ARMSTRONG

DESIGN ENVELOPE 6800Q | TRIPLEX BOOSTER PACKAGES | (3 DUTY PUMPS OR 2 DUTY + 1 STANDBY PUMP) | SUBMITTAL

File No: 100.612IN
Date: MAY 31, 2024
Supersedes: NEW
Date: NEW

Job: _____ Representative: _____

_____ Order No: _____ Date: _____

Contractor: _____ Submitted by: _____ Date: _____

Engineer: _____ Approved by: _____ Date: _____

BOOSTER PACKAGE DESIGN DATA

Tag: _____ Model: _____

Operation: ☐ 3 Duty ☐ 2 Duty + 1 Standby

Total Flow: _____ L/s (m^3/hr) Flow per Pump: _____L/s (m^3/hr)

Suction (Supply) Pressure: _____m (bar)

NPSHr at Design: _____ m (bar)

Boost Pressure (Head): _____ m (bar)

Discharge Pressure:_____m (bar)

Total Installed Power: _____kW

Absorbed Power at Design: _____kW

Efficiency at Design:_____%

Liquid: ☐ Water Max Temperature: 65°C ± 2 (150°F ± 4)

☐ Other: _____ Max Temperature: _____°F (°C)

Specific Gravity: _____ Viscosity: _____ lbf*s/ft^2 (Pa*s)

NOTE: Test tolerance according to ISO 9906 Grade 2B
±8% on measured flow and ±5% on measured head

BOOSTER PACKAGE CONSTRUCTION DATA

Pump Type: 4700Q (Vertical Multi Stage)

Pump Construction: Full Stainless Steel

Piping Material: 304 Stainless Steel

Base & Stanchion Material: 304 Stainless Steel

Suction Valve Type:
☐ Ball Valve (less than DN50)
☐ Butterfly Valve (greater than or equal to DN50)

Discharge Valve Type:
☐ Check (NRV) + Ball Valve (less than DN50)
☐ Check (NRV) + Butterfly Valve (greater than or equal to DN50)

Suction Connection Orientation: ☐ Right ☐ Left

Discharge Connection Orientation: ☐ Right ☐ Left

System Connection Type: Flanged

Suction Flange Type: PN16

Discharge Flange Type: ☐ PN16
☐ PN25

MOTOR DATA

Motor Type (Efficiency): ☐ Induction (IE3)
☐ Permanent Magnet (IE5)

Voltage: ☐ 06: 400-415/3/50 ☐ 03: 380/3/50
☐ 05: 400/3/50 ☐ 08:440/3/50

Phase: 3 **Frequency:** 60 Hz **Enclosure:** TEFC

NOTE:
- Booster electrical supply is 50Hz

DRIVE DATA

Drive Type: ☐ VFD (Induction Motors)
☐ ECM (Permanent Magnet Motors)

Enclosure: IP55

EMI/RFI Control: Integrated filter designed to meet EN61800-3

Harmonic Suppression: Integrated DC link reactors (in all VFDs and 112 frame Permanent Magnet Motors)

Cooling: Fan-cooled through back channel

Ambient temperature:

-10°C to +45°C (-14°F to +113°F): Permanent Magnet models

-10°C to +40°C (-14°F to +104°F): IVS models up to 1000m (3280 ft) above sea level

CONTROL PANEL DATA

CE labelled
IP 54 Enclosure
PLC Controlled
4.3" Color Touchscreen
Door Interlocked Main Disconnect
MPCB (motor protection circuit breaker)
Power on Indication
Motor Run Indication
Virtual Hand-Off-Auto (HOA) for each pump
Flash Memory Storage
Modbus RTU serial communication

CONTROLS CAPABILITIES

Safety Features:

- High Suction Pressure Shutdown
- Low Suction Shutdown w/ Auto Restart
- End of Curve Protection
- Soft Fill Mode
- Emergency Power Mode

Conformance to ASHRAE 90.1 Section 10.4:

- No-flow shutdown
- Pressure setback mode

Convenience Features:

- Field Adjustable Set Points, Alarms and Timers
- Alternate Setpoints
- Auto Alternation of Pumps
- Minimal Run Timer
- Pump On Delay Timer
- Pump Switch Over (in case of lead pump failure)
- No-flow pressure optimization

