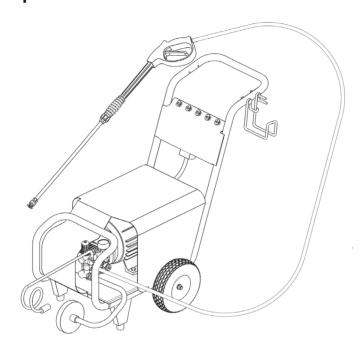




# **Operation and Maintenance Guide**



High Pressure Washers

Models	Descriptions	IMPA Number
EW 1103-110V	Electric High Pressure Washer, 110Bar, 110V-1ph, 2.2kW	590857
EW 1103-220V	Electric High Pressure Washer, 110Bar, 220V-1ph, 2.2kW	590852
EW 1106-220V	Electric High Pressure Washer, 110Bar, 220V-3ph, 2.2kW	590853-OLD
EW 1106-440V	Electric High Pressure Washer, 110Bar, 440V-3ph, 2.2kW	590854-OLD
EW 1706-220V	Electric High Pressure Washer, 170Bar, 220V-3ph, 4.4kW	590853
EW 1706-440V	Electric High Pressure Washer, 170Bar, 440V-3ph, 4.4kW	590854
EW 200-220V	Electric High Pressure Washer, 200Bar, 220V-3ph, 5.5kW	590855
EW 200-440V	Electric High Pressure Washer, 200Bar, 440V-3ph, 5.5kW	590856

Read this manual carefully before installing, operating or servicing this equipment. It's the responsibility of the employer to ensure this manual is read by the operator. Please preserve this manual.

This document is issued with Product Serial No	
This document is issued with Product Senai No	

### **Table of Contents**

- 3 Technical Data
- 3 Operaing and SafetyInstrucions
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- 15 Repair Kit
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- 17 List of Main Partsof HighPressure/Vasher
- 18. WarrantyCard-TermsandCondiions.
- 19 Product Installaion and Registraion



### **Technical Data**

IMPA No.	590857	590852	590853 - Old	590854 - Old
Model No.	EW1103P - 110V	EW1103P - 220V	EW1106P-220V	EW1106P-440V
Power Supply	Single Phase, 110\ 60 Hz	/, Single Phase, 2200 60 Hz	V, hree Phase, 220V, 60 Hz	hree Phase, 440V, 60 Hz
Powe Consumption	3 HP (2.2 KW)	3 HP (2.2 KW)	6 HP (4.4 KW)	6 HP (4 KW)
Working Pressure	110 Bar	110 Bar	110 Bar	110 Bar
Flow Capacity	11.7 ltr/min	11.7 ltr/min	11.7 ltr/min	11.7 ltr/min
Pump Number	Pe200	Pe200	Pe200	Pe200
Overall Dimensions	97 x 51 x 76 cm	97 x 51 x 76 cm	97 x 51 x 76 cm	97 x 51 x 76 cm
Weight	50 Kgs	50 Kgs	53 Kgs	53 Kgs

IMPA No.	590853	590854	590855	590856
Model No.	EW1706P-220V	EW1706P-440V	EW200P-220V	EW200P-4400V
Power Supply	hree Phase, 220V, 60 Hz	hree Phase, 440V, 60 Hz	hree Phase, 220V, 60 Hz	hree Phase, 440V, 60 Hz
Powe Consumption	6 HP (4.4 KW)	6 HP (4.4 KW)	7.5 HP (5.5 KW)	7.5 HP (5.5 KW)
Working Pressure	170 Bar	170 Bar	200 Bar	200 Bar
Flow Capacity	15.2 ltr/min	15.2 ltr/min	16.5 ltr/min	16.5 ltr/min
Pump Number	Pe250	Pe250	Pe250	Pe250
Overall Dimensions	97 x 51 x 76 cm	97 x 51 x 76 cm	107 x 61 x 84 cm	107 x 61 x 84 cm
Weight	60 Kgs	60 Kgs	74 Kgs	74 Kgs

# **Operating and Safety Instructions**

Following symbols are used throughout this manual.



