



**HDS** HYDRAULIC DREDGING SYSTEMS

WEBSITE : [www.hdsbelgium.com](http://www.hdsbelgium.com)  
[www.dredgingpumps.eu](http://www.dredgingpumps.eu)  
E – mail : [hds@hdsbelgium.com](mailto:hds@hdsbelgium.com)

**HDS SUBMERSIBLE SAND AND GRAVEL DREDGING PUMP WITH EXTENDED SHAFT AND STIR UP AGITATOR. THE AGITATOR REPLACES JETTING EQUIPMENT.**

**A NEW DESIGN DEVELOPED BY FIELD ENGINEERS WITH JOB-SITE EXPERIENCE.**

**AVOIDING SUFFERING MECHANICS AND OPERATORS BY ALL WEATHER CONDITIONS. NOT ROUND LIKE AN EGG WERE DIFFICULT TO FIT ON EXISTING MACHINERY.**

**COMPACT OUTER DIMENSION. DESIGNED TO MOUNT A SUCTION PIPE INSTEAD OF THE STANDARD STRAINER AND AGITATOR IF NEEDED.**

**THREADED FIXATIONS ON BOTH SIDE OF THE MOTOR HOUSING ALLOWING TO FIX ON :**

**- LIFTING FRAME (STANDARD)**

**- ROTATING SHAFTS TO FIX ON LADDER ARMS**

**HORIZONTAL OR VERTICAL LADDER ARM TO AVOID SPINNING OF THE UNIT OR LAYING DOWN ON THE BOTTOM. ALLOWING THE FIXATION OF THE DISCHARGE HOSE, POWER HOSES OR JETTING HOSE. MAKES IT OPERATOR FRIENDLY AND ALLOWS THE OPERATOR TO FOCUS MORE ON PRODUCTION INSTEAD OF CARING ABOUT THE SURROUNDINGS AND NOT COOPERATING FLOATING EQUIPMENT.**

**THREADED FIXATIONS ON BOTH SIDE OF THE VORTEX HOUSING ALLOWING FIXATION OF JETTING RING OF SELF CLEANING CUTTING EXCAVATORS FOR HARD SOIL AND CLAY OR MIXING EXCAVATORS TO FLUIDIFY HEAVY MUD WITH LOW WATER CONTENT.**

**EXCAVATORS WITH ON THE EXTREMITY NEGATIVE ANGLE VANES EVACUATING**

**OVERSIZED MATERIALS, INSTEAD TO PUSH THE OVERSIZED MATERIALS INTO THE INLET OF THE PUMP AND NEEDING A FREQUENT CLEANING STOP.**

**EXTRACTION BOLTS FOR EASY DISMANTELING BY REPAIR OR OVERHAUL. CASTED PARTS IN OVERSIZED THICKNESS, UNBREAKABLE MAKES DISMANTELING AND REASSEMBLING POSSIBLE IN RECORD TIMES UNCOMPARABLE TO OTHERS.**

**STAINLESS WEARPLATE ADJUSTMENT SCREWS. ALL OTHER SCREWS ARE TREATED AND PROTECTED FROM WATER CONTACT FOR EASY DISASSEMBLING AFTER SEAWATER OPERATION.**

**IMPELLER, AGITATOR, UPPER AND LOWER WEARPLATES ARE MADE OF HIGH-CHROME 27% CHROME CASTING PRECISION MACHINED AND HARDENED TO + 60 ROCKWELL C. HIGHER QUALITY THAN NI-HARD AND HIGHER THICKNESS THAN OTHERS.**

**VORTEX HOUSING CHROM CASTING, FOR SEA WATER TEMPERED STAINLESS SHAFT MARTENSITIC AISI T-431 – DIN 1-4057 – X17CrN16.**

**SHAFT SLEEVE SWISS MADE DIAMIX HIGH FRICTION RESISTANT.**

**SEALS GLASS FILLED TEFLON IN STAINLESS HOUSING.**

**STRAINER PLATE ST 52.**

**OVERSIZED QUALITY BEARINGS.**

**TWO COMPONENTS HARDENER FIRST PAINT COATING + FINISH COATING.**

**SPARE PARTS AT BETTER PRICES THAN ANY OTHERS.**

**EXPERIENCE THE DIFFERENCE BY THE FIRST REPAIR.**



## **HYDRAULIC DREDGING SYSTEMS**

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# HDS Heavy Duty Dredging Equipments

- Page 4 Friction Lost Chart Of A Steel Discharge Pipe.

- Page 5 – 9 HDS Dredging Pumps Specifications.

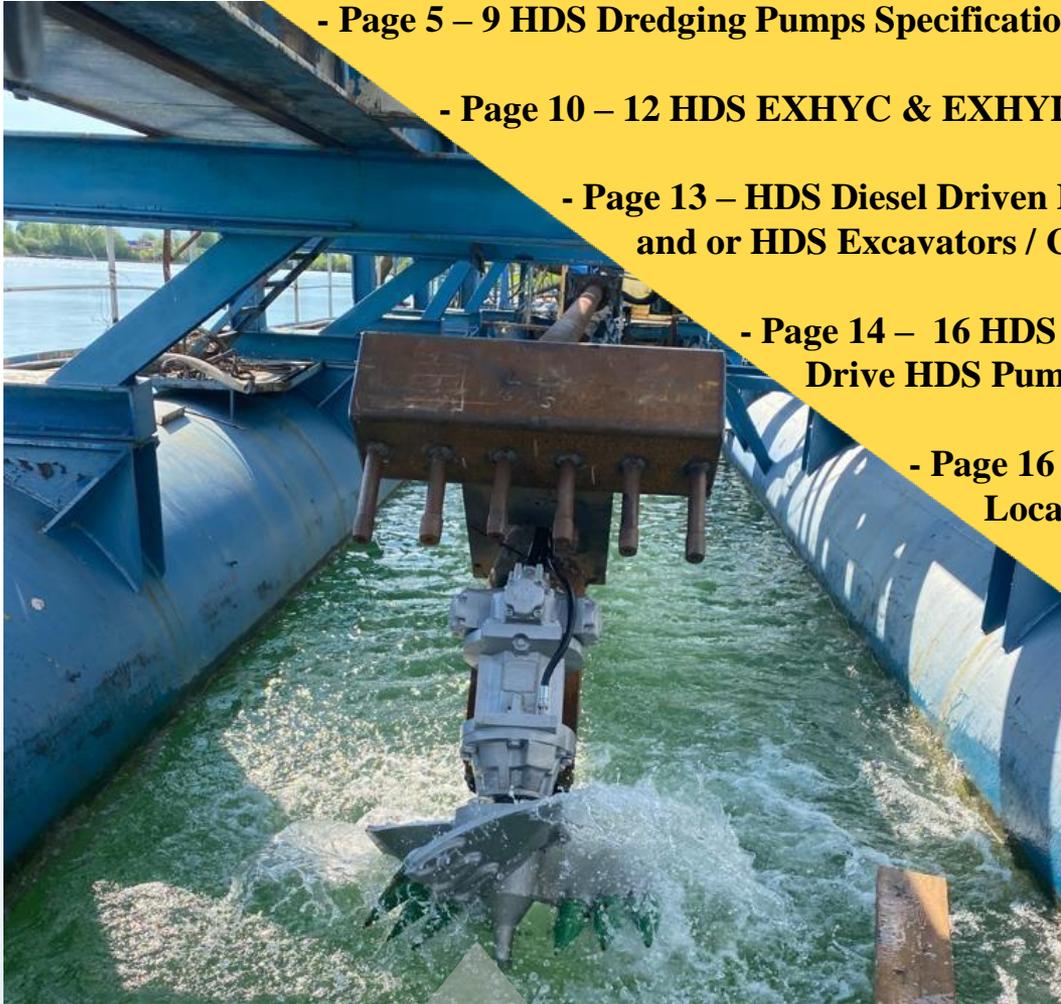
- Page 10 – 12 HDS EXHYC & EXHYL Excavators / Cutterheads Specifications.

- Page 13 – HDS Diesel Driven Hydraulic Power Pack To Drive HDS Pumps and or HDS Excavators / Cutterheads.

