S Series – Industrial pumps (long coupled)

Documentation pack	Inclusive documents	Standard
Bronze pack	Order acknowledgement (electronic)	•
	Installation, Operating & Maintenance manual	•
	Declaration of conformity	•
	ATEX Declaration of conformity – only if contracted	
ilver pack (includes bronze pack)	Standard pump GA drawing	
	Hydrostatic test certificate	
	Pump HQ performance test certificate	
	Spare parts list – commissioning	
	Type 2.2 certificates (* pressure containing + process wetted parts only) – only if contract	
old pack (includes silver pack)	Pump SA & parts list	
	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	
Ocumentation format	Electronic CD – Adobe (.pdf), ms office (.xls.doc)	•
	Hard copy	

Pump test	Test standard	Acceptance criteria	Standard
Hydrostatic	BSEN25199 / ISO5199	BSEN25199 / ISO5199 (1.5 x MAWP)	
Head & flow	BSEN25199 / ISO5199	ISO9906 Grade 2	
	BSEN25199 / ISO5199	ISO9906 Grade 1	
Mechanical run – 1 hour at rated duty	Amarinth procedure	Amarinth procedure	
NPSH – single point	BSEN25199 / ISO5199	ISO9906 Grade 2	
	BSEN25199 / ISO5199	ISO9906 Grade 1	
Noise – single point at 1m	BSEN12639 : 2000	Mutual agreement	
Vibration – single point	BSEN25199 / ISO5199	BSEN25199 / ISO5199	

NDE

Various motor tests

*Pressure containing parts include; volute casing & seal housing. Process wetted parts include additional shaft & impeller. A full range of testing and documentation can be tailored to suit your exact requirements. Amarinth reserves the right to alter any information within this document without prior notification. © Copyright 2005-2017. Amarinth Limited. E&OE.



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

S Series – Small industrial pumps (long coupled)

Amarinth

 General Specification 	
General description	A range of single stage cent
	a variety of alloys. All pumps
	equivalent Girdlestone SSD
Construction	Back pullout design with ma
Design methodology	Advanced computer technic
Design standards	ATEX EC-Directive 94/9/EC
Design pressure rating	10 bar g @ 20°C
Suction pressure rating	3.5 bar g
Temperature rating	-5°C to 120°C
Performance envelope	
Flow rate	Up to 20m ³ /h
Differential head	Up to 55m
Speed	Up to 3600 rpm
Configurations	Long coupled pump
	Bareshaft
Frame sizes	025x025x173 to 040x040x1
Design life	15 years (2 years uninterrup

Material Options	Casing	Impeller
Cast Iron / Cast Iron	BS EN 1561 Gr EN GJL 250	BS EN 1561 Gr EN GJL 250
Cast Iron / Gun Metal	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	ASTM A744 CF 8M	ASTM A744 CF 8M
Titanium / Titanium	ASTM B367 Gr C2	ASTM B367 Gr C2
Gunmetal / Gunmetal	BS EN 1982 CC492K GS	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

technical specification



ntrifugal end suction pumps with tangential discharge manufactured in ps and individual components are fully interchangeable with the series units.

nachined abutments

iques including 3D modelling & FEA

x127

upted operation)

S Series – Industrial pumps (long coupled)

