COMPANY PROFILE

Management Policy

"One for All, and All for One"

COCOMECH respects the long established Collaboration Spirit, and aims to be an enterprise with the significance of existence which is appreciated by the employees, customers and local communities.

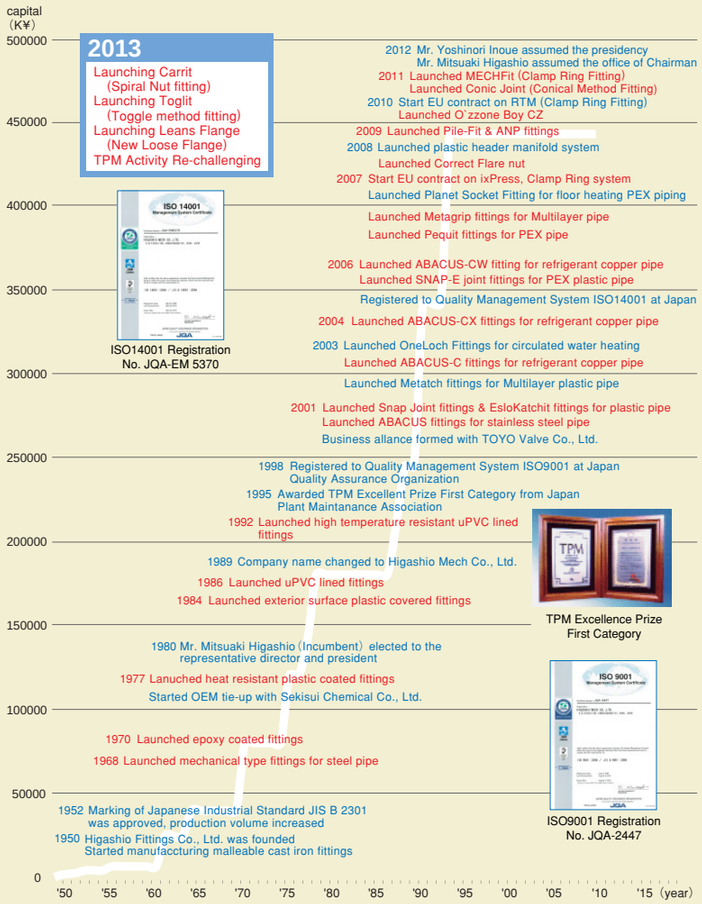
1. Growth and Healthy Management of the company
No Future without Growth. We aim for the compatibility of Growth and Health (Soundness).
We work through Bigger share, Product development, Technical innovation, and Global evolution recognizing the corporate environment.

2. Providing Products consistent with the Era
We inject management resources for offering and growing "Only-One Product" with considering changes of market and user's intention.

3. Compliance with Agreements and Promises
We aim for the trustful company with implementing faithfully the Agreements and Promises.
We observe the Rules, Standards, Directions and Plans.
We construct and uphold the structure to secure the Quality and Due date.

4. Management with Humanity
We provide Safety work, Allocation of achievement, Management information and Education opportunity to the employees.
We request activities that are conductive to Increase the sales, Securing profit, Technology accumulation, and Personal growth to the employees.

History



Outline

Company Name	HIGASHIO MECH CO.,LTD./COCOMECH
Trade Mark	MECH
Address	8-22 Kikusuicho, Kawachinagano 586-0012 Osaka, Japan Tel:+81(0)721 53 2221 Fax:+81(0)721 53 2279
Established	March-1950
Employee	170
Capital	4.6 million US$ (Capital reserve 3.6 million)
Annual Sales	70 million US$ (2012 Turnover)

Industrial Property Rights

	Applied	Published
Patent	Japan 98, Overseas 40	6
Utility Model	189	15
Mark	5	4
Design	33	1
Overseas Application	10	7

Main Products

Malleable Cast Iron Pipe Fittings
Black, White, Coat, Rust-Proof Lined fittings
Plastic (Crosslinked PE, PB) Pipe Fittings
Katchit fittings, Snap Joint fittings
Clamp Ring Fittings
Light Gauge Stainless Steel Pipe Fittings
ABACUS fittings
Refregerant Copper Pipe Fittings
O'zzone Boy CZ
Plastic Multi-Layer Pipe Fittings
Metatchi fittings
C.C.Box Cable Duct Steel Pipe Fittings
EasyTreat (S type, W type)
Plastic (Crosslinked PE, Multilayer) Pipe Fittings
MECHFit, Carrit, Toglit
Ground Foundation Improvement System Fittings
PILE-FIT

US$1.00=JP¥95.00—

Information in this document is subject to change without notice.