- Page 14 – 16 HDS Electric Driven Hydraulic Power Pack To Drive HDS Pumps and or HDS Excavators / Cutterheads.

- Page 16 – 19 HDS Design Dredging Pontoons But Locally Made.

- Page 20 – 28 HDS Heavy Duty Dredging Equipments Applications.



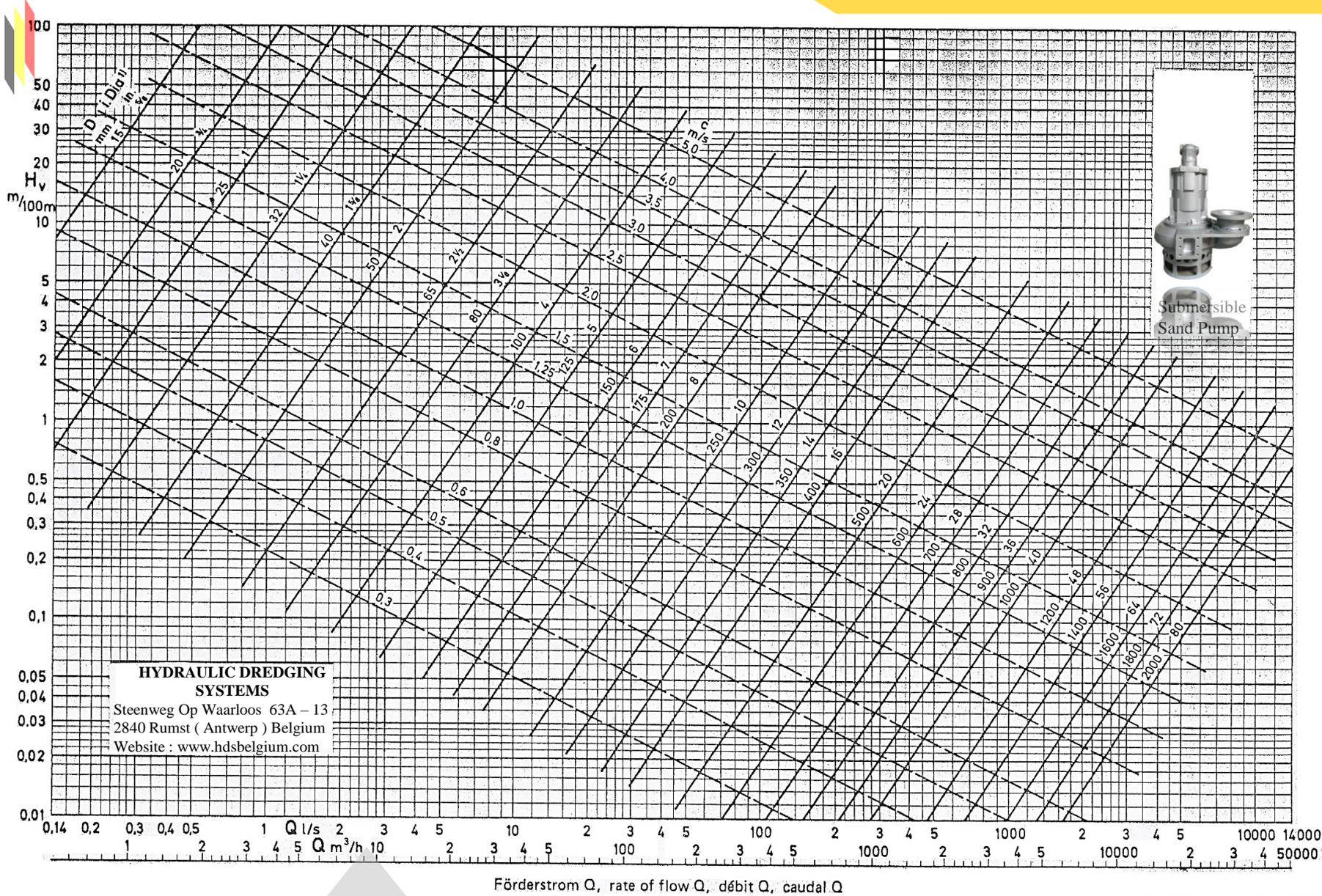


Diagram for the determination of the pressure head losses  $H_v$  in function of the inside pipe diameter  $D$ , the flow velocity  $c$  and the rate of flow  $Q$

Diagramme pour déterminer les pertes de charge  $H_v$  en fonction du diamètre intérieur de la tuyauterie  $D$ , de la vitesse d'écoulement  $c$  et du débit  $Q$



**HYDRAULIC DREDGING SYSTEMS**

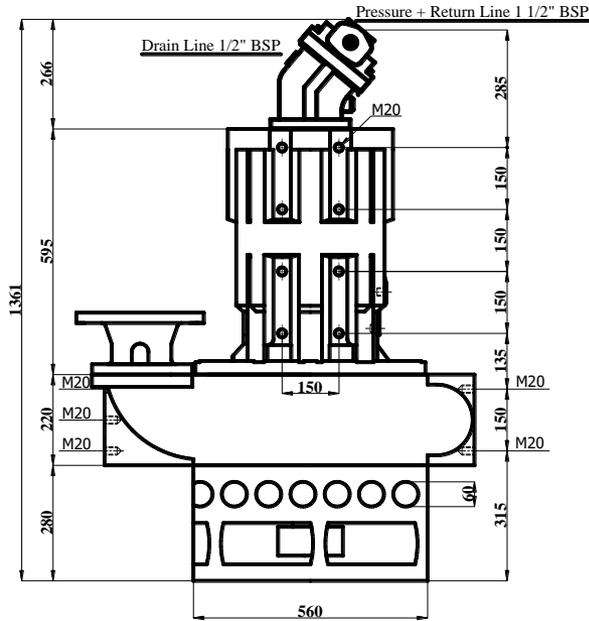
# HDS 110

Discharge : 150 - 200mm/6 - 8 Inch

Power : 62KW – 82 HP

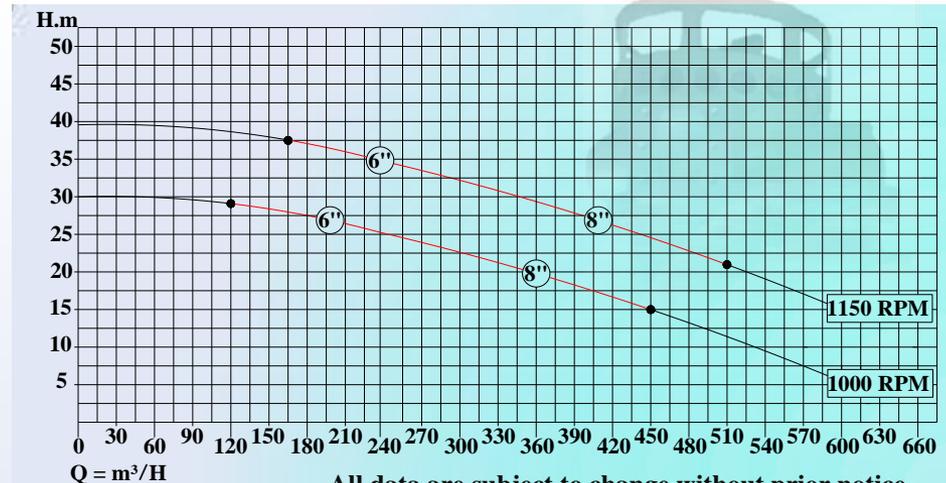
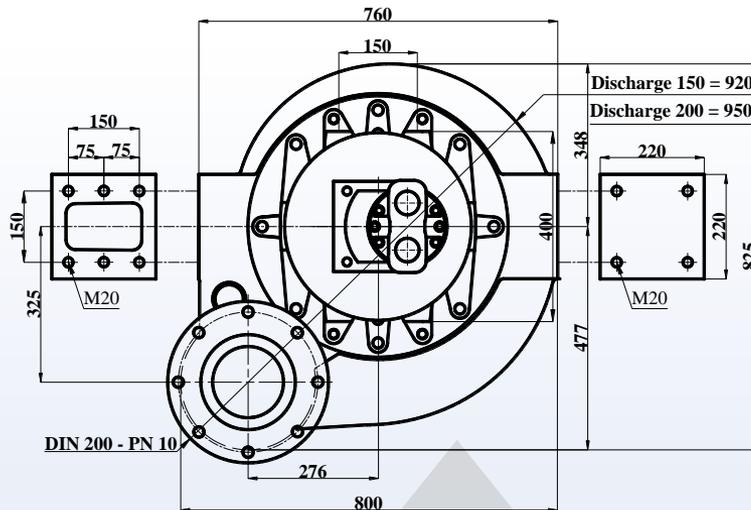
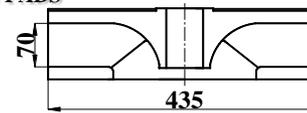
Hydraulic 110cc Piston Motor