OPTIONAL

BMS Communication Protocol: ☐ BACnet/IP
☐ BACnet MS/TP

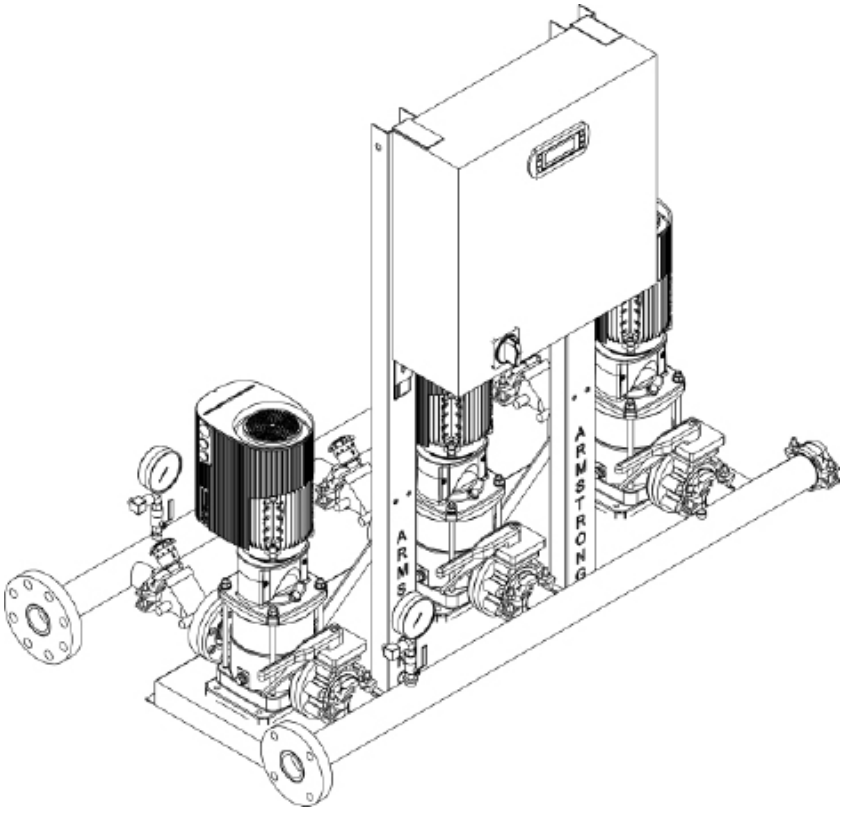
☐ Low Suction Level Shutdown

☐ Float Switch

☐ Remote Pressure Transducer

☐ Redundant Pressure Transducer

☐ Certified Test Report



DESIGN ENVELOPE (PERMANENT MAGNET) CAPABILITY DATA

DESIGN ENVELOPE MODEL		VMS MODEL	POWER PER PUMP (kw)	MAX WORKING PRESSURE (bar)	MAX FLOW L/s (m³/hr)		MAX HEAD m (bar)	BEP EFFICIENCY (%)	MOTOR FRAME	DRIVER TYPE
DUTY-DUTY	DUTY-STANDBY				DUTY-DUTY	DUTY-STANDBY				
QPR-303040-XXD	QPR-203040-XXS	QVMS 03:04A	0.55	16	4.3 (15.4)	2.9 (10.3)	14.3 (1.4)	50.4%	90S	DEPM
QPR-303050-XXD	QPR-203050-XXS	QVMS 03:05A	0.75	16	4.3 (15.4)	2.9 (10.3)	17.9 (1.8)	50.4%	90S	DEPM
QPR-303080-XXD	QPR-203080-XXS	QVMS 03:08A	1.1	16	4.3 (15.4)	2.9 (10.3)	28.6 (2.8)	50.4%	90S	DEPM
QPR-303110-XXD	QPR-203110-XXS	QVMS 03:11A	1.5	16	4.3 (15.4)	2.9 (10.3)	39.3 (3.9)	50.4%	90S	DEPM
QPR-303170-XXD	QPR-203170-XXS	QVMS 03:17A	2.2	25	4.3 (15.4)	2.9 (10.3)	60.8 (6)	50.4%	90	DEPM
QPR-303230-XXD	QPR-203230-XXS	QVMS 03:23A	3	25	4.3 (15.4)	2.9 (10.3)	82.3 (8.1)	50.4%	90	DEPM
QPR-303250-XXD	QPR-203250-XXS	QVMS 03:25A	4	25	4.3 (15.4)	2.9 (10.3)	89.4 (8.8)	50.4%	90	DEPM
QPR-305020-XXD	QPR-205020-XXS	QVMS 05:02A	0.75	16	7.7 (27.8)	5.1 (18.5)	10.8 (1.1)	60.0%	90S	DEPM
QPR-305040-XXD	QPR-205040-XXS	QVMS 05:04A	1.1	16	7.4 (26.5)	4.9 (17.7)	19.6 (1.9)	60.0%	90S	DEPM
QPR-305050-XXD	QPR-205050-XXS	QVMS 05:05A	1.5	16	7.7 (27.7)	5.1 (18.5)	26.8 (2.6)	60.0%	90S	DEPM
QPR-305080-XXD	QPR-205080-XXS	QVMS 05:08A	2.2	16	7.4 (26.5)	4.9 (17.7)	39.3 (3.8)	60.0%	90	DEPM
QPR-305100-XXD	QPR-205100-XXS	QVMS 05:10A	3	16	7.7 (27.7)	5.1 (18.5)	53.5 (5.2)	60.0%	90	DEPM
QPR-305160-XXD	QPR-205160-XXS	QVMS 05:16A	4	25	7 (25.3)	4.7 (16.9)	71.4 (7)	60.0%	90	DEPM
QPR-305200-XXD	QPR-205200-XXS	QVMS 05:20A	5.5	25	7.4 (26.5)	4.9 (17.7)	98.2 (9.6)	60.0%	90	DEPM
QPR-310021-XXD	QPR-210021-XXS	QVMS 10:02-1A	0.75	16	12 (43.2)	8 (28.8)	10.8 (1.1)	62.7%	90S	DEPM