Warning: If not followed could cause personal injuries

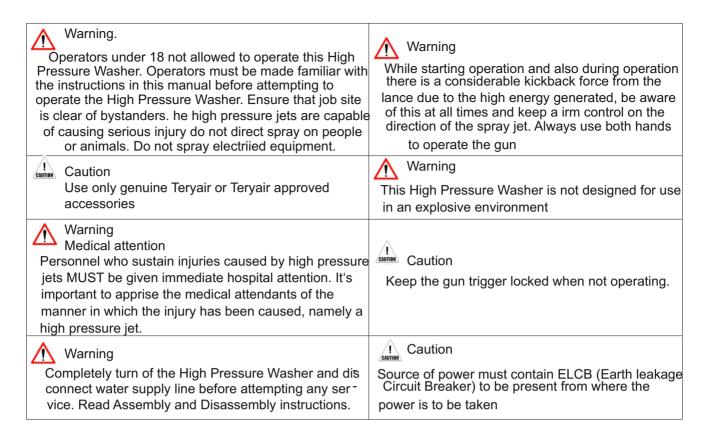


Caution: If not followed could result in damage to High Pressure Washer.

Warning Warning his manual must be read and the operating instructions carefully followed, Use only for high pressure cleaning, do not use for any because of the high pressure developed, severe other application injuries can be caused by negligent operation Caution Warning Safety and protective clothing, eyewear, headgear, ear Do not run the high pressure washer without a proper and adequate supply of water connected protection, gloves and footwear to be worn during operation of this High Pressure Washer. Please see Table C at end of Insu cient water supply will cause damage to this section. the seals in a few minutes of use. Warning Caution ! Completely turn of the High Pressure Washer Source of power must contain ELCB (Earth leakage Cir and disconnect water supply line before attempcuit Breaker) to be present from where the power is to be ting any service. Read Assembly and Disassemb taken



ly instructions.



### Safety wear mandatory while operating high pressure washer







Eye and face and ear protection must be worn at alleye and face and ear protection must be worn at times during operation of the High Pressure Washerall times during operation of the High Pressure here is a chance of lying debris from the jobsite Washer. here is a chance of lying debris from and the quality of wear should be such to protect the jobsite and the quality of wear should be against such lying debris such as lakes of the re such to protect against such lying debris such as moved layer. lakes of the removed layer.







Suitable heavy duty gloves must be worn at all times Suitable heavy duty gloves must be worn at all during operation. times .



### Intended and Prohibitive use

Intended use

Biological growth from concrete or steel constructions

Hard caked mud from construction machinery like dozer tracks.

Paint, dirt, mud from walls and loors

Oil and grease from High Pressure Washer.

Dirt, paint from sea going vessels.

### Prohibitive use

Any use in an explosive atmosphere is prohibited

Use on materials containing asbestos is prohibited

Use by an underage, untrained or operator who is under the inluence of drugs or alcohol.

Use with non genuine spare parts or accessories is prohibited

Use with safety devices un functional or in need of service is prohibited

Do not use with hot water, this High Pressure Washer is for use with cold water.



### **Un Packing**

Identify all the components as shown earlier, contact your supplier if any parts are missing or dam aged.

Be aware that minor visual diferences may be noticed between actual motor/frame/pump and High pressure hoses because this components vary depending on the model ordered. his illustration is for identification only.

Unless specially requested the motor, pump and frame are factory itted to each other.