Low Speed – Low Wear



RPM	Q m <sup>3</sup> /h	H meter	KW - HP	Operating Pressure BAR	Oil Flow l/min
1000	360	19	41 - 55	242	120
1150	400	26	62 - 85	300	135

CONTINUOUS DUTY AT LOW SPEEDS  
 IMPELLER WIDTH 70mm – STRAINER 60mm  
 WEAR PARTS CHROM CASTING 27% Cr  
 SHAFT TEMPERED STAINLESS AISI T-431 DIN 1-4057  
 TORQUE 1.7 2Nm / BAR  
 MOTOR DISPLACEMENT 108,4cc  
 MAX CONTINUOUS OIL PRESSURE 430 BAR  
 EXCAVATOR MOUNTING PADS  
 2C - PAINT  
 WEIGHT 750 KG



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# HDS 160M

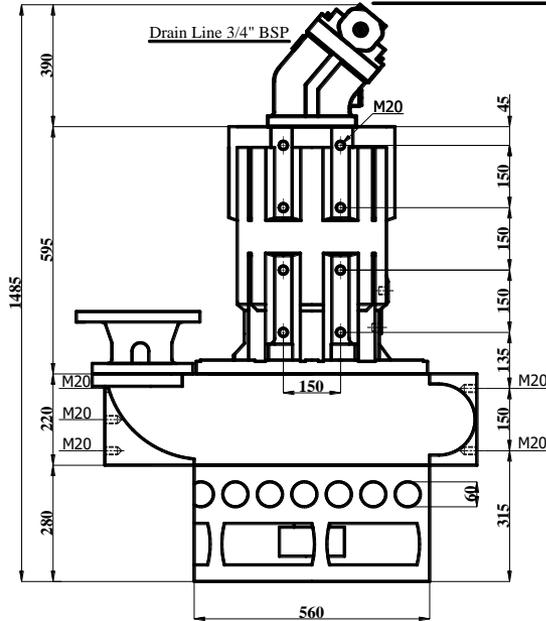
Discharge : 200mm/8 Inch

Power : 111KW / 151 HP

Hydraulic 160cc Piston Motor  
Medium Speed

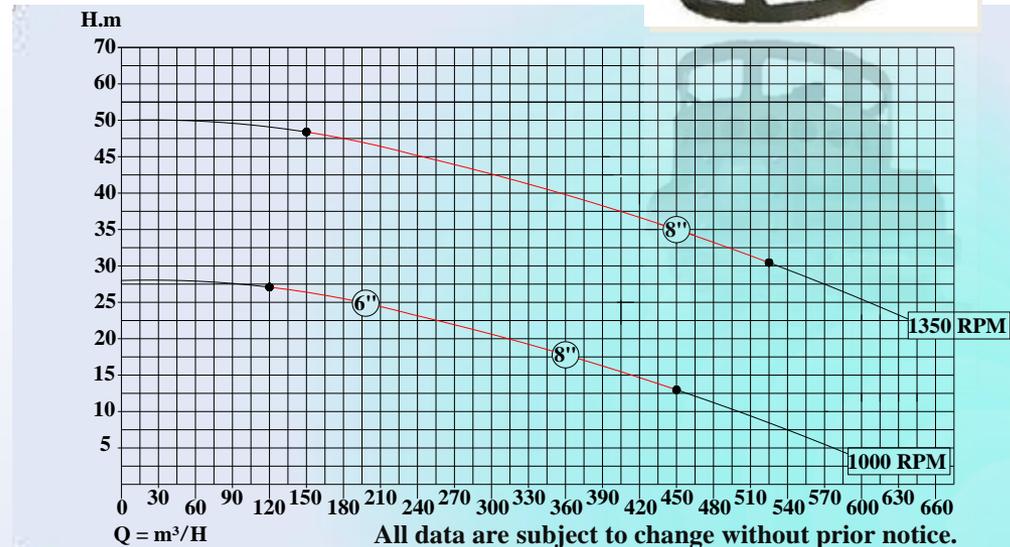
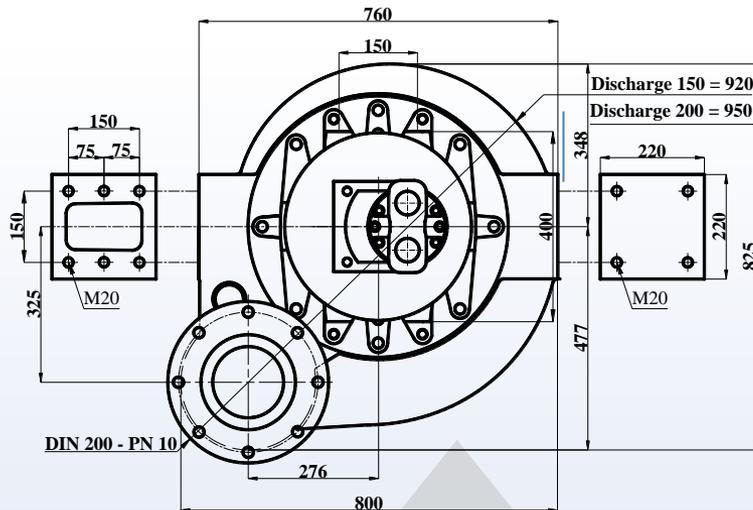
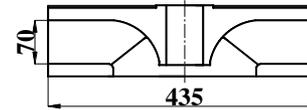


Pressure + Return Line 1 1/4" Flange 6000 PSI



RPM	Q m³/h	H meter	KW - HP	Operating Pressure BAR	Oil Flow l/min
1000	360	17	45 - 60	165	175
1350	450	35	111 - 151	300	230

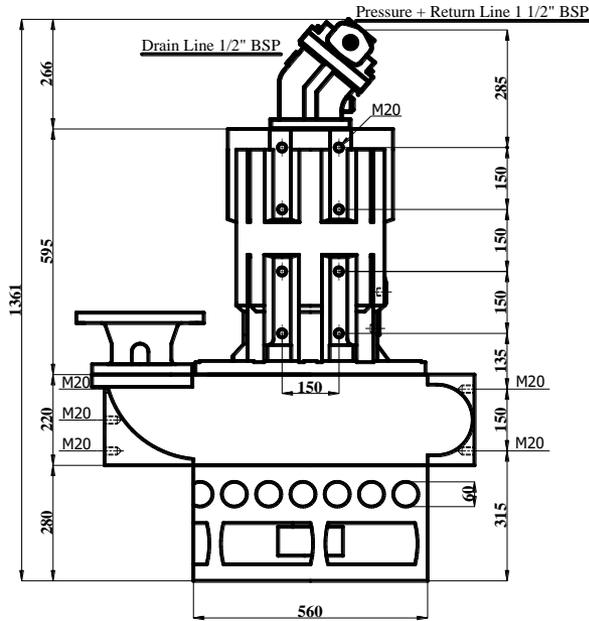
CONTINUOUS DUTY AT LOW SPEEDS  
 IMPELLER WIDTH 70mm - STRAINER 60mm  
 WEAR PARTS CHROM CASTING 27% Cr  
 SHAFT TEMPERED STAINLESS AISI T-431 DIN 1-4057  
 TORQUE 2,6 Nm / BAR  
 MOTOR DISPLACEMENT 163,9cc  
 MAX CONTINUOUS OIL PRESSURE 430 BAR  
 EXCAVATOR MOUNTING PADS  
 2C - PAINT  
 WEIGHT 770 KG



