. U.S. French	- MIL-PRF-87257 B -	-	H-538	Synthetic fluid, fire resistant, low temperature
HYDRAUNYCOIL FH 46	-	-	UK. U.S. French	- - -	-	-	Petroleum hydraulic fluid, landing grear, SAAB STD 161216
HYDRAUNYCOIL FH 51	AEROSHELL FLUID 41	Mobil Aero HF	UK. U.S. French	DEF STAN 91-48 MIL-PRF-5606 H DCSEA 415/A	OM-15	H-515	Petroleum based fluid, superclean
-	AEROSHELL FLUID 61, TY II	-	UK. U.S. French	- MIL-PRF-46170 D,TY II -	-	-	Preservative grade synthetic hydrocarbon hydraulic fluid dyed red for aerospace



Aircraft Wheel Cleaner & Paint Shop Tools

Clean up to 30 aircraft wheel hubs in 8-hour shift

Universal - type fixture to accept wheel hubs of any size

Complete automatic cleaning process (PLC controlled)

Clean up to 30 complete wheels in 8-hour shift.
ACC offers Equipment +chemical i.e ACC 2230





Automatically cleans wheels used on commercial and military aircraft. It removes oil, grease, rubber and dirt accumulated on these parts. Automated section of process and amount of detergent depends on the degree of contamination.



PROCECO-TYPHOON AWW WHEEL CLEANER

ACC PAINT SHAKER:

ACC has developed its own Paint Shaker Machine

- Compact design
- More space saving
- Promoting shop image
- Optional moveable loading plate
- Easier to put paint cans in and out
- Modularized design
- More convenient maintenance
- Higher stability
- Intelligent pressure adjustment, detecting
- Different can size



ACC AIRLESS STRIPPING PUMP

Application definition:

Airless sprayer of all kind of paint removers like ACC 1120.

The pump system is specially configured for this application and is also suitable for all the other aerospace paint strippers. There are several configuration possible!



Proceco Designs and Manufacturs a wide range of automated aqueous parts cleaning and surface treatment systems for MRO and manufacturing of aircraft components. Proceco system obtain high cleanliness levels, increased productivity, and reduced cost per part.

Proceco technology is environmentally friendly. Using aheated water-based cleaning solution; Proceco's systems remove oils, grease, chips, dirt, coolants and other contaminants from the parts prior to inspection, repair, NDT, and final assembly. In addition to producing no VOC emissions, the cleaning solution is filtered and recirculatedto preserve energy and minimize water consumption.

A complete selection of system configurations such as immersion cleaning, in-line tunnel, spray-immersion, and turntable spray cabinet are available to degrease, clean, rinse, dry and treat surfaces of virtually any part. Systems are available in batch or continuous processes and can be customized by adding pre-engineered options to meet your exact requirements.



Ultrasonic immersion degreasing

Proceco Process Capabilities	Cleaning / Degreasing	Carbon Removal	Non Destructive Testing	Surface Treatment	Deburring
			FPI		
Engine Components	●	●	●	●	●
Wheels / Brakes / Bearings	●	●	●		
Landing Gear	●		●	●	
Tubes / Fittings / Hoses	●				
Electric Motors / Actuators	●				
Propellers	●			●	
Sheet Metal Components / Wing Skins	●			●	●

System Configurations:

- Cleaning by immersion
- In-line conveyor
- Turntable spray cabinet
- Reciprocating spray
- Spray-immersion
- Monorail
- Custom design

Typical Options:

- Ultrasonics
- Mechanical agitation
- Water conditioning
- Automation
- Solution filtration
- Oil removal
- Sludge removal
- Waste water treatment

At Proceco, you will find the system you need for your component MRO and manufacturing processes.

Typical Cleaning and Surface Treatment Systems



Ultrasonic immersion cleaning
- Jet engine overhaul



Aircraft wheel washer
- Wheel hub maintenance



Reciprocating nozzle spray cabinet
- Landing gear manufacturing and overhaul



Spray-immersion cleaning
- Piston engine parts overhaul



Turntable spray cabinet
- Bearing maintenance



Automatic FPI and degreasing tank line
- Turbine engine parts manufacturing and overhaul



Turntable spray cabinet
- Jet engine components



Turntable spray cabinet and vacuum dryer
- Electric motor overhaul



Automatic immersion cleaning and anodizing system
- C130 propeller overhaul



In-line conveyor spray washer
- Jet engine parts



Tube flushing and cleaning
- Hydraulic, oxygen, fuel tubing



Robotic, high-pressure water jet deburring system
- Precision components

Designed to clean up to 30 aircraft wheel hubs of any size in an 8-hour shift, the Proceco Typhoon® -AWW is the proven choice of commercial airliners worldwide.

The Typhoon ® -AWW aircraft wheel cleaning system uses the latest aqueous cleaning technology to remove grease, rubber residues, dirt and brake dust from wheel hubs prior to inspection or overhaul.