COCOMECH
HIGASHIO MECH CO., LTD.
http://www.mech.co.jp/
http://www.youtube.com/watch?v=07rI3lyu41Y

HO.14-10.C

MECH

Cocoon Brand :
One Push Press Fitting

MECHFit

Patented

New Generation!

"MECHFit" is the new name for "ixPress"

The innovative system for plastic piping application.

★One Push Press, No tool required.
★Less Labor and thus improve productivity with cost savings
★Eco Fitting with long term warranty

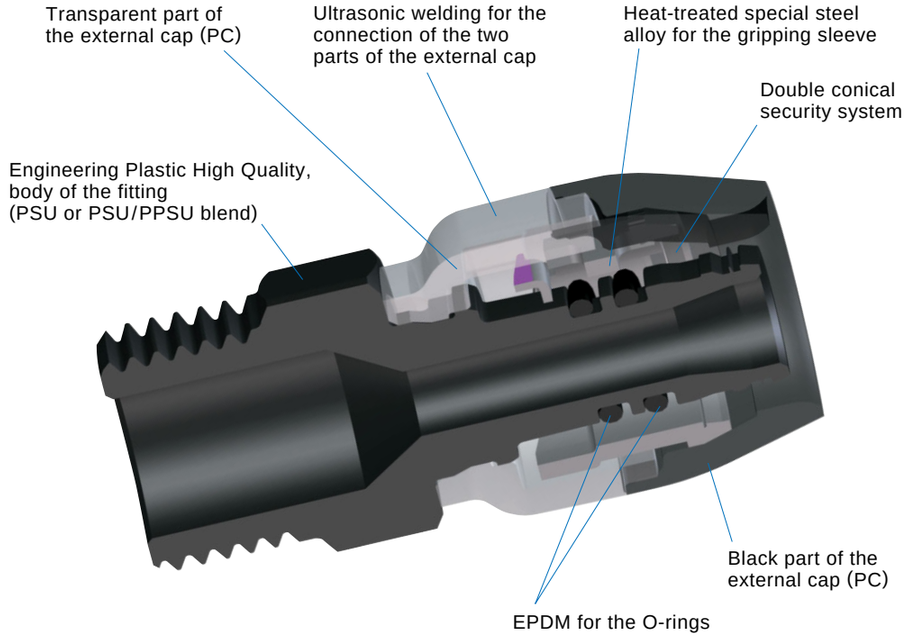
COCOMECH
Made in Japan

Vol.4

MECHFit

FEATURE

The "MECHFit" system uses the best combination of new generation of metal and plastic materials:



New generation!

We introduce the new "MECHFit" fitting, the only press-fitting without tools, more reliable than traditional press-fittings, that is compatible with Multilayer and PEX pipes.
"MECHFit" connects tightly with both PEX / AL / PEX pipes, without typical problems associated with fitting systems that require tools.
The new "MECHFit" fitting gives 25 years guarantee and the snap-on solution makes connection incredibly fast without any tool!
An astonishingly simple and reliable solution than traditional press-fittings.

CLAMP RING METHOD pat.

Simple and Reliable!

Can you believe in such an apparently simple fitting system that requires neither tool nor elaborate training for the installers?
Yes you would. The system is so simple enough that any person could operate the installation.

High Productivity!

