MARCO FANTOZZI

Soluzioni Innovative per Migliorare le Performance nell'Industria dell'Acqua

Gestire e Ridurre le Perdite nei Sistemi Idrici

Software & Servizi

utilizzando i Metodi "Best Practice" promossi dalla Water Losses Task Force della IWA (International Water Association)

MARCO FANTOZZI
Soluzioni Innovative per Migliorare le
Performance dell'Industria dell'Acqua

LEAKS

*(Leakage Evaluation and Assessment Know-How Software)**

include 'Fastcalc' Software e utilizza i Metodi "Best Practice" promossi dalla Water Losses Task Force dell'IWA (International Water Association)

Quando ci sarà un modo migliore per Gestire e Ridurre le Perdite nei Sistemi Idrici?

Avete dati di perdita inconsistenti?
Data di cui non vi fidate?
Avete una non chiara strategia con le perdite?
Non fate abbastanza ricerca perdite?
Avete pressione elevata in rete?

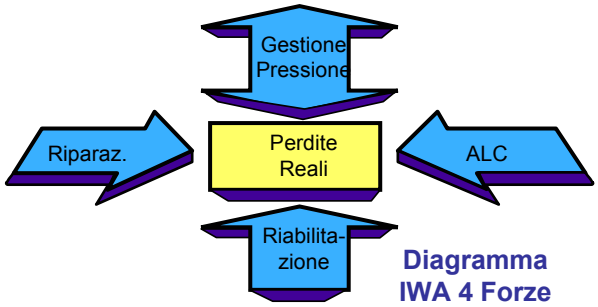


Diagramma IWA 4 Forze

Ora c'è la soluzione! *LEAKS**

che utilizza i Metodi "Best Practice" promossi dalla Water Losses Task Force dell'IWA

***LEAKS,* sviluppato da Allan Lambert (primo presidente della Water Loss Task Force e uno dei massimi esperti al mondo di gestione perdite) viene continuamente aggiornato e distribuito in USA, Canada, Australia ed Europa grazie alla collaborazione tra ILMSS, WBWC, Marco Fantozzi e Veritec.**

Lo Studio dell'ing. Marco Fantozzi opera nel settore della consulenza alle aziende del settore idrico per l'applicazione di soluzioni innovative per il miglioramento delle performance. L'ing. Marco Fantozzi è membro della "Water Loss Task Force" dell'International Water Association, consulente della Commissione Europea per la Key Action "Sustainable Management and Quality of Water" e membro dell'"Emerging Technologies Group" dell'American Water Works Association Research Foundation. L'ing Marco Fantozzi è un esperto di gestione di sistemi idrici, è autore di numerosi paper a Conferenze Internazionali del settore e relatore in numerosi corsi di formazione sulla Gestione delle Perdite tra cui i "Corsi di Formazione Professionale" di Federgasacqua.

MARCO FANTOZZI - Via Forcella 29 - 25064 Gussago (BS) - Italy
Tel. +39 030 2524372 - Fax. +39 030 2524372 - Mobile +39 339 5923610
Email: marco.fantozzi@email.it - Web: www.studiomarcofantozzi.it

MARCO FANTOZZI
Soluzioni Innovative per Migliorare le
Performance dell'Industria dell'Acqua

LEAKS

*(Leakage Evaluation and Assessment Know-How Software)**

include 'Fastcalc' Software e utilizza i Metodi "Best Practice" promossi dalla Water Losses Task Force dell'IWA (International Water Association)

Come ho potuto gestire le perdite senza *LEAKS* ?

Non l'hai fatto, ti sei basato sull'esperienza ed hai approssimato.

Con *LEAKS* puoi integrare, validare e correggere i tuoi dati di perdita, fare benchmark e report.

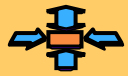
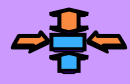
Di qualsiasi tipo sia il tuo sistema idrico, *LEAKS* ti consente una chiara comprensione di come Gestire Perdite e Pressioni in modo efficiente ed economico.