Aircraft Wheel Cleaning System

Standard Features

- Stainless-steel 304 construction
- Three(3) universal-type wheel hub fixtures
- Vertical sliding cabinet hood with safety latch
- Recirculated wash
- Freshwater rinse
- Plant air blow-off
- Two chip baskets accessible by a hinged tank cover
- Rotating polypropylene brush
- Programmable logic controller (PLC) with preprogrammed cleaning process
- Stainless-steel disc-type oil skimmer
- Exhaust blower
- All moving parts are covered with safety guards
- Automatic solution level control
- Low solution level heating system protection
- Electric solution heating
- Fully insulated solution tank and hood
- Low energy consumption design resulting in lower heating requirements
- Vertical sealless pump
- Maximum noise level of 80 dB(A)
- Finish: two-component epoxy paint
- Easy access to mechanical components

Clean up to 30 aircraft wheel hubs in an 8-hour shift





	Specifications	Imperial	Metric
	Production (wheels per 8-hour shift)	30	30
	Turntable diameter	32"	810 mm
	Maximum work height	20"	510 mm
	Loading height	40"	1016 mm
	Maximum workpiece weight	150 lb	70 kg
Wash stage	Tank capacity	470 USgal	1780 litres
	Pump capacity @ 60 Hz	200 USgal/min @175 psi	760 litres/min@12 bar
	Pump motor	50 hp	37 kW
Recirculating rinse stage (Optional)	Tank capacity	120 USgal	455 litres
	Pump capacity @ 60 Hz	115 USgal/min @60 psi	435 litres/min @4 bar
	Pump motor	7½ hp	5,5 kW
Slurry blast & Rinse stage (Optional)	Tank capacity	120 USgal	455 litres
	Pump capacity @ 60 Hz	245 USgal/min @60 psi	930 l/min @4,1 bar
	Pump motor	15 hp	11 kW

Options

- Recirculated rinse
- Recirculated slurry blast and rinse stage
- Automatic load and unload system
- Stainless-steel pump, spray manifolds, exhaust blower and brush core
- Special parts basket
- Marine door on tank
- Power supply other than standard 460V

Reduce Your Wastewater Stream Up To 98% and Recuperate Process Water

ÉCO-SMART

The Éco-Smart® is a Mechanical Vapor Recompression (MVR) evaporator engineered to separate water from waste through distillation. The system reclaims up to 98% of your waste water as clean water that can be re-used in your industrial process. The remaining residual waste is collected in a concentrate for disposal.
As a result, the Éco-Smart® substantially reduces your waste water disposal costs and minimizes your environmental foot print.

- Reduce your disposal costs
- Recycle water
- Operate a closed-Loop
- Low energy consumption
- Cost savings & cost-effective solution



Based on avg. US energy cost: 0.07$/kWh

APPLICATIONS

- Surface Treatment Rinse Water
- FPI Rinse Water
- Parts Washing Solution
- Die Casting Wastewater
- Oily Emulsions
- Metalworking Fluids
- Concentrate from Membrane
- Filtration

FEATURES

- Uses No Electric, Gas, or Steam heat Sources
- Efficient Vapor Compression Technology
- Few Moving Parts – No Pumps
- No Membranes to Replace
- PLC Controlled – Runs Unattended
- Automatic Periodic Blow-Down
- Compact, Portable, and Easy to Install

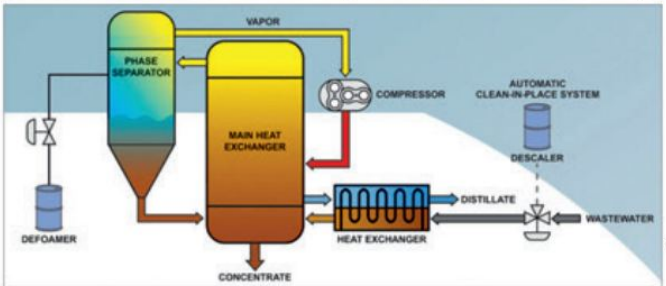
BENEFITS

- Low Energy Consumption – 0.25kWh/gal
- Low Operating Costs
- Low Maintenance
- High Water Recovery Rate – Up to 98%
- Closed-Loop System – No Air Permits
- Waste Concentrated in Sludge
- Concentration Up to 400,000 mg/L

Models	*Daily Production (USGal/Day)	Motor Power (HP)	Dimensions LxWxH)Inches(	Weight (Lbs)
Éco-Smart® ES 400	400	10	94 x 52 x 88	2000
Éco-Smart® ES 800	800	20	98 x 60 x 100	3000
Éco-Smart® ES 1500	1500	30	110 x 60 x 110	4000
Éco-Smart® ES 3200	3200	75	150 x 72 x 145	8000
Éco-Smart® ES 6000	6000	125	182 x 74 x 130	13000
Éco-Smart® ES 11500	11500	200	200 x 84 x 130	16000

*Based on 22/24 hours

System specifications are subject to change without notice.

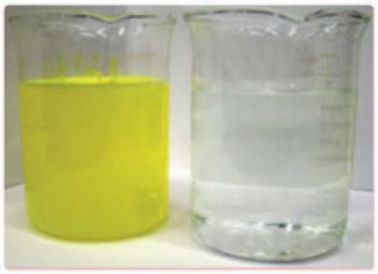


Mechanical Vapor Recompression (MVR) Evaporator



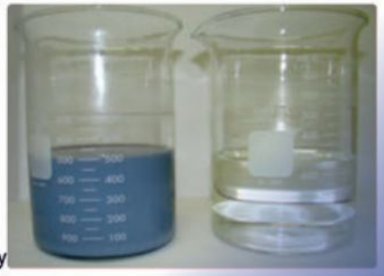
The Éco-Smart's process is fully automatic and can be continuously monitored on the machine's touchscreen interface.