This apparent simplicity is an engineering innovation by COCOMECH, working with the most stringent Japanese customers looking for quality solution.
We are encouraged by the success of these fittings in the Japanese market where customers want leak-free, tight union and pipe fittings. Till date, more than 50 million fittings have been sold.
The new "MECHFit" is an evolution of tool-free fittings used in Japan for many years, made by COCOMECH under thorough research and engineering innovation.
The large offerings from the new "MECHFit" fitting system for use in all kinds of sanitary, heating and chill water (FCU system) installations give you best opportunity for cost down and improvement of productivity.

How the "MECHFit" Works?

The exclusive technology of the "MECHFit" is based on its clamp ring feature, that grips the pipe, making it the only press fitting without tools.
The patented "MECHFit" clamp ring is made from a heat-treated special spring steel. This unrivaled patented technology comes from the Japanese automobile industry.
After inserting the pipe into the fitting, the small red Jumping Pin pushed out from the ring and the clamp ring starts compressing the pipe from the outside, absorbing the dimensional changes that occur in the pipe.

One Push,
No tool required.

The key feature of the "MECHFit" clamp ring is that its spring effect guarantees a long-term water tightness connection. For the constant pressing force applying to the pipe, any possible fluctuation in the pipe dimension could be absorbed. All the other tool-free fittings, like the push-fit types, are called old generation and they are struggling how to absorb the dimensional fluctuation of the pipe.
Actually the pipes never have the nominal dimensions, either because of the manufacturing tolerance, the standards permit tolerance in the external diameter and in the wall thickness of the pipe, or because of the dimensional changes that the pipe suffers when functioning connected to the fitting, the well-known creep effect.

MECHFit Product Introduction

MECHFit LINE UP

Super Engineering Plastic Model

Elbow

Code No. MP90L

New	Old	Size	pcs/BOX
16	2300005	16	108
20	2300006	20	72
25	2300010	25	32
32	2300012	32	20

Equal and Reducing Tees

Code No. MPTEE

New	Old	Size	pcs/BOX
16	2310005	16	64
20	2310006	20	40
25	2310010	25	24
32	2310012	32	10
2016	2311705	20×16×16	56
2012	2311806	20×16×20	44
2020	2311605	20×20×16	44
2516	2311908	25×16×25	34
2520	2311906	25×20×20	30
2522	2311910	25×20×25	32
3220	2312006	32×20×32	14
3225	2312007	32×25×25	12
3223	2312009	32×25×32	10

Equal and Reducing Union

Code No. MPSOC

New	Old	Size	pcs/BOX
16	2320005	16	136
20	2320006	20	70
25	2320010	25	48
32	2320012	32	30
2016	2320605	20×16	70
2516	2321005	25×16	48
2520	2321006	25×20	48
3225	2321210	32×25	30

Fixed Fitting with Male Thread

Code No. MPOAG

New	Old	Size	pcs/BOX
1604	2330504	16×1/2	192
2004	2330604	20×1/2	112
2006	2330606	20×3/4	112
2506	2331006	25×3/4	48

Fixed Fitting with Female Thread

Code No. MPMAD

New	Old	Size	pcs/BOX
1604	2340504	16×1/2	120
2004	2340604	20×1/2	120
2506	2341006	25×3/4	76

Elbow with Fixing Base (Short)

Code No. MPZWL

New	Old	Size	pcs/BOX
1604	2350504	16×1/2	68
2004	2350604	20×1/2	68

Teminal Elbow

Code No. MPMAL

New	Old	Size	pcs/BOX
1604	2370504	16×1/2	114
2004	2370604	20×1/2	102
2506	2371006	25×3/4	48

Terminal Elbow with Threaded Male End

Code No. MPOAL

New	Old	Size	pcs/BOX
1604	2470504	16×1/2	108

Loose Nut Elbow

Code No. MPLNL

New	Old	Size	pcs/BOX
2506	2671006	25×3/4	40

Calibrator

Code No. MPTOL

New	Old	Size	pcs/BOX
16	2660010	16×20×25	40
32	2660012	32×32×32	10

Brass Model

Equal and Reducing Tees

Code No. MDTEE

New	Old	Size	pcs/BOX
3232	2511211	32×32×25	12
2525	2511912	25×25×20	30

Equal and Reducing Union

Code No. MDSOC

New	Old	Size	pcs/BOX
3216	2521205	32×16	30

MFSOC

New	Old	Size	pcs/BOX
*3220	2521206	32×20	30

Fixed Fitting with Male Thread

Code No. MFOAG

New	Old	Size	pcs/BOX
1604	2530504	16×1/2	192
2004	2530604	20×1/2	112
2006	2530606	20×3/4	112
2506	2531006	25×3/4	48
2510	2531010	25×1	48
3210	2531210	32×1	30