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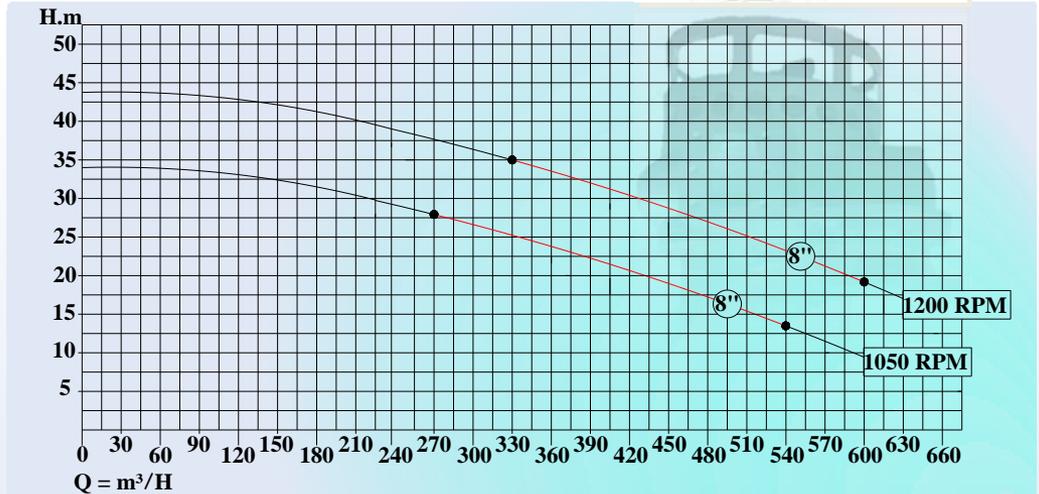
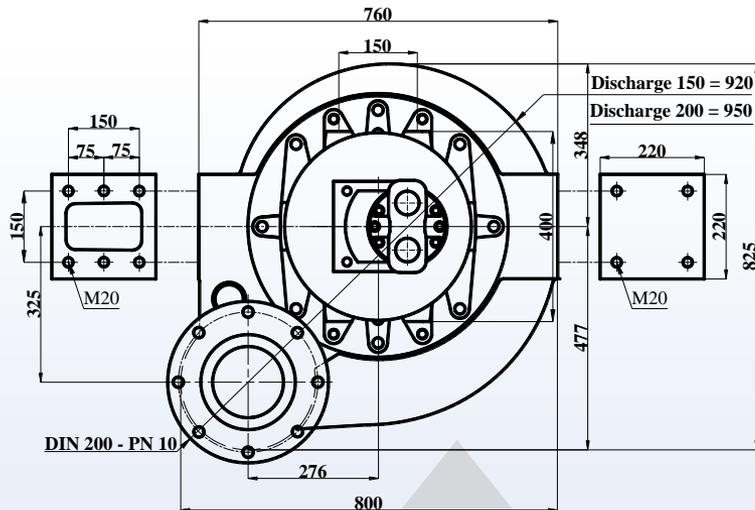
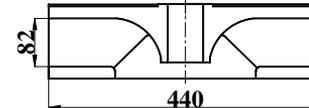
# HDS 125L

Discharge : 200mm / 8 Inch  
 Power : 78KW / 106 HP  
 Hydraulic 125cc Piston Motor  
 Low Speed - Low Wear



RPM	Q m <sup>3</sup> /h	H meter	KW - HP	Operating Pressure BAR	Oil Flow l/min
1050	500	16	62 - 83	270	140
1200	550	22	78 - 106	300	160

CONTINUOUS DUTY AT LOW SPEEDS  
 IMPELLER WIDTH 80mm - STRAINER 60mm  
 WEAR PARTS CHROM CASTING 27% Cr  
 SHAFT TEMPERED STAINLESS AISI T-431 DIN 1-4057  
 TORQUE 2 Nm / BAR  
 MOTOR DISPLACEMENT 124,8cc  
 MAX CONTINUOUS OIL PRESSURE 430 BAR  
 EXCAVATOR MOUNTING PADS  
 2C - PAINT  
 WEIGHT 830 KG



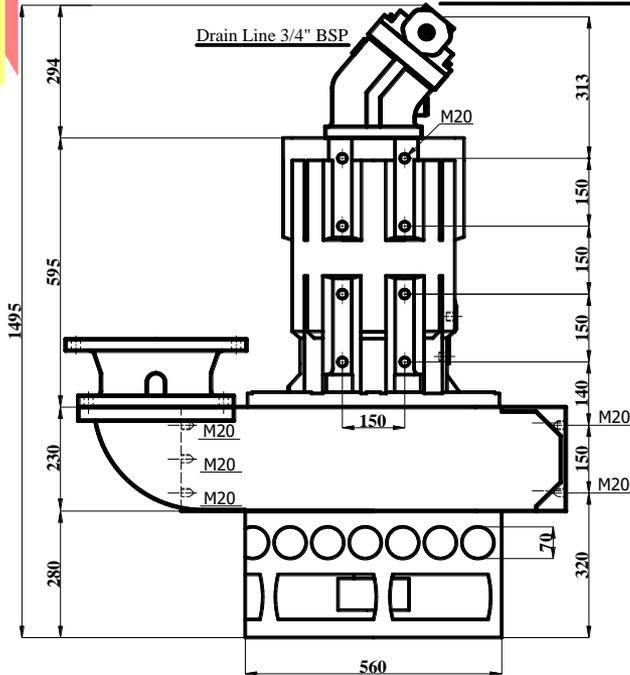
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# HDS 160

Discharge : 250mm / 10 Inch  
 Power : 103KW / 140 HP  
 Hydraulic 160cc Piston Motor  
 Low Speed - Low Wear

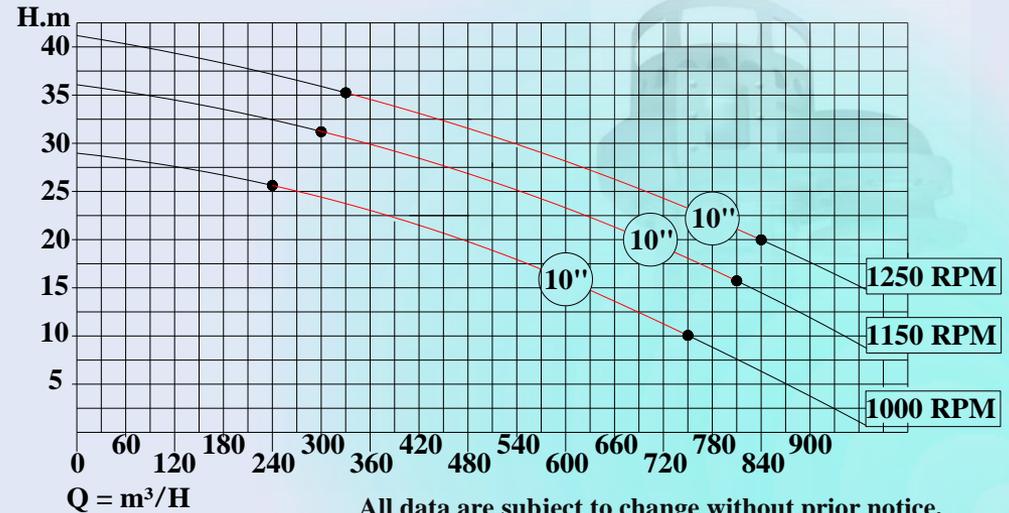
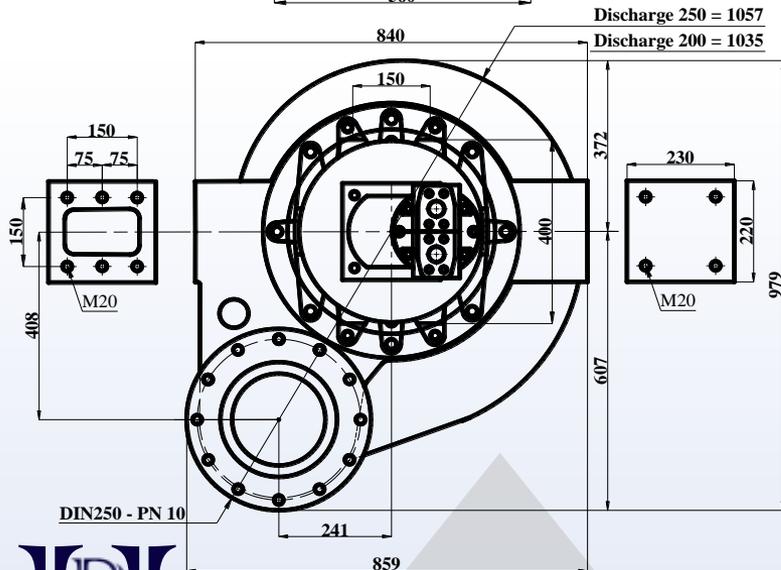
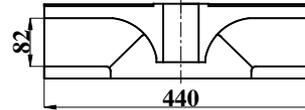


