

U Series – Industrial pumps (long coupled)

▼ Documentation packs		
Documentation pack	Inclusive documents	Standard
Bronze pack	Order acknowledgement (electronic)	●
	Installation, Operating & Maintenance manual	
	Declaration of conformity	
	ATEX Declaration of conformity - if applicable	
Silver Pack	Hydrostatic test certificate	
(includes bronze pack)	Pump HQ performance test certificate	
	Spare parts list – commissioning	
	Type 2.2 certificates (*pressure containing parts only) – only if contracted	
	Standard pump GA drawing	
Gold pack	Pump SA & parts list	
(includes silver pack)	Pump HQ performance test curve	
	Pump datasheet	
	Motor type test certificate	
	Motor GA drawing	
	Motor datasheet	
	Motor Declaration of conformity	
	Motor ATEX Declaration of conformity – if applicable	
	Seal – ATEX Declaration of conformity – if applicable	
Documentation format	Hard copy	●
	Electronic CD - Adobe (.pdf), ms office (.xls .doc) - only if contracted	

▼ Testing			
Pump test	Test standard	Acceptance criteria	Standard
Hydrostatic	BSEN25199 / ISO5199	BSEN25199 / ISO5199 (1.5 x MAWP)	●
Head & flow	BSEN25199 / ISO5199 BSEN25199 / ISO5199	ISO9906 Grade 2 ISO9906 Grade 1	
Mechanical run - 1 hour at rated duty	Amarinth procedure	Amarinth procedure	
NPSH – single point	BSEN25199 / ISO5199 BSEN25199 / ISO5199	ISO9906 Grade 2 ISO9906 Grade 1	
Noise – single point at 1m	BSEN12693:2000	Mutual Agreement	
Vibration – single point	BSEN25199 / ISO5199	BSEN25199 / ISO5199	

▼ NDT

Various motor tests

* Pressure containing parts include; volute casing, seal housing & mechanical seal. Process wetted parts include additional shaft & impeller. A full range of testing and documentation can be tailored to suit your exact requirements. Amaranth reserves the right to alter any information within this document without prior notification.
© Copyright 2005. Amaranth Limited. E&OE.



Bentwaters Parks, Rendlesham, Woodbridge, Suffolk, IP12 2TW. United Kingdom
tel: +44 (0)1394 462 120 fax: +44 (0)1394 462 130 email: enquiries@amarinth.com web: www.amarinth.com

U Series – Industrial pumps (long coupled)

technical specification



▼ General Specification	
General description	A range of single stage centrifugal end suction pumps with tangential discharge manufactured in a variety of alloys. All pumps and individual components are fully interchangeable with the equivalent Girdlestone URF series units.
Construction	Back pullout design with machined abutments
Design methodology	Advanced computer techniques including 3D modelling & FEA
Design standards	ATEX EC-Directive 94/9/EC
Design pressure rating	10 bar g @ 20°C
Suction pressure rating	6 bar g
Temperature rating	-10°C to 200°C
Performance envelope	
Flowrate	Up to 20m ³ /h
Differential head	Up to 55m
Speed	Up to 3600 rpm
Configurations	Long coupled pump Bareshaft pump
Frame sizes	050x040x159 to 150x125x274
Design life	15 years (2 years uninterrupted operation)

▼ Materials		
Materials	Casing	Impeller
Cast Iron / Cast Iron	BS EN 1561 Gr EN-GJL- 250	BS EN 1561 Gr EN-GJL- 250
Cast Iron / Gunmetal	BS EN 1561 Gr EN-GJL- 250	BS EN 1982 CC492K - GS
Cast Iron / SS 316	BS EN 1561 Gr EN-GJL- 250	ASTM A744 CF-8M
SS 316 / SS 316	BS 3100 316 C12	ASTM A744 CF-8M
Gunmetal / Gunmetal	BS 1400 LG2	BS EN 1982 CC492K - GS

Bentwaters Parks, Rendlesham, Woodbridge, Suffolk, IP12 2TW. United Kingdom
tel: +44 (0)1394 462 120 fax: +44 (0)1394 462 130 email: enquiries@amarinth.com web: www.amarinth.com

MP-050-UL Rev A (Jun 05)

Features	Technical Notes	Benefits	Standard
▼ Casing			
Construction	Two piece casting with removable suction cover	Prolonged pump life	●
Flange standard	BS 10 Table D BS 10 Table E, PN16, PN10	Matched to site standard	●
Fasteners	High tensile SS 316	Strength & corrosion resistance	●
Gasket	CSF Customer specified	Covers most fluids Matched to site standard	●
Pressure tapping	3/8" plugged	Aids trouble shooting	●
Drain	1/2 " plugged		●
▼ Impeller			
Construction	One piece casting	Strength & integrity	●
Vanes	4 / 5 off designed specifically for low NPSH	Low NPSHr	●
Style	Shrouded Open	Optimum efficiency Handles solids content in fluid	●
Fixing	Screwed with retention nut		●
Hydraulic balancing	Balance hub / holes		●
Dynamic balancing	Static balance	Prolonged pump life	●
▼ Seals & seal housing			
Shaft diameters	1", 1 1/2", 2"		●
Seal types	Single component Single cartridge Double component / cartridge	Lowest cost Ease of maintenance Environmentally safer	●
Seal housing	Cast / wrought housing to suit a wide variety of seals	Optimum seal environment	●
Seal piping arrangement	ISO Code 01 ISO Code 02, 09, 10, 11	Optimum seal environment Matched to customer requirement	●
Manufacturers	John Crane AES, Burgmann, or customer specified	Matched to site standard	
▼ Bearing bracket			
Style	One piece casting	Better concentricity, less run out	●
Construction	Robust design	Long life	●
Bearings	Deep groove ball	Ease of maintenance	●
Design bearing life	17,500 hours (L10) @ standard duties		●
Bearing seals	Lip seals Non contacting bearing isolators	Ease of maintenance Minimal wear, long life, ATEX	●
Lubrication	Grease Oil	Lowest cost Matched to customer requirement	●

Features	Technical Notes	Benefits	Standard
Running temperature	Less than 50°C above ambient	Long life	●
Bearing bracket materials	Cast iron		●
Shaft materials	Stainless steel 316 Customer specified	Material to match casing / fluid	●
▼ Coupling & guard			
Coupling style	Non spacer wrap round type	Easy maintenance	●
Construction	Bored & keywayed	Easy removal	●
Balancing	Static		●
Manufacturers	Autoguard Customer specified	Matched to site standard	●
Standards	ATEX		
Guard	Single piece in carbon steel Single piece in brass	Non sparking/ATEX compliant	●
▼ Baseplate			
Style	Open Customer specified	Ease of grouting / rigidity Replacing existing	●
Construction	Fabricated from rolled steel sections with 4 lifting points	Rugged construction	●
Earthing points	2 off M10 screws	ATEX compliant	
Material	Carbon steel		●
▼ Driver			
Motor type	Safe area, EExN, EExd, EExde, Exe,	Matched to area requirements	
Standards	ISO frames ATEX	Hazardous area requirement	●
Supply	380 – 440 / 3 / 50, 440 – 460 / 3 / 60	Matched to site standard	
Manufacturers	ABB, Brook Hansen, Loher, Seimens, TECO, WEG, Customer specified	Matched to site standard	
▼ Paint			
Industrial specification	One pack polyurethane (Gentian Blue RAL5010)		●
Customer specification		Matched to site standard	
▼ Packing			
Road	Palletised & cling wrap		●
Seafreight	Wooden box suitable for sea Wooden box with vacuum sealing		
Airfreight	Wooden box suitable for air		