MDOAG

New	Old	Size	pcs/BOX
*3204	2531204	32×1/2	30
3212	2531212	32×1-1/4	30

Fixed Fitting with Female Thread

Code No. MFMAD

New	Old	Size	pcs/BOX
1604	2540504	16×1/2	120
2004	2540604	20×1/2	120
2006	2540606	20×3/4	120
2506	2541006	25×3/4	76
2510	2541010	25×1	70
3210	2541210	32×1	30

Elbow with Short Fixing Base

Code No. MFZWL

New	Old	Size	pcs/BOX
1604	2550504	16×1/2	68
2004	2550604	20×1/2	68
2006	2550606	20×3/4	68

Teminal Elbow

Code No. MFMAL

New	Old	Size	pcs/BOX
1604	2570504	16×1/2	114
2004	2570604	20×1/2	102
2006	2570606	20×3/4	68
2506	2571006	25×3/4	48
2510	2571010	25×1	60
3204	2571204	32×1/2	TBA
3210	2571210	32×1	28

Tee with Female Threaded End

Code No. MFMNT

New	Old	Size	pcs/BOX
1604	2580504	16×1/2	60
2004	2580604	20×1/2	44
2006	2580606	20×3/4	44

Stop End

Code No. MDSTE

New	Old	Size	pcs/BOX
16	2630005	16	192
20	2630006	20	192

Teminal Elbow with Threaded Male End

Code No. MFOAL

New	Old	Size	pcs/BOX
1604	2770504	16×1/2	108
2004	2770604	20×1/2	84
2006	2770606	20×3/4	84
2506	2771006	25×3/4	40

MDOAL

New	Old	Size	pcs/BOX
3204	2771204	32×1/2	30

Copper Adapter Long

Code No. MFCAL

New	Old	Size	pcs/BOX
16	2760515	16×CU15	40

Test Plug

Code No. MFTPG

New	Old	Size	pcs/BOX
*16	2640005	16	84
*20	2640006	20	84
*25	2640010	25	54
*32	2640012	32	39

Hub Header

Code No. MPHHD

New	Old	Branch Size	pcs/BOX
2211	2810001	20-20-16-16	12
2111	2810002	20-16-16-16	12
211	2810003	20-16-16	15
*2222	2810004	20-20-20-20	12

Terminal Header

Code No. MPTHD

New	Old	Branch Size	pcs/BOX
221	2820001	20-20-16	15
211	2820002	20-16-16	18
21	2820003	20-16	24

*：New Line up.

NEWLY ADDED COCOMECH Brand pipes!!!

SYSTEM PROPOSAL of WORLD-LEADING PIPES + MOST ADVANCED FITTING

PEX pipe and PEX/AL/PEX pipe which meet the dimension and performance requirement of ISO15875 (PEX) and ISO21003 (PEX/AL/PEX) with MECHFit will make the Plumbing work extremely easy, simple and reliable!!

These pipes are now considered as the best piping material for hot and cold water supply system in the world by the following properties.

- Flexibility / Coiled-Light Weight of the pipe improve the workability in all process of the work.
  Delivery, Handling, and contributing to less joint which reduces the risk of troubles etc.
- Excellent Corrosion Resistance, Chlorine Resistance, Electrical Resistance, Pipe-Creep Resistance. etc.
- Coverage of wide temperature and pressure range in the use.
- Absolute harmless from any toxic or substance & promotes healthier water.