Pressure + Return Line 1 1/4" Flange 6000 PSI



RPM	Q m <sup>3</sup> /h	H meter	KW - HP	Operating Pressure BAR	Oil Flow l/min
1000	600	16	70 - 95	260	170
1150	700	20	90 - 122	290	194
1250	780	22	103 - 140	300	210

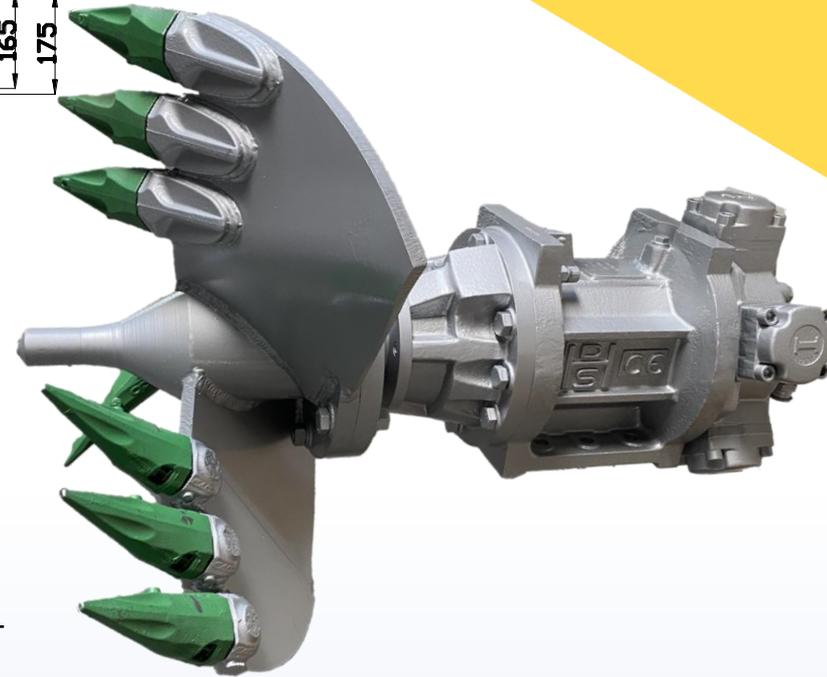
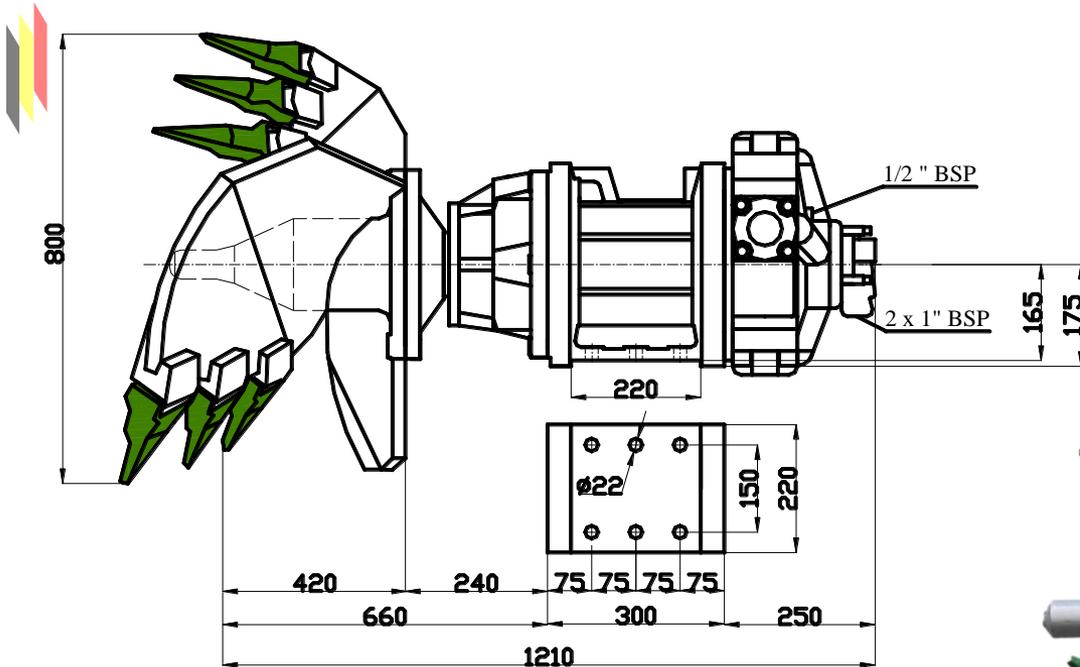
CONTINUOUS DUTY AT LOW SPEEDS  
 IMPELLER WIDTH 80mm - STRAINER 70mm  
 WEAR PARTS CHROM CASTING 27% Cr  
 SHAFT TEMPERED STAINLESS AISI T-431 DIN 1-4057  
 TORQUE 2,6 Nm / BAR  
 MOTOR DISPLACEMENT 163,9cc  
 MAX CONTINUOUS OIL PRESSURE 430 BAR  
 EXCAVATOR MOUNTING PADS  
 2K - PAINT  
 WEIGHT 900 KG



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# EXHYC 4200

Excavator/Cutter head -Hydraulic Driven  
 Diameter Head Ø800mm - 9 Teeth  
 Radial Piston Motor 1116cc  
 4200Nm at Min Speed 50RPM



COMPACT SOIL 50 – CLAY 75 – MIXING 100 RPM.  
 HEAVY DUTY CONSTRUCTION. DIAMIX – HD 480 SHAFT SLEEVE.  
 OVERSIZED BEARINGS. OIL FILLED HOUSING.  
 SEAL PROTECTION WEAR PLATE WITH WATER FLUSH CONNECTION.  
 2C PAINT.

KOMPAKTES SAND 50 – LEEM 75 – MISCHEN 100 UPM.  
 SCHWERAUSFUHRUNG. DIAMIX – HD 480 WELLENSCHUTZHUELSE.  
 UBERDIMENSIONIERTE LAGER. OELGEFULT GEHAUSE.  
 SCHLEISSPLATTE MIT SPERWASSERANSCHLUSS.  
 2K FARBE.

SABLE COMPACT 50 – ARGILE 75 – MIXAGE 100 T/MIN.  
 CONSTRUCTION ROBUSTE. CHEMISE D'ARBRE EN DIAMIX – HD 480.  
 ROULEMENTS SURDIMENSIONNES. BAIN D'HUILE.  
 PLAQUE D'USURE AVEC RACCORDEMENT EAU DE BARRAGE.  
 PEINTURE 2C.

