Tightening automation.
Only excellent solutions.

EasyDriver:
New automatic screw feeding system
- CA…A air screwdriver with forward bit stroke
- CA…T air screwdriver with telescopic device

Fiam®
PEOPLE AND SOLUTIONS

New automatic screw feeding system EasyDriver

The right solution to improve the productivity

A concentrate of innovation for a **faster productive process**: this is the new tightening system EasyDriver.

The tightening system EasyDriver is particularly suitable for **large and medium batch of equal screws**; it offers important **benefits** to improve the productivity: the **screw is automatically sent** from the bowl to the screwdriver head and it is possible to start tightening immediately.

Evident **reduction of the tightening cycle times**, saving almost **40%**: the **manual phases** (such as picking up the screw and positioning it correctly on the workpiece) **are eliminated**; they considerably reduce the rhythm of the assembly process.

Vibrating bowl

with good capacity for improved working autonomy

Transparent cover

is big and soundproof for a better view of the inside without having to open the machine

PLC

adjusts all machine parameters depending on tightening needs

allows to easily monitor and change the productive cycle

This extraordinary solution consists of:

New screw feeding system

This innovative screw feeding system, designed and manufactured by Fiam in compliance with new Directive 2006/42/EC, manages the working cycle and guarantees high flexibility, as it is possible to quickly and easily **set and manage the tightening cycle** basing on the specific application.

Functional keypad

it adjusts easily and directly the machine parameters

New autofeed air screwdriver

with patented **FORWARD BIT STROKE**.
It works everywhere also on tightening points where access is difficult (such as close to sidewalls) or where space is limited. Particularly **components** (like for instance varnished surfaces, electronic cards, etc.) **are not damaged** because the screwdriver works **without touching the surface of the component**.

Filter and lubrication unit

with compressed air pressure gauge filters the air and maintains constant the machine feed guaranteeing suitable lubrification of the tool

New autofeed air screwdriver

with **TELESCOPIC device**.
It works with high speed and optimum grip at **different depths or on inner holes**. Aside from guaranteeing reliable tightenings and continuous working cycles with no screw jams, the version with 2 sensors **controls the final screw height**.

New over-load sensor

makes sure no screw gets stuck in the selection duct guaranteeing high and uninterrupted production

Feeding hoses

which make the passage of the screw easier and quicker with no chance of getting stuck

The screw is shot inside a closed chamber

which optimises screw speed and consequently the productive process

Autofeed air screwdriver

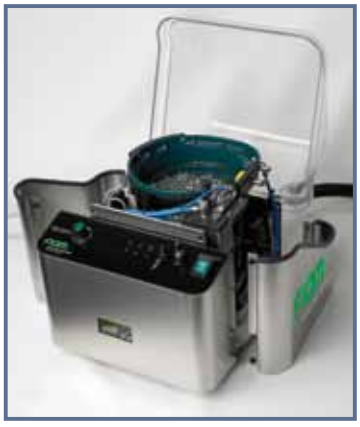
- **with forward bit stroke**

o

- **with telescopic device**

Structure in stainless steel

to guarantee long lifetime



External structure

of small dimension; it can be dismantled easily for maintenance

Light leds

to monitor the different phases of working cycle

Selector

it increases speed and productivity and guarantees selector's calibration parameters do not change

Be demanding

Reliability

A careful design guarantees long lifetime and reliability of the components which results in high productive process, less maintenance and repair costs

Screw feeding system

Designed and manufactured by Fiam in compliance with new Directive 2006/42/EC. New design in stainless steel guarantees long lifetime

The **PLC** (Programmable Logic Controller), integrated into the feeder, manages the working cycle of the tightening system EasyDriver and guarantees high flexibility, as it is possible to quickly and easily **set and manage the tightening cycle** basing on the specific application

The **new over-load sensor** **makes sure no screw gets stuck** in the selection duct guaranteeing high and uninterrupted production (the optical fibre detects the screw after a length of time established by the PLC and activates a solenoid valve that produces a jet of air that gets rid of any surplus screws)

The **selector** is still **extremely reliable** even when the EasyDriver is subject to logistic moves: in fact, the selector's calibration parameters do not change thanks to its new more solid and compact design and to new screw device for accurate height adjustment

New feeding hose, customized depending on type of screw, made of memory-shape soft and flexible polyurethane, makes screw passage easier and quicker, reducing friction