Before | After



Dye penetrant rinse water

Before | After



Mold releasing agent

ADT-Tank Lines

Proceco's ADT tank lines are multi-stage immersion systems designed for wet dip processes used for parts cleaning, metal surface treatment, and flaw detection. Based on a common design platform, each system is custom engineered for a specific **process and workpieces.**

Degreasing, metal etching, anodizing and phosphating are just some of the processes handled by Proceco's ADT tank lines across the aviation, automotive and general manufacturing industries. Proceco provides a complete solutions approach from initial concept to turnkey installation.

Proceco systems offer automation, process control,dynamic scheduling, traceability, as well as a variety of fluid management and part handling options to meet your exact needs. This makes Proceco's ADT tank lines completely flexible; ideal for processing components in manufacturing as well as in maintenance, repair and overhaul.



5-stage automated immersion line with cleaning and paint stripping of armored vehicle engine components

Proceco's engineering team will evaluate your application and production requirements in order to design the best system to fit your needs. Proceco integrate the necessary technologies to enhance performance, improve efficiency, and extend solution life. Proceco has extensive experience in engineering innovative systems for cleaning and surface treatment applications that use aqueous-based solutions. There are many advantages to choosing Proceco systems:

- Custom-designed to meet your exact requirements
- Process know-how
- Integration expertise
- ISO 9001:2000 quality management system
- Turnkey installations
- Fast lead time and project management



6-stage automated ultrasonic immersion degreasing line featuring automatic basket loading/unloading and convection drying.

Energy Efficient Design

Proceco believes in energy efficiency. When sizing pumps, ventilation, and water utilization, we pay specificattention to all the elements that have an impact on energy consumption.

We offer thick thermal insulation for all our heated processes, and tank covers to preserve energy. Our process control system is designed to conserve energy by avoiding over-heating of tanks, and by opening covers only when necessary for the shortest time possible. Covers can also be interlocked with ventilation to reduce heat losses.

Proceco also offers closed-loop cascading rinses, solution reclaim and filtration to reduce water usage.

System Features

- Process flexibility
- Stainless-steel and plastic / FRP tanks to suit solution chemistry
- Rugged construction
- Service connections and equipment located at rear forease of maintenance
- Automated and semi-automated processes
- Automatic solution level control
- Digital temperature controls
- Heavy soil, oil and grease removal capabilities
- Ergonomic and easy to operate
- OSHA compliant safety guarding
- Factory testing

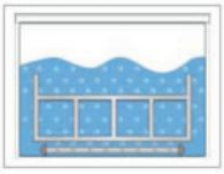
Applications

Surface Treatment
- Anodizing
- Degreasing
- Decontamination
- Deoxidizing
- Desmutting
- Etching
- FPI
- Passivation
- Pickling
- Phosphating
- Rust-inhibiting

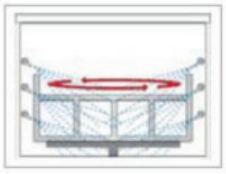
Cleaning
- Degreasing
- Pre-cleaning
- Precision cleaning
- Rinsing

Multi-Stage Design

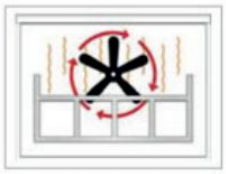
Based on your needs, pre-engineered processes are combined with automatic part transfer and process control to create your tailor-made multi-stage immersion line. Systems can include a wide range of processes such as:



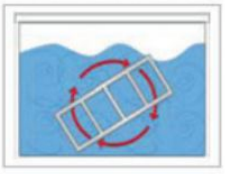
Air sparge agitation



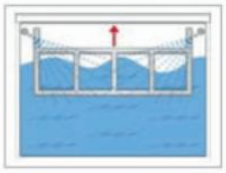
Rotation with spray



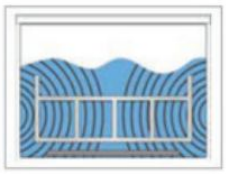
Convection drying



Rotation agitation



Immersion and spray

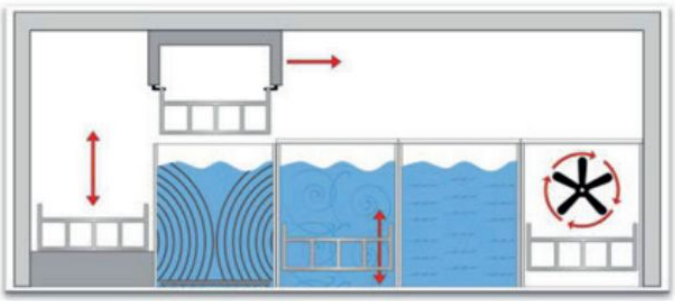


Ultrasonic

also:

- Pump/ eductor agination
- Vertical oscillation

Automatic Part Transfer



Fixtures or baskets are automatically transferred through the process based on pre-programmed recipes. Simple or dynamic scheduling can be added to maximize production efficiency. Proceco offers various transfer systems:



Overhead hoists: Located above the machine, supported by a dual-side, heavy-duty structural frame. Capacity up to 5,000 lbs.