Pipe dimensional standard

Size	O.D.	I.D.	Thickness
D16	16.0	12.0	2.0
D20	20.0	16.0	2.0
D25	25.0	20.0	2.5
D32	32.0	26.0	3.0
D40	40.0	33.0	3.5

Technical Properties of Pipes

		16×2		20×2		25×2.5		32×3	
		PEX	PEX-AL-PEX	PEX	PEX-AL-PEX	PEX	PEX-AL-PEX	PEX	PEX-AL-PEX
Outside pipe diameter	mm	16		20		25		32	
Thickness pipe	mm	2		2		2.5		3	
Weight of 1m pipe	kg/m	0.089	0.099	0.115	0.127	0.174	0.206	0.275	0.323
Internal volume of 1m pipe	l/m	0.113		0.201		0.314		0.531	
Heat conduction coefficient	Watt/m*K	0.41	0.43	0.41	0.43	0.41	0.43	0.41	0.43
Coefficient of linear expansion	mm/m*K	0.17	0.024	0.17	0.024	0.17	0.024	0.17	0.024
Roughness of internal surface	μm	1.5		1.5		1.5		1.5	
Oxygen diffusion for antioxygen barrier tubes	mg/l*d	<0.1	—	<0.1	—	<0.1	—	<0.1	—
Maximum punctual temperature	℃	110		110		110		110	
Maximum operating temperature	℃	95		95		95		95	
Minimum temperature of tube manipulation	℃	−40		−40		−40		−40	
Minimum bending radius without internal spring	mm	160	80	200	100	250	125	320	160
Minimum bending radius with bending tool	mm	No kink	No kink	No kink	No kink	No kink	No kink	No kink	
Gel content	%	>60		>60		>60		>60	

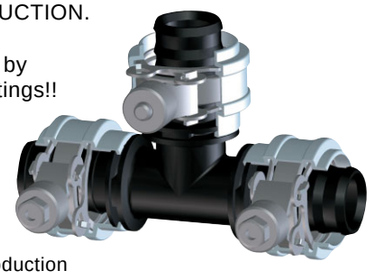
* Based on pipe manufacturer's specifications

NEWLY ADDED LINEUP for Larger diameter pipes!!!

Toglit for Over 40mm pipes

A unique combination system with MECHFit for 16-32mm pipes & Toglit for over 40mm pipe can enhance the Workability and High Productivity that directly link to
TIME-SAVING and COST REDUCTION.

Expand the Coverage of piping by COCOMECH's High Quality Fittings!!



Toglit Product Introduction

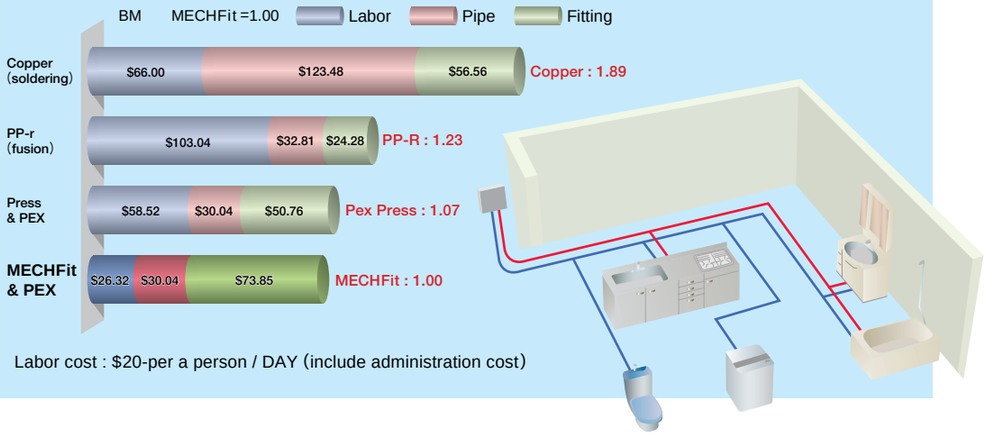
New System Combination

MECHFit
For 16 to 32mm
+
Toglit
Over 40mm

COST & QUALITY

Less Labor and thus improve productivity with cost savings

How the "MECHFit" Fitting Works? (Total Cost Comparison)



Labor cost : $20-per a person / DAY (include administration cost)

WHAT REGULATIONS HAVE LED THE DESIGN AND TESTING OF THE NEW MECHFit?