***LEAKS* usa i più recenti metodi pratici sviluppati dalla Water Losses Task Force** dell'IWA (International Water Association)**

***LEAKS* ti aiuta a pianificare: Controllo Attivo delle Perdite, Gestione della Pressione, Gestione delle Riparazioni e a definire il Livello Economico delle Perdite nel tuo sistema idrico.**

***LEAKS* applica tutte le 4 Forze indicate da IWA e vi consente di:**

* **Quantificare le vostre perdite**
* **Confrontare le vostre performance**
* **Identificare dove e come potete risparmiare acqua e denaro**

LEAKS Suite - Software per applicare la metodologia della Water Loss Task Force IWA		Versione Standard
	Bilancio Idrico & Performance Indicators	***PIFastCalcs°*** ***+ training***
	Gestione della Pressione	***PresCalcs*** ***+ training***
	Controllo Attivo delle Perdite	***ALCCalcs*** ***+ training***
	Livelli Economici Di Perdita	***ELLCalcs*** ***+ training***

** Il Bilancio Idrico dell'IWA è già stato adottato da numerose organizzazioni nazionali (Australia, Germania, Malta, Sud Africa ecc.) e da moltissimi Enti Gestori e Consulenti in UK, Italia, Brasile, Canada, Malesia, Nuova Zelanda, USA ecc.

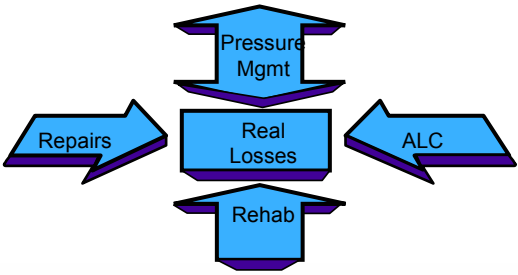
°PIFastCalcs consente il calcolo del Bilancio Idrico IWA con limiti di confidenza del 95% e secondo quanto richiesto dal DM 99/97.

Contattateci per quotazioni sul software e sul training!

MARCO FANTOZZI - Via Forcella 29 - 25064 Gussago (BS) - Italy
Tel. +39 030 2524372 - Fax. +39 030 2524372 - Mobile +39 339 5923610
Email: marco.fantozzi@email.it - Web: www.studiomarcofantozzi.it

LEAKS Suite of Softwares

using best practice methods developed by IWA Water Losses Task Forces



LEAKS (**L**eakage **E**valuation and **A**ssessment **K**now-How **S**oftware) is a comprehensive suite of customisable softwares for quantifying leakage and leakage management options in public water distribution systems.

LEAKS helps Utilities to understand the various interlinked processes that cause leakage, and to identify opportunities for reducing leakage, saving money, and increasing efficiency

Standard and Professional Softwares

-recently developed advanced practical concepts for leakage analysis are not all easily accessible in a concise form
-the Standard softwares explain these concepts, with examples, and allow users to become familiar with the terminology and key parameters
-individual Utilities can identify their own specific objectives and priorities
-Standard Versions can then be customised if required, using Worksheets from the 'Professional' range of options
-'Special' softwares can also be developed to individual requirements

The LEAKS Suite
was developed by Allan Lambert, a recognised international expert in water loss management

It uses proven practical concepts, such as the IWA Water Balance and best practice performance indicators, BABE Component Analysis, and FAVAD pressure:leakage relationships

Specialist training and support are available if required – see main page for international contacts

Date: 05 Dec 2005

LEAKS Suite - Software Tools for applying IWA Task Force methodology	Standard Version for sale	Customised Pro Versions
Water Balance & Performance Indicators	***PIFastCalcs*** ***800 Euro + training***	***Professional Versions are available through Consultancy with training and support*** ***Each of the Standard Versions can be customised to individual requirements*** ***This customisation can include the addition of specialised Worksheets from the LEAKS ProfessionalWorkbook***
Pressure Management	***PresCalcs*** ***1000 Euro + training***	
Active Leakage Control	***ALCCalcs*** ***1500 Euro + training***	
Economic Leakage Levels	***ELLCalcs*** ***2000 Euro + training***	