QPR-310020-XXD	QPR-210020-XXS	QVMS 10:02A	1.5	16	12 (43.2)	8 (28.8)	21.7 (2.1)	62.7%	90S	DEPM
QPR-310030-XXD	QPR-210030-XXS	QVMS 10:03A	2.2	16	12 (43.2)	8 (28.8)	32.5 (3.2)	62.7%	90	DEPM
QPR-310050-XXD	QPR-210050-XXS	QVMS 10:05A	3	16	11.2 (40.5)	7.5 (27)	47.5 (4.7)	62.7%	90	DEPM
QPR-310060-XXD	QPR-210060-XXS	QVMS 10:06A	4	16	11.8 (42.6)	7.9 (28.4)	63.3 (6.2)	62.7%	90	DEPM
QPR-310080-XXD	QPR-210080-XXS	QVMS 10:08A	5.5	16	12 (43.2)	8 (28.8)	86.7 (8.5)	62.7%	90	DEPM
QPR-310120-XXD	QPR-210120-XXS	QVMS 10:12A	7.5	25	11.5 (41.3)	7.6 (27.5)	118.8 (11.6)	62.7%	112	DEPM
QPR-310140-XXD	QPR-210140-XXS	QVMS 10:14A	11	25	12 (43.2)	8 (28.8)	151.7 (14.9)	62.7%	112	DEPM
QPR-315021-XXD	QPR-215021-XXS	QVMS 15:02-1A	2.2	16	22.3 (80.2)	14.9 (53.5)	12.7 (1.2)	64.4%	90	DEPM
QPR-315020-XXD	QPR-215020-XXS	QVMS 15:02A	4	16	22.3 (80.2)	14.9 (53.5)	25.3 (2.5)	64.4%	90	DEPM
QPR-315030-XXD	QPR-215030-XXS	QVMS 15:03A	5.5	16	22.3 (80.2)	14.9 (53.5)	38 (3.7)	64.4%	90	DEPM
QPR-315040-XXD	QPR-215040-XXS	QVMS 15:04A	7.5	16	22.3 (80.2)	14.9 (53.5)	50.6 (5)	64.4%	112	DEPM
QPR-315060-XXD	QPR-215060-XXS	QVMS 15:06A	11	16	22.3 (80.2)	14.9 (53.5)	76 (7.4)	64.4%	112	DEPM
QVR-315080-XXD	QVR-215080-XXS	QVMS 15:08A	15	25	21.9 (78.7)	14.6 (52.4)	97.4 (9.5)	64.4%	160M	DE IVS
QVR-315100-XXD	QVR-215100-XXS	QVMS 15:10A	18.5	25	21.9 (78.7)	14.6 (52.4)	121.7 (11.9)	64.4%	160L	DE IVS
QPR-320010-XXD	QPR-220010-XXS	QVMS 20:01A	2.2	16	26.7 (96)	17.8 (64)	14 (1.4)	63.0%	90	DEPM
QPR-320020-XXD	QPR-220020-XXS	QVMS 20:02A	4	16	25.4 (91.5)	17 (61)	25.5 (2.5)	63.0%	90	DEPM
QPR-320030-XXD	QPR-220030-XXS	QVMS 20:03A	5.5	16	24.3 (87.6)	16.2 (58.4)	35.1 (3.4)	63.0%	90	DEPM
QPR-320040-XXD	QPR-220040-XXS	QVMS 20:04A	7.5	16	24.6 (88.6)	16.4 (59.1)	47.8 (4.7)	63.0%	112	DEPM
QPR-320060-XXD	QPR-220060-XXS	QVMS 20:06A	11	25	24.3 (87.6)	16.2 (58.4)	70.1 (6.9)	63.0%	112	DEPM
QVR-320080-XXD	QVR-220080-XXS	QVMS 20:08A	15	25	24.9 (89.5)	16.6 (59.7)	97.5 (9.6)	63.0%	160M	DE IVS
QVR-320100-XXD	QVR-220100-XXS	QVMS 20:10A	18.5	25	24.7 (88.9)	16.5 (59.3)	120.3 (11.8)	63.0%	160L	DE IVS