EXHYC 4200	UPM – RPM – T/Min	50	75	100
CONTINUOUS DUTY	KW	23	35	47
DAUERBETRIEB	ÖL – OIL – HUILE L/Min	56	84	112
SERVICE CONTINU	KG	380		
250 BAR/4200 Nm	1116cc Radial Piston Motor			
SPT : N-Value 55 = Cohesion Factor 5000 Gr/cm <sup>2</sup>				

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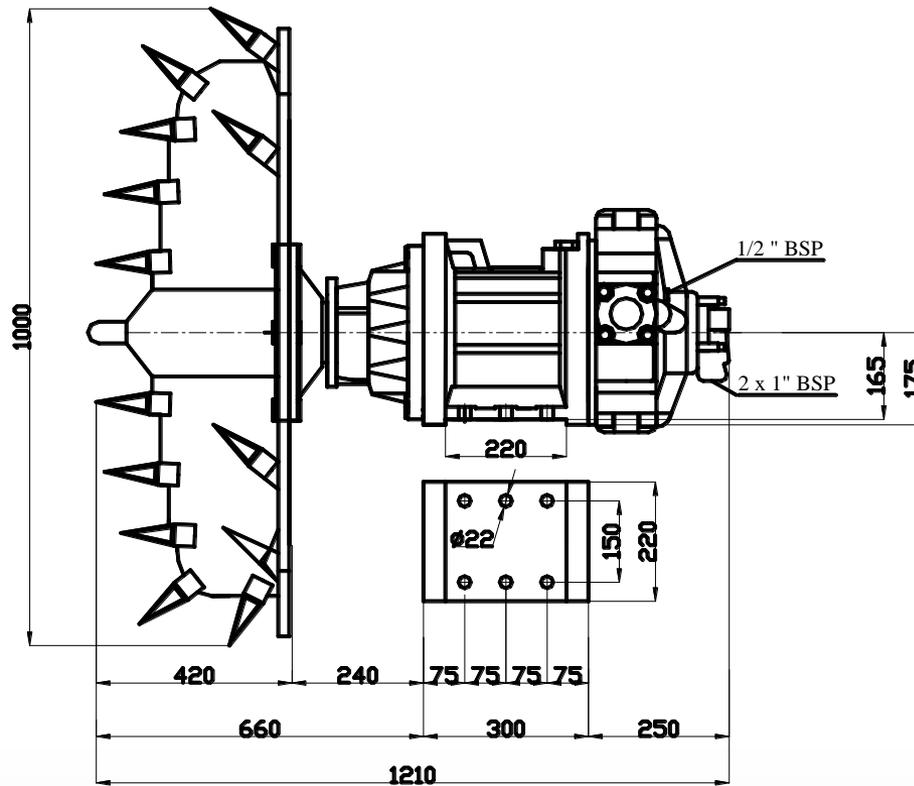
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# EXHYC 4500

Excavator/Cutter head -Hydraulic Driven  
 Diameter Head Ø1000mm – 18 Teeth  
 Radial Piston Motor 1116cc  
 4200Nm at Min Speed 40RPM



COMPACT SOIL 40 – CLAY 60 – MIXING 80 RPM.  
 HEAVY DUTY CONSTRUCTION. DIAMIX – HD 480 SHAFT SLEEVE.  
 OVERSIZED BEARINGS. OIL FILLED HOUSING.  
 SEAL PROTECTION WEAR PLATE WITH WATER FLUSH CONNECTION.  
 2C PAINT.

KOMPAKTES SAND 40 – LEEM 60 – MISCHEN 80 UPM.  
 SCHWERAUSFUHRUNG. DIAMIX – HD 480 WELLENSCHUTZHUELSE.  
 UBERDIMENSIONIERTE LAGER. OELGEFULT GEHAUSE.  
 SCHLEISSPLATTE MIT SPERWASSERANSCHLUSS.  
 2K FARBE.

SABLE COMPACT 40 – ARGILE 60 – MIXAGE 80 T/MIN.  
 CONSTRUCTION ROBUSTE. CHEMISE D'ARBRE EN DIAMIX – HD 480.  
 ROULEMENTS SURDIMENSIONES. BAIN D'HUILE.  
 PLAQUE D'USURE AVEC RACCORDEMENT EAU DE BARRAGE.  
 PEINTURE 2C.



EXHYC 4500 CONTINUOUS DUTY DAUERBETRIEB SERVICE CONTINU 250 BAR/4500 Nm SPT : N-Value 55 = Cohesion Factor 5000 Gr/cm <sup>2</sup>	UPM – RPM – T/Min	40	50	60	70	80
	KW	19	23	28	33	38
	ÖL – OIL – HUILE L/Min	45	56	67	78	90
	KG	480				
	1116cc Radial Piston Motor					

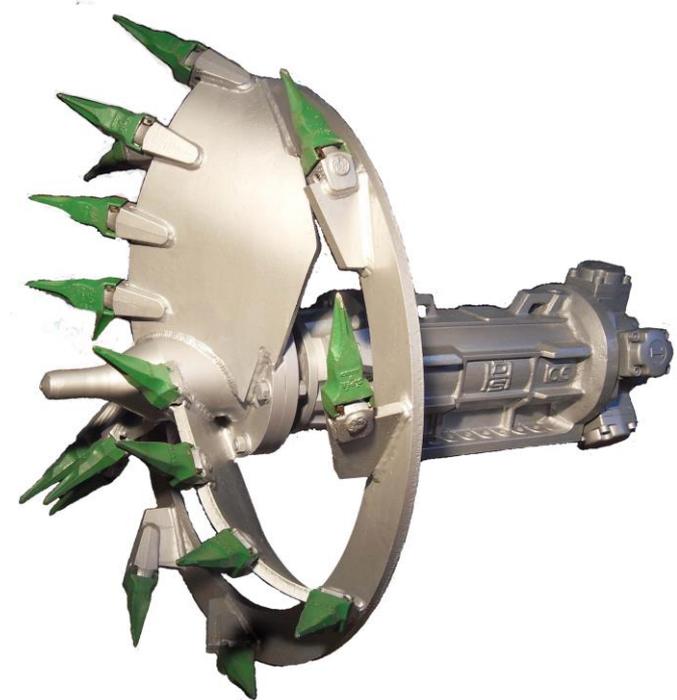
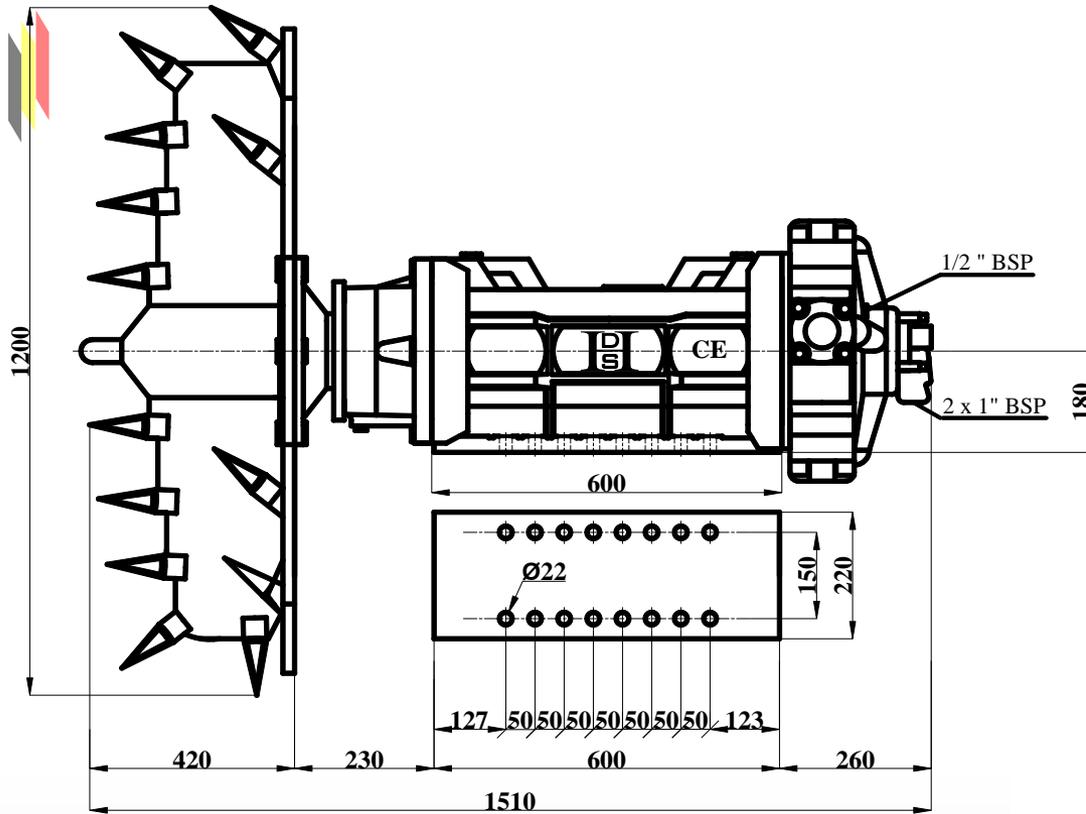
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# EXHYL 5000

Excavator/Cutter head -Hydraulic Driven  
 Diameter Head Ø1200mm – 21 Teeth  
 Radial Piston Motor 1332cc  
 5000Nm at Min Speed 35RPM



COMPACT SOIL 35 – CLAY 50 – MIXING 65 RPM.  
 HEAVY DUTY CONSTRUCTION. DIAMIX – HD 480 SHAFT SLEEVE.  
 OVERSIZED BEARINGS. OIL FILLED HOUSING.  
 SEAL PROTECTION WEAR PLATE WITH WATER FLUSH CONNECTION.  
 2C PAINT.