Product Main Components and Description



Sr. No	Description	Quantity	Instructions & Remark
1	Gun	1 no	-
2	Lance	1 no	-
3	Handle with Nozzle Sets & MCB NO/OFF swi	tch 1 Set	-
4	Trolley with Motor and H.P. Pump	1 Set	-
5	Suction Pipe with Strainer	1 Set	-
6	Chemical suction pipe with Strainer	1 Set	-
7	High Pressure Hose Complete with end ittings	1 Set	-
8	Breathing Cap	1 Set	User has to remove Oil plug and replce with breathing Cap is MUST.
9	Holding Bracket with Fasteners	1 Set	-
10	Spanner and Screwdriver Set	1 Set	-



# **Assembly & Diassembly**

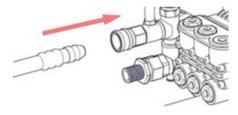
- 1. he motor and the pump are factory itted to the Trolley
- 2. Connect the Handle to the frame
- Connect the hoses to the Pump (see table A for correct High Pressure hose) (see table A for correct Pump Number)
- 4. Connect gun to lance



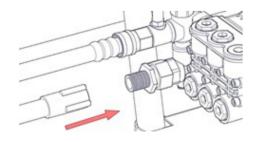
5. Connect high pressure hose to gun



6. Connect other end of high pressure hose to upper connector on pump as shown



7. Connect the water inlet hose to the lower connector on pump.

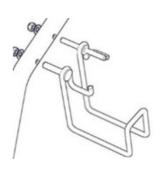


8. Connect other end of water inlet hose to a water supply source.



Caution

- Water supply source must provide a
   r minimum of 20 litres/min low at least 20 psi of pressure. Insu cient water supply can damage the pump pre maturely.
- 10. Attach the gun hook to frame

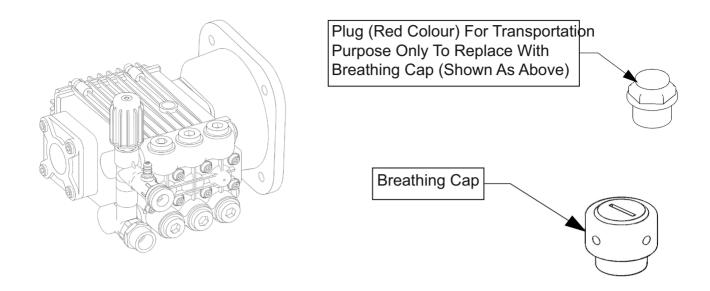


11. Connect the spray tip to the gun lance



Caution

- 12. Always engage trigger lock on gun before connecting/changing spray tip. Pull back collar and remove existing spray tip if any. Insert desired spray tip and click back collar.
- 13. Connect the electric motor cable (see table D for correct motor number)
- 14. Check that the electrical voltage and frequency are consistent with what is mentioned on the electric motor nameplate.
- 15. e motor must be grounded properly.
- 16. Please ensure that the necessary thermal overload protection and short circuit protection has been installed prior to the starting of the high pressure washer.
- 17. Place the High Pressure Washer on a level ground and II up the pump oil level to ½ the sight glass.



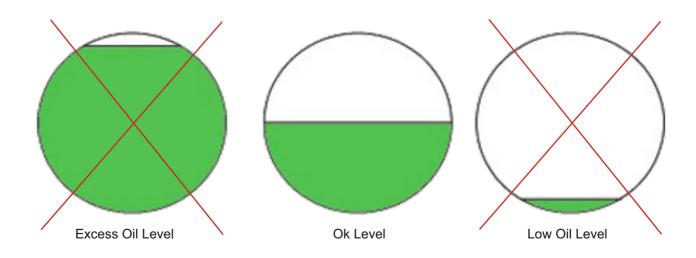
### Fill lubricating oil

Make Sure to ill Oil in the pump as shown below befor start.

Make Sure that the itted oil plug is removed. Fill lubricating oil 10W15 up to half way mark of Oil Indicating Glass window.

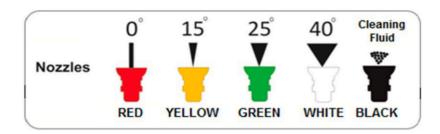
And Fit Breathing cap provided with pump. Do not it Oil Plug.

Caution – a) If oil plug itted ater illing oil instead of breathing cap- Pump will over heat during use and will damage all internal parts of pump and machine will stop working / developing pressure. b) If oil is illed fully in pump up to top / maximum level of Oil indicating window, there will be no space for breathing of oil during use and pump will be over heated which will damage pump internal parts.