■ Casing One piece casting Prolonged pump life ■ construction One piece casting Prolonged pump life ■ constructions Screwed BSP ■ ■ casteners High tensile SS 316 Strength & corrosion resistance ■ □ casket CSF Covers most fluids ■ □ casket CSF Covers most fluids ■ □ caster Customer specified Matched to site standard ■ > Impeller □ □ ■ ■ □ construction One piece casting / fabrication Strength & integrity ● □ fanees 4 / 5 off designed specifically for low NPSH Low NPSHr ● □ construction One piece casting / fabrication nut Easy maintenance ● □ cask & seal housing Static balance Prolonged pump life ● □ cask & seal housing Bell type to suit a variety of seals Optimum seal environment ● □ casting bracket User One piece fabrication Beter concentricity, less run out ● □ construction Robust design Long life ● ● □ construction </th <th>Features</th> <th>Technical notes</th> <th>Benefits</th> <th>Standard</th>	Features	Technical notes	Benefits	Standard
Connections Screwed BSP • Sasteners High tensile SS 316 Strength & corrosion resistance • Sasteners Covers most fluids • • Casket CSF Covers most fluids • Customer specified Matched to site standard • Impeller • • • Construction One piece casting / fabrication Strength & integrity • Construction One piece casting / fabrication Strength & integrity • Construction One piece casting / fabrication Strength & integrity • Construction One piece casting / fabrication Strength & integrity • Construction One piece casting / fabrication Strength & integrity • Canes 4 / 5 off designed specifically for low NPSH Low NPSHr • Canes 4 / 5 off designed specifically for low NPSH Low NPSHr • Canes Open Handles Solids content in fluid • Static balance Prolonged pump life • • <tr< td=""><td>- Casing</td><td></td><td></td><td>Standard</td></tr<>	- Casing			Standard
High tensile SS 316 Strength & corrosion resistance Casket CSF Covers most fluids • Customer specified Matched to site standard • Pripoller • • Construction One piece casting / fabrication Strength & integrity • Canes 4 / 5 off designed specifically for low NPSH Low NPSHr • Construction One piece casting / fabrication Strength & integrity • Canes 4 / 5 off designed specifically for low NPSH Low NPSHr • Copen Handles solids content in fluid • • Casts & scal housing Static balance Prolonged pump life • • Seals & scal housing Single component • • Single component • • • Single component • • • • • Alarufacturers John Crane • • • • • Baaring, bracket • • • • • • • Bearing, bracket • • • • • • <td< td=""><td>Construction</td><td>One piece casting</td><td>Prolonged pump life</td><td>٠</td></td<>	Construction	One piece casting	Prolonged pump life	٠
CSF Covers most fluids • Customer specified Matched to site standard • > Impeller • • Construction One piece casting / fabrication Strength & integrity • Carses 4 / 5 off designed specifically for low NPSH Low NPSHr • Carses 4 / 5 off designed specifically for low NPSH Low NPSHr • Carses 4 / 5 off designed specifically for low NPSH Low NPSHr • Carses 4 / 5 off designed specifically for low NPSH Low NPSHr • Carses 4 / 5 off designed specifically for low NPSH Low NPSHr • Carses 4 / 5 off designed specifically for low NPSH Low NPSHr • Carses Shrouded Optimum efficiency • Static balance Prolonged pump life • • Static balance Single component • • • Scals Assall housing Bell type to suit a variety of seals Optimum seal environment • Scals Assaudiacturers John Crane • • <	Connections	Screwed BSP		•
Customer specified Matched to site standard > Impeller • Canstruction One piece casting / fabrication Strength & integrity • Canstruction One piece casting / fabrication Strength & integrity • Canstruction One piece casting / fabrication Strength & integrity • Canstruction One piece casting / fabrication Strength & integrity • Canstruction One piece casting / fabrication Strength & integrity • Casting Strouded Optimum efficiency • Open Handles solids content in fluid • • Static balance Prolonged pump life • • • Static balance Single component • • • icial housing Bell type to suit a variety of seals Optimum seal environment • icial housing Bell type to suit a variety of seals Optimum seal environment • icial housing Bell type to suit a variety of seals Optimum seal environment • icial housing Dohn Crane •	Fasteners	High tensile SS 316	Strength & corrosion resistance	•