Notes:

1 -XX(D or S) in the model number represents booster voltage.
400-415/3/50: -06(D or S)
380/3/50: -03(D or S)
400/3/50: -05(D or S)
440/3/50: -08(D or S)

DESIGN ENVELOPE (PERMANENT MAGNET) CAPABILITY DATA

DESIGN ENVELOPE MODEL		VMS MODEL	POWER PER PUMP (kw)	MAX WORKING PRESSURE (bar)	MAX FLOW L/s (m³/hr)		MAX HEAD m (bar)	BEP EFFICIENCY (%)	MOTOR FRAME	DRIVER TYPE
DUTY-DUTY	DUTY-STANDBY				DUTY-DUTY	DUTY-STANDBY				
QPR-332011-XXD	QPR-232011-XXS	QVMS 32:01-1A	3	16	41.1 (148.1)	27.4 (98.7)	8.3 (0.8)	69.0%	90	DEPM
QPR-332010-XXD	QPR-232010-XXS	QVMS 32:01A	4	16	41.1 (148.1)	27.4 (98.7)	16 (1.6)	71.6%	90	DEPM
QPR-332022-XXD	QPR-232022-XXS	QVMS 32:02-2A	5.5	16	41.1 (148.1)	27.4 (98.7)	16.7 (1.6)	69.0%	90	DEPM
QPR-332032-XXD	QPR-232032-XXS	QVMS 32:03-2A	7.5	16	41.1 (148.1)	27.4 (98.7)	32.8 (3.2)	71.6%	112	DEPM
QPR-332042-XXD	QPR-232042-XXS	QVMS 32:04-2A	11	16	41.1 (148.1)	27.4 (98.7)	48.9 (4.8)	71.6%	112	DEPM
QVR-332052-XXD	QVR-232052-XXS	QVMS 32:05-2A	15	16	40.3 (145.2)	26.9 (96.8)	62.5 (6.1)	71.6%	160M	DE IVS
QVR-332060-XXD	QVR-232060-XXS	QVMS 32:06A	18.5	25	40.2 (144.9)	26.8 (96.6)	92.3 (9.1)	71.6%	160L	DE IVS
QVR-332082-XXD	QVR-232082-XXS	QVMS 32:08-2A	22	25	40.4 (145.4)	26.9 (96.9)	109.2 (10.7)	71.6%	180M	DE IVS
QVR-332102-XXD	QVR-232102-XXS	QVMS 32:10-2A	30	25	40.6 (146.1)	27 (97.4)	141.3 (13.9)	71.6%	200L	DE IVS
QPR-342011-XXD	QPR-242011-XXS	QVMS 42:01-1A	5.5	16	55.7 (200.6)	37.1 (133.7)	17.3 (1.7)	70.6%	90	DEPM
QPR-342010-XXD	QPR-242010-XXS	QVMS 42:01A	7.5	16	55.7 (200.6)	37.1 (133.7)	20.7 (2)	70.6%	112	DEPM
QPR-342022-XXD	QPR-242022-XXS	QVMS 42:02-2A	11	16	55.7 (200.6)	37.1 (133.7)	34.7 (3.4)	70.6%	112	DEPM
QVR-342020-XXD	QVR-242020-XXS	QVMS 42:02A	15	16	54.6 (196.7)	36.4 (131.1)	39.8 (3.9)	70.6%	160M	DE IVS
QVR-342030-XXD	QVR-242030-XXS	QVMS 42:03A	18.5	16	54.6 (196.7)	36.4 (131.1)	59.8 (5.9)	70.6%	160L	DE IVS
QVR-342042-XXD	QVR-242042-XXS	QVMS 42:04-2A	22	25	53.9 (193.9)	35.9 (129.3)	71.7 (7)	70.6%	180M	DE IVS
QVR-342050-XXD	QVR-242050-XXS	QVMS 42:05A	30	25	54.1 (194.8)	36.1 (129.9)	97.7 (9.6)	70.6%	200L	DE IVS
QVR-342060-XXD	QVR-242060-XXS	QVMS 42:06A	37	25	54.9 (197.5)	36.6 (131.7)	120.5 (11.8)	70.6%	200L	DE IVS
QVR-342070-XXD	QVR-242070-XXS	QVMS 42:07A	45	25	54.9 (197.8)	36.6 (131.9)	141 (13.8)	70.6%	225M/S	DE IVS
QPR-365011-XXD	QPR-265011-XXS	QVMS 65:01-1A	7.5	16	76.9 (276.8)	51.3 (184.5)	15.9 (1.6)	67.0%	112	DEPM
QPR-365010-XXD	QPR-265010-XXS	QVMS 65:01A	11	16	77.1 (277.7)	51.4 (185.1)	25.1 (2.5)	68.3%	112	DEPM
QVR-365022-XXD	QVR-265022-XXS	QVMS 65:02-2A	15	16	75.4 (271.4)	50.3 (180.9)	30.6 (3)	67.0%	160M	DE IVS
QVR-365020-XXD	QVR-265020-XXS	QVMS 65:02AE	18.5	16	74.9 (269.5)	49.9 (179.7)	47.2 (4.6)	68.3%	160L	DE IVS
QVR-365032-XXD	QVR-265032-XXS	QVMS 65:03-2A	22	16	75.8 (272.9)	50.5 (182)	55.4 (5.4)	68.2%	180M	DE IVS
QVR-365030-XXD	QVR-265030-XXS	QVMS 65:03A	30	16	76.1 (273.9)	50.7 (182.6)	73.1 (7.2)	68.3%	200L	DE IVS
QVR-365042-XXD	QVR-265042-XXS	QVMS 65:04-2A	37	16	75.8 (272.9)	50.5 (182)	79.9 (7.8)	68.2%	200L	DE IVS
QVR-365052-XXD	QVR-265052-XXS	QVMS 65:05-2A	45	16	75.8 (272.9)	50.5 (182)	104.5 (10.2)	68.2%	225M/S	DE IVS
QPR-385011-XXD	QPR-285011-XXS	QVMS 85:01-1A	11	16	102.8 (370.3)	68.6 (246.8)	8.2 (0.8)	65.2%	112	DEPM
QVR-385010-XXD	QVR-285010-XXS	QVMS 85:01A	15	16	100.6 (362.2)	67.1 (241.5)	19.4 (1.9)	66.4%	160M	DE IVS
QVR-385022-XXD	QVR-285022-XXS	QVMS 85:02-2A	18.5	16	100.8 (363.1)	67.2 (242)	15.8 (1.5)	65.3%	160L	DE IVS
QVR-385021-XXD	QVR-285021-XXS	QVMS 85:02-1A	22	16	101.2 (364.2)	67.5 (242.8)	27.8 (2.7)	64.8%	180M	DE IVS
QVR-385020-XXD	QVR-285020-XXS	QVMS 85:02A	30	16	101.2 (364.2)	67.5 (242.8)	39.2 (3.8)	66.4%	200L	DE IVS
QVR-385031-XXD	QVR-285031-XXS	QVMS 85:03-1A	37	16	101.2 (364.2)	67.5 (242.8)	47.5 (4.7)	64.8%	200L	DE IVS
QVR-385042-XXD	QVR-285042-XXS	QVMS 85:04-2A	45	16	101.4 (365.2)	67.6 (243.4)	54.9 (5.4)	65.1%	225M/S	DE IVS

Notes:

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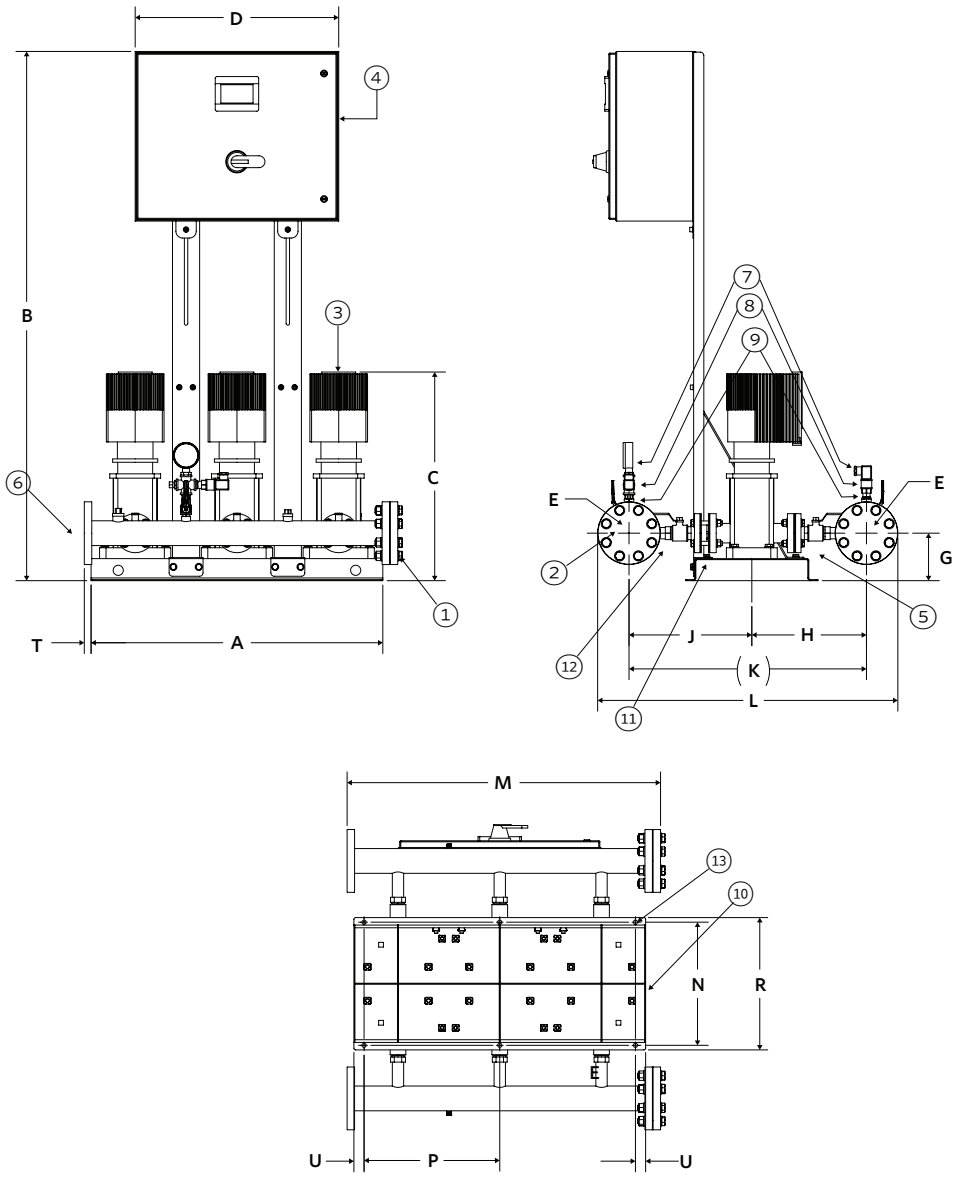
380/3/50: -03(D or S)
400/3/50: -05(D or S)
440/3/50: -08(D or S)



Triplex Booster Package

ITEM	DESCRIPTION
①	304 Stainless steel suction header
②	304 Stainless steel discharge header
③	Stainless Steel pump with integrated controls (IVS or DEPM)
④	Control Panel with PLC & Full Colour Touch HMI
⑤	Suction isolation valve
⑥	Flanged connections
⑦	Pressure gauge
⑧	Pressure transducer
⑨	Pressure gauge isolation valve
⑩	Stainless steel base and panel support
⑪	Discharge check (NRV) valve
⑫	Discharge isolation valve
⑬	6×12.50 bolting /AV mounting holes

Notes:

1. Standard right hand orientation illustrated
2. All pumps are the same

DESIGN ENVELOPE MODEL (DUTY-DUTY)	DESIGN ENVELOPE MODEL (DUTY-STANDBY)	VMS MODEL	A*	B*	C**	D*	HEADER FLANGE RATING	HEADER SIZE E	G*	H**	J**	K*	L*	M*	N**	P**	R**	T*	U*	WEIGHT kg
QPR-303040-XXD	QPR-203040-XXS	QVMS 03:04A	860.0	1560.0	615.0	600.0	PN16	DN 65	140.0	338.0	362.0	700.0	885.0	924.0	363.0	400.0	390.0	20.0	30.0	232
QPR-303050-XXD	QPR-203050-XXS	QVMS 03:05A	860.0	1560.0	643.0	600.0	PN16	DN 65	140.0	338.0	362.0	700.0	885.0	924.0	363.0	400.0	390.0	20.0	30.0	241
QPR-303080-XXD	QPR-203080-XXS	QVMS 03:08A	860.0	1560.0	691.0	600.0	PN16	DN 65	140.0	338.0	362.0	700.0	885.0	924.0	363.0	400.0	390.0	20.0	30.0	247
QPR-303110-XXD	QPR-203110-XXS	QVMS 03:11A	860.0	1560.0	761.0	600.0	PN16	DN 65	140.0	338.0	362.0	700.0	885.0	924.0	363.0	400.0	390.0	20.0	30.0	274
QPR-303170-XXD	QPR-203170-XXS	QVMS 03:17A	860.0	1560.0	938.0	600.0	PN25	DN 65	140.0	339.0	368.0	700.0	885.0	924.0	363.0	400.0	390.0	20.0	30.0	307
QPR-303230-XXD	QPR-203230-XXS	QVMS 03:23A	860.0	1560.0	1056.0	600.0	PN25	DN 65	140.0	339.0	368.0	700.0	885.0	924.0	363.0	400.0	390.0	20.0	30.0	337
QPR-303250-XXD	QPR-203250-XXS	QVMS03:25A	860.0	1560.0	1092.0	600.0	PN25	DN 65	140.0	339.0	368.0	700.0	885.0	924.0	363.0	400.0	390.0	20.0	30.0	365
QPR-305020-XXD	QPR-205020-XXS	QVMS 05:02A	860.0	1560.0	587.0	600.0	PN16	DN 65	140.0	341.5	371.5	713.0	898.0	924.0	363.0	400.0	390.0	20.0	30.0	235
QPR-305040-XXD	QPR-205040-XXS	QVMS 05:04A	860.0	1560.0	651.0	600.0	PN16	DN 65	140.0	341.5	371.5	713.0	898.0	924.0	363.0	400.0	390.0	20.0	30.0	241
QPR-305050-XXD	QPR-205050-XXS	QVMS 05:05A	860.0	1560.0	678.0	600.0	PN16	DN 65	140.0	341.5	371.5	713.0	898.0	924.0	363.0	400.0	390.0	20.0	30.0	262
QPR-305080-XXD	QPR-205080-XXS	QVMS 05:08A	860.0	1560.0	838.0	600.0	PN16	DN 65	140.0	341.5	371.5	713.0	898.0	924.0	363.0	400.0	390.0	20.0	30.0	289
QPR-305100-XXD	QPR-205100-XXS	QVMS 05:10A	860.0	1560.0	892.0	600.0	PN16	DN 65	140.0	341.5	371.5	713.0	898.0	924.0	363.0	400.0	390.0	20.0	30.0	322
QPR-305160-XXD	QPR-205160-XXS	QVMS 05:16A	860.0	1560.0	1054.0	600.0	PN25	DN 65	140.0	341.5	371.5	713.0	898.0	924.0	363.0	400.0	390.0	20.0	30.0	355
QPR-305200-XXD	QPR-205200-XXS	QVMS 05:20A	860.0	1560.0	1172.0	600.0	PN25	DN 65	140.0	341.5	371.5	713.0	898.0	924.0	363.0	400.0	390.0	20.0	30.0	415
QPR-310021-XXD	QPR-210021-XXS	QVMS 10:02-1A	1150.0	1560.0	740.9	600.0	PN16	DN 100	145.0	397.5	430.5	828.0	1048.0	1222.0	427.0	525.0	450.0	25.0	50.0	281
QPR-310020-XXD	QPR-210020-XXS	QVMS 10:02A	1150.0	1560.0	766.9	600.0	PN16	DN 100	145.0	397.5	430.5	828.0	1048.0	1222.0	427.0	525.0	450.0	25.0	50.0	305
QPR-310030-XXD	QPR-210030-XXS	QVMS 10:03A	1150.0	1560.0	793.9	600.0	PN16	DN 100	145.0	397.5	430.5	828.0	1048.0	1222.0	427.0	525.0	450.0	25.0	50.0	329
QPR-310050-XXD	QPR-210050-XXS	QVMS 10:05A	1150.0	1560.0	846.9	600.0	PN16	DN 100	145.0	397.5	430.5	828.0	1048.0	1222.0	427.0	525.0	450.0	25.0	50.0	356
QPR-310060-XXD	QPR-210060-XXS	QVMS 10:06A	1150.0	1560.0	899.9	600.0	PN16	DN 100	145.0	397.5	430.5	828.0	1048.0	1222.0	427.0	525.0	450.0	25.0	50.0	383
QPR-310080-XXD	QPR-210080-XXS	QVMS 10:08A	1150.0	1560.0	1004.1	600.0	PN16	DN 100	145.0	397.5	430.5	828.0	1048.0	1222.0	427.0	525.0	450.0	25.0	50.0	433
QPR-310120-XXD	QPR-210120-XXS	QVMS 10:12A	1150.0	1560.0	1071.1	600.0	PN25	DN 100	145.0	397.5	430.5	828.0	1063.0	1226.0	427.0	525.0	450.0	25.0	50.0	499
QPR-310140-XXD	QPR-210140-XXS	QVMS 10:14A	1150.0	1560.0	1168.1	600.0	PN25	DN 100	145.0	397.5	430.5	828.0	1063.0	1226.0	427.0	525.0	450.0	25.0	50.0	715
QPR-315021-XXD	QPR-215021-XXS	QVMS 15:02-1A	1150.0	1560.0	787.0	600.0	PN16	DN 100	155.0	390.0	527.2	917.2	1137.2	1222.0	427.0	525.0	450.0	25.0	50.0	350
QPR-315020-XXD	QPR-215020-XXS	QVMS 15:02A	1150.0	1560.0	797.0	600.0	PN16	DN 100	155.0	390.0	527.2	917.2	1137.2	1222.0	427.0	525.0	450.0	25.0	50.0	395
QPR-315030-XXD	QPR-215030-XXS	QVMS 15:03A	1150.0	1560.0	862.0	600.0	PN16	DN 100	155.0	390.0	527.2	917.2	1137.2	1222.0	427.0	525.0	450.0	25.0	50.0	441
QPR-315040-XXD	QPR-215040-XXS	QVMS 15:04A	1150.0	1560.0	985.0	600.0	PN16	DN 100	155.0	390.0	527.2	917.2	1137.2	1222.0	427.0	525.0	450.0	25.0	50.0	495
QPR-315060-XXD	QPR-215060-XXS	QVMS 15:06A	1150.0	1560.0	1163.0	600.0	PN16	DN 100	155.0	390.0	527.2	917.2	1137.2	1222.0	427.0	525.0	450.0	25.0	50.0	734
QVR-315080-XXD	QVR-215080-XXS	QVMS 15:08A	1150.0	1560.0	1400.0	600.0	PN25	DN 100	155.0	390.0	527.2	917.2	1152.2	1226.0	567.0	525.0	590.0	25.0	50.0	1030
QVR-315100-XXD	QVR-215100-XXS	QVMS 15:10A	1150.0	1560.0	1490.0	600.0	PN25	DN 100	155.0	390.0	527.2	917.2	1152.2	1226.0	567.0	525.0	590.0	25.0	50.0	1181
QPR-320010-XXD	QPR-220010-XXS	QVMS 20:01A	1150.0	1560.0	787.0	600.0	PN16	DN 125	155.0	390.0	527.2	917.2	1167.2	1224.0	427.0	525.0	450.0	25.0	50.0	347
QPR-320020-XXD	QPR-220020-XXS	QVMS 20:02A	1150.0	1560.0	797.0	600.0	PN16	DN 125	155.0	390.0	527.2	917.2	1167.2	1224.0	427.0	525.0	450.0	25.0	50.0	395
QPR-320030-XXD	QPR-220030-XXS	QVMS 20:03A	1150.0	1560.0	862.0	600.0	PN16	DN 125	155.0	390.0	527.2	917.2	1167.2	1224.0	427.0	525.0	450.0	25.0	50.0	444
QPR-320040-XXD	QPR-220040-XXS	QVMS 20:04A	1150.0	1560.0	985.0	600.0	PN16	DN 125	155.0	390.0	527.2	917.2	1167.2	1224.0	427.0	525.0	450.0	25.0	50.0	507
QPR-320060-XXD	QPR-220060-XXS	QVMS 20:06A	1150.0	1560.0	1157.0	600.0	PN 25	DN 125	155.0	390.0	527.2	917.2	1187.2	1228.0	427.0	525.0	450.0	25.0	50.0	734
QVR-320080-XXD	QVR-220080-XXS	QVMS 20:08A	1150.0	1560.0	1400.0	600.0	PN25	DN 125	155.0	390.0	527.2	917.2	1187.2	1228.0	567.0	525.0	590.0	25.0	50.0	1030
QVR-320100-XXD	QVR-220100-XXS	QVMS 20:10A	1150.0	1560.0	1490.0	600.0	PN25	DN 125	155.0	390.0	527.2	917.2	1187.2	1228.0	567.0	525.0	590.0	25.0	50.0	1184