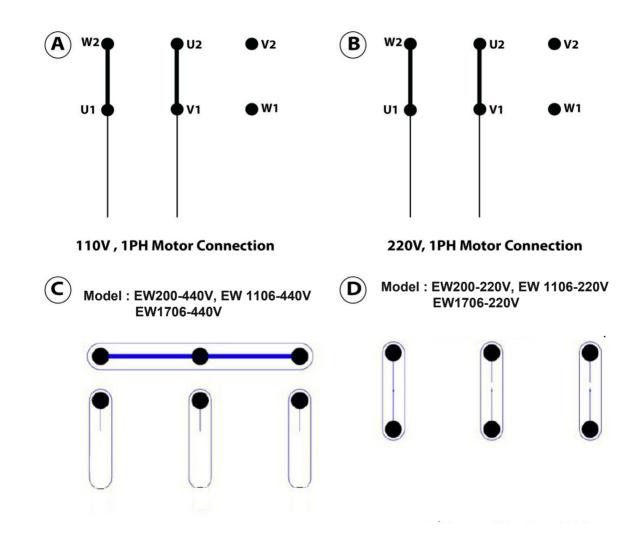


18. Types of nozzle provided as shown & can be use according to user requierment.

### **Spray Tip detail**



### **Electric motor connection detail**



### Safety checks before and after operating the High Pressure Washer

### Lubrication.

- •he oil sump in the Pump unit should contain SAE15W40 / 10W15 grade oil.
- •Ensure that the oil is at the half level by looking at the transparent window.
- •If the number of hours has crossed ity, drain out the oil by opening the Oil drain plug at the end of the pump •Release collar housing. Re ix the plug and open the Breathing oil cap to Tug on tip to ensure proper seat top up oil to the correct level (Refer ig on page 11). hereaf ter repeat ater every 500 hours of use or whenever the level Cleaning solution injection of oil has dropped or looks contaminated.

# Changing spray nozzle tips

- Choose appropriate nozzle.
- •Engage the trigger lock
- •Pull back the collar
- •Remove spray tip
- Install desired tip.

### •All Teryair high pressure washers have a facility of Check list before starting the High Pressure injection of Cleaning Fluids to aid in the cleaning Washer

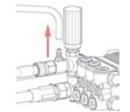
- •Check safety wear mentioned earlier in warnings.
- •Check the hoses, especially the high pressure hoses for washer. It should say so on the level, if it does not say it, damage or leaks.
- •Make sure that the electrical supply voltage and frequency match the motor. Refer electrical connection detail on page 5 for termination.
- •Make sure that the High Pressure Washer is grounded •Once you have your cleaning solution is ready to go,
- •Make sure that the electrical cables are not damaged and to the pump as shown. all the connectors between gun, lance, hoses and pump are secure.
- •Make sure that the ilter cone on the water supply in place
- •Turn on the water supply.

# don't use it. Warning: Never use bleach or bleach based products

process, here are several brands & types of cleaning solutions available in the market today. Whichever you choose make sure it designed for use in high pressure

!\ as they can damage the pump.

check to make sure that injector tube is securely attached



### Starting the High Pressure Washer

- ·Hold the gun securely with both hands, ( the gun will kick back when irst started )
- •Switch on the electricity, and depress trigger of the gun to solution. start the jetting.
- •Adjust the output pressure as required by the pressure regulator.
- Then insert the other end into the cleaning
- A pressure washer will only siphon cleaning solution when in low pressure mode. So a pressure soap nozzle must be use on the lance (Refer Spray tip detail on page 5).





Bypass mode-In bypass mode, the pump reticulates the water because the trigger of the spray gun is not being pulled. If unit is let in bypass mode For more than two minutes, the water temperature will rise to a dangerous Level and could damage internal components of the pump.

Note- Any damage to pump due to these causes will not be covered under Warranty.



### Caution

 After cleaning Fluid application it is recommended to disconnect the injection system to allow clean water to rinse through the system for few minutes.