Drain ¼ * plugged - Impeller Construction One piece casting / fabrication Strength & integrity James 4 / 5 off designed specifically for low NPSH Low NPSHr Construction Open Handles solids content in fluid Sityle Strouded Oppin Open Handles solids content in fluid Salancing Static balance Prolonged pump life Salancing Static balance Prolonged pump life Selas & seal housing Sciel types Single component Sical housing Bell type to suit a variety of seals Optimum seal environment Sical piping arrangement ISO Code 01 Optimum seal environment Sical piping arrangement ISO Code 01 Optimum seal environment AES, Burgmann, or customer specified Matched to site standard Vearing: bracket Sityle One piece fabrication Better concentricity, less run out Construction Robust design Long life Construction Robust design Long life Stearing	Gasket	CSF	Covers most fluids	•
Impeller Construction One piece casting / fabrication Strength & integrity A / 5 off designed specifically for low NPSH Low NPSHr Open Handles solids content in fluid Open Handles solids content in fluid String Keyed with retention nut Easy maintenance Static balance Prolonged pump life Static balance Solds & seal housing Solds & seal hou		Customer specified	Matched to site standard	
Construction One piece casting / fabrication Strength & integrity /anes 4 / 5 off designed specifically for low NPSH Low NPSHr /anes 4 / 5 off designed specifically for low NPSH Low NPSHr /anes 4 / 5 off designed specifically for low NPSH Low NPSHr /anes 4 / 5 off designed specifically for low NPSH Low NPSHr /anes 4 / 6 off designed specifically for low NPSH Low NPSHr /anes Open Handles solids content in fluid /anon Reyed with retention nut Easy maintenance Image: Solids content in fluid /anon Static balance Prolonged pump life Image: Solids content in fluid /alancing Static balance Prolonged pump life Image: Solids content in fluid /alancing Single component Image: Solids content Image: Solids content Image: Solids content /alanufacturers John Crane Image: Solids content I	Drain	1/4 " plugged		•
Aanes 4 / 5 off designed specifically for low NPSH Low NPSHr Shrouded Optimum efficiency • Open Handles solids content in fluid • Static balance Prolonged pump life • Salancing Static balance Prolonged pump life • Seals & seal housing • • • Static balance Prolonged pump life • • Seals & seal housing • • • Single component • • • Seal housing Bell type to suit a variety of seals Optimum seal environment • Sieal piping arrangement ISO Code 01 Optimum seal environment • AES, Burgmann, or customer specified Matched to site standard • Vertex • • • Static daines Deep groove ball Ease of maintenance • Bearings Deep groove ball Ease of maintenance • Design bearing life 17,500 hours (L10) @ standard duties • • Bearing seals Lip seals Ease of maintenance •	← Impeller			
Shrouded Optimum efficiency Open Handles solids content in fluid ixing Keyed with retention nut Easy maintenance Static balance Prolonged pump life • Seals & seal housing • Static balance Prolonged pump life • Seals & seal housing • Static balance Prolonged pump life • Seals & seal housing Single component • Single component • ieal housing Bell type to suit a variety of seals Optimum seal environment • Socode 01 Optimum seal environment • • AES, Burgmann, or customer specified Matched to site standard • Non-contacting bearing life 17,500 hours (L10) @ standard duties • Deep groove ball Ease of maintenance • • Dearing seals Lip seals Ease of maintenance • • Dearing life 17,500 hours (L10) @ standard duties • • Dearing seals Lip seals Ease of maintenance • • Dearing seals Lip seals Ease of maintenance • • Dearing life 17,500 hours (L10) @ standard duties • • • Dearing seals Lip seals Ease of maintenance • • Dearing seals Lip seals Ease of maintenance <	Construction	One piece casting / fabrication	Strength & integrity	•
Open Handles solids content in fluid ixing Keyed with retention nut Easy maintenance Salancing Static balance Prolonged pump life • Seals & seal housing • schaft diameters 5/8" (15.9mm), 19mm sieal types Single component sieal housing Bell type to suit a variety of seals Optimum seal environment sieal piping arrangement ISO Code 01 Optimum seal environment Alanufacturers John Crane • AES, Burgmann, or customer specified Matched to site standard • Design bracket • construction Robust design Long life Construction Robust design • Design bearing life 17,500 hours (L10) @ standard duties • Design bearing life 17,500 hours (L10) @ standard duties • Aubrication Grease • Non-contacting bearing isolators Minimal wear, Long life, ATEX	/anes	4 / 5 off designed specifically for low NPSH	Low NPSHr	•