Cantilever hoists: Located on the side of the machine and supported by a heavy-duty structural frame. Capacity up to 1,000 lbs.



Automatic part loading / unloading: Conveyors or other technologies can be added to increase productivity or for seamless integration into your production line.

Process Control

Our automation engineers are trained in Siemens, Allen Bradley or soft PLC to offer you complete process control as you need it.

Systems overview



to monitor process parameters, workpiece flow, and error messages.

Detailed information



about individual stations can be displayed for close process monitoring.

Manual controls



are available at each station for system flexibility and maintenance.

Additional Options & Equipment

A wide range of options and auxiliary equipment can be integrated with the system to enhance its capabilities and extend solution life:

- Electrical, steam or gas / hydronic heating systems
- Solution filtration
- Oil removal and sludge removal (#1)
- Water conditioning
- Waste water treatment (#2)
- Air handling
- Automated tank covers
- Safety enclosures
- Remote diagnostics
- Data collection
- Cooling
- Automatic dosing
- Manual touch-up tools (#3)
- Special part fixtures and racks
- Tank clean-out doors
- Operator platforms
- ⓢ, ⓤ, CE compliant

(#1)



(#2)



(#3)





4-stage automated ultrasonic immersion cleaning line featuring basket oscillation, convection drying, and RO water generation.
- Aircraft jet engine maintenance



7-stage automated immersion line featuring aluminum etching, desmutting, and anodizing with DI water generation.
- Aircraft propeller overhaul



10-stage manual immersion line featuring pump / eductor agitation, degreasing and heat scale removal.
- Aircraft jet engine maintenance



12-stage automated fluorescent penetrant inspection FPI and degreasing tank line
- Aircraft turbine engine parts manufacturing



7-stage automated immersion line featuring parts cleaning, phosphating, and drying stages in a fully enclosed system.
- Air-conditioning compressor manufacturing



7-stage automated immersion line featuring power spray cleaning, deoxidizing, and automatic loading / unloading.
- Large diesel cylinder head repair

KIMTECH* Aerospace Cloths

Understanding that while surface preparation and cleaning is a very small part of the whole aircraft & equipment manufacturing, repair and maintenance process, it is just as crucial and requires precise, tailored products.

Aerospace Abrasive surface cloths

- Highly durable aerospace cloths specifically designed for abrasive surfaces.

Heavy Duty Low Lint Cloths

- Advanced material for optimum linting and extractables control.

General purpose and chemical application cloths

- An easy to implement lean cleaning solution that addresses waste reduction and productivity improvement around general wiping needs.
- More controlled dispensing and application of solvent for reduced waste and better overall performance versus traditional bucket/decanter systems and disposable pre-saturated options.

The following Kimberly-Clark Professional products have been tested by Boeing and been shown to be compliant with the updated specification BMS 15-5G:

- Aerospace General Purpose Cloths (U3866400)
- Aerospace Heavy Duty Cloths (U3866600)
- Aerospace Heavy Duty Low Lint Cloths (U3866800)
- Aerospace Chemical Application Cloths (U3866500)
- Aerospace Surface Cloths (U3866700)









production line.

- ⓢ, Ⓤ, CE compliant

WETTASK* Wiping System

Increasing worker safety from VOCs and minimising consumption and waste of chemicals

FACT:

In industries such as Aerospace, Automotive or Metal Manufacturing, the inhalation of VOCs can cause chronic respiratory problems and fatigue. These contribute significantly towards the 350 million working days lost per year in Europe through occupational ill-health.*

* Source: OSHA Europa

OUR SOLUTION:

We have worked alongside industrial manufacturers and have seen first hand the daily occupational health and safety challenges you face.

Our new WETTASK* Wiping System addresses your needs of reducing worker exposure to solvents and optimising solvent consumption, increasing the safety and profitability of your facility.



A refillable, fully enclosed wiping system giving you greater control over solvent use and wiping costs. Upgraded opening system and inclusive visual management kit for more efficient working in a safer environment.



YOUR BENEFITS:

HEALTH AND SAFETY
- Increased worker safety through limited exposure to dangerous solvents and fluids
- Reduced environmental footprint with less VOC emissions

PRODUCTIVITY
- Ready-to-use system saves considerable time and effort
- Greater flexibility through use of any preferred solvents / chemicals

PROFITABILITY
- Reduced solvent consumption by at least 20%
- Minimal waste disposal costs



WETTASK* DSX/DS Wipers



Ideal for:

Hygiene-critical Healthcare environments, requiring optimal infection control:

- Resistance to mould and biological growth
  Chemically treated surface wipers, protecting patients in Acute and Primary Care zones
- Longer-lasting protection
  Leaves fluid on wiped surface, so disinfectant continues working
- An alternative to sprays
  Reducing wastage and giving better cost control

Our WETTASK* System reduces solvent consumption by at least 20% compared to traditional rags and other open systems.

Just choose the KIMTECH* Wipers that works best for your task, then add the chemical solution you already use. Add up to 2.5 litres of solution or until the wiper is wet enough for your application.