Warning keep distance from gun tip to job at least 8



Warning: is high pressure washer is a high powered • DO NOT turn of water source before switching of the High Pressure Washer and it is imperative that it must motor.

be operated by a competent and trained operator. SeeSwitch of motor or remove the plug from mains.

warnings



High Pressure Washer and it is imperative that it must be operated by a competent and trained operator. See warnings Storage



Warning: e high pressure washer needs a constant supply of water during operation, any starvation of water to the High Pressure Washer will result in overheating and quick damage to High Pressure Washer.

• Hold gun vertically and depress trigger to remove all



Warning: With the motor running and the jetting o, the high pressure water circulates in the circuit. DO • Drain the hose too in a similar way. NOT pause jetting for more than TWO minutes. Instead shut down the high pressure washer see Shutting down later in this section.

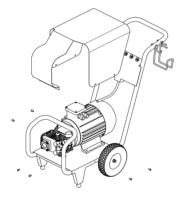
### **Maintenance**

### Servicing the Pump

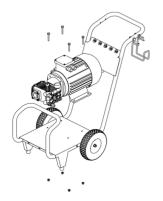
Follow instructions in "Shutting Down" section earlier in the manual

Dis assemble the hoses and the electrical cable from the High Pressure Washer.

Dis assemble the cover from the trolley by opening the six screws as shown below.



Dis assemble the motor and pump from the trolley by opening the bolts and nuts as shown below



### **Shutting down**

• Turn of the water source.

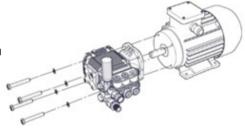
Warning: is high pressure washer is a high powered • Pull the lance trigger to relieve any residual water pressure

• Disconnect the gun from the high pressure hose and the

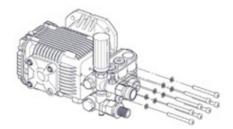
residual water from the gun and lance.

- Remove the water supply hose and drain.
- Run the pump for ten seconds to eject any residual water that may have remained in.
- Store in a clean and dry place.

Dis assemble the pump from the motor.



Dis assemble the un pump housing valve assembly from the pump. (refeexploded view page)



Proceed to disassemble the Pump and pump Remove bolts (13) to dismantle pump housing (10) valve from the pump.



### Dis-Assembly insrtructions for High Pre. Washer

- Remove the Plugs (14) & take out vale kits (15). herē. are total 6 plugs & 6 valve kits (3nos on front side & 3nos on top side of pump housing. Now observe it for wear and tear (if found replace it with new one)
- 2. Remove the Bolts & washers (13 & 12) to dis assem8. ble pump hsg. from body (1) to Remove the Seal kits (17) from the Pump Hsg.(10). here are total 3 sets of seal kit for 3 pistons & observe it for wear and tear (19). found replace it with new one).
- 3. Using spanner open the QC itting with chemical injector (11).
- 4. Open the unloader valve assembly (22) by opening it's leakages (if found replace it with new one). side Bolt using spanner.
- 5. Pull out unloader valve cap (16) from the unloader valve assembly(22).
- 6. Open the inlet assly. (23) by opening it's side Bolt using spanner.

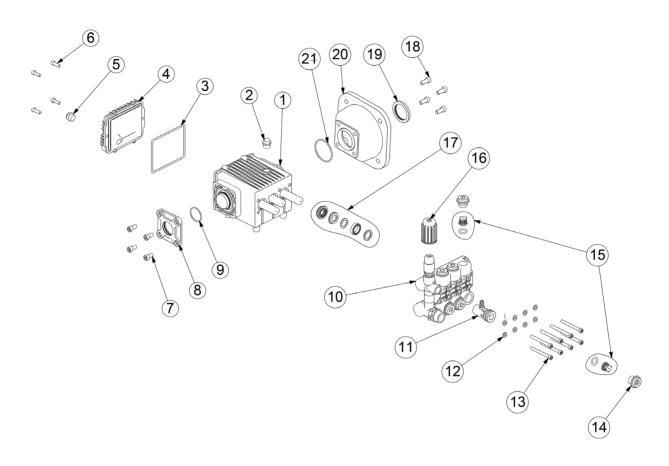
Open inlet adaptor (25) using spanner from inlet assem bly (23) & remove inlet Strainer (24). Observe strainer for chock up (If chock up found it can be cleaned manu ally or replace it with new one).