KOMPAKTES SAND 35 – LEEM 50 – MISCHEN 65 UPM.  
 SCHWERAUSFUHRUNG. DIAMIX – HD 480 WELLENSCHUTZHUELSE.  
 UBERDIMENSIONIERTE LAGER. OELGEFULT GEHAUSE.  
 SCHLEISSPLATTE MIT SPERWASSERANSCHLUSS.  
 2K FARBE.

SABLE COMPACT 35 – ARGILE 50 – MIXAGE 65 T/MIN.  
 CONSTRUCTION ROBUSTE. CHEMISE D'ARBRE EN DIAMIX – HD 480.  
 ROULEMENTS SURDIMENSIONES. BAIN D'HUILE.  
 PLAQUE D'USURE AVEC RACCORDEMENT EAU DE BARRAGE.  
 PEINTURE 2C.

EXHY 5000 CONTINUOUS DUTY DAUERBETRIEB SERVICE CONTINU 250 BAR/5000 Nm SPT : N-Value 55 = Cohesion 5000 Gr/cm <sup>2</sup>	UPM – RPM – T/Min	35	40	50	60	65
	KW	20	23	28	34	36
	ÖL – OIL – HUILE L/Min	47	54	67	80	87
	KG	600				
	1332cc Radial Piston Motor					

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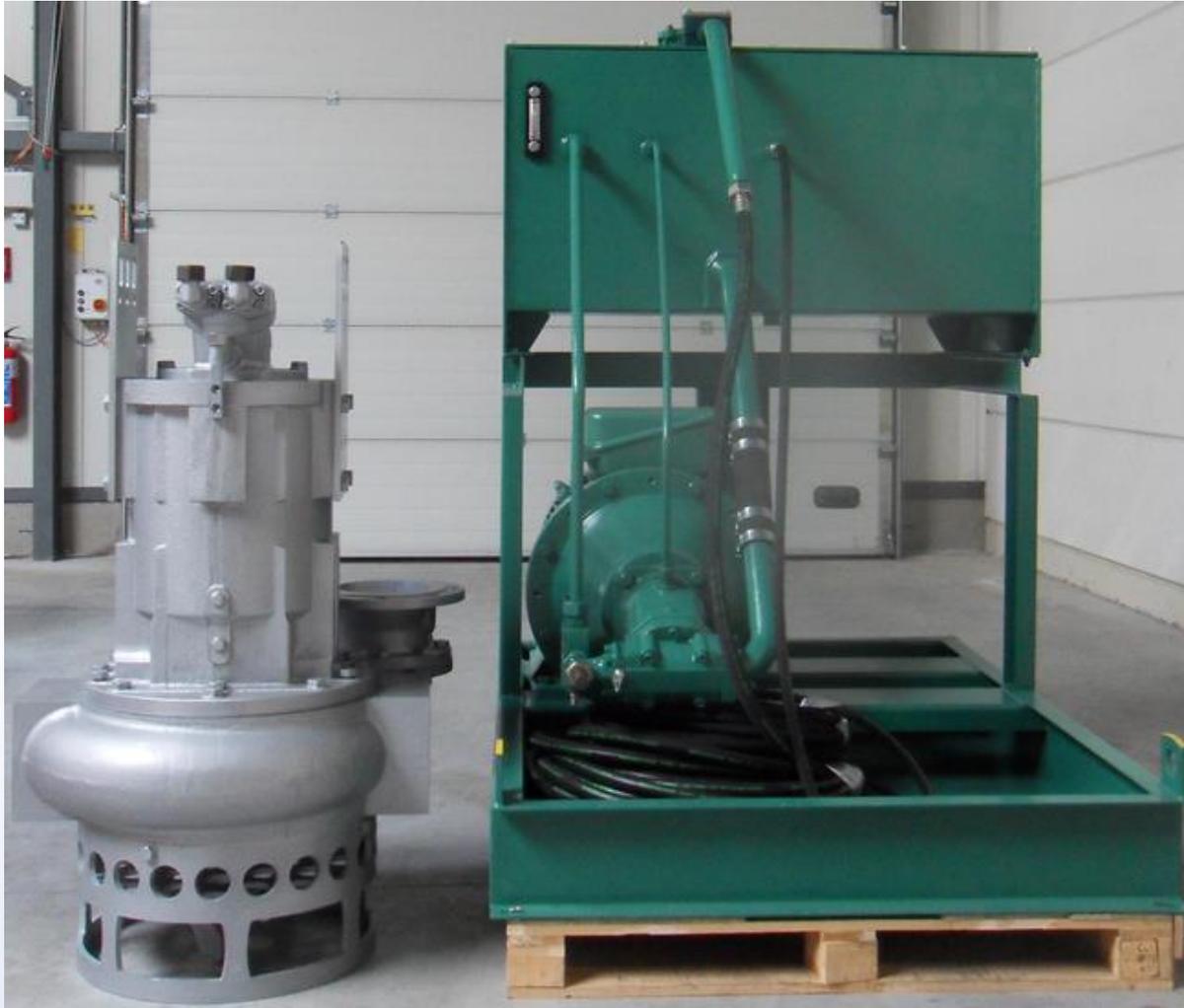
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**HDS Diesel Driven Hydraulic  
Power Pack To Drive HDS  
Dredging Pumps &  
Excavators /  
Cutterheads**



**HDS Electric Driven Hydraulic  
Power Pack To Drive HDS 160M  
With Possibilities To Add One  
E-Motor To Drive EXHYC 4200**





# HDS Electric Driven Hydraulic Power Pack To Drive HDS EXHYC 4500



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# HDS Electric Driven Hydraulic Power Pack To Drive One HDS 110 & Two EXHYC 4500



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**HDS Design Pontoon But**  
**Locally Made - HDS110**  
**& EXHYC 4200 For**  
**Hydro Electric Power Plant**  
**Philippines**





**HDS EXHYL 5000-Ø1200mm**  
**Excavator / Cutterhead**  
**On an 18 Inch**  
**Suction Pipe**





# HDS Design Pontoon But Locally Made - HDS110 & EXHYC 4200



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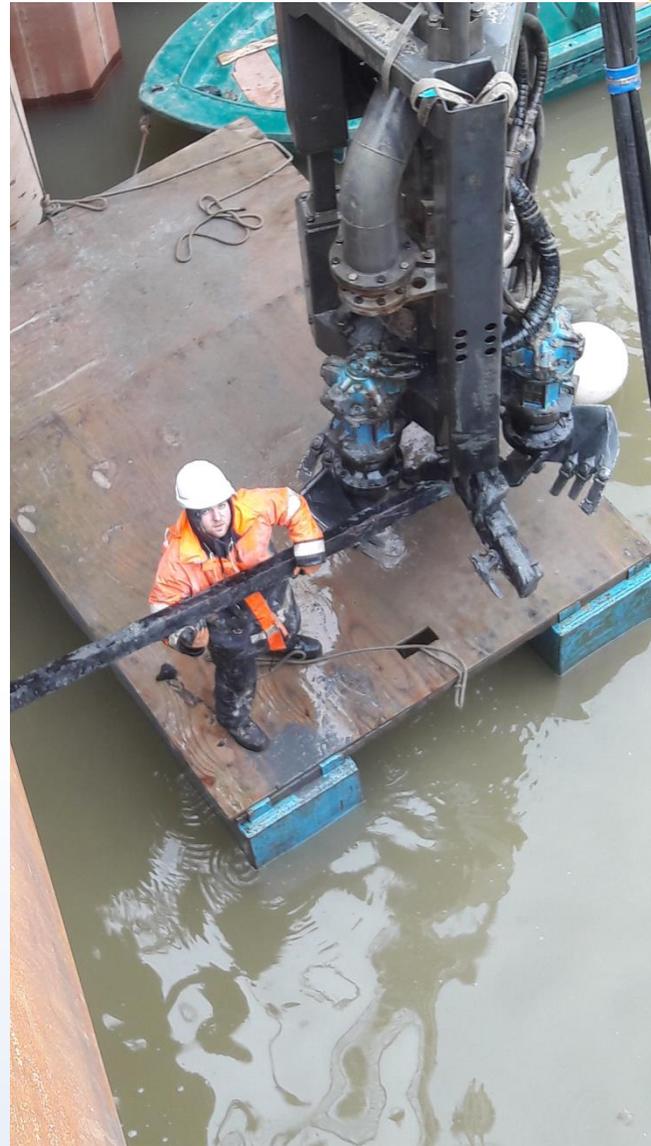
## HDS 160 with EXHYC 4200

Dredging Unit mounted on an  
HITACHI ZAXIS 350 LC For Canal  
Maintenance Dredging



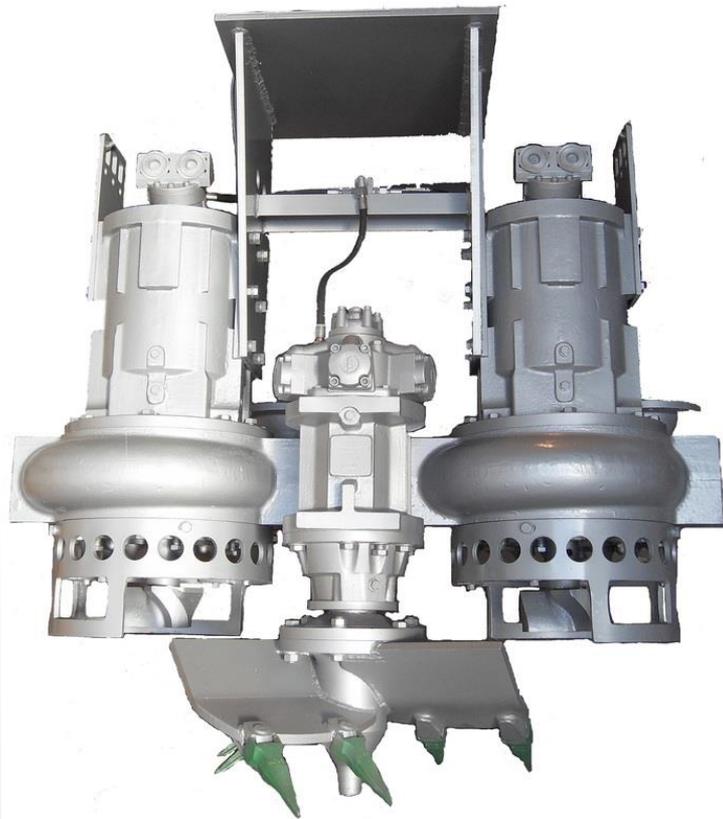
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**Double Pumps 2xHDS 110**  
**Discharge 200mm/8 Inch**  
**& 1xEXHYC 4200**  
**Excavator/Cutterhead**





# HDS 110 Discharge 200mm/ 8 Inch & EXHYC 4200 Excavator/Cutterhead



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# HDS EXHYL 5000 Customized Excavator / Cutterhead



**HDS 110 & EXHYC 4200**  
**Mounted On A Watermaster**  
**Dredger**





**- HDS 125 & EXHYC 4200 For  
20 Tons Hydraulic Excavator**  
**- HDS 160 & EXHYC 4200 For  
30 Tons Hydraulic Excavator**



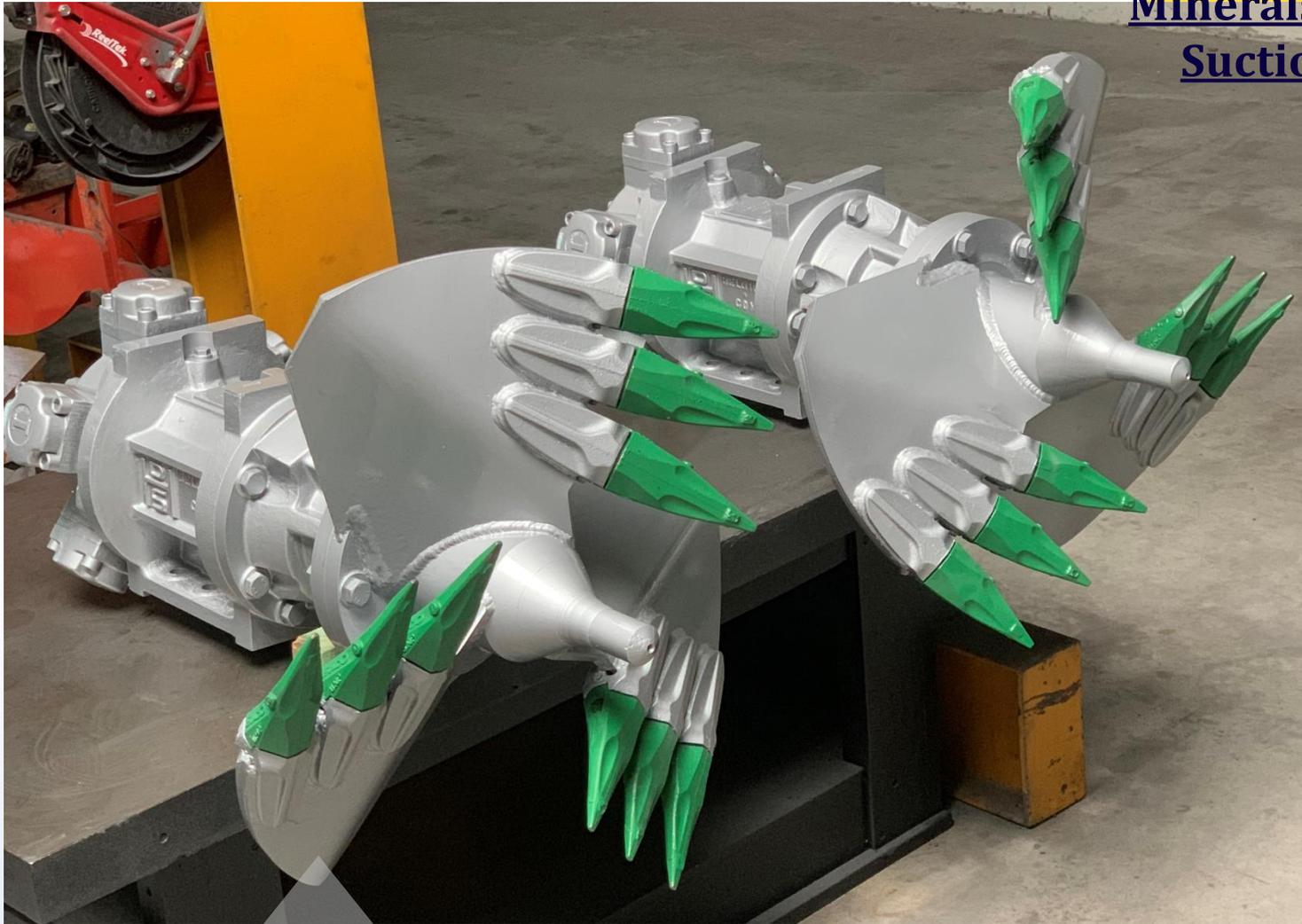
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**Two EXHYC 4200 – One Left  
& One Right Rotation  
Cutterhead For IDRECO  
Suction Dredger**



**Two EXHYC 4200 – One Left  
& One Right Rotation  
Cutterhead For WEIR  
Minerals Australia  
Suction Dredger**



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**[www.dredgingpumps.eu](http://www.dredgingpumps.eu)**

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