

CITY OF LOS ANGELES
CALIFORNIA

BOARD OF
BUILDING AND SAFETY
COMMISSIONERS

MARSHA L. BROWN
PRESIDENT

PEDRO BIRBA
VICE-PRESIDENT

VAN AMBATIELOS

HELENA JUBANY

ELENORE A. WILLIAMS



ANTONIO R. VILLARAIGOSA
MAYOR

DEPARTMENT OF
BUILDING AND SAFETY
2319 DORRIS PLACE
LOS ANGELES, CA 90031

ANDREW A. ADELMAN, P.E.
GENERAL MANAGER

RAYMOND CHAN
EXECUTIVE OFFICER

April 10, 2008

Reece Robinson
Grundfos Pumps Corp.
17100 West 118th Terrace
Olathe, KS 66061

RESEARCH REPORT: RR 5611
EFFECTIVE DATE: 03/01/2008
EXPIRATION DATE: 03/01/2009
Telephone: 913-227-3400

GENERAL APPROVAL - Renewal - Domestic Water Booster Pump System manufactured by Grundfos Pumps Corporation. See attached sheets for list of approved models.

DETAILS

The Grundfos BoosterpaQ consists of 2-4 CR(E) centrifugal pumps coupled in parallel and mounted on a common base frame provided with all the necessary fittings and a control panel. Assemblies may consist eight pumps.

The approval is subject to the following conditions:

1. This water pressure booster system may be installed in potable water systems for residential, commercial or industrial applications. These products are not approved for fire protection applications. These products shall not be used as fire or jockey pumps.
2. An approved reduced pressure principle backflow prevention device shall be installed on the portable water system supplying these products.
3. These products shall be manufactured using approved materials including, but not limited to pipe, fittings, flux, solder, pumps, pressure reducing valves, pressure relief valves and butterfly valves.
4. Any drain lines from this product or other equipment installed in accordance with these Conditions of Approval shall discharge indirectly into an approved indirect waste receptor.
5. All electrical components that are part of this product shall be either currently listed as part of the equipment for the intended use or currently approved by the a City of Los Angeles recognized electrical testing laboratory.
6. The system shall be subject to a full working pressure test for not less than 15 minutes. The system

Grundfos Pumps Corporation
RE: Domestic Water Booster Pump Systems
shall not leak when subject to this test.

7. The Department of Building and Safety Mechanical Plan Check approval and permits are required prior to the installation of the system. Hydraulic calculations shall be shown on the approved plan for the demand, head, and friction losses. Head and flow performance curves of the water booster pump system shall be submitted at the time of plan check.
8. This system shall be operated and maintained in accordance with manufacturer's instructions.
9. Each water booster pump package shall be permanently labeled. Each label shall show the manufacturer's name "Grundfos," company logo, appropriate model number, flow rate in unit of gallons per minute, and head where visible after installation.

DISCUSSION

These products have been tested by Underwriters Laboratory, Inc. and comply with applicable requirements in ANSI/NSF Standard 61 (Drinking Water System Components-Health Effects).

Current production samples of these domestic water booster pumps were examined by the Mechanical Testing Laboratory. The materials and construction are equivalent to that prescribed by the Los Angeles Municipal Code in quality, strength, effectiveness, durability and safety.

For this General Approval to be valid on any individual construction project in the City of Los Angeles, an engineer or inspector of the Department of Building and Safety must make a determination that all conditions of the General Approval required to provide equivalency have been met in the case of each construction project under consideration.

This approval is granted under Section 94.101.3, 94.301.0, 94.311.8, 94.313.0, 94.603.0, 94.604.0, 94.608.0, and 94.609.0 of the Los Angeles Plumbing Code(LAPC), 2008 Edition.

Approved by:

Grundfos Pumps Corporation
RE: Domestic Water Booster Pump Systems

Thomas Liu, Director
Mechanical Testing Laboratory
Engineering Bureau

Prepared by: Yogen R. Thakar
Mechanical Testing Laboratory

RR-5611:Grundfos Pumps Corporation

Domestic Water Booster Pump System Approved Models

A. Table-1: BoosterpaQ Hydro MPC Type Key

	Hydro MPC	ED	2	CRE32-3	1	CR32-3	3x460V 60Hz
Type Range							
Subgroups: Pumps with integrated VFD: -E, -ED, -ES Pumps with panel mounted VFD: -EF, -EDF, -F Fixed Speed pumps (start/stop): -S							
Number of pumps with integrated VFD and pump type							
Number of standard pumps (fixed speed motor) and pump type							
Supply Voltage and Frequency							

Note: The Grundfos BoosterpaQ nameplate is located on the stainless steel base of the system. The model number of the system is described on the nameplate next to the word ‘TYPE.’

The model number will always begin with a letter configuration such as ME, MF, MPC-ED, etc., followed by the number and model of pumps and the power supply.

Example: ME 4CRE32-5, 3x460 60 Hz

The table on the following page describes all of the variations in model numbers for the Grundfos BoosterpaQ systems.

B. Table-2: Grundfos BoosterpaQ Model Numbers

1. Systems with Integrated VFD motors															
System Type	# of Pumps	Pump Model			# of Full Size Impellers	# of Red. Dia. Impellers	Power Supply								
ME MPC-E	1-8	CRE	1	-	1-27	-	1-2	1X230, 60 Hz 3X208, 60 Hz 3X230, 60 Hz 3X460, 60 Hz							
		CRI	3												
		CRN	5												
		E	10												
			15												
			20												
			32												
			45												
			64												
2. Systems with External VFD Drives and/or Fixed															
System Type	# of Pumps	Pump Model			# of Full Size Impellers	# of Red. Dia. Impellers	Power Supply								
MF MPC-F MPC-EF MPC-EDF MS MPC-S	1-8	CR	1	-	1-27	-	1-2	1X230, 60 Hz 3X208, 60 Hz 3X230, 60 Hz 3X460, 60 Hz							
		CRI	3												
		CRN	5												
			10												
			15												
			20												
			32												
			45												
			64												
			90												
3. Systems with Integrated VFD Motors and Fixed															
System Type	# of Integrated VFD	Pump Model			# of Full Size Impellers	# of Red. Dia. Impellers	# of Fixed Speed Pumps	Pump Model		# of Full Size Impellers	# of Red. Dia. Impellers	Power Supply			
MPC-ED MPC-ES	1-2	CRE	1	-	1-27	-	1-2	1-6	CR	1	-	1-27	-	1-2	1X230, 60 Hz 3X208, 60 Hz
		CRI	3						CRI	3					3X230, 60 Hz 3X460, 60 Hz
		CRN	5						CRN	5					
		E	10							10					
			15							15					
			20							20					
			32							32					
			45							45					
			64							64					
										90					