Open the inlet nipple (26) using spanner from inlet adaptor (25).

- 9. Before further proceeding for any further assembly, Open the Drain plug (5) and drain the Oil from the Pump Body(1).
- Open Screws (18) and remove the Oil seal (19), Flange (20) and O-ring (21). Observe it for wear and tear or it's leakages (if found replace it with new one).
- 11. Open Screws (7) and remove the Side Cover (20) and O-ring (21), Observe it for wear and tear or leakages (if found replace it with new one).
- 12. Open Screws (6) to remove End cover (4) and end cover O-ring (3), Observe it for wear and tear or leakages (if found replace it with new one).



# **Exploded View pf High Pr. Pump 110 Bar**

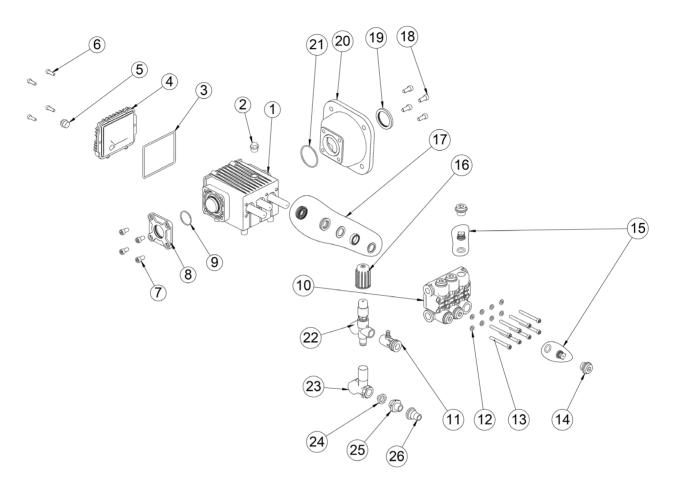


# Bill Of Material High Pressure Pump - EW110 Bar

IIIu. No.	Description	Qty.
1	Pump Body	1
2	PLUG (RED) with O-Ring	1
3	O- Ring for End Cover	1
4	End Cover	1
5	Drain Plug	1
6	Bolt for End Cover	4
7	Bolt for Said Cover	4
8	Said Cover	1
9	O-Ring Said Cover	1
10	Pump Housing (Brass) 110Bar	1
11	QC with Chemical Injector	1
12	Washer For Pump Hsg.	8
13	Bolt For Pump Hsg.	8
14	Plug with O-Ring for Pump Hsg.	6
15	Valve With O-Ring	6

IIIu. No.	Description	Qty.
16	6 Cap For Pressure Regulator	
17	Seal Kit (Set of 5 pcs)	3
18	Bolt For Flange	4
19	Oil Seal For Flange	1
20	Flange	1
21	O-Ring For Flange	1

# Exploded View pf High Pr. Pump 170 Bar / 200 Bar



# Bill Of Material High Pressure Pump - EW170 Bar / EW200 Bar

IIIu. No.	Description	Qty.
1	Pump Body	1
2	PLUG (RED) with O-Ring	1
3	O- Ring for End Cover	1
4	End Cover	1
5	Drain Plug	1
6	Bolt for End Cover	4
7	Bolt for Said Cover	4
8	Said Cover	1
9	O-Ring Said Cover	1
10	Pump Housing (Brass) 170 Bar / 200 Bar	1
11	QC with Chemical Injector	1
12	Washer For Pump Hsg.	8
13	Bolt For Pump Hsg.	8
14	Plug with O-Ring for Pump Hsg.	6