Who's Who

Allan Lambert - United Kingdom

Allan has more than 40 years experience in the water industry and is recognised as a world leader in water demand management. He was the leader of the first International Water Association (IWA) Water Loss Task Force from 1996 to 2000, and has produced numerous international papers and publications on leakage management.
Allan has held positions as: President, British Hydrological Society; Technical Secretary, UK National Leakage Control Initiative; Special Adviser, House of Commons Environment Committee; and consultant for World Bank and other international funding agencies.
An independent consultant, he is also Managing Director of ILMSS Ltd: which provides training and leakage management software to facilitate introduction of IWA methodologies. He contributed considerably to the IWA water loss performance indicator initiative and last but not least, developed the BABE concept for Component Analysis of Real Losses, and the ILI (Infrastructure Leakage Index).

Marco Fantozzi - Italy

Marco Fantozzi leads an independent consulting firm specialising in the analysis and optimisation of water utilities and in training and leakage management software to facilitate introduction of IWA methodologies.
Marco has 18 years experience in the water industry specialising in water demand management, and has been responsible for water, gas and wastewater networks in ASM BRESCIA SPA (Italy), one of the largest and most advanced public utility companies operating in Italy.
Marco is an expert evaluator of the European Commission for the 5th and 6th Framework Research Program for the Key Action "Sustainable Management and Quality of Water".
He is an active member of the IWA Water Loss Task Force and has been at the forefront to promote the IWA methodology in Italy and other EC countries.

Who are the International Water Association "Water Loss Task Force"?

The Water Loss Task Force is a special interest group established by the International Water Association to develop practical methodologies and share ideas on water loss issues and management.
The Water Loss Task Force comprises more than 70 representatives from 19 countries, working on some of the largest and most diverse water loss contracts and projects in the world.
The Task Force has developed a common water balance, terminology and best practice performance indicators, which can be successfully applied to water loss activities throughout the world.

Date: 05 Dec 2005

PIFastCalcs

One of the first steps in the systematic 4-component approach to management of Non-Revenue Water (NRW) is the calculation of an International Water Association (IWA) best practice Water Balance and associated Performance Indicators (PIs).

IWA best practice Water Balance

System Input Volume	Authorised Consumption	Billed Authorised Consumption	Billed Metered Consumption	Revenue Water
			Billed Unmetered Consumption	
		Unbilled Authorised Consumption	Unbilled Metered Consumption	Non Revenue Water
			Unbilled Unmetered Cons	
	Water Losses	Apparent Losses	Unauthorised Consumption	
			Customer Meter Inaccuracies	
		Real Losses	Leakage on Transmission & Distribution Mains	
			Leakage and Overflows at Reservoirs	
			Leakage on Service Connections up to metering point	

The PIFastCalcs software encourages rapid evaluation of water balance components and performance of individual systems, with reliability bands and confidence limits. It can be used to identify and prioritise types of management interventions that should achieve savings in water losses, in both volume and monetary terms, for individual systems. Customised versions of PIFastCalcs are currently used in Australia, Brazil, Canada, Italy, and USA.

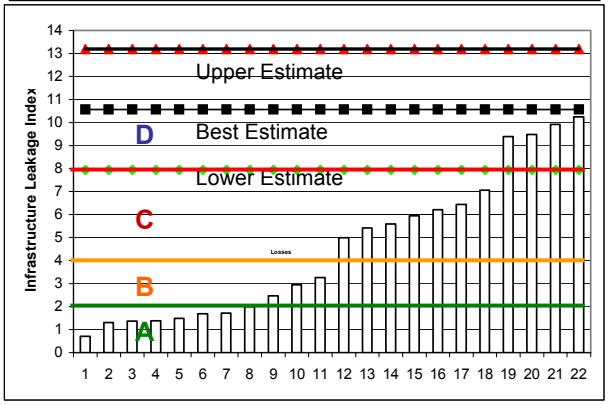
A standard European version of PIFastCalcs, in English language, is now available through Marco Fantozzi as an Excel Workbook,with the following facilities:

* User manual
* Performance assessment matrix for 'Twin-Track' approach to leakage management
* IWA water balance diagram and definitions of terminology
* Water Balance components by volume, including NRW, Apparent and Real Losses with confidence levels and reliability bands
* Option to use defaults for smaller unmeasured components of Water Balance
* Non-Revenue Water components in both volume and money terms
* Calculated performance indicators for NRW, Apparent Losses and Real Losses
* Predictions of 'How Low could you go?' - Unavoidable Annual Real Losses
* Calculation of Infrastructure Leakage Index (ILI)
* Graphs and performance comparisons with data from other European Utilities and World Bank performance bands
* Optional detailed worksheets for components of consumption and operating costs

If you are interested in reducing distribution system losses and saving money, then the standard European version of PIFastCalcs is an important element of your toolkit.