Extremely safe and reliable packing for shipment to guarantee system integrity and performance. Upon request, packing in wooden case is available

Screw feeding system is equipped with **high quality air components**

Don't be satisfied with the maximum

Productivity

Considerable increase of the efficiency of the productive cycle thanks to innovative systems

Screw feeding system

Machine parameters can be adjusted easily and quickly directly via the PLC's **functional keypad**

Good capacity of the bowl: 1lt. for improved working autonomy

Designed to allow **easy maintenance** and **component replacing**: in fact, the exterior structure is easily and quickly removed to access all its inside parts

Thanks to the **PLC** (Programmable Logic Controller) it is possible to make **several adjustments:** bowl vibrating time, screw shooting time, parameters of optical sensor, and bowl vibrating time after screw shooting

The high frequency selector increases speed considerably and therefore system **productivity**

The **screw is shot inside a closed chamber** which **optimises screw speed considerably**: there is no longer any dissipation of compressed air and power is concentrated entirely on speeding up the screw's path

The **filter and lubrication unit complete of air gauge** filters the air and maintains constant the machine feed guaranteeing suitable lubrification of the tool

Perfection is in your hands

Naturally innovative

Ergonomics

Ecology

Optimization of the tool and of the screw feeder performances in regard to ergonomics and operator safety

Innovative systems designed paying even more attention with respect to environment and of its safeguard

Designed to ensure **all maintenance operations easy, safe and reliable**, in compliance with new Directive 2006/42/EC

All system operations are managed by PLC

Screw feeding system

Volumes have been **reduced** for easy inclusion in the production areas and for **easy logistics management**

The **transparent cover is bigger** for a **better view** of the inside without having to open the machine

New materials used for improbe **soundproofing**

The system design is compliant with new Directive 2006/42/EC

Screw feeding system

High reduction of electricity consumption: the vibrator's special timed system stops the screw feed automatically when it is not required, thus **eliminating unnecessary electricity consumption**

The **screw is shot inside a closed chamber** which optimises the power of compressed air because there is **no longer dissipation**

The torque control system TRACS2 has a high running speed which **reduces the working time of the screwdriver and the compressed air consumption**

ECO-CONTRIBUTION WEEE ACQUITTED: for electronic accessories, Fiam carries out its obligations of producer, with full respect for the environment, and without **any extra charge for the customer**

New air screwdriver with forward bit stroke

Best reliability, maximum productivity

The autofeed screwdriver with immediate and automatic air shut-off guarantees **accurate, reliable, constant tightenings cycle by cycle. It works everywhere** also on tightening points where access is difficult (such as close to sidewalls) or where space is limited.

The patented forward bit stroke allows to **tighten any type of product**. With critical materials such as varnished surfaces or electronic cards, it **doesn't damage the components because it works without touching the surfaces of the component. The screw bit protruding from the jaws eases positioning on the workpiece and reduced the risk of incorrect tightening**.

Thanks to its automatic thrust of 30 Kg, it represents the ideal solution to **work with minimum effort**.

Pistol version:

For **pistol grip models, two control buttons are available**:
- one to start tightening
- one to master screw shooting

No effort to tighten

- The forward bit stroke, through its 30 Kg. of thrust, guarantees high force to ensure a reliable tightening on any type of joint
- The **grip position, close to the tightening point**, favours the operator with centering the component to be tightened

Noiseless

The screwdrivers are extremely noiseless

They can be used in any position,

from downwards to upwards, and in very restricted places. The **easy handling** is guaranteed since the grip in closer to the screwdriver's head

Quick unlocking system

for fast and safe bit replacement

Rotation of the head at 120°

The particular device allows also a **practical rotation of the head in 3 positions at 120°**. Thus, the position of the head can be adjusted based on the encumbrance on tightening points

Easy adjustment of the external clutch

Practical and fast: the housing has a groove for clutch spring adjustment

High torque repeatability

The modern TRACS2 torque control system (Torque Repeatability and Accuracy Control System) with automatic and immediate air shut-off **guarantees high torque repeatability**

Vibration levels below 2,5 m/s²

The modern TRACS2 torque control system **reduces torque reaction**. Thanks to the immediate automatic air shut-off system and the design of the internal gears, the vibration levels are below 2,5 m/s^2 in compliance with new standards in terms of vibrations to the hand-arm system