IIIu. No.	Description	Qty.
15	Valve With O-Ring	6
16	Cap For Pressure Regulator	1
17	Seal Kit (Set of 5 pcs)	3
18	Bolt For Flange	4
19	Oil Seal For Flange	1
20	Flange	1
21	O-Ring For Flange	1
22	Unloader Valve Assy	1
23	Inlet Assy	1
24	Inlet Strainer	1
25	Inlet Adopter	1
26	Inlet Nipple	1

# Repair Kit

Description	Images	EW110 Bar	EW170 Bar / EW200 Bar	Qty / Assembly
Seal Replacement K	it	644 97 02	642 97 42	x 3 Sets
Valve Replacement K	it	644 97 03	642 97 43	x 6 Sets

# **Troubleshooting**

Serial No	Causes	Remedial Action
1	he motor does not turn ater energizing	A loose connection Check connections and retry
2	he motor hums but does not turn	Low voltage Check voltage and verify correct and re try
	no motor name but about not tarn	Pump is stuck Service Pump see Maintenance section
		Pump is sucking air along with water Check hose ittings
3	Pump is noisy	Valves are tight Service pump
		Bearings worn Service Pump
		Water supply not adequate 20 litres per min at 20 PSI recommended
		Leak in high pressure hose itting Check use sealant tape if needed.
		Nozzle obstructed Clean Nozzles, see maintenance section
4	Low pressure when new	Water ilter is clogged Clean and ensure clean supply
		Defective un loader valve Service Pump
		Air in hose Switch of motor, disconnect water hose from pump inle and allow water to low removing air bubbles, reconnec
		Cleaning solution ilter clogged Clean or replace
5	Cleaning solution not getting sucked	Wrong Cleaning luids See section
		Cleaning solution residue clogging the pump Service pump
6	Low pressure ater normal use	Pump needs service Service Pump
7	Water leaking at Gun	Check hose ittings Use sealant tape or replace ittings
	Water Leading 17	Check ittings Use sealant tape or replace ittings
8	Water leaking at Pump	If not solved Service Pump
9	Oil Leaking at Pump	Seals or O rings worn Service Pump
10	Pump pulsates	Clogged nozzle Clear nozzle



# **List of Main Parts of High Pressure Washer**

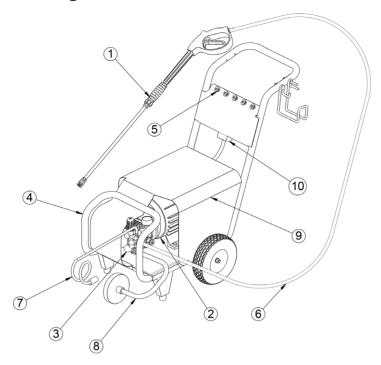


Illustration Number	EW1103-110V	EW-1103-220V	EW-1106-220V	EW-1106-440V
	59.08.57	59.08.52	59.08.53-OLD	59.08.54-OLD
1	500mm lance	500mm lance	500mm lance	500mm lance
2	2.2kW-110V-1ph	2.2kW-220V-1ph	2.2kW-220V-3ph	2.2kW-440V-3ph
3	Pe200	Pe200	Pe200	Pe200
4	F1	F1	F1	F1
5	Standard Nozzle Set	Standard Nozzle Set	Standard Nozzle Set	Standard Nozzle Set
6	7mm ID X 10mtr Plastic Hose	7mm ID X 10mtr Plastic Hose	7mm ID X 10mtr Plastic Hose	7mm ID X 10mtr Plastic
7	6.5mmID X 1.5mtr	6.5mmID X 1.5mtr	6.5mmID X 1.5mtr	6.5mmID X 1.5mtr
8	15mmID X 3mtr	15mmID X 3mtr	15mmID X 3mtr	15mmID X 3mtr
9	Cover	Cover	Cover	Cover
10	MCB - ON/OFF Switch	MCB - ON/OFF Switch	MCB - ON/OFF Switch	MCB - ON/OFF Switch