Your investment: Euro 800 + 20% IVA

Infrastructure Leakage Index ILI Estimate and Comparison (22 Systems in 15 European Countries)



Note: Marco Fantozzi is also pleased to provide quotations on request for:

* training in PIFastCalcs and technical support
* discounts for multiple copies of PIFastCalcs
* customising and upgrading of PIFastCalcs for content and/or language.

Date: 05 Dec 2005

Marco Fantozzi - Via Forcella 29 - 25064 Gussago (BS) – Italy

Tel. +39 030 2524372 - Fax. +39 030 2524372 - Mobile +39 339 5923610 Email: marco.fantozzi@email.it - Web: www.studiomarcofantozzi.it

ALCCalcs

Active Leakage Control (ALC) – looking for unreported leaks – is a key aspect of the systematic 4-component approach to management of Real Losses.

Many European Utilities do not have an ALC program and budget, and are unaware that the annual volume of their Real (Physical) Losses could be significantly reduced by limiting the average run times of unreported leaks.

The simplest method of ALC is 'regular survey', in which unreported leaks are identified by periodic acoustic surveys and inspections. Efficiency of ALC can be improved by measuring and interpreting night flows in individual sectors.

A specially designed software, ALCCalcs, in English language, is now available through Marco Fantozzi to assist and encourage European Utilities to economically manage their unreported leakage.

The first output of the ALCCalcs software, to help Utilities 'get started', is a rapid prediction for each system, with confidence levels, of:

- economic frequency of ALC intervention
- economic % of system to be surveyed each year
- annual budget for economic ALC (excluding repair costs)
- economic level of unreported real losses

These predictions are based on 3 local parameters – value of lost water (Euro/m^3), cost of intervention (Euro) and average rate of rise of unreported leakage (m^3/day, per year). Guidance is given on simple methods of estimating average rate of rise.

After explaining how night flow measurements can assist in the timing of individual ALC interventions, the rest of the ALCCalcs software provides the user with information, guidance and calculations on the frequency and interpretation of night flow measurements, including:

- Identifying key system characteristics (pumped, gravity, etc)
- Calculate System-specific economic intervention
- Defining Average Zone Point (AZP) and other pressure measurements points
- Traditional performance indicators for night flow, and their limitations
- Definitions of components of minimum night flow
- Pressure-dependent components of night flow
- Calculate Night Day Factors, relating leakage at night to 24 hours average leakage

If you are interested in reducing distribution system losses and saving money, then the ALCCalcs software is an important element of your toolkit.

Your investment: Euro 1500 + 20% IVA

Note: Marco Fantozzi is also pleased to provide quotations on request for:

* training in ALCCalcs and technical support
* discounts for multiple copies of ALCCalcs
* customising and upgrading of ALCCalcs for content and/or language.

Date: 05 Dec 2005

Marco Fantozzi - Via Forcella 29 - 25064 Gussago (BS) – Italy
Tel. +39 030 2524372 - Fax. +39 030 2524372 - Mobile +39 339 5923610 Email: marco.fantozzi@email.it - Web: www.studiomarcofantozzi.it

PresCalcs

Effective management of distribution system pressures is the foundation of any successful and economic policy for leakage management.

This is because maximum pressures and surge pressures influence:

- the flow rates from existing leaks
- the number of new leaks which occur each year, and their repair costs
- the efficiency and frequency of active leakage control interventions
- infrastructure replacement program investments

Average pressures may also influence some elements of consumption, and revenue.
A standard European version of the PresCalcs software, in English language, is now available through Marco Fantozzi as an Excel Workbook. It provides an introduction to rapid practical predictions of how changes in pressure management are likely to influence leakage, new leak frequency, consumption repair costs and operating costs for individual distribution systems.