Giving you greater control over solvent/disinfectant use and wiping costs

Here is a new concept in wiping systems. We have created a refillable, airtight wiping system. Giving you better chemical control and pre-moistened wipers specific to cleaning tasks in your sector. You simply add the solution of choice:

- Enhancing hygiene and safety standards
  Pre-moistened cloths helping you to control solvent and disinfectant costs
- A fully enclosed system
  To reduce cross contamination, chemical vapours and splashes, enhancing worker safety



BOEING MATERIAL SPECIFICATION
QUALIFIED PRODUCTS LIST
BMS 15-5G

CLASS A

MATERIAL CLASSIFICATION	MANUFACTURER'S PRODUCT DESIGNATION FL 1	MANUFACTURER	QUALIFYING PRODUCT GROUP	DATE
Non-Woven, 43 percent polyester/ 57 percent wood pulp	CERTEK®	Haines Wiping Products Ltd. Dawson Lane Barwell LE9 8BE United Kingdom	BR&T	03-APR-2014
Non-Woven, 45 percent polyester/ 55 percent rayon	Purewipe® VP-100	American Fiber & Finishing No. 2188 Xinkai Rd. Pinghu Economic Development Zhe Jiang, China	BR&T	26-APR-2013
Non-Woven, 45 percent polyester/ 55 percent wood pulp	DuPont Sontara® Style 8801	Sontara® Technologies 1002 Industrial Rd. Old Hickory, TN 37138	BCA	10-JAN-1998
	DuPont Sontara® AC Style K802	Sontara® Technologies	BCA	23-MAY-2000
	KIMTECH® P2 Aviation Wipers European Code: U3866800 Global Codes: 28643, 28644	Kimberly-Clark Professional No. 63 Anfeng Rd. Nanping City, Fujian Province China	BR&T	03-MAY-2014
	Purewipe® WP-100	American Fiber & Finishing Zhe Jiang, China	BR&T	26-APR-2013
Non-Woven, 50 percent polyester/ 50 percent rayon	DuPont Sontara® Style 8426	Sontara® Technologies	BCA	22-SEP-1999
	KIMTECH® P3 Aviation Wipers Global Code: 28647	Kimberly-Clark Professional 1007 N. Market St. Wilmington, DE 19898	BR&T	03-APR-2014
	KIMTECH SCOTTPURE®	Kimberly-Clark Corp. 1400 Holcomb Bridge Rd. Roswell, GA 30078	BCA	22-SEP-1999
Non-Woven, 50 percent polyester/ 50 percent wood pulp	DuPont Sontara® Style K868	Sontara® Technologies	BCA	08-MAR-2004
Non-Woven, 100 percent polyester	DuPont Sontara® Style 8005	Sontara® Technologies	BCA	10-JAN-1998
Non-Woven, 100 percent rayon	Chix Aerospace Wipers Case Code No. 8756 Fabric Code No. 3984	Chicopee, Inc. 1203 Chicopee Rd. Benson, NC 27504	BCA	13-MAR-1989
	DuPont Sontara® Style 8642	Sontara® Technologies	BCA	22-SEP-1999

BOEING MATERIAL SPECIFICATION QUALIFIED PRODUCTS LIST

BMS 15-5G

MATERIAL CLASSIFICATION		MANUFACTURER'S PRODUCT DESIGNATION FL 1	MANUFACTURER	QUALIFYING PRODUCT GROUP	DATE
CLASS A	Non-Woven, 100 percent rayon	Purewipe ® V-100	American Fiber & Finishing Zhe Jiang, China	BCA	02-MAR-2011
		Veraclean® Material Code No.140411	BBA Fiberweb 500 Chestnut St. Bethune, SC 29009	BCA	02-JUN-1992
		Veraclean® Plus+ Material Code No. 140130	BBA Fiberweb	BCA	13-JAN-1998
	Non-Woven, 15 percent polypropylene / 85 percent wood pulp	KIMTECH® C3 Aviation Wipers European Code: U3866500 Global Code: 28645	Kimberly-Clark Professional 3461 County Rd. 100 Corinth, MS 38834	BR&T	03-APR-2014
	Non-Woven, 20 percent polypropylene / 80 percent wood pulp	KIMTECH® C2 Aviation Wipers European Code: U3866400 Global Code: 28641	Kimberly-Clark Professional 746-1 Daekwang-Dong Kimcheon City Kyungsangbook-D Korea	BR&T	03-APR-2014
		KIMTECH® C4 Aviation Wipers European Code: U3866600 Global Code: 28642	Kimberly-Clark Professional Kyungsangbook-D Korea	BR&T	03-APR-2014
		WYPALL® X80 (Blue/White Colors)	Kimberly-Clark Professional Corinth, MS	BR&T	03-APR-2014
	Non-Woven, Cotton	BEMCOT A-100	ASAHIOZU Co., Ltd. 3294-1, Kushitsu-Cho, Nobeoka, Miyazaki, Japan	BCA	18-FEB-2009
			OZUTECHNO Co., Ltd., 1 - 15, Oroshi-Machi, Minumaku, Saitama, Saitama, Japan	BCA	18-FEB-2009
		BEMCOT A-200	ASAHIOZU Co., Ltd.	BCA	18-FEB-2009
			OZUTECHNO Co., Ltd.	BCA	18-FEB-2009
		Grade 142951	BBA Fiberweb	BH	06-OCT-1993
	Swabs	Purewipe®	American Fiber & Finishing, Inc. C1, C2, and C3 Shengli Industrial Park Shengli Rd. Jingzhou Hubei, China	BCA	02-MAR-2011
	Woven, Cotton	Aerotex®	American Fiber & Finishing, Inc. 225 N. Depot St. Albemarle, NC 28001	BCA	26-MAR-2009

Airbus Broughton – Wing Division Aerospace OEM

Disposal costs reduced by €83k.