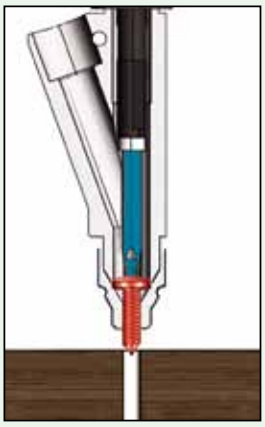
Easy and functional starting system

Practical and fast start lever: with a click the tightening starts, with a double click the screw is shooted. An efficient and safe system to avoid screw jams and machine stops

Extremely safe

The absence of electrical power devices on the screwdriver eliminates dangerous sources of potential electric shocks

Two versions...

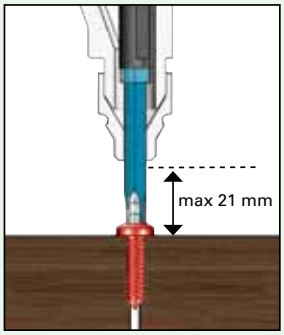


With screw at sight and internal bit

For models with screw at sight and internal bit, when the screwdriver starts, the **patented device maintains visible the screw to the operator** and doens't allow the screw to back up, making every tightening operation easy and fast.
The screw is held in position by the jaws and the bit, while the screw shank remains visible for a more practical centering of the tightening point.

With screw at sight and external bit

Models with screw at sight and external bit, particularly ideal to tighten **where access is difficult or space is limited**, easing operator's work and avoiding wrong positions of the hand-arm system.
The screw is held in position by the magnetic bit which ejects from the head completely. Bit ejection in respect to the jaws varies depending on the dimensions of the head being used.



Model of screw head	Max length of bit ejection*
TTV - P	mm 21
TTV - G	mm 18
TTV - M	mm 15

* The length of the bit ejection can change depending on the type of screw

New air screwdriver with telescopic device

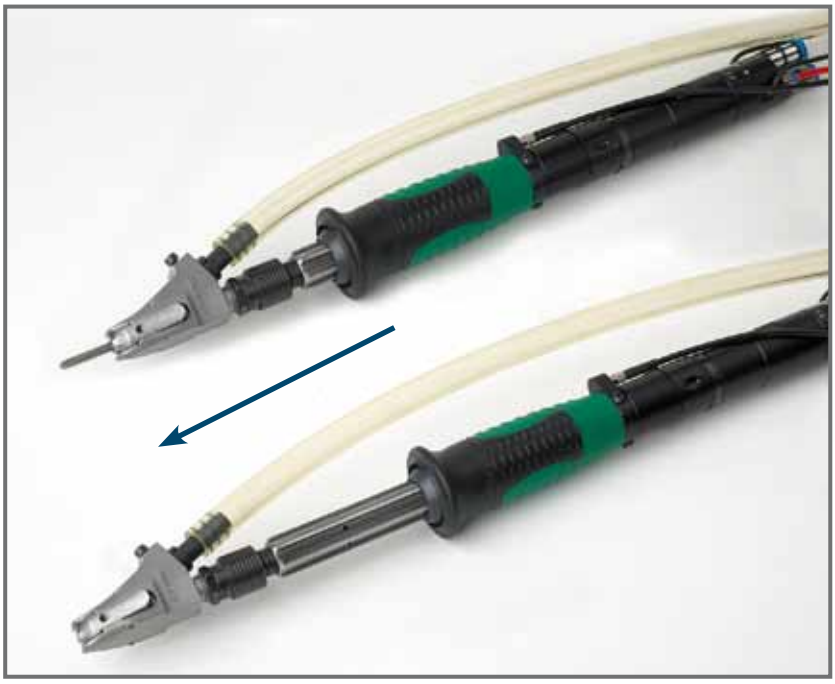
All Fiam innovation in your hands

If you need to tighten in deep holes, this innovative **autofeed air screwdriver with TELESCOPIC device** is the right solution because it works with **high speed, optimum grip and with different depths**.

Equipped with TRACS2 torque control system with immediate and automatic air shut-off to guarantee **accurate, reliable, constant tightenings**, this air screwdriver is extremely reliable because it ensures **continuous working cycles with no screw jam**: in fact the built-in sensor of screw shooting, by monitoring the head stroke, avoids shooting of a new screw until the ongoing tightening cycle has been performed.
A great advantage for operator's productivity because it **avoids screw jams**.