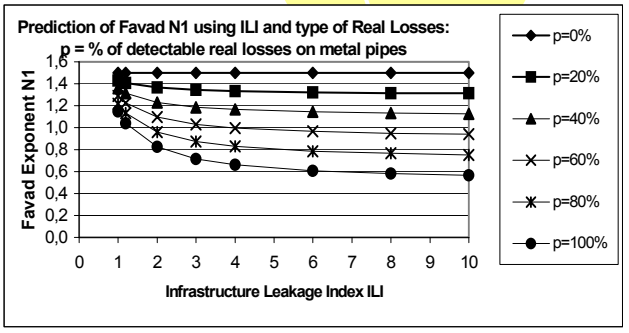
After outlining the benefits of pressure management, the software allows the user to obtain a broad initial overview of the effect of pressure change in individual distributions systems (of any size), based on a combination of simple practical approaches to estimating:

- the best practice equation and exponent for pressure:leak flow rate relationships
- changes in annual real losses, consumption and revenue, new leak frequency, repair costs and operating costs

If the user wishes to proceed to investigations and predictions in individual sectors of a system, PresCalcs assists with the essential preliminaries of explaining and identifying the following items:

- key pressure measurement points (Average Zone Point, Critical Point)
- presence of surges, and/or excess pressures at critical point
- Night-Day Factor (NDF), relating leakage at night to 24-hour average leakage

Your investment: Euro 1000 + 20% IVA



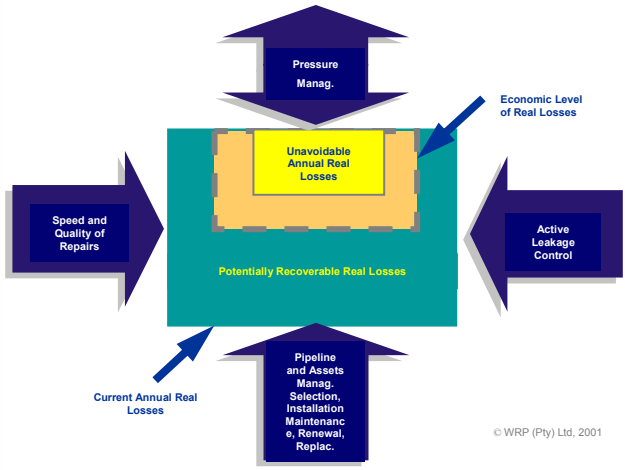
Notes:
PresCalcs is not a Network Analysis Model.
A PIFastCalcs water balance and calculated ILI is required for part of this program
Marco Fantozzi is also pleased to provide quotations on request for training in PresCalcs, technical support, discounts for multiple copies of softwares and customising and upgrading of PresCalcs for content and/or language.

Date: 05 Dec 2005

Marco Fantozzi - Via Forcella 29 - 25064 Gussago (BS) – Italy
Tel. +39 030 2524372 - Fax. +39 030 2524372 - Mobile +39 339 5923610 Email: marco.fantozzi@email.it - Web: www.studiomarcofantozzi.it

ELLCalcs

The Economic Level of Leakage (ELL) can be defined as 'the level of leakage at which any further reduction would incur costs in excess of the benefits derived from the savings'.



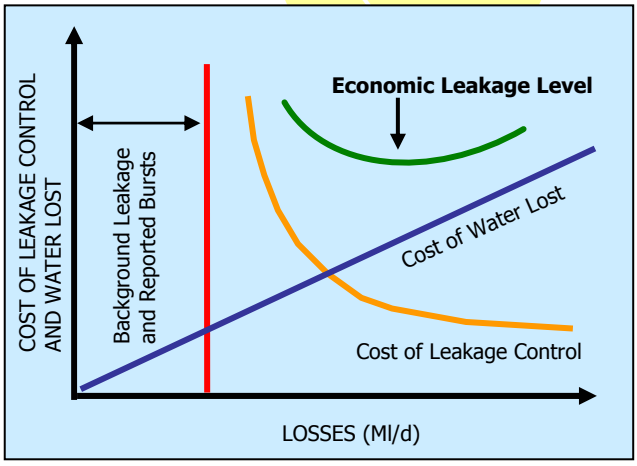
In the 4-component approach to Real Losses management, the ELL is usually less than the Current Level (CARL), but more than the Unavoidable Annual Real Losses (UARL). If all four leakage management activities are carried out individually to an economic level, the ELL will eventually be achieved.
This technique is known in the IWA Water Losses Task Force as 'squeezing the box'.
The ELLCalcs software is designed to assist the user in identifying economically viable options which will assist in reducing real losses to an economic level.