Problem

Issues with cloths in wing production:

- Poor quality cloths used for technical wiping
- Cloths kept in bins away from point of use
- Bulky to store and dispense
- Disposal costs impact Airbus 2020 vision of reducing CO2 emissions and waste targets

Countermeasure

Use wipers that:

- Offer users higher capacity.
- Are available at point of use.

➠ WYPALL X80 Large Roll Cloth (lab approved)

➠ WYPALL X8 Folded Cloth

Results

€79,000 annual saving in disposal of cloths due to reduced wiper volumes and elimination of unusable wipers

Inventory waste reduction of 520 pallets (10 full trucks) in/out of stores

➠ €4,000 annual saving

Motion waste reduced due to point of use availability

€83,000 total annual saving

Airbus Bremen - Wing / Flap Production Aerospace OEM

Solvent consumption reduced by 25%

Problem

Issues with current rag solution in wing production:

- High solvent consumption and only small solvent bottles not placed at point of use
- Wiper too large for cleaning wings and flaps efficiently
- No dispensing solution exists for rags

Use wipers that:

- right size for the tasks
- appropriate to remove skydrol and other chemicals
- available at point of use
- decrease consumption of wipers and solvents

Implement a LEAN orientated system that combines solvents and compatible wipers (1 bucket per cell + solvent dispenser + visual management)

➠ WETTASK* System

➠ Precision Cloths

Over-processing waste reduced by decreasing solvent consumption - 25% annual saving, achieving the EADS Vision 2020 targets

Inventory waste and disposal costs reduced by replacing large format wipers

Motion waste reduced due to point of use availability.

Hawker Beechcraft Aerospace MRO

Reduction of solvent consumption by 30%

Problem

Lack of standard for safety compliance

- Solvent consumption high due to inefficient use of rags
- Wipers are not antistatic: potential source of accidents due to flash risk
- Eyewear not anti-mist: so workers are scratching lenses when wiping fog/mist of eyewear
- Eyewear is uncomfortable, so users often wear nothing

Countermeasure

Use Wipers that:

- reduce solvent consumption
- reduce safety hazard due to antistatic base sheet.

➠ WETTASK Refillable Wiping System

Use Eyewear that:

- is anti-mist
- damage resistant
- ofers increased comfort

➠ JACKSON SAFETY Nemesis VL Eyewear

Results

Over-processing waste reduction due to 30% less solvent consumption through using a controlled dispening system

Inventory waste reduction due to optimized Eyewear consumption.

Improved safety compliance , due to installation of new visual management aids

Wiping processes backed up by visual management

Glove Legislation
The Legal Responsibilities

When a glove is examined against a typical test standard, a performance level is normally assigned (between 0 and 5). Level 0 specifies that the glove is either untested or falls below the minimum performance level. A performance level 'X' signifies that the glove is not designed for the use covered by the corresponding test. Higher numbers indicate higher levels of performance.

EN 420: 2003
(General Requirements for Protective Gloves)

- Glove Design and Construction
- Gloves should offer the greatest possible degree of protection in the foreseeable conditions of end use If seams are included, the strength of these seams should not reduce the overall performance of the glove.

Innocuousness
- Gloves should not cause any adverse harm to the end user
- Glove pH must be between 3.5 and 9.5
- Chromium (VI) content should be below detection (for gloves containing leather)
- Gloves made from natural rubber latex will be tested for extractable proteins according to EN 455-3

Cleaning Instructions
- If care instructions are provided, glove performance shall not be diminished when the maximum number of recommended cleaning cycles is used.

Sizing
- Gloves shorter in length than the required minimum will be marked 'Fit for Special Purpose'.

Dexterity
- If required, performance to be graded (Level 0 - 5)

Gloves in Contact with Foodstuffs

We offer you the guarantee of compatibility between foodstuffs and glove components and full compliance with the toughest European and national standards in terms of food contact and food hygiene.