Available also in version with two sensors where, aside from guaranteeing tightening reliability and continuous working cycles, the second sensor controls the final screw height.

Telescopic device permits to work at required depth



Noiseless

The screwdrivers are extremely noiseless

Grip

Available also with pistol grip and with push or button start

Quick unlocking system

for fast and safe bit replacement

Rotation of the head at 120°

The particular device allows also a **practical rotation of the head in 3 positions at 120°**.
Thus, the position of the head can be adjusted based on the encumbrance on tightening points

Easy and functional push-to-start system

- Extremely reliable because ensuring **the screwdriver to be axially in line with the component to be tightened**
- **The grip position, close to the tightening point**, helps the operator in centering the component to be tightened

Easy adjustment of the external clutch

Practical and fast: the housing has a groove for clutch spring adjustment

High torque repeatability

The modern TRACS2 torque control system (Torque Repeatability and Accuracy Control System) with automatic and immediate air shut-off **guarantees high torque repeatability**

Vibration levels below 2,5 m/s²

The modern TRACS2 torque control system **reduces torque reaction**. Thanks to the immediate automatic air shut-off system and the design of the internal gears, the vibration levels are below 2,5 m/s^2 in compliance with new standards in terms of vibrations to the hand-arm system

Extremely safe

The absence of electrical power devices on the screwdriver eliminates dangerous sources of potential electric shocks

SCREW SHOOTING sensor

It monitors the head stroke and avoids shooting of a new screw until the ongoing tightening cycle has been performed

SCREW HEIGHT sensor

Upon request, it can be activated or disabled on the screw feeding system and permits to control the screw final height

Double advantage of the model with 2 sensors that can work with torque control or height control

The second sensor integrated into the tool can be activated or disabled through a selector positioned on screw feeeding system: it permits to work by **controlling the tightening height**.

In this case **the clutch of the motor is inhibited** and the motor stops because the sensor stops motor feeding.

Technical features of the tightening system EasyDriver

• Autofeed air screwdriver

	Model	Grip: Type	Tightening torque: Soft joint Nm	Tightening torque: Soft joint in lb	Idle speed: rpm	Starting system: Type	Reversibility: Type	Weight of the tool: kg	Weight of the tool: lb	Air consumption: l/s	Accessories: Drive	Sound pressure level: dBA	Vibrations of the tool: m/s²
SCREWDRIVER WITH FORWARD BIT STROKE	CA - 15/26C...A - A		1÷5	8.85÷44.25	650 ÷ 2000			1,8	3.96	5 ÷ 9	10-32 UNF	< 80	< 2,5
	CA - 15/26C...A - P - A		1÷5	8.85÷44.25	650 ÷ 2000			1,8	3.96	5 ÷ 9	10-32 UNF	< 80	< 2,5
SCREWDRIVER WITH TELESCOPIC DEVICE	CA - 15/26C...A -T/T2		1÷5	8.85÷44.25	650 ÷ 2000			1,1	2.42	5 ÷ 9	10-32 UNF	< 80	< 2,5
	CA - 15/26C...A - P -T/T2		1÷5	8.85÷44.25	650 ÷ 2000			1,1	2.42	5 ÷ 9	10-32 UNF	< 80	< 2,5

Legend

CA = Screw feeding system • 15/26 = Motor power of the screwdriver in Watt/10 • C = Air screwdriver • .... = Max torque in Nm • A = Torque control system with air shut-off • P = Pistol • A = Screwdriver with forward bit stroke • T = Screwdriver with telescopic device • T2 = Double-sensor telescopic screwdriver

Legend

Non-reversible screwdriver (only tightening)

Lever start	**Push button**
Push to start	**Push to start**

- The figures shown are measured at a pressure of 6.3 bar (ISO 2787), the recommended operating pressure.
- The tightening torque values have been measured in accordance with ISO 5393 standard.
- Sound pressure level has been measured in accordance with ISO 3744 and ISO 15744 standards.
- Vibrations level has been measured in accordance with ISO 8662-1 and ISO 8662-7 standards.
- Accessory drive: Fil. nr. 10-32 UNF (american thread)
- How to order: contact your local distributor or Fiam Technical Consultancy Service