Note:

1 Tolerances are

* ±25.40mm

** ±12.70mm

*** ±6.35mm

2 Dimension are in mm.

3 -XX(D or S) in the model number represents booster voltage.

400-415/3/50: -06(D or S)

380/3/50: -03(D or S)

400/3/50: -05(D or S)

440/3/50: -08(D or S)

DESIGN ENVELOPE MODEL (DUTY-DUTY)	DESIGN ENVELOPE MODEL (DUTY-STANDBY)	VMS MODEL	A*	B*	C**	D*	HEADER FLANGE RATING	HEADER SIZE E	G*	H**	J**	K*	L*	M*	N**	P**	R**	T*	U*	WEIGHT kg
QPR-332011-XXD	QPR-232011-XXS	QVMS 32:01-1A	1300.0	1560.0	895.0	600.0	PN16	DN 150	170.0	395.0	538.2	933.2	1218.2	1372.0	474.0	600.0	500.0	24.0	50.0	448
QPR-332010-XXD	QPR-232010-XXS	QVMS 32:01A	1300.0	1560.0	895.0	600.0	PN16	DN 150	170.0	395.0	538.2	933.2	1218.2	1372.0	474.0	600.0	500.0	24.0	50.0	475
QPR-332022-XXD	QPR-232022-XXS	QVMS 32:02-2A	1300.0	1560.0	965.0	600.0	PN16	DN 150	170.0	395.0	538.2	933.2	1218.2	1372.0	474.0	600.0	500.0	24.0	50.0	527
QPR-332032-XXD	QPR-232032-XXS	QVMS 32:03-2A	1300.0	1560.0	1113.0	600.0	PN16	DN 150	170.0	395.0	538.2	933.2	1218.2	1372.0	474.0	600.0	500.0	24.0	50.0	587
QPR-332042-XXD	QPR-232042-XXS	QVMS 32:04-2A	1300.0	1560.0	1288.0	600.0	PN16	DN 150	170.0	395.0	538.2	933.2	1218.2	1372.0	474.0	600.0	500.0	24.0	50.0	817
QVR-332052-XXD	QVR-232052-XXS	QVMS 32:05-2A	1300.0	1560.0	1505.0	600.0	PN16	DN 150	170.0	395.0	538.2	933.2	1233.2	1378.0	638.0	600.0	664.0	24.0	50.0	1120
QVR-332060-XXD	QVR-232060-XXS	QVMS 32:06A	1300.0	1560.0	1575.0	600.0	PN25	DN 150	170.0	395.0	538.2	933.2	1233.2	1378.0	638.0	600.0	664.0	24.0	50.0	1270
QVR-332082-XXD	QVR-232082-XXS	QVMS 32:08-2A	1300.0	1560.0	1849.0	600.0	PN25	DN 150	170.0	395.0	538.2	933.2	1233.2	1378.0	638.0	600.0	664.0	24.0	50.0	1679
QVR-332102-XXD	QVR-232102-XXS	QVMS 32:10-2A	1300.0	1560.0	2044.0	600.0	PN25	DN 150	170.0	395.0	538.2	933.2	1233.2	1378.0	638.0	600.0	664.0	24.0	50.0	1886
QPR-342011-XXD	QPR-242011-XXS	QVMS 42:01-1A	1380.0	1560.0	951.0	600.0	PN16	DN 200	205.0	465.5	638.7	1104.2	1444.2	1526.0	607.0	640.0	630.0	60.0	50.0	608
QPR-342010-XXD	QPR-242010-XXS	QVMS 42:01A	1380.0	1560.0	951.0	600.0	PN16	DN 200	205.0	465.5	638.7	1104.2	1444.2	1526.0	607.0	640.0	630.0	60.0	50.0	656
QPR-342022-XXD	QPR-242022-XXS	QVMS 42:02-2A	1380.0	1560.0	1216.0	600.0	PN16	DN 200	205.0	465.5	638.7	1104.2	1444.2	1526.0	607.0	640.0	630.0	60.0	50.0	886
QVR-342020-XXD	QVR-242020-XXS	QVMS 42:02A	1380.0	1560.0	1363.0	600.0	PN16	DN 200	205.0	465.5	638.7	1104.2	1444.2	1526.0	607.0	640.0	630.0	60.0	50.0	1168
QVR-342030-XXD	QVR-242030-XXS	QVMS 42:03A	1380.0	1560.0	1443.0	600.0	PN16	DN 200	205.0	465.5	638.7	1104.2	1444.2	1526.0	607.0	640.0	630.0	60.0	50.0	1318
QVR-342042-XXD	QVR-242042-XXS	QVMS 42:04-2A	1380.0	1560.0	1657.0	600.0	PN25	DN 200	205.0	465.5	638.7	1104.2	1464.2	1532.0	607.0	640.0	630.0	60.0	50.0	1549
QVR-342050-XXD	QVR-242050-XXS	QVMS 42:05A	1380.0	1560.0	1792.0	600.0	PN25	DN 200	205.0	465.5	638.7	1104.2	1464.2	1532.0	755.0	640.0	778.0	60.0	50.0	1909