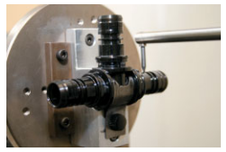
The design of the new "MECHFit" has met a standard of European regulation EN 1254-Part 3a regarding the thickness to be used in the nipple and the inside diameters, **so that it guarantees the minimum flow of water required by the regulations.**
The new "MECHFit" satisfies requirements of regulations "ISO 15875"(PEX pipes) and "ISO 21003"(PEX-AL-PEX pipes) and complies with all the required tests.


3-axis Assemble Machine

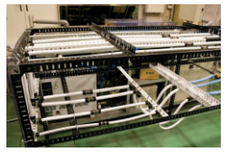

Ultrasonic welding of the nut


Injection Mold


Polysulfone injection molding


3D Measuring Contracer


Fatigue Test Machine


Thermal cycle Test Machine


Dimensional control of the nut

			Pressure		Tempe-rature	Hour Cycle	Test Procedure	Judgment	Results
			Multi	PEX					
National Standard	ISO 15875 Part 5	Internal Pressure	12.5 Bar	7.58 Bar	95℃	1,000Hr	Continuous pressurized test for 1,000Hr at 95℃	No-Leakage	Pass
		Bending	33.9 Bar	20.4 Bar	20℃	1Hr Hold	Bending Radius: 5-time of ND	No-Leakage Find Burst	Pass
		Pull-Out			23 & 90℃	1Hr Hold	23℃=1.5F, 90℃=F	No-separation	Pass
	ISO 21003 Part 5	Thermal Cycle	10 Bar	8 Bar	23 & 95℃	5,000 Cycle	95℃×15Min→20℃×15Min Cycling test for 5,000 Cycle	No-Leakage	Pass
		Pressure Cycle	15 Bar & 0.5 Bar	9 Bar & 0.5 Bar	23℃	10,000 Cycle	15Bar→0.5Bar Pulse pressure 30cycle/min.	No-Leakage	Pass
		Vacuum	−0.8 Bar Vacuum	−0.8 Bar Vacuum	23℃	1Hr Hold	Vacuum −0.8Bar 1Hr hold	Within 0.05Bar	Pass
	ASTM F877 F2262	Thermo-Cycle	0.69 MPa	0.69 MPa	16℃ Water 82℃ Water	1,000 Cycle	82℃Water Immersion:10Min. 16℃Water Immersion:3Min. (ASTM:Min 2-Minutes)	No-Leakage Find Burst	Pass
Higashio's Excessive Test	High Temp. Pressure Cycle Test		10 Bar & 3 Bar	10 Bar & 3 Bar	95℃	1,000,000 Cycle	10Bar→3Bar Pulse pressure 30cycle/min.	No-Leakage Find Burst	Pass
	Pull Pulsation Fatigue Cycle		Equivalent of internal pressure 3 MPa		23℃	1,000,000 Cycle	Tensile fatigue force of equivalent internal pressure 3 MPa	No-Leakage No-deformation	Pass
	Water Pressure Test at High Temp.		Injection bursting internal water pressure		95℃	—	Increased water pressure until pipe bursting, after the specimen curing at 95℃ for 8h	No pull out defect at connecting points	Pass
	Slant Cut Pipe Insertion						Check the disposition of O-ring under the 3mm slant cut pipe	No-disposition of O-ring	Pass
	Slant Insertion of Pipe						Check the disposition of O-ring under practical slant insertion	No-disposition of O-ring	Pass

JOB REFERENCE Clamp Ring Method





Dhabi, UAE



Abu Dhabi, UAE

Doha, Qatar



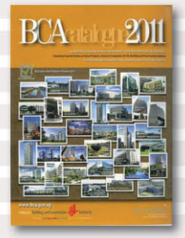


Singapore








BCA catalogue 2011


PSB Singapore