The data given in the table are indicative and can be changed without prior notice. The torque values are purely indicative and may be influenced by the softness of the type of joint, by the type and length of the screw, by the pressure and quantity of air supply, and by the type of accessory used. The values indicated for noise and vibration levels were obtained in the laboratory, performing tests that comply with the standards stated, but alone are not sufficient for calculating risks. Values measured in the single work places may be higher than those stated. The values of actual exposure and consequent risks are specific and depend on the operator's method of work, the type of work piece and the work place, as well as the operator's time of exposure and his physical conditions. Fiam cannot be held responsible for any consequences deriving from the use of the information in the table when evaluating risks in the work place over which Fiam has no control. For all further details, please apply to the **Fiam Technical Consultancy Service**.

Model	Air inlet	Recommended hose bore
All screwdrivers	1/4" gas	ø 8 mm

Fiam screwdrivers are designed for use with lubricated or unlubricated compressed air

• Screw feeding system

Air connection: 3/8" F

Power features: 220 V/50 Hz - Optional: 220V/60 Hz and 110 V/60 Hz

Maximum feed: 120 screws/minute

Air consumption: 13 l/s

Noise level: <80 dB(A)

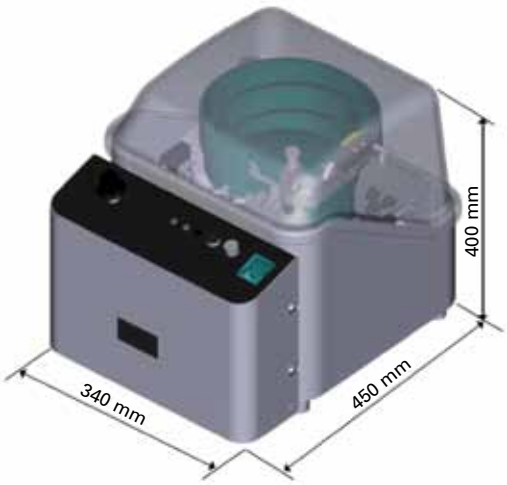
Diameter of the bowl: ø 220 mm

Capacity of the bowl: 1 litre

Weight: 36 Kg

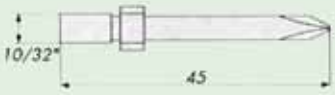
Connecting hose to the screwdriver: 4 m

Dimensions (mm): L 450 x Width 340 x h 400



Accessories available upon request

- Threaded bits 10/32"



Bit nr.	Phillips code	Pozidrive code
1	635050010	635060002
2	635050011	635060007

- For other bits, see Accessories catalogue nr. 78

- Standard Cartesian arm BC25/… for more ergonomic tightening operations

- Cartesian arm BC25/4 for EasyDriver with 'self-worker'air thrust device with balancer and auxiliary grip

- Auxiliary grips to transform straight screwdrivers into pistol screwdrivers

- Wooden case for shipment:
  code 683050046 (kg. 11 of case weight)
  Dimensions mm: L650x500xh715

Models available upon request

- Models with screwdriver equipped with rotating piston
- Models for use with 110 Volt/60 Hz, 220 Volt/60Hz power supplies
- Models with different screw dimensions than those indicated
- Models with slip clutch
- Telescopic models with lever start

For other models please apply to the **Fiam Technical Consultancy Service**

Standard equipment (supplied with the system)

- Three bits
- Clutch adjustment key
- Keys for screw feeder's use and maintenance
- Hanging ring
- Use and maintenance manual
- Eco-friendly packaging in paperboard (weight kg. 3)
  Dimensions: mm L600x450xh520

How to choose a tightening system EasyDriver

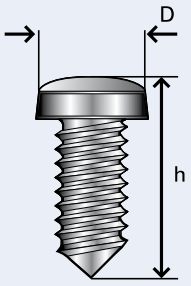
To choose a tightening system EasyDriver we have to consider:
- Material to tighten (plastic, wood, steel, etc.)
- Dimensions of component to assemble
- Tightening torque and speed

but **the most important is the screw.**

The tightening system EasyDriver is able to **tighten:**
- **any screws:** metric, self-threading, self-tapping, self-drilling, three-lobe, etc.
- **any type of head:** countersunk, flat, cylindrical, oval, etc.
- **any type of imprint:** slotted, cross-slotted, torx, hex socket screw, hex head) and with knurled washer under the head too.