Illustration Number	EW-1706-220V	EW-1706-440V	EW-200-220V	EW 200- 440V
	59.08.53	59.08.54	59.08.55	59.08.56
1	500mm lance	500mm lance	500mm lance	500mm lance
2	4.4kW-220V-3ph	4.4kW-440V-3ph	5.5kW-220V-3ph	5.5kW-440V-3ph
3	Pe250	Pe250	Pe250	Pe250
4	F3	F3	F3	F3
5	Standard Nozzle Set	Standard Nozzle Set	Standard Nozzle Set	Standard Nozzle Set
6	8mmID X 10 Mtr Steel Braided hose			
7	6.5mmID X 1.5mtr	6.5mmID X 1.5mtr	6.5mmID X 1.5mtr	6.5mmID X 1.5mtr
8	15mmID X 3mtr	15mmID X 3mtr	15mmID X 3mtr	15mmID X 3mtr
9	Cover	Cover	Cover	Cover
10	MCB - ON/OFF Switch			



### **EU DECLARATION OF CONFORMITY**

We hereby certify that the Listed Product stipulated below comply with all relevant provisions of the machinery directive (2006/42/EC) and the national laws and regulations adopting this directive.

Description : Electric High Pressure Washers

Model Number : EW Series

Date :

Serial Number :

Is in conformity with the provisions of the following European Directives: (2006/42/EC) Machinery Safety and Harmonized standards

ISO 12100-1: 2010: Safety of Machinery –general Principles for Design –Risk Assessment and Risk Reduction.

Registered O ce : 416 Gundecha Industrial Complex, Akuril Road,

Kandivali East, Mumbai – 400101, Maharashtra, India.

Web site : www.teryair.com

Works : A-1, Tirupati Udyog Nagar, Sativali Road, Vasai East,

Palghar – 401208, Maharashtra, India.

CE certiication registration no - C E 16831/2

Issued by – BMQR Certifications Pvt Ltd. www.cemarking-india.com

Valid Till - 03/11/2025

Signed for and on behalf of

TERYAIR EQUIPMENT PVT. LTD.

Place of Issue: Vasai

Date:





# Warranty Certiicate

Every product manufactured by Teryair is built to meet the highest standards of quality.

Teryair warrants that the Products, accessories and parts manufactured or supplied by the company be free from defects in material and workmanship for a period of six months from date of Teryair authorized dealer invoice to customer, or one year from date of Teryair invoice to dealer, whichever is earlier. Failure due to normal wear, misapplication, or abuse is, of course, excluded from this warranty.

Since the use of Teryair products and parts is beyond our control, Teryair cannot guarantee the suitability of any product or part for a particular application and Teryair shall not be liable for any consequential damage or expense arising from the use or misuse of its products on any application. Teryair does not warranty bought out products or components such as electric motors and hardware but will assist in directing warranty queries to the dealer/manufacturer responsible. Teryair responsibility is limited solely to replacement or repair of defective Teryair products or components.

Dealer/End User shall have no right or remedy and Teryair shall have no liability or obligation under the warranty, if: (i) a Product is altered, changed, modiied or tampered with in any way, (ii) a Product is damaged after deposit with the transporter for shipment; (iii) a Product is not properly preserved, packaged, stored, processed or handled after receipt; (iv) a Product is not used and maintained in accordance with Teryair's recommended operating and maintenance manuals, instructions and procedures, if any; (v) a Product is not properly incorporated or installed in, or not properly combined with, an Other Product; (vi) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, a failure, substandard performance or other issue with another product, material, component or part not supplied by Teryair; (vii) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, compliance with any design, specification or other specific requirement of Dealer/End User; (viii) a Product is used in a manner, with a substance or for a purpose other than the normal manner, substance and purpose for which it is intended or is otherwise subjected to abnormal use or service; (ix) a Product is subjected to a power surge, brown out or other similar occurrence; (x) the issue with a Product is directly or indirectly results from or arises out of, normal wear and tear of such Product (including, without limitation, things such as worn seals, diaphragms, balls, O rings, gaskets, chisels, cutters, hoses and other such wearing components; (xi) the issue with a Product is directly or indirectly.

Model Number : EW Series

Serial Numbar : M Yadav, Q.A. Manager

Dated : (Company Seal)

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