After the marginal cost of real losses (Euro/m^3) has been assessed and input, the numbers and types of leaks are listed, and the effect of existing Utility policies on their average run-time is assessed. For service connections leaks, ownership and responsibility for repairs prior to the point of customer metering can be a key issue influencing economic average run-time.
After explaining the 'Twin-Track' approach to pressure management and active leakage control, the ELLCalcs software then helps the user to identify:
• opportunities to reduce pressure surges
• likely effect of pressure management on typical leak flow rates, frequency of new leaks, and natural rate of rise of unreported leakage

Using component analysis of Real Losses (reported, unreported and background leaks), together with economic intervention theory, ELLCalcs allows the user to assess the probable ELL that could be achieved for the existing infrastructure by pressure management, active leakage control by regular survey, and targets for standard volume allowances per reported leak.

If you are interested in reducing your system leakage to economic levels, and saving money, then the standard European version of ELLCalcs is an important element of your toolkit.

Your investment: Euro 2000 + 20% IVA



Note: Marco Fantozzi is also pleased to provide quotations on request for:
* training in ELLCalcs and technical support
* discounts for multiple copies of ELLCalcs
* customising and upgrading of ELLCalcs for content and/or language.

Date: 05 Dec 2005

Marco Fantozzi - Via Forcella 29 - 25064 Gussago (BS) – Italy
Tel. +39 030 2524372 - Fax. +39 030 2524372 - Mobile +39 339 5923610 Email: marco.fantozzi@email.it - Web: www.studiomarcofantozzi.it

ORDER FORM

Softwares using best practice methods promoted by IWA Water Losses Task Force

Please fax this form and remittance to: MARCO FANTOZZI on +39 030 2524372
Marco Fantozzi - Via Forcella 29 - 25064 Gussago (BS) – Italy
Tel./Fax: +39 030 2524372 - Email: marco.fantozzi@email.it Web: www.studiomarcofantozzi.it

Customer Data

Please write in CAPITAL letters and write name, as you would like them to appear on Invoice

Title:	First Name:
Middle Name:	Surname:
Organization:	
Postal Address:	
City:	State/Province:
Post/Zip Code:	Country:
Telephone:	Fax:
Email:	
VAT Number:	

Yes, I'd like further information on other products and software packages available on StudioMarcoFantozzi web site ☐

Software Costs

Please tick which products you to purchase. (Delivery by email will occur within ten days of receipt of your order).

PRODUCT	YOUR PURCHASE TOTAL (in EURO)
PIFastCalcs Software European Version: Water Balance & Performance Indicators	800 €
PresCalcs Software European Version: Pressure Management	1000 €
ALCCalcs Software European Version: Active Leakage Control Management	1500 €
EllCalcs Software European Version: Economic Level of Leakage Calculation	2000 €
I would like the set of 4 Software (LEAKS SUITE)	5000 €
Total €	€
VAT at 20%	€
TOTAL PAYMENT DUE €	**€**

Method of Payment

All payments in Euros (€) to be made by Bank Transfer. **Please quote Leakage Software reference on all bank transactions** (Leakage Software) and the name of the Organisation the payment is made by.
These payments should be made via your banker,
to: MARCO FANTOZZI,
BANK: Banca FIN-ECO Cod. Agenzia N° 00699,
Account number: **000000212696**,
IBAN:**IT10 Y030 1503 2000 0000 0212 696**,
SWIFT-BIC**: BROMITRR ,** BIC (recipient bank)**: FEBIITM1**
These payments should include transfer charges.

Signed: ……..... Date: .....