ixing Keyed with retention nut Easy maintenance Salancing Static balance Prolonged pump life Salancing Static balance Prolonged pump life Schaft diameters 5/8" (15.9mm), 19mm • Sieal types Single component • Sieal housing Bell type to suit a variety of seals Optimum seal environment • Sieal piping arrangement ISO Code 01 Optimum seal environment • John Crane • • • AES, Burgmann, or customer specified Matched to site standard • Construction Robust design Long life • Deep groove ball Ease of maintenance • Design bearing life 17,500 hours (L10) @ standard duties • Bearing seals Lip seals Ease of maintenance • Design bearing life 17,500 hours (L10) @ standard duties • • Reuning temperature Less than 50°C above ambient Long life •	Style	Shrouded	Optimum efficiency	•
Balancing Static balance Prolonged pump life Scals & seal housing Schaft diameters 5/8" (15.9mm), 19mm Scals & seal housing Single component Seal housing Bell types Single component Single component So Code 01 Optimum seal environment So Code 01 Optimum seal environment Manufacturers John Crane AES, Burgmann, or customer specified Matched to site standard Static balance Bearing, bracket Style One piece fabrication Better concentricity, less run out Searings Deep groove ball Ease of maintenance Searing seals Lip seals Ease of maintenance Deep groove ball Ease of maintenance Bearing seals Lip seals		Open	Handles solids content in fluid	
Seals & seal housing Shaft diameters S/8" (15.9mm), 19mm Single component Single component Single component Seal housing Bell type to suit a variety of seals Optimum seal environment Seal piping arrangement ISO Code 01 Optimum seal environment AES, Burgmann, or customer specified Matched to site standard Searing, bracket Style One piece fabrication Robust design Long life T7,500 hours (L10) @ standard duties Searing seals Lip seals Lip seals Lip seals Lip seals Lip seals Lip seals Long life Matched to gife, ATEX Murication Grease Cannon Long life Interval	Fixing	Keyed with retention nut	Easy maintenance	•
Shaft diameters 5/8" (15.9mm), 19mm ● Single component ● Sieal housing Bell type to suit a variety of seals Optimum seal environment ● Sieal piping arrangement ISO Code 01 Optimum seal environment ● Manufacturers John Crane ● ● AES, Burgmann, or customer specified Matched to site standard ● > Bearing, bracket ● ● ● Sityle One piece fabrication Better concentricity, less run out ● Searings Deep groove ball Ease of maintenance ● Obesign bearing life 17,500 hours (L10) @ standard duties ● ● Searing seals Lip seals Ease of maintenance ● Non-contacting bearing isolators Minimal wear, Long life, ATEX ● Autrication Grease ● ● Running temperature Less than 50°C above ambient Long life ●	Balancing	Static balance	Prolonged pump life	•
Single component • Sieal types Single component Sieal housing Bell type to suit a variety of seals Optimum seal environment Seal piping arrangement ISO Code 01 Optimum seal environment Manufacturers John Crane • AES, Burgmann, or customer specified Matched to site standard Bearing, bracket Construction Robust design Long life Bearings Deep groove ball Ease of maintenance Pesign bearing life 17,500 hours (L10) @ standard duties Bearing seals Lip seals Ease of maintenance Mon-contacting bearing isolators Minimal wear, Long life, ATEX ubrication Grease Running temperature Less than 50°C above ambient Long life 	✓ Seals & seal housing			
Seal housing Bell type to suit a variety of seals Optimum seal environment Seal piping arrangement ISO Code 01 Optimum seal environment Manufacturers John Crane • AES, Burgmann, or customer specified Matched to site standard > Bearing, bracket • Style One piece fabrication 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 Ease of maintenance • Autication Grease • • Running temperature Less than 50°C above ambient Long life •	Shaft diameters	5/8" (15.9mm), 19mm		•
Seal piping arrangement ISO Code 01 Optimum seal environment ● Manufacturers John Crane ● AES, Burgmann, or customer specified Matched to site standard > Bearing, bracket ● Style One piece fabrication Better concentricity, less run out ● Construction Robust design Long life ● Searings Deep groove ball Ease of maintenance ● Obesign bearing life 17,500 hours (L10) @ standard duties ● ● Searing seals Lip seals Ease of maintenance ● Non-contacting bearing isolators Minimal wear, Long life, ATEX ● Autrication Grease ● ● Running temperature Less than 50°C above ambient Long life ●	Seal types	Single component		•