EN 388: 2003
(Protective Gloves Against Mechanical Risks)

Test
- A: 6.1 Abrasion resistance (number of cycles)
- B: 6.2 Blade cut resistance (index)
- C: 6.3 Tear resistance (N)
- D: 6.4 Puncture resistance (N)

Test	Level 1	Level 2	Level 3	Level 4	Level 5
A	100	500	2000	8000	-
B	1.2	2.5	5.0	10.0	20,0
C	10	25	50	75	-
D	20	60	100	150	-

The 'Mechanical Risks' pictogram is accompanied by a 4-digit code:
- (a) Abrasion resistance (0 to 4)
- (b) Blade cut resistance (0 to 5)
- (c) Tear resistance (0 to 4)
- (d) Puncture resistance (0 to 4)



The relevant performance levels below should be clearly identifiable on the product and primary packaging

EN 407: 2004
Protective gloves against thermal risks (heat and/or fire)

Performance Level	Contact Temperature T_c ° C	Threshold time t_t s
1	100	≥15
2	250	≥15
3	350	≥15
4	500	≥15

(a) Burning Behaviour (1 to 4)
(b) Contact Heat (1 to 4)
(c) Convective Heat (1 to 4)
(d) Radiant Heat (1 to 4)
(e) Small splashes of molten metal (1 to 4)
(f) Large Quantities of molten metal (1 to 4)



EN 374: 2003
(Protective Gloves Against Chemicals and Micro-organisms)





G80 Chemical Resistant Gloves

G80 Chemical Resistant Gloves
Nitrile

CE 0120 | EN 374-2:2003 Level 3 | EN 374-3:2003 AJK | EN 388:2003 4101



Chemical protection against:
- Oils
- Greases
- Acids
- Caustic
- Solvents

- Nitrile formulation offering excellent chemical resistance and durability
- Contains no natural rubber latex, reducing the potential for Type 1 glove associated reactions
- Flock-lined for extra comfort and easy donning
- AQL 0.65 to provide superior protection, more productivity and efficiency
- High abrasion resistance
- The diamond embossed structure provides excellent grip

G80 Chemical Resistant Gauntlets
Nitrile

CE 0120 | EN 374-2:2003 Level 3 | EN 374-3:2003 AJK | EN 388:2003 4101



Chemical protection against:
- Oils
- Greases
- Acids
- Caustic
- Solvents

- 0.55mm thickness offers increased protection
- Longer length (compared to our G80 Nitrile Glove) to protect wrist and lower forearm (46 cm)
- Unlined, reducing the risk of lint contamination
- AQL 0.65 for pinholes to provide superior protection, more productivity and efficiency

G80 Chemical Resistant Gloves
Neoprene / Latex

CE 0120 | EN 374-2:2003 Level 2 | EN 374-3:2003 AKL | EN 388:2003 2110

NEW



Chemical protection against:
- Alcohol
- Bases
- Oils
- Acids
- Solvents
- Detergents

- Neoprene over Latex formulation to maximise protection and enhance flexibility and elasticity
- Anti-slip pattern with honeycomb structure to provide excellent grip in wet and dry conditions
- Palm strengthened by special dip for extra protection
- 0.70mm thickness to increase protection
- Anatomically shaped for increased comfort and dexterity
- Pure cotton flock lining to absorb perspiration
- Chlorinated for low extractable proteins and residual chemicals
- Straight cuff

G60 Cut Resistant Gloves & Sleeves

G60 Level 5 Cut Resistant Gloves
PU Coated

CE | EN 388:2003 4542



- PU Coating offers excellent grip
- Patented engineered yarn provides exceptional protection against cuts and gashes
- Yarn transmits heat away, making glove breathable and comfortable
- Also available with grey coating to meet FOD requirements
- Extreme cut resistance (Level 5) combined with very good fit comfort and dexterity
- Conforms to EN420 Minimum Cuff Length, providing protection to wrist area
- High abrasion resistance (Level 4)
- Latex free
- Suitable for washing

G60 Level 5 Cut Resistant Sleeve

CE | EN 388:2003 1521



- Patented engineered yarn provides exceptional protection against cuts and gashes
- High breathability, since yarn transmits heat away
- High cut resistance (Level 5)
- Connectivity to glove to protect vulnerable wrist area
- Adjustable strap to ensure good fit for all arm sizes
- Suitable for washing
- Unique system to provide the highest level of protection, efficiency and productivity

G60 Level 3 Cut Resistant Glove
PU Coated

CE EN 388:2003



- Polyurethane coating offers excellent grip
- Excellent dexterity
- High breathability, since yarn transmits heat away
- High cut resistance (Level 3)
- Conforms to EN420 Minimum Cuff Length, providing protection to wrist area
- High abrasion resistance (Level 4)
- Latex free

G60 Level 2 Cut Resistant Sleeve
With Thumbhole

CE EN 407:2004 X1XXXX EN 388:2003 X24X



- Aramid yarns provide excellent lightweight cut protection (Level 2)
- Inner cotton liner for extra comfort
- Contact heat protection (Level 1)
- 45.7cm (18") cuff
- Good breathability

G60 Level 3 Cut Resistant Glove
PU Knuckle Coated+

CE EN 388:2003 4342

NEW



- Minimises the risk of cuts and abrasions to the back of the hands
- Conforms to EN420 standard, providing protection to wrist area
- Lycra fibre with nylon thread combines cut resistance with a comfortable fit
- Yarn transmits heat away, making glove breathable and comfortable
- High cut resistance (Level 3)
- PU coating provides excellent dry and oil grip
- High abrasion resistance (Level 4)
- High tear resistance (Level 4)
- Excellent dexterity

G60 Level 2 Cut Resistant Sleeve
Without Thumbhole

CE EN 407:2004 X1XXXX EN 388:200 X24X



- Aramid yarns provide excellent lightweight cut protection (Level 2)
- Inner cotton liner for extra comfort
- Contact heat protection (Level 1)
- 45.7cm (18") cuff
- Good breathability