Screw features for **standard EasyDriver solutions**:

Dimensions of the head (D):	ø 4,5÷10,5 mm
Total lenght of the screw (h):	from 8 up to 35 mm
Screws with hexagonal head:	Hexagon max 7 mm



Total length of any screw* must be minimum
1,5 times of the head diameter
example: Ø head screw = 8 mm
Min h (height) = 12 mm (12 : 8 = 1,5)

* For hex. screws contact **Fiam Technical Consultancy Service**

When screws have different parameters, contact Fiam Technical Service

Remember that **every customized EasyDriver solution depends on screw type and on component to be tightened. In order to check feasibility, a data entry form has to be filled-in.** Moreover, it is always necessary to supply screws and component samples.

How to order a customized system EasyDriver

To receive in very short-time a customized offer, complete the following form and send it by fax +39 0444 385002
For information about the following form or other techical informations contact the **Fiam Technical Consultancy Service**.

Screws features

Heads

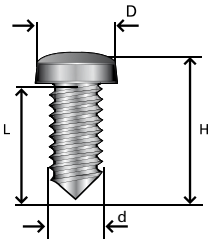
- Flat Countersunk
- Cylindrical
- Oval
- Hexagonal
- Oval Countersunk
- Oval Cylindrical

Imprints

- Phillips
- Pozidrive
- Slotted
- Hex Socket Screws
- Torx
- Hex

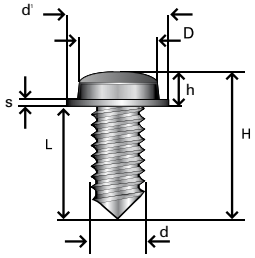
Dimensions of the screw

☐ Standard screw



D = _____ mm
H = _____ mm
L = _____ mm
d = _____ mm

☐ Knurled washer under the head



D = _____ mm
H = _____ mm
L = _____ mm
s = _____ mm
d = _____ mm
h = _____ mm
d'= _____ mm

Tightening type

Torque : _____ Nm

Accuracy: _____ %

Speed: _____ Rpm

Type of tightening

- ☐ Horizontal
- ☐ From bottom towards the top
- ☐ From the top towards the bottom
- ☐ Other: _____ Degrees

Materials:

- ☐ Wood
- ☐ Plastic
- ☐ Aluminium
- ☐ Steel
- ☐ Iron
- ☐ Other _____

Cycle

Quantity of screws/components _____

Nr. pieces/hour _____

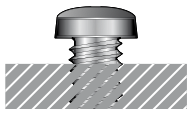
Autonomy _____ Hours

Ergonomic auxiliaries

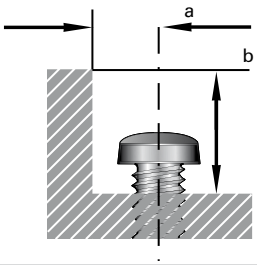
- ☐ Balancer
- ☐ BC25 cartesian arm
- ☐ Cartesian arm with air thrust device selfworker
- ☐ Auxiliary grip

Position of tightening

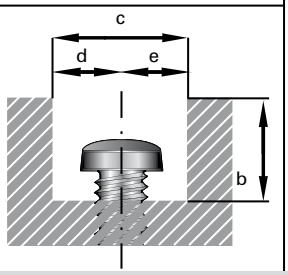
☐ Plane surface without obstruct



☐ Near to wall



☐ Embedded



Dimensions (mm)

a= _____
b= _____
c= _____
d= _____
e= _____

☐ Attached drawings of the piece

Other details

Particular solution in order to not damage the piece:	no ☐	yes ☐	_____
Length of the screw feed hose (4 mt supplied as a standard): other lenght	no ☐	yes ☐	_____ mt.
Feeding pressure in line:	220V, 50Hz ☐	other ☐	_____
Screws samples sent*:	no ☐	yes ☐	_____ quantity
Pieces samples sent:	no ☐	yes ☐	_____ quantity

☐ Packaging in wood case (cod. 683050046)

**Without screws or incomplete information Fiam offers only an indicative feasibility.*

Compiled by _____

Company _____

Date _____

Tel. _____

e-mail _____

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PEOPLE AND SOLUTIONS

Quality Management System Certificate

Environmental Management System Certificate