Manufacturers John Crane AES, Burgmann, or customer specified Matched to site standard Bearing, bracket One piece fabrication Better concentricity, less run out Construction Robust design Long life Deep groove ball Ease of maintenance Design bearing life 17,500 hours (L10) @ standard duties Design bearing seals Lip seals Ease of maintenance Non-contacting bearing isolators Minimal wear, Long life, ATEX Aubrication Grease Qubrication Ease than 50°C above ambient Long life 	Seal housing	Bell type to suit a variety of seals	Optimum seal environment	•
AES, Burgmann, or customer specified Matched to site standard Bearing, bracket Style One piece fabrication Better concentricity, less run out Eonstruction Robust design Long life Deep groove ball Ease of maintenance Design bearing life 17,500 hours (L10) @ standard duties Ease of maintenance Lip seals Lip seals Non-contacting bearing isolators Minimal wear, Long life, ATEX Lubrication Grease Cong life 	Seal piping arrangement	ISO Code 01	Optimum seal environment	•
 > Bearing, bracket Sityle One piece fabrication Better concentricity, less run out Construction Robust design Long life Ease of maintenance Deep groove ball Ease of maintenance Design bearing life 17,500 hours (L10) @ standard duties Ease of maintenance Bearing seals Lip seals Non-contacting bearing isolators Minimal wear, Long life, ATEX Aubrication Grease Construction Construction	Manufacturers	John Crane		•
Style One piece fabrication 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 Ease of maintenance ● Non-contacting bearing isolators Minimal wear, Long life, ATEX ● Aubrication Grease ● ● Running temperature Less than 50°C above ambient Long life ●		AES, Burgmann, or customer specified	Matched to site standard	
ConstructionRobust designLong lifeBearingsDeep groove ballEase of maintenanceDesign bearing life17,500 hours (L10) @ standard duties•Bearing sealsLip sealsEase of maintenanceNon-contacting bearing isolatorsMinimal wear, Long life, ATEXAubricationGrease•Running temperatureLess than 50°C above ambientLong life	✓ Bearing, bracket			
Bearings Deep groove ball Ease of maintenance Design bearing life 17,500 hours (L10) @ standard duties ● Bearing seals Lip seals Ease of maintenance ● Non-contacting bearing isolators Minimal wear, Long life, ATEX ● Aubrication Grease ● Running temperature Less than 50°C above ambient Long life ●	Style	One piece fabrication	Better concentricity, less run out	•
Design bearing life 17,500 hours (L10) @ standard duties Bearing seals Lip seals Non-contacting bearing isolators Minimal wear, Long life, ATEX Subrication Grease Running temperature Less than 50°C above ambient	Construction	Robust design	Long life	•
Bearing seals Lip seals Ease of maintenance Non-contacting bearing isolators Minimal wear, Long life, ATEX Lubrication Grease Competition Less than 50°C above ambient Long life Ease of maintenance Ease of maintenance 	Bearings	Deep groove ball	Ease of maintenance	•
Non-contacting bearing isolators Minimal wear, Long life, ATEX Lubrication Grease Running temperature Less than 50°C above ambient	Design bearing life	17,500 hours (L10) @ standard duties		•
Cubrication Grease Running temperature Less than 50°C above ambient Long life	Bearing seals	Lip seals	Ease of maintenance	•
Running temperature Less than 50°C above ambient Long life		Non-contacting bearing isolators	Minimal wear, Long life, ATEX	
	Lubrication	Grease		•
	Running temperature	Less than 50°C above ambient	Long life	•
	Bearing bracket materials	Carbon steel	· · ·	•

Features	Technical notes	Benefits	Standar
Shaft materials	Stainless steel 316		•
	Customer specified	Material to match casing / fluid	
 Coupling and Guard 			
Coupling style	Non spacer wrap round type	Easy maintenance	•
Construction	Bored & keywayed	Easy removal	•
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	Ease of grouting / ridgidty	•
	Customer specified	Replacing existing	
Construction	Fabricated from rolled steel sections	Rugged construction	•
	with 4 lifting points		
Earthing points	2 off M10 screws		
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,	Matched to site standard	
	TECO, WEG, Customer specified		
- Paint			
Industrial specification	One pack polyurethane (Gentian Blue RAL5010)		•
Customer specification		Matched to site standard	
- Packing			
Road	Palletised & cling wrap		
Seafreight	Wooden box paper lined	Long term storage	
	Wooden box with vacuum sealed bag	Moisture free	
Airfreight	Wooden box paper lined	Long term storage	



Amarinth Limited