QVR-342060-XXD	QVR-242060-XXS	QVMS 42:06A	1380.0	1560.0	1858.0	600.0	PN25	DN 200	205.0	465.5	638.7	1104.2	1464.2	1532.0	755.0	640.0	778.0	60.0	50.0	2056
QVR-342070-XXD	QVR-242070-XXS	QVMS 42:07A	1380.0	1560.0	1959.0	600.0	PN25	DN 200	205.0	465.5	638.7	1104.2	1464.2	1532.0	755.0	640.0	778.0	60.0	50.0	2722
QPR-365011-XXD	QPR-265011-XXS	QVMS 65:01-1A	1380.0	1560.0	1029.0	600.0	PN16	DN 200	205.0	467.0	690.2	1157.2	1497.2	1526.0	607.0	640.0	630.0	60.0	50.0	675
QPR-365010-XXD	QPR-265010-XXS	QVMS 65:01A	1380.0	1560.0	1140.0	600.0	PN16	DN 200	205.0	467.0	690.2	1157.2	1497.2	1526.0	607.0	640.0	630.0	60.0	50.0	892
QVR-365022-XXD	QVR-265022-XXS	QVMS 65:02-2A	1380.0	1560.0	1340.0	600.0	PN16	DN 200	205.0	467.0	690.2	1157.2	1497.2	1526.0	607.0	640.0	630.0	60.0	50.0	1174
QVR-365020-XXD	QVR-265020-XXS	QVMS 65:02AE	1380.0	1560.0	1366.0	600.0	PN16	DN 200	205.0	467.0	690.2	1157.2	1497.2	1526.0	607.0	640.0	630.0	60.0	50.0	1432
QVR-365032-XXD	QVR-265032-XXS	QVMS 65:03-2A	1380.0	1560.0	1587.0	600.0	PN16	DN 200	205.0	467.0	690.2	1157.2	1497.2	1526.0	607.0	640.0	630.0	60.0	50.0	1549
QVR-365030-XXD	QVR-265030-XXS	QVMS 65:03A	1380.0	1560.0	1640.0	600.0	PN16	DN 200	205.0	467.0	690.2	1157.2	1497.2	1526.0	755.0	640.0	778.0	60.0	50.0	1987
QVR-365042-XXD	QVR-265042-XXS	QVMS 65:04-2A	1380.0	1560.0	1709.0	600.0	PN16	DN 200	205.0	467.0	690.2	1157.2	1497.2	1526.0	755.0	640.0	778.0	60.0	50.0	2053
QVR-365052-XXD	QVR-265052-XXS	QVMS 65:05-2A	1380.0	1560.0	1812.0	600.0	PN16	DN 200	205.0	467.0	690.2	1157.2	1497.2	1526.0	755.0	640.0	778.0	60.0	50.0	2704
QPR-385011-XXD	QPR-285011-XXS	QVMS 85:01-1A	1500.0	1560.0	1060.0	600.0	PN16	DN 250	225.0	504.5	727.7	1232.2	1637.2	1644.0	607.0	700.0	630.0	58.0	50.0	884
QVR-385010-XXD	QVR-285010-XXS	QVMS 85:01A	1500.0	1560.0	1207.0	600.0	PN16	DN 250	225.0	505.5	727.7	1232.2	1637.2	1644.0	607.0	700.0	630.0	58.0	50.0	1169
QVR-385022-XXD	QVR-285022-XXS	QVMS 85:02-2A	1500.0	1560.0	1360.0	600.0	PN16	DN 250	225.0	505.5	727.7	1232.2	1637.2	1644.0	607.0	700.0	630.0	58.0	50.0	1313
QVR-385021-XXD	QVR-285021-XXS	QVMS 85:02-1A	1500.0	1560.0	1540.0	600.0	PN16	DN 250	225.0	505.5	727.7	1232.2	1637.2	1644.0	607.0	700.0	630.0	58.0	50.0	1529
QVR-385020-XXD	QVR-285020-XXS	QVMS 85:02A	1500.0	1560.0	1690.0	600.0	PN16	DN 250	225.0	505.5	727.7	1232.2	1637.2	1644.0	755.0	700.0	778.0	58.0	50.0	1880
QVR-385031-XXD	QVR-285031-XXS	QVMS 85:03-1A	1500.0	1560.0	1680.0	600.0	PN16	DN 250	225.0	505.5	727.7	1232.2	1637.2	1644.0	755.0	700.0	778.0	58.0	50.0	2012
QVR-385042-XXD	QVR-285042-XXS	QVMS 85:04-2A	1500.0	1560.0	1790.0	600.0	PN16	DN 250	225.0	505.5	727.7	1232.2	1637.2	1644.0	755.0	700.0	778.0	58.0	50.0	2663

Note:

1 Tolerances are
- * ±25.40mm
- ** ±12.70mm
- *** ±6.35mm

2 Dimension are in mm.

3 -XX(D or S) in the model number represents booster voltage.
- 400-415/3/50: -06(D or S)
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