G60 Level 3 Cut Resistant Glove
Purple Nitrile

CE EN 388:2003 4342



- Nitrile dots on palm offer excellent grip
- Conforms to EN420 Minimum Cuff Length, providing protection to wrist area
- Unique Nitrile coated fingertips – grip with maximum breathability
- High abrasion resistance (Level 4)
- Latex free
- Suitable for washing
- The unique design offers an exceptional level of breathability and comfort
- Ambidextrous for a better cost in use , more productivity and efficiency

G40 Gloves

G40 Gloves
Smooth Nitrile Coated

CE EN 388:2003 4342

NEW



- Premium, general purpose glove offering a versatile solution for assembly and general handling
- Ideal for dry or slightly oily tasks
- Perfect for light/medium assembly application, providing high level of dexerity and good mechanical protection
- Smooth Nitrile Coated palm for excellent oil repellence and palm protection
- Seamless nylon knitted backing for breathability and comfort

G60 Level 2 Cut Resistant Glove
Nitrile Coated

CE EN 407:2004 X1XXXX EN 388:2003 3221



- Aramid yarns provide excellent lightweight cut protection (Level 2)
- Nitrile coating offers enhanced grip
- Excellent dexterity
- Excellent abrasion resistance (Level 3)
- Contact heat protection (Level 1)

G40 Gloves
Foam Nitrile Coated

CE EN 388:2003 4342



- Premium, general purpose hand protection providing the highest levels of abrasion resistance
- Foam Nitrile Coated palm for excellent dry grip, dexterity and palm protection
- Seamless nylon knitted backing for breathability and comfort
- Highly durable and abrasion-resistant
- Highest abrasion resistance
- The foam nitrile formulation offers maximum comfort and breathability

G40 Gloves
Polyurethane Coated



- Versatile, general purpose hand protection
- Excellent grip due to roughened polyurethane coating
- Also available in grey coating to meet FOD requirements in Aerospace
- Seamless nylon knitted backing for breathability and comfort
- Good tear and abrasion resistance for durability and reduced cost in use
- Excellent dexterity, ideal for handling small Components

G20 Atlantic Green Nitrile Gloves



- PPE Category III (CE Complex) product classified by EC Council Directive 89/686/EEC
- 0.06 mm thickness provides exceptional touch sensitivity
- Comfort and flexibility
- Food contact approved
- AQL 0.65 to reduce waste and increase protection, efficiency and productivity
- Textured finger tips providing excellent grip
- Excellent tactile sensitivity
- Beaded cuff

G40 Gloves
Latex Coated



- Cost-efective general purpose hand protection
- High tear resistance providing high durability
- Seamless knitted polyester construction offering high breathability for comfort and extended use
- Combines thermal and mechanical protection for handling in a wider range of applications
- Crinkled finish latex coated palm provides excellent grip

G10 Nitrile Disposable Gloves

G10 Blue Nitrile Gloves



- PPE Category I (CE Simple) product classified by EC Council Directive 89/686/EEC
- 0.12mm thickness provides exceptional touch sensitivity
- AQL 1.5
- Premium glove offering high level of comfort
- Extremely resistant providing dexterity, protection and high performance
- Food contact approved

G35 Gloves

G35 Inspection Gloves
White Nylon



- Nylon gloves: soft, comfortable, flexible and low linting
- Silicone free on product contact area (palm) to avoid product contamination
- Seamless knit shell for a longer and more comfortable wear
- Ambidextrous: no need to pair to generate better cost in use
- To be used on their own or as liners to provide excellent value for money and flexibility
- Low linting
- 100% Nylon offering a more sensitive glove to allow workers to easily find the defects on surfaces

G10 Arctic Blue Nitrile Gloves



- PPE Category I (CE Simple) product classified by EC Council Directive 89/686/EEC
- 0.06mm thickness provides exceptional touch sensitivity
- AQL 1.5
- Comfort and flexibility ideal for intricate assembly work
- All the benefits of natural rubber latex without the risk of reaction.
- Food contact approved

G20 Limited Chemical Resistant Gloves

G20 Blue Nitrile+ Thin Mil Gloves



- PPE Category III (CE Complex) product classified by EC Council Directive 89/686/EEC
- Smooth nitrile to ensure excellent tactile sensitivity and flexibility for maximum comfort
- Beaded cuff
- 0.12mm thickness (minimum)
- AQL 1.5 for pinholes
- It contains no natural rubber proteins, to avoid any risk of Type 1 allergies
- Protective against a wide range of chemical splashes
- Excellent versatility and easy donning

G10 Flex Blue Nitrile Gloves



- PPE Category I CE Simple product classified by Council Directive 89/686/EEC
- 0.05mm thickness to guarantee dexterity and maximum touch sensitivity
- AQL 1.5
- Nitrile formulation to provide extreme elasticity but also excellent protection, avoiding risk of type 1 glove associated reaction
- Made of an ultraflexible nitrile that combines the resistance properties of nitrile and the elasticity of latex.
- Powder-free to avoid skin allergies
- Textured fingertips to help grip
- Beaded cuffs to ensure protection